

FCC

SAR EVALUATION REPORT

For

FCC ID : 2ADINS6505L

Model: S6505L

Report Type : Original Report	Product Name : LTE Smart Phone
Report Number: <u>RXZ210830005SA01</u>	
Report Date: <u>2021-09-13</u>	
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Statement of Compliance

Applicant(Certification Holder)	Sun Cupid Technology (HK) Ltd.
	16/F,CEO Tower,77 Wing Hong Street,Cheung Sha Wan,Kowloon,Hong Kong
Brand(Trade) Name	NUU
Product(Equipment) Name	LTE Smart Phone
Model Name	S6505L
Serial Model Name	B10, NUU B10
Serial Number	N/A
Test Date	2021/09/01 ~ 2021/09/06

Measurement Procedures and Standards Used:

- ☒ IEEE1528:2013
- ☒ FCC 47 CFR part 2.1091
- ☒ FCC 47 CFR part 2.1093
- ☒ EN 62209-1:2016
- ☒ EN 62209-2:2010+A1:2019
- ☒ KDB 447498 D01 General RF Exposure Guidance v06
- ☒ KDB 648474 D04 Handset SAR v01r03
- ☒ KDB865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- ☒ KDB865664 D02 RF Exposure Reporting v01r02
- ☒ KDB941225 D01 3G SAR Procedures v03r01
- ☒ KDB 941225 D05 SAR for LTE Devices v02r05
- ☒ KDB941225 D06 Hotspot Mode v02r01

The measurement results in this report were performed at Bay Area Compliance Laboratories Corp(New Taipei Laboratory).

Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

The determination of the test results does not require consideration of the uncertainty of the measurement, unless the assessment is required by customer agreement, regulation or standard document specification.

Report Issued Date:2021-09-13

Project Engineer:Anson Lu

Reviewed By:Gimmy Tsai

Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
0.0	RXZ210830005	RXZ210830005SA01	2021.09.13	Original Report	Anson Lu

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EUT RESULTS

Attestation of Test Results			
Frequency Band	Max. SAR Level(s) Reported(W/kg)		Limit(W/kg)
GSM 850	1g Head SAR	0.362	1.6
	1g Body SAR	0.516	
PCS 1900	1g Head SAR	0.111	
	1g Body SAR	0.439	
WCDMA Band II	1g Head SAR	0.190	
	1g Body SAR	0.643	
WCDMA Band IV	1g Head SAR	0.401	
	1g Body SAR	0.726	
WCDMA Band V	1g Head SAR	0.309	
	1g Body SAR	0.522	
LTE Band 2	1g Head SAR	0.196	
	1g Body SAR	0.886	
LTE Band 4	1g Head SAR	0.115	
	1g Body SAR	0.672	
LTE Band 5	1g Head SAR	0.359	
	1g Body SAR	0.509	
LTE Band 12	1g Head SAR	0.159	
	1g Body SAR	0.369	
LTE Band 13	1g Head SAR	0.192	
	1g Body SAR	0.264	
LTE Band 25	1g Head SAR	0.021	
	1g Body SAR	0.770	
LTE Band 26	1g Head SAR	0.355	
	1g Body SAR	0.424	
LTE Band 41	1g Head SAR	0.180	
	1g Body SAR	1.240	
	Please refer to report number: SZGMA210809-33453E-20, FCC ID: 2ADINS6505L		
LTE Band 66	1g Head SAR	0.580	
	1g Body SAR	0.743	
LTE Band 71	1g Head SAR	0.080	
	1g Body SAR	0.250	

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	Please refer to report number: SZGMA210809-33453E-20, FCC ID: 2ADINS6505L		1.6
WLAN 2.4GHz	1g Head SAR	0.250	
	1g Body SAR	0.090	
WLAN 5.2GHz	1g Head SAR	0.370	
	1g Body SAR	0.110	
WLAN 5.8GHz	1g Head SAR	0.790	
	1g Body SAR	0.450	
Simultaneous	1g Head SAR	1.122	
	1g Body SAR	1.400	
	1g Body SAR(Hotspot)	1.410	

Note: This wireless device has been shown to be capable of compliance for localized specific absorption rate (SAR) for General Population/Uncontrolled Exposure limits specified in FCC 47 CFR part 2.1093 and has been tested in accordance with the measurement procedures specified in IEEE 1528-2013 and RF exposure KDB procedures.

The results and statements contained in this report pertain only to the device(s) evaluated.

Note: WiFi 2.4GHz & 5GHz and Bluetooth and LTE Band41& Band71 data please refer to report number: SZGMA210809-33453E-20, FCC ID: 2ADINS6505L, issued by Bay Area Compliance Laboratories Corp. (Dongguan).

EUT DESCRIPTION

Technical Specification

Applicant	Sun Cupid Technology (HK) Ltd.
Exposure Category	Population / Uncontrolled
Antenna Type(s)	PIFA Antenna for GSM and WCDMA and LTE PIFA Antenna for WLAN and Bluetooth
Modulation Type	GSM/GPRS/EGPRS: GMSK,8PSK WCDMA:BPSK,QPSK,16QAM; LTE:QPSK,16QAM 2.4G Wi-Fi: DSSS,OFDM; 5G Wi-Fi:OFDM BT3.0:GFSK, $\pi/4$ -DQPSK,8DPSK; BLE:GFSK
Frequency Band	GSM/GPRS/EGPRS 850: 824 ~ 849 MHz(TX) GSM/GPRS/EGPRS 1900: 1850 ~ 1910MHz(TX) WCDMA Band II: 1850 ~ 1910 MHz(TX) WCDMA Band IV: 1710 ~ 1755 MHz(TX) WCDMA Band V: 824 ~ 849 MHz(TX) LTE Band 2: 1850 ~ 1910 MHz(TX) LTE Band 4: 1710 ~ 1755 MHz(TX) LTE Band 5: 824 ~ 849 MHz(TX) LTE Band 12: 699 ~ 716 MHz(TX) LTE Band 13: 777 ~ 787 MHz(TX) LTE Band 25: 1850 ~ 1915 MHz(TX) LTE Band 26: 814 ~ 849 MHz(TX) LTE Band 41: 2555 ~ 2655 MHz(TX) LTE Band 66: 1710 ~ 1780 MHz(TX) LTE Band 71: 663 ~ 698 MHz(TX) 2.4G Wi-Fi: 2412 ~ 2462 MHz(b/g/n20) ; 2422 ~ 2452 MHz(n40) BT: 2402 ~ 2480 MHz; BLE(1Mbps): 2402 ~ 2480 MHz 5GBand 1: 5150~5250 MHz, 5GBand 4: 5725~5850 MHz

Conducted RF Power	GSM 850 : 31.98 dBm
	PCS 1900: 30.66 dBm
	WCDMA Band 2: 22.87 dBm
	WCDMA Band 4: 23.64 dBm
	WCDMA Band 5: 24.38 dBm
	LTE Band 2: 23.57 dBm
	LTE Band 4: 23.65 dBm
	LTE Band 5: 23.95 dBm
	LTE Band 12: 23.83 dBm
	LTE Band 13: 23.40 dBm
	LTE Band 25: 23.68 dBm
	LTE Band 26: 23.94 dBm
	LTE Band 41: 23.5 dBm; <i>Please refer to report number: SZGMA210809-33453E-20, FCC ID: 2ADINS6505L</i>
	LTE Band 66: 23.84 dBm
	LTE Band 71: 23.05 dBm; <i>Please refer to report number: SZGMA210809-33453E-20, FCC ID: 2ADINS6505L</i>
Power Source	4.4 VDC Rechargeable Battery
Normal Operation	Head and Body-worn

All measurement and test data in this report was gathered from production sample serial number : 21083000501(Assigned by BACL, New Taipei Laboratory).The EUT supplied by the applicant was received on 2021/08/30.

REFERENCE, STANDARDS, AND GUIDELINES

FCC :

The Report and Order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 1.6 mW/g as recommended by the ANSI/IEEE standard C95.1 [6] for an uncontrolled environment (Paragraph 65). According to the Supplement C of OET Bulletin 65 "Evaluating Compliance with FCC Guide-lines for Human Exposure to Radio frequency Electromagnetic Fields", released on Jun 29, 2001 by the FCC, the device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in North America is 1.6 mW/g average over 1 gram of tissue mass.

CE :

The order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 2.0mW/g as recommended by EN62209-1 for an uncontrolled environment. According to the Standard, the device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in Europe is 2.0mW/g average over 10 gram of tissue mass.

The test configurations were laid out on a specially designed test fixture to ensure the reproducibility of measurements. Each configuration was scanned for SAR. Analysis of each scan was carried out to characterize the above effects in the device.

SAR Limits**FCC Limit**

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 1 g of tissue)	1.60	8.0
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0

CE Limit

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 10 g of tissue)	2.0	10
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0

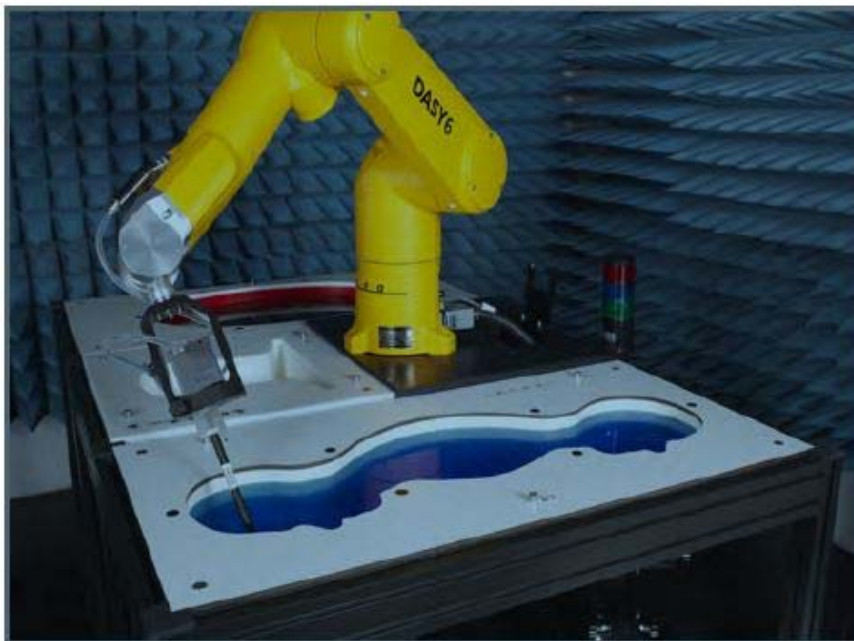
Population/Uncontrolled Environments are defined as locations where there is the exposure of individual who have no knowledge or control of their exposure.

Occupational/Controlled Environments are defined as locations where there is exposure that maybe incurred by people who are aware of the potential for exposure (i.e. as a result of employment or occupation).

General Population/Uncontrolled environments Spatial Peak limit 1.6W/kg (FCC) & 2.0 W/kg (CE) applied to the EUT.

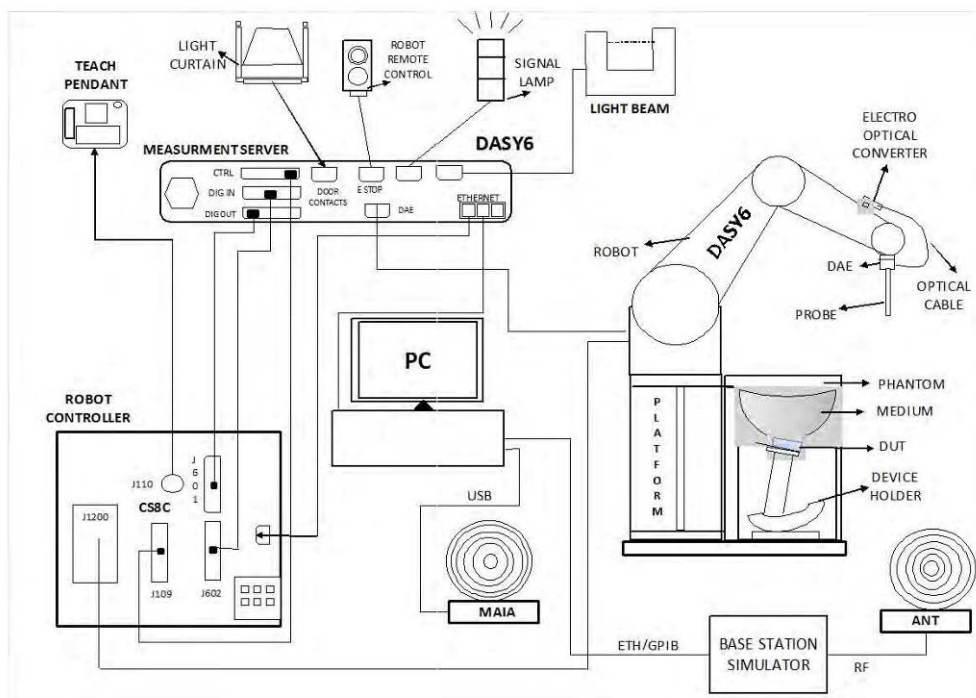
DESCRIPTION OF TEST SYSTEM

These measurements were performed with the automated near-field scanning system DASY6 from Schmid & Partner Engineering AG (SPEAG) which is the Fifth generation of the system shown in the figure hereinafter:



DASY6 System Description

The DASY6 system for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot (Staubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal application, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- 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.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 professional operating system and the DASY52 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

DASY6 Measurement Server

The DASY6 measurement server is based on a PC/104 CPU board with a 400 MHz Intel ULV Celeron, 128 MB chip-disk and 128 MB RAM. The necessary circuits for communication with the DAE4 (or DAE3) electronics box, as well as the 16-bit AD converter system for optical detection and digital I/O interface are contained on the DASY6 I/O board, which is directly connected to the PC/104 bus of the CPU board.



The measurement server performs all real-time data evaluations of field measurements and surface detection, controls robot movements, and handles safety operations. The PC operating system cannot interfere with these time-critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program- controlled robot movements. Furthermore, the measurement server is equipped with an expansion port, which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Connection of devices from any other supplier could seriously damage the measurement server.

Data Acquisition Electronics

The data acquisition electronics (DAE4) 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.

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.

The input impedance of both the DAE4 as well as of the DAE3 box is 200M Ω ; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

EX3DV4 E-Field Probes

Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%.
Compatibility	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

SAM Twin Phantom

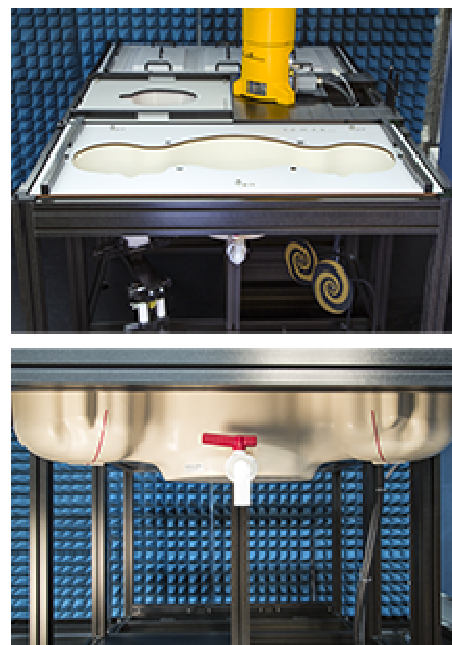
The SAM Twin Phantom (shown in front of DASY6) is a fiberglass shell phantom with shell thickness 2 mm, except in the ear region where the thickness is increased to 6 mm. The phantom has three measurement areas: 1) Left Head, 2) Right Head, and 3) Flat Section. For larger devices, the use of the ELI-Phantom (shown behind DASY6) is required. For devices such as glasses with a wireless link, the Face Down Phantom is the most suitable (between the SAM Twin and ELI phantoms).

When the phantom is mounted inside allocated slot of the DASY6 platform, phantom reference points can be taught directly in the DASY5 V5.2 software. When the DASY6 platform is used to mount the

Phantom, some of the phantom teaching points cannot be reached by the robot in DASY5 V5.2. A special tool called P1a-P2aX-Former is provided to transform two of the three points, P1 and P2, to reachable locations. To use these new teaching points, a revised phantom configuration file is required.

In addition to our standard broadband liquids, the phantom can be used with the following tissue simulating liquids:

Sugar-water-based liquids can be left permanently in the phantom. Always cover the liquid when the system is not in use to prevent changes in liquid parameters due to water evaporation.

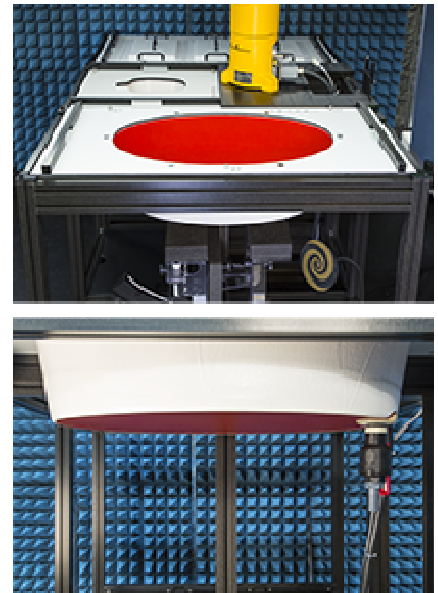


DGBE-based liquids should be used with care. As DGBE is a softener for most plastics, the liquid should be taken out of the phantom, and the phantom should be dried when the system is not in use (desirable at least once a week).

Do not use other organic solvents without previously testing the solvent resistivity of the phantom. Approximately 25 liters of liquid is required to fill the SAM Twin phantom.

ELI Phantom

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30MHz to 6 GHz. ELI is fully compatible with the latest draft of the standard IEC 62209-2 and the use of all known tissue simulating liquids. ELI has been optimized for performance and can be integrated into a SPEAG standard phantom table. A cover is provided to prevent evaporation of water and changes in liquid parameters. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points.



The phantom can be used with the following tissue simulating liquids:

- Sugar-water-based liquids can be left permanently in the phantom. Always cover the liquid when the system is not in use to prevent changes in liquid parameters due to water evaporation.
- DGBE-based liquids should be used with care. As DGBE is a softener for most plastics, the liquid should be taken out of the phantom, and the phantom should be dried when the system is not in use (desirable at least once a week).
- Do not use other organic solvents without previously testing the solvent resistivity of the phantom.

Approximately 25 liters of liquid is required to fill the ELI phantom

Robots

The DASY6 system uses the high-precision industrial robots TX60L, TX90XL, and RX160L from StaubliSA (France). The TX robot family - the successor of the well-known RX robot family - continues to offer the features important for DASY6 applications:

- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchrony motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

The robots are controlled by the Staubli CS8c robot controllers. All information regarding the use and maintenance of the robot arm and the robot controller is provided

Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 15mm² step integral, with 1.5mm interpolation used to locate the peak SAR area used for zoom scan assessments.

Where the system identifies multiple SAR peaks (which are within 25% of peak value) the system will provide the user with the option of assessing each peak location individually for zoom scan averaging.

Zoom Scan (Cube Scan Averaging)

The averaging zoom scan volume utilized in the DASY6 software is in the shape of a cube and the side dimension of a 1 g or 10 g mass is dependent on the density of the liquid representing the simulated tissue. A density of 1000 kg/m³ is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1g cube is 10mm, with the side length of the 10g cube is 21.5mm.

When the cube intersects with the surface of the phantom, it is oriented so that 3 vertices touch the surface of the shell or the center of a face is tangent to the surface. The face of the cube closest to the surface is modified in order to conform to the tangent surface.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 7 x 7 x 7 (5mmx5mmx5mm) providing a volume of 30 mm in the X & Y & Z axis.

Recommended Tissue Dielectric Parameters for Head and Body

Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEC 62209-1:2016

Recommended Tissue Dielectric Parameters for Head liquid

Table A.3 – Dielectric properties of the head tissue-equivalent liquid

Frequency MHz	Relative permittivity ϵ_r	Conductivity (σ) S/m
300	45,3	0,87
450	43,5	0,87
750	41,9	0,89
835	41,5	0,90
900	41,5	0,97
1 450	40,5	1,20
1 500	40,4	1,23
1 640	40,2	1,31
1 750	40,1	1,37
1 800	40,0	1,40
1 900	40,0	1,40
2 000	40,0	1,40
2 100	39,8	1,49
2 300	39,5	1,67
2 450	39,2	1,80
2 600	39,0	1,96
3 000	38,5	2,40
3 500	37,9	2,91
4 000	37,4	3,43
4 500	36,8	3,94
5 000	36,2	4,45
5 200	36,0	4,66
5 400	35,8	4,86
5 600	35,5	5,07
5 800	35,3	5,27
6 000	35,1	5,48

NOTE For convenience, permittivity and conductivity values at those frequencies which are not part of the original data provided by Drossos et al. [33] or the extension to 5 800 MHz are provided (i.e. the values shown *in italics*). These values were linearly interpolated between the values in this table that are immediately above and below these values, except the values at 6 000 MHz that were linearly extrapolated from the values at 3 000 MHz and 5 800 MHz.

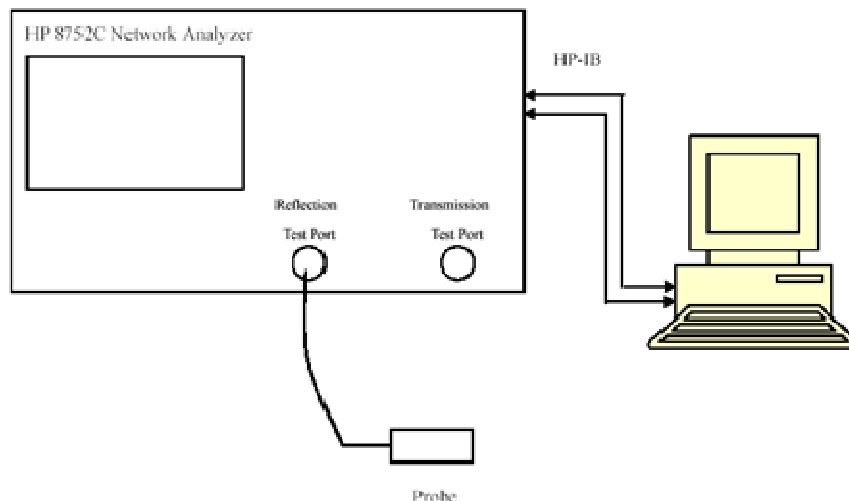
EQUIPMENT LIST AND CALIBRATION

Equipment's List & Calibration Information

Equipment	Model	S/N	Calibration Date	Calibration Due Date
Robot	TX90	5N26A1	N.C.R	N.C.R
DASY5 Test Software	DASY5.2	N/A	N.C.R	N.C.R
DASY6 Measurement Server	DASY 6.0	1588	N/A	N/A
Data Acquisition Electronics	DAE4	1561	2020/11/23	2021/11/22
E-Field Probe	EX3DV4	7520	2020/11/16	2021/11/15
Dipole, 750 MHz	D750V3	1079	2020/11/06	2023/11/05
Dipole, 835 MHz	D835V2	454	2020/11/18	2023/11/17
Dipole, 1800 MHz	D1800V2	2d207	2020/11/09	2023/11/08
Dipole,1900MHz	D1900V2	5d207	2020/11/11	2023/11/10
Twin SAM	Twin SAM V5.0	1368	N/A	N/A
Twin SAM	Twin SAM V8.0	1953	N/A	N/A
Twin ELI	Twin ELI V8.0	2088	N/A	N/A
Simulated Tissue 750 MHz Head	TS-750-H	/	Each Time	/
Simulated Tissue 835 MHz Head	TS-835-H	/	Each Time	/
Simulated Tissue 1800 MHz Head	TS-1800-H	/	Each Time	/
Simulated Tissue 1900 MHz Head	TS-1900-H	/	Each Time	/
Wideband Radio Communication Tester	CMU-200	106868	2021/04/07	2022/04/06
Functional radio communication tester	CMW 290	101741	2021/08/07	2022/08/06
Mounting Device	N/A	SD 000 H01 KA	N/A	N/A
Network Analyzer	E5063A	MY54402093	2020/12/29	2021/12/28
Dielectric probe kit	85070B	50207	/	/
Signal Generator	8648C	3537A01745	2020/12/30	2021/12/29
Power Meter	E4418B	GB43312279	2020/12/30	2021/12/29
Power Sensor	E9300A	US39210953	2021/05/05	2022/05/04
Power Amplifier	ZVE-8G+	365701647	2021/1/8	2022/1/7
Power Amplifier	ZHL-42W+	329401642	2021/1/8	2022/1/7
Temperature and Humidity Recoder	HTC-1	005	2020/10/30	2021/10/29
Directional Coupler	488Z	810	N.C.R	N.C.R
Attenuator	20dB, 100W	1453	N.C.R	N.C.R

SAR MEASUREMENT SYSTEM VERIFICATION

Liquid Verification



Liquid Verification Setup Block Diagram

Liquid Verification Results

Test Date	Frequency (MHz)	Liquid Type	Liquid parameter		Target Value		Delta (%)		Tolerance (%)
			σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	
2021/09/01	835	HSL	0.918	40.093	0.9	41.5	2.00	-3.39	± 5
	836.6	HSL	0.919	40.118	0.9	41.5	2.11	-3.33	± 5
	836.4	HSL	0.919	40.104	0.9	41.5	2.11	-3.36	± 5
	836.5	HSL	0.919	40.106	0.9	41.5	2.11	-3.36	± 5
	831.5	HSL	0.917	40.108	0.9	41.5	1.89	-3.35	± 5

Test Date	Frequency (MHz)	Liquid Type	Liquid parameter		Target Value		Delta (%)		Tolerance (%)
			σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	
2021/09/02	750	HSL	0.886	40.140	0.89	41.9	-0.45	-4.20	± 5
	707.5	HSL	0.870	40.265	0.89	42.11	-2.25	-4.38	± 5
	782	HSL	0.897	40.005	0.89	41.9	0.79	-4.52	± 5

Test Date	Frequency (MHz)	Liquid Type	Liquid parameter		Target Value		Delta (%)		Tolerance (%)
			σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	
2021/09/03	1900	HSL	1.407	38.916	1.4	40	0.50	-2.71	± 5
	1880	HSL	1.395	38.972	1.4	40	-0.36	-2.57	± 5

Test Date	Frequency (MHz)	Liquid Type	Liquid parameter		Target Value		Delta (%)		Tolerance (%)
			σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	
2021/09/04	1900	HSL	1.397	38.556	1.4	40	-0.21	-3.61	± 5
	1880	HSL	1.377	38.627	1.4	40	-1.64	-3.43	± 5
	1882.5	HSL	1.38	38.612	1.4	40	-1.43	-3.47	± 5

Test Date	Frequency (MHz)	Liquid Type	Liquid parameter		Target Value		Delta (%)		Tolerance (%)
			σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	σ (S/m)	ϵ_r	
2021/09/06	1800	HSL	1.383	40.397	1.4	40	-1.21	0.99	± 5
	1732.6	HSL	1.346	40.586	1.36	40.13	-1.03	1.14	± 5
	1732.5	HSL	1.346	40.575	1.36	40.13	-1.03	1.11	± 5
	1745	HSL	1.352	40.49	1.37	40.10	-1.31	0.97	± 5

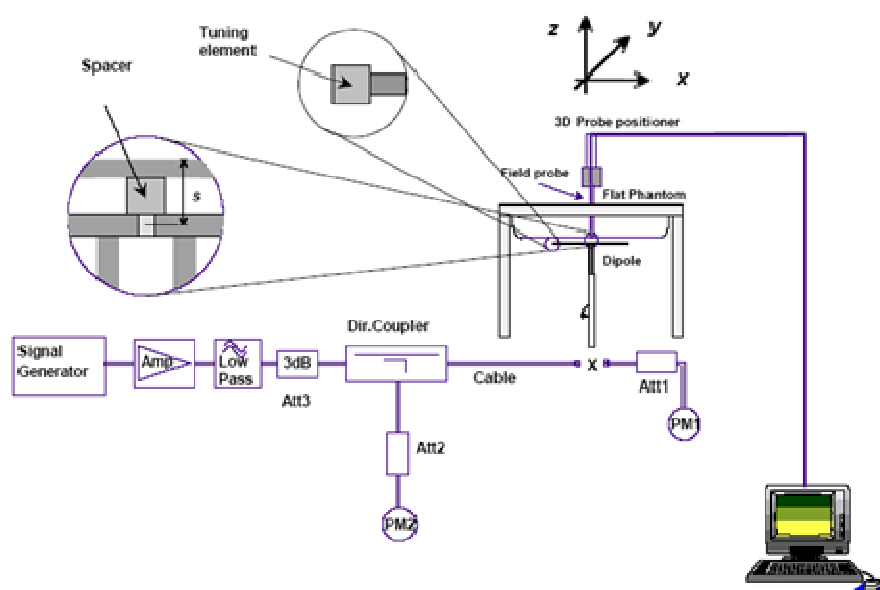
System Accuracy Verification

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of $\pm 10\%$. The validation results are tabulated below. And also the corresponding SAR plot is attached as well in the SAR plots files.

The spacing distances in the **System Verification Setup Block Diagram** is given by the following:

- a) $s = 15 \text{ mm} \pm 0,2 \text{ mm}$ for $300 \text{ MHz} \leq f \leq 1\,000 \text{ MHz}$;
- b) $s = 10 \text{ mm} \pm 0,2 \text{ mm}$ for $1\,000 \text{ MHz} < f \leq 3\,000 \text{ MHz}$;
- c) $s = 10 \text{ mm} \pm 0,2 \text{ mm}$ for $3\,000 \text{ MHz} < f \leq 6\,000 \text{ MHz}$.

System Verification Setup Block Diagram



System Accuracy Check Results

Test Date	Frequency Band (MHz)	Liquid Type	Input Power (mW)	Measured SAR (W/kg)		Target Value (W/kg)		Normalized to 1W (W/kg)		Delta (%)	Tolerance (%)
2021/9/01	835	HSL	250	1g	2.37	1g	9.38	1g	9.48	1.07	±10
				10g	1.52	10g	6.06	10g	6.08	0.33	±10
2021/9/02	750	HSL	250	1g	2.20	1g	8.25	1g	8.80	6.67	±10
				10g	1.47	10g	5.38	10g	5.88	9.29	±10
2021/09/03	1900	HSL	250	1g	9.62	1g	40.1	1g	38.48	-4.04	±10
				10g	4.89	10g	20.8	10g	19.56	-5.96	±10
2021/09/04	1900	HSL	250	1g	9.33	1g	40.1	1g	37.32	-6.93	±10
				10g	4.73	10g	20.8	10g	18.92	-9.04	±10
2021/09/06	1800	HSL	250	1g	9.53	1g	38.9	1g	38.12	-2.01	±10
				10g	4.96	10g	20.3	10g	19.84	-2.27	±10

Note: The power inputted to dipole is 0.25Watt; the SAR values are normalized to 1 Watt forward power by multiplying 4 times.

SAR SYSTEM VALIDATION DATA

Test Laboratory: BACL . SAR Testing Lab

System Check_Head_835MHz**DUT: D835V2-454**

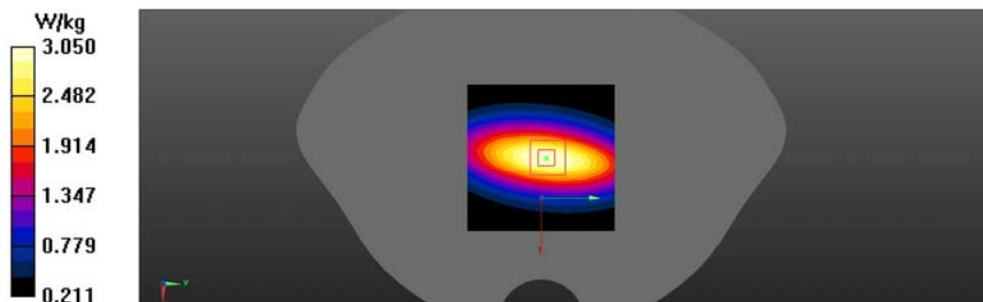
Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL835 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.918 \text{ S/m}$; $\epsilon_r = 40.093$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7520; ConvF(9.55, 9.55, 9.55) @ 835 MHz; Calibrated: 11/16/2020
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1561; Calibrated: 11/23/2020
- Phantom: Twin-SAM V8.0 (20deg probe tilt)-Right; Type: QD 000 P40 CB; Serial: 1368
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Configuration/Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$,
 $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 3.11 W/kg

Configuration/Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$,
 $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 56.87 V/m ; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 3.68 W/kg
SAR(1 g) = 2.37 W/kg ; SAR(10 g) = 1.52 W/kg
Smallest distance from peaks to all points 3 dB below = 17.2 mm
Ratio of SAR at M2 to SAR at M1 = 64.5%
Maximum value of SAR (measured) = 3.05 W/kg



Test Laboratory: BACL . SAR Testing Lab

System Check_Head_750MHz

DUT: Dipole 750 MHz D750V3

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1

Medium: HSL_750 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.886 \text{ S/m}$; $\epsilon_r = 40.14$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7520; ConvF(9.81, 9.81, 9.81) @ 750 MHz; Calibrated: 11/16/2020
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1561; Calibrated: 11/23/2020
- Phantom: Twin-SAM V8.0 (20deg probe tilt)-Right; Type: QD 000 P40 CB; Serial: 1368
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 2.91 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 60.94 V/m; Power Drift = -0.00 dB

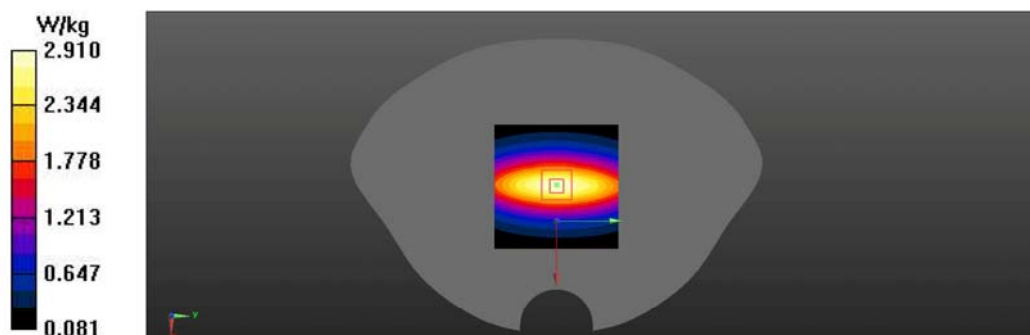
Peak SAR (extrapolated) = 3.28 W/kg

SAR(1 g) = 2.2 W/kg; SAR(10 g) = 1.47 W/kg

Smallest distance from peaks to all points 3 dB below = 17.6 mm

Ratio of SAR at M2 to SAR at M1 = 67.3%

Maximum value of SAR (measured) = 2.90 W/kg



Test Laboratory: BACL . SAR Testing Lab

System Check_Head_1900MHz

DUT: D1900V2-5d207

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1

Medium: HSL2000 Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.407 \text{ S/m}$; $\epsilon_r = 38.916$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7520; ConvF(8.35, 8.35, 8.35) @ 1900 MHz; Calibrated: 11/16/2020
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1561; Calibrated: 11/23/2020
- Phantom: Twin-SAM V8.0 (20deg probe tilt)-Right; Type: QD 000 P40 CB; Serial: 1368
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 15.5 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 108.2 V/m; Power Drift = -0.07 dB

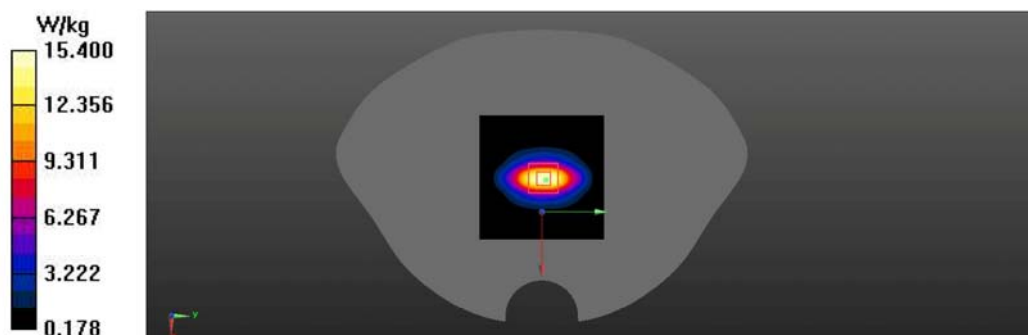
Peak SAR (extrapolated) = 19.0 W/kg

SAR(1 g) = 9.62 W/kg; SAR(10 g) = 4.89 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 50.3%

Maximum value of SAR (measured) = 15.4 W/kg



Test Laboratory: BACL . SAR Testing Lab

System Check_Head_1900MHz-2

DUT: D1900V2-5d207

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1

Medium: HSL2000 Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.397 \text{ S/m}$; $\epsilon_r = 38.556$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7520; ConvF(8.35, 8.35, 8.35) @ 1900 MHz; Calibrated: 11/16/2020
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1561; Calibrated: 11/23/2020
- Phantom: Twin-SAM V8.0 (20deg probe tilt)-Right; Type: QD 000 P40 CB; Serial: 1368
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 15.2 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 106.3 V/m; Power Drift = -0.01 dB

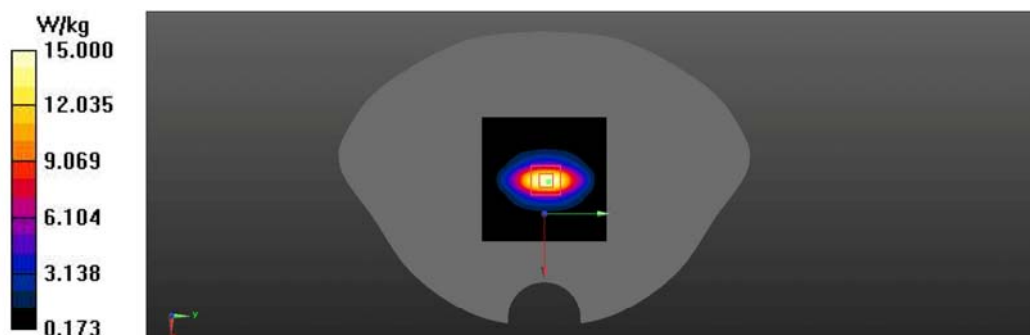
Peak SAR (extrapolated) = 18.5 W/kg

SAR(1 g) = 9.33 W/kg; SAR(10 g) = 4.73 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 50.2%

Maximum value of SAR (measured) = 15.0 W/kg



Test Laboratory: BACL . SAR Testing Lab

System Check_Head_1800MHz

DUT: D1800V2-2d207

Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1

Medium: HSL1800 Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.383 \text{ S/m}$; $\epsilon_r = 40.397$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7520; ConvF(8.66, 8.66, 8.66) @ 1800 MHz; Calibrated: 11/16/2020
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1561; Calibrated: 11/23/2020
- Phantom: Twin-SAM V8.0 (20deg probe tilt)-Right; Type: QD 000 P40 CB; Serial: 1368
- Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$
Maximum value of SAR (interpolated) = 14.9 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 108.4 V/m; Power Drift = -0.06 dB

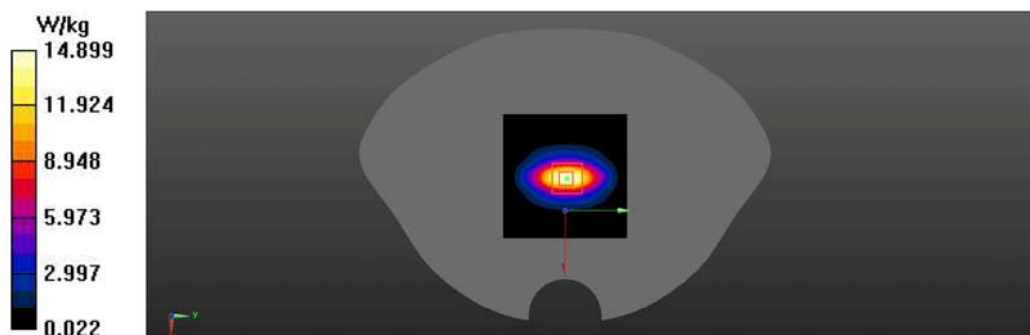
Peak SAR (extrapolated) = 17.9 W/kg

SAR(1 g) = 9.53 W/kg; SAR(10 g) = 4.96 W/kg

Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 53%

Maximum value of SAR (measured) = 14.9 W/kg

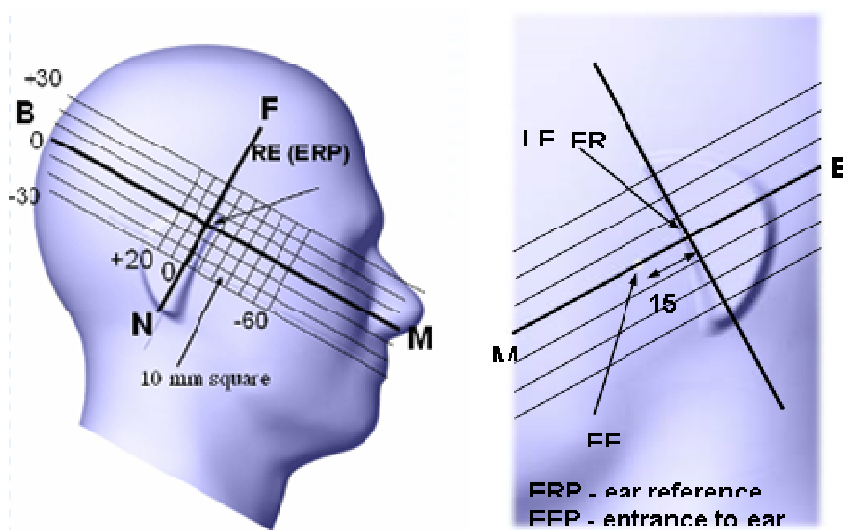


EUT TEST STRATEGY AND METHODOLOGY

Test Positions for Device Operating Next to a Person's Ear

This category includes most wireless handsets with fixed, retractable or internal antennas located toward the top half of the device, with or without a foldout, sliding or similar keypad cover. The handset should have its earpiece located within the upper $\frac{1}{4}$ of the device, either along the centerline or off-centered, as perceived by its users. This type of handset should be positioned in a normal operating position with the "test device reference point" located along the "vertical centerline" on the front of the device aligned to the "ear reference point". The "test device reference point" should be located at the same level as the center of the earpiece region. The "vertical centerline" should bisect the front surface of the handset at its top and bottom edges. A "ear reference point" is located on the outer surface of the head phantom on each ear spacer. It is located 1.5 cm above the center of the ear canal entrance in the "phantom reference plane" defined by the three lines joining the center of each "ear reference point" (left and right) and the tip of the mouth.

A handset should be initially positioned with the earpiece region pressed against the ear spacer of a head phantom. For the SCC-34/SC-2 head phantom, the device should be positioned parallel to the "N-F" line defined along the base of the ear spacer that contains the "ear reference point". For interim head phantoms, the device should be positioned parallel to the cheek for maximum RF energy coupling. The "test device reference point" is aligned to the "ear reference point" on the head phantom and the "vertical centerline" is aligned to the "phantom reference plane". This is called the "initial ear position". While maintaining these three alignments, the body of the handset is gradually adjusted to each of the following positions for evaluating SAR:



Cheek/Touch Position

The device is brought toward the mouth of the head phantom by pivoting against the "ear reference point" or along the "N-F" line for the SCC-34/SC-2 head phantom.

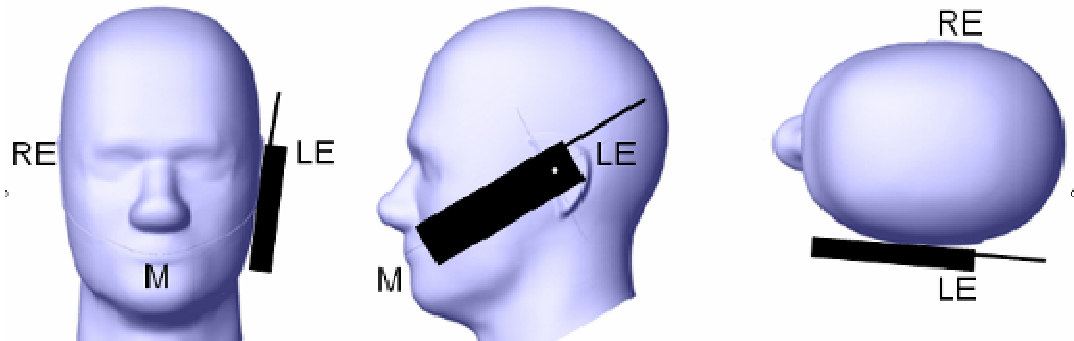
This test position is established:

When any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom.

(or) When any portion of a foldout, sliding or similar keypad cover opened to its intended self-adjusting normal use position is in contact with the cheek or mouth of the phantom.

For existing head phantoms – when the handset loses contact with the phantom at the pivoting point, rotation should continue until the device touches the cheek of the phantom or breaks its last contact from the ear spacer.

Cheek /Touch Position



Ear/Tilt Position

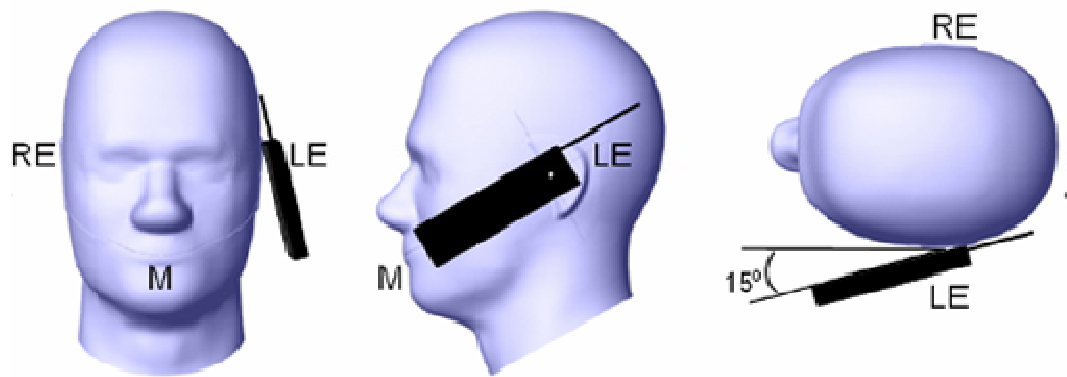
With the handset aligned in the “Cheek/Touch Position”:

1) If the earpiece of the handset is not in full contact with the phantom’s ear spacer (in the “Cheek/Touch position”) and the peak SAR location for the “Cheek/Touch” position is located at the ear spacer region or corresponds to the earpiece region of the handset, the device should be returned to the “initial ear position” by rotating it away from the mouth until the earpiece is in full contact with the ear spacer.

2) (otherwise) The handset should be moved (translated) away from the cheek perpendicular to the line passes through both “ear reference points” (note: one of these ear reference points may not physically exist on a split head model) for approximate 2-3 cm. While it is in this position, the device handset is tilted away from the mouth with respect to the “test device reference point” until the inside angle between the vertical centerline on the front surface of the phone and the horizontal line passing through the ear reference point is by 15 80°. After the tilt, it is then moved (translated) back toward the head perpendicular to the line passes through both “ear reference points” until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process should be repeated with a tilt angle less than 15° so that the device and its antenna would touch the phantom simultaneously. This test position may require a device holder or positioner to achieve the translation and tilting with acceptable positioning repeatability.

If a device is also designed to transmit with its keypad cover closed for operating in the head position, such positions should also be considered in the SAR evaluation. The device should be tested on the left and right side of the head phantom in the “Cheek/Touch” and “Ear/Tilt” positions. When applicable, each configuration should be tested with the antenna in its fully extended and fully retracted positions. These test configurations should be tested at the high, middle and low frequency channels of each operating mode; for example, AMPS, CDMA, and TDMA. If the SAR measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tilt/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s). If the transmission band of the test device is less than 10 MHz, testing at the high and low frequency channels is optional.

Ear /Tilt 15o Position



Test positions for body-worn and other configurations

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.

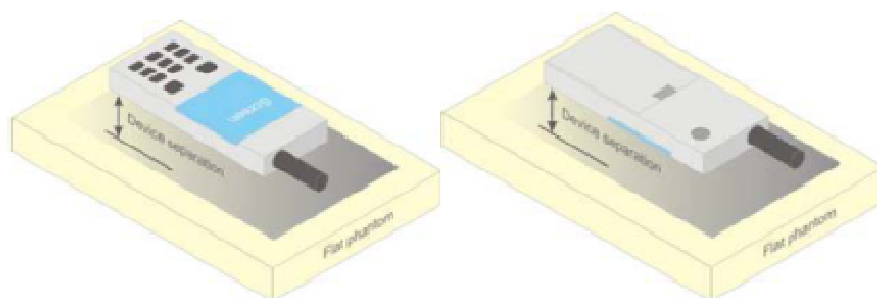


Figure 5 – Test positions for body-worn devices

Test Distance for SAR Evaluation

For this case the EUT(Equipment Under Test) is set 10mm away from the phantom, the test distance is 10mm.

SAR Evaluation Procedure

The evaluation was performed with the following procedure:

Step 1: Measurement of the SAR value at a fixed location above the ear point or central position was used as a reference value for assessing the power drop. The SAR at this point is measured at the start of the test and then again at the end of the testing.

Step 2: The SAR distribution at the exposed side of the head was measured at a distance of 4 mm from the inner surface of the shell. The area covered the entire dimension of the head or radiating structures of the EUT, the horizontal grid spacing was 15 mm x 15 mm, and the SAR distribution was determined by integrated grid of 1.5mm x 1.5mm. Based on these data, the area of the maximum absorption was determined by spline interpolation. The first Area Scan covers the entire dimension of the EUT to ensure that the hotspot was correctly identified.

Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7x 7 x 7 points. On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:

- 1) The data at the surface were extrapolated, since the center of the dipoles is 1.2 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

- 2) The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one dimensional splines with the "Not a knot"-condition (in x, y and z-directions). The volume was integrated with the trapezoidal-algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the averages.

All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement of the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation was repeated.

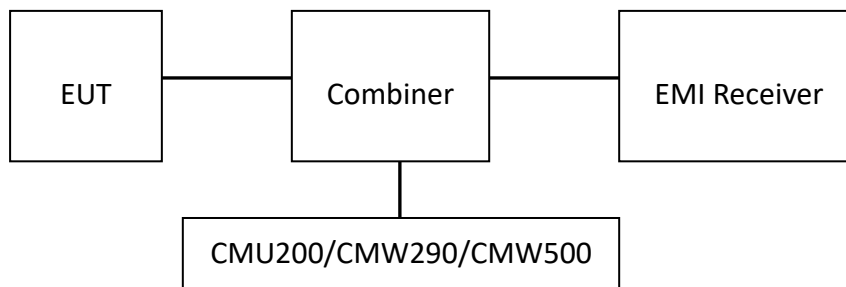
CONDUCTED OUTPUT POWER MEASUREMENT

Provision Applicable

The measured peak output power should be greater and within 5% than EMI measurement.

Test Procedure

The RF output of the transmitter was connected to the input of the EMI Test Receiver through sufficient attenuation.



GSM&3G<E

GSM/GPRS/EGPRS

Function: Menu select > GSM Mobile Station > GSM 850/1900

Press Connection control to choose the different menus

Press RESET > choose all the reset all settings

Connection Press Signal Off to turn off the signal and change settings

Network Support > GSM + GPRS or GSM + EGSM

Main Service > Packet Data

Service selection > Test Mode A – Auto Slot Config. off

MS Signal Press Slot Config Bottom on the right twice to select and change the number of time slots and power setting

- > Slot configuration > Uplink/Gamma

- > 33 dBm for GPRS 850

- > 30 dBm for GPRS 1900

- > 27 dBm for EGPRS 850

- > 26 dBm for EGPRS 1900

BS Signal Enter the same channel number for TCH channel (test channel) and BCCH channel

Frequency Offset > + 0 Hz

Mode > BCCH and TCH

BCCH Level > -85 dBm (May need to adjust if link is not stable)

BCCH Channel > choose desired test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]

Channel Type > Off

P0 > 4 dB

Slot Config>Unchanged (if already set under MS signal)

TCH > choose desired test channel

Hopping > Off

Main Timeslot > 3

Network Coding Scheme > CS4 (GPRS) and MCS5 (EGPRS)

Bit Stream > 2E9-1 PSR Bit Stream

AF/RF Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input

Connection Press Signal on to turn on the signal and change settings

WCDMA Release 99

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification. The EUT has a nominal maximum output power of 24dBm (+1.7/-3.7).

WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	β_c / β_d	8/15

HSDPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subset	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm2			
	β_c	2/15	12/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	β_d (SF)	64			
	β_c/β_d	2/15	12/15	15/8	15/4
	β_{hs}	4/15	24/15	30/15	30/15
HSDPA Specific Settings	MPR(dB)	0	0	0.5	0.5
	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	$A_{hs}=\beta_{hs}/\beta_c$	30/15			

HSUPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA
	Subset	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	β_c	11/15	6/15	15/15	2/15	15/15
	β_d	15/15	15/15	9/15	15/15	0
	β_{ec}	209/225	12/15	30/15	2/15	5/15
	β_c/β_d	11/15	6/15	15/9	2/15	-
	β_{hs}	22/15	12/15	30/15	4/15	5/15
	CM(dB)	1.0	3.0	2.0	3.0	1.0
	MPR(dB)	0	2	1	2	0
HSDPA Specific Settings	DACK	8				
	DNAK	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback	4ms				
	CQI Repetition Factor	2				
	$A_{hs}=\beta_{hs}/\beta_c$	30/15				
HSUPA Specific Settings	DE-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI	75	67	92	71	81
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9
	Reference E_FCI	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27		E-TFCI 11 E-TFCI PO4 E-TFCI 92 E-TFCI PO 18	E-TFCI 11 E E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO23 E-TFCI 75 E-TFCI PO26 E-TFCI 81 E-TFCI PO 27	

HSPA+

Sub-test	β_c (Note3)	β_d	β_{hs} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (bcast)
1	1	0	30/15	30/15	β_{ed1} : 30/15 β_{ed2} : 30/15	β_{ed3} : 24/15 β_{ed4} : 24/15	3.5	2.5	14	105	105

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

Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0)

Note 3: DPDCH is not configured, therefore the β_c is set to 1 and $\beta_d = 0$ by default.

Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.

Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH I category 7. E-DCH I TTI is set to 2ms TTI and E-DCH I table index = 2. To support these E-DCH I configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

The following tests were conducted according to the test requirements in Table C.11.1.4 of 3GPP TS 34.121-1

LTE

For UE Power Class 1 and 3, the allowed Maximum Power Reduction (MPR) for the maximum output power in Table 6.2.2-1 due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1 and 3

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2

For UE Power Class 1 and 3 the specific requirements and identified subclauses are specified in Table 6.2.4-1 along with the allowed A-MPR values that may be used to meet these requirements. The allowed A-MPR values specified below in Table 6.2.4-1 to 6.2.4-15 are in addition to the allowed MPR requirements specified in subclause

Table 6.2.4-1: Additional Maximum Power Reduction (A-MPR)

Network Signalling value	Requirements (subclause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01	6.6.2.1.1	Table 5.5-1	1.4, 3, 5, 10, 15, 20	Table 5.6-1	N/A
NS_03	6.6.2.2.1	2, 4, 10, 23, 25, 35, 36	3	>5	≤ 1
			5	>6	≤ 1
			10	>6	≤ 1
			15	>8	≤ 1
			20	>10	≤ 1
NS_04	6.6.2.2.2	41	5	>6	≤ 1
NS_05	6.6.3.3.1	1	10, 15, 20	Table 6.2.4-4	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	Table 5.6-1	N/A
NS_07	6.6.2.2.3	13	10	Table 6.2.4-2	
NS_08	6.6.3.3.3	19	10, 15	> 44	≤ 3
NS_09	6.6.3.3.4	21	10, 15	> 40	≤ 1
				> 55	≤ 2
NS_10		20	15, 20	Table 6.2.4-3	
NS_11	6.6.2.2.1	23	1.4, 3, 5, 10, 15, 20	Table 6.2.4-5	
NS_12	6.6.3.3.5	26	1.4, 3, 5	Table 6.2.4-6	
NS_13	6.6.3.3.6	26	5	Table 6.2.4-7	
NS_14	6.6.3.3.7	26	10, 15	Table 6.2.4-8	
NS_15	6.6.3.3.8	26	1.4, 3, 5, 10, 15	Table 6.2.4-9 Table 6.2.4-10	
NS_16	6.6.3.3.9	27	3, 5, 10	Table 6.2.4-11, Table 6.2.4-12, Table 6.2.4-13	
NS_17	6.6.3.3.10	28	5, 10	Table 5.6-1	N/A
NS_18	6.6.3.3.11	28	5	≥ 2	≤ 1
			10, 15, 20	≥ 1	≤ 4
NS_19	6.6.3.3.12	44	10, 15, 20	Table 6.2.4-14	
NS_20	6.2.2 6.6.2.2.1 6.6.3.2	23	5, 10, 15, 20	Table 6.2.4-15	
...					
NS_32	-	-	-	-	-

Maximum Target Output Power**WWAN Antenna Full Power Target power**

Max Target Power(dBm)			
Mode / Band	Low channel	Middle channel	High channel
GSM 850	32.0	32.0	32.0
GSM 850:GPRS 1 TX Slot	32.0	32.0	32.0
GSM 850:GPRS 2 TX Slot	32.0	32.0	32.0
GSM 850:GPRS 3 TX Slot	31.5	31.5	31.5
GSM 850:GPRS 4 TX Slot	31.0	31.0	31.0
GSM 850:EGPRS 1 TX Slot	26.0	26.0	26.0
GSM 850:EGPRS 2 TX Slot	25.5	25.5	25.0
GSM 850:EGPRS 3 TX Slot	25.0	25.0	25.5
GSM 850:EGPRS 4 TX Slot	25.0	25.0	25.5
PCS 1900	31.0	31.0	31.0
PCS 1900:GPRS 1 TX Slot	30.5	30.5	30.5
PCS 1900:GPRS 2 TX Slot	30.5	30.5	30.5
PCS 1900:GPRS 3 TX Slot	30.0	30.0	30.0
PCS 1900:GPRS 4 TX Slot	30.0	30.0	30.0
PCS 1900:EGPRS 1 TX Slot	27.0	27.0	27.0
PCS 1900:EGPRS 2 TX Slot	27.0	27.0	27.0
PCS 1900:EGPRS 3 TX Slot	26.5	26.5	26.5
PCS 1900:EGPRS 4 TX Slot	26.5	26.5	26.5
WCDMA Band 2	23.0	23.0	23.0
WCDMA Band 4	24.0	24.0	24.0
WCDMA Band 5	24.5	24.5	24.5
LTE Band 2	24.0	24.0	24.0
LTE Band 4	24.0	24.0	24.0
LTE Band 5	24.0	24.0	24.0
LTE Band 12	24.0	24.0	24.0
LTE Band 13	23.5	23.5	23.5
LTE Band 25	24.0	24.0	24.0
LTE Band 26	24.0	24.0	24.0
LTE Band 41	23.6	23.6	23.6
	Please refer to Report no: SZGMA210809-33453E-20, FCC ID: 2ADINS6505L		
LTE Band 66	24.0	24.0	24.0
LTE Band 71	23.1	23.1	23.1
	Please refer to Report no: SZGMA210809-33453E-20, FCC ID: 2ADINS6505L		

Test Results:**WWAN Antenna Full Power****GSM:**

Mode	Channel	Frequency (MHz)	RF Output Power (Peak / dBm)
GSM850	128	824.2	31.56
	190	836.6	31.75
	251	848.8	31.98
PCS1900	512	1850.2	30.66
	661	1880.0	30.52
	810	1909.8	30.58

GPRS:

Mode	Channel No.	Frequency (MHz)	RF Output Power (Peak / dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM850	128	824.2	31.45	31.25	30.93	30.51
	190	836.6	31.68	31.33	31.01	30.93
	251	848.8	31.81	31.65	31.22	30.82
PCS1900	512	1850.2	30.21	29.98	29.78	29.56
	661	1880	30.26	29.81	29.77	29.54
	810	1909.8	30.22	29.79	29.76	29.32

EGPRS:

Mode	Channel No.	Frequency (MHz)	RF Output Power (Peak / dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM850	128	824.2	25.86	25.01	24.79	24.48
	190	836.6	25.79	24.96	24.68	24.35
	251	848.8	25.87	24.98	24.67	24.26
PCS1900	512	1850.2	26.95	26.62	26.29	25.91
	661	1880	26.62	26.28	25.94	25.62
	810	1909.8	26.44	26.07	25.76	25.41

For SAR, the time based average power is relevant, the difference in between depends on the duty cycle of the TDMA signal.

Number of Time slot	1	2	3	4
Duty Cycle	1:8	1:4	1:2.66	1:2
Time based Ave. power compared to slotted Ave. power	-9 dB	-6 dB	-4.25 dB	-3 dB
Crest Factor	8	4	2.66	2

The time based average power for GPRS

Band	Channel No.	Frequency (MHz)	Time based average Power (dBm)			
			1 slot	2 slot	3 slots	4 slots
GSM 850	128	824.2	22.45	25.25	26.68	27.51
	190	836.6	22.68	25.33	26.76	27.93
	251	848.8	22.81	25.65	26.97	27.82
PCS 1900	512	1850.2	21.21	23.98	25.53	26.56
	661	1880	21.26	23.81	25.52	26.54
	810	1909.8	21.22	23.79	25.51	26.32

The time based average power for EDGE

Band	Channel No.	Frequency (MHz)	Time based average Power (dBm)			
			1 slot	2 slot	3 slots	4 slots
GSM 850	128	824.2	16.86	19.01	20.54	21.48
	190	836.6	16.79	18.96	20.43	21.35
	251	848.8	16.87	18.98	20.42	21.26
PCS 1900	512	1850.2	17.95	20.62	22.04	22.91
	661	1880	17.62	20.28	21.69	22.62
	810	1909.8	17.44	20.07	21.51	22.41

WCDMA WWAN Antenna Full Power**WCDMA Band II**

Test Condition	Test Mode	3GPP Sub Test	Averaged Mean Power (dBm)		
			Low Channel	Mid Channel	High Channel
Normal	Rel 99 RMC	1	22.38	22.87	22.67
	HSDPA	1	21.65	21.77	21.91
		2	21.47	21.76	21.97
		3	21.35	21.46	21.55
		4	21.17	21.25	21.34
	HSUPA	1	21.62	21.59	21.81
		2	21.09	21.05	21.53
		3	21.07	20.85	21.18
		4	20.72	20.47	21.07
		5	20.40	20.30	20.84
	DC-HSDPA	1	21.09	21.23	21.84
		2	21.04	20.94	21.73
		3	20.99	20.86	21.35
		4	20.94	20.75	20.97
	HSPA+	1	20.85	20.59	21.27

WCDMA Band IV

Test Condition	Test Mode	3GPP Sub Test	Averaged Mean Power (dBm)		
			Low Channel	Mid Channel	High Channel
Normal	Rel 99 RMC	1	23.59	23.15	23.64
	HSDPA	1	22.35	22.54	22.38
		2	21.14	21.22	21.35
		3	20.93	21.08	21.18
		4	21.09	21.14	21.27
	HSUPA	1	21.89	21.75	21.99
		2	20.58	20.37	20.93
		3	20.82	20.46	20.85
		4	20.74	20.51	20.72
		5	20.79	20.69	20.74
	DC-HSDPA	1	21.28	21.54	21.62
		2	21.48	21.68	21.57
		3	21.69	21.43	21.27
		4	21.37	21.52	21.36
	HSPA+	1	20.36	20.27	20.48

WCDMA Band V

Test Condition	Test Mode	3GPP Sub Test	Averaged Mean Power (dBm)		
			Low Channel	Mid Channel	High Channel
Normal	Rel 99 RMC	1	24.25	24.38	24.18
	HSDPA	1	23.51	23.57	23.45
		2	22.97	23.18	22.37
		3	22.23	22.64	21.79
		4	21.57	22.10	21.37
	HSUPA	1	22.98	22.87	22.95
		2	22.80	22.98	22.29
		3	22.41	22.86	22.14
		4	22.29	22.41	21.96
		5	21.96	22.02	21.66
	DC-HSDPA	1	21.60	21.69	21.33
		2	21.21	21.39	20.97
		3	20.91	21.12	20.67
		4	20.43	20.67	20.55
	HSPA+	1	21.06	21.11	21.02

LTE:**Full Power****LTE Band 2 part1:**

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	23.08	23.17	23.31
		RB1#3	23.33	23.34	23.57
		RB1#5	23.07	23.16	23.35
		RB3#0	23.25	23.28	23.38
		RB3#3	23.17	23.27	23.45
		RB6#0	22.19	22.28	22.44
	16-QAM	RB1#0	22.10	22.32	22.33
		RB1#3	22.29	22.51	22.54
		RB1#5	22.11	22.30	22.36
		RB3#0	22.36	22.24	22.47
		RB3#3	22.37	22.22	22.47
		RB6#0	21.20	21.34	21.35
3M	QPSK	RB1#0	23.17	23.24	23.38
		RB1#8	23.15	23.23	23.41
		RB1#14	23.12	23.24	23.39
		RB6#0	22.16	22.20	22.39
		RB6#9	22.16	22.23	22.38
		RB15#0	22.17	22.25	22.36
	16-QAM	RB1#0	22.67	22.34	22.43
		RB1#8	22.65	22.38	22.43
		RB1#14	22.59	22.36	22.37
		RB6#0	21.22	21.24	21.33
		RB6#9	21.19	21.25	21.29
		RB15#0	21.17	21.18	21.41

LTE Band 2 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	23.06	23.11	23.24
		RB1#13	23.17	23.28	23.40
		RB1#24	23.05	23.15	23.30
		RB15#0	22.16	22.25	22.44
		RB15#10	22.22	22.23	22.33
		RB25#0	22.15	22.22	22.34
	16-QAM	RB1#0	21.91	22.41	22.29
		RB1#13	22.08	22.55	22.50
		RB1#24	21.94	22.42	22.33
		RB15#0	21.16	21.22	21.45
		RB15#10	21.23	21.22	21.38
		RB25#0	21.17	21.22	21.39
10M	QPSK	RB1#0	23.12	23.16	23.31
		RB1#25	23.23	23.35	23.52
		RB1#49	23.15	23.24	23.41
		RB25#0	22.07	22.28	22.33
		RB25#25	22.21	22.26	22.31
		RB50#0	22.19	22.25	22.34
	16-QAM	RB1#0	22.63	22.33	22.31
		RB1#25	22.81	22.49	22.48
		RB1#49	22.67	22.35	22.38
		RB25#0	21.13	21.29	21.42
		RB25#25	21.25	21.28	21.41
		RB50#0	21.15	21.26	21.36

LTE Band 2 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	RB1#0	23.05	23.11	23.21
		RB1#38	23.16	23.26	23.35
		RB1#74	23.10	23.19	23.31
		RB36#0	22.17	22.26	22.34
		RB36#39	22.27	22.32	22.42
		RB75#0	22.21	22.31	22.39
	16-QAM	RB1#0	22.58	22.25	22.61
		RB1#38	22.67	22.39	22.70
		RB1#74	22.63	22.31	22.69
		RB36#0	21.12	21.25	21.28
		RB36#39	21.20	21.25	21.33
		RB75#0	21.16	21.27	21.32
20M	QPSK	RB1#0	23.33	23.42	23.57
		RB1#50	23.03	23.10	23.05
		RB1#99	23.15	23.20	23.25
		RB50#0	22.03	22.21	22.24
		RB50#50	22.19	22.22	22.30
		RB100#0	22.11	22.23	22.27
	16-QAM	RB1#0	22.34	22.30	22.60
		RB1#50	22.62	22.55	23.00
		RB1#99	22.44	22.38	22.78
		RB50#0	21.02	21.20	21.26
		RB50#50	21.19	21.21	21.28
		RB100#0	21.12	21.21	21.29

LTE Band 4 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	23.37	23.38	23.38
		RB1#3	23.51	23.55	23.58
		RB1#5	23.37	23.41	23.36
		RB3#0	23.43	23.45	23.44
		RB3#3	23.38	23.44	23.46
		RB6#0	22.45	22.49	22.43
	16-QAM	RB1#0	22.34	22.50	22.37
		RB1#3	22.50	22.67	22.55
		RB1#5	22.35	22.50	22.42
		RB3#0	22.58	22.36	22.51
		RB3#3	22.60	22.42	22.52
		RB6#0	21.44	21.49	21.36
3M	QPSK	RB1#0	23.41	23.41	23.43
		RB1#8	23.36	23.43	23.43
		RB1#14	23.32	23.41	23.41
		RB6#0	22.38	22.42	22.36
		RB6#9	22.38	22.43	22.40
		RB15#0	22.40	22.46	22.43
	16-QAM	RB1#0	22.88	22.55	22.44
		RB1#8	22.90	22.57	22.45
		RB1#14	22.87	22.53	22.42
		RB6#0	21.44	21.40	21.31
		RB6#9	21.45	21.42	21.32
		RB15#0	21.46	21.38	21.46

LTE Band 4 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	23.28	23.32	23.34
		RB1#13	23.40	23.46	23.47
		RB1#24	23.26	23.33	23.28
		RB15#0	22.42	22.45	22.49
		RB15#10	22.46	22.44	22.47
		RB25#0	22.39	22.41	22.43
	16-QAM	RB1#0	22.16	22.66	22.39
		RB1#13	22.30	22.74	22.56
		RB1#24	22.19	22.63	22.40
		RB15#0	21.41	21.40	21.50
		RB15#10	21.48	21.41	21.45
		RB25#0	21.44	21.39	21.46
10M	QPSK	RB1#0	23.35	23.37	23.40
		RB1#25	23.52	23.57	23.57
		RB1#49	23.36	23.37	23.37
		RB25#0	22.40	22.44	22.45
		RB25#25	22.46	22.42	22.44
		RB50#0	22.41	22.45	22.45
	16-QAM	RB1#0	22.85	22.54	22.37
		RB1#25	23.09	22.69	22.63
		RB1#49	22.96	22.54	22.40
		RB25#0	21.41	21.47	21.54
		RB25#25	21.53	21.47	21.48
		RB50#0	21.45	21.44	21.48

LTE Band 4 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	RB1#0	23.33	23.31	23.38
		RB1#38	23.40	23.48	23.46
		RB1#74	23.32	23.36	23.36
		RB36#0	22.47	22.46	22.56
		RB36#39	22.56	22.52	22.55
		RB75#0	22.51	22.53	22.61
	16-QAM	RB1#0	22.83	22.48	22.67
		RB1#38	22.97	22.60	22.83
		RB1#74	22.92	22.48	22.75
		RB36#0	21.41	21.45	21.47
		RB36#39	21.53	21.50	21.48
		RB75#0	21.47	21.51	21.49
20M	QPSK	RB1#0	23.26	23.30	23.25
		RB1#50	23.62	23.65	23.60
		RB1#99	23.33	23.33	23.28
		RB50#0	22.35	22.37	22.51
		RB50#50	22.52	22.37	22.40
		RB100#0	22.45	22.38	22.46
	16-QAM	RB1#0	22.54	22.52	22.76
		RB1#50	22.94	22.81	23.10
		RB1#99	22.63	22.51	22.85
		RB50#0	21.33	21.38	21.45
		RB50#50	21.52	21.37	21.40
		RB100#0	21.49	21.39	21.49

LTE Band 5 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	23.62	23.62	23.67
		RB1#3	23.77	23.78	23.95
		RB1#5	23.61	23.63	23.77
		RB3#0	23.72	23.70	23.69
		RB3#3	23.68	23.68	23.67
		RB6#0	22.65	22.70	22.76
	16-QAM	RB1#0	22.61	22.71	22.59
		RB1#3	22.82	22.90	22.84
		RB1#5	22.57	22.69	22.62
		RB3#0	22.83	22.56	22.72
		RB3#3	22.85	22.62	22.69
		RB6#0	21.66	21.67	21.64
3M	QPSK	RB1#0	23.68	23.69	23.70
		RB1#8	23.66	23.68	23.71
		RB1#14	23.62	23.72	23.82
		RB6#0	22.59	22.61	22.67
		RB6#9	22.60	22.65	22.69
		RB15#0	22.65	22.69	22.70
	16-QAM	RB1#0	23.14	22.78	22.68
		RB1#8	23.14	22.74	22.66
		RB1#14	23.12	22.76	22.66
		RB6#0	21.68	21.60	21.60
		RB6#9	21.64	21.66	21.60
		RB15#0	21.71	21.65	21.76

LTE Band 5 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	23.57	23.59	23.58
		RB1#13	23.68	23.67	23.72
		RB1#24	23.58	23.64	23.68
		RB15#0	22.67	22.64	22.77
		RB15#10	22.66	22.69	22.66
		RB25#0	22.62	22.68	22.67
	16-QAM	RB1#0	22.44	22.82	22.60
		RB1#13	22.55	22.92	22.75
		RB1#24	22.46	22.82	22.61
		RB15#0	21.73	21.64	21.80
		RB15#10	21.68	21.69	21.71
		RB25#0	21.70	21.65	21.69
10M	QPSK	RB1#0	23.62	23.66	23.68
		RB1#25	23.81	23.83	23.89
		RB1#49	23.68	23.70	23.81
		RB25#0	22.66	22.66	22.69
		RB25#25	22.72	22.74	22.56
		RB50#0	22.73	22.71	22.67
	16-QAM	RB1#0	23.13	22.75	22.58
		RB1#25	23.28	22.83	22.77
		RB1#49	23.15	22.78	22.69
		RB25#0	21.73	21.68	21.76
		RB25#25	21.76	21.71	21.64
		RB50#0	21.73	21.72	21.68

LTE Band 12 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	23.67	23.64	23.60
		RB1#3	23.83	23.74	23.83
		RB1#5	23.64	23.66	23.68
		RB3#0	23.73	23.71	23.71
		RB3#3	23.72	23.75	23.77
		RB6#0	22.68	22.73	22.69
	16-QAM	RB1#0	22.62	22.75	22.59
		RB1#3	22.81	22.91	22.83
		RB1#5	22.67	22.79	22.69
		RB3#0	22.89	22.70	22.77
		RB3#3	22.90	22.76	22.76
		RB6#0	21.74	21.81	21.67
3M	QPSK	RB1#0	23.65	23.69	23.71
		RB1#8	23.64	23.69	23.67
		RB1#14	23.67	23.72	23.73
		RB6#0	22.60	22.61	22.63
		RB6#9	22.70	22.63	22.66
		RB15#0	22.70	22.68	22.67
	16-QAM	RB1#0	23.27	22.85	22.72
		RB1#8	23.28	22.80	22.67
		RB1#14	23.25	22.85	22.70
		RB6#0	21.77	21.70	21.62
		RB6#9	21.76	21.69	21.59
		RB15#0	21.79	21.72	21.79

LTE Band 12 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	23.63	23.61	23.57
		RB1#13	23.79	23.74	23.69
		RB1#24	23.67	23.66	23.63
		RB15#0	22.69	22.69	22.72
		RB15#10	22.75	22.68	22.69
		RB25#0	22.68	22.68	22.67
	16-QAM	RB1#0	22.50	22.89	22.65
		RB1#13	22.67	23.01	22.79
		RB1#24	22.55	22.91	22.69
		RB15#0	21.73	21.75	21.79
		RB15#10	21.87	21.68	21.77
		RB25#0	21.77	21.71	21.73
10M	QPSK	RB1#0	23.61	23.62	23.61
		RB1#25	23.79	23.83	23.83
		RB1#49	23.69	23.70	23.75
		RB25#0	22.66	22.70	22.74
		RB25#25	22.70	22.73	22.75
		RB50#0	22.67	22.75	22.77
	16-QAM	RB1#0	23.19	22.75	22.61
		RB1#25	23.42	22.96	22.86
		RB1#49	23.27	22.84	22.73
		RB25#0	21.72	21.76	21.85
		RB25#25	21.80	21.80	21.87
		RB50#0	21.73	21.79	21.80

LTE Band 13:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	23.32	23.29	23.16
		RB1#13	23.40	23.31	23.25
		RB1#24	23.20	23.23	23.28
		RB15#0	22.09	22.21	22.49
		RB15#10	22.37	22.15	22.22
		RB25#0	22.14	22.15	22.31
	16-QAM	RB1#0	22.01	22.33	22.21
		RB1#13	22.11	22.59	22.36
		RB1#24	22.03	22.54	22.16
		RB15#0	21.01	21.21	21.58
		RB15#10	21.34	21.17	21.25
		RB25#0	21.13	21.16	21.45
10M	QPSK	RB1#0	/	23.48	/
		RB1#25	/	23.38	/
		RB1#49	/	23.36	/
		RB25#0	/	22.00	/
		RB25#25	/	22.01	/
		RB50#0	/	22.03	/
	16-QAM	RB1#0	/	22.49	/
		RB1#25	/	22.89	/
		RB1#49	/	22.67	/
		RB25#0	/	20.99	/
		RB25#25	/	21.14	/
		RB50#0	/	21.03	/

LTE Band 25 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	23.19	23.28	23.48
		RB1#3	23.40	23.48	23.68
		RB1#5	23.19	23.27	23.50
		RB3#0	23.27	23.36	23.57
		RB3#3	23.28	23.39	23.60
		RB6#0	22.30	22.40	22.57
	16-QAM	RB1#0	22.17	22.36	22.50
		RB1#3	22.32	22.57	22.71
		RB1#5	22.18	22.38	22.52
		RB3#0	22.41	22.30	22.65
		RB3#3	22.43	22.32	22.63
		RB6#0	21.31	21.38	21.49
3M	QPSK	RB1#0	23.20	23.27	23.47
		RB1#8	23.18	23.25	23.54
		RB1#14	23.18	23.28	23.49
		RB6#0	22.15	22.27	22.42
		RB6#9	22.21	22.27	22.46
		RB15#0	22.18	22.25	22.47
	16-QAM	RB1#0	22.70	22.38	22.55
		RB1#8	22.69	22.40	22.49
		RB1#14	22.67	22.42	22.43
		RB6#0	21.22	21.27	21.37
		RB6#9	21.24	21.28	21.42
		RB15#0	21.24	21.22	21.50

LTE Band 25 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	23.09	23.22	23.30
		RB1#13	23.21	23.32	23.51
		RB1#24	23.10	23.20	23.39
		RB15#0	22.20	22.27	22.56
		RB15#10	22.25	22.30	22.46
		RB25#0	22.20	22.25	22.46
	16-QAM	RB1#0	21.98	22.44	22.38
		RB1#13	22.12	22.58	22.57
		RB1#24	22.01	22.50	22.43
		RB15#0	21.22	21.26	21.58
		RB15#10	21.27	21.25	21.51
		RB25#0	21.23	21.26	21.50
10M	QPSK	RB1#0	23.16	23.23	23.39
		RB1#25	23.40	23.48	23.60
		RB1#49	23.24	23.28	23.51
		RB25#0	22.17	22.34	22.54
		RB25#25	22.30	22.32	22.38
		RB50#0	22.24	22.31	22.48
	16-QAM	RB1#0	22.68	22.37	22.35
		RB1#25	22.87	22.56	22.65
		RB1#49	22.72	22.42	22.49
		RB25#0	21.18	21.38	21.63
		RB25#25	21.32	21.33	21.45
		RB50#0	21.22	21.34	21.46

LTE Band 25 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	RB1#0	23.12	23.18	23.28
		RB1#38	23.24	23.31	23.45
		RB1#74	23.17	23.28	23.42
		RB36#0	22.22	22.38	22.46
		RB36#39	22.33	22.39	22.42
		RB75#0	22.26	22.38	22.43
	16-QAM	RB1#0	22.65	22.33	22.63
		RB1#38	22.73	22.45	22.75
		RB1#74	22.73	22.44	22.85
		RB36#0	21.20	21.33	21.39
		RB36#39	21.27	21.32	21.35
		RB75#0	21.23	21.35	21.34
20M	QPSK	RB1#0	23.08	23.17	23.16
		RB1#50	23.41	23.45	23.52
		RB1#99	23.18	23.29	23.39
		RB50#0	22.11	22.28	22.27
		RB50#50	22.23	22.29	22.17
		RB100#0	22.15	22.27	22.25
	16-QAM	RB1#0	22.35	22.34	22.69
		RB1#50	22.67	22.62	23.03
		RB1#99	22.50	22.45	22.92
		RB50#0	21.07	21.27	21.27
		RB50#50	21.23	21.29	21.17
		RB100#0	21.21	21.30	21.25

LTE Band 26 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	23.71	23.65	23.71
		RB1#3	23.90	23.84	23.94
		RB1#5	23.67	23.63	23.79
		RB3#0	23.77	23.73	23.73
		RB3#3	23.75	23.69	23.65
		RB6#0	22.74	22.70	22.75
	16-QAM	RB1#0	22.68	22.70	22.66
		RB1#3	22.86	22.99	22.82
		RB1#5	22.64	22.71	22.65
		RB3#0	22.94	22.65	22.75
		RB3#3	22.91	22.65	22.68
		RB6#0	21.74	21.74	21.67
3M	QPSK	RB1#0	23.75	23.68	23.76
		RB1#8	23.70	23.69	23.78
		RB1#14	23.67	23.67	23.83
		RB6#0	22.66	22.62	22.66
		RB6#9	22.69	22.66	22.73
		RB15#0	22.72	22.69	22.72
	16-QAM	RB1#0	23.26	22.75	22.73
		RB1#8	23.18	22.78	22.71
		RB1#14	23.15	22.77	22.64
		RB6#0	21.74	21.60	21.64
		RB6#9	21.75	21.67	21.57
		RB15#0	21.80	21.69	21.78

LTE Band 26 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	23.63	23.59	23.60
		RB1#13	23.71	23.68	23.72
		RB1#24	23.62	23.62	23.69
		RB15#0	22.71	22.66	22.80
		RB15#10	22.73	22.69	22.68
		RB25#0	22.67	22.68	22.73
	16-QAM	RB1#0	22.48	22.85	22.60
		RB1#13	22.59	22.95	22.76
		RB1#24	22.51	22.83	22.61
		RB15#0	21.76	21.64	21.86
		RB15#10	21.77	21.70	21.70
		RB25#0	21.74	21.68	21.76
10M	QPSK	RB1#0	23.72	23.62	23.67
		RB1#25	23.91	23.83	23.91
		RB1#49	23.72	23.68	23.80
		RB25#0	22.69	22.72	22.72
		RB25#25	22.76	22.76	22.63
		RB50#0	22.75	22.74	22.69
	16-QAM	RB1#0	23.20	22.72	22.57
		RB1#25	23.36	22.97	22.84
		RB1#49	23.24	22.78	22.66
		RB25#0	21.76	21.76	21.81
		RB25#25	21.81	21.79	21.73
		RB50#0	21.78	21.76	21.72

LTE Band 26 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	RB1#0	23.66	23.63	23.62
		RB1#38	23.73	23.70	23.72
		RB1#74	23.69	23.68	23.76
		RB36#0	22.72	22.76	22.75
		RB36#39	22.81	22.80	22.75
		RB75#0	22.79	22.78	22.75
	16-QAM	RB1#0	23.15	22.75	22.88
		RB1#38	23.24	22.78	22.97
		RB1#74	23.19	22.76	22.97
		RB36#0	21.69	21.71	21.64
		RB36#39	21.80	21.74	21.65
		RB75#0	21.78	21.75	21.63

LTE Band 66 part1:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	23.48	23.49	23.55
		RB1#3	23.63	23.61	23.70
		RB1#5	23.46	23.50	23.55
		RB3#0	23.53	23.57	23.54
		RB3#3	23.52	23.57	23.58
		RB6#0	22.57	22.60	22.63
	16-QAM	RB1#0	22.45	22.61	22.49
		RB1#3	22.61	22.77	22.67
		RB1#5	22.46	22.60	22.50
		RB3#0	22.68	22.50	22.59
		RB3#3	22.68	22.49	22.58
		RB6#0	21.55	21.63	21.49
3M	QPSK	RB1#0	23.54	23.58	23.61
		RB1#8	23.52	23.57	23.64
		RB1#14	23.55	23.59	23.60
		RB6#0	22.54	22.57	22.52
		RB6#9	22.50	22.53	22.56
		RB15#0	22.53	22.58	22.56
	16-QAM	RB1#0	23.03	22.68	22.55
		RB1#8	23.00	22.69	22.54
		RB1#14	23.05	22.70	22.58
		RB6#0	21.58	21.56	21.47
		RB6#9	21.57	21.59	21.47
		RB15#0	21.57	21.54	21.56

LTE Band 66 part2:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
5M	QPSK	RB1#0	23.47	23.49	23.47
		RB1#13	23.58	23.61	23.59
		RB1#24	23.49	23.54	23.52
		RB15#0	22.55	22.57	22.58
		RB15#10	22.57	22.56	22.55
		RB25#0	22.54	22.58	22.55
	16-QAM	RB1#0	22.34	22.77	22.50
		RB1#13	22.47	22.84	22.63
		RB1#24	22.40	22.79	22.56
		RB15#0	21.59	21.60	21.59
		RB15#10	21.63	21.55	21.58
		RB25#0	21.57	21.54	21.53
10M	QPSK	RB1#0	23.52	23.57	23.60
		RB1#25	23.84	23.71	23.75
		RB1#49	23.58	23.57	23.60
		RB25#0	22.54	22.65	22.63
		RB25#25	22.67	22.63	22.52
		RB50#0	22.66	22.64	22.60
	16-QAM	RB1#0	23.04	22.66	22.50
		RB1#25	23.26	22.81	22.67
		RB1#49	23.16	22.70	22.59
		RB25#0	21.58	21.64	21.70
		RB25#25	21.73	21.63	21.59
		RB50#0	21.65	21.62	21.62

LTE Band 66 part3:

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
15M	QPSK	RB1#0	23.45	23.48	23.50
		RB1#38	23.63	23.62	23.64
		RB1#74	23.46	23.50	23.55
		RB36#0	22.60	22.71	22.78
		RB36#39	22.73	22.71	22.66
		RB75#0	22.70	22.72	22.72
	16-QAM	RB1#0	22.94	22.58	22.80
		RB1#38	23.20	22.72	22.87
		RB1#74	23.07	22.67	22.86
		RB36#0	21.58	21.63	21.66
		RB36#39	21.70	21.65	21.55
		RB75#0	21.67	21.67	21.60
20M	QPSK	RB1#0	23.41	23.42	23.37
		RB1#50	23.78	23.77	23.74
		RB1#99	23.49	23.46	23.41
		RB50#0	22.52	22.60	22.65
		RB50#50	22.67	22.57	22.39
		RB100#0	22.60	22.60	22.54
	16-QAM	RB1#0	22.75	22.58	22.91
		RB1#50	23.10	22.94	23.16
		RB1#99	22.79	22.65	22.91
		RB50#0	21.51	21.58	21.67
		RB50#50	21.65	21.59	21.38
		RB100#0	21.60	21.56	21.50

STANDALONE SAR TEST EXCLUSION CONSIDERATIONS

Antennas Location:



Note: The LTE DIV antenna can't transmit and is receiving only.

Antenna Distance To Edge

Antenna	Antenna Distance To Edge(mm)					
	Front	Back	Left	Right	Top	Bottom
WWAN	<5	<5	<5	38	146	<5

NOTE:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$$

$$[\sqrt{f(\text{GHz})}] \leq 3.0$$
 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

1. $f(\text{GHz})$ is the RF channel transmit frequency in GHz.

2. Power and distance are rounded to the nearest mW and mm before calculation.

3. The result is rounded to one decimal place for comparison.

4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

Standalone SAR test exclusion considerations

Mode	Frequency (MHz)	Target Power (Avg/dBm)	Target Power (Avg/mW)	Exclusion considerations	Test ExclusionDistance(mm)
GSM 850	836.6	32.0	1584.89	38.10	146
PCS 1900	1880	31.0	1258.93	45.43	146
WCDMA 2	1880	23.0	199.53	1069.40	146
WCDMA 4	1732.6	24.0	251.19	1073.96	146
WCDMA 5	836.4	24.5	281.84	699.31	146
LTE Band 2	1880	24.0	251.19	1069.40	146
LTE Band 4	1732.6	24.0	251.19	1073.96	146
LTE Band 5	836.5	24.0	251.19	699.37	146
LTE Band 12	707.5	24.0	251.19	631.13	146
LTE Band 13	782	23.5	223.87	670.10	146
LTE Band 25	1882.5	24.0	251.19	1069.33	146
LTE Band 26	831.5	24.0	251.19	696.66	146
LTE Band 66	1745	24.0	251.19	1073.55	146
LTE Band 41/ 71	Please refer to Report no:SZGMA210809-33453E-20, FCC ID: 2ADINS6505L				

SAR test exclusion for the EUT edge considerations Result

Mode	Back	Front	Left	Right	Top	Bottom
GSM 850	Required	Required	Required	Required	Required	Required
PCS 1900	Required	Required	Required	Required	Required	Required
WCDMA Band 2	Required	Required	Required	Required	Exclusion	Required
WCDMA Band 4	Required	Required	Required	Required	Exclusion	Required
WCDMA Band 5	Required	Required	Required	Required	Exclusion	Required
LTEBand 2	Required	Required	Required	Required	Exclusion	Required
LTEBand 4	Required	Required	Required	Required	Exclusion	Required
LTEBand 5	Required	Required	Required	Required	Exclusion	Required
LTEBand 12	Required	Required	Required	Required	Exclusion	Required
LTE Band 13	Required	Required	Required	Required	Exclusion	Required
LTE Band 25	Required	Required	Required	Required	Exclusion	Required
LTE Band 26	Required	Required	Required	Required	Exclusion	Required
LTE Band 66	Required	Required	Required	Required	Exclusion	Required
LTE Band 41/71	Please refer to Report no: SZGMA210809-33453E-20, FCC ID: 2ADINS6505L					

Note:**Required:** The distance is less than Test Exclusion Distance, testing is required.**Exclusion*:** SAR test exclusion evaluation has been done above.**Exclusion:** The distance is larger than Test Exclusion Distance, testing is not required.

SAR MEASUREMENT RESULTS

This page summarizes the results of the performed diametric evaluation.

SAR Test Data

Environmental Conditions

Test Date	2021/09/01	2021/09/02	2021/09/03	2021/09/04
Freq. Band(MHz)	835	750	1900	1900
Temperature	23.1°C	22.9°C	23.2°C	23.2°C
Relative Humidity	52 %	55 %	53 %	53 %
Test Engineer	Nike Wu	Nike Wu	Nike Wu	Nike Wu

Test Date	2021/09/06
Freq. Band(MHz)	1800
Temperature	23.3°C
Relative Humidity	55 %
Test Engineer	Nike Wu

GSM850/GPRS850 :

EUT Position	Freq. (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	836.6	GSM voice	31.75	32.00	1.059	0.342	0.362	1.6	1
Head Left Tilted	836.6	GSM voice	31.75	32.00	1.059	0.132	0.140	1.6	2
Head Right Cheek	836.6	GSM voice	31.75	32.00	1.059	0.327	0.346	1.6	3
Head Right Tilted	836.6	GSM voice	31.75	32.00	1.059	0.127	0.135	1.6	4
BodyBack(10mm)	836.6	GSM voice	31.75	32.00	1.059	0.010	0.011	1.6	169
Body Back(10mm)	836.6	GPRS 4TS	30.93	31.00	1.016	0.354	0.360	1.6	5
Body Front(10mm)	836.6	GPRS 4TS	30.93	31.00	1.016	0.484	0.492	1.6	6
Body Hotspot Back(10mm)	836.6	GPRS 4TS	30.93	31.00	1.016	0.449	0.456	1.6	7
Body Hotspot Front(10mm)	836.6	GPRS 4TS	30.93	31.00	1.016	0.478	0.486	1.6	8
Body Hotspot Left(10mm)	836.6	GPRS 4TS	30.93	31.00	1.016	0.293	0.298	1.6	9
Body Hotspot Right(10mm)	836.6	GPRS 4TS	30.93	31.00	1.016	0.200	0.203	1.6	10
Body Hotspot Bottom(10mm)	836.6	GPRS 4TS	30.93	31.00	1.016	0.508	0.516	1.6	11
Body Hotspot Top(10mm)	836.6	GPRS 4TS	30.93	31.00	1.016	0.012	0.012	1.6	12

EUT Position	Freq. (MHz)	Test Mode	Max. Meas. Power ()	Max. Rated Power ()	Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Body Left(10mm)	836.6	GPRS 2TS						4.0	
Body Right(10mm)	836.6	GPRS 2TS						4.0	
Body Back(10mm)	836.6	GPRS 2TS						4.0	

PCS1900/GPRS1900 :

EUT Position	Freq. (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	1880	GSM voice	30.52	31.0	1.117	0.099	0.111	1.6	13
Head Left Tilted	1880	GSM voice	30.52	31.0	1.117	0.049	0.055	1.6	14
Head Right Cheek	1880	GSM voice	30.52	31.0	1.117	0.088	0.098	1.6	15
Head Right Tilted	1880	GSM voice	30.52	31.0	1.117	0.057	0.064	1.6	16
Body Back(10mm)	1880	GSM voice	30.52	31.0	1.117	0.235	0.262	1.6	171
Body Back(10mm)	1880	GPRS 4TS	29.54	30.0	1.112	0.395	0.439	1.6	17
Body Front(10mm)	1880	GPRS 4TS	29.54	30.0	1.112	0.281	0.312	1.6	18
Body Hotspot Back(10mm)	1880	GPRS 4TS	29.54	30.0	1.112	0.395	0.439	1.6	19
Body Hotspot Front(10mm)	1880	GPRS 4TS	29.54	30.0	1.112	0.223	0.248	1.6	20
Body Hotspot Left(10mm)	1880	GPRS 4TS	29.54	30.0	1.112	0.087	0.097	1.6	21
Body Hotspot Right(10mm)	1880	GPRS 4TS	29.54	30.0	1.112	0.032	0.036	1.6	22
Body Hotspot Bottom(10mm)	1880	GPRS 4TS	29.54	30.0	1.112	0.028	0.031	1.6	23
Body Hotspot Top(10mm)	1880	GPRS 4TS	29.54	30.0	1.112	0.021	0.023	1.6	24

Note:According KDB865664 D01 Repeated measurements are required only when the measured SAR is ≥ 0.80 W/kg.

If the measured SAR value of the initial repeated measurement is < 1.45 W/kg with $\leq 20\%$ variation, only one repeated measurement is required to reaffirm that the results are not expected to have substantial variations.

A second repeated measurement is required only if the measured result for the initial repeated measurement is within 10% of the SAR limit and vary by more than 20%..

WCDMA Band 2 :

EUT Position	Freq. (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	1880	RMC	22.87	23.00	1.030	0.184	0.190	1.6	25
Head Left Tilted	1880	RMC	22.87	23.00	1.030	0.137	0.141	1.6	26
Head Right Cheek	1880	RMC	22.87	23.00	1.030	0.124	0.128	1.6	27
Head Right Tilted	1880	RMC	22.87	23.00	1.030	0.081	0.083	1.6	28
Body Back(10mm)	1880	RMC	22.87	23.00	1.030	0.555	0.572	1.6	29
Body Front(10mm)	1880	RMC	22.87	23.00	1.030	0.387	0.399	1.6	30
Body Hotspot Back(10mm)	1880	RMC	22.87	23.00	1.030	0.532	0.548	1.6	31
Body Hotspot Front(10mm)	1880	RMC	22.87	23.00	1.030	0.355	0.366	1.6	32
Body Hotspot Left(10mm)	1880	RMC	22.87	23.00	1.030	0.316	0.326	1.6	33
Body Hotspot Right(10mm)	1880	RMC	22.87	23.00	1.030	0.080	0.082	1.6	34
Body Hotspot Bottom(10mm)	1880	RMC	22.87	23.00	1.030	0.624	0.643	1.6	35

WCDMA Band 4 :

EUT Position	Freq. (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	1732.6	RMC	23.14	24.00	1.216	0.068	0.083	1.6	37
Head Left Tilted	1732.6	RMC	23.14	24.00	1.216	0.050	0.061	1.6	38
Head Right Cheek	1732.6	RMC	23.14	24.00	1.216	0.081	0.099	1.6	39
Head Right Tilted	1732.6	RMC	23.14	24.00	1.216	0.033	0.040	1.6	40
Body Back(10mm)	1732.6	RMC	23.14	24.00	1.216	0.280	0.341	1.6	41
Body Front(10mm)	1732.6	RMC	23.14	24.00	1.216	0.222	0.270	1.6	41
Body Hotspot Back(10mm)	1732.6	RMC	23.14	24.00	1.216	0.339	0.412	1.6	43
Body Hotspot Front(10mm)	1732.6	RMC	23.14	24.00	1.216	0.257	0.313	1.6	44
Body Hotspot Left(10mm)	1732.6	RMC	23.14	24.00	1.216	0.080	0.097	1.6	45
Body Hotspot Right(10mm)	1732.6	RMC	23.14	24.00	1.216	0.046	0.056	1.6	46
Body Hotspot Bottom(10mm)	1732.6	RMC	23.14	24.00	1.216	0.597	0.726	1.6	47

WCDMA Band 5 :

EUT Position	Freq. (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
					Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	836.4	RMC	24.38	24.50	1.028	0.301	0.309	1.6	49
Head Left Tilted	836.4	RMC	24.38	24.50	1.028	0.159	0.163	1.6	50
Head Right Cheek	836.4	RMC	24.38	24.50	1.028	0.281	0.289	1.6	51
Head Right Tilted	836.4	RMC	24.38	24.50	1.028	0.140	0.144	1.6	52
Body Back(10mm)	836.4	RMC	24.38	24.50	1.028	0.403	0.414	1.6	53
Body Front(10mm)	836.4	RMC	24.38	24.50	1.028	0.473	0.486	1.6	54
Body Hotspot Back(10mm)	836.4	RMC	24.38	24.50	1.028	0.357	0.367	1.6	55
Body Hotspot Front(10mm)	836.4	RMC	24.38	24.50	1.028	0.508	0.522	1.6	56
Body Hotspot Left(10mm)	836.4	RMC	24.38	24.50	1.028	0.273	0.281	1.6	57
Body Hotspot Right(10mm)	836.4	RMC	24.38	24.50	1.028	0.193	0.198	1.6	58
Body Hotspot Bottom(10mm)	836.4	RMC	24.38	24.50	1.028	0.476	0.489	1.6	59

LTE FDD Band 2 :

EUT Position	Freq. (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	1880	QPSK	20	1	23.42	24.00	1.143	0.158	0.181	1.6	61
	1880	QPSK	20	50%	22.21	24.00	1.510	0.130	0.196	1.6	61-2
Head Left Tilted	1880	QPSK	20	1	23.42	24.00	1.143	0.113	0.129	1.6	62
	1880	QPSK	20	50%	22.21	24.00	1.510	0.091	0.137	1.6	62-2
Head Right Cheek	1880	QPSK	20	1	23.42	24.00	1.143	0.124	0.142	1.6	63
	1880	QPSK	20	50%	22.21	24.00	1.510	0.087	0.131	1.6	63-2
Head Right Tilted	1880	QPSK	20	1	23.42	24.00	1.143	0.089	0.102	1.6	64
	1880	QPSK	20	50%	22.21	24.00	1.510	0.080	0.121	1.6	64-2
Body Back(10mm)	1880	QPSK	20	1	23.42	24.00	1.143	0.504	0.576	1.6	65
	1880	QPSK	20	50%	22.21	24.00	1.510	0.446	0.673	1.6	65-2
Body Front(10mm)	1880	QPSK	20	1	23.42	24.00	1.143	0.360	0.411	1.6	66
	1880	QPSK	20	50%	22.21	24.00	1.510	0.304	0.459	1.6	66-2
BodyHotpot Back(10mm)	1880	QPSK	20	1	23.42	24.00	1.143	0.503	0.575	1.6	67
	1880	QPSK	20	50%	22.21	24.00	1.510	0.452	0.683	1.6	67-2
BodyHotpot Front(10mm)	1880	QPSK	20	1	23.42	24.00	1.143	0.359	0.410	1.6	68
	1880	QPSK	20	50%	22.21	24.00	1.510	0.303	0.458	1.6	68-2
BodyHotpot Left(10mm)	1880	QPSK	20	1	23.42	24.00	1.143	0.211	0.241	1.6	69
	1880	QPSK	20	50%	22.21	24.00	1.510	0.177	0.267	1.6	69-2
BodyHotpot Right(10mm)	1880	QPSK	20	1	23.42	24.00	1.143	0.070	0.080	1.6	70
	1880	QPSK	20	50%	22.21	24.00	1.510	0.058	0.088	1.6	70-2
BodyHotpot Bottom(10mm)	1880	QPSK	20	1	23.42	24.00	1.143	0.692	0.791	1.6	71
	1880	QPSK	20	50%	22.22	24.00	1.507	0.587	0.884	1.6	71-2
	1860	QPSK	20	50%	22.19	24.00	1.517	0.298	0.452	1.6	71-3
	1900	QPSK	20	50%	22.30	24.00	1.479	0.470	0.695	1.6	71-4
	1880	QPSK	20	100%	22.23	24.00	1.503	0.380	0.571	1.6	71-5

LTE FDD Band 4 :

EUT Position	Freq. (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	1732.5	QPSK	20	1	23.65	24.00	1.084	0.075	0.081	1.6	73
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.060	0.087	1.6	73-2
Head Left Tilted	1732.5	QPSK	20	1	23.65	24.00	1.084	0.049	0.053	1.6	74
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.036	0.052	1.6	74-2
Head Right Cheek	1732.5	QPSK	20	1	23.65	24.00	1.084	0.100	0.108	1.6	75
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.079	0.115	1.6	75-2
Head Right Tilted	1732.5	QPSK	20	1	23.65	24.00	1.084	0.033	0.036	1.6	76
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.019	0.028	1.6	76-2
Body Back(10mm)	1732.5	QPSK	20	1	23.65	24.00	1.084	0.327	0.354	1.6	77
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.263	0.383	1.6	77-2
Body Front(10mm)	1732.5	QPSK	20	1	23.65	24.00	1.084	0.231	0.250	1.6	78
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.183	0.266	1.6	78-2
BodyHotpot Back(10mm)	1732.5	QPSK	20	1	23.65	24.00	1.084	0.326	0.353	1.6	79
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.262	0.381	1.6	79-2
BodyHotpot Front(10mm)	1732.5	QPSK	20	1	23.65	24.00	1.084	0.230	0.249	1.6	80
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.182	0.265	1.6	80-2
BodyHotpot Left(10mm)	1732.5	QPSK	20	1	23.65	24.00	1.084	0.210	0.228	1.6	81
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.169	0.246	1.6	81-2
BodyHotpot Right(10mm)	1732.5	QPSK	20	1	23.65	24.00	1.084	0.074	0.080	1.6	82
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.058	0.084	1.6	82-2
BodyHotpot Bottom(10mm)	1732.5	QPSK	20	1	23.65	24.00	1.084	0.574	0.622	1.6	83
	1732.5	QPSK	20	50%	22.37	24.00	1.455	0.462	0.672	1.6	83-2

LTE FDD Band 5 :

EUT Position	Freq. (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	836.5	QPSK	10	1	23.83	24.00	1.040	0.329	0.342	1.6	85
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.264	0.359	1.6	85-2
Head Left Tilted	836.5	QPSK	10	1	23.83	24.00	1.040	0.145	0.151	1.6	86
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.118	0.161	1.6	86-2
Head Right Cheek	836.5	QPSK	10	1	23.83	24.00	1.040	0.311	0.323	1.6	87
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.253	0.344	1.6	87-2
Head Right Tilted	836.5	QPSK	10	1	23.83	24.00	1.040	0.168	0.175	1.6	88
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.136	0.185	1.6	88-2
Body Back(10mm)	836.5	QPSK	10	1	23.83	24.00	1.040	0.342	0.356	1.6	89
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.277	0.377	1.6	89-2
Body Front(10mm)	836.5	QPSK	10	1	23.83	24.00	1.040	0.397	0.413	1.6	90
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.329	0.448	1.6	90-2
BodyHotpot Back(10mm)	836.5	QPSK	10	1	23.83	24.00	1.040	0.341	0.355	1.6	91
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.252	0.343	1.6	91-2
BodyHotpot Front(10mm)	836.5	QPSK	10	1	23.83	24.00	1.040	0.443	0.461	1.6	92
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.362	0.493	1.6	92-2
BodyHotpot Left(10mm)	836.5	QPSK	10	1	23.83	24.00	1.040	0.294	0.306	1.6	93
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.246	0.335	1.6	93-2
BodyHotpot Right(10mm)	836.5	QPSK	10	1	23.83	24.00	1.040	0.177	0.184	1.6	94
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.144	0.196	1.6	94-2
BodyHotpot Bottom(10mm)	836.5	QPSK	10	1	23.83	24.00	1.040	0.457	0.475	1.6	95
	836.5	QPSK	10	50%	22.66	24.00	1.361	0.374	0.509	1.6	95-2

LTE FDD Band 12 :

EUT Position	Freq. (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	707.5	QPSK	10	1	23.83	24.00	1.040	0.153	0.159	1.6	97
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.132	0.141	1.6	97-2
Head Left Tilted	707.5	QPSK	10	1	23.83	24.00	1.040	0.059	0.061	1.6	98
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.053	0.057	1.6	98-2
Head Right Cheek	707.5	QPSK	10	1	23.83	24.00	1.040	0.150	0.156	1.6	99
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.131	0.140	1.6	99-2
Head Right Tilted	707.5	QPSK	10	1	23.83	24.00	1.040	0.083	0.086	1.6	100
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.072	0.078	1.6	100-2
Body Back(10mm)	707.5	QPSK	10	1	23.83	24.00	1.040	0.257	0.267	1.6	101
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.222	0.238	1.6	101-2
Body Front(10mm)	707.5	QPSK	10	1	23.83	24.00	1.040	0.195	0.203	1.6	102
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.171	0.183	1.6	102-2
BodyHotpot Back(10mm)	707.5	QPSK	10	1	23.83	24.00	1.040	0.250	0.260	1.6	103
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.214	0.229	1.6	103-2
BodyHotpot Front(10mm)	707.5	QPSK	10	1	23.83	24.00	1.040	0.190	0.198	1.6	104
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.166	0.178	1.6	104-2
BodyHotpot Left(10mm)	707.5	QPSK	10	1	23.83	24.00	1.040	0.355	0.369	1.6	105
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.309	0.331	1.6	105-2
BodyHotpot Right(10mm)	707.5	QPSK	10	1	23.83	24.00	1.040	0.173	0.180	1.6	106
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.152	0.163	1.6	106-2
BodyHotpot Bottom(10mm)	707.5	QPSK	10	1	23.83	24.00	1.040	0.162	0.168	1.6	107
	707.5	QPSK	10	50%	23.70	24.00	1.072	0.142	0.152	1.6	107-2

LTE FDD Band 13 :

EUT Position	Freq. (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	782	QPSK	10	1	23.31	23.50	1.045	0.174	0.182	1.6	109
	782	QPSK	10	50%	22.00	23.50	1.413	0.136	0.192	1.6	109-2
Head Left Tilted	782	QPSK	10	1	23.31	23.50	1.045	0.094	0.098	1.6	110
	782	QPSK	10	50%	22.00	23.50	1.413	0.076	0.107	1.6	110-2
Head Right Cheek	782	QPSK	10	1	23.31	23.50	1.045	0.153	0.160	1.6	111
	782	QPSK	10	50%	22.00	23.50	1.413	0.119	0.168	1.6	111-2
Head Right Tilted	782	QPSK	10	1	23.31	23.50	1.045	0.068	0.071	1.6	112
	782	QPSK	10	50%	22.00	23.50	1.413	0.052	0.074	1.6	112-2
Body Back(10mm)	782	QPSK	10	1	23.31	23.50	1.045	0.219	0.229	1.6	113
	782	QPSK	10	50%	22.00	23.50	1.413	0.165	0.233	1.6	113-2
Body Front(10mm)	782	QPSK	10	1	23.31	23.50	1.045	0.185	0.193	1.6	114
	782	QPSK	10	50%	22.00	23.50	1.413	0.136	0.192	1.6	114-2
BodyHotpot Back(10mm)	782	QPSK	10	1	23.31	23.50	1.045	0.213	0.223	1.6	115
	782	QPSK	10	50%	22.00	23.50	1.413	0.159	0.225	1.6	115-2
BodyHotpot Front(10mm)	782	QPSK	10	1	23.31	23.50	1.045	0.192	0.201	1.6	116
	782	QPSK	10	50%	22.00	23.50	1.413	0.141	0.199	1.6	116-2
BodyHotpot Left(10mm)	782	QPSK	10	1	23.31	23.50	1.045	0.224	0.234	1.6	117
	782	QPSK	10	50%	22.00	23.50	1.413	0.187	0.264	1.6	117-2
BodyHotpot Right(10mm)	782	QPSK	10	1	23.31	23.50	1.045	0.143	0.149	1.6	118
	782	QPSK	10	50%	22.00	23.50	1.413	0.109	0.154	1.6	118-2
BodyHotpot Bottom(10mm)	782	QPSK	10	1	23.31	23.50	1.045	0.206	0.215	1.6	120
	782	QPSK	10	50%	22.00	23.50	1.413	0.155	0.219	1.6	120-2

LTE FDD Band 25 :

EUT Position	Freq. (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	1882.5	QPSK	20	1	23.48	24.00	1.127	0.166	0.187	1.6	121
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.141	0.210	1.6	121-2
Head Left Tilted	1882.5	QPSK	20	1	23.48	24.00	1.127	0.125	0.141	1.6	122
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.103	0.153	1.6	122-2
Head Right Cheek	1882.5	QPSK	20	1	23.48	24.00	1.127	0.107	0.121	1.6	123
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.086	0.128	1.6	123-2
Head Right Tilted	1882.5	QPSK	20	1	23.48	24.00	1.127	0.082	0.092	1.6	124
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.052	0.077	1.6	124-2
Body Back(10mm)	1882.5	QPSK	20	1	23.48	24.00	1.127	0.573	0.646	1.6	125
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.507	0.753	1.6	125-2
Body Front(10mm)	1882.5	QPSK	20	1	23.48	24.00	1.127	0.452	0.509	1.6	126
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.399	0.593	1.6	126-2
BodyHotpot Back(10mm)	1882.5	QPSK	20	1	23.48	24.00	1.127	0.612	0.690	1.6	127
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.518	0.770	1.6	127-2
BodyHotpot Front(10mm)	1882.5	QPSK	20	1	23.48	24.00	1.127	0.457	0.515	1.6	128
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.400	0.594	1.6	128-2
BodyHotpot Left(10mm)	1882.5	QPSK	20	1	23.48	24.00	1.127	0.062	0.070	1.6	129
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.057	0.085	1.6	129-2
BodyHotpot Right(10mm)	1882.5	QPSK	20	1	23.48	24.00	1.127	0.067	0.076	1.6	130
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.048	0.071	1.6	130-2
BodyHotpot Bottom(10mm)	1882.5	QPSK	20	1	23.48	24.00	1.127	0.506	0.570	1.6	131
	1882.5	QPSK	20	50%	22.28	24.00	1.486	0.437	0.649	1.6	131-2

LTE FDD Band 26 :

EUT Position	Freq. (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	831.5	QPSK	15	1	23.84	24.00	1.021	0.334	0.347	1.6	133
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.267	0.355	1.6	133-2
Head Left Tilted	831.5	QPSK	15	1	23.84	24.00	1.021	0.140	0.145	1.6	134
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.117	0.156	1.6	134-2
Head Right Cheek	831.5	QPSK	15	1	23.84	24.00	1.021	0.291	0.302	1.6	135
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.247	0.329	1.6	135-2
Head Right Tilted	831.5	QPSK	15	1	23.84	24.00	1.021	0.159	0.165	1.6	136
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.134	0.178	1.6	136-2
Body Back(10mm)	831.5	QPSK	15	1	23.84	24.00	1.021	0.316	0.328	1.6	137
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.265	0.353	1.6	137-2
Body Front(10mm)	831.5	QPSK	15	1	23.84	24.00	1.021	0.336	0.3649	1.6	138
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.284	0.378	1.6	138-2
BodyHotpot Back(10mm)	831.5	QPSK	15	1	23.84	24.00	1.021	0.334	0.347	1.6	139
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.272	0.362	1.6	139-2
BodyHotpot Front(10mm)	831.5	QPSK	15	1	23.84	24.00	1.021	0.289	0.300	1.6	140
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.244	0.325	1.6	140-2
BodyHotpot Left(10mm)	831.5	QPSK	15	1	23.84	24.00	1.021	0.334	0.347	1.6	141
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.280	0.373	1.6	141-2
BodyHotpot Right(10mm)	831.5	QPSK	15	1	23.84	24.00	1.021	0.229	0.238	1.6	142
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.192	0.255	1.6	142-2
BodyHotpot Bottom(10mm)	831.5	QPSK	15	1	23.84	24.00	1.021	0.383	0.397	1.6	143
	831.5	QPSK	15	50%	22.76	24.00	1.033	0.319	0.424	1.6	143-2

LTE FDD Band 66 :

EUT Position	Freq. (MHz)	Modulation Type	Bandwidth (MHz)	RB	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)				
							Scaled Factor	Meas. SAR	Scaled SAR	Limit	Plot
Head Left Cheek	1745	QPSK	20	1	23.77	24.00	1.054	0.055	0.058	1.6	157
	1745	QPSK	20	50%	22.60	24.00	1.380	0.053	0.073	1.6	157-2
Head Left Tilted	1745	QPSK	20	1	23.77	24.00	1.054	0.049	0.052	1.6	158
	1745	QPSK	20	50%	22.60	24.00	1.380	0.039	0.054	1.6	158-2
Head Right Cheek	1745	QPSK	20	1	23.77	24.00	1.054	0.078	0.082	1.6	159
	1745	QPSK	20	50%	22.60	24.00	1.380	0.063	0.088	1.6	159-2
Head Right Tilted	1745	QPSK	20	1	23.77	24.00	1.054	0.036	0.038	1.6	160
	1745	QPSK	20	50%	22.60	24.00	1.380	0.031	0.043	1.6	160-2
Body Back(10mm)	1745	QPSK	20	1	23.77	24.00	1.054	0.421	0.444	1.6	161
	1745	QPSK	20	50%	22.60	24.00	1.380	0.357	0.493	1.6	161-2
Body Front(10mm)	1745	QPSK	20	1	23.77	24.00	1.054	0.357	0.376	1.6	162
	1745	QPSK	20	50%	22.60	24.00	1.380	0.333	0.460	1.6	162-2
BodyHotpot Back(10mm)	1745	QPSK	20	1	23.77	24.00	1.054	0.430	0.453	1.6	163
	1745	QPSK	20	50%	22.60	24.00	1.380	0.361	0.498	1.6	163-2
BodyHotpot Front(10mm)	1745	QPSK	20	1	23.77	24.00	1.054	0.408	0.430	1.6	164
	1745	QPSK	20	50%	22.60	24.00	1.380	0.336	0.464	1.6	164-2
BodyHotpot Left(10mm)	1745	QPSK	20	1	23.77	24.00	1.054	0.174	0.183	1.6	165
	1745	QPSK	20	50%	22.60	24.00	1.380	0.147	0.203	1.6	165-2
BodyHotpot Right(10mm)	1745	QPSK	20	1	23.77	24.00	1.054	0.082	0.086	1.6	166
	1745	QPSK	20	50%	22.60	24.00	1.380	0.059	0.081	1.6	166-2
BodyHotpot Bottom(10mm)	1745	QPSK	20	1	23.77	24.00	1.054	0.624	0.658	1.6	167
	1745	QPSK	20	50%	22.60	24.00	1.380	0.538	0.743	1.6	167-2

Note:

1. When the 1-g SAR is $\leq 0.8 \text{ W/Kg}$, testing for other channels are optional.
2. SAR for LTE band exposure configurations is measured according to the procedures of KDB 941225 D05 SAR for LTE Devices v02.
3. KDB941225D05-SAR for higher order modulation is required only when the highest maximum output power for the configuration in the higher order modulation is $> 0.5 \text{ dB}$ higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is $> 1.45 \text{ W/kg}$
4. KDB941225D05-For QPSK with 100% RB allocation, when the reported SAR measured for the Highest output power channel is $< 1.45 \text{ W/kg}$, tests for the remaining required test channels are optional.
5. KDB941225D05- For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are $\leq 0.8 \text{ W/kg}$.
6. KDB941225D05- Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offset the upper edge, middle and lower edge of each required test channel.
7. KDB941225D05- other channel bandwidths SAR test is required when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is $> 0.5 \text{ dB}$ higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is $> 1.45 \text{ W/kg}$.
8. Worst case SAR for 50% RB allocation is selected to be tested.

SAR SIMULTANEOUS TRANSMISSION DESCRIPTION

Simultaneous Transmission:

Description of Simultaneous Transmit Capabilities		
Transmitter Combination	Simultaneous?	Hotspot
WWAN(GSM/WCDMA/LTE) + Bluetooth	√	×
WWAN(GSM/WCDMA/LTE) + WLAN 2.4G	√	√
WLAN + Bluetooth	×	×

Simultaneous Transmission Consideration Detail

Transmitter Combination	Position	Max SAR(W/kg)		Σ SAR<1.6W/kg
		SAR1(WWAN)	SAR2(BT)	
WWAN+ Bluetooth	Head Left Cheek	0.362	0.38	0.742
	Head Left Tilt	0.163	0.38	0.543
	Head Right Cheek	0.346	0.38	0.726
	Head Right Tilt	0.185	0.38	0.565
	Body Back(10mm)	1.220	0.19	1.410
	Body Front(10mm)	0.594	NA	0.594
	Body Left(10mm)	0.373	NA	0.373
	Body Right(10mm)	0.255	NA	0.255
	Body Bottom(10mm)	1.240	NA	1.240
	Body Top(10mm)	0.023	NA	0.023

Transmitter Combination	Position	Max SAR(W/kg)		Σ SAR<1.6W/kg
		SAR1(WWAN)	SAR2(WLAN)	
WWAN+ WLAN 2.4G (Hotspot)	Head Left Cheek	0.362	0.21	0.572
	Head Left Tilt	0.163	0.25	0.413
	Head Right Cheek	0.346	0.08	0.426
	Head Right Tilt	0.401	0.12	0.521
	Body Back(10mm)	1.220	0.09	1.229
	Body Front(10mm)	0.594	NA	0.594
	Body Left(10mm)	0.373	NA	0.373
	Body Right(10mm)	0.255	0.04	0.295
	Body Bottom(10mm)	1.240	NA	1.240
	Body Top(10mm)	0.070	NA	0.070

Transmitter Combination	Position	Max SAR(W/kg)		Σ SAR<1.6W/kg
		SAR1(WWAN)	SAR2(WLAN)	
WWAN+ WLAN 5.2G (Hotspot)	Head Left Cheek	0.362	0.29	0.652
	Head Left Tilt	0.163	0.37	0.533
	Head Right Cheek	0.346	0.18	0.526
	Head Right Tilt	0.401	0.20	0.601
	Body Back(10mm)	1.220	0.03	1.223
	Body Front(10mm)	0.594	NA	0.594
	Body Left(10mm)	0.373	NA	0.373
	Body Right(10mm)	0.255	0.07	0.325
	Body Bottom(10mm)	1.240	NA	1.240
	Body Top(10mm)	0.070	0.11	0.180

Transmitter Combination	Position	Max SAR(W/kg)		Σ SAR<1.6W/kg
		SAR1(WWAN)	SAR2(WLAN)	
WWAN+ WLAN 5.8G (Hotspot)	Head Left Cheek	0.362	0.76	1.122
	Head Left Tilt	0.163	0.79	0.953
	Head Right Cheek	0.346	0.63	0.976
	Head Right Tilt	0.401	0.72	1.121
	Body Back(10mm)	1.220	0.18	1.400
	Body Front(10mm)	0.594	NA	0.594
	Body Left(10mm)	0.373	NA	0.373
	Body Right(10mm)	0.255	0.11	0.365
	Body Bottom(10mm)	1.240	NA	1.240
	Body Top(10mm)	0.070	0.45	0.520

Conclusion:

Sum of SAR: Σ SAR $\leq$ 1.6 W/kg for 1g Body SAR, therefore simultaneous transmission SAR with Volume Scans is **not required**.

APPENDIX A MEASUREMENT UNCERTAINTY

The uncertainty budget has been determined for the measurement system and is given in the following Table.

Measurement uncertainty evaluation for IEEE1528 SAR test

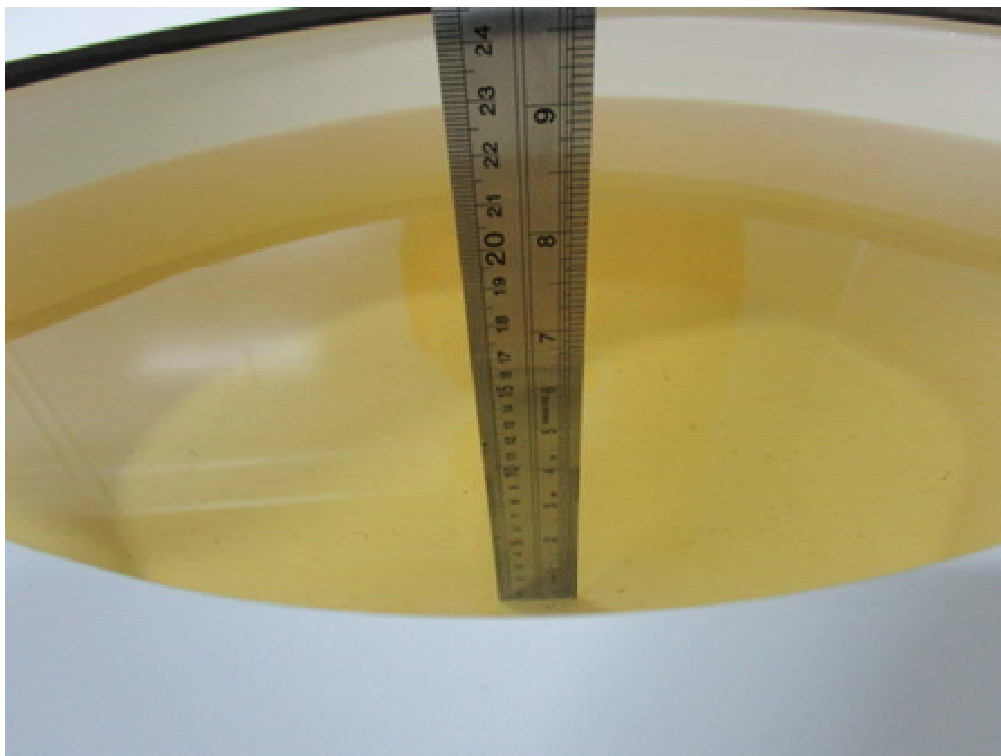
Source of uncertainty	Tolerance/ uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
Measurement system							
Probe calibration	6.55	N	1	1	1	6.6	6.6
Axial Isotropy	4.7	R	$\sqrt{3}$	1	1	2.7	2.7
Hemispherical Isotropy	9.6	R	$\sqrt{3}$	0	0	0.0	0.0
Boundary effect	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Linearity	4.7	R	$\sqrt{3}$	1	1	2.7	2.7
Detection limits	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.0	R	$\sqrt{3}$	1	1	0.0	0.0
Integration time	0.0	R	$\sqrt{3}$	1	1	0.0	0.0
RF ambient conditions – noise	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
RF ambient conditions–reflections	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Probe positioner mech. Restrictions	0.8	R	$\sqrt{3}$	1	1	0.5	0.5
Probe positioning with respect to phantom shell	6.7	R	$\sqrt{3}$	1	1	3.9	3.9
Post-processing	2.0	R	$\sqrt{3}$	1	1	1.2	1.2
Test sample related							
Test sample positioning	2.8	N	1	1	1	2.8	2.8
Device holder uncertainty	6.3	N	1	1	1	6.3	6.3
Drift of output power	5.0	R	$\sqrt{3}$	1	1	2.9	2.9
Phantom and set-up							
Phantom uncertainty (shape and thickness tolerances)	4.0	R	$\sqrt{3}$	1	1	2.3	2.3
Liquid conductivity target)	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2
Liquid conductivity meas.)	2.5	N	1	0.64	0.43	1.6	1.1
Liquid permittivity target)	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4
Liquid permittivity meas.)	2.5	N	1	0.6	0.49	1.5	1.2
Combined standard uncertainty		RSS				12.2	12.0
Expanded uncertainty 95 % confidence interval)						24.3	23.9

Measurement uncertainty evaluation for IEC62209-2 SAR test

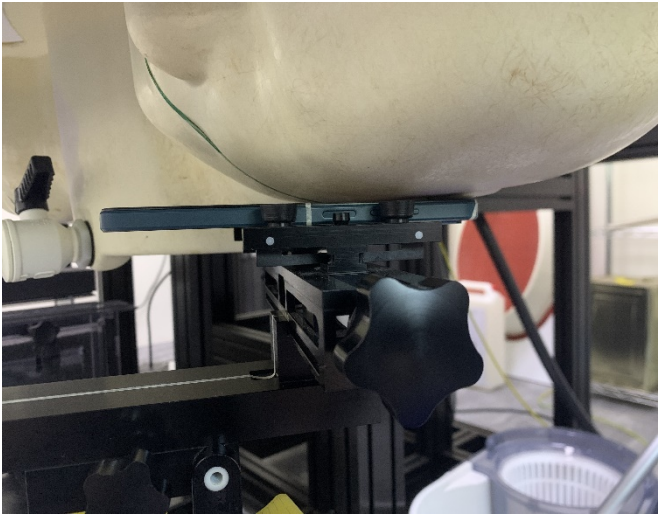
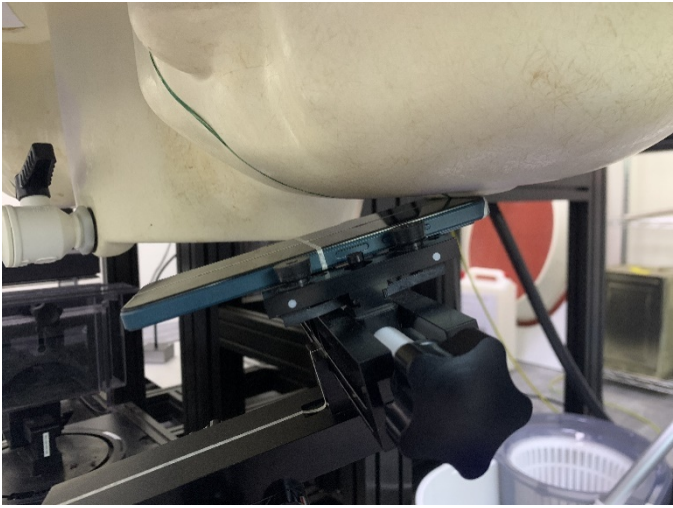
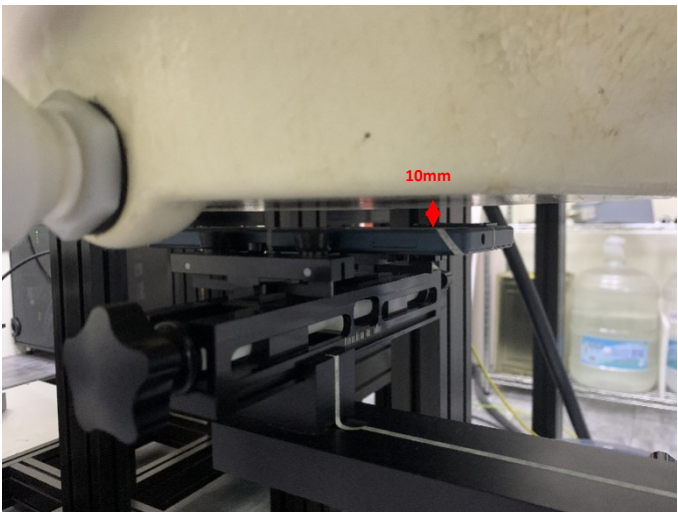
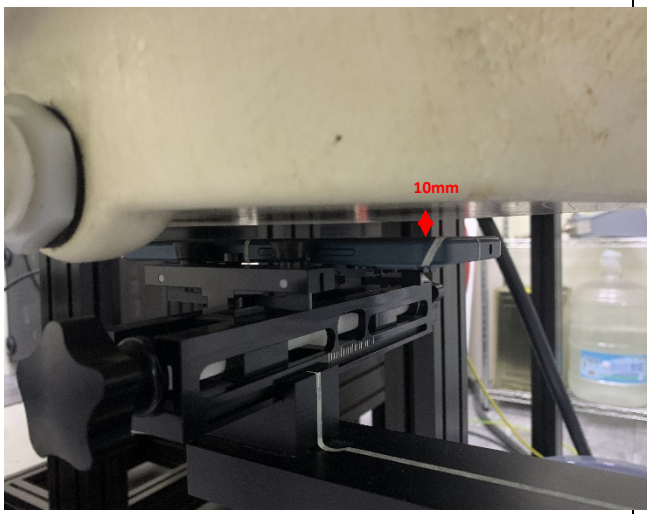
Source of uncertainty	Tolerance/ uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
Measurement system							
Probe calibration	6.55	N	1	1	1	6.6	6.6
Axial Isotropy	4.7	R	$\sqrt{3}$	1	1	2.7	2.7
Hemispherical Isotropy	9.6	R	$\sqrt{3}$	0	0	0.0	0.0
Linearity	4.7	R	$\sqrt{3}$	1	1	2.7	2.7
Modulation Response	0.0	R	$\sqrt{3}$	1	1	0.0	0.0
Detection limits	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Boundary effect	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.0	R	$\sqrt{3}$	1	1	0.0	0.0
Integration time	0.0	R	$\sqrt{3}$	1	1	0.0	0.0
RF ambient conditions – noise	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
RF ambient conditions–reflections	1.0	R	$\sqrt{3}$	1	1	0.6	0.6
Probe positioner mech. Restrictions	0.8	R	$\sqrt{3}$	1	1	0.5	0.5
Probe positioning with respect to phantom shell	6.7	R	$\sqrt{3}$	1	1	3.9	3.9
Test sample related							
Device holder Uncertainty	6.3	N	1	1	1	6.3	6.3
Test sample positioning	2.8	N	1	1	1	2.8	2.8
Power scaling	4.5	R	$\sqrt{3}$	1	1	2.6	2.6
Drift of output power	5.0	R	$\sqrt{3}$	1	1	2.9	2.9
Phantom and set-up							
Phantom uncertainty (shape and thickness tolerances)	4.0	R	$\sqrt{3}$	1	1	2.3	2.3
Algorithm for correcting SAR for deviations in permittivity and conductivity	1.9	N	1	1	0.84	1.1	0.9
Liquid conductivity (meas.)	2.5	N	1	0.64	0.43	1.6	1.1
Liquid permittivity (meas.)	2.5	N	1	0.6	0.49	1.5	1.2
Temp. unc. - Conductivity	1.7	R	$\sqrt{3}$	0.78	0.71	0.8	0.7
Temp. unc. - Permittivity	0.3	R	$\sqrt{3}$	0.23	0.26	0.0	0.0
Combined standard uncertainty		RSS				12.2	12.1
Expanded uncertainty 95 % confidence interval)						24.5	24.2

APPENDIX B EUT TEST POSITION PHOTOS

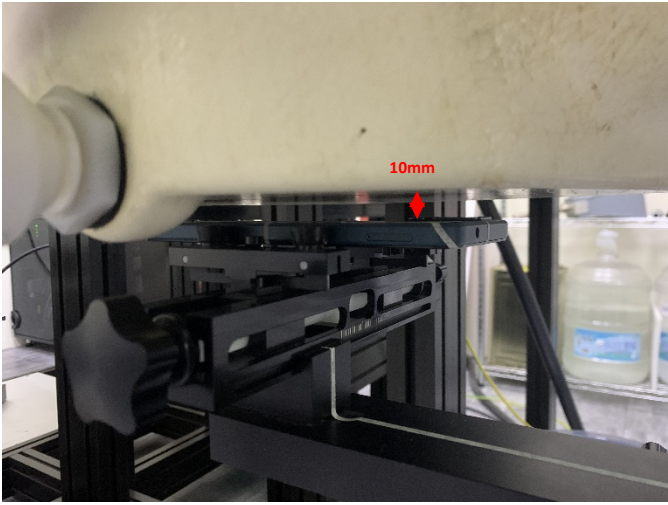
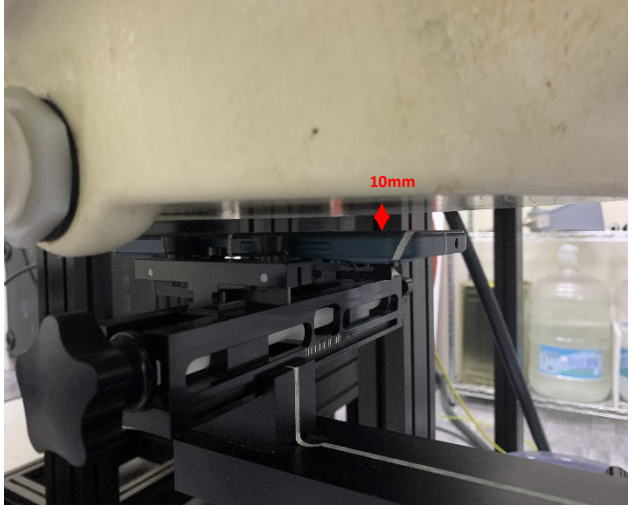
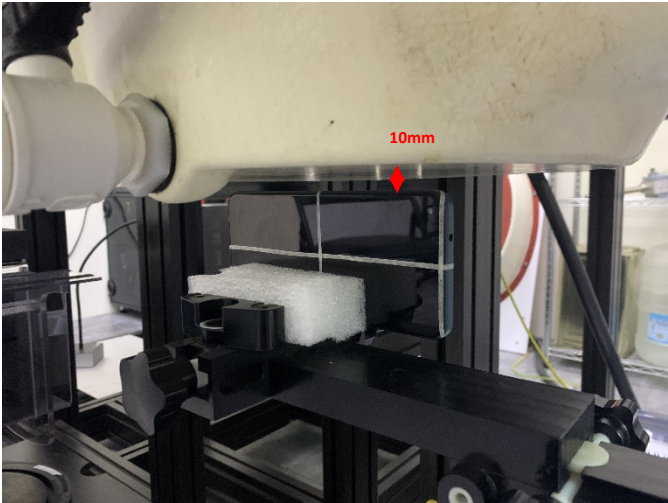
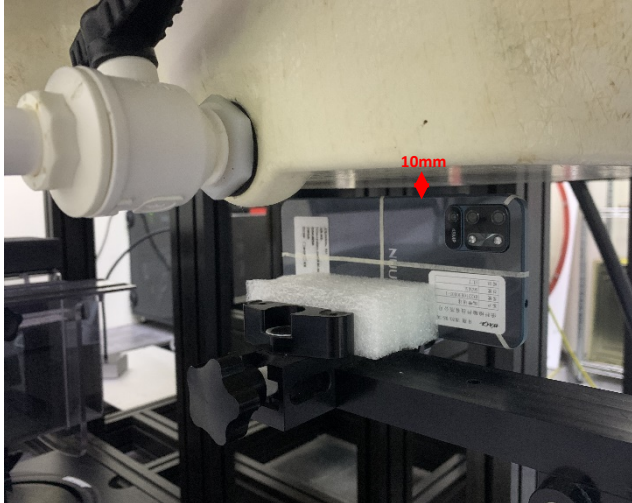
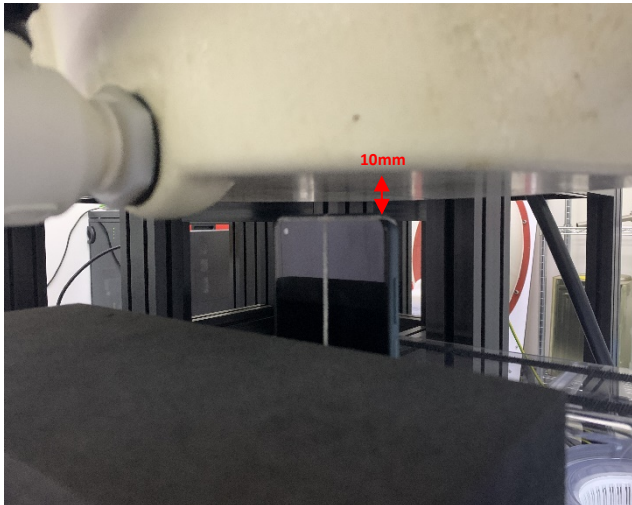
Liquid depth $\geq 15\text{cm}$



SAR Setup Photo

Head Left Cheek	Head Right Cheek
	
Head Left Tilt	Head Right Tilt
	
BodyBack(10mm)	Body Front (10mm)
	

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Body Hotspot Back(10mm)	Body Hotspot Front(10mm)
	
Body Hotspot Left(10mm)	Body Hotspot Right(10mm)
	
Body Hotspot Bottom(10mm)	Body Hotspot Top(10mm)
	

SAR EUT Photo

EUT-Front View



EUT-Back View



APPENDIX CSAR PLOTS OF SAR MEASUREMENT

Please Refer to the Attachment APPENDIX C SAR PLOTS OF SAR MEASUREMENT

APPENDIX D PROBE & DAE CALIBRATION CERTIFICATES

Please refer to the file document PROBE & DAE CALIBRATION CERTIFICATES

APPENDIX E DIPOLE CALIBRATION CERTIFICATES

Please refer to the file document DIPOLE CALIBRATION CERTIFICATES

******* END OF REPORT *******