TEST REPORT

Applicant	:	Shenzhen UniStrong Science & Technology Co.,Ltd.
Address of Applicant	:	B,4-4Factory, Zhengcheng Road, FuyongBaoan District, Shenzhen, China
Product Name	:	Rugged Tablet
Model No.	:	UT30
Sample acquisition Method	:	Sent by Client
Sample No.	:	E22090034-01#01 E22090034-01#03
Standards	:	FCC 47 CFR § 2.1093 ANSI C95.1-2019 IEC/IEEE 62209-1528:2020
Date of Receipt	:	2022-09-23,2022-09-30
Date of Test	:	2022-09-24 ~ 2022-09-30
Date of Issue	:	2022-10-25

Remark:

This report details the results of the testing carried out on one sample, the results contained in this report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

Prepared by: Henry Zhang (Henry Zhang) Reviewed by: Jennifer Zhou (Jennifer Zhou) Approved by: Guoyou Chi (Authorized signatory: Guoyou Chi)

Contents

1 General Information

1.1 Testing Laboratory

ISED CAB identifier #	CN0081
Company Name	ICAS Testing Technology Services (Shanghai) Co., Ltd.
Address	No.1298 Pingan Rd, Minhang District, Shanghai, China
Telephone	0086 21-51682999
Fax	0086 21-54711112
Homepage	www.icasiso.com

1.2 Details of Application

Company Name	Shenzhen UniStrong Science & Technology Co.,Ltd.
Address	B,4-4Factory, Zhengcheng Road, FuyongBaoan District, Shenzhen, China
Contact Person	Lili Zheng
Telephone	+86-21-54467182
Email	ll.zheng@unistrong.com
Manufacturer Company Name	Shenzhen UniStrong Science & Technology Co.,Ltd.
Address	B,4-4Factory, Zhengcheng Road, FuyongBaoan District, Shenzhen, China

1.3 Details of EUT

Product Name	Rugged Tablet
Brand Name	UniStrong
Model No.	UT30
FCC ID	2AOPD-UT30
ISED	11546A-UT30
Serial Number	861263030015070
HW Version	UT30_V103
SW Version	UT30_V1.0
Mode of Operation	GSM/GPRS/EDGE 850/1900; WCDMA/HSDPA/HSUPA Band II/V; CDMA2000 1xRTT/1xEv-Do BC0; LTE FDD Band 2/4/5/7//12/13/17/25; LTE TDD Band 41; WLAN 802.11b/g/n(HT20) for 2.4GHz; WLAN 802.11a/n(HT20/HT40)/ac(VHT20/VHT40/VHT80) for 5.2GHz and 5.8GHz; Bluetooth 4.2 dual mode

Duty Cycle	8.3 for GSM/GPRS/EDGE 1Tx Slot, 4.15 for GPRS/EDGE 2Tx Slot, 2.77 for GPRS/EDGE 3Tx Slot, 2.075 for GPRS/EDGE4Tx Slot; 1 for WCDMA/LTE FDD/WLAN/Bluetooth; 0.633 for LTE TDD
Modulation Type	GMSK for GSM/GPRS and 8PSK for EGPRS; QPSK for WCDMA;QPSK/16QAM for LTE; DSSS/OFDM for WLAN 2.4GHz and OFDM for WLAN 5.2GHz/5.8GHz;GFSK/8DPSK/Π/4DQPSK for Bluetooth
Antenna Type	Internal Antenna
Power Supply	DC 3.8V by Lithium ion polymer battery
Device Category	Portable Device
Exposure Category	General Population/Uncontrolled Exposure
EUT Type	Production Unit
Power Reduction	Supported

1.4 Identification of Auxiliary Equipment

AEID	Description	Model	Manufacturer	Type
AE1	Battery (made by SJY Energy)	BA820	Shen Zhen Sai JIao Yang Energy & Science Technology Co., Ltd.	8200mAh

1.5 The Highest Reported SAR Values

Band	Reported 1g SAR (W/Kg)		
	Body		
	No Proximity Sensory	Proximity Sensory On	Proximity Sensory Off
PCB		0.759	0.545
DTS	0.117	N/A	N/A
NII	0.587	N/A	N/A
Bluetooth	0.087	N/A	N/A
Simultaneous SAR	1.507		

Sum of the SAR for LTE + WLAN & Bluetooth

Condition	Simultaneous Transmission Scenario (W/Kg)				Max Σ 1-g SAR (W/Kg)	SPLSR (Yes/ No)
	GSM	WLAN DTS Band	WLAN UNII Band	Bluetooth		
Body-Worn	0.464	0.117	0.587	0.087	1.051	No
Hotspot	0.920	0.117	0.587	0.087	1.507	No

Note(s):

1. Since only update CPU model name and LCD panel Manufacturer,The air pressure gauge component was removed in original product.So only test the worst case.Other test data were referenced report'BL-SZ1840167-701'.

Conducted power data from original report "BL-SZ1840167-701'.

2. The proximity sensor is only used for power reduction to 2G/3G/4G antenna.

1.6 Test Methodology

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE Std 1528-2013, the following FCC Published RF exposure KDB procedures, and TCB workshop updates:

☒	KDB 248227 D01 802.11 WLAN SAR v02r02
☒	KDB 447498 D01 General RF Exposure Guidance v06
☐	KDB 447498 D02 SAR Procedures for Dongle Xmtr v02r01
☐	KDB 615223 D01 802.16e WiMax SAR Guidance v01r01
☐	KDB 616217 D04 SAR for laptop and tablets v01r02
☐	KDB 643646 D01 SAR Test for PTT Radios v01r03
☐	KDB 648474 D03 Wireless Chargers Battery Cover v01r04
☐	KDB 648474 D04, Handset SAR v01r03
☐	KDB 680106 D01 RF Exposure Wireless Charging Apps v02
☒	KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
☒	KDB 941225 D01 3G SAR Procedures v03r01
☒	KDB 941225 D05 SAR for LTE Devices v02r05
☒	KDB 941225 D06 Hot Spot SAR v02r01
☐	KDB 941225 D07 UMPC Mini Tablet v01r02

Note(s):

All test items were verified and recorded according to the standards and without any addition/deviation/exclusion during the test.

1.7 SAR Limits

The limits to be used for evaluation are based generally on criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate ("SAR") in Section 4.2 of "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz," ANSI/IEEE C95.1-1992, Copyright 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in "Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields," NCRP Report No. 86, Section 17.4.5. Copyright NCRP, 1986, Bethesda, Maryland 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards. The criteria to be used are specified in paragraphs (d)(1) and (d)(2) of this section and shall apply for portable devices transmitting in the frequency range from 100 kHz to 6 GHz. Portable devices that transmit at frequencies above 6 GHz are to be evaluated in terms of the MPE limits specified in §1.1310 of this chapter. Measurements and calculations to demonstrate compliance with MPE field strength or power density limits for devices

operating above 6 GHz should be made at a minimum distance of 5 cm from the radiating source.

1) The SAR limits for occupational/controlled exposure are 0.4 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 8 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit for occupational/controlled exposure is 20 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 6 minutes to determine compliance with occupational/controlled SAR limits.
2) The SAR limits for general population/uncontrolled exposure are 0.08 W/kg, as averaged over the whole body, and a peak spatial-average SAR of 1.6 W/kg, averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the parts of the human body treated as extremities, such as hands, wrists, feet, ankles, and pinnae, where the peak spatial-average SAR limit is 4 W/kg, averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). Exposure may be averaged over a time period not to exceed 30 minutes to determine compliance with general population/uncontrolled SAR limits.

Exposure Limits	**FCC 1g SAR Limit (W/Kg)**	
	General Population/Uncontrolled Exposure	**Occupational/Controlled Exposure**
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 1g of tissue)	1.6	8.0
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0

2 Test Environment

2.1 Environmental conditions

Temperature (°C)	18-25
Humidity (%RH)	40-65
Barometric Pressure (mbar)	960-1060
Ambient noise & Reflection（W/kg）	< 0.012

2.2 Equipment List

Dielectric Property Measurements

Name of Equipment	Manufacturer	Model	Serial No.	Cal.Date	Cal. Due Date
Network Analyzer	Anritsu	MS46121A	1618412	2022-07-25	2023-07-24
Material Measurement Probe System	Poseidon	MMP	/	N/A	N/A

System Check

Name of Equipment	Manufacturer	Model	Serial No.	Cal.Date	Cal. Due Date
Signal Generator	Agilent	SMB 100	114400	2022-06-10	2023-06-09
Power Meter	Agilent	NRP2	106036	2022-06-10	2023-06-09
Power Sensor	Agilent	NRP8S	103592	2022-06-10	2023-06-09
Amplifier	Mini-Circuits	ZVE-8G+	S0N560400742	2022-07-25	2023-07-24
Amplifier	Mini-Circuits	ZHL-42+	SN784901545	2022-08-02	2023-08-01
DC Power Supply	ACPOWER	ADC-0800025-15	D215010003	2022-06-06	2023-06-05
E-Field Probe	SPEAG	EX3DV4	7475	2022-01-27	2023-01-26
Data Acquisition Electronics	SPEAG	DAE4	787	2021-11-05	2022-11-04
Dipole	SPEAG	D2450V2	723	2020-02-17	2023-02-16
Dipole	SPEAG	D2600V2	1142	2020-02-17	2023-02-16
Dipole	SPEAG	D5GHzV2	1061	2020-02-17	2023-02-16
Dipole	SPEAG	D1900V2	5d092	2020-02-18	2023-02-17
Dipole	SPEAG	D2100V2	1053	2020-02-18	2023-02-17
Dipole	SPEAG	D2300V2	1040	2020-02-18	2023-02-17
Dipole	SPEAG	D900V2	1d055	2020-02-19	2023-02-18

Dipole	SPEAG	D1800V2	2d148	2020-02-19	2023-02-18
Dipole	SPEAG	D750V3	1055	2020-02-20	2023-02-19
Dipole	SPEAG	D835V2	4d061	2020-02-20	2023-02-19

Other

Name of Equipment	Manufacturer	Model	Serial No.	Cal.Date	Cal. Due Date
Base Station Simulator	R & S	CMW500	150835	2022-08-02	2023-08-01
Base Station Simulator	R & S	CMW500	116333	2022-08-02	2023-08-01
Robot	SPEAG	TX90 XL	F07/564YA1/A/01	N/A	N/A
Phantom	SPEAG	SAM	TP-1641	N/A	N/A
Phantom	SPEAG	SAM	TP-1642	N/A	N/A

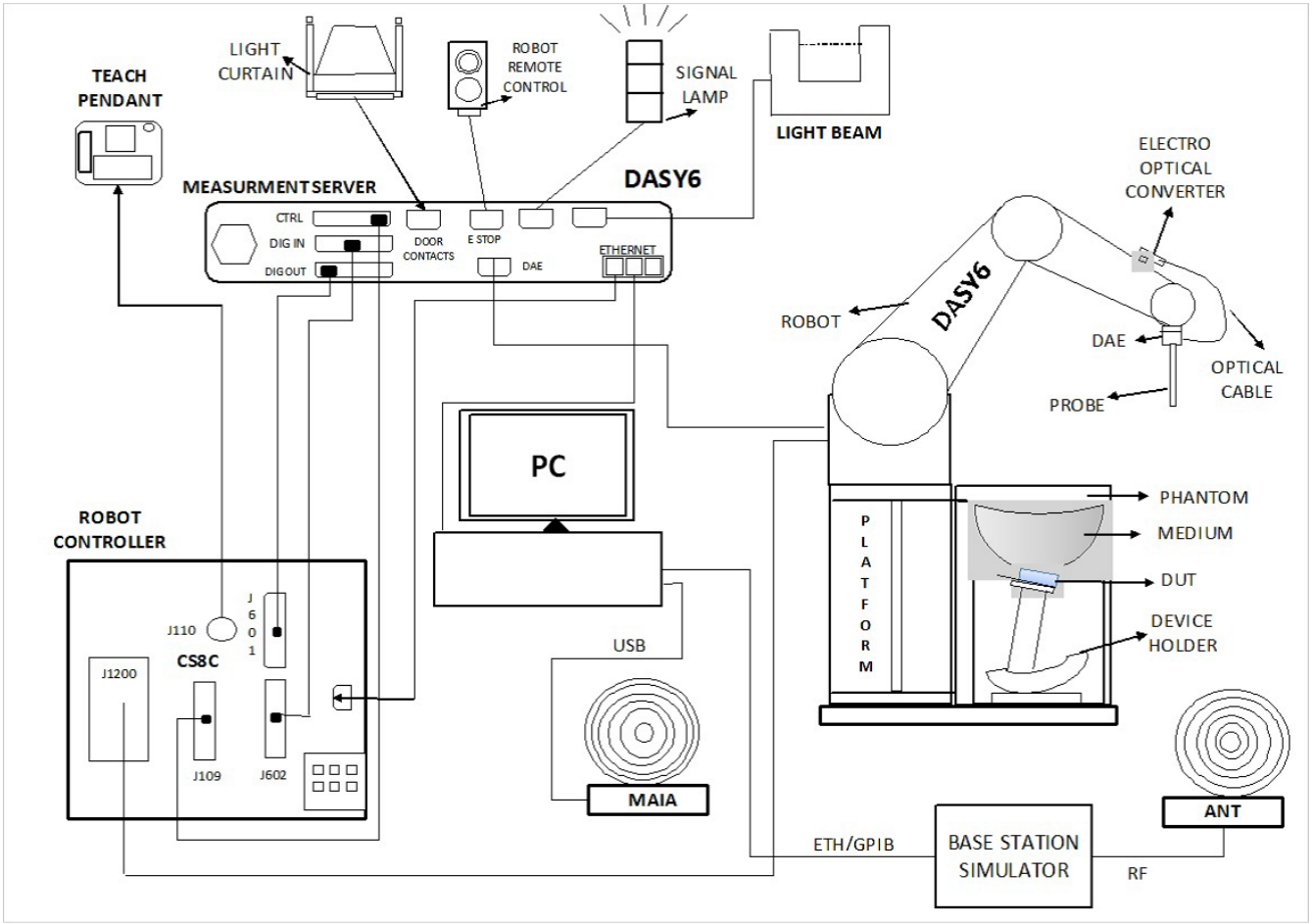
2.3 Measurement Uncertainty

Source of Uncertainty	Tol. (±%)	Prob. Dist.	Div.	c_i (1 g)	c_i (10 g)	1 g u_i (±%)	10 g u_i (±%)	v_i
Measurement System								
Probe Calibration (k=1)	4.7	N	1	1	1	4.7	4.7	∞
Axial isotropy	1.2	R	√3	1	1	0.69	0.69	∞
Hemispherical isotropy	3.2	R	√3	1	1	1.85	1.85	∞
Boundary Effect	7.4	R	√3	1	1	4.27	4.27	∞
Linearity	0.9	R	√3	1	1	0.52	0.52	∞
System Detection Limit	1	R	√3	1	1	0.6	0.6	∞
Readout Electronics	0.3	N	1	1	1	0.3	0.3	∞
Response Time	0	R	√3	1	1	0	0	∞
Integration Time	0	R	√3	1	1	0	0	∞
RF Ambient Condition - Noise	1	R	√3	1	1	0.6	0.6	∞
RF Ambient Condition - Reflections	1	R	√3	1	1	0.6	0.6	∞
Probe Positioner Mechanical Tolerance	0.8	R	√3	1	1	0.5	0.5	∞
Probe Positioning with respect to Phantom Shell	9.9	R	√3	1	1	5.7	5.7	∞
Extrapolation, Interpolation, and Integration Algorithms for Max. SAR Evaluation	4	R	√3	1	1	2.3	2.3	∞

Test Sample Related								
Test Sample Positioning	2.9	N	1	1	1	2.9	2.9	8
Device Holder Uncertainty	3.5	N	1	1	1	3.5	3.5	∞
Drift of Output Power	5	R	√3	1	1	2.9	2.9	∞
SAR scaling	2.18	R	√3	1	1	1.26	1.26	∞
Phantom and Setup								
Phantom Uncertainty (shape & thickness tolerance)	4	R	√3	1	1	2.3	2.3	∞
Uncertainty in SAR correction fordeviations in permittivity andconductivity	1.2	N	1	1	0.84	1.2	1.01	∞
Liquid Conductivity (target)	5	R	√3	0.64	0.43	1.85	1.24	∞
Liquid Conductivity (meas.)	2.93	N	1	0.64	0.43	1.88	1.26	9
Liquid Permittivity (target)	5	R	√3	0.6	0.49	1.73	1.41	∞
Liquid Permittivity (meas.)	5.9	N	1	0.6	0.49	3.54	2.89	9
Combined Uncertainty		RSS	$u_c = \sqrt{\sum_{i=1}^{m} c_i^2 \cdot u_i^2}$			11.37	11.12	
Combined Uncertainty (coverage factor=2)		k=2	$u_e = 2u_c$			22.73	22.24	

3 SAR Measurement System

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



- A standard high precision 6-axis robot 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 amplification, 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 DASY6 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

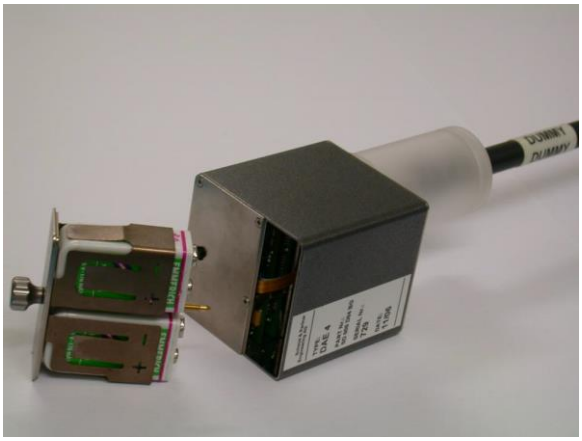
3.1 DASY6 Measurement Server

The DASY6 measurement server is based on a PC/104 CPU board with a 400MHz intel ULV Celeron, 128MB chip-disk and 128MB 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 inter face 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 evaluation of field measurements and surface detection, controls robot movements and handles safety operation. 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. Devices from any other supplier could seriously damage the measurement server.

3.2 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.

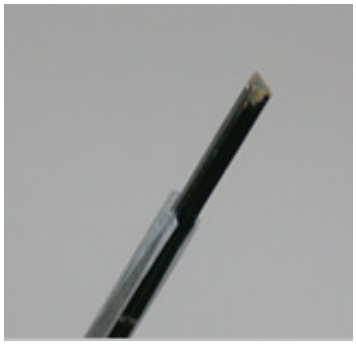


The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

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

3.3 EX3DV4 E-Field Probe

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)

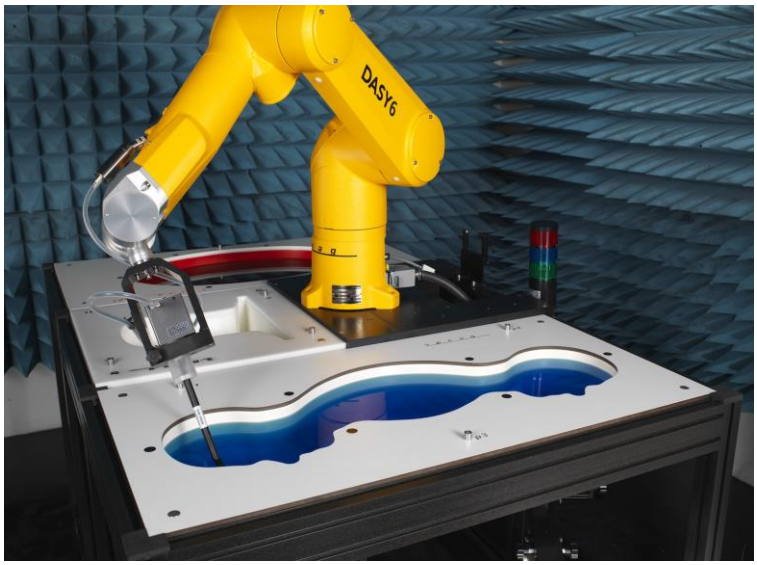


Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 330 mm (Tip: 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). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.

3.4 SAM 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:

- Left hand
- Right hand
- Flat phantom



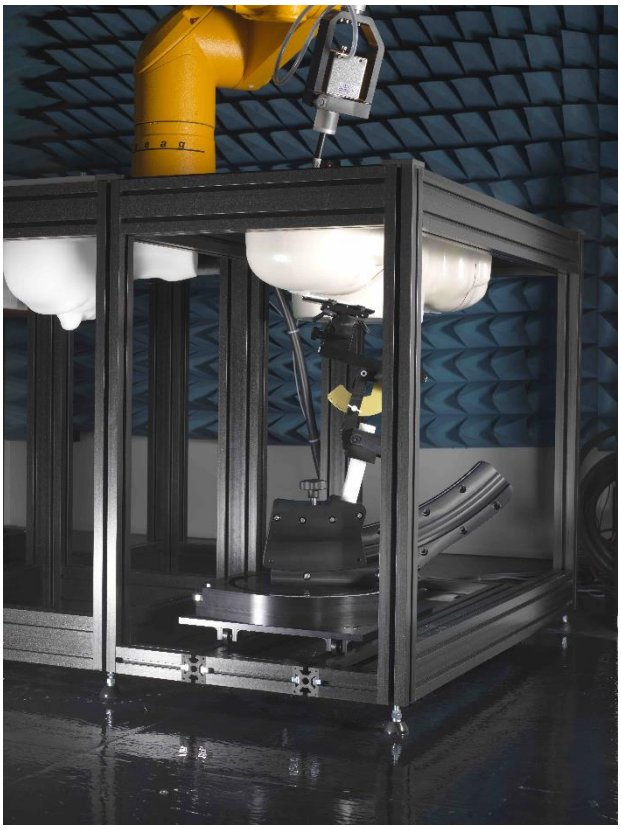
The phantom table for the DASY systems based on the TX90XL and RX160L robots have the size of 100 x 50 x 85 cm (L x W x H). These tables are reinforced for mounting of the robot onto the table. For easy dislocation these tables have fork lift cut outs at the bottom. The bottom plate contains three pairs of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. Only one device holder is necessary if two phantoms are used (e.g., for different liquids)

A white cover is provided to cover the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on top of this phantom cover are possible.

Three reference marks are provided on the phantom counter. These reference marks are used to teach the absolute phantom position relative to the robot.

3.5 Device Holder for SAM Twin Phantom

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5mm distance, a positioning uncertainty of ±0.5mm would produce a SAR uncertainty of ±20%. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards. The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.



The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity =3 and loss tangent =0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

4 SAR Measurement Procedures

4.1 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The Minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 2 mm / 4 mm. This distance cannot be smaller than the Distance of sensor calibration points to probe tip as defined in the probe properties.

4.2 Area Scan Procedures

The Area Scan is used as a fast scan in two dimensions to find the area of high field values before running a detailed measurement around the hot spot.Before starting the area scan a grid spacing of 15 mm x 15 mm is set. During the scan the distance of the probe to the phantom remains unchanged. After finishing area scan, the field maxima within a range of 2 dB will be ascertained.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 mm ± 1 mm	$½ \cdot \delta \cdot \ln(2)$ mm ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

4.3 Zoom Scan Procedures

Zoom Scans are used to estimate the peak spatial SAR values within a cubic averaging volume containing 1 g and 10 g of simulated tissue. The default Zoom Scan is done by 7x7x7 points within a cube whose base is centered around the maxima found in the preceding area scan.

Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$ mm	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see IEEE Std 1528-2013 for details.

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

4.4 Power drift measurement

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

4.5 Definition for Body-Worn Accessory Configurations

Body-Worn operation configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration. A device with a headset output is tested with a headset connected to the device.

Accessories for Body-Worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are supplied with the device, the device is tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (i.e. 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 is tested.

Body-Worn accessories may not always be supplied of available as options for some devices intended to be authorized for Body-Worn use. In this case, a test configuration where a separation distances between the back of the device and the flat phantom is used. Test position spacing was documented.

4.6 Definition for Wireless Router Configurations

Some battery-operated handsets have the capability to transmit and receive user data through simultaneous transmission of WLAN simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 v02r01 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10 mm from the front, back and edges of the device containing transmitting

antennas within 2.5 cm of their edges, determined from general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the Body-Worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some Body-Worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WLAN transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WLAN transmitter according to FCC KDB Publication 447498 D01v06 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

4.7 Dielectric Property Measurements

The dielectric properties for this simulant fluid were measured by using the Dielectric Probe in conjunction with Network Analyzer(300 kHz - 6 GHz) by using a procedure detailed in KDB 865664 D01v01r04.

Dielectric properties of the tissue-equivalent liquid

Target Frequency	Head		Body	
(MHz)	ε_r	σ (S/m)	ε_r	σ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

(ε_r = relative permittivity, σ = conductivity and ρ = 1000 kg/m^3)

Dielectric Property Measurements Results

Frequency	Target Tissue		Measured Tissue		Limit (±5% Dev.)		Temp (℃)	Test Date
	ε_r	σ(s/m)	ε_r	σ(s/m)	ε_r	σ(s/m)		
707.5 Head	41.90	0.89	42.30	0.88	0.95%	-0.79%	21.5	2022-09-28
709 Head	41.90	0.89	42.30	0.88	0.95%	-0.67%	21.5	2022-09-28
711 Head	41.90	0.89	42.20	0.88	0.72%	-0.67%	21.5	2022-09-28
750 Head	41.90	0.89	42.14	0.90	0.57%	1.12%	21.5	2022-09-28
782 Head	41.68	0.89	42.10	0.91	1.01%	2.58%	21.5	2022-09-28

824.2 Head	41.56	0.90	41.90	0.93	0.83%	3.45%	21.5	2022-09-24
824.7 Head	41.60	0.91	41.90	0.93	0.72%	2.20%	21.5	2022-09-24
835 Head	41.50	0.90	41.88	0.94	0.92%	4.11%	21.5	2022-09-24
836.4 Head	41.50	0.90	41.90	0.94	0.96%	3.89%	21.5	2022-09-24
836.5 Head	41.50	0.90	41.90	0.94	0.96%	3.89%	21.5	2022-09-24
836.52 Head	41.50	0.90	41.90	0.94	0.96%	3.89%	21.5	2022-09-24
836.6 Head	41.50	0.90	41.90	0.94	0.96%	3.89%	21.5	2022-09-24
844 Head	41.50	0.91	41.90	0.94	0.96%	3.08%	21.5	2022-09-24
848.31 Head	41.50	0.91	41.90	0.94	0.96%	3.19%	21.5	2022-09-24
848.8 Head	41.50	0.92	41.90	0.94	0.96%	2.17%	21.5	2022-09-24
1732.5 Head	40.11	1.36	40.20	1.33	0.22%	-2.21%	21.5	2022-09-27
1745 Head	40.00	1.37	40.19	1.34	0.47%	-2.19%	21.5	2022-09-27
1800 Head	40.00	1.40	40.09	1.36	0.23%	-2.57%	21.5	2022-09-27
1860 Head	40.00	1.40	40.00	1.38	0.00%	-1.43%	21.5	2022-09-26
1880 Head	40.00	1.40	40.00	1.39	0.00%	-0.71%	21.5	2022-09-26
1882.5 Head	40.00	1.40	40.00	1.39	0.00%	-0.71%	21.5	2022-09-26
1900 Head	40.11	1.36	39.95	1.40	-0.12%	-0.29%	21.5	2022-09-26
2437 Head	39.22	1.79	39.30	1.76	0.21%	-1.46%	21.5	2022-09-30
2441 Head	39.22	1.79	39.30	1.76	0.21%	-1.46%	21.5	2022-09-30
2450 Head	39.20	1.80	39.24	1.771	0.10%	-1.61%	21.5	2022-09-30
2510 Head	39.13	1.87	39.20	1.81	0.19%	-3.00%	21.5	2022-09-27
2535 Head	39.09	1.89	39.10	1.84	0.02%	-2.80%	21.5	2022-09-27
2600 Head	39.00	1.96	39.05	1.913	0.13%	-2.40%	21.5	2022-09-27
2605 Head	39.01	1.96	39.00	1.91	-0.03%	-2.75%	21.5	2022-09-27
2645 Head	38.95	2.02	39.00	1.95	0.14%	-3.37%	21.5	2022-09-27
5200 Head	36.00	4.66	35.60	4.71	-1.11%	0.99%	21.5	2022-09-30
5230 Head	35.94	4.69	35.60	4.74	-0.95%	1.07%	21.5	2022-09-30
5745 Head	35.34	5.21	35.40	5.26	0.17%	0.96%	21.5	2022-09-30
5800 Head	35.30	5.27	35.44	5.32	0.40%	0.95%	21.5	2022-09-30

4.8 SAR System Verification

The purpose of the system check is to verify that the system operates within its specifications at the decice test frequency. The system check is simple check of repeatability to make sure that the system works correctly at the time of the compliance test.

A system check measurement was made following the determination of the dielectric parameters of the simulates, using the dipole validation kit. A power level of 250 mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom.

System check results have to be equal or near the values determined during dipole calibration with the relevant liquids and test system (±10 %).

System check is performed regularly on all frequency bands where tests are performed with the

DASY6 system.

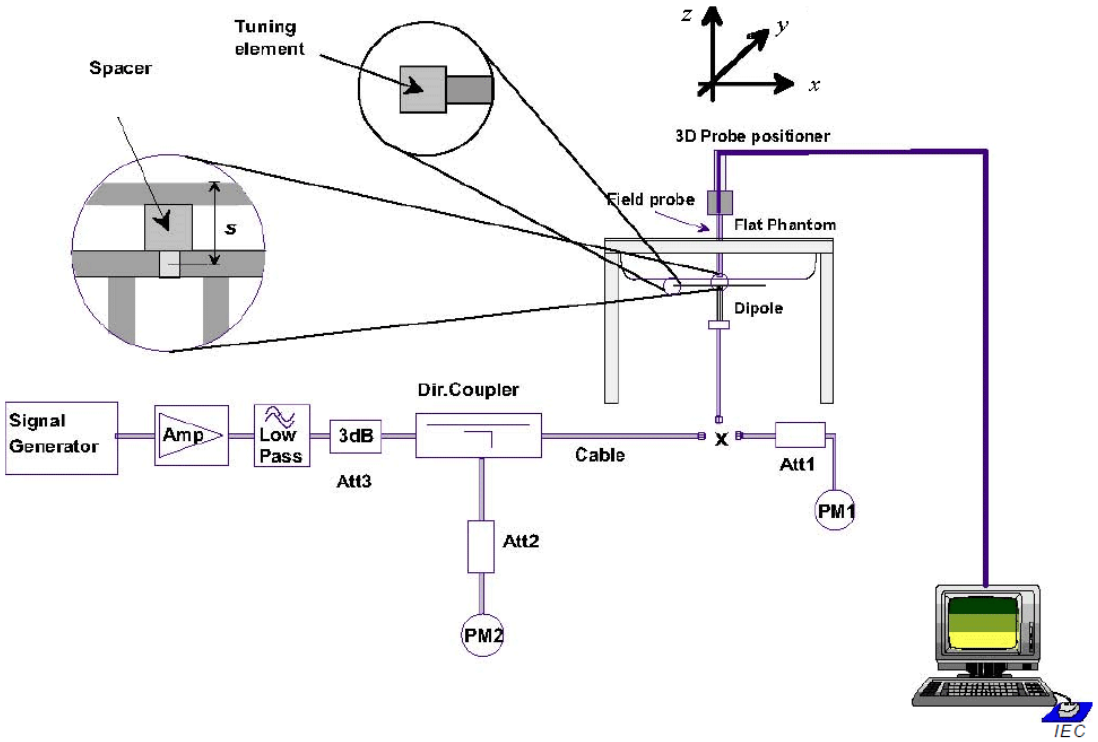


Figure 4 System Check Set-up

System Verification Results

Frequency & Tissue Type	1W Target (W/Kg)		250mW Measured (W/Kg)		1W Normalized (W/Kg)		Temp (℃)	1g Limit (±10% Dev.)	Test Date
	1g SAR	10g SAR	1g SAR	10g SAR	1g SAR	10g SAR			
750 Head	8.55	5.64	2.08	1.37	8.32	5.48	21.5	-2.69%	2022-09-28
835 Head	9.47	6.19	2.47	1.61	9.88	6.44	21.5	4.33%	2022-09-24
1800 Head	39.30	20.40	9.02	4.74	36.08	18.96	21.5	-8.19%	2022-09-27
1900 Head	39.90	20.40	10.30	5.31	41.20	21.24	21.5	3.26%	2022-09-26
2450 Head	51.90	23.80	12.40	5.75	49.60	23.00	21.5	-4.43%	2022-09-30
2600 Head	55.60	24.50	13.60	6.09	54.40	24.36	21.5	-2.16%	2022-09-27

Frequency & Tissue Type	1W Target (W/Kg)		100mW Measured (W/Kg)		1W Normalized (W/Kg)		Temp (℃)	1g Limit (±10% Dev.)	Test Date
	1g SAR	10g SAR	1g SAR	10g SAR	1g SAR	10g SAR			
5200 Head	73.90	20.70	7.54	2.14	75.40	21.40	21.5	2.03%	2022-09-30
5800 Head	76.90	21.40	8.04	2.25	80.40	22.50	21.5	4.55%	2022-09-30

Note(s):

1. Target Values used from the calibration certificate by SPEAG and CTTL in collaboration with SPEAG.

5 SAR Measurement Procedure

5.1 Conducted Power Measurement

Conducted power measurements were performed using a base station simulator under digital average power. The handset was placed into a simulated call using a base station simulator in shielded chamber. SAR measurements were taken with a fully charged battery. In order to verify that the device was tested and maintained at full power, this was configured with the base station simulator. The SAR measurement Software calculates a reference point at the start and end of the test to check for power drifts. If conducted power deviations of more than 5 % occurred, the tests were repeated.

5.2 GSM Test Configuration

SAR test for GSM band, a communication link is set up with a System Simulator (SS) by air link. The power level is set to “5” for GSM 850, set to “0” for GSM 1900. Since the GPRS class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslots is 5. The EDGE class is 12 for this EUT, it has at most 4 timeslots in uplink and at most 4 timeslots in downlink, the maximum total timeslots is 5.
SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. GSM voice and GPRS data use GMSK, which is a constant amplitude modulation with minimal peak to average power difference within the time-slot burst. For EDGE, GMSK is used for MCS 1 – MCS 4 and 8-PSK is used for MCS 5 – MCS 9; where 8-PSK has an inherently higher peak-to-average power ratio. The GMSK and 8-PSK EDGE configurations are considered separately for SAR compliance. The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance. The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode.

5.3 UMTS Test Configuration

Output power Verification

Maximum output power is verified on the High, Middle and Low channel according to the procedures described in section 5.2 of 3GPP TS 34. 121, using the appropriate RMC or AMR with TPC(transmit power control) set to all up bits for WCDMA/HSDPA or applying the required inner loop power control procedures to the maximum output power while HSUPA is active. Results for all applicable physical channel configuration (DPCCH, DPDCHn and spreading codes, HSDPA, HSPA) should be tabulated in the SAR report. All configuration that are not supported by the DUT or can not be measured due to technical or equipment limitations should be clearly identified

Head SAR

SAR for head exposure configurations in voice mode is measured using a 12.2kbps RMC with TPC bits configured to all up bits. SAR in AMR configurations is not required when the maximum average output of each RF channel for 12.2kbps AMR is less than 1/4 dB higher than that measured in 12.2 kbps RMC. Otherwise, SAR is measured on the maximum output channel in 12.2kbps AMR with a 3.4 kbps SRB(Signaling radio bearer) using the exposure

configuration that results in the highest SAR in 12.2kbps RMC for that RF channel.

Body-Worn Accessory SAR

SAR for body exposure configurations in voice and data modes is measured using 12.2kbps RMC with TPC bits configured to all up bits. SAR for other spreading codes and multiple DPDCHn, when supported by the DUT, are not required when the maximum average output of each RF channel, for each spreading code and DPDCHn configuration, are less than 1/4 dB higher than those measured in 12.2kbps RMC. Otherwise, SAR is measured on the maximum output channel with an applicable RMC configuration for the corresponding spreading code or DPDCHn using the exposure configuration that results in the highest SAR with 12.2 kbps RMC. When more than 2 DPDCHn are supported by the DUT, it may be necessary to configure additional DPDCHn for a DUT using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC.

HSDPA Test Configuration

SAR for body exposure configurations is measured according to the 'Body SAR Measurements' procedures of that section. In addition,body SAR is also measured for HSDPA when the maximum average output of each RF channel with HSDPA active is at least ¼ dB higher than that measured without HSDPA using 12.2 kbps RMC or the maximum SAR for 12.2 kbps RMC is above 75% of the SAR limit. Body SAR for HSDPA is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration in 12.2 kbps RMC without HSDPA.

HSDPA should be configured according to the UE category of a test device.The number of HSDSCH/ HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors(βc, βd), and HS-DPCCH power offset parameters (ΔACK, ΔNACK, ΔCQI) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (1)	CM (dB) (2)
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15 (3)	15/15 (3)	64	12/15 (3)	24/15	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

Note 1: Δ_{ACK}, Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$

Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15.

Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 11/15 and β_d = 15/15.

HSUPA Test Configuration

Body SAR is also measured for HSPA when the maximum average output of each RF channel with HSPA active is at least ¼ dB higher than that measured without HSPA using 12.2 kbps RMC or the maximum SAR for 12.2 kbps RMC is above 75% of the SAR limit. Body SAR for HSPA is measured with E-DCH Sub-test 5, using H-Set 1 and QPSK for FRC and a 12.2 kbps RMC configured in Test Loop Mode 1 with power control algorithm 2, according to the highest body SAR configuration in 12.2 kbps RMC without HSPA.

Due to inner loop power control requirements in HSPA, a commercial communication test set should be used for the output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E- DCH configurations for HSPA should be

configured according to the β values indicated below as well as other applicable procedures described in the 'WCDMA Handset' and 'Release 5 HSDPA Data Devices' sections of 3 G device.

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (1)	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM (2) (dB)	MPR (dB)	AG (4) Index	E-TFCI
1	11/15 (3)	15/15 (3)	64	11/15 (3)	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}: 47/15 β_{ed2}: 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 (4)	15/15 (4)	64	15/15 (4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 8 ⇔ $A_{hs} = \beta_{hs}/\beta_c$ = 30/15 ⇔ β_{hs}= 30/15 *β_c.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c=24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.
Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

HSPA, HSPA+ and DC-HSDPA Test Configuration

SAR test exclusion for HSPA, HSPA+ and DC-HSDPA is determined according to the following:

a) The HSPA procedures are applied to configure 3GPP Rel. 6 HSPA devices in the required sub-test mode(s) to determine SAR test exclusion.

b) SAR is required for Rel. 7 HSPA+ when SAR is required for Rel. 6 HSPA; otherwise, the 3G SAR test reduction procedure is applied to (uplink) HSPA+ with 12.2 kbps RMC as the primary mode.36 Power is measured for HSPA+ that supports uplink 16 QAM according to configurations in Table C.11.1.4 of 3GPP TS 34.121-1 to determine SAR test reduction.

c) SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

d) Regardless of whether a PAG is required, the following information must be verified and included in the SAR report for devices supporting HSPA, HSPA+ or DC-HSDPA:

1) The output power measurement results and applicable release version(s) of 3GPP TS 34.121.

a) Power measurement difficulties due to test equipment setup or availability must be resolved between the grantee and its test lab.

2) The power measurement results are in agreement with the individual device implementation and specifications. When Enhanced MPR (E-MPR) applies, the normal MPR targets may be modified according to the Cubic Metric (CM) measured by the device, which must be taken into consideration.

3) The UE category, operating parameters, such as theβand △values used to configure the device for testing, power setback procedures described in 3GGPP TS 34.121 for the power measurements, and HSPA/HSPA+

channel conditions (active and stable) for the entire duration of the measurement according to the required E-TFCI and AG index values.

e) When SAR measurement is required, the test configurations, procedures and power measurement results must be clearly described to confirm that the required test parameters are used, including E-TFCI and AG index stability and output power conditions.

5.4 CDMA Test Configuration

Output power Verification

Maximum output power is verified on the high, middle and low channels according to procedures in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. Results for at least steps 3, 4 and 10 of the power measurement procedures are required in the SAR report. Steps 3 and 4 are measured using Loopback Service Option SO55 with power control bits in “All Up” condition. TDSO/SO32 may be used instead of SO55 for step 4. Step 10 is measured using TDSO/SO32 with power control bits in the “Bits Hold” condition (i.e. alternative Up/Down Bits). All power measurements defined in C.S0011/TIA-98-E that are inapplicable to the handset or cannot be measured due to technical or equipment limitations must be clearly identified in the test report.

Head SAR

SAR for next to the ear head exposure is measured in RC3 with the handset configured to transmit at full rate in SO55. The 3G SAR test reduction procedure is applied to RC1 with RC3 as the primary mode; otherwise, SAR is required for the channel with maximum measured output in RC1 using the head exposure configuration that results in the highest reported SAR in RC3.

Body-Worn Accessory SAR

Body-Worn accessory SAR is measured in RC3 with the handset configured in TDSO/SO32 to transmit at full rate on FCH only with all other code channels disabled. The Body-Worn accessory procedures in KDB Publication 447498 D01 are applied. The 3G SAR test reduction procedure is applied to the multiple code channel configuration (FCH+SCHn), with FCH only as the primary mode. Otherwise, SAR is required for multiple code channel configuration (FCH + SCHn), with FCH at full rate and SCH0 enabled at 9600 bps, using the highest reported SAR configuration for FCH only. When multiple code channels are enabled, the transmitter output can shift by more than 0.5 dB and may lead to higher SAR drifts and SCH dropouts.

The 3G SAR test reduction procedure is applied to Body-Worn accessory SAR in RC1 with RC3 as the primary mode.Otherwise, SAR is required for RC1, with SO55 and full rate, using the highest reported SAR configuration for Body-Worn accessory exposure in RC3.

1x Ev-Do Test Configuration

For handsets with Ev-Do capabilities, the 3G SAR test reduction procedure is applied to Ev-Do Rev. 0 with 1x RTT RC3 as the primary mode to determine Body-Worn accessory test requirements. Otherwise, Body-Worn accessory SAR is required for Rev. 0, at 153.6 kbps, using the highest reported SAR configuration for Body-Worn accessory exposure in RC3.

The 3G SAR test reduction procedure is applied separately to Rev. A and Rev. B, with Rev. 0 as the primary mode to determine Body-Worn accessory SAR test requirements. When SAR is not required for Rev. 0, the 3G SAR test reduction is applied with 1x RTT RC3 as the primary mode. Otherwise, SAR is required for Rev. A or Rev. B, with a

Reverse Data Channel payload size of 4096 bits and a Termination Target of 16 slots defined for Subtype 2 and 3 Physical Layer configurations, using the highest reported SAR configuration for Body-Worn accessory exposure in Rev. 0 or RC3, as appropriate.
A Forward Traffic Channel data rate corresponding to the 2-slot version of 307.2 kbps with ACK Channel transmitting in all slots is configured in the downlink for Rev. 0, Rev. A and Rev. B.

5.5 LTE Test Configuration

QPSK with 1 RB allocation

Start with the largest channel bandwidth then 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 offsets at the upper edge, middle, and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

QPSK with 50% RB allocation

The procedures required for 1 RB allocation in above section are applied to measure the SAR for QPSK with 50% RB allocation.

QPSK with 100% RB allocation

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 in above two sections are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in above sections to determine the channels and RB configurations that need SAR testing, then only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ½ 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 W/kg. The equivalent channel configuration for the RB allocation, RB offset and modulation, etc., is determined for the smaller channel bandwidth according to the same number of RB allocated in the largest channel bandwidth. For example, 50 RB in 10 MHz channel bandwidth does not apply to 5 MHz channel bandwidth; therefore, this cannot be tested in the smaller channel bandwidth. However, 50% RB allocation in 10 MHz channel bandwidth is equivalent to 100% RB allocation in 5 MHz channel bandwidth; therefore, these are the equivalent configurations to be compared to determine the specific channel and configuration in the smaller channel bandwidth that need SAR testing.

5.6 WLAN Test Configuration

The SAR measurement and test reduction procedures are structured according to either the DSSS or OFDM transmission mode configurations used in each standalone frequency band and aggregated band. For devices that

operate in exposure configurations that require multiple test positions, additional SAR test reduction may be applied. The maximum output power specified for production units, including tune-up tolerance, are used to determine initial SAR test requirements for the 802.11 transmission modes in a frequency band. SAR is measured using the highest measured maximum output power channel for the initial test configuration. SAR measurement and test reduction for the remaining 802.11 modes and test channels are determined according to measured or specified maximum output power and reported SAR of the initial measurements. The general test reduction and SAR measurement approaches are summarized in the following:

1) The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. Channels with measured maximum output power within ¼ dB are considered to have the same maximum output.
2) For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, an “initial test configuration” is first determined for each standalone and aggregated frequency band according to the maximum output power and tune-up tolerance specified for production units.
   a. When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band.
   b. SAR is measured for OFDM configurations using the initial test configuration procedures. Additional frequency band specific SAR test reduction may be considered for individual frequency bands
   c. Depending on the reported SAR of the highest maximum output power channel tested in the initial test configuration, SAR test reduction may apply to subsequent highest output channels in the initial test configuration to reduce the number of SAR measurements.
3) The Initial test configuration does not apply to DSSS. The 2.4 GHz band SAR test requirements and 802.11b DSSS procedures are used to establish the transmission configurations required for SAR measurement.
4) An “initial test position”is applied to further reduce the number of SAR tests for devices operating in next to the ear, UMPC mini-tablet or hotspot mode exposure configurations that require multiple test positions .

a. SAR is measured for 802.11b according to the 2.4 GHz DSSS procedure using the exposure condition established by the initial test position.

b. SAR is measured for 2.4 GHz and 5 GHz OFDM configurations using the initial test configuration. 802.11b/g/n operating modes are tested independently according to the service requirements in each frequency band. 802.11b/g/n modes are tested on the maximum average output channel.

5) The Initial test position does not apply to devices that require a fixed exposure test position. SAR is measured in a fixed exposure test position for these devices in 802.11b according to the 2.4 GHz DSSS procedure or in 2.4 GHz and 5 GHz OFDM configurations using the initial test configuration procedures .
6) The “subsequent test configuration”procedures are applied to determine if additional SAR measurements are required for the remaining OFDM transmission modes that have not been tested in the initial test configuration.

SAR test exclusion is determined according to reported SAR in the initial test configuration and maximum output power

specified or measured for these other OFDM configurations.

2.4 GHz and 5GHz SAR Procedures

Separate SAR procedures are applied to DSSS and OFDM configurations in the 2.4 GHz band to simplify DSSS test requirements. For 802.11b DSSS SAR measurements, DSSS SAR procedure applies to fixed exposure test position and initial test position procedure applies to multiple exposure test positions. When SAR measurement is required for an OFDM configuration, the initial test configuration, subsequent test configuration and initial test position procedures are applied. The SAR test exclusion requirements for 802.11g/n OFDM configurations are described in section 5.2.2.

1. 802.11b DSSS SAR Test Requirements

SAR is measured for 2.4 GHz 802.11b DSSS using either a fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:

a. When the reported SAR of the highest measured maximum output power channel (section 3.1) for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.

b. When the reported SAR is > 0.8 W/kg, SAR is required for that exposure configuration using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.

2. 2.4 GHz 802.11g/n OFDM SAR Test Exclusion Requirements

When SAR measurement is required for 2.4 GHz 802.11g/n OFDM configurations, the measurement and test reduction procedures for OFDM are applied (section 5.3). SAR is not required for the following 2.4 GHz OFDM conditions.

a. When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration

b. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

3. SAR Test Requirements for OFDM Configurations

When SAR measurement is required for 802.11 a/g/n/ac OFDM configurations, each standalone and frequency aggregated band is considered separately for SAR test reduction. When the same transmitter and antenna(s) are used for U-NII-1 and U-NII-2A bands, additional SAR test reduction applies. When band gap channels between U-NII-2C band and 5.8 GHz U-NII-3 or §15.247 band are supported, the highest maximum output power transmission mode configuration and maximum output power channel across the bands must be used to determine SAR test reduction, according to the initial test configuration and subsequent test configuration requirements.20 In applying the initial test configuration and subsequent test configuration procedures, the 802.11 transmission configuration with the highest specified maximum output power and the channel within a test configuration with the highest measured maximum output power should be clearly distinguished to apply the procedures.

4. OFDM Transmission Mode SAR Test Configuration and Channel Selection Requirements

The initial test configuration for 2.4 GHz and 5 GHz OFDM transmission modes is determined by the 802.11 configuration with the highest maximum output power specified for production units, including tune-up tolerance, in each standalone and aggregated frequency band. SAR for the initial test configuration is measured using the highest maximum output power channel determined by the default power measurement procedures (section 4)

When multiple configurations in a frequency band have the same specified maximum output power, the initial test configuration is determined according to the following steps applied sequentially.

a. The largest channel bandwidth configuration is selected among the multiple configurations with the same specified maximum output power.

b. If multiple configurations have the same specified maximum output power and largest channel bandwidth, the lowest order modulation among the largest channel bandwidth configurations is selected.
c. If multiple configurations have the same specified maximum output power, largest channel bandwidth and lowest order modulation, the lowest data rate configuration among these configurations is selected.
d. When multiple transmission modes (802.11a/g/n/ac) have the same specified maximum output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11a is chosen over 802.11n then 802.11ac or 802.11g is chosen over 802.11n.
After an initial test configuration is determined, if multiple test channels have the same measured maximum output power, the channel chosen for SAR measurement is determined according to the following. These channel selection procedures apply to both the initial test configuration and subsequent test configuration(s), with respect to the default power measurement procedures or additional power measurements required for further SAR test reduction. The same procedures also apply to subsequent highest output power channel(s) selection.
a. Channels with measured maximum output power within ¼ dB of each other are considered to have the same maximum output.
b. When there are multiple test channels with the same measured maximum output power, the channel closest to mid-band frequency is selected for SAR measurement.
c. When there are multiple test channels with the same measured maximum output power and equal separation from mid-band frequency; for example, high and low channels or two mid-band channels, the higher frequency (number) channel is selected for SAR measurement. Initial Test Configuration Procedures
An initial test configuration is determined for OFDM transmission modes according to the channel bandwidth, modulation and data rate combination(s) with the highest maximum output power specified for production units in each standalone and aggregated frequency band. SAR is measured using the highest measured maximum output power channel. For configurations with the same specified or measured maximum output power, additional transmission mode and test channel selection procedures are required (see section 5.3.2). SAR test reduction of subsequent highest output test channels is based on the reported SAR of the initial test configuration. For next to the ear, hotspot mode and UMC mini-tablet exposure configurations where multiple test positions are required, the initial test position procedure is applied to minimize the number of test positions required for SAR measurement using the initial test configuration transmission mode.23 For fixed exposure conditions that do not have multiple SAR test positions, SAR is measured in the transmission mode determined by the initial test configuration. When the reported SAR of the initial test configuration is > 0.8 W/kg, SAR measurement is required for the subsequent next highest measured output power channel(s) in the initial test configuration until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. Subsequent Test Configuration Procedures
SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units. The initial test position procedure is applied to next to the ear, UMPC mini-tablet and hotspot mode configurations.
When the same maximum output power is specified for multiple transmission modes, the procedures in section 5.3.2 are applied to determine the test configuration. Additional power measurements may be required to determine if SAR measurements are required for subsequent highest output power channels in a subsequent test configuration. The subsequent test configuration and SAR measurement procedures are described in the following.
a. When SAR test exclusion provisions of KDB Publication 447498 are applicable and SAR measurement is not required for the initial test configuration, SAR is also not required for the next highest maximum output power

transmission mode subsequent test configuration(s) in that frequency band or aggregated band and exposure configuration.

b. When the highest reported SAR for the initial test configuration (when applicable, include subsequent highest output channels), according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

c. The number of channels in the initial test configuration and subsequent test configuration can be different due to differences in channel bandwidth. When SAR measurement is required for a subsequent test configuration and the channel bandwidth is smaller than that in the initial test configuration, all channels in the subsequent test configuration that overlap with the larger bandwidth channel tested in the initial test configuration should be used to determine the highest maximum output power channel. This step requires additional power measurement to identify the highest maximum output power channel in the subsequent test configuration to determine SAR test reduction.

1). SAR should first be measured for the channel with highest measured output power in the subsequent test configuration.

2). SAR for subsequent highest measured maximum output power channels in the subsequent test configuration is required only when the reported SAR of the preceding higher maximum output power channel(s) in the subsequent test configuration is > 1.2 W/kg or until all required channels are tested.

a) For channels with the same measured maximum output power, SAR should be measured using the channel closest to the center frequency of the larger channel bandwidth channel in the initial test configuration.

d. SAR measurements for the remaining highest specified maximum output power OFDM transmission mode configurations that have not been tested in the initial test configuration (highest maximum output) or subsequent test configuration(s) (subsequent next highest maximum output power) is determined by applying the subsequent test configuration procedures in this section to the remaining configurations according to the following:

1) replace “subsequent test configuration” with “next subsequent test configuration” (i.e., subsequent next highest specified maximum output power configuration)

2) replace “initial test configuration” with “all tested higher output power configurations.

5.7 Measurement Variability

Per FCC KDB Publication 865664 D01, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.

2) A second repeated measurement was preformed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the

1-g SAR limit).

3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg

5.8 Measured and Reported SAR

Per FCC KDB Publication 447498 D01v06, When SAR is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance. For simultaneous transmission, the measured aggregate SAR must be scaled according to the sum of the differences between the maximum tune-up tolerance and actual power used to test each transmitter. When SAR is measured at or scaled to the maximum tune-up tolerance limit, the results are referred to as reported SAR. Test highest reported SAR results are identified on the grant of equipment authorization according to procedures in KDB 690783 D01v01r03.

6 Test Results

6.1 Conducted Power Results

Conducted Power Measurement Results for GSM/GPRS/EDGE

GSM 850		Burst Conducted Power (dBm)			/	Average Power (dBm)		
		Channel				Channel		
		Low	Mid	High		Low	Mid	High
GSM		**32.96**	32.74	32.79	/	/	/	/
GPRS	1 TX slot	32.67	32.71	32.82	**-9.03 dB**	23.64	23.68	23.79
	2 TX slot	32.07	32.14	31.77	**-6.02 dB**	26.05	26.12	25.75
	3 TX slot	30.67	30.62	30.64	**-4.26 dB**	26.41	26.36	26.38
	4 TX slot	29.48	29.58	29.49	**-3.01 dB**	26.47	**26.57**	26.48
EDGE	1 TX slot	29.34	29.33	29.24	**-9.03 dB**	20.31	20.30	20.21
	2 TX slot	28.05	28.05	28.06	**-6.02 dB**	22.03	22.03	22.04
	3 TX slot	26.79	26.90	26.76	**-4.26 dB**	22.53	22.64	22.50
	4 TX slot	25.61	25.67	25.70	**-3.01 dB**	22.60	22.66	**22.69**

GSM 1900		Burst Conducted Power (dBm)			/	Average Power (dBm)		
		Channel				Channel		
		Low	Mid	High		Low	Mid	High
GSM		29.46	29.89	**29.90**	/	/	/	/
GPRS	1 TX slot	29.45	29.95	29.91	**-9.03 dB**	20.42	20.92	20.88
	2 TX slot	28.81	29.00	29.32	**-6.02 dB**	22.79	22.98	23.3
	3 TX slot	27.38	27.65	28.01	**-4.26 dB**	23.12	23.39	23.75
	4 TX slot	26.13	26.66	26.76	**-3.01 dB**	23.12	23.65	**23.75**
EDGE	1 TX slot	27.53	27.84	27.85	**-9.03 dB**	18.50	18.81	18.82
	2 TX slot	26.20	26.46	26.65	**-6.02 dB**	20.18	20.44	20.63
	3 TX slot	24.90	25.23	25.50	**-4.26 dB**	20.64	20.97	21.24
	4 TX slot	23.70	24.02	24.25	**-3.01 dB**	20.69	21.01	**21.24**

Note(s):

1. Division Factors
   To average the power, the division factor is as follows:
   1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB
   2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB
   3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB
   4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB
2. According to the conducted power as above, the GPRS/EDGE measurements are performed with 4Tx slot for GPRS 900 and GPRS 1800.

Conducted Power Measurement Results for WCDMA/HSDPA/HSPUA

WCDMA Band II	Mode	Conducted Power (dBm)		
		Channel		
		Low	Mid	High
RMC	12.2 kbps	23.47	**23.63**	23.22
HSDPA	Sub - Test 1	22.31	22.53	22.17
	Sub - Test 2	22.41	22.51	22.19
	Sub - Test 3	21.94	22.04	21.72
	Sub - Test 4	22.00	22.04	21.72
HSUPA	Sub - Test 1	22.20	22.34	22.27
	Sub - Test 2	22.29	20.66	20.28
	Sub - Test 3	21.83	21.66	21.29
	Sub - Test 4	21.82	20.71	20.30
	Sub - Test 5	22.20	22.42	22.00

WCDMA Band V	Mode	Conducted Power (dBm)		
		Channel		
		Low	Mid	High
RMC	12.2 kbps	23.06	23.10	**23.26**
HSDPA	Sub - Test 1	22.07	22.15	22.20
	Sub - Test 2	22.25	22.24	22.29
	Sub - Test 3	21.87	21.78	21.83
	Sub - Test 4	21.75	21.66	21.82
HSUPA	Sub - Test 1	22.23	21.91	22.06
	Sub - Test 2	20.27	20.06	20.36
	Sub - Test 3	21.19	21.06	21.26
	Sub - Test 4	20.26	20.16	20.34
	Sub - Test 5	21.92	21.88	22.09

Conducted Power Measurement Results for CDMA 1xRTT

Band	Mode	Conducted Power (dBm)		
		Channel		
		Low	Mid	High
BC0	RC1 SO55 (Loopback)	23.93	23.84	23.80
	RC3 SO55 (Loopback)	23.85	23.82	23.80
	RC3 SO32 (FCH)	24.05	**24.11**	24.06
	RC3 SO32 (FCH+SCH)	23.96	24.10	24.08

Conducted power measurement results for CDMA 1xEv-Do Rev. 0

Band	FTAP Rate	RTAP Rate	Conducted Power (dBm)		
			Channel		
			Low	Mid	High
BC0	307.2 kbps (2 slot, QPSK)	153.6 kbps	23.20	23.37	23.28

Conducted power measurement results for CDMA 1xEv-Do Rev. A

Band	FETAP Traffic Format	RETAP Data Payload Size	Conducted Power (dBm)		
			Channel		
			Low	Mid	High
BC0	307.2k, QPSK/ ACK channel is transmitted at all the slots	4096	23.16	23.34	23.22

Conducted power measurement results for LTE

FDD LTE Band 2							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	22.43	23.52	22.85	21.90	22.87	22.24
20MHz	1 (RB_Pos:0)	23.45	**24.33**	23.94	22.94	22.96	22.67
	1 (RB_Pos:49)	23.40	23.41	23.55	22.90	22.54	22.61
	1 (RB_Pos:99)	23.09	23.06	22.89	22.11	21.93	21.90
	50 (RB_Pos:0)	**23.13**	22.99	22.86	22.15	21.89	21.76
	50 (RB_Pos:24)	23.10	23.04	22.73	22.11	21.91	21.58
	50 (RB_Pos:49)	**23.17**	22.99	22.87	22.08	21.98	21.83
	100 (RB_Pos:0)	22.43	23.52	22.85	21.90	22.87	22.24
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	18675	18900	19125	18675	18900	19125
15MHz	1 (RB_Pos:0)	22.63	24.01	22.65	21.50	23.00	22.03
	1 (RB_Pos:37)	23.30	23.89	23.62	22.19	22.83	23.29
	1 (RB_Pos:74)	22.64	23.67	23.52	21.55	22.34	22.84
	36 (RB_Pos:0)	23.06	22.99	22.83	22.07	22.02	21.81
	36 (RB_Pos:18)	23.26	22.97	22.81	22.31	21.96	21.64
	36 (RB_Pos:37)	23.11	22.99	22.69	22.13	21.86	21.60
	75 (RB_Pos:0)	23.07	23.01	22.75	22.10	21.87	21.65
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	18650	18900	19150	18650	18900	19150
10MHz	1 (RB_Pos:0)	22.91	24.10	23.30	21.80	23.21	22.33
	1 (RB_Pos:24)	23.40	24.17	24.08	22.29	22.89	22.78

	1 (RB_Pos:49)	22.57	23.77	23.74	21.47	23.02	22.73
	25 (RB_Pos:0)	23.08	23.08	22.82	22.31	22.14	21.93
	25 (RB_Pos:12)	23.17	23.04	22.90	22.20	22.08	21.77
	25 (RB_Pos:24)	23.10	23.11	22.95	22.12	22.00	21.87
	50 (RB_Pos:0)	23.18	23.05	22.88	22.19	21.98	21.64
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	18625	18900	19175	18625	18900	19175
5MHz	1 (RB_Pos:0)	23.21	23.79	23.58	22.69	22.81	22.39
	1 (RB_Pos:12)	23.50	24.02	23.65	23.02	22.78	22.38
	1 (RB_Pos:24)	22.97	23.97	23.55	22.47	22.66	22.19
	12 (RB_Pos:0)	23.15	23.08	22.87	22.00	21.96	21.87
	12 (RB_Pos:6)	23.17	23.05	22.93	22.03	21.89	21.66
	12 (RB_Pos:11)	23.20	23.08	22.83	22.18	21.92	21.66
	25 (RB_Pos:0)	23.07	22.99	22.77	21.93	22.09	22.02
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	18615	18900	19185	18615	18900	19185
3MHz	1 (RB_Pos:0)	23.44	24.05	23.88	22.34	22.93	22.91
	1 (RB_Pos:7)	23.52	24.01	23.81	22.43	22.86	22.65
	1 (RB_Pos:14)	23.27	24.09	23.76	22.18	22.95	22.78
	8 (RB_Pos:0)	23.23	23.06	22.85	22.44	22.03	22.13
	8 (RB_Pos:4)	23.17	23.01	22.78	22.09	22.10	21.97
	8 (RB_Pos:7)	23.06	22.95	22.81	22.36	22.02	21.66
	15 (RB_Pos:0)	23.12	23.01	22.84	22.01	22.00	21.83
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	18607	18900	19193	18607	18900	19193
1.4MHz	1 (RB_Pos:0)	23.54	23.79	23.99	22.59	22.89	22.98
	1 (RB_Pos: 2)	23.54	23.89	23.93	22.62	22.84	22.75
	1 (RB_Pos:5)	23.47	23.98	23.88	22.55	22.79	22.78
	3 (RB_Pos:0)	23.49	23.93	23.69	22.56	22.94	22.98
	3 (RB_Pos:1)	23.51	23.98	23.91	22.58	23.01	23.05
	3 (RB_Pos:2)	23.45	23.91	23.80	22.54	22.97	22.80
	6 (RB_Pos:0)	23.12	22.96	22.87	22.18	21.90	21.84

FDD LTE Band 4							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20050	20175	20300	20050	20175	20300

20MHz	1 (RB_Pos:0)	22.48	22.71	22.87	21.75	21.54	21.83
	1 (RB_Pos:49)	22.52	**23.15**	22.95	21.99	21.83	21.56
	1 (RB_Pos:99)	22.54	22.90	22.54	21.36	21.52	21.56
	50 (RB_Pos:0)	21.69	21.89	**21.94**	20.59	20.72	20.70
	50 (RB_Pos:24)	21.71	21.81	21.72	20.50	20.90	20.67
	50 (RB_Pos:49)	21.75	21.86	21.72	20.58	20.79	20.68
	100 (RB_Pos:0)	21.76	**21.86**	21.85	20.69	20.73	20.67
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20025	20175	20325	20025	20175	20325
15MHz	1 (RB_Pos:0)	22.73	22.95	22.94	21.93	22.47	21.94
	1 (RB_Pos:37)	22.70	22.78	22.63	21.64	22.27	22.27
	1 (RB_Pos:74)	22.78	22.51	22.71	21.14	21.76	22.01
	36 (RB_Pos:0)	21.67	21.87	21.75	20.62	20.74	20.63
	36 (RB_Pos:18)	21.68	21.85	21.59	20.64	20.69	20.56
	36 (RB_Pos:37)	21.73	21.79	21.65	20.69	20.68	20.65
	75 (RB_Pos:0)	21.70	21.79	21.62	20.67	20.75	20.61
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20000	20175	20350	20000	20175	20350
10MHz	1 (RB_Pos:0)	22.88	22.88	22.78	21.59	21.81	21.72
	1 (RB_Pos:24)	22.80	23.23	22.63	21.47	22.02	21.95
	1 (RB_Pos:49)	22.80	22.94	22.69	21.03	21.89	21.76
	25 (RB_Pos:0)	21.74	21.96	21.68	20.81	21.05	20.77
	25 (RB_Pos:12)	21.62	21.89	21.66	20.81	21.02	20.71
	25 (RB_Pos:24)	21.70	21.87	21.65	20.85	21.06	20.70
	50 (RB_Pos:0)	21.71	21.93	21.73	20.85	20.68	20.70
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	19975	20175	20375	19975	20175	20375
5MHz	1 (RB_Pos:0)	22.84	22.84	22.64	21.91	21.64	21.25
	1 (RB_Pos:12)	22.64	22.85	22.68	21.66	21.52	21.53
	1 (RB_Pos:24)	22.54	22.90	22.71	21.24	21.76	21.38
	12 (RB_Pos:0)	21.73	21.90	21.65	20.49	20.72	20.61
	12 (RB_Pos:6)	21.67	21.90	21.90	20.42	20.80	20.77
	12 (RB_Pos:11)	21.63	21.85	21.97	20.39	20.77	20.71
	25 (RB_Pos:0)	21.62	21.86	21.88	20.59	20.88	20.90
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	19965	20175	20385	19965	20175	20385

3MHz	1 (RB_Pos:0)	22.87	22.73	22.58	22.04	21.82	21.83
	1 (RB_Pos:7)	22.66	22.75	22.43	21.81	21.82	21.66
	1 (RB_Pos:14)	22.55	22.76	22.54	21.78	21.54	21.79
	8 (RB_Pos:0)	21.79	21.88	21.72	20.70	20.87	20.91
	8 (RB_Pos:4)	21.69	21.94	21.78	20.75	20.66	21.09
	8 (RB_Pos:7)	21.78	21.97	21.76	20.66	20.68	20.51
	15 (RB_Pos:0)	21.70	21.86	21.78	20.78	20.49	20.70
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	19957	20175	20393	19957	20175	20393
1.4MHz	1 (RB_Pos:0)	22.62	22.79	22.83	21.56	21.75	21.81
	1 (RB_Pos: 2)	22.78	22.94	22.91	21.56	21.82	21.97
	1 (RB_Pos:5)	22.54	22.85	22.77	21.40	21.78	21.88
	3 (RB_Pos:0)	22.69	22.86	22.71	21.79	22.06	22.05
	3 (RB_Pos:1)	22.75	22.97	22.81	21.70	22.03	22.02
	3 (RB_Pos:2)	22.59	22.86	22.78	21.56	21.93	22.01
	6 (RB_Pos:0)	21.72	21.88	21.79	20.68	20.76	20.66

FDD LTE Band 5							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20450	20525	20600	20450	20525	20600
10MHz	1 (RB_Pos:0)	22.81	22.86	22.89	21.63	21.65	21.94
	1 (RB_Pos:24)	23.06	22.98	22.94	21.89	21.68	22.00
	1 (RB_Pos:49)	22.83	**23.09**	22.96	21.67	22.17	22.04
	25 (RB_Pos:0)	21.93	22.07	21.99	21.02	21.15	21.01
	25 (RB_Pos:12)	22.04	22.05	22.07	21.03	21.13	21.08
	25 (RB_Pos:24)	22.04	22.04	**22.10**	21.03	21.02	21.09
	50 (RB_Pos:0)	22.06	22.00	**22.13**	20.95	20.94	21.12
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20425	20525	20625	20425	20525	20625
5MHz	1 (RB_Pos:0)	22.78	22.71	22.93	21.80	21.05	21.67
	1 (RB_Pos:12)	23.04	22.97	22.90	21.90	21.16	21.68
	1 (RB_Pos:24)	22.98	22.90	22.92	21.98	21.12	21.56
	12 (RB_Pos:0)	21.92	21.90	22.01	20.83	20.84	21.08
	12 (RB_Pos:6)	21.96	22.03	22.18	20.77	20.98	21.07
	12 (RB_Pos:11)	22.03	21.97	22.21	20.86	21.01	21.16
	25 (RB_Pos:0)	21.97	22.03	22.00	20.92	21.09	21.23
Bandwidth	**RB Set**	**Power (dBm)**					

(MHz)		QPSK			16QAM		
	Channel	20415	20525	20635	20415	20525	20635
3MHz	1 (RB_Pos:0)	22.88	22.92	22.88	22.00	21.77	21.98
	1 (RB_Pos:7)	22.86	22.81	22.93	22.02	21.73	22.10
	1 (RB_Pos:14)	22.80	22.88	22.99	22.05	21.85	22.08
	8 (RB_Pos:0)	22.06	22.03	22.11	21.05	20.91	21.05
	8 (RB_Pos:4)	22.07	22.03	22.21	21.09	20.92	21.08
	8 (RB_Pos:7)	22.17	22.08	22.22	21.09	20.95	21.11
	15 (RB_Pos:0)	21.97	22.04	22.24	20.98	20.99	21.03
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20407	20525	20643	20407	20525	20643
1.4MHz	1 (RB_Pos:0)	22.87	22.85	23.07	22.19	21.89	21.94
	1 (RB_Pos: 2)	22.88	22.85	23.18	22.31	21.84	21.99
	1 (RB_Pos:5)	22.90	22.86	23.27	21.79	21.42	22.16
	3 (RB_Pos:0)	22.95	22.90	23.20	21.88	21.82	22.46
	3 (RB_Pos:1)	22.92	22.97	23.42	21.88	21.96	22.41
	3 (RB_Pos:2)	22.87	22.92	23.07	21.94	21.82	22.31
	6 (RB_Pos:0)	22.03	21.92	22.13	20.88	20.72	21.26

FDD LTE Band 7							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20850	21100	21350	20850	21100	21350
20MHz	1 (RB_Pos:0)	22.88	23.05	22.86	22.23	22.44	21.79
	1 (RB_Pos:49)	**23.31**	23.16	23.27	22.31	22.55	21.88
	1 (RB_Pos:99)	23.07	23.07	22.79	22.22	21.62	21.67
	50 (RB_Pos:0)	22.23	22.15	22.09	21.05	21.15	20.94
	50 (RB_Pos:24)	**22.24**	22.07	22.03	21.32	20.87	20.89
	50 (RB_Pos:49)	22.18	22.08	22.03	21.25	21.04	20.93
	100 (RB_Pos:0)	**22.20**	22.09	22.06	21.09	21.11	21.08
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20825	21100	21375	20825	21100	21375
15MHz	1 (RB_Pos:0)	23.05	22.92	23.16	22.18	22.03	22.59
	1 (RB_Pos:37)	22.98	22.94	22.95	22.75	21.86	22.78
	1 (RB_Pos:74)	23.07	23.01	22.82	21.94	21.38	22.18
	36 (RB_Pos:0)	22.15	22.06	22.09	21.06	21.28	21.04
	36 (RB_Pos:18)	22.15	22.10	22.06	21.05	21.26	21.04
	36 (RB_Pos:37)	22.21	22.07	22.03	20.99	21.04	20.92

	75 (RB_Pos:0)	22.09	22.07	22.04	21.05	21.12	20.99
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20800	21100	21400	20800	21100	21400
10MHz	1 (RB_Pos:0)	23.25	23.15	23.02	21.95	21.74	21.89
	1 (RB_Pos:24)	23.09	23.19	23.31	22.59	21.76	21.88
	1 (RB_Pos:49)	22.92	22.95	22.84	21.92	21.73	21.89
	25 (RB_Pos:0)	22.21	22.07	22.05	21.04	21.31	21.23
	25 (RB_Pos:12)	22.10	22.02	22.10	21.22	21.35	21.29
	25 (RB_Pos:24)	22.11	22.02	22.05	21.11	21.06	21.04
	50 (RB_Pos:0)	22.20	22.09	22.05	21.09	21.03	21.00
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20775	21100	21425	20775	21100	21425
5MHz	1 (RB_Pos:0)	23.07	22.79	22.72	21.70	21.94	21.59
	1 (RB_Pos:12)	23.07	23.00	22.97	21.71	21.97	21.45
	1 (RB_Pos:24)	22.94	22.80	22.95	21.42	21.38	21.03
	12 (RB_Pos:0)	22.08	22.06	21.92	20.96	21.00	21.09
	12 (RB_Pos:6)	22.08	22.10	21.95	21.08	21.04	20.84
	12 (RB_Pos:11)	22.02	22.02	21.93	21.09	20.79	20.99
	25 (RB_Pos:0)	22.08	21.99	21.95	21.22	20.98	20.96

FDD LTE Band 12							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	23060	23095	23130	23060	23095	23130
10MHz	1 (RB_Pos:0)	23.16	23.34	23.47	22.21	22.13	22.43
	1 (RB_Pos:24)	23.36	**24.04**	23.82	22.44	22.24	22.41
	1 (RB_Pos:49)	23.21	23.41	23.26	22.23	22.28	22.23
	25 (RB_Pos:0)	22.32	22.43	22.44	21.23	21.43	21.56
	25 (RB_Pos:12)	22.47	22.42	22.39	21.33	21.63	21.32
	25 (RB_Pos:24)	22.50	22.37	**22.51**	21.40	21.51	21.40
	50 (RB_Pos:0)	22.36	**22.44**	22.37	21.14	21.33	21.31
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	23035	23095	23155	23035	23095	23155
5MHz	1 (RB_Pos:0)	23.33	23.42	23.57	22.05	22.54	22.31
	1 (RB_Pos:12)	23.15	23.69	23.35	21.90	22.52	22.17
	1 (RB_Pos:24)	23.21	23.21	23.27	21.44	21.91	22.14
	12 (RB_Pos:0)	22.36	22.49	22.41	21.25	21.17	21.41

	12 (RB_Pos:6)	22.37	22.53	22.40	21.30	21.38	21.39
	12 (RB_Pos:11)	22.33	22.27	22.36	21.20	21.20	21.31
	25 (RB_Pos:0)	22.30	22.40	22.53	21.36	21.27	21.28
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	23025	23095	23165	23025	23095	23165
3MHz	1 (RB_Pos:0)	23.43	23.51	23.54	22.29	22.19	22.35
	1 (RB_Pos:7)	23.40	23.66	23.44	22.12	22.11	22.31
	1 (RB_Pos:14)	23.12	23.24	23.69	22.14	22.02	22.27
	8 (RB_Pos:0)	22.36	22.44	22.36	21.73	21.28	21.12
	8 (RB_Pos:4)	22.25	22.41	22.49	21.70	21.26	21.06
	8 (RB_Pos:7)	22.31	22.47	22.43	21.39	21.30	21.27
	15 (RB_Pos:0)	22.37	22.49	22.39	21.32	21.39	21.03
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	23017	23095	23173	23017	23095	23173
1.4MHz	1 (RB_Pos:0)	23.62	23.27	23.26	22.38	22.34	22.24
	1 (RB_Pos: 2)	23.51	23.52	23.62	22.14	22.27	22.44
	1 (RB_Pos:5)	23.32	23.25	23.77	22.22	22.18	22.46
	3 (RB_Pos:0)	23.52	23.34	23.36	22.20	21.99	22.21
	3 (RB_Pos:1)	23.29	23.45	23.66	22.32	21.89	22.43
	3 (RB_Pos:2)	23.26	23.46	23.60	22.30	21.90	22.33
	6 (RB_Pos:0)	22.32	22.46	22.41	21.48	21.04	21.33

FDD LTE Band 13							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	--	23230	--	--	23230	--
10MHz	1 (RB_Pos:0)	--	23.32	--	--	22.26	--
	1 (RB_Pos:24)	--	**23.68**	--	--	22.95	--
	1 (RB_Pos:49)	--	23.34	--	--	22.20	--
	25 (RB_Pos:0)	--	**22.48**	--	--	21.32	--
	25 (RB_Pos:12)	--	22.36	--	--	21.51	--
	25 (RB_Pos:24)	--	22.48	--	--	21.50	--
	50 (RB_Pos:0)	--	**22.36**	--	--	21.37	--
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	23205	23230	23255	23205	23230	23255
5MHz	1 (RB_Pos:0)	23.14	23.10	23.41	21.94	22.25	22.28

	1 (RB_Pos:12)	23.19	23.41	23.52	21.94	22.42	22.42
	1 (RB_Pos:24)	23.22	23.37	23.36	21.71	22.13	21.67
	12 (RB_Pos:0)	22.45	22.36	22.50	21.30	21.25	21.21
	12 (RB_Pos:6)	22.43	22.45	22.47	21.21	21.37	21.31
	12 (RB_Pos:11)	22.44	22.47	22.31	21.18	21.20	21.36
	25 (RB_Pos:0)	22.38	22.53	22.47	21.56	21.41	21.22

FDD LTE Band 17							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	23780	23790	23800	23780	23790	23800
10MHz	1 (RB_Pos:0)	23.22	22.94	23.06	22.19	22.01	22.07
	1 (RB_Pos:24)	**23.96**	23.60	23.35	22.23	22.33	22.69
	1 (RB_Pos:49)	23.16	22.95	22.94	21.67	22.20	21.69
	25 (RB_Pos:0)	22.41	22.43	22.40	21.39	21.64	21.40
	25 (RB_Pos:12)	**22.44**	22.42	22.44	21.47	21.59	21.47
	25 (RB_Pos:24)	22.40	22.41	22.40	21.38	21.46	21.31
	50 (RB_Pos:0)	**22.57**	22.34	22.36	21.25	21.29	21.34
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	23755	23790	23825	23755	23790	23825
5MHz	1 (RB_Pos:0)	23.30	23.07	23.24	22.39	22.17	21.79
	1 (RB_Pos:12)	23.45	23.42	23.26	22.34	21.95	21.86
	1 (RB_Pos:24)	23.02	23.33	23.02	22.26	21.55	21.69
	12 (RB_Pos:0)	22.32	22.34	22.39	21.18	21.11	21.11
	12 (RB_Pos:6)	22.34	22.36	22.35	21.31	21.42	21.15
	12 (RB_Pos:11)	22.33	22.37	22.23	21.20	21.33	21.24
	25 (RB_Pos:0)	22.35	22.38	22.35	21.24	21.26	21.38

FDD LTE Band 25							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	26140	26365	26590	26140	26365	26590
20MHz	1 (RB_Pos:0)	23.60	23.71	23.36	22.86	23.23	22.11
	1 (RB_Pos:49)	23.75	**23.91**	23.35	22.63	23.29	21.99
	1 (RB_Pos:99)	23.61	23.83	22.88	22.78	22.33	22.35
	50 (RB_Pos:0)	**22.89**	22.84	22.67	21.88	21.69	21.63
	50 (RB_Pos:24)	22.77	22.80	22.55	21.85	21.63	21.42

	50 (RB_Pos:49)	22.69	22.66	22.47	21.78	21.59	21.41
	100 (RB_Pos:0)	**22.84**	22.80	22.64	21.99	21.78	21.43
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	26115	26365	26615	26115	26365	26615
15MHz	1 (RB_Pos:0)	23.77	23.89	23.53	22.68	22.65	22.68
	1 (RB_Pos:37)	23.72	23.81	23.41	22.73	22.60	22.55
	1 (RB_Pos:74)	23.65	23.67	22.81	22.58	22.42	22.24
	36 (RB_Pos:0)	22.77	22.83	22.53	21.84	21.74	21.57
	36 (RB_Pos:18)	22.74	22.74	22.50	21.78	21.71	21.47
	36 (RB_Pos:37)	22.80	22.62	22.43	21.62	21.73	21.43
	75 (RB_Pos:0)	22.78	22.71	22.46	21.87	21.57	21.42
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	26090	26365	26640	26090	26365	26640
10MHz	1 (RB_Pos:0)	23.84	23.80	23.52	22.82	22.60	22.34
	1 (RB_Pos:24)	24.11	23.76	23.49	22.97	22.65	22.22
	1 (RB_Pos:49)	23.88	23.75	23.09	22.75	22.63	22.06
	25 (RB_Pos:0)	22.85	22.81	22.56	21.87	21.61	21.44
	25 (RB_Pos:12)	22.81	22.80	22.50	21.81	21.72	21.52
	25 (RB_Pos:24)	22.76	22.79	22.52	21.85	21.74	21.46
	50 (RB_Pos:0)	22.87	22.76	22.63	21.82	21.86	21.47
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	26065	26365	26665	26065	26365	26665
5MHz	1 (RB_Pos:0)	23.73	23.72	23.50	22.47	22.67	21.86
	1 (RB_Pos:12)	23.80	23.59	23.49	22.47	22.68	21.65
	1 (RB_Pos:24)	23.71	23.76	23.38	22.36	22.66	22.06
	12 (RB_Pos:0)	22.66	22.80	22.44	21.66	21.77	21.34
	12 (RB_Pos:6)	22.87	22.75	22.42	21.74	21.60	21.40
	12 (RB_Pos:11)	22.77	22.70	22.36	21.55	21.64	21.33
	25 (RB_Pos:0)	22.70	22.76	22.47	21.86	21.73	21.32
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	26055	26365	26675	26055	26365	26675
3MHz	1 (RB_Pos:0)	23.89	23.75	23.65	23.07	22.57	22.36
	1 (RB_Pos:7)	23.58	23.56	23.21	22.93	22.51	22.25
	1 (RB_Pos:14)	23.81	23.47	23.39	23.16	22.60	22.06
	8 (RB_Pos:0)	22.78	22.80	22.40	21.77	21.68	21.21
	8 (RB_Pos:4)	22.86	22.77	22.46	21.76	21.64	21.15

	8 (RB_Pos:7)	22.75	22.73	22.28	21.86	21.87	21.15
	15 (RB_Pos:0)	22.82	22.73	22.35	21.77	21.70	21.15
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	26047	26365	26683	26047	26365	26683
1.4MHz	1 (RB_Pos:0)	23.85	23.41	23.12	22.67	22.57	22.14
	1 (RB_Pos: 2)	23.94	23.60	23.63	22.69	22.53	22.25
	1 (RB_Pos:5)	23.88	23.50	23.61	22.75	22.53	22.20
	3 (RB_Pos:0)	23.72	23.59	23.10	22.84	22.31	22.37
	3 (RB_Pos:1)	23.73	23.75	23.14	22.86	22.28	22.45
	3 (RB_Pos:2)	23.68	23.68	23.44	22.89	22.21	22.31
	6 (RB_Pos:0)	22.83	22.67	22.13	21.53	21.38	21.34

TDD LTE Band 41							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	40340	40740	41140	40340	40740	41140
20MHz	1 (RB_Pos:0)	23.48	**23.63**	23.15	21.39	22.58	22.04
	1 (RB_Pos:49)	23.61	23.37	23.13	21.04	22.97	22.02
	1 (RB_Pos:99)	22.91	23.34	22.83	21.28	22.34	21.67
	50 (RB_Pos:0)	22.44	22.22	**22.46**	21.38	21.18	21.45
	50 (RB_Pos:24)	22.31	22.22	22.37	21.23	21.20	21.30
	50 (RB_Pos:49)	22.27	22.19	22.31	21.25	21.18	21.26
	100 (RB_Pos:0)	22.32	22.25	**22.38**	21.11	21.19	21.29
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	40315	40740	41165	40315	40740	41165
15MHz	1 (RB_Pos:0)	23.62	23.33	23.34	22.88	21.50	22.60
	1 (RB_Pos:37)	23.29	23.32	23.06	22.53	21.44	22.33
	1 (RB_Pos:74)	23.35	23.35	23.26	22.55	21.51	22.17
	36 (RB_Pos:0)	22.44	22.31	22.33	21.37	21.13	21.10
	36 (RB_Pos:18)	22.47	22.23	22.35	21.31	21.13	21.12
	36 (RB_Pos:37)	22.35	22.16	22.39	21.17	21.11	21.14
	75 (RB_Pos:0)	22.41	22.24	22.35	21.37	21.19	21.32
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	40290	40740	41190	40290	40740	41190
10MHz	1 (RB_Pos:0)	23.56	23.12	23.35	21.68	23.07	22.53
	1 (RB_Pos:24)	23.52	23.01	23.29	21.70	23.27	22.84
	1 (RB_Pos:49)	23.48	23.01	23.14	21.51	23.09	22.78

	25 (RB_Pos:0)	22.47	22.21	22.41	21.20	21.16	21.36
	25 (RB_Pos:12)	22.43	22.25	22.35	21.26	21.12	21.49
	25 (RB_Pos:24)	22.45	22.24	22.36	21.17	21.09	21.42
	50 (RB_Pos:0)	22.38	22.31	22.42	21.37	21.19	21.10
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	40265	40740	41215	40265	40740	41215
5MHz	1 (RB_Pos:0)	23.12	23.03	23.19	21.78	21.93	21.55
	1 (RB_Pos:12)	23.38	23.20	23.24	21.99	21.90	21.66
	1 (RB_Pos:24)	23.08	23.15	23.12	21.76	21.88	21.68
	12 (RB_Pos:0)	22.38	22.20	22.33	21.50	21.11	21.11
	12 (RB_Pos:6)	22.41	22.19	22.35	21.53	21.17	21.07
	12 (RB_Pos:11)	22.33	22.19	22.25	21.19	21.09	21.03
	25 (RB_Pos:0)	22.44	22.20	22.34	21.34	20.98	21.31

Conducted power measurement results for WLAN (2.4 GHz)

Mode	**Worst case Data rate**	**Conducted Power (dBm)**		
		Channel		
		1	**6**	**11**
802.11b	**11 Mbps**	**12.46**	**12.66**	12.38
802.11g	**54 Mbps**	12.52	12.96	12.62
802.11n(HT20)	**MCS0**	11.64	12.20	11.81

Conducted power measurement results for WLAN (5.2 GHz)

Mode	**Worst case Data rate**	**Conducted Power (dBm)**		
		Channel		
		36	**44**	**48**
802.11a	**6 Mbps**	12.20	12.59	12.57
802.11n(HT20)	**MCS0**	12.24	12.66	12.58
802.11ac(VHT20)	**MCS0**	12.20	12.61	12.58

Mode	**Worst case Data rate**	**Conducted Power (dBm)**	
		Channel	
		38	**46**
802.11ac(VHT40)	**MCS0**	12.70	**12.78**

Mode	**Worst case Data rate**	**Conducted Power (dBm)**
		Channel
		42
802.11ac(VHT80)	**MCS0**	11.65

Conducted power measurement results for WLAN (5.8 GHz)

Mode	Worst case Data rate	Conducted Power (dBm)		
		Channel		
		149	157	165
802.11a	6 Mbps	12.77	11.75	11.40
802.11n(HT20)	MCS0	12.74	11.63	11.35
802.11ac(VHT20)	MCS0	12.78	12.21	11.83

Mode	Worst case Data rate	Conducted Power (dBm)	
		Channel	
		151	159
802.11ac(VHT40)	MCS0	12.50	12.05

Mode	Data Rate (Mbps)	Conducted Power (dBm)
		Channel
		155
802.11ac(VHT80)	MCS0	11.44

Conducted power measurement results for Bluetooth

Mode	Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)
BR/EDR	GFSK	0	2402	10.43
		39	2441	10.84
		78	2480	8.02
	Pi/4DOPSK	0	2402	10.32
		39	2441	10.92
		78	2480	8.10
	8DPSK	0	2402	10.57
		39	2441	**11.13**
		78	2480	8.33
BLE	GFSK	0	2402	0.46
		19	2440	0.84
		39	2480	-1.30

Note(s):

1. Per KDB 447498 D01v06, 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:
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[$\sqrt{f_{(GHz)}}$] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR

$f_{(GHz)}$ is the RF channel transmit frequency in GHz

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

The result is rounded to one decimal place for comparison

Bluetooth Turn-up Power (dBm)	Separation Distance (mm)	Frequency (GHz)	Value	Exclusion Thresholds
11.5	5	2.45	4.42	3.0

Per KDB 447498 D01v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion. The test exclusion threshold is 4.42 which is<>3.0, SAR testing is required.

For IC: RSS-102 section 2.5.1 Exemption Limits for Routine Evaluation, Table 1 shows the SAR evaluation for a device with a separation distance of 5 mm at 2450 MHz is 4 mW, which is 6 dBm < 11.5 dBm, so SAR testing is required for IC.

Table 1: SAR evaluation — Exemption limits for routine evaluation based on frequency and separation distance [4, 5]

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223 mW	254 mW	284 mW	315 mW	345 mW
450	141 mW	159 mW	177 mW	195 mW	213 mW
835	80 mW	92 mW	105 mW	117 mW	130 mW
1900	99 mW	153 mW	225 mW	316 mW	431 mW
2450	83 mW	123 mW	173 mW	235 mW	309 mW
3500	86 mW	124 mW	170 mW	225 mW	290 mW
5800	56 mW	71 mW	85 mW	97 mW	106 mW

6.2 Power Reduction List

Conducted Power Measurement Results for GSM/GPRS/EDGE

GSM 1900	Burst Conducted Power (dBm)			/	Average Power (dBm)		
	Channel				Channel		
	Low	Mid	High		Low	Mid	High
GSM	25.91	**25.99**	25.85	/	/	/	/

GPRS	**1 TX slot**	25.24	25.39	25.46	**-9.03 dB**	16.21	16.36	16.43
	2 TX slot	24.46	24.80	24.97	**-6.02 dB**	18.44	18.78	18.95
	3 TX slot	23.50	24.36	24.24	**-4.26 dB**	19.24	20.10	19.98
	4 TX slot	22.65	23.49	23.24	**-3.01 dB**	19.64	**20.48**	20.23
EDGE	**1 TX slot**	23.53	24.32	24.59	**-9.03 dB**	14.50	15.29	15.56
	2 TX slot	22.61	23.23	23.01	**-6.02 dB**	16.59	17.21	16.99
	3 TX slot	21.18	21.32	21.15	**-4.26 dB**	16.92	17.06	16.89
	4 TX slot	20.37	20.02	20.08	**-3.01 dB**	**17.36**	17.01	17.07

Note(s):

3. Division Factors
   To average the power, the division factor is as follows:
   1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB
   2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB
   3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB
   4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB
4. According to the conducted power as above, the GPRS/EDGE measurements are performed with 4Tx slot for GPRS 900 and GPRS 1800.

Conducted Power Measurement Results for WCDMA/HSDPA/HSPUA

WCDMA Band II	**Mode**	**Conducted Power (dBm)**		
		Channel		
		Low	**Mid**	**High**
RMC	**12.2 kbps**	18.22	**18.24**	18.13
HSDPA	**Sub - Test 1**	17.16	17.23	17.03
	Sub - Test 2	17.25	17.25	17.14
	Sub - Test 3	16.64	16.76	16.56
	Sub - Test 4	16.64	16.76	16.54
HSUPA	**Sub - Test 1**	17.11	17.18	17.00
	Sub - Test 2	15.00	15.21	15.05
	Sub - Test 3	16.12	16.20	16.03
	Sub - Test 4	15.08	15.21	15.05
	Sub - Test 5	16.94	17.21	17.04

WCDMA Band V	**Mode**	**Conducted Power (dBm)**		
		Channel		
		Low	**Mid**	**High**
RMC	**12.2 kbps**	19.21	19.24	**19.59**
HSDPA	**Sub - Test 1**	18.18	18.20	18.49
	Sub - Test 2	18.19	18.23	18.50
	Sub - Test 3	17.67	17.73	18.00

	Sub - Test 4	17.67	17.73	18.00
HSUPA	**Sub - Test 1**	18.19	18.19	18.47
	Sub - Test 2	16.16	16.19	16.49
	Sub - Test 3	17.15	17.14	17.50
	Sub - Test 4	16.26	16.28	16.51
	Sub - Test 5	18.16	18.25	18.45

Conducted power measurement results for LTE

FDD LTE Band 2							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	18700	18900	19100	18700	18900	19100
20MHz	1 (RB_Pos:0)	18.24	**18.71**	18.44	18.51	18.35	18.22
	1 (RB_Pos:49)	18.58	18.46	18.38	18.83	17.96	18.07
	1 (RB_Pos:99)	18.25	18.37	18.15	18.07	17.66	17.93
	50 (RB_Pos:0)	**18.44**	18.33	18.30	18.39	18.26	18.18
	50 (RB_Pos:24)	18.41	18.24	18.14	18.30	18.36	18.20
	50 (RB_Pos:49)	18.40	18.27	18.08	18.28	18.26	18.09
	100 (RB_Pos:0)	**18.48**	18.31	18.31	18.44	18.19	18.21
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	18675	18900	19125	18675	18900	19125
15MHz	1 (RB_Pos:0)	18.42	18.48	18.53	18.46	19.02	18.25
	1 (RB_Pos:37)	18.62	18.20	18.07	18.47	18.80	18.65
	1 (RB_Pos:74)	18.33	18.08	18.22	18.26	18.32	17.98
	36 (RB_Pos:0)	18.57	18.38	18.26	18.60	18.17	18.13
	36 (RB_Pos:18)	18.59	18.37	18.16	18.64	18.25	18.16
	36 (RB_Pos:37)	18.64	18.35	18.16	18.63	18.20	18.09
	75 (RB_Pos:0)	18.53	18.37	18.10	18.53	18.27	18.10
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	18650	18900	19150	18650	18900	19150
10MHz	1 (RB_Pos:0)	18.59	18.23	18.18	18.65	18.02	17.99
	1 (RB_Pos:24)	18.40	18.53	18.30	18.74	17.93	17.86
	1 (RB_Pos:49)	18.41	18.37	18.03	18.33	18.08	18.07
	25 (RB_Pos:0)	18.44	18.21	18.13	18.43	18.29	18.36
	25 (RB_Pos:12)	18.37	18.17	18.04	18.39	18.32	18.23
	25 (RB_Pos:24)	18.40	18.17	18.09	18.38	18.31	18.26
	50 (RB_Pos:0)	18.40	18.19	18.12	18.48	18.23	18.00
Bandwidth	**RB Set**	**Power (dBm)**					

(MHz)		QPSK			16QAM		
	Channel	18625	18900	19175	18625	18900	19175
5MHz	1 (RB_Pos:0)	18.25	18.02	17.99	17.79	17.82	17.81
	1 (RB_Pos:12)	18.23	18.15	18.03	17.88	17.82	17.84
	1 (RB_Pos:24)	18.22	18.00	18.12	17.84	17.76	17.68
	12 (RB_Pos:0)	18.32	18.16	18.13	18.23	18.15	18.28
	12 (RB_Pos:6)	18.37	18.21	18.13	18.24	18.07	18.21
	12 (RB_Pos:11)	18.37	18.13	18.04	18.19	18.01	17.94
	25 (RB_Pos:0)	18.28	18.24	18.10	18.55	18.17	17.91
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	18615	18900	19185	18615	18900	19185
3MHz	1 (RB_Pos:0)	18.21	18.27	18.17	18.45	17.96	17.76
	1 (RB_Pos:7)	18.16	18.30	18.00	18.08	17.90	17.50
	1 (RB_Pos:14)	18.21	18.26	17.99	18.23	17.93	17.79
	8 (RB_Pos:0)	18.36	18.15	18.14	18.54	18.06	18.20
	8 (RB_Pos:4)	18.46	18.07	18.09	18.53	17.92	17.96
	8 (RB_Pos:7)	18.32	18.11	18.22	18.53	17.95	18.18
	15 (RB_Pos:0)	18.30	18.14	18.12	18.49	18.13	18.16
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	18607	18900	19193	18607	18900	19193
1.4MHz	1 (RB_Pos:0)	18.39	18.17	18.39	18.25	18.13	18.59
	1 (RB_Pos: 2)	18.57	18.23	18.42	18.23	18.30	17.97
	1 (RB_Pos:5)	18.26	18.07	18.23	18.28	18.15	17.96
	3 (RB_Pos:0)	18.32	18.31	18.23	18.24	18.07	18.33
	3 (RB_Pos:1)	18.34	18.37	18.21	18.23	18.04	18.45
	3 (RB_Pos:2)	18.36	18.33	18.15	18.24	17.98	18.51
	6 (RB_Pos:0)	18.41	18.39	18.20	18.23	18.21	18.47

FDD LTE Band 4							
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	20050	20175	20300	20050	20175	20300
20MHz	1 (RB_Pos:0)	17.71	18.06	18.08	17.74	17.77	18.23
	1 (RB_Pos:49)	17.94	**18.40**	17.97	17.99	17.60	17.63
	1 (RB_Pos:99)	17.72	18.31	17.99	17.36	17.47	17.38
	50 (RB_Pos:0)	17.76	17.98	**18.01**	17.90	17.76	17.92
	50 (RB_Pos:24)	17.77	17.93	17.78	17.95	18.09	17.83
	50 (RB_Pos:49)	17.88	17.98	17.81	17.86	18.07	17.80

	100 (RB_Pos:0)	17.85	17.97	17.95	17.79	18.04	17.87
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20025	20175	20325	20025	20175	20325
15MHz	1 (RB_Pos:0)	17.82	17.97	17.96	17.79	17.93	18.66
	1 (RB_Pos:37)	17.97	18.01	17.68	17.71	17.73	18.33
	1 (RB_Pos:74)	17.99	17.89	17.91	17.57	17.49	18.57
	36 (RB_Pos:0)	17.81	17.98	17.85	17.74	17.99	17.95
	36 (RB_Pos:18)	17.87	17.94	17.83	17.66	18.14	17.80
	36 (RB_Pos:37)	17.91	17.97	17.86	17.74	18.09	17.77
	75 (RB_Pos:0)	17.66	17.97	17.84	17.75	17.96	18.01
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20000	20175	20350	20000	20175	20350
10MHz	1 (RB_Pos:0)	17.74	17.97	17.78	17.60	17.66	17.68
	1 (RB_Pos:24)	17.76	18.18	18.19	17.72	17.57	17.60
	1 (RB_Pos:49)	17.67	18.20	17.90	17.50	17.70	17.75
	25 (RB_Pos:0)	17.80	18.11	17.81	17.98	18.11	17.80
	25 (RB_Pos:12)	17.79	18.04	17.81	17.89	18.12	17.79
	25 (RB_Pos:24)	17.76	17.99	17.89	17.71	18.07	18.00
	50 (RB_Pos:0)	17.84	17.93	17.88	17.77	17.89	17.84
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	19975	20175	20375	19975	20175	20375
5MHz	1 (RB_Pos:0)	17.58	17.97	17.86	17.34	17.99	17.63
	1 (RB_Pos:12)	17.77	18.01	18.16	17.24	17.51	17.84
	1 (RB_Pos:24)	17.59	18.06	17.91	17.00	17.45	17.17
	12 (RB_Pos:0)	17.72	18.05	17.86	17.80	17.86	17.75
	12 (RB_Pos:6)	17.76	18.09	18.11	17.70	17.99	18.25
	12 (RB_Pos:11)	17.70	18.05	18.13	17.56	18.08	18.22
	25 (RB_Pos:0)	17.69	18.01	17.95	17.87	18.15	17.95
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	19965	20175	20385	19965	20175	20385
3MHz	1 (RB_Pos:0)	17.68	18.22	17.72	17.76	17.47	17.75
	1 (RB_Pos:7)	17.61	18.10	17.77	17.43	17.61	17.64
	1 (RB_Pos:14)	17.70	18.12	17.74	17.69	17.19	17.66
	8 (RB_Pos:0)	17.75	18.11	17.99	17.57	18.06	17.61
	8 (RB_Pos:4)	17.79	18.05	17.93	17.83	17.99	17.63
	8 (RB_Pos:7)	17.72	18.02	17.90	17.93	18.07	17.61

	15 (RB_Pos:0)	17.78	18.05	17.92	17.72	18.18	17.74
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	19957	20175	20393	19957	20175	20393
1.4MHz	1 (RB_Pos:0)	17.89	17.85	17.73	17.59	17.79	17.74
	1 (RB_Pos: 2)	17.92	17.78	17.81	17.53	17.61	18.01
	1 (RB_Pos:5)	17.71	17.91	17.78	17.61	17.20	17.91
	3 (RB_Pos:0)	17.83	17.90	17.84	17.19	17.47	17.95
	3 (RB_Pos:1)	17.82	18.09	18.01	17.47	17.72	18.13
	3 (RB_Pos:2)	17.70	18.02	17.91	17.38	17.74	18.00
	6 (RB_Pos:0)	17.75	17.91	17.88	17.52	17.69	17.84

FDD LTE Band 5							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20450	20525	20600	20450	20525	20600
10MHz	1 (RB_Pos:0)	18.86	18.91	18.99	18.70	18.75	18.81
	1 (RB_Pos:24)	18.97	19.07	**19.21**	18.79	18.87	18.93
	1 (RB_Pos:49)	18.71	18.86	19.05	18.73	18.86	19.05
	25 (RB_Pos:0)	18.85	18.87	18.98	18.72	18.93	19.05
	25 (RB_Pos:12)	18.87	18.93	19.16	18.72	18.94	19.16
	25 (RB_Pos:24)	18.88	18.97	**19.18**	18.74	18.98	19.19
	50 (RB_Pos:0)	18.96	18.87	19.08	18.90	19.10	18.94
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20425	20525	20625	20425	20525	20625
5MHz	1 (RB_Pos:0)	18.76	18.85	19.12	18.26	18.77	18.96
	1 (RB_Pos:12)	18.69	18.97	19.27	18.43	18.91	18.92
	1 (RB_Pos:24)	18.61	18.73	19.20	18.39	19.06	18.79
	12 (RB_Pos:0)	18.81	18.85	19.12	18.90	18.88	19.13
	12 (RB_Pos:6)	18.84	18.98	19.09	18.86	18.97	19.15
	12 (RB_Pos:11)	18.79	18.93	19.23	18.82	18.80	19.30
	25 (RB_Pos:0)	18.78	18.82	19.13	18.96	18.82	19.18
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20415	20525	20635	20415	20525	20635
3MHz	1 (RB_Pos:0)	18.86	19.05	18.99	18.81	18.74	19.04
	1 (RB_Pos:7)	18.86	19.00	19.20	18.34	18.80	19.21
	1 (RB_Pos:14)	18.76	18.96	19.24	18.40	18.86	19.14
	8 (RB_Pos:0)	19.01	19.02	19.23	18.73	18.91	19.12

	8 (RB_Pos:4)	18.87	18.99	19.23	18.87	18.99	19.05
	8 (RB_Pos:7)	18.91	19.06	19.27	18.94	19.03	19.07
	15 (RB_Pos:0)	18.87	18.84	19.28	18.82	18.89	19.24
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20407	20525	20643	20407	20525	20643
1.4MHz	1 (RB_Pos:0)	18.78	18.86	19.22	18.76	18.86	19.13
	1 (RB_Pos: 2)	18.69	19.04	19.13	18.67	18.75	19.16
	1 (RB_Pos:5)	18.76	18.98	19.24	18.57	18.83	19.17
	3 (RB_Pos:0)	18.78	19.05	19.22	18.71	18.82	19.01
	3 (RB_Pos:1)	18.89	18.97	19.31	18.86	18.89	19.10
	3 (RB_Pos:2)	18.94	18.97	19.08	18.77	18.84	19.14
	6 (RB_Pos:0)	18.77	18.97	19.33	18.58	18.94	19.49

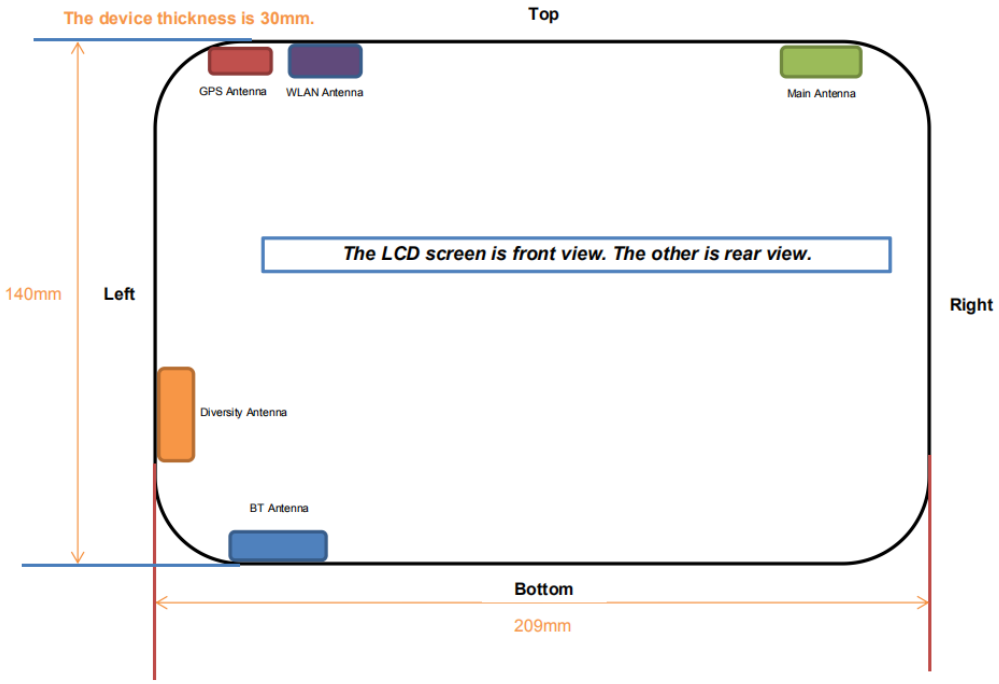
FDD LTE Band 7							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20850	21100	21350	20850	21100	21350
20MHz	1 (RB_Pos:0)	17.82	18.20	17.59	17.89	17.63	17.54
	1 (RB_Pos:49)	18.24	**18.26**	17.75	18.36	17.79	17.59
	1 (RB_Pos:99)	17.78	18.04	17.51	17.53	17.47	17.53
	50 (RB_Pos:0)	**18.09**	17.96	17.86	17.95	17.81	17.84
	50 (RB_Pos:24)	18.08	18.02	17.80	18.12	18.17	17.71
	50 (RB_Pos:49)	17.98	18.01	17.79	18.07	18.17	17.44
	100 (RB_Pos:0)	18.04	17.99	17.90	18.07	17.92	17.98
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20825	21100	21375	20825	21100	21375
15MHz	1 (RB_Pos:0)	18.03	17.97	17.75	18.06	17.90	18.48
	1 (RB_Pos:37)	17.97	18.08	17.58	18.51	17.81	18.32
	1 (RB_Pos:74)	17.95	17.95	17.65	17.89	17.67	17.87
	36 (RB_Pos:0)	18.00	17.97	17.87	18.12	17.96	17.89
	36 (RB_Pos:18)	18.05	18.03	17.81	17.94	18.21	17.80
	36 (RB_Pos:37)	17.98	17.97	17.78	17.90	17.94	17.67
	75 (RB_Pos:0)	17.97	18.03	17.78	18.03	17.79	17.82
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20800	21100	21400	20800	21100	21400
10MHz	1 (RB_Pos:0)	18.09	17.98	17.75	17.81	17.78	17.71

	1 (RB_Pos:24)	18.11	18.41	18.00	18.43	17.73	17.85
	1 (RB_Pos:49)	17.90	17.95	17.72	17.83	17.76	17.64
	25 (RB_Pos:0)	18.10	17.94	17.80	17.97	18.01	17.77
	25 (RB_Pos:12)	18.10	17.98	17.78	18.05	18.05	18.01
	25 (RB_Pos:24)	18.12	17.96	17.80	17.86	18.01	17.95
	50 (RB_Pos:0)	18.03	18.01	17.80	17.95	18.05	17.70
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	20775	21100	21425	20775	21100	21425
5MHz	1 (RB_Pos:0)	17.88	17.82	17.67	17.68	17.94	17.45
	1 (RB_Pos:12)	17.95	17.84	17.81	17.65	17.99	17.18
	1 (RB_Pos:24)	17.81	17.74	17.67	17.35	17.46	17.07
	12 (RB_Pos:0)	18.00	17.98	17.69	17.95	17.77	17.63
	12 (RB_Pos:6)	18.05	17.94	17.74	18.08	17.93	17.62
	12 (RB_Pos:11)	17.92	17.91	17.67	17.90	17.80	17.70
	25 (RB_Pos:0)	18.02	17.96	17.72	18.10	17.96	17.67

FDD LTE Band 25							
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	26140	26365	26590	26140	26365	26590
20MHz	1 (RB_Pos:0)	17.87	18.14	17.72	18.27	17.68	17.35
	1 (RB_Pos:49)	**18.35**	18.24	17.84	18.53	17.78	18.33
	1 (RB_Pos:99)	18.02	18.14	17.69	18.23	17.58	17.33
	50 (RB_Pos:0)	**18.16**	18.05	17.85	18.10	17.80	17.74
	50 (RB_Pos:24)	18.07	17.96	17.84	18.05	17.95	17.73
	50 (RB_Pos:49)	18.00	18.00	17.82	17.94	17.92	17.73
	100 (RB_Pos:0)	18.03	17.98	17.82	18.11	17.87	17.76
Bandwidth (MHz)	**RB Set**	**Power (dBm)**					
		QPSK			**16QAM**		
	Channel	26115	26365	26615	26115	26365	26615
15MHz	1 (RB_Pos:0)	18.06	18.03	17.76	18.20	18.05	18.44
	1 (RB_Pos:37)	18.12	18.01	17.65	18.20	17.82	18.64
	1 (RB_Pos:74)	18.03	17.97	17.71	17.88	17.61	18.47
	36 (RB_Pos:0)	18.25	17.98	17.78	18.17	18.05	17.86
	36 (RB_Pos:18)	18.10	17.90	17.81	18.11	17.98	17.76
	36 (RB_Pos:37)	18.19	17.88	17.73	18.10	17.96	17.74
	75 (RB_Pos:0)	18.08	18.06	17.77	18.08	17.84	17.77
Bandwidth	**RB Set**	**Power (dBm)**					

(MHz)		QPSK			16QAM		
	Channel	26090	26365	26640	26090	26365	26640
10MHz	1 (RB_Pos:0)	18.12	18.07	17.87	18.09	17.84	17.82
	1 (RB_Pos:24)	18.19	18.07	17.83	18.20	17.88	17.57
	1 (RB_Pos:49)	18.10	17.96	17.91	17.95	17.80	17.28
	25 (RB_Pos:0)	18.15	18.09	17.85	18.22	18.05	17.97
	25 (RB_Pos:12)	18.19	18.04	17.93	18.08	18.20	17.90
	25 (RB_Pos:24)	18.26	18.09	17.91	18.09	18.20	17.78
	50 (RB_Pos:0)	18.12	18.01	17.79	18.10	17.96	17.73
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	26065	26365	26665	26065	26365	26665
5MHz	1 (RB_Pos:0)	17.82	17.81	17.75	17.58	17.96	17.33
	1 (RB_Pos:12)	17.96	17.86	17.92	17.73	18.05	17.38
	1 (RB_Pos:24)	17.92	17.93	17.90	17.65	17.83	17.21
	12 (RB_Pos:0)	18.03	18.02	17.80	18.04	18.09	17.61
	12 (RB_Pos:6)	18.10	18.06	17.81	18.12	17.98	17.61
	12 (RB_Pos:11)	18.07	17.98	17.84	18.11	17.99	17.67
	25 (RB_Pos:0)	18.01	18.02	17.73	18.15	18.06	17.85
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	26055	26365	26675	26055	26365	26675
3MHz	1 (RB_Pos:0)	18.22	18.01	17.72	18.10	17.80	17.59
	1 (RB_Pos:7)	18.20	17.96	17.82	18.10	17.71	17.60
	1 (RB_Pos:14)	18.28	17.99	18.03	18.14	17.76	17.60
	8 (RB_Pos:0)	18.06	18.01	17.85	18.10	17.94	17.52
	8 (RB_Pos:4)	18.03	18.07	17.80	18.08	17.91	17.55
	8 (RB_Pos:7)	18.08	18.04	17.89	18.04	17.87	17.57
	15 (RB_Pos:0)	18.06	18.03	17.88	17.97	18.02	17.65
Bandwidth (MHz)	RB Set	Power (dBm)					
		QPSK			16QAM		
	Channel	26047	26365	26683	26047	26365	26683
1.4MHz	1 (RB_Pos:0)	17.83	17.95	17.60	17.88	17.68	17.61
	1 (RB_Pos: 2)	18.20	18.02	17.86	18.19	17.77	17.30
	1 (RB_Pos:5)	17.90	18.10	17.75	17.99	17.65	17.34
	3 (RB_Pos:0)	18.01	17.95	17.78	18.14	17.95	17.23
	3 (RB_Pos:1)	18.29	17.95	17.75	18.14	17.94	17.64
	3 (RB_Pos:2)	18.33	17.98	17.81	18.07	17.89	17.50
	6 (RB_Pos:0)	18.04	17.99	17.80	18.00	17.57	17.52

6.3 Transmit Antennas Conditions



Antenna information:

Main Antenna	GSM/CDMA/WCDMA/LTE TX/RX
LTE Diversity Antenna	Only RX
WLAN/BT Antenna	WLAN/BT TX/RX

Distance of the Antenna to the EUT surface and edge (mm)						
Antenna	**Front**	**Back**	**Top**	**Bottom**	**Left**	**Right**
Main Antenna	10.7	2.5	187.5	8.4	92	9
WLAN/BT Antenna	10.9	2.5	23.8	192.5	131.7	8.9

Note(s):

1. Per KDB648474 D04, because the overall diagonal distance of this devices is 100mm<160mm, it is considered as “Mini Table“ device.
2. Per KDB648474 D04, 10-g extremity SAR is not required when Body-Worn mode 1-g reported SAR < 1.2 W/Kg.
3. According to the KDB941225 D06 Hot Spot SAR v02, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.
4. Referring to KDB 941225 D06 v02, When the overall device length and width are ≥9cm*5cm, the test distance is 10mm, SAR must be measured for all sides and surfaces with a transmitting antenna located with 25mm from that surface or edge.

6.4 SAR Test Exclusion Consideration Table

For FCC

According with FCC KDB 447498 D01, Appendix A, <SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm> Table, this Device SAR test configurations consider as below.

For IC

According with section 2.5.1 of RSS-102 Issue 5, SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table.

Exemption Limits (mW)					
Frequency (MHz)	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW
Frequency (MHz)	At separation distance of 30 mm	At separation duistance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223 mW	254 mW	284 mW	315 mW	345 mW
450	141 mW	159 mW	177 mW	195 mW	213 mW
835	80 mW	92 mW	105 mW	117 mW	130 mW
1900	99 mW	153 mW	225 mW	315 mW	431 mW
2450	83 mW	123 mW	173 mW	235 mW	309 mW
3500	86 mW	124 mW	170 mW	225 mW	290 mW
5800	56 mW	71 mW	85 mW	97 mW	106 mW

SAR Test Exclusion Consideration Table:

Band	Mode	Max. Tune-up Power		Test Position Configurations					
		dBm	mW	Head	Back	Left Edge	Right Edge	Top Edge	Bottom Edge
GSM 850	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	Voice	33.00	1995.26	N/A	Yes	No	Yes	No	Yes
	Data	30.00	1000.00	N/A	Yes	No	Yes	No	Yes

GSM 1900	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	Voice	26.00	398.11	N/A	Yes	No	Yes	No	Yes
	Data	24.00	251.19	N/A	Yes	No	Yes	No	Yes
WCDMA Band 2	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	RMC	18.50	70.79	N/A	Yes	No	Yes	No	Yes
WCDMA Band 5	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	RMC	18.50	70.79	N/A	Yes	No	Yes	Yes	No
CDMA BC0	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	1xRTT (RC3 SO32)	24.50	281.84	N/A	Yes	No	Yes	Yes	No
	1xEVDO (Rel.0)	23.50	223.87	N/A	Yes	No	Yes	Yes	No
LTE Band 2	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	QPSK	19.00	79.43	N/A	Yes	No	Yes	Yes	No
LTE Band 4	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	QPSK	18.50	70.79	N/A	Yes	No	Yes	Yes	No
LTE Band 5	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	QPSK	19.50	89.13	N/A	Yes	No	Yes	Yes	No
LTE Band 7	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	QPSK	18.50	70.79	N/A	Yes	No	Yes	Yes	No
LTE Band 12	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	QPSK	24.10	257.04	N/A	Yes	No	Yes	Yes	No
LTE Band 13	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	QPSK	24.00	251.19	N/A	Yes	No	Yes	Yes	No
LTE Band 17	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	QPSK	24.00	251.19	N/A	Yes	No	Yes	Yes	No
LTE Band 25	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	QPSK	18.50	70.79	N/A	Yes	No	Yes	Yes	No
LTE Band 41	Distance to User			N/A	2.5mm	92mm	9mm	187.5mm	8.4mm
	QPSK	24.00	251.19	N/A	Yes	No	Yes	Yes	No
WLAN 2.4 G	Distance to User			N/A	2.5mm	131.7mm	8.9mm	23.8mm	192.5mm
	802.11b	13.00	19.95	N/A	Yes	No	Yes	Yes	No
	802.11g	13.00	19.95	N/A	Yes	No	Yes	Yes	No
	802.11n(HT20)	12.50	17.78	N/A	Yes	No	Yes	Yes	No
WLAN 5.2 G	Distance to User			N/A	2.5mm	131.7mm	8.9mm	23.8mm	192.5mm
	802.11a	13.00	19.95	N/A	Yes	No	Yes	Yes	No
	802.11n(HT20)	13.00	19.95	N/A	Yes	No	Yes	Yes	No
	802.11ac(HT20)	13.00	19.95	N/A	Yes	No	Yes	Yes	No
	802.11ac(HT40)	13.00	19.95	N/A	Yes	No	Yes	Yes	No

	802.11ac(HT80)	12.00	15.85	N/A	Yes	No	Yes	Yes	No
WLAN 5.8 G	Distance to User			N/A	2.5mm	131.7mm	8.9mm	23.8mm	192.5mm
	802.11a	13.00	19.95	N/A	Yes	No	Yes	Yes	No
	802.11n(HT20)	13.00	19.95	N/A	Yes	No	Yes	Yes	No
	802.11ac(HT20)	13.00	19.95	N/A	Yes	No	Yes	Yes	No
	802.11ac(HT40)	13.00	19.95	N/A	Yes	No	Yes	Yes	No
	802.11ac(HT80)	12.00	15.85	N/A	Yes	No	Yes	Yes	No
Bluetooth	Distance to User			N/A	2.5mm	131.7mm	8.9mm	23.8mm	192.5mm
	BR/EDR	11.50	14.13	N/A	Yes	No	Yes	Yes	No
	BLE	1.00	1.26	N/A	Yes	No	Yes	Yes	No

Note:

1. Maximum power is the source-based time-average power and represents the maximum RF output power including tune-up tolerance among production units
2. Per KDB 447498 D01, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
3. Per KDB 447498 D01, standalone SAR test exclusion threshold is applied; If the distance of the antenna to the user is < 5mm, 5mm is used to determine SAR exclusion threshold
4. Per KDB 447498 D01, 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:
   [(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR
   a. f(GHz) is the RF channel transmit frequency in GHz
   b. Power and distance are rounded to the nearest mW and mm before calculation
   c. The result is rounded to one decimal place for comparison
   d. For < 50 mm distance, we just calculate mW of the exclusion threshold value (3.0) to do compare.

   This formula is [3.0] / [√f(GHz)] · [(min. test separation distance, mm)] = exclusion threshold of mW.
5. Per KDB 447498 D01, at 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following
   a. [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·(f(MHz)/150)] mW, at 100 MHz to 1500 MHz
   b. [Threshold at 50 mm in step 1) + (test separation distance - 50 mm)·10] mW at > 1500 MHz and ≤ 6 GHz
6. Per KDB 941225 D01, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA /HSUPA /DC-HSDPA output power is < 0.25dB higher than RMC12.2Kbps, or reported SAR with RMC 12.2kbps setting is ≤ 1.2W/kg, HSDPA/HSUPA/DC-HSDPA SAR evaluation can be excluded.
7. Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion.8. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 1/4dB higher than those measured at the lowest data rate
8. Per KDB 248227 D01 SAR is not required for the following 2.4 GHz OFDM conditions.
   a. When KDB Publication 447498 D01 SAR test exclusion applies to the OFDM configuration.
   b. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum

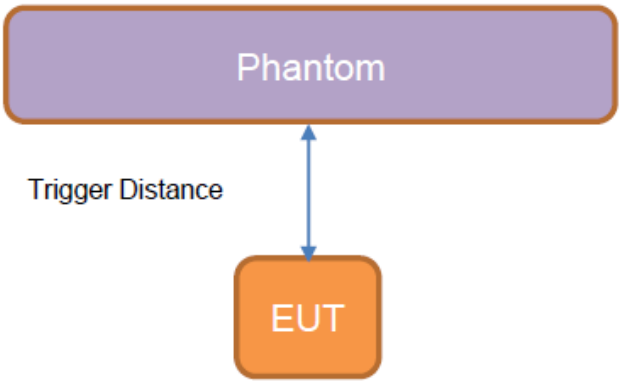
output power and the adjusted SAR is ≤ 1.2 W/kg.

9. Per KDB 248227 D01 SAR is not required for the following U-NII-1 and U-NII-2A bands conditions.
   a. When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.
   b. When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, each band is tested independently for SAR.

6.5 Proximity Sensor Triggering Test

Proximity sensor triggering distances

Proximity sensor triggering distance testing was performed according to the procedures outlined in KDB 616217 D04 section 6.2, and EUT moving further away from the flat phantom and EUT moving toward the flat phantom were both assessed, and the shortest triggering distances were reported and used for SAR assessment.



Distance in mm	0-4	5	6	7	8	9	10	11	12
Back Side	On	On	On	On	On	On	On	Off	Off
Left Side	Off	Off	Off	Off	Off	Off	Off	Off	Off
Right Side	On	On	On	On	On	On	On	Off	Off
Top Side	Off	Off	Off	Off	Off	Off	Off	Off	Off
Bottom Side	On	On	Off	Off	Off	Off	Off	Off	Off
Note: Power reduction is only applicable for 2G/3G/4G.									

Proximity sensor coverage

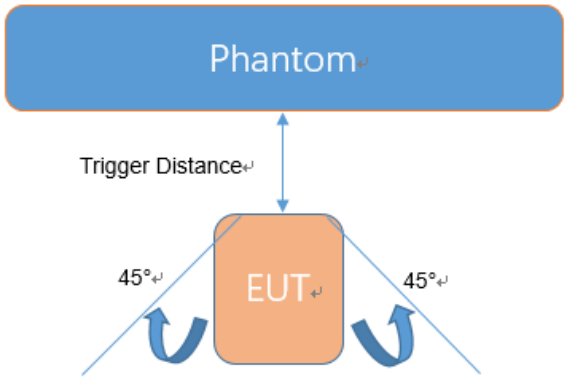
If a sensor is spatially offset from the antenna(s), it is necessary to verify sensor triggering for conditions where the antenna is next to the user but the sensor is laterally further away to ensure sensor coverage is sufficient for reducing the power to maintain compliance. For p-sensor coverage testing, the device is moved and “along the direction of maximum antenna and sensor offset”.

The proximity sensor and main antenna use same metallic electrode, so there is no spatial offset.

Device tilt angle influences to proximity sensor triggering

The influence of device tilt angles to proximity sensor triggering was determined by positioning each tablet edge that contains a transmitting antenna, perpendicular to the flat phantom.

Rotating the tablet around the edge next to the phantom in ⩽ 10° increments until the tablet is ± 45° from the vertical position at 0°, and the maximum output power remains in the reduced mode.



For verification of compliance of power reduction scheme, additional SAR test with EUT transmitting at full RF power at a separation of “the triggering distance – 1 mm”

The Sensor Triggering Distance (mm)			
Position	Back	Right	Bottom
Required SAR Test	9	9	4

6.6 SAR Measurement Results

GSM 850

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory												
Voice	N/A	Back Side	0	190	836.60	-0.03	0.437	32.74	33.00	1.06	**0.464**	1#
Hotspot												
GPRS 4 slots	N/A	Back Side	0	128	824.2	0.00	0.816	29.48	30.00	1.13	**0.920**	2#
			0	190	836.6	0.00	0.809	29.58	30.00	1.10	0.891	
			0	251	848.8	0.01	0.808	29.49	30.00	1.12	0.909	

GSM 1900

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory												
Voice	on	Back Side	0	661	1880	-0.16	0.133	25.99	26.00	1.00	**0.133**	3#
	off	Back Side	9	661	1880	0.14	0.128	29.89	30.00	1.03	**0.131**	4#
Hotspot												
GPRS 4 slots	on	Back Side	0	661	1880	0.04	0.311	23.49	24.00	1.12	**0.350**	5#
	off	Back Side	9	661	1880	-0.09	0.199	26.66	27.00	1.08	**0.215**	6#

WCDMA Band II

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot												
RMC	on	Back Side	0	9400	1880	0.17	0.513	18.24	18.50	1.06	**0.545**	7#
	off	Back Side	9	9400	1880	0.05	0.418	23.63	24.00	1.09	**0.455**	8#

WCDMA Band V

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot												

RMC	on	Back Side	0	4182	836.4	-0.13	0.228	19.24	20.00	1.19	**0.272**	9#
	off	Back Side	9	4182	836.4	0.00	0.221	23.10	23.50	1.10	**0.242**	10#

Note(s):

1. WCDMA mode in Body SAR was tested under RMC 12.2 kbps without HSPA inactive per KDB Publication 941225 D01v03. HSPA SAR was not required since the average output power of the HSPA subtests was not more than 0.25 dB higher than the RMC level and SAR was less than 1.2 W/kg.

CDMA BC0

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot												
1xRTT (RC3 SO32)	N/A	Back Side	0	1013	824.7	-0.11	0.821	24.05	24.20	1.04	**0.850**	11#
			0	384	836.52	-0.01	0.788	24.11	24.20	1.02	0.805	
			0	777	848.31	0.02	0.534	24.06	24.20	1.03	0.551	
EvDo Rel A	N/A	Back Side	0	1013	824.7	0.13	0.717	23.20	23.50	1.07	**0.768**	12#
			0	384	836.52	-0.16	0.676	23.37	23.50	1.03	0.697	
			0	777	848.31	-0.14	0.505	23.28	23.50	1.05	0.531	

LTE Band 2 (20MHz Bandwidth**)**

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot														
QPSK	on	Back Side	0	18900	1880	1	Low	-0.14	0.569	18.71	19.00	1.07	**0.608**	13#
				18700	1860	50	Low	0.17	0.478	18.44	18.50	1.01	0.485	
	off	Back Side	9	18900	1880	1	Mid	-0.04	0.523	24.33	24.50	1.04	**0.544**	14#
				18700	1860	50	Mid	-0.12	0.320	23.13	23.50	1.09	0.348	

LTE Band 4 (20MHz Bandwidth**)**

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot														
QPSK	on	Back Side	0	20175	1732.5	1	Mid	-0.08	0.333	18.4	18.50	1.02	**0.341**	15#
				20300	1745	50	Low	-0.17	0.302	18.01	18.10	1.02	0.308	
	off	Back Side	9	20175	1732.5	1	Mid	0.06	0.293	23.15	23.50	1.08	**0.318**	16#

				20300	1745	50	Low	0.05	0.232	21.94	22.00	1.01	0.235	

LTE Band 5 (10MHz Bandwidth**)**

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot														
QPSK	on	Back Side	0	20600	844	1	Mid	-0.16	0.218	19.21	19.50	1.07	**0.233**	17#
				20600	844	25	High	-0.13	0.183	19.18	19.50	1.08	0.197	
	off	Back Side	9	20525	836.5	1	High	0.05	0.252	23.09	23.50	1.10	**0.277**	18#
				20600	844	25	High	-0.01	0.174	22.1	22.50	1.10	0.191	

LTE Band 7 (20MHz Bandwidth**)**

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot														
QPSK	on	Back Side	0	21100	2535	1	Mid	-0.12	0.452	18.26	18.50	1.06	**0.478**	19#
				20850	2510	50	low	0.11	0.422	18.09	18.20	1.03	0.433	
	off	Back Side	9	20850	2510	1	Mid	-0.12	0.169	23.31	23.50	1.04	**0.177**	20#
				20850	2510	50	Mid	-0.06	0.135	22.24	22.50	1.06	0.143	

LTE Band 12 (10MHz Bandwidth**)**

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot														
QPSK	N/A	Back Side	0	23095	707.5	1	Mid	-0.16	0.634	24.04	24.10	1.01	**0.643**	21#
				23130	711	25	High	-0.05	0.455	22.51	23.00	1.12	0.509	

LTE Band 13 (10MHz Bandwidth**)**

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot														
QPSK	N/A	Back Side	0	23230	782	1	Mid	0.17	0.453	23.68	24.00	1.08	**0.488**	22#

				23230	782	25	Low	-0.14	0.343	22.48	22.50	1.00	0.345	

LTE Band 17 (10MHz Bandwidth**)**

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot														
QPSK	N/A	Back Side	0	23780	709	1	Mid	-0.03	0.692	23.96	24.00	1.01	**0.698**	23#
				23780	709	25	Mid	-0.10	0.515	22.44	22.50	1.01	0.522	

LTE Band 25 (20MHz Bandwidth**)**

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot														
QPSK	on	Back Side	0	26140	1860	1	Mid	-0.12	0.540	18.35	18.50	1.06	**0.477**	24#
				26140	1860	50	Low	-0.11	0.460	18.16	18.50	1.03	0.459	
	off	Back Side	9	26365	1882.5	1	Mid	-0.13	0.432	23.91	24.00	1.04	**0.184**	25#
				26140	1860	50	Low	-0.05	0.344	22.89	23.00	1.06	0.152	

LTE Band 41 (20MHz Bandwidth**)**

Mode	SAR Power Back-off	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Numb.	RB Start	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot														
QPSK	on	Back Side	0	40740	2605	1	Low	0.12	0.592	23.63	24.00	1.09	**0.645**	26#
				41140	2645	50	Low	-0.18	0.296	22.46	22.50	1.01	0.299	

Note(s):

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Considerations for LTE Devices in FCC KDB Publication 941225 D05v02r05.
2. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results.

WLAN 2.4 GHz

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot													
802.11b	Back Side	0	1	2412	0.14	0.105	14.52	15.00	1.12	98.43	1.016	**0.117**	27#

WLAN 5.2 GHz

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot													
802.11ac (VHT40)	Back Side	0	46	5230	-0.08	0.397	12.78	13.00	1.05	71	1.408	**0.587**	28#

WLAN 5.8 GHz

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-worn Accessory & Hotspot													
802.11ac (VHT20)	Back Side	0	149	5745	-0.14	0.376	12.78	13.00	1.05	82	1.220	**0.481**	29#

Note(s):

1. Per KDB 248227 D01 SAR is not required for the following 2.4 GHz OFDM conditions.
   a. When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
   b. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
3. Per KDB 248227 D01 5G WLAN Subsequent Test Configuration Procedures
   SAR measurement requirements for the remaining 802.11 transmission mode configurations that have not been tested in the initial test configuration are determined separately for each standalone and aggregated frequency band, in each exposure condition, according to the maximum output power specified for production units.

a. When SAR test exclusion provisions of KDB Publication 447498 D01 are applicable and SAR measurement is not required for the initial test configuration, SAR is also not required for the next highest maximum output power transmission mode subsequent test configuration(s) in that frequency band or aggregated band and exposure configuration.

b. When the highest reported SAR for the initial test configuration (when applicable, include subsequent highest output channels), according to the initial test position or fixed exposure position requirements, is adjusted by the ratio of the subsequent test configuration to initial test configuration specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for that subsequent test configuration.

Bluetooth

Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas. SAR 1 g (W/Kg)	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Duty Cycle (%)	Duty Cycle Factor	Report SAR 1 g (W/Kg)	Meas. No.
Body-Worn & Hotspot													
EDR	Back Side	0	39	2441	-0.18	0.080	11.13	11.50	1.09	100	1.000	**0.087**	30#

General Note(s):

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, FCC KDB Publication 865664 D01v01r04 and FCC KDB Publication 447498 D01v06.
2. All modes of operation were investigated, and worst-case results are reported.
3. The EUT is tested 2nd hot-spot peak, if it is less than 2 dB below the highest peak.
4. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB Publication 447498 D01v06.
5. Per FCC KDB Publication 648474 D04v01r03, body worn SAR was evaluated without a headset connected to the device. Since the standalone reported SAR was ≤1.2 W/kg, no additional body worn SAR evaluations using a headset cable were required.
6. Per FCC KDB Publication 865664 D01v01r04, variability SAR tests were performed when the measured SAR results for a frequency band were greater than 0.8 W/kg.
7. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is ≤ 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is>1/2 dB, instead of the middle channel, the highest output power channel must be used.

6.7 SAR Measurement Variability

In accordance with published RF Exposure KDB procedure 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Frequency band	Test Position	Mode	Ch.	Original 1g SAR (W/kg)	1st Repeated 1g SAR (W/kg)	Largest to Smallest SAR Ratio
GSM 850	Back	GPRS	9262	0.816	0.813	1.004
CDMA BC0	Back	RMC	1513	0.821	0.811	1.012

Note(s):

1. Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20.

6.8 Standalone SAR Test Exclusion Considerations and Estimated SAR

KDB 447498 D01v06 General RF Exposure Guidance v06, introduces a new formula for calculating the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR = (SAR_1 + SAR_2)^{1.5} / R_i$$

Where:

SAR_1 is the highest reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR_2 is the highest reported or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

R_i is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$

A new threshold of 0.04 is also introduced in the draft KDB. Thus, in order for a pair of simultaneous transmitting antennas with the sum of 1-g SAR > 1.6 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$$(SAR_1 + SAR_2)^{1.5} / R_i < 0.04$$

For simultaneous transmission analysis, Bluetooth SAR estimated per KDB 447498 D01v06 based on the formaua below:

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

0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distance is > 50 mm.

6.9 Simultaneous Transmission SAR Considerations

Sum of the SAR for GSM + WLAN & Bluetooth

Condition	Simultaneous Transmission Scenario (W/Kg)				Max Σ 1-g SAR (W/Kg)	SPLSR (Yes/ No)
	GSM	WLAN DTS Band	WLAN UNII Band	Bluetooth		
Body-Worn	0.464	0.117	0.587	0.087	1.051	No
Hotspot	0.920	0.117	0.587	0.087	1.507	No

Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

Sum of the SAR for WCDMA + WLAN & Bluetooth

Condition	Simultaneous Transmission Scenario (W/Kg)				Max Σ 1-g SAR (W/Kg)	SPLSR (Yes/ No)
	WCDMA	WLAN DTS Band	WLAN UNII Band	Bluetooth		
Body-Worn	0.545	0.117	0.587	0.087	1.132	No
Hotspot	0.545	0.117	0.587	0.087	1.132	No

Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

Sum of the SAR for CDMA + WLAN & Bluetooth

Condition	Simultaneous Transmission Scenario (W/Kg)				Max Σ 1-g SAR (W/Kg)	SPLSR (Yes/ No)
	CDMA	WLAN DTS Band	WLAN UNII Band	Bluetooth		
Body-Worn	0.850	0.117	0.587	0.087	1.437	No
Hotspot	0.850	0.117	0.587	0.087	1.437	No

Conclusion:

Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

Sum of the SAR for LTE + WLAN & Bluetooth

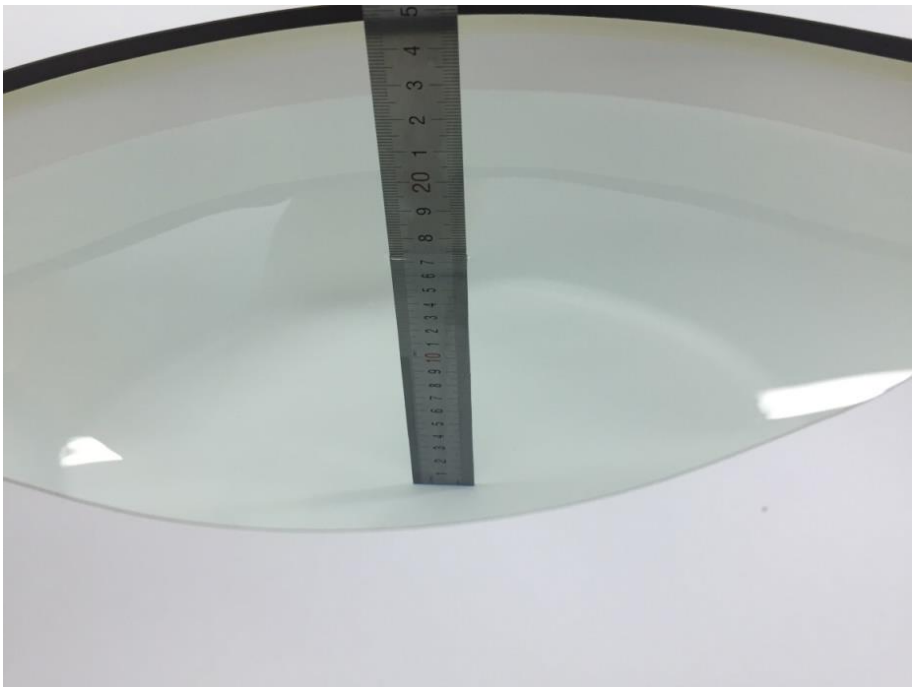
Condition	Simultaneous Transmission Scenario (W/Kg)				Max Σ 1-g SAR (W/Kg)	SPLSR (Yes/ No)
	LTE	WLAN DTS Band	WLAN UNII Band	Bluetooth		
Body-Worn	0.698	0.117	0.587	0.087	1.285	No
Hotspot	0.698	0.117	0.587	0.087	1.285	No

Conclusion:

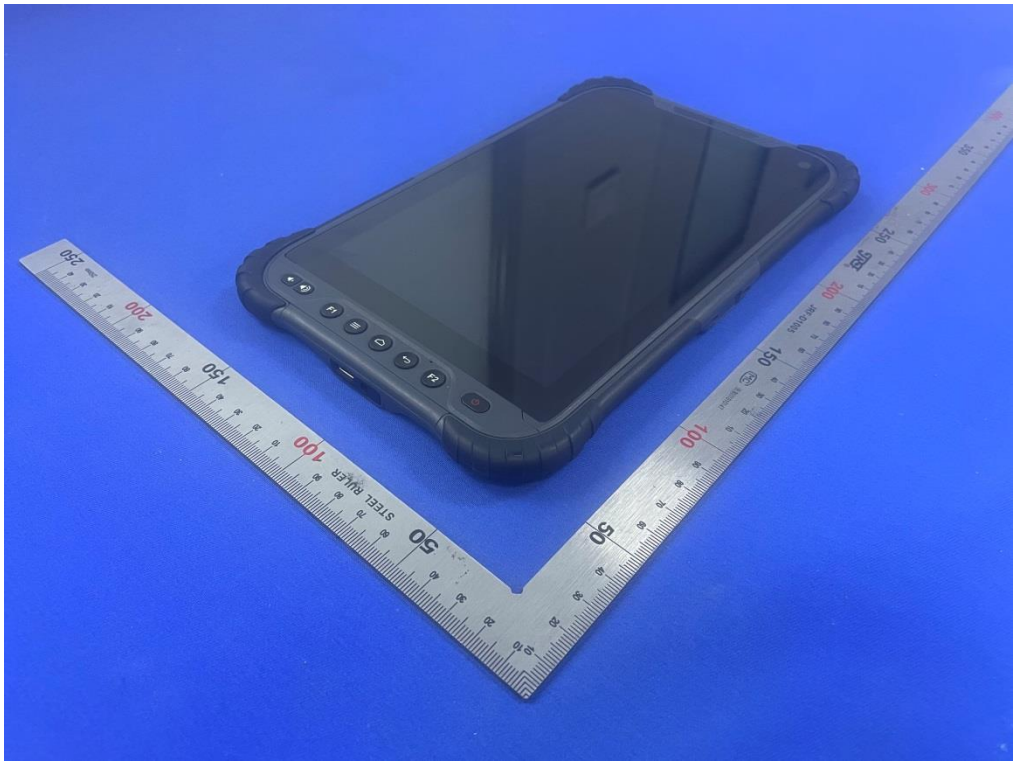
Simultaneous transmission SAR measurement (Volume Scan) is not required because the either sum of the 1-g SAR is < 1.6 W/kg or the SPLSR is < 0.04 for all circumstances that require SPLSR calculation.

7 Appendixes

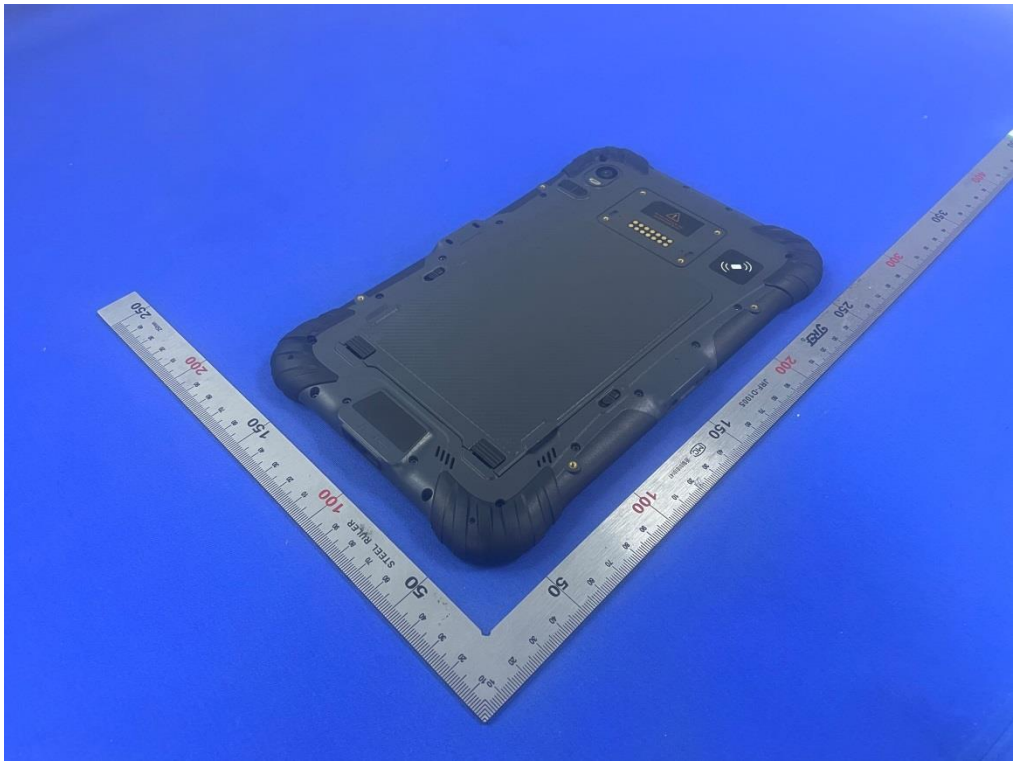
7.1 Liquid depth



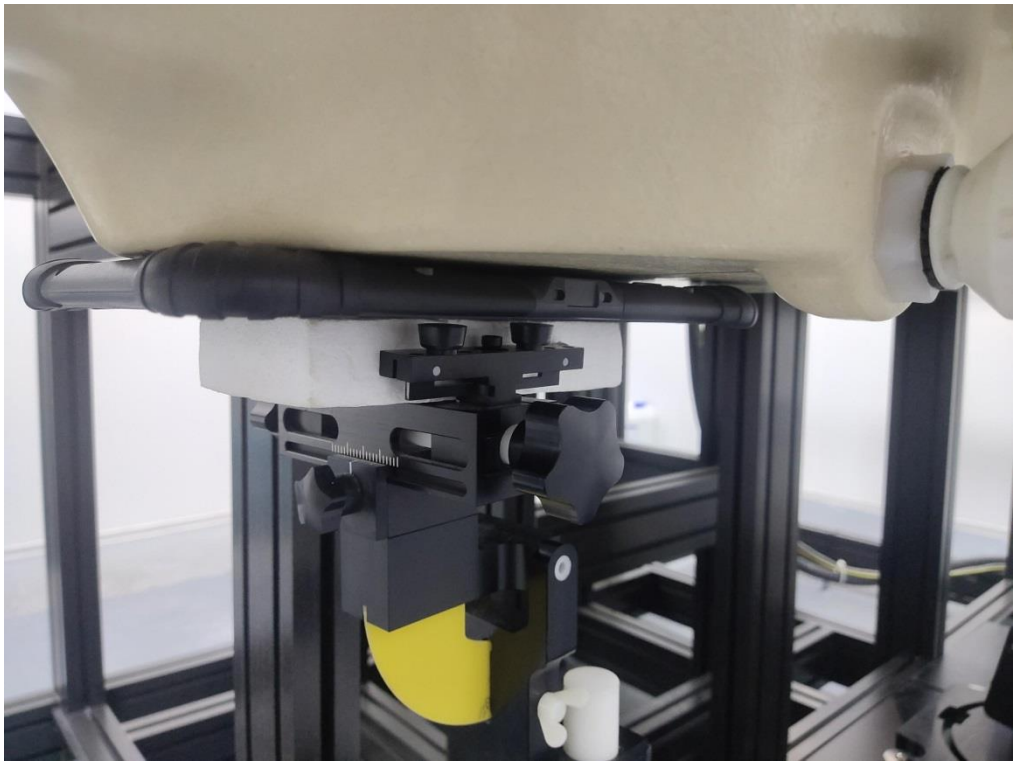
7.2 Sample and Set-up Photos



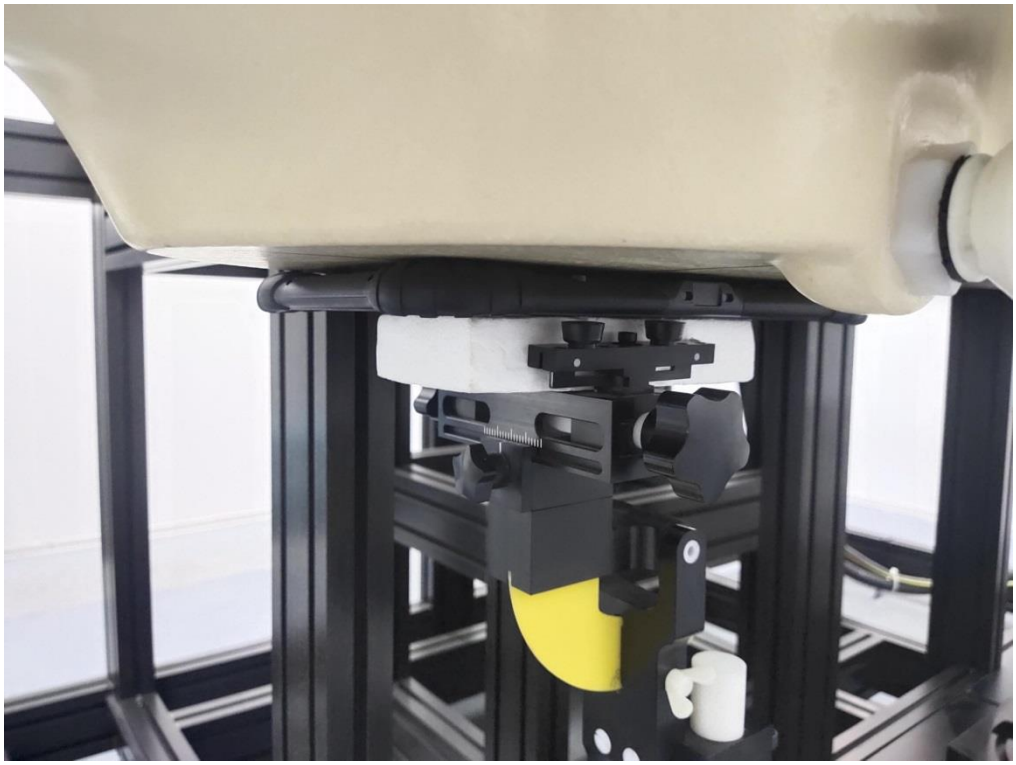
Front of the sample



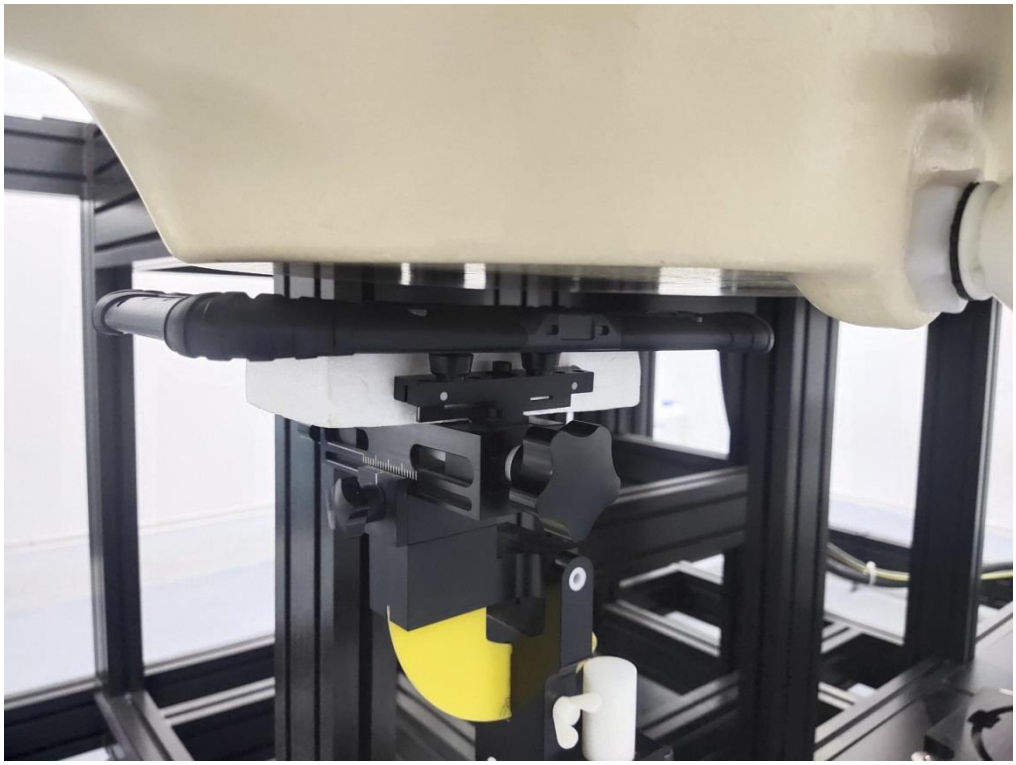
Back of the sample



Back-0mm



BT/WIFI Back-0mm



Back-9mm

7.3 System Verification Plots

System Validation for 750MHz Head _2022-09-28

Measurement Report for D750V2 SN1055, FRONT, D750, UID 0 -, Channel 50 (750.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
D750V2 SN1055,	180.0 x 100.0 x 330.0	/	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 15.00	D750	CW, 0--	750.0, 50	10.0	0.90	42.14

Hardware Setup

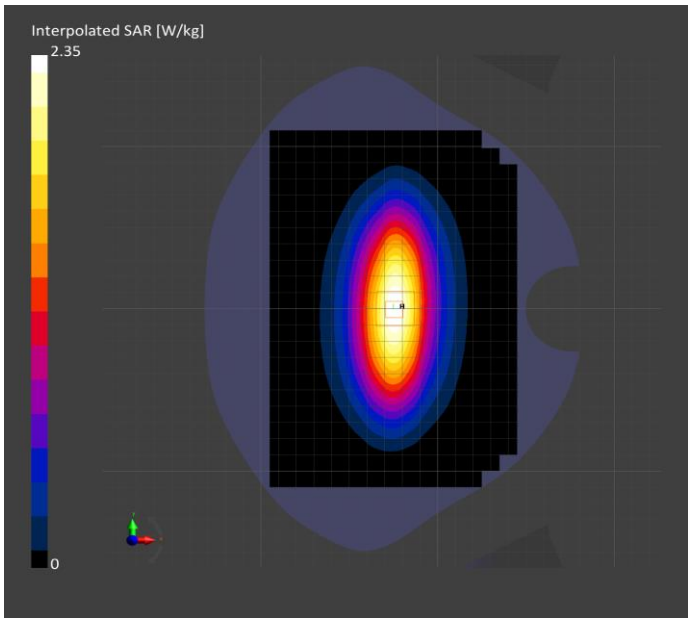
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	140.0 x 220.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.04	2.08
psSAR10g [W/Kg]	1.36	1.37
Power Drift [dB]	0.01	0.00
M2/M1 [%]		17.0
Dist 3dB Peak [mm]		63.5



System Validation for 835MHz Head _2022-09-24

Measurement Report for D835V2 SN4d061, FRONT, D835, UID 0 -, Channel 50 (835.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
D835V2 SN4d061,	160.0 x 120.0 x 340.0	/	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 15.00	D835	CW, 0--	835.0, 50	9.61	0.94	41.88

Hardware Setup

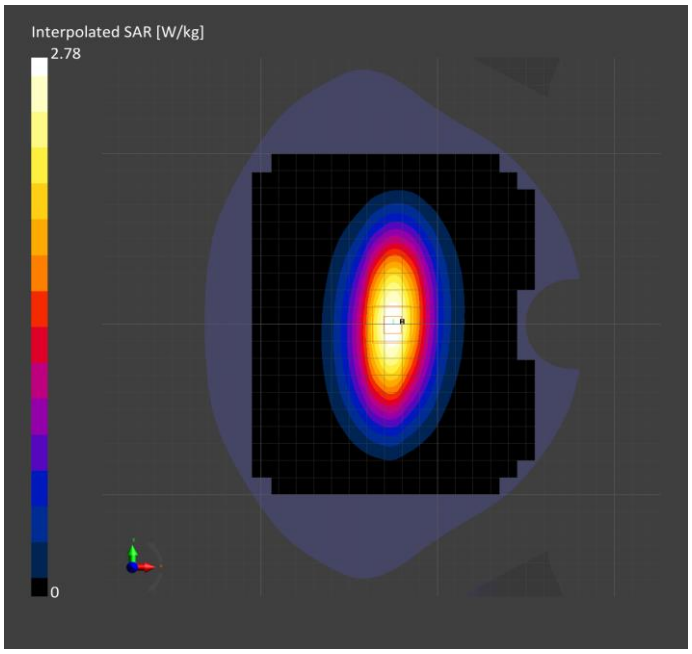
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	160.0 x 200.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.40	2.47
psSAR10g [W/Kg]	1.58	1.61
Power Drift [dB]	-0.01	-0.00
M2/M1 [%]		16.3
Dist 3dB Peak [mm]		64.4



System Validation for 1800MHz Head _2022-09-27

Measurement Report for D1800V2 SN1d148, FRONT, D1800, UID 0 -, Channel 50 (1800.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
D1800V2 SN1d148,	100.0 x 74.0 x 300.0	/	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 10 mm	D1800	CW, 0--	1800.0, 50	8.3	1.36	40.09

Hardware Setup

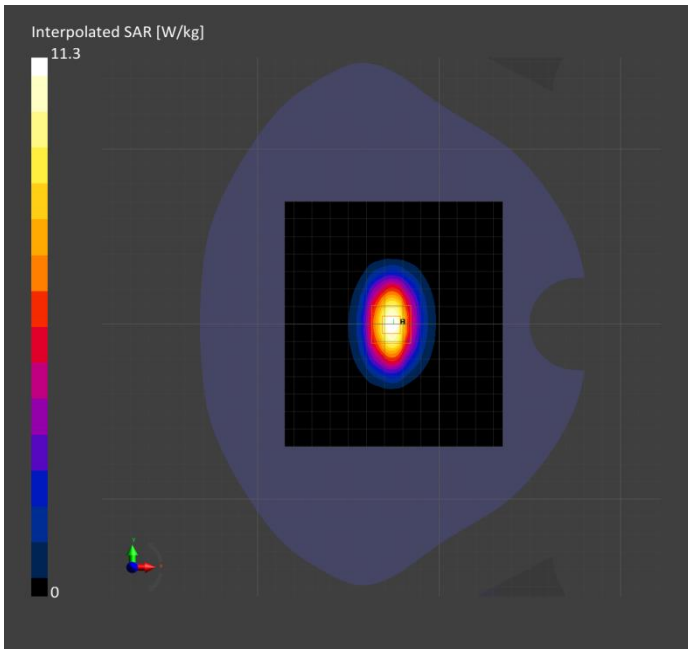
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 140.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	9.02	9.02
psSAR10g [W/Kg]	4.73	4.74
Power Drift [dB]	-0.05	0.01
M2/M1 [%]		10.0
Dist 3dB Peak [mm]		54.8



System Validation for 1900MHz Head _2022-09-24

Measurement Report for D1900V2 SN5d092, FRONT, D1900, UID 0 -, Channel 50 (1900.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
D1900V2 SN5d092,	100.0 x 68.0 x 300.0	/	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 10 mm	D1900	CW, 0--	1900.0, 50	7.93	1.40	39.95

Hardware Setup

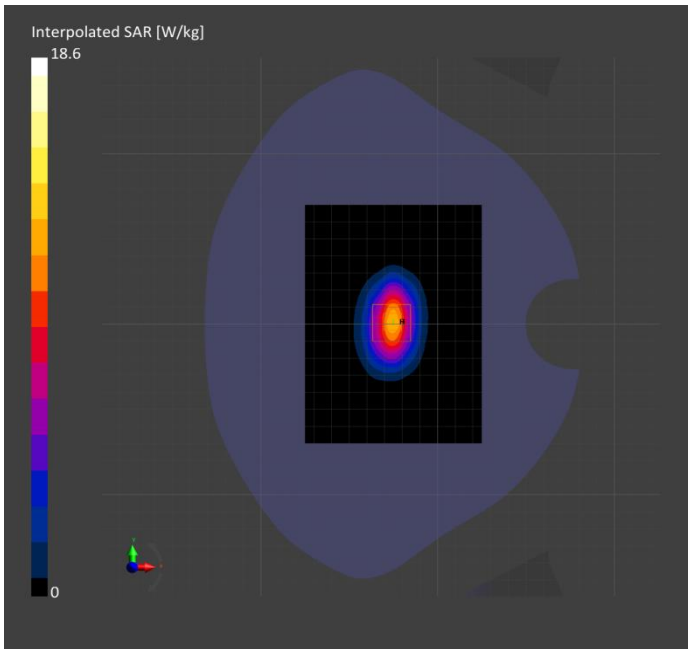
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 x 140.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	10.1	10.3
psSAR10g [W/Kg]	5.17	5.31
Power Drift [dB]	-0.04	-0.00
M2/M1 [%]		9.8
Dist 3dB Peak [mm]		54.2



System Validation for 2450MHz Head _2022-09-30

Measurement Report for D2450V2 SN723, FRONT, D2450, UID 0 -, Channel 50 (2450.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
D2450V2 SN723,	100.0 x 52.0 x 290.0	/	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 10.00	D2450	CW, 0--	2450.0, 50	7.52	1.77	39.24

Hardware Setup

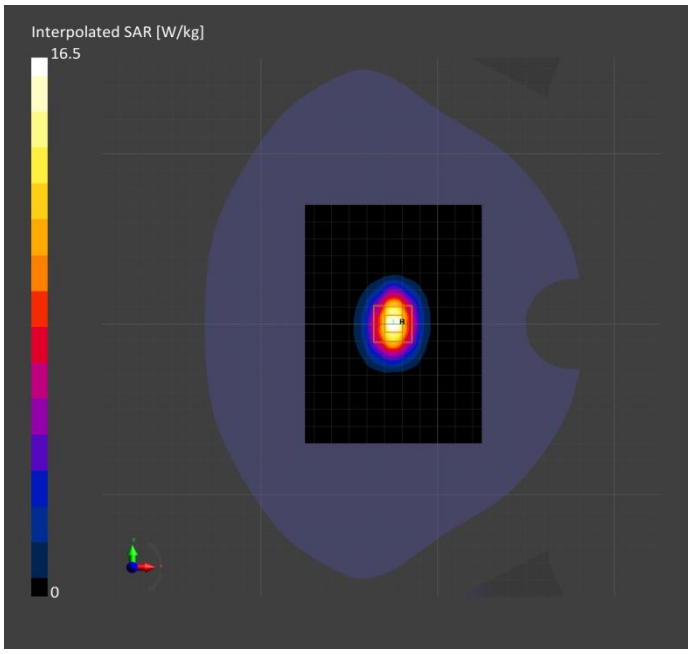
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 x 140.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	12.4	12.4
psSAR10g [W/Kg]	5.66	5.75
Power Drift [dB]	-0.02	-0.01
M2/M1 [%]		9.0
Dist 3dB Peak [mm]		49.6



System Validation for 2600MHz Head _2022-09-27

Measurement Report for D2600V2 SN1142, FRONT, D2600, UID 0 -, Channel 50 (2600.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
D2600V2 SN1142,	100.0 x 50.0 x 290.0		Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 10.00	D2600	CW, 0--	2600.0, 50	7.32	1.91	39.05

Hardware Setup

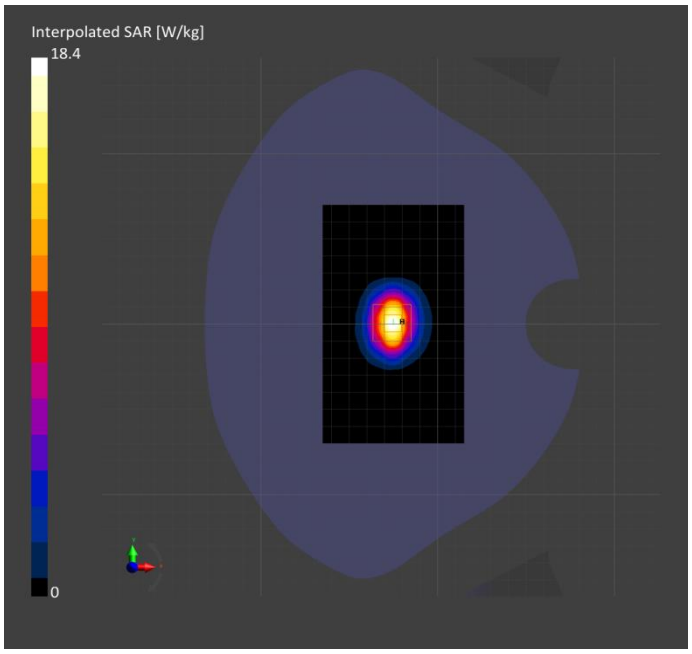
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	80.0 x 140.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	13.7	13.6
psSAR10g [W/Kg]	6.05	6.09
Power Drift [dB]	-0.03	0.00
M2/M1 [%]		9.0
Dist 3dB Peak [mm]		47.9



System Validation for 5200MHz Head _2022-09-30

Measurement Report for D5GHzV2 SN1061, FRONT, D5GHz, UID 0 -, Channel 20 (5200.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
D5GHzV2 SN1061,	80.0 x 20.0 x 300.0	/	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 10.00	D5GHz	CW, 0--	5200.0, 20	5.4	4.71	35.60

Hardware Setup

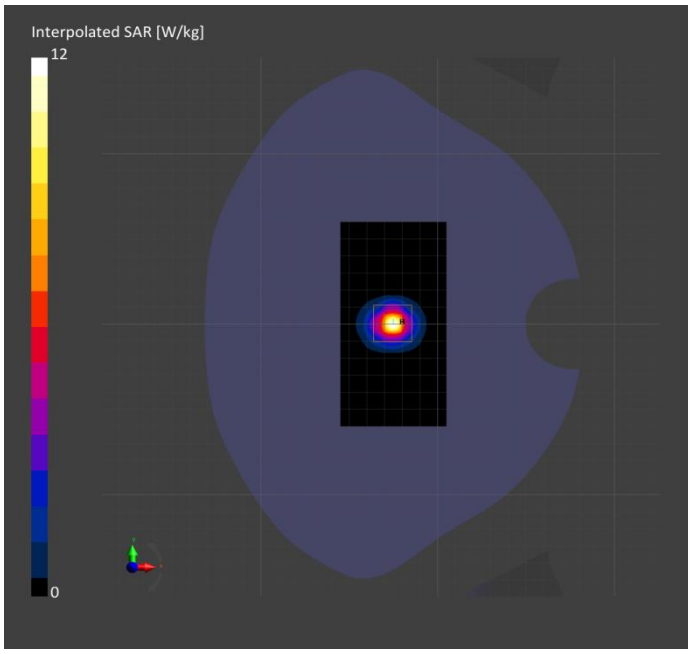
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	60.0 x 120.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	7.22	7.54
psSAR10g [W/Kg]	2.05	2.14
Power Drift [dB]	-0.13	-0.16
M2/M1 [%]		6.8
Dist 3dB Peak [mm]		66.0



System Validation for 5800MHz Head _2022-09-30

Measurement Report for D5GHzV2 SN1061, FRONT, D5GHz, UID 0 -, Channel 80 (5800.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
D5GHzV2 SN1061,	80.0 x 20.0 x 300.0	/	Phone

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	FRONT, 10.00	D5GHz	CW, 0--	5800.0, 80	4.73	5.32	35.44

Hardware Setup

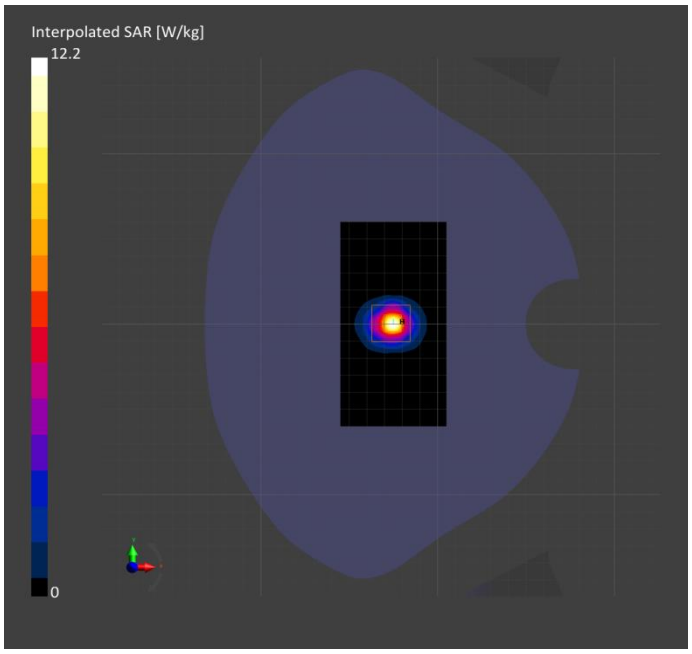
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	60.0 x 120.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	7.55	8.04
psSAR10g [W/Kg]	2.12	2.25
Power Drift [dB]	-0.11	-0.03
M2/M1 [%]		7.2
Dist 3dB Peak [mm]		61.9



7.4 Highest SAR Test Plots

Meas.1 Measurement Report for UT30, BACK, GSM 850, UID 10021 DAC, Channel 190 (836.6MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	GSM 850	GSM, 10021-DAC	836.6, 190	9.61	0.935	41.9

Hardware Setup

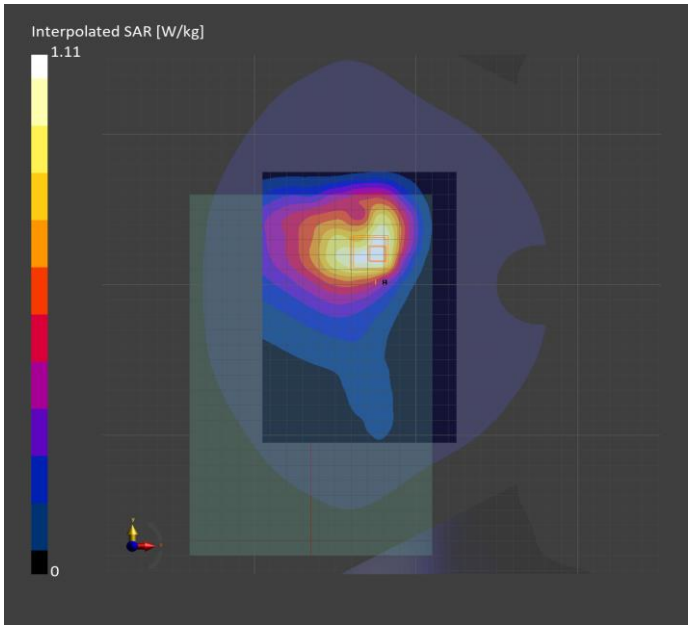
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.384	0.437
psSAR10g [W/Kg]	0.254	0.244
Power Drift [dB]	0.04	-0.03
M2/M1 [%]		9.4
Dist 3dB Peak [mm]		67.5



Meas.2 Measurement Report for UT30, BACK, GSM 850, UID 10028 DAC, Channel 128 (824.2MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	GSM 850	GSM, 10028-DAC	824.2, 128	9.61	0.930	41.9

Hardware Setup

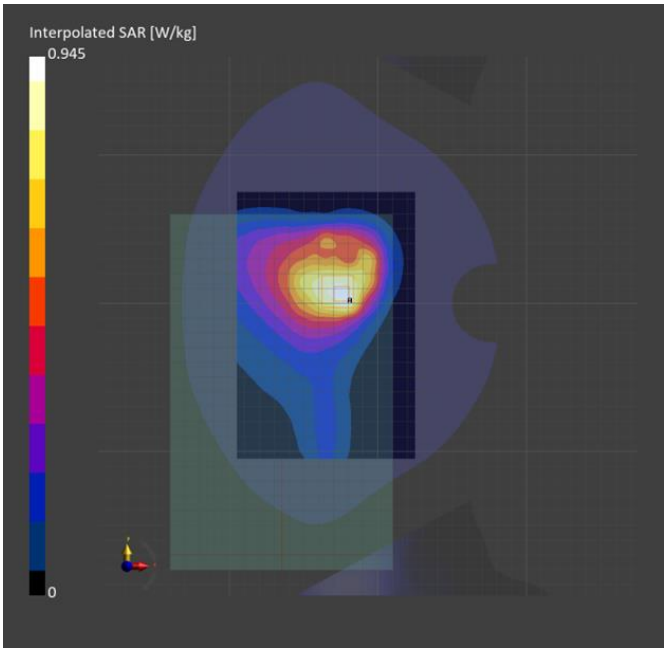
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.809	0.816
psSAR10g [W/Kg]	0.448	0.454
Power Drift [dB]	-0.02	0.00
M2/M1 [%]		9.2
Dist 3dB Peak [mm]		68.6



Meas.3 Measurement Report for UT30, BACK, PCS 1900, UID 10021 DAC, Channel 661 (1880.0MHz) Sensor on Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	PCS 1900	GSM, 10021-DAC	1880.0, 661	7.93	1.39	40.0

Hardware Setup

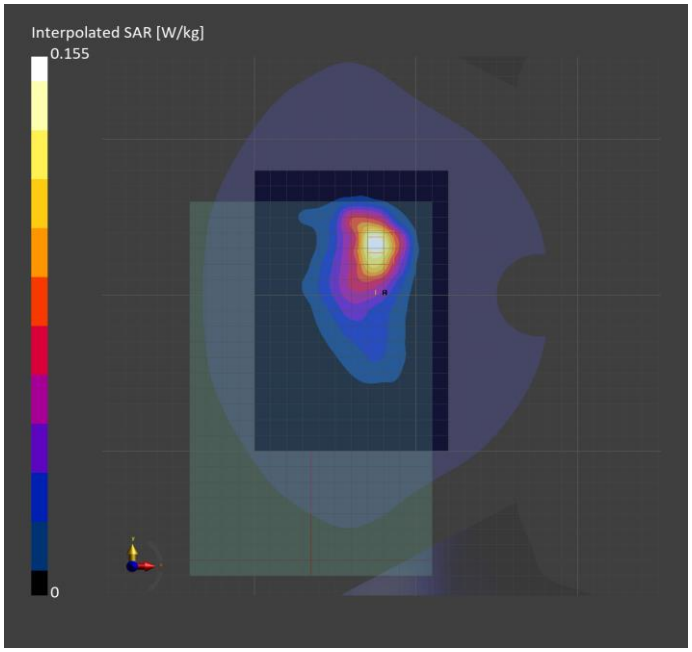
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.124	0.133
psSAR10g [W/Kg]	0.068	0.072
Power Drift [dB]	0.18	-0.16
M2/M1 [%]		9.7
Dist 3dB Peak [mm]		79.9



Meas.4 Measurement Report for UT30, BACK, PCS 1900, UID 10021 DAC, Channel 661 (1880.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 9.00	PCS 1900	GSM, 10021-DAC	1880.0, 661	7.93	1.39	40.0

Hardware Setup

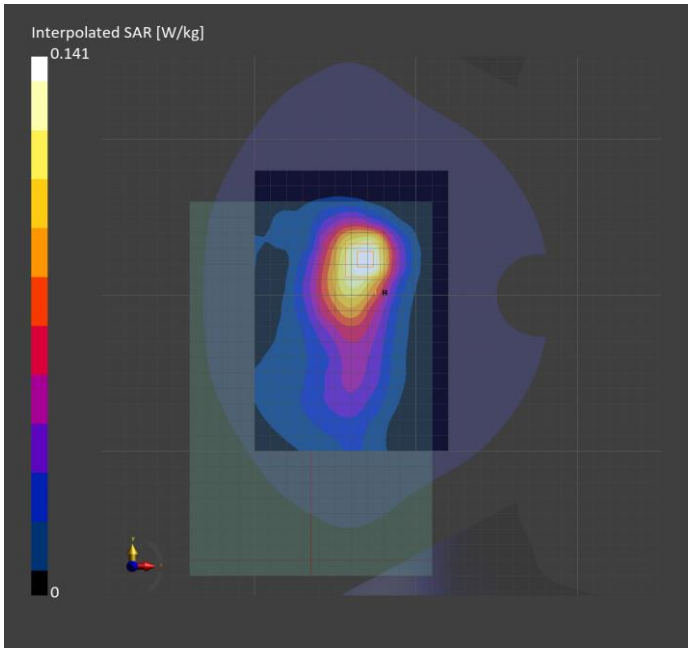
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.119	0.128
psSAR10g [W/Kg]	0.072	0.075
Power Drift [dB]	-0.04	0.14
M2/M1 [%]		14.4
Dist 3dB Peak [mm]		80.7



Meas.5 Measurement Report for UT30, BACK, PCS 1900, UID 10028 DAC, Channel 661 (1880.0MHz) Sensor on Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	PCS 1900	GSM, 10028-DAC	1880.0, 661	7.93	1.39	40.0

Hardware Setup

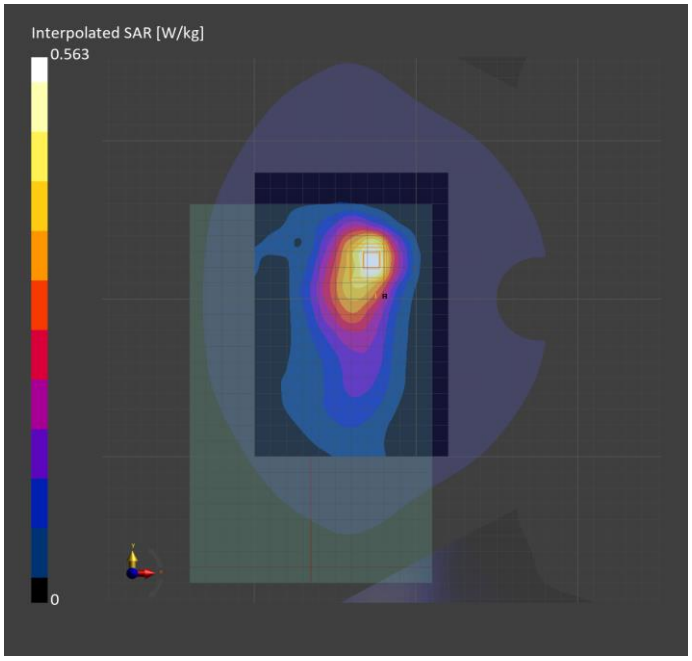
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.287	0.311
psSAR10g [W/Kg]	0.166	0.177
Power Drift [dB]	-0.06	0.04
M2/M1 [%]		13.2
Dist 3dB Peak [mm]		81.3



Meas.6 Measurement Report for UT30, BACK, PCS 1900, UID 10028 DAC, Channel 661 (1880.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 9.00	PCS 1900	GSM, 10028-DAC	1880.0, 661	7.93	1.39	40.0

Hardware Setup

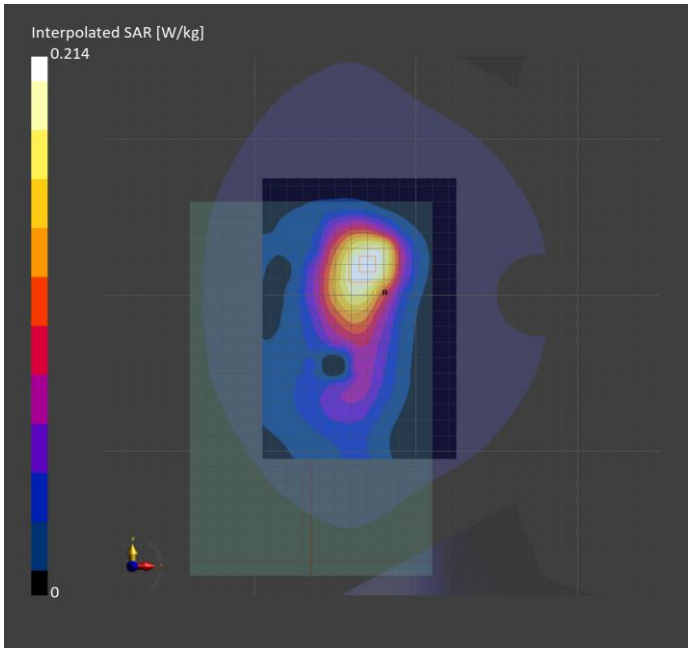
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.181	0.199
psSAR10g [W/Kg]	0.111	0.119
Power Drift [dB]	0.04	-0.09
M2/M1 [%]		15.7
Dist 3dB Peak [mm]		81.9



Meas.7 Measurement Report for UT30, BACK, Band 2, UID 10457 AAB, Channel 9400 (1880.0MHz) Sensor on Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 2	WCDMA, 10457-AAB	1880.0, 9400	7.93	1.39	40.0

Hardware Setup

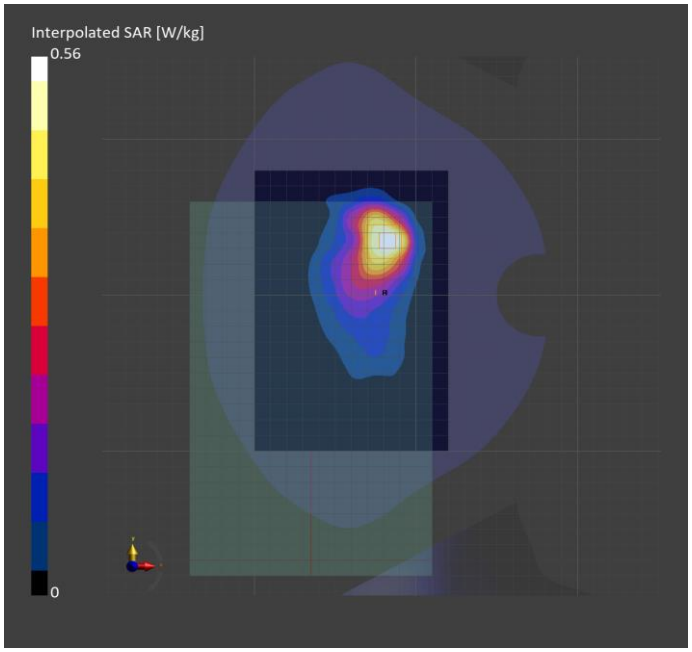
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.468	0.513
psSAR10g [W/Kg]	0.268	0.275
Power Drift [dB]	0.11	0.17
M2/M1 [%]		10.8
Dist 3dB Peak [mm]		80.0



Meas.8 Measurement Report for UT30, BACK, Band 2, UID 10457 AAB, Channel 9400 (1880.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 9.00	Band 2	WCDMA, 10457-AAB	1880.0, 9400	7.93	1.39	40.0

Hardware Setup

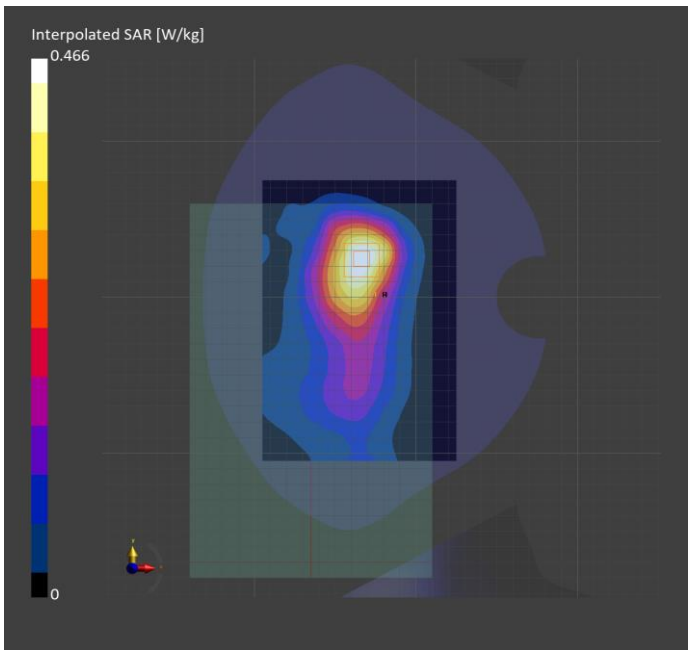
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.390	0.418
psSAR10g [W/Kg]	0.236	0.250
Power Drift [dB]	-0.18	0.05
M2/M1 [%]		16.1
Dist 3dB Peak [mm]		81.7



Meas.9 Measurement Report for UT30, BACK, Band 5, UID 10457 AAB, Channel 4182 (836.4MHz) Sensor on Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 5	WCDMA, 10457-AAB	836.4, 4182	9.61	0.935	41.9

Hardware Setup

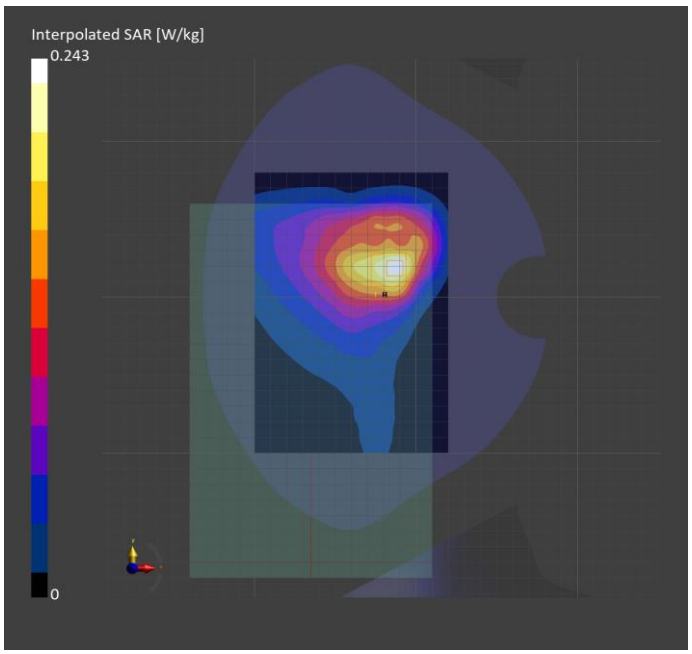
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.204	0.228
psSAR10g [W/Kg]	0.131	0.124
Power Drift [dB]	0.16	-0.13
M2/M1 [%]		9.4
Dist 3dB Peak [mm]		70.0



Meas.10 Measurement Report for UT30, BACK, Band 5, UID 10457 AAB, Channel 4182 (836.4MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 9.00	Band 5	WCDMA, 10457-AAB	836.4, 4182	9.61	0.935	41.9

Hardware Setup

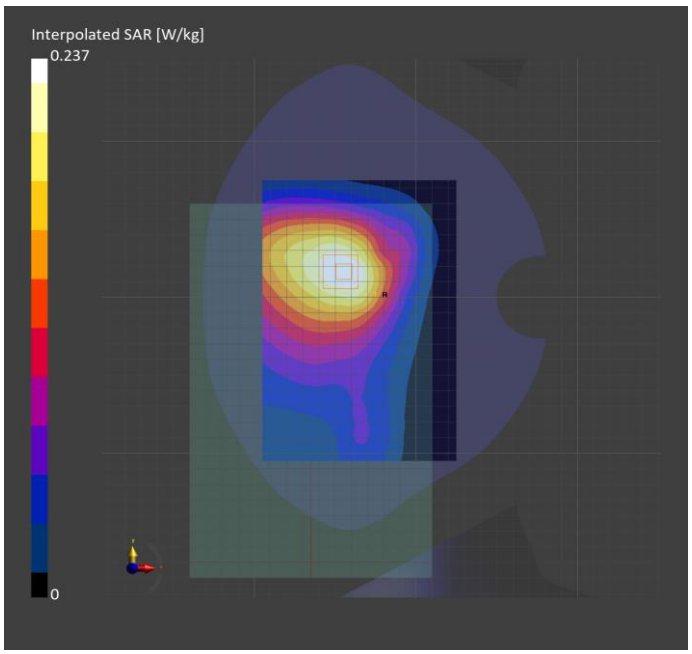
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.209	0.221
psSAR10g [W/Kg]	0.145	0.154
Power Drift [dB]	0.12	-0.00
M2/M1 [%]		> 15.0
Dist 3dB Peak [mm]		83.9



Meas.11 Measurement Report for UT30, BACK, Band Class 0, UID 10292 AAB, Channel 1013 (824.7MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band Class 0	CDMA2000, 10292-AAB	824.7, 1013	9.61	0.930	41.9

Hardware Setup

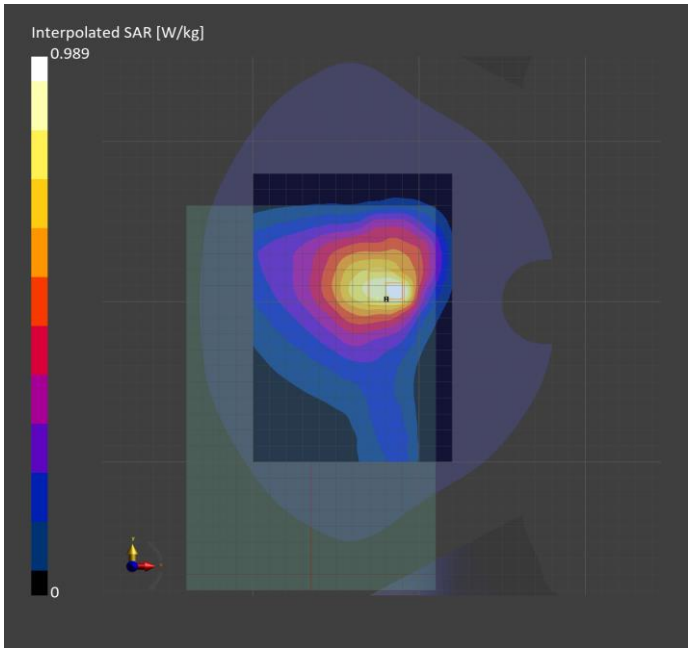
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.829	0.821
psSAR10g [W/Kg]	0.543	0.505
Power Drift [dB]	-0.02	-0.11
M2/M1 [%]		10.2
Dist 3dB Peak [mm]		70.6



Meas.12 Measurement Report for UT30, BACK, Band Class 0, UID 10403 AAB, Channel 1013 (824.7MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band Class 0	CDMA2000, 10403-AAB	824.7, 1013	9.61	0.930	41.9

Hardware Setup

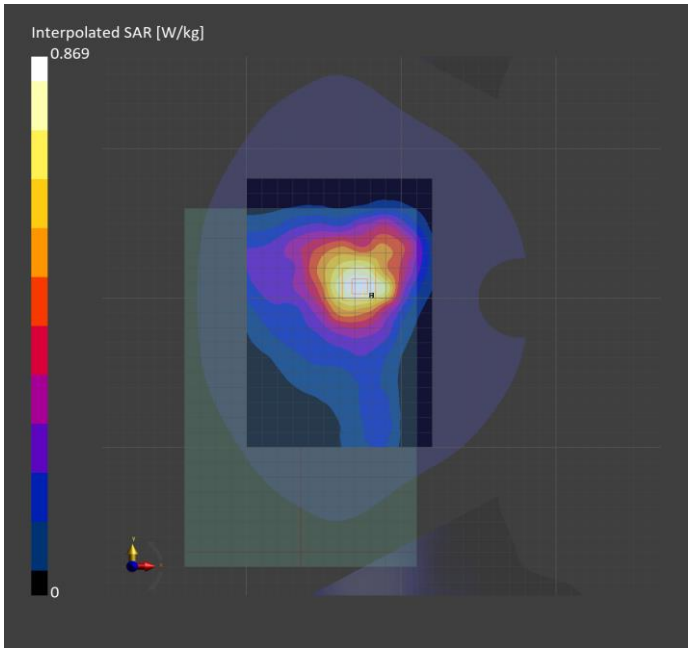
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.758	0.717
psSAR10g [W/Kg]	0.511	0.466
Power Drift [dB]	-0.06	0.13
M2/M1 [%]		9.2
Dist 3dB Peak [mm]		54.3



Meas.13 Measurement Report for UT30, BACK, Band 2, UID 10169 CAF, Channel 18900 (1880.0MHz)

Sensor on

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 2	LTE-FDD, 10169-CAF	1880.0, 18900	7.93	1.39	40.0

Hardware Setup

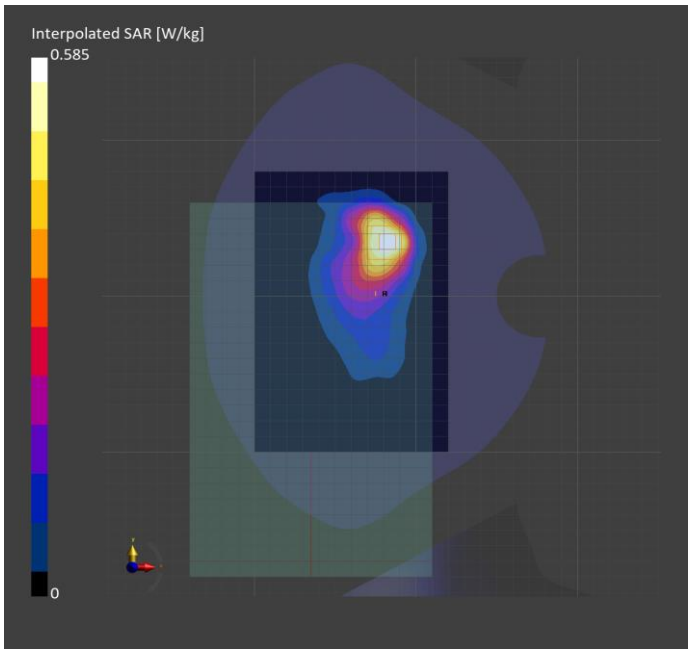
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.490	0.569
psSAR10g [W/Kg]	0.281	0.305
Power Drift [dB]	-0.13	-0.14
M2/M1 [%]		10.8
Dist 3dB Peak [mm]		79.1



Meas.14 Measurement Report for UT30, BACK, Band 2, UID 10169 CAF, Channel 18900 (1880.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 9.00	Band 2	LTE-FDD, 10169-CAF	1880.0, 18900	7.93	1.39	40.0

Hardware Setup

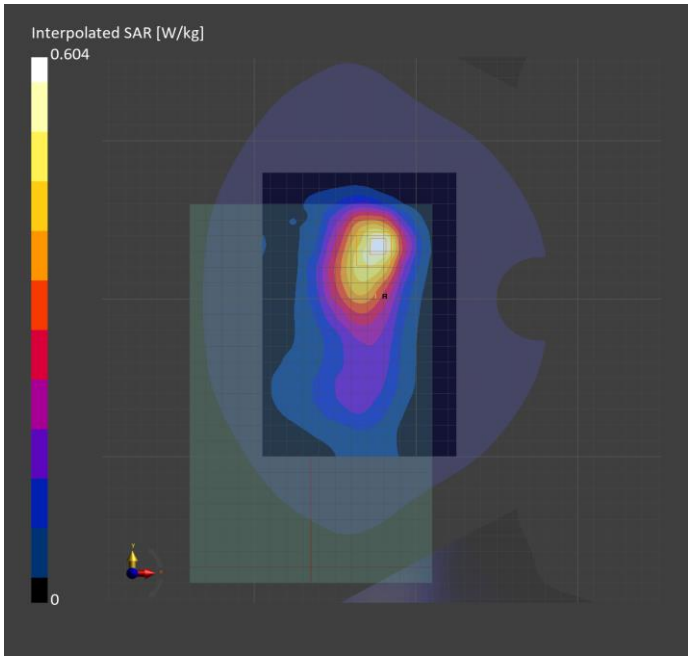
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.488	0.523
psSAR10g [W/Kg]	0.285	0.306
Power Drift [dB]	-0.14	-0.04
M2/M1 [%]		13.5
Dist 3dB Peak [mm]		81.3



Meas.15 Measurement Report for UT30, BACK, Band 4, UID 10169 CAF, Channel 20175 (1732.5MHz) Sensor on

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 4	LTE-FDD, 10169-CAF	1732.5, 20175	8.3	1.33	40.2

Hardware Setup

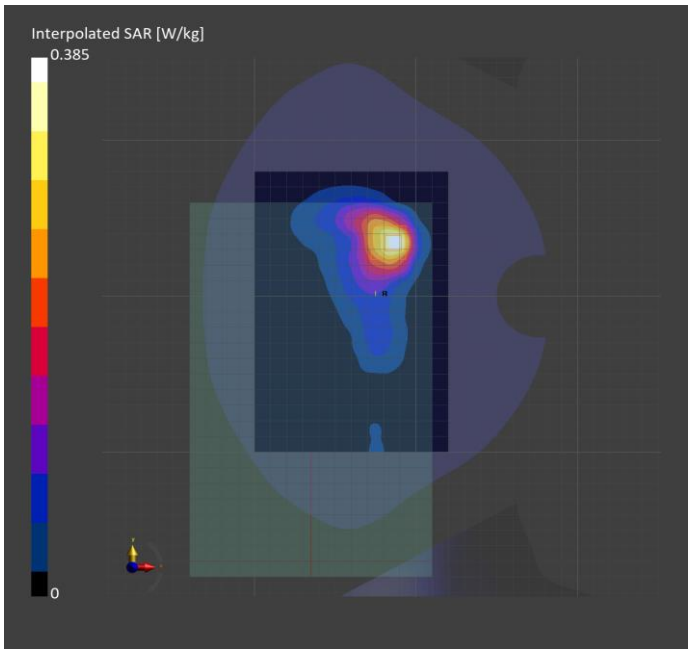
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.306	0.333
psSAR10g [W/Kg]	0.168	0.174
Power Drift [dB]	-0.19	-0.08
M2/M1 [%]		10.3
Dist 3dB Peak [mm]		81.5



Meas.16 Measurement Report for UT30, BACK, Band 4, UID 10169 CAF, Channel 20175 (1732.5MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 9.00	Band 4	LTE-FDD, 10169-CAF	1732.5, 20175	8.3	1.33	40.2

Hardware Setup

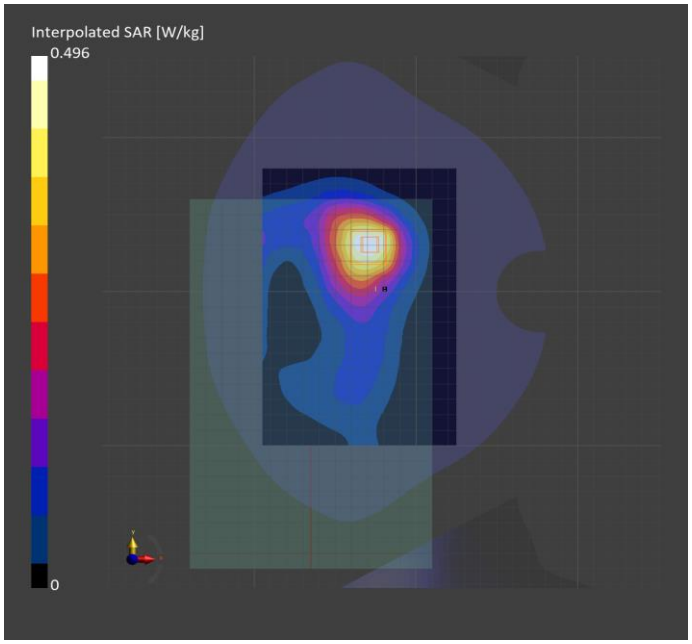
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.273	0.293
psSAR10g [W/Kg]	0.165	0.174
Power Drift [dB]	-0.05	0.06
M2/M1 [%]		14.5
Dist 3dB Peak [mm]		83.1



Meas.17 Measurement Report for UT30, BACK, Band 5, UID 10175 CAH, Channel 20600 (844.0MHz) Sensor on Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 5	LTE-FDD, 10175-CAH	844.0, 20600	9.61	0.938	41.9

Hardware Setup

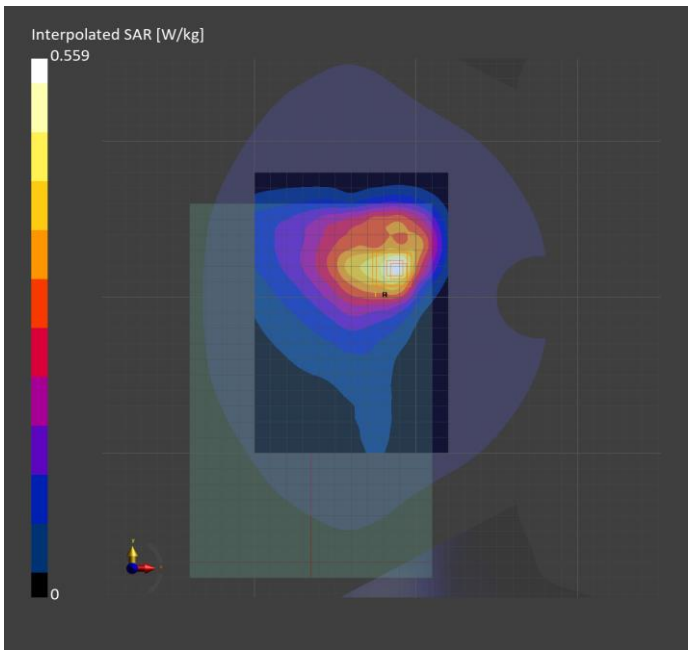
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.195	0.218
psSAR10g [W/Kg]	0.124	0.119
Power Drift [dB]	0.11	-0.16
M2/M1 [%]		9.2
Dist 3dB Peak [mm]		67.8



Meas.18 Measurement Report for UT30, BACK, Band 5, UID 10175 CAH, Channel 20525 (836.5MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 9.00	Band 5	LTE-FDD, 10175-CAH	836.5, 20525	9.61	0.935	41.9

Hardware Setup

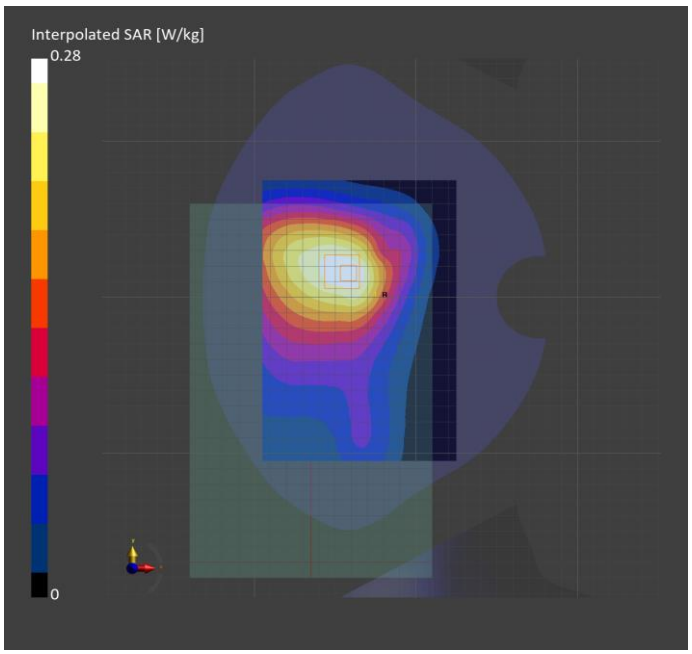
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.246	0.252
psSAR10g [W/Kg]	0.170	0.175
Power Drift [dB]	-0.05	0.05
M2/M1 [%]		> 15.0
Dist 3dB Peak [mm]		84.8



Meas.19 Measurement Report for UT30, BACK, Band 7, UID 10169 CAF, Channel 21100 (2535.0MHz) Sensor on

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 7	LTE-FDD, 10169-CAF	2535.0, 21100	7.52	1.84	39.1

Hardware Setup

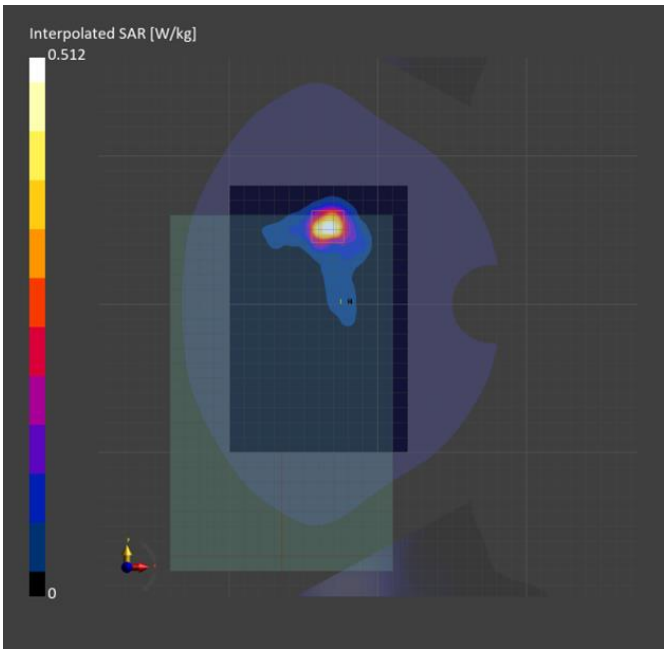
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.392	0.452
psSAR10g [W/Kg]	0.167	0.176
Power Drift [dB]	0.13	-0.12
M2/M1 [%]		7.1
Dist 3dB Peak [mm]		78.5



Meas.20 Measurement Report for UT30, BACK, Band 7, UID 10169 CAF, Channel 20850 (2510.0MHz) Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 9.00	Band 7	LTE-FDD, 10169-CAF	2510.0, 20850	7.52	1.81	39.2

Hardware Setup

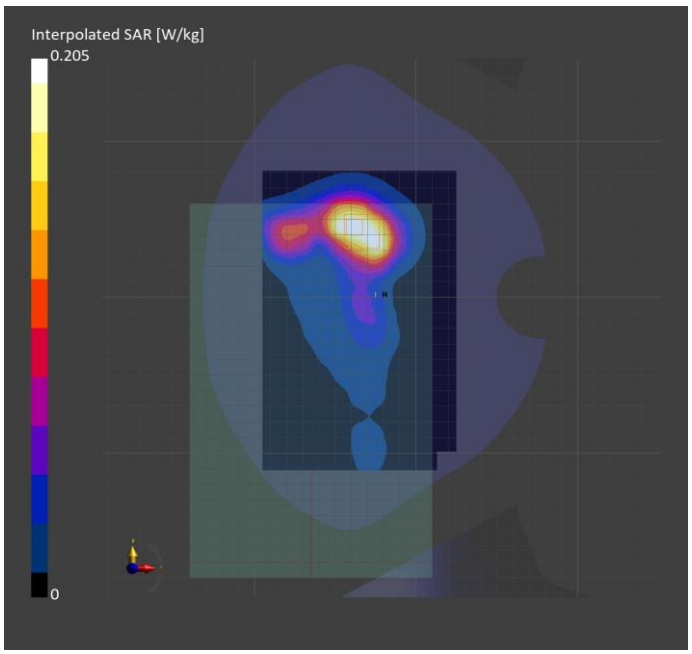
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 192.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	12.0 x 12.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.167	0.169
psSAR10g [W/Kg]	0.092	0.092
Power Drift [dB]	-0.17	-0.12
M2/M1 [%]		12.9
Dist 3dB Peak [mm]		81.1



Meas.21 Measurement Report for UT30, BACK, Band 12, UID 10175 CAH, Channel 23095 (707.5MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 12	LTE-FDD, 10175-CAH	707.5, 23095	10.0	0.883	42.3

Hardware Setup

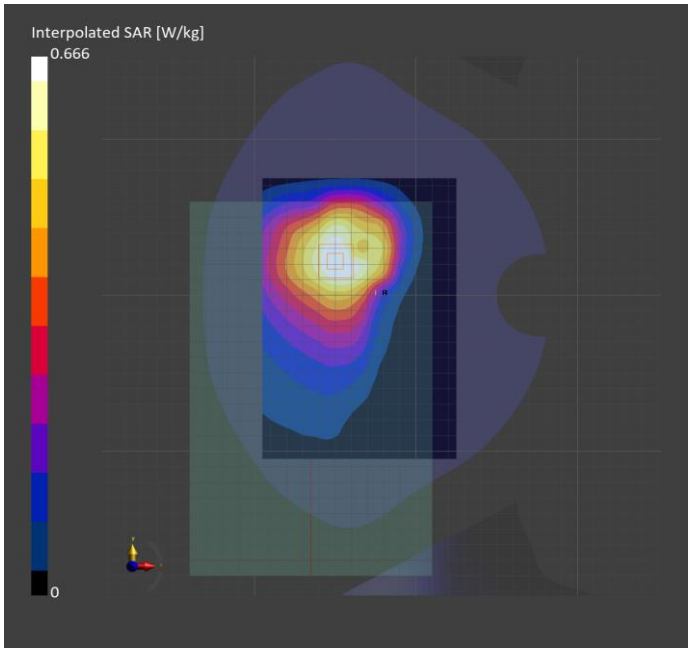
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.590	0.634
psSAR10g [W/Kg]	0.410	0.425
Power Drift [dB]	-0.18	-0.16
M2/M1 [%]		8.5
Dist 3dB Peak [mm]		66.9



Meas.22 Measurement Report for UT30, BACK, Band 13, UID 10175 CAH, Channel 23230 (782.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 13	LTE-FDD, 10175-CAH	782.0, 23230	10.0	0.913	42.1

Hardware Setup

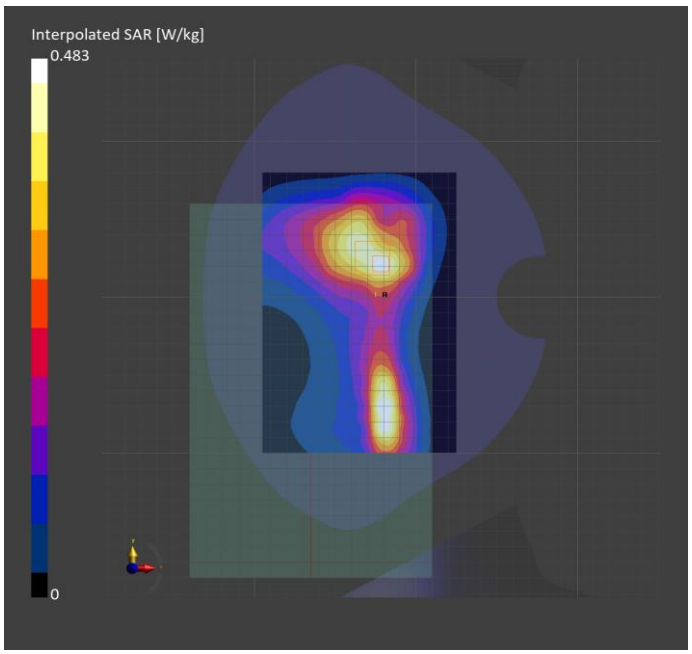
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.404	0.453
psSAR10g [W/Kg]	0.267	0.263
Power Drift [dB]	-0.00	0.17
M2/M1 [%]		9.6
Dist 3dB Peak [mm]		55.2



Meas.23 Measurement Report for UT30, BACK, Band 17, UID 10175 CAH, Channel 23780 (709.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 17	LTE-FDD, 10175-CAH	709.0, 23780	10.0	0.884	42.3

Hardware Setup

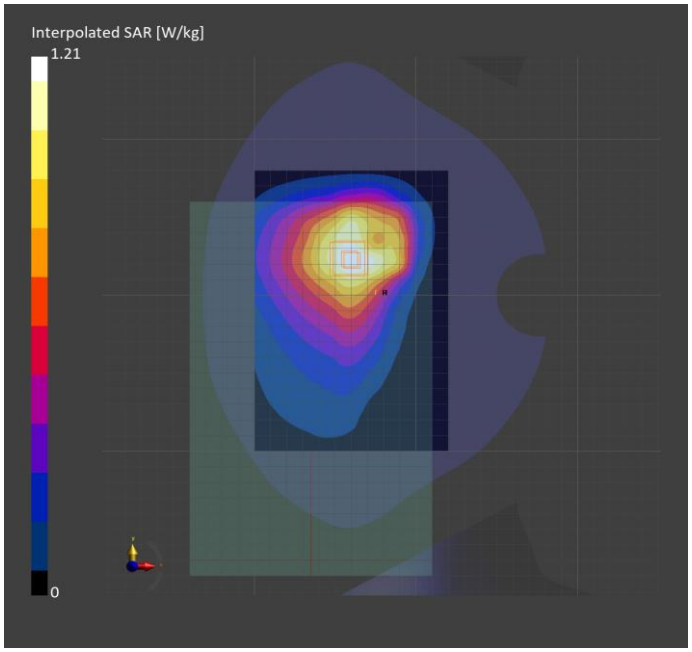
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.660	0.692
psSAR10g [W/Kg]	0.454	0.459
Power Drift [dB]	-0.03	-0.03
M2/M1 [%]		> 15.0
Dist 3dB Peak [mm]		79.2



Meas.24 Measurement Report for UT30, BACK, Band 25, UID 10169 CAF, Channel 26140 (1860.0MHz) Sensor on Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 25	LTE-FDD, 10169-CAF	1860.0, 26140	7.93	1.38	40.0

Hardware Setup

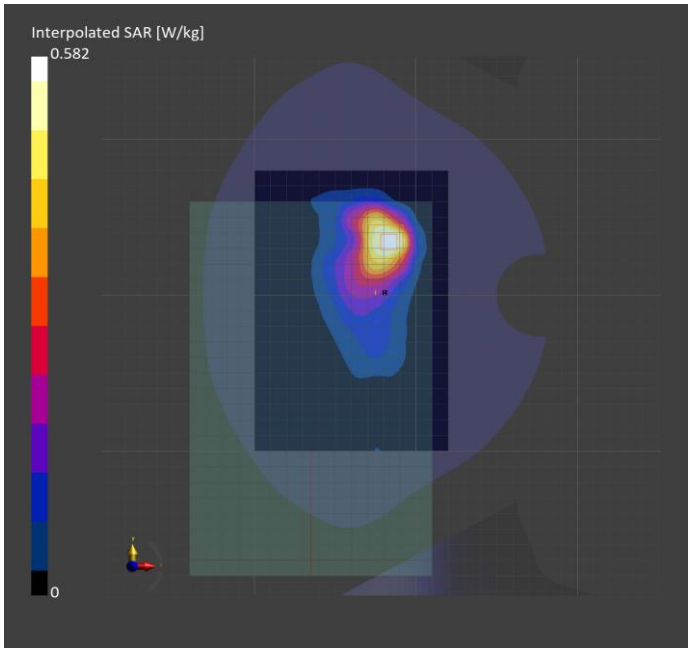
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.484	0.540
psSAR10g [W/Kg]	0.277	0.287
Power Drift [dB]	-0.20	-0.12
M2/M1 [%]		9.7
Dist 3dB Peak [mm]		79.8



Meas.25 Measurement Report for UT30, BACK, Band 25, UID 10169 CAF, Channel 26365 (1882.5MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 9.00	Band 25	LTE-FDD, 10169-CAF	1882.5, 26365	7.93	1.39	40.0

Hardware Setup

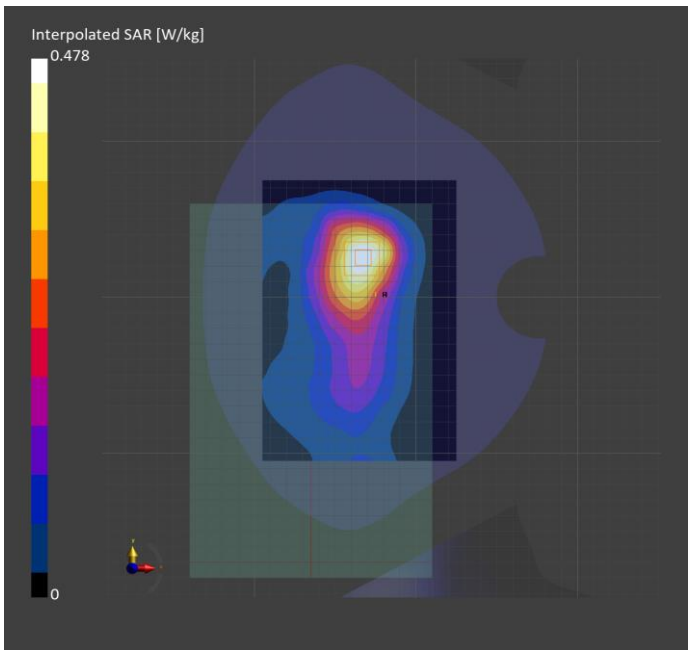
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.400	0.432
psSAR10g [W/Kg]	0.241	0.258
Power Drift [dB]	-0.16	-0.13
M2/M1 [%]		16.1
Dist 3dB Peak [mm]		81.7



Meas.26 Measurement Report for UT30, BACK, Band 41, UID 10172 CAH, Channel 40740 (2605.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	Band 41	LTE-TDD, 10172-CAH	2605.0, 40740	7.32	1.91	39.0

Hardware Setup

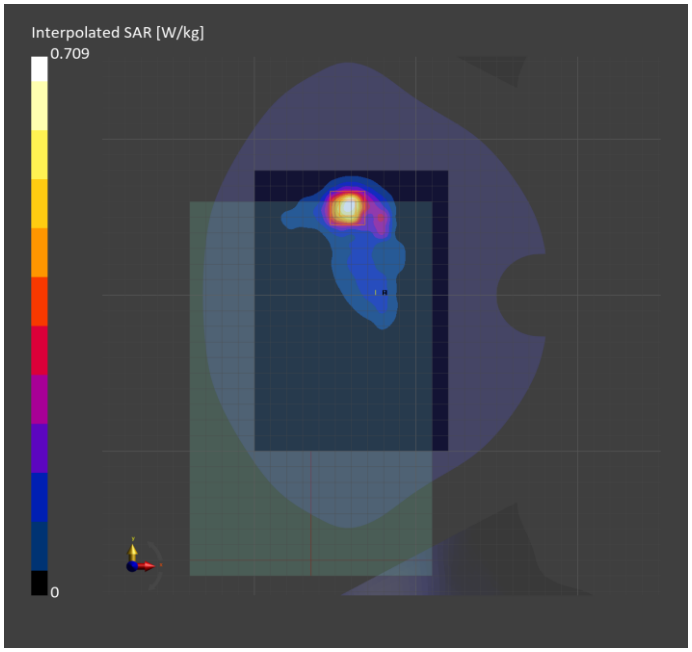
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.540	0.592
psSAR10g [W/Kg]	0.232	0.225
Power Drift [dB]	0.19	0.12
M2/M1 [%]		6.8
Dist 3dB Peak [mm]		83.1



Meas.27 Measurement Report for UT30, BACK, WLAN 2.4GHz, UID 10415 AAA, Channel 6 (2437.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 2.4GHz	WLAN, 10415-AAA	2437.0, 6	7.52	1.76	39.3

Hardware Setup

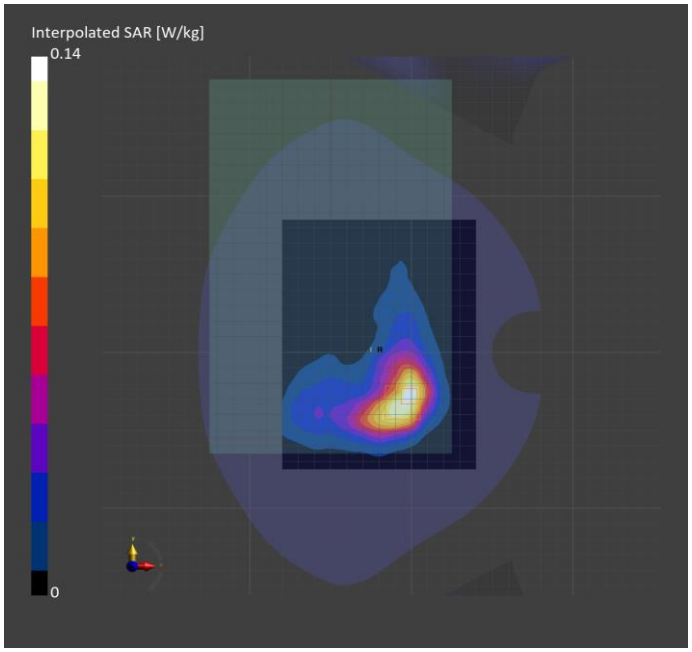
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 160.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.107	0.106
psSAR10g [W/Kg]	0.057	0.057
Power Drift [dB]	0.19	0.16
M2/M1 [%]		8.0
Dist 3dB Peak [mm]		73.2



Meas.28 Measurement Report for UT30, BACK, WLAN 5GHz, UID 10525 AAC, Channel 46 (5230.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 5GHz	WLAN, 10525-AAC	5230.0, 46	5.4	4.74	35.6

Hardware Setup

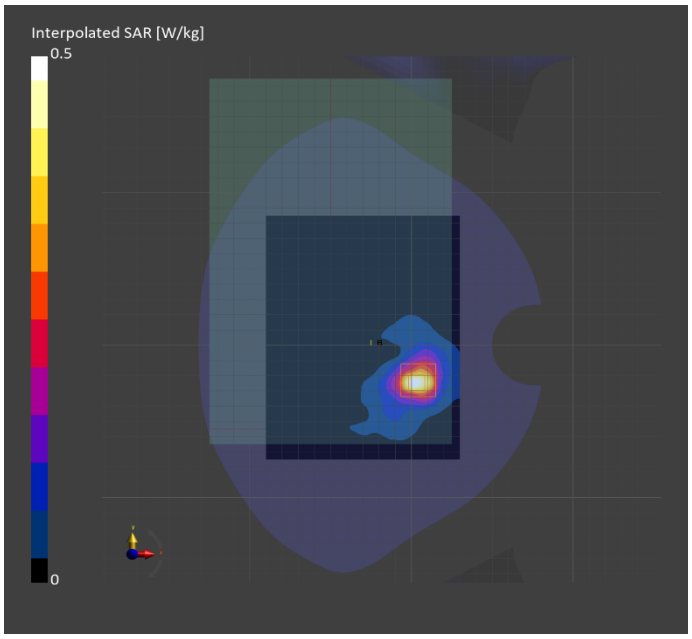
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 160.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.346	0.397
psSAR10g [W/Kg]	0.121	0.133
Power Drift [dB]	0.13	-0.08
M2/M1 [%]		6.4
Dist 3dB Peak [mm]		60.5



Meas.29 Measurement Report for UT30, BACK, WLAN 5GHz, UID 10525 AAC, Channel 149 (5745.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	WLAN 5GHz	WLAN, 10525-AAC	5745.0, 149	4.73	5.26	35.4

Hardware Setup

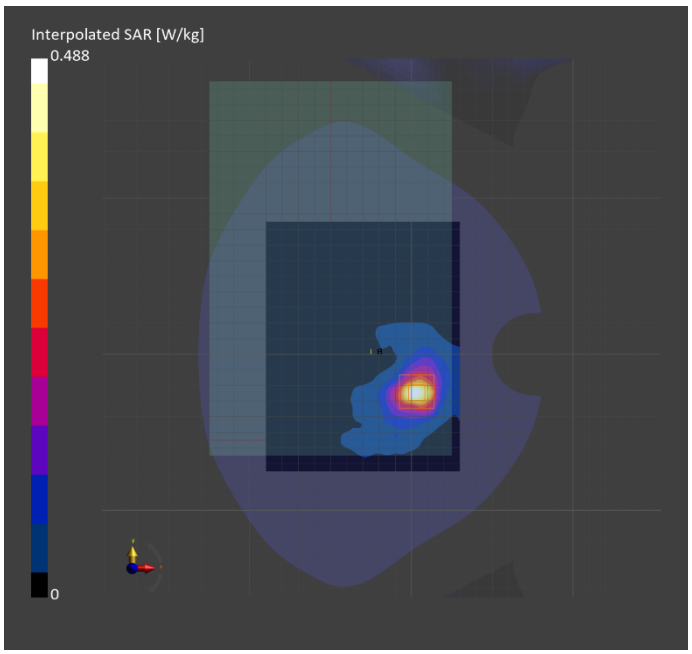
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 160.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.342	0.376
psSAR10g [W/Kg]	0.118	0.121
Power Drift [dB]	0.17	-0.14
M2/M1 [%]		6.1
Dist 3dB Peak [mm]		58.3



Meas.30 Measurement Report for UT30, BACK, ISM 2.4 GHz Band, UID 10032 CAA, Channel 39 (2441.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
UT30,	240.0 x 150.0 x 8.0	861263030015070	Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	ISM 2.4 GHz Band	Bluetooth, 10032-CAA	2441.0, 39	7.52	1.76	39.3

Hardware Setup

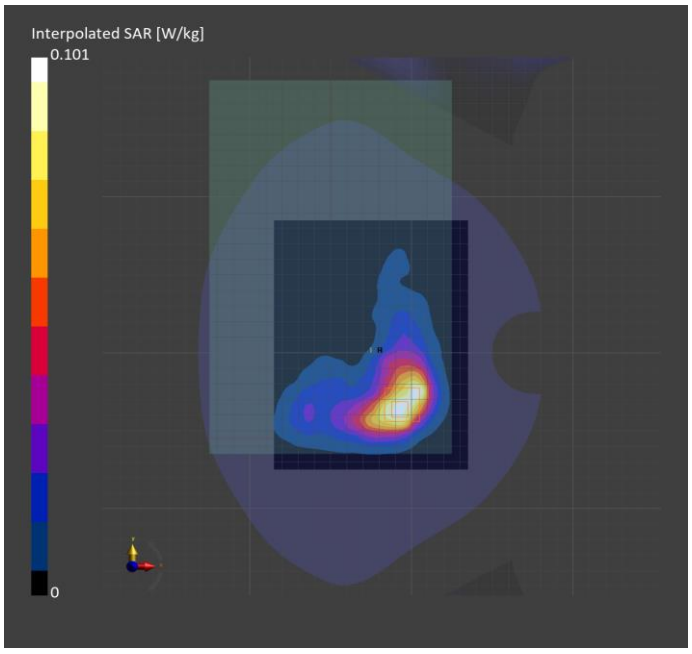
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1461	HBBL-600-10000 Charge:xxxx, --	EX3DV4 - SN7475, 2022-01-27	DAE4 Sn787, 2021-11-05

Scan Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 160.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Surface Detection	VMS + 6p	VMS + 6p
Scan Method	Measured	Measured

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.078	0.080
psSAR10g [W/Kg]	0.042	0.043
Power Drift [dB]	0.16	-0.18
M2/M1 [%]		8.0
Dist 3dB Peak [mm]		72.8



End of the report