TEST REPORT

REPORT NUMBER：B17W00112-SARV03

ON

Type of Equipment:	4G LTE mobile phone
Type of Designation:	A1-901
Manufacturer:	SHENZHEN FUTAIHONG PRECISION INDUSTRY CO.,LTD
FCC ID：	2AK9KA1

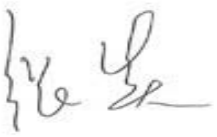
ACCORDING TO

IEEE C95.1-2005
IEEE 1528–2013

China Telecommunication Technology Labs.

Month date, year
Jun 7, 2017

Signature



Zhang Yan
Director
Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of China Telecommunication Technology Labs.

CONTENTS

1. Test Laboratory

1.1. Testing Location

Company Name:	China Telecommunication Technology Labs.
Address:	No. 8, Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China
Postal Code:	401336
Telephone:	0086-23-88069965
Fax:	0086-23-88608777

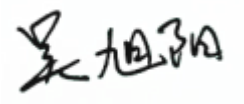
1.2. Testing Environment

Normal Temperature:	15-35℃
Relative Humidity:	20-75%
Ambient noise & Reflection:	< 0.012 W/kg

1.3. Project Data

Testing Start Date:	2017-03-04
Testing End Date:	2017-03-31

1.4. Signature



2017-04-12

Wu Xuyang
(Prepared this test report)

Date

2017-04-12

Wang Lili
(Reviewed this test report)

Date

2017-04-12

Zhang Yan
Director of the laboratory
(Approved this test report)

Date

2. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for A1-901 are as follows (with expanded uncertainty 22.4%)

Table 2.1: Max. Reported SAR Measured (1g)

Band	Position	SAR 1g (W/Kg)
GSM850	Head	0.066
	Body	0.3069
	Hotspot	0.3069
GSM1900	Head	0.0978
	Body	0.663
	Hotspot	0.663
WCDMA Band2	Head	0.1747
	Body	0.7787
	Hotspot	0.7787
WCDMA Band5	Head	0.0924
	Body	0.1877
	Hotspot	0.1877
CDMA 2000 BC0	Head	0.1162
	Body	0.2137
	Hotspot	0.2137
CDMA 2000 BC1	Head	0.1998
	Body	0.7320
	Hotspot	1.0730
LTE Band7	Head	0.1224
	Body	0.5936
	Hotspot	0.612
LTE Band41	Head	0.0639
	Body	0.3707
	Hotspot	0.4452
WIFI（2.4G）-Antenna1	Head	0.3474
	Body	0.070304
	Hotspot	0.0852
WIFI（2.4G）-Antenna2	Head	0.2630
	Body	0.0278
	Hotspot	0.0680
WLAN 5G UNII Band II-2A-Antenna1	Head	0.4686
	Body	0.3454
WLAN 5G UNII Band	Head	0.152

II-2A-Antenna2	Body	0.2735
WLAN 5G UNII Band II-2C-Antenna1	Head	0.3151
	Body	0.3042
WLAN 5G UNII Band II-2C-Antenna2	Head	0.1754
	Body	0.4403
WLAN 5G UNII Band III-Antenna1	Head	0.1847
	Body	0.1505
WLAN 5G UNII Band III-Antenna2	Head	0.1006
	Body	0.3178

Table 2.2: The Maximum Reported of SAR values

	Maximum SAR value for Head	Maximum SAR value for Body	Maximum SAR value for Hotspot
GSM	**0.0978**	**0.663**	**0.663**
WCDMA	**0.1747**	**0.7787**	**0.7787**
CDMA 2000	**0.1998**	**0.7320**	**1.0730**
LTE	**0.1224**	**0.5936**	**0.612**
WIFI-2.4G	**0.3474**	**0.070304**	**0.0852**
WIFI-5G	**0.4686**	**0.4403**	/

The SAR values found for the Mobile Phone are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1g tissue according to the IEEE C95.1–2005.

The measurement together with the test system set-up is described in chapter 7 of this test report. A detailed description of the equipment under test can be found in chapter 3 of this test report.

The maximum SAR value is obtained at the case of **(Table 2.2),** and the values are**: 1.0730 W/Kg (1g)**.

3. Client Information

3.1. Applicant Information

Company Name:	CloudMinds(Shenzhen) Holdings Co. Ltd
Address /Post:	Room 201 Building A No.1 Qian hai shengang Corporation Zone Qian hai Road 1st Shenzhen（Stay by Shenzhen Qianhai Commerce Secretariat Co., Ltd ）
City:	Shenzhen
Country:	China
Telephone:	13426155325
Fax:	--
Email:	andy.xu@cloudminds.com
Contact Person:	andy.xu

3.2. Manufacturer Information

Company Name:	SHENZHEN FUTAIHONG PRECISION INDUSTRY CO.,LTD
Address /Post:	Office Address Floor 2.Building 3. Zone K1. Foxcon Technology park,2ND DONGHUAN RD NO.2.LONGHUA Agency. LONGHUA NEW DISTRICT SHENZHEN
City:	Shenzhen
Country:	China
Telephone:	--
Fax:	--
Email:	--
Contact Person:	--

4. Equipment Under Test (EUT) and Ancillary Equipment (AE)

4.1. About EUT

Description:	4G LTE mobile phone
Model name:	A1-901
Operation Model(s):	GSM 850/1900,WCDMA 1900/850,CDMA 2000 BC0/1, LTE Band7/41, WIFI,BT
Tx Frequency:	825 – 848.8 MHz (GSM 850), 1850.2 – 1910 MHz (GSM 1900) 826.4–846.6 MHz (WCDMA850 Band V) 1852.4–1907.6 MHz (WCDMA1900 Band II) 824 – 849 MHz (CDMA 2000 BC0) 1850 –1909 MHz (CDMA 2000 BC1) 2500 – 2570 MHz (LTE Band 7) 2496 – 2690 MHz (LTE Band 41) 2412 – 2462 MHz (Wi-Fi 2.4G) 5150 – 5250 MHz (U-NII-1) 5250 – 5350 MHz (U-NII-2A) 5470 – 5725 MHz (U-NII-2C) 5725 – 5850 MHz (U-NII-3)
GPRS Multislot Class:	12
E-GPRS Multislot Class:	12
Operation mode:	B
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Inner antenna
Accessories/Body-worn configurations:	Headset
Hotspot mode:	Support simultaneous transmission of hotspot and voice (or data)
Dimensions:	16.0cm×8.0cm

4.2. Internal Identification of EUT used during the test

EUT ID*	SN or IMEI	HW Version	SW Version	**Date of receipt**
S10	IMEI1: 862851030005071 IMEI2: 862851030025079	AP1	A1-901.1.130	2017-02-21

*EUT ID: is used to identify the test sample in the lab internally.

4.3. Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
B10	Battery	NA	NA	NA
A1	Headset	NA	NA	NA

*AE ID: is used to identify the test sample in the lab internally.

5. TEST METHODOLOGY

5.1. Applicable Limit Regulations

IEEE C95.1–2005: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

5.2. Applicable Measurement Standards

IEEE 1528–2013: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques.

KDB447498 D01: General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

KDB648474 D04 Handset SAR v01r03: SAR Evaluation Considerations for Wireless Handsets.

KDB941225 D01 SAR test for 3G devices v03r01: SAR Measurement Procedures for 3G Devices

KDB941225 D05 SAR for LTE Devices v02r05： SAR Evaluation Considerations for LTE Devices

KDB941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02： Rel. 10 LTE SAR Test Guidance and KDB Inquiries

KDB941225 D06 Hotspot Mode SAR v02r01: SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities

KDB248227 D01 802.11 Wi-Fi SAR v02r02: SAR Measurement Procedures for IEEE 802.11 Wi-Fi Transmitters

KDB865664 D01SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz.

KDB865664 D02 RF Exposure Reporting v01r02: RF Exposure Compliance Reporting and Documentation Considerations
NOTE: KDB is not in A2LA Scope List and CNAS Scope List.

6. Specific Absorption Rate (SAR)

6.1. Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

6.2. SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ) . The equation description is as below:

$$SAR = \frac{d}{dt}(\frac{dW}{dm}) = \frac{d}{dt}(\frac{dW}{\rho dv})$$

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be either related to the temperature elevation in tissue by

$$SAR = c(\frac{\delta T}{\delta t})$$

Where: C is the specific head capacity, δT is the temperature rise and δt is the exposure duration, or related to the electrical field in the tissue by

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

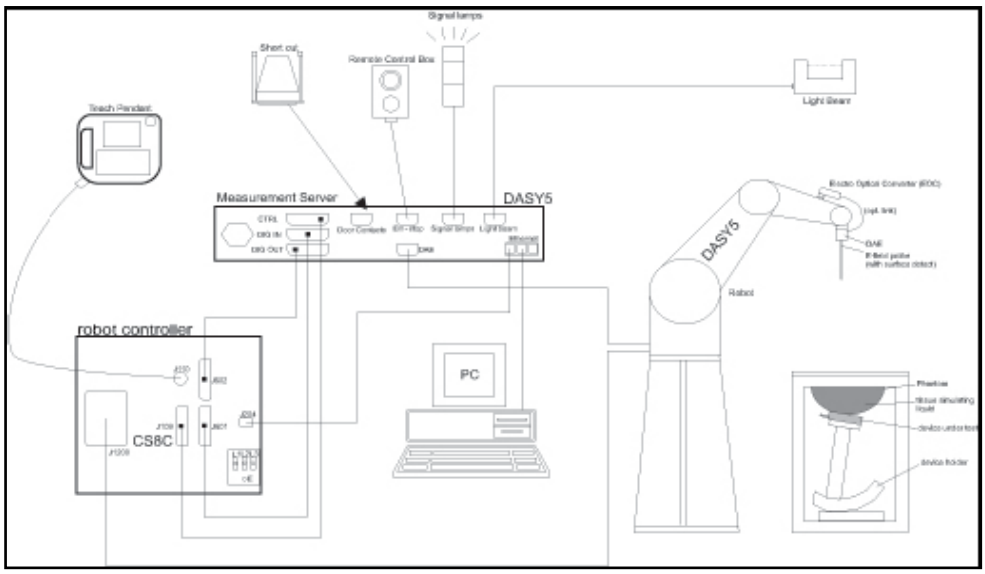
Where: σ is the conductivity of the tissue, ρ is the mass density of tissue and E is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

7. SAR MEASUREMENT SETUP

7.1. Measurement Set-up

The DASY5 system for performing compliance tests is illustrated above graphically. This system consists of the following items:



Picture 7-1 SAR Lab Test Measurement Set-up

- A standard high precision 6-axis robot (Stäubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal 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 WinXP and the DASY5 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.

7.2. DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multifiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY5 software reads the reflection durning a software approach and looks for the maximum using 2nd ord curve fitting. The approach is stopped at reaching the maximum.

Probe Specifications:

Model: ES3DV3
Frequency Range: 10MHz — 2.6GHz(ES3DV3)
Calibration: In head and body simulating tissue at Frequencies from 835 up to 5800MHz
Linearity: ± 0.2dB(30 MHz to 26 GHz) for ES3DV3

Picture 7-2 Near-field Probe

Dynamic Range: 10 mW/kg — 100W/kg
Probe Length: 330 mm
Probe Tip Length: 20 mm
Body Diameter: 12 mm
Tip Diameter: 2.5 mm (3.9 mm for ES3DV3)
Tip-Center: 1 mm (2.0mm for ES3DV3)
Application: SAR Dosimetry Testing
Compliance tests of mobile phones
Dosimetry in strong gradient fields

Picture 7-3 E-field Probe

7.3. E-field Probe Calibration

Each E-Probe/Probe Amplifier combination has unique calibration parameters. A TEM cell calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm^2) using an RF Signal generator, TEM cell, and RF Power Meter.

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can

be performed in a TEM cell if the frequency is below 1 GHz and inn a waveguide or other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1 mW/ cm^2..

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The E-field in the medium correlates with the temperature rise in the dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR = C\frac{\Delta T}{\Delta t}$$

Where:

Δt = Exposure time (30 seconds),

C = Heat capacity of tissue (brain or muscle),

ΔT = Temperature increase due to RF exposure.

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

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).

7.4. Other Test Equipment

7.4.1. Data Acquisition Electronics(DAE)

The data acquisition electronics 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 the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

Picture7-4: DAE

7.4.2. Robot

The SPEAG DASY system uses the high precision robots (DASY5: TX90) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version from Stäubli is used. The Stäubli robot series have many features that are important for our application:

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

Picture7-5: DASY 5

7.4.3. Measurement Server

The Measurement server is based on a PC/104 CPU broad with CPU (DASY5: 400 MHz, Intel Celeron), chipdisk (DASY5: 128MB), RAM (DASY5: 128MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O broad, which is directly connected to the PC/104 bus of the CPU broad.

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.

Picture 7-6: Server for DASY 5

7.4.4. Device Holder for 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

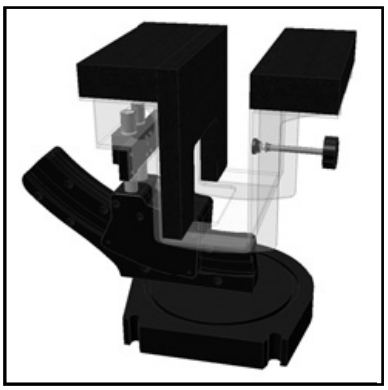
material having the following dielectric parameters:

relative permittivity ε =3 and loss tangent δ =0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

<Laptop Extension Kit>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin-SAM and ELI phantoms.

Picture7-7: Device Holder



Picture 7-8: Laptop Extension Kit

7.4.5. Phantom

The SAM Twin Phantom V4.0 is constructed of a fiberglass shell integrated in a table. The shape of the shell is based on data from an anatomical study designed to Represent the 90th percentile of the population. The phantom enables the dissymmetric evaluation of SAR for both left and right handed handset usage, as well as body-worn usage using the flat phantom region. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. The shell phantom has a 2mm shell thickness (except the ear region where shell thickness increases to 6 mm).

Shell Thickness: 2 ± 0. 2 mm
Filling Volume: Approx. 25 liters
Dimensions: 810 x l000 x 500 mm (H x L x W)
Available: Special

Picture 7-9: SAM Twin Phantom

8. Tissue Simulating Liquids

8.1. Targets for tissue simulating liquid

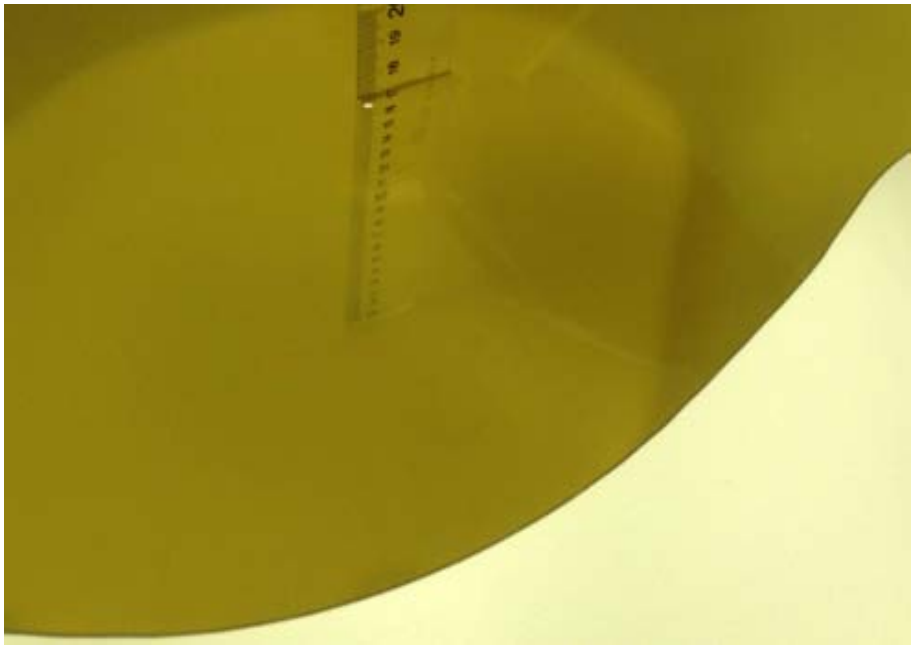
Table 8.1 Targets for tissue simulating liquid

Frequency (MHz)	Liquid Type	Conductivity (σ)	± 5% Range	Permittivity (ε)	± 5% Range
835	Head	0.90	0.86～0.95	41.5	39.4～43.6
1900	Head	1.40	1.33～1.47	40.0	38.0～42.0
2450	Head	1.80	1.71～1.89	39.2	37.2～41.2
2550	Head	1.91	1.81～2.00	39.1	37.1～41.0
2600	Head	1.96	1.86～2.06	39.0	37.0～40.9
5300	Head	4.66	4.43～4.89	36.0	34.2～37.8
5600	Head	5.07	4.82～5.32	35.5	33.7～37.3
5800	Head	5.27	5.00～5.53	35.2	33.4～37.0
835	Body	0.97	0.92～1.02	55.2	52.4～58.0
1900	Body	1.52	1.44～1.60	53.3	50.6～56.0
2450	Body	1.95	1.85～2.05	52.7	50.1～55.3
2550	Body	2.09	1.98～2.19	52.6	49.9～55.2
2600	Body	2.16	2.05～2.27	52.5	49.8～55.1
5300	Body	5.30	5.04～5.56	49.0	46.6～51.4
5600	Body	5.77	5.48～6.06	48.5	46.1～50.9
5800	Body	6.00	5.70～6.30	48.2	45.8～50.6

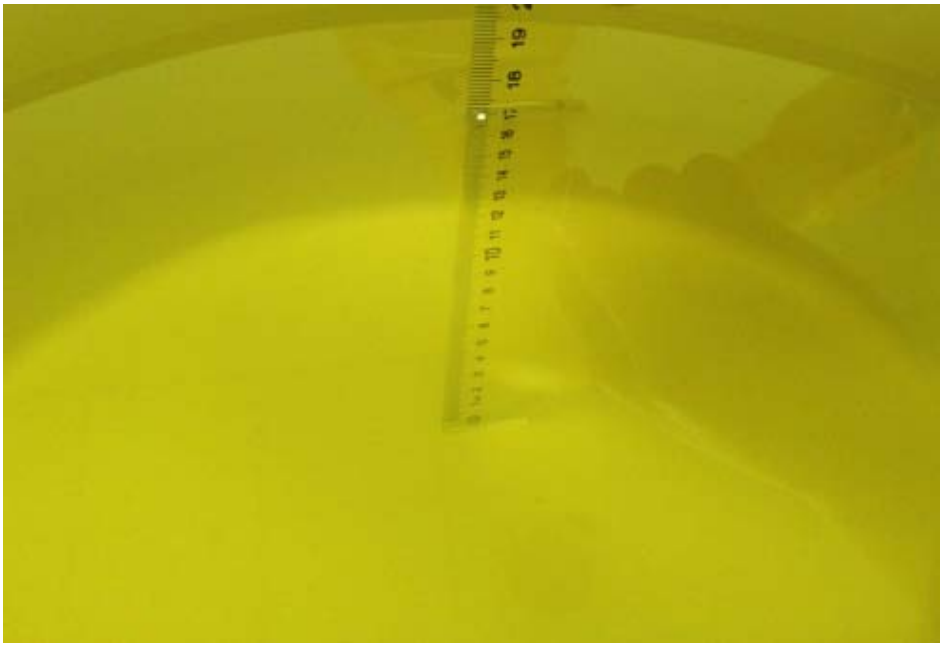
8.2. Dielectric Performance

Table 8.2: Dielectric Performance of Head Tissue Simulating Liquid

Measurement Value						
Liquid Temperature: 22.5℃						
Type	**Frequency**	**Permittivity ε**	**Drift (%)**	**Conductivity σ**	**Drift (%)**	**Test Date**
Head	835MHz	41.94	+1.06%	0.909	+1.00%	**2017-03-10**
Head	1900MHz-1	39.92	-0.20%	1.376	-1.71%	**2017-03-06**
Head	1900MHz-2	39.92	-0.20%	1.391	-0.64%	**2017-03-12**
Head	2450MHz	38.54	-1.68%	1.829	+1.61%	**2017-03-17**
Head	2550MHz	38.18	-2.35%	1.941	+1.62%	**2017-03-16**
Head	2600MHz	37.65	-3.46%	2.022	+3.16%	**2017-03-16**
Head	5300MHz	37.34	+3.72%	4.876	+4.64%	**2017-03-20**
Head	5600MHz	34.85	-1.83%	4.966	-2.05%	**2017-03-20**
Head	5800MHz	35.92	+2.05%	5.252	-0.34%	**2017-03-20**
Body	835MHz-1	54.34	-1.56%	0.969	-0.10%	**2017-03-04**
Body	835MHz-2	54.54	-1.20%	0.988	+1.86%	**2017-03-14**
Body	1900MHz	50.92	-4.47%	1.501	-1.25%	**2017-03-28**
Body	2450MHz	51.95	-1.42%	1.954	+0.21%	**2017-03-17**
Body	2550MHz	51.21	-2.64%	2.110	+0.96%	**2017-03-15**
Body	2600MHz	50.84	-3.16%	2.190	+1.39%	**2017-03-15**
Body	5300MHz	49.48	+0.98%	5.545	+4.62%	**2017-03-31**
Body	5600MHz	46.43	-4.27%	5.701	-1.20%	**2017-03-31**
Body	5800MHz	47.48	-1.49%	5.995	-0.08%	**2017-03-31**

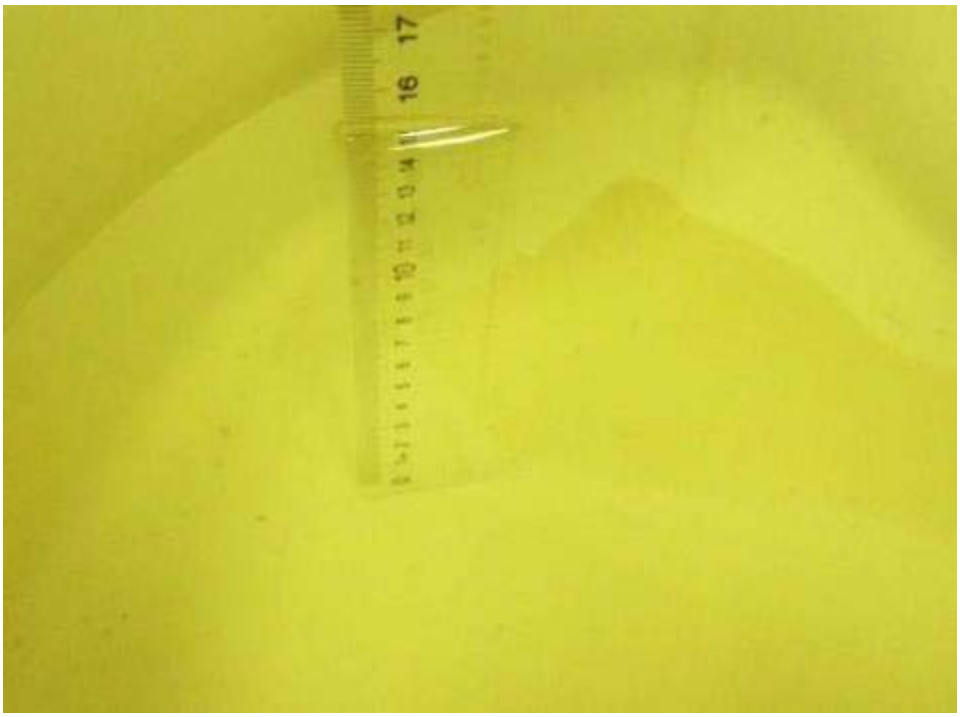


Picture 8-1: Liquid depth in the Head Phantom (835 MHz Head)

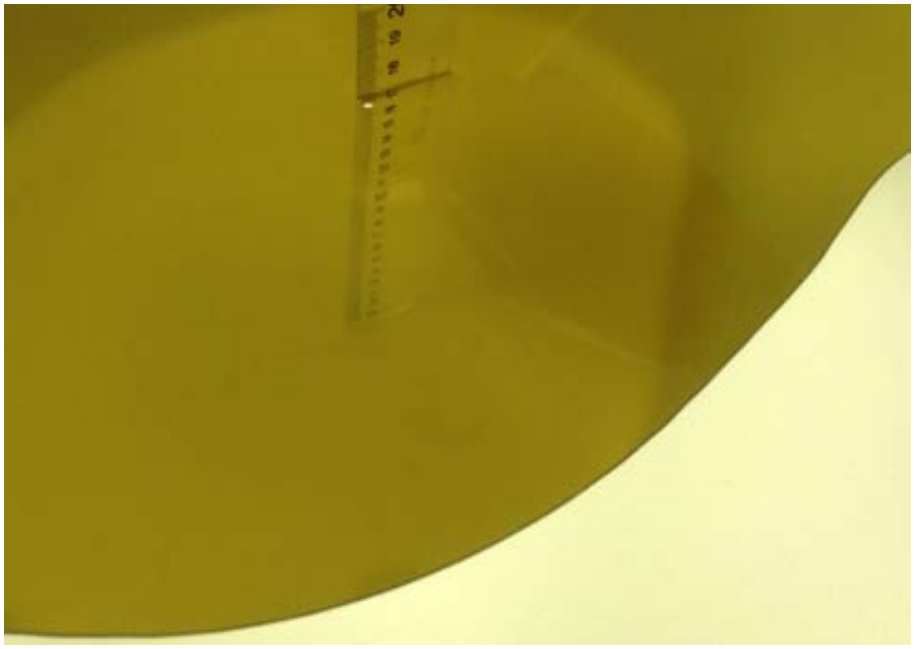


Picture 8-2: Liquid depth in the Head Phantom (1900 MHz Head)

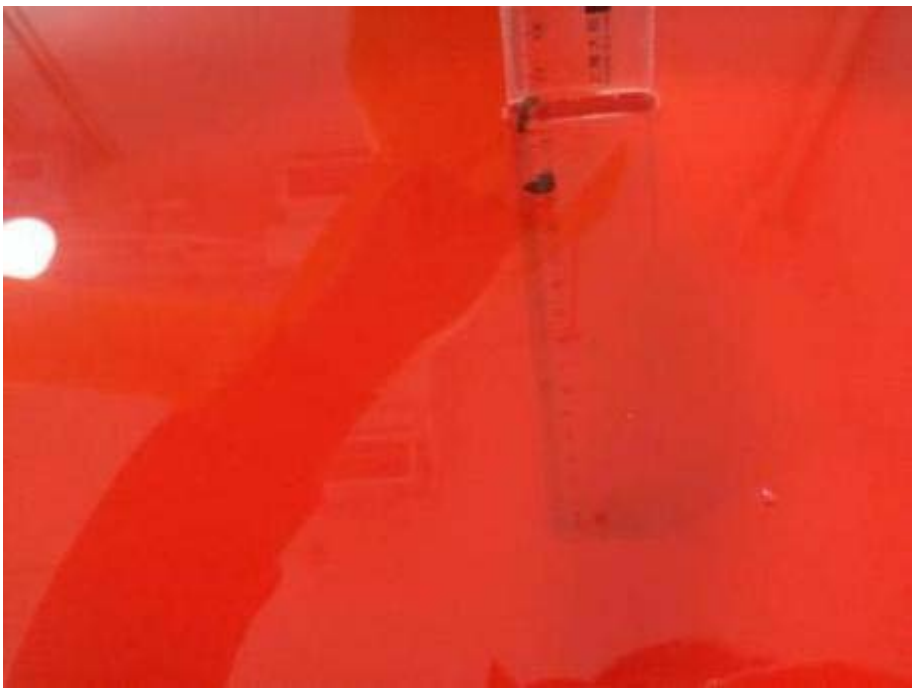
Picture 8-3: Liquid depth in the Head Phantom (2450 MHz Head)



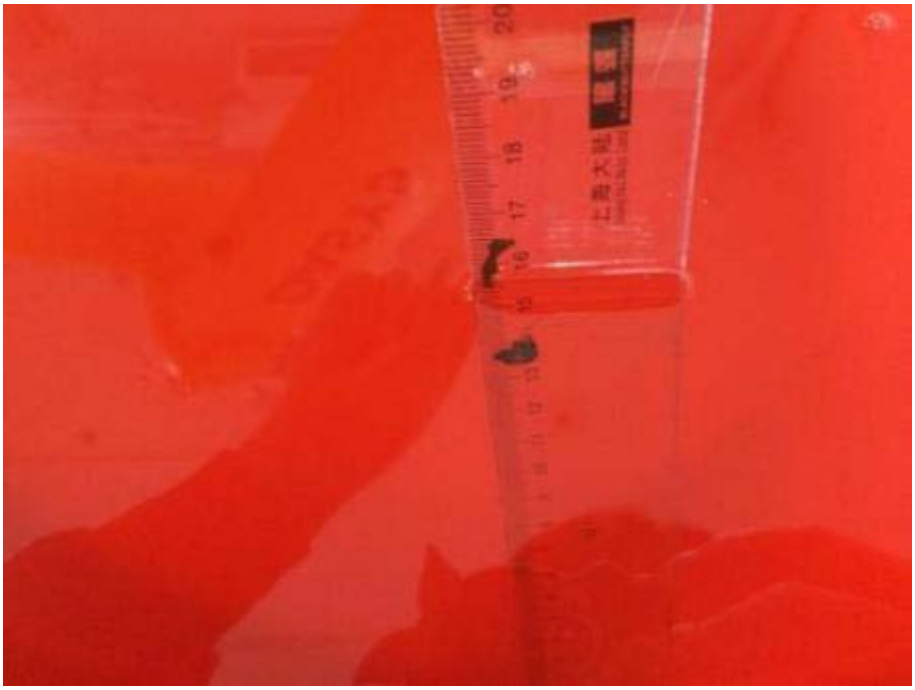
Picture 8-4: Liquid depth in the Head Phantom (2600 MHz Head)



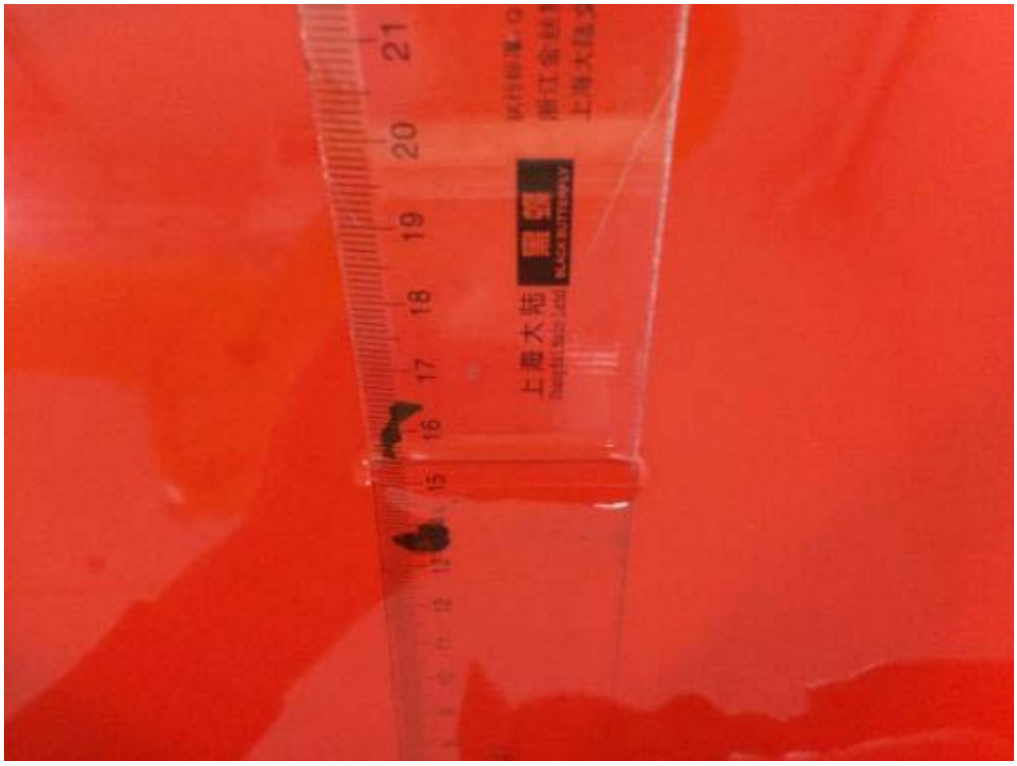
Picture 8-5: Liquid depth in the Head Phantom (5GHz Head)



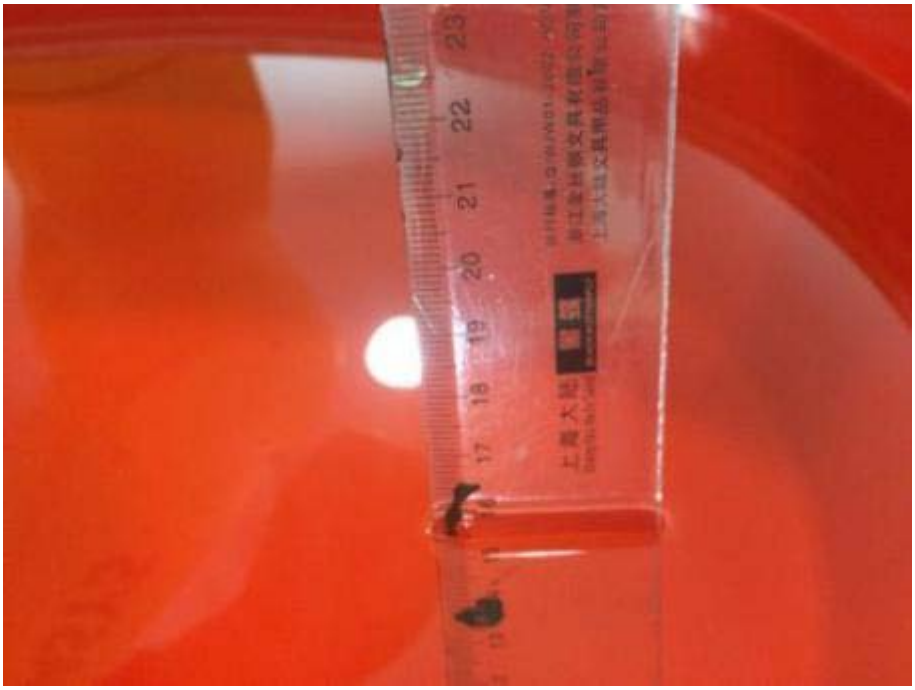
Picture 8-6: Liquid depth in the Flat Phantom (835 MHz Body)



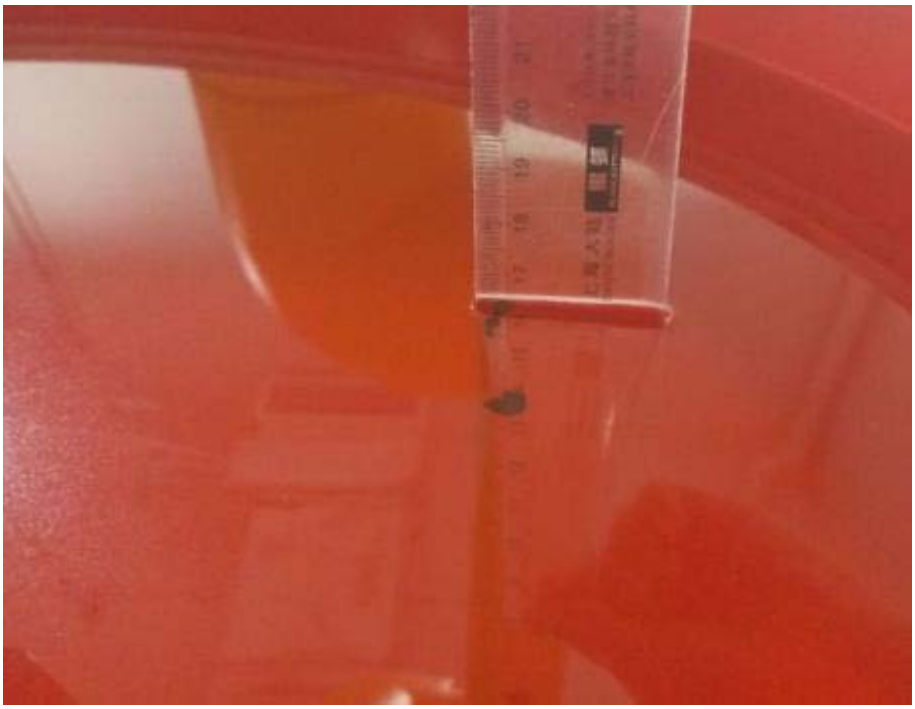
Picture 8-7: Liquid depth in the Flat Phantom (1900 MHz Body)



Picture 8-8: Liquid depth in the Flat Phantom (2450 MHz Body)



Picture 8-9: Liquid depth in the Flat Phantom (2600 MHz Body)



Picture 8-10: Liquid depth in the Flat Phantom (5GHz Body)

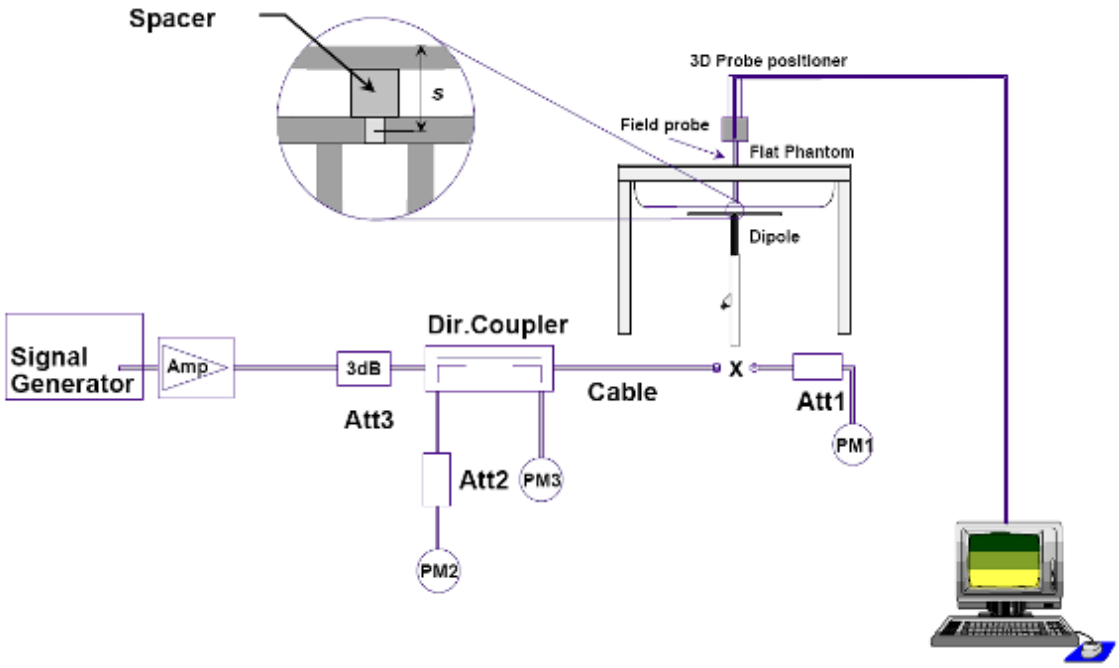
9. System Validation

9.1. System Validation

Each DASY system is equipped with one or more system validation kits. These units, together with the predefined measurement procedures within the DASY software, enable the user to conduct the system performace check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

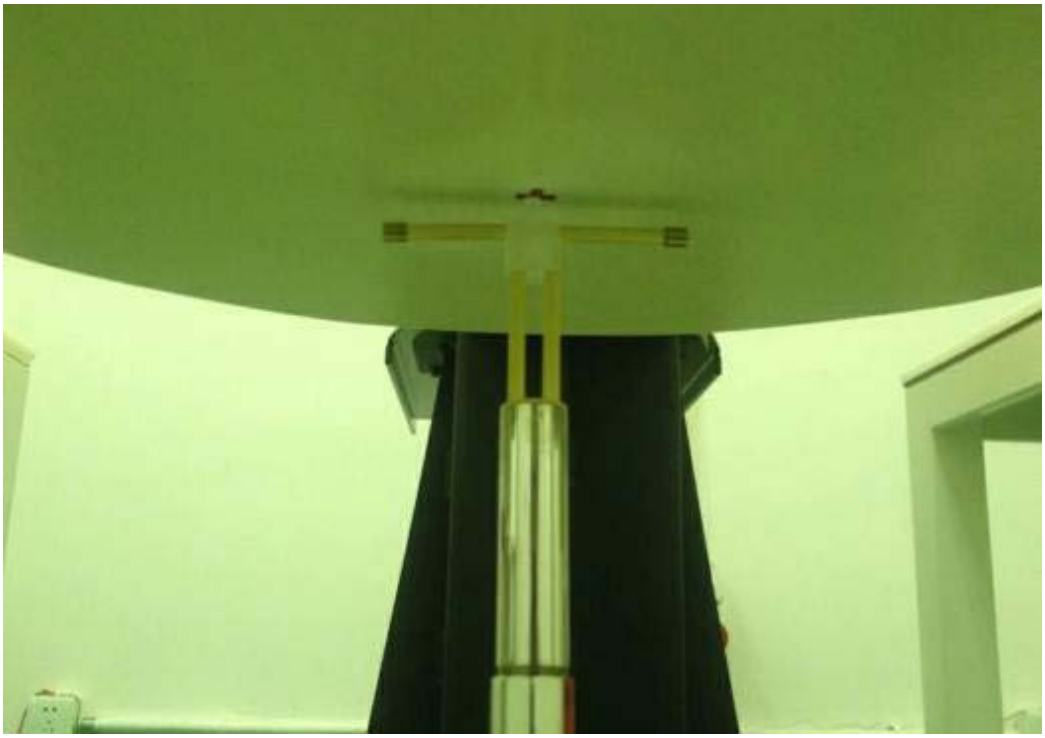
9.2. System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



Picture 9-1 System Setup for System Evaluation

The output power on dipole port must be calibrated to 24 dBm (250mW) before dipole is connected.



Picture 9-2 Photo of Dipole Setup

Table 9.1: System Validation of Head

Verification Results							
Frequency	Target value (W/kg)		Measured value (W/kg)		Deviation		Test date
	10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average	
835MHz	1.53	2.33	1.63	2.48	+6.54%	+6.44%	**2017-03-10**
1900MHz-1	5.19	9.97	5.10	9.97	-1.73%	0.00%	**2017-03-06**
1900MHz-2	5.19	9.97	5.34	10.3	+2.89%	+3.31%	**2017-03-12**
2450MHz	6.14	13.1	6.06	13.3	-1.30%	+1.53%	**2017-03-17**
26000MHz	6.25	14.0	6.19	14.1	-0.96%	+0.71%	**2017-03-16**
5300MHz	2.33	8.12	2.27	7.88	-2.58%	-2.96%	**2017-03-20**
5600MHz	2.42	8.49	2.33	8.06	-3.72%	-5.06%	**2017-03-20**
5800MHz	2.20	7.82	2.23	7.72	+1.36%	-1.28%	**2017-03-20**

Table 9.2: System Validation of Body

Verification Results							
Frequency	Target value (W/kg)		Measured value (W/kg)		Deviation		Test date
	10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average	
835MHz-1	1.61	2.41	1.60	2.41	-0.62%	+0.00%	**2017-03-04**
835MHz-2	1.61	2.41	1.53	2.32	-4.97%	-3.73%	**2017-03-14**
1900MHz	5.34	10.2	4.96	9.42	-7.12%	-7.65%	**2017-03-28**
2450MHz	6.14	13.2	5.97	12.7	-2.77%	-3.79%	**2017-03-17**
26000MHz	6.25	14.2	6.30	14.2	+0.80%	0.00%	**2017-03-15**
5300MHz	2.20	7.79	2.03	7.66	-7.73%	-1.67%	**2017-03-31**
5600MHz	2.23	7.97	2.09	7.23	-6.28%	-9.28%	**2017-03-31**
5800MHz	2.07	7.50	2.26	7.87	+9.18%	+4.93%	**2017-03-31**

10. Measurement Procedures

10.1. Tests to be performed

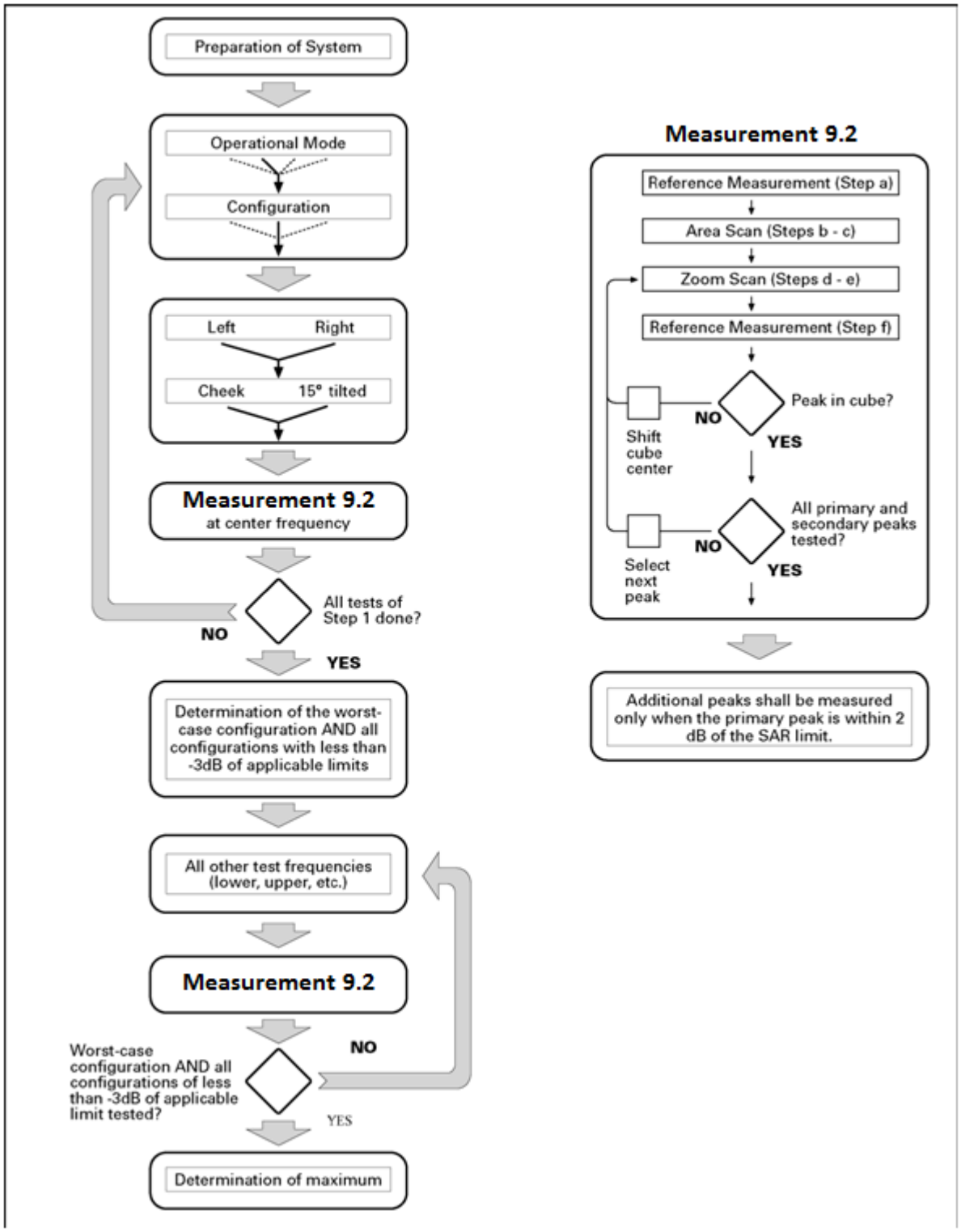
In order to determine the highest value of the peak spatial-average SAR of a handset, all device positions, configurations and operational modes shall be tested for each frequency band according to steps 1 to 3 below. A flowchart of the test process is shown in Picture 10-1.

Step 1: The tests described in 9.2 shall be performed at the channel that is closest to the centre of the transmit frequency band (f_c) for:
a) all device positions (cheek and tilt, for both left and right sides of the SAM phantom, as described in annex c),
b) all configurations for each device position in a), e.g., antenna extended and retracted, and
c) all operational modes, e.g., analogue and digital, for each device position in a) and configuration in b) in each frequency band.

If more than three frequencies need to be tested according to 11.1 (i.e., $N_c > 3$), then all frequencies, configurations and modes shall be tested for all of the above test conditions.

Step 2: For the condition providing highest peak spatial-average SAR determined in Step 1, perform all tests described in 9.2 at all other test frequencies, i.e., lowest and highest frequencies. In addition, for all other conditions (device position, configuration and operational mode) where the peak spatial-average SAR value determined in Step 1 is within3 dB of the applicable SAR limit, it is recommended that all other test frequencies shall be tested as well.

Step 3: Examine all data to determine the highest value of the peak spatial-average SAR found in Steps 1 to 2.



Picture 10-1 Block diagram of the tests to be performed

10.2. General Measurement Procedure

The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements and fully documented in SAR reports to qualify for TCB approval. Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2003. The results should be documented as part of the system validation records and may be requested to support test results when all the measurement parameters in the following table are not satisfied.

<table>
<tr><td colspan="3"></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}</td><td>≤ 2 GHz: ≤ 8 mm
2 – 3 GHz: ≤ 5 mm*</td><td>3 – 4 GHz: ≤ 5 mm*
4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{Zoom}(n)$</td><td>≤ 5 mm</td><td>3 – 4 GHz: ≤ 4 mm
4 – 5 GHz: ≤ 3 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface</td><td>≤ 4 mm</td><td>3 – 4 GHz: ≤ 3 mm
4 – 5 GHz: ≤ 2.5 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td>$\Delta z_{Zoom}(n>1)$: between subsequent points</td><td colspan="2">≤ 1.5·$\Delta z_{Zoom}(n-1)$</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>≥ 30 mm</td><td>3 – 4 GHz: ≥ 28 mm
4 – 5 GHz: ≥ 25 mm
5 – 6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
* When zoom scan is required and the <u>reported</u> SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

10.3. WCDMA Measurement Procedures for SAR

The following procedures are applicable to WCDMA handsets operating under 3GPP Release99, Release 5 and Release 6. The default test configuration is to measure SAR with an established radio link between the DUT and a communication test set using a 12.2kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations (DPCCH &DPDCH$_n$), HSDPA and HSPA (HSUPA/HSDPA) modes according to output power, exposure conditions and device operating capabilities. Both uplink and downlink should be configured with the same RMC or AMR, when required. SAR for Release 5 HSDPA and Release 6 HSPA are measured using the applicable FRC (fixed reference channel) and E-DCH reference channel configurations. Maximum output power is verified according to applicable versions of 3GPP TS 34.121 and SAR must be measured according to these maximum output conditions. When Maximum Power Reduction (MPR) is not implemented according to Cubic Metric (CM) requirements for Release 6 HSPA, the following procedures do not apply.

For Release 5 HSDPA Data Devices:

Sub-test	β_c	β_d	β_d （SF）	β_c / β_d	β_{hs}	CM/dB
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15	15/15	64	12/15	24/25	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

For Release 6 HSUPA Data Devices

Sub-test	β_c	β_d	β_d （SF）	β_c / β_d	β_{hs}	β_{ec}	β_{ed}	β_{ed} （SF）	β_{ed} （codes）	CM (dB)	MPR (dB)	AG Index	E-TFCI
1	11/15	15/15	64	11/15	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	12/15	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	4/15	56/75	4	1	3.0	2.0	17	71
5	15/15	15/15	64	15/15	24/15	30/15	134/15	4	1	1.0	0.0	21	81

10.4. SAR Measurement for LTE

SAR tests for LTE are performed with a base station simulator, R&S CMW500. Closed loop power control was used so the UE transmits with maximum output power during SAR testing.

All powers were measured with the CMW500.

Downlink LTE CA additional specification

The device supports downlink Release 11 LTE Carrier Aggergation (CA) only. It supports a maximum of 3 carriers in the downlink. Other Release 11 features are not supported, including Uolink carrier.

Table 5.6A.1-1: E-UTRA CA configurations and bandwidth combination sets defined for intra-band contiguous CA

E-UTRA CA configuration / Bandwidth combination set					
E-UTRA CA configuration	Uplink CA configurations (NOTE 3)	Component carriers in order of increasing carrier frequency		Maximum aggregated bandwidth [MHz]	Bandwidth combination set
		Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
CA_41C	CA_41C	10	20	40	0
		15	15, 20		
		20	10, 15, 20		
NOTE 1: The CA configuration refers to an operating band and a CA bandwidth class specified in Table 5.6A-1 (the indexing letter). Absence of a CA bandwidth class for an operating band implies support of all classes.					
NOTE 2: For the supported CC bandwidth combinations, the CC downlink and uplink bandwidths are equal.					
NOTE 3: Uplink CA configurations are the configurations supported by the present release of specifications.					

Table 5.6A.1-2: E-UTRA CA configurations and bandwidth combination sets defined for inter-band CA (two bands)

E-UTRA CA configuration / Bandwidth combination set										
E-UTRA CA Configuration	Uplink CA configurations (NOTE 4)	E-UTRA Bands	1.4 MHz	3 MHz	5 MHz	10 MHz	15 MHz	20 MHz	Maximum aggregated bandwidth [MHz]	Bandwidth combination set
CA_39A-41A	CA_39A-41A	39				Yes	Yes	Yes	40	0
		41						Yes		

10.5. Power Drift

To control the output power stability during the SAR test, DASY5 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in Table 13.1 to Table 13.26 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

11. Conducted Output Power

11.1. Manufacturing tolerance

Table 11.1-1: GSM Speech

GSM 835			
Channel	Channel 251	Channel 190	Channel 128
Maximum Target Value (dBm)	32.0±1	32.0±1	32.0±1
PCS 1900			
Channel	Channel 810	Channel 661	Channel 512
Maximum Target Value (dBm)	27.5±1	27.5±1	27.5±1

Table 11.1-2: GPRS/EGPRS(GMSK)

GSM 850 GPRS				
Channel		251	190	128
1 Tx slots	Maximum Target Value (dBm)	32.0±1	32.0±1	32.0±1
2 Tx slots	Maximum Target Value (dBm)	31.0±1	31.0±1	31.0±1
3 Tx slots	Maximum Target Value (dBm)	30.0±1	30.0±1	30.0±1
4 Tx slots	Maximum Target Value (dBm)	29.0±1	29.0±1	29.0±1
GSM 1900 GPRS				
Channel		810	661	512
1 Tx slots	Maximum Target Value (dBm)	27.5±1	27.5±1	27.5±1
2 Tx slots	Maximum Target Value (dBm)	25.0±1	25.0±1	25.0±1
3 Tx slots	Maximum Target Value (dBm)	24.0±1	24.0±1	24.0±1
4 Tx slots	Maximum Target Value (dBm)	22.5±1	22.5±1	22.5±1

Table 11.1-3: EGPRS(8KSK)

GSM 850 EGPRS				
Channel		251	190	128
1 Tx slots	Maximum Target Value (dBm)	26.0±1	26.0±1	26.0±1
2 Tx slots	Maximum Target Value (dBm)	25.0±1	25.0±1	25.0±1
3 Tx slots	Maximum Target Value (dBm)	24.0±1	24.0±1	24.0±1
4 Tx slots	Maximum Target Value (dBm)	22.0±1	22.0±1	22.0±1
GSM 1900 GPRS				
Channel		810	661	512
1 Tx slots	Maximum Target Value (dBm)	25.0±1	25.0±1	25.0±1
2 Tx slots	Maximum Target Value (dBm)	24.5±1	24.5±1	24.5±1
3 Tx slots	Maximum Target Value (dBm)	23.0±1	23.0±1	23.0±1
4 Tx slots	Maximum Target Value (dBm)	22.5±1	22.5±1	22.5±1

Table 11.1-4:WCDMA

WCDMA Band V			
Channel	Channel 4132	Channel 4182	Channel 4233
Maximum Target Value (dBm)	23.5±1	23.5±1	23.5±1
WCDMA Band II			
Channel	Channel 9262	Channel 9400	Channel 9538
Maximum Target Value (dBm)	22.7±1	22.7±1	22.7±1

Table 11.1-5 HSDPA(QPSK)

WCDMA Band V				
Channel		4132	4182	4233
1	Maximum Target Value (dBm)	22.5±1	22.5±1	22.5±1
2	Maximum Target Value (dBm)	22.5±1	22.5±1	22.5±1
3	Maximum Target Value (dBm)	21.0±1	21.0±1	21.0±1
4	Maximum Target Value (dBm)	21.0±1	21.0±1	21.0±1
WCDMA Band II				
Channel		9262	9400	9538
1	Maximum Target Value (dBm)	21.7±1	21.7±1	21.7±1
2	Maximum Target Value (dBm)	22.0±1	22.0±1	22.0±1
3	Maximum Target Value (dBm)	21.2±1	21.2±1	21.2±1
4	Maximum Target Value (dBm)	21.0±1	21.0±1	21.0±1

Table 11.1-6: HSUPA（QPSK）

WCDMA Band V				
Channel		4132	4182	4233
1	Maximum Target Value (dBm)	21.5±1	21.5±1	21.5±1
2	Maximum Target Value (dBm)	21.5±1	21.5±1	21.5±1
3	Maximum Target Value (dBm)	21.5±1	21.5±1	21.5±1
4	Maximum Target Value (dBm)	21.5±1	21.5±1	21.5±1
5	Maximum Target Value (dBm)	21.5±1	21.5±1	21.5±1
WCDMA Band II				
Channel		9262	9400	9538
1	Maximum Target Value (dBm)	21.5±1	21.5±1	21.5±1
2	Maximum Target Value (dBm)	21.5±1	21.5±1	21.5±1
3	Maximum Target Value (dBm)	21.5±1	21.5±1	21.5±1
4	Maximum Target Value (dBm)	21.5±1	21.5±1	21.5±1
5	Maximum Target Value (dBm)	21.5±1	21.5±1	21.5±1

Table 11.1-7: CDMA 2000

BC0			
Channel	1013	384	777
Maximum Target Value (dBm)	23.1±1	23.1±1	23.1±1
BC1			
Channel	25	600	1175
Maximum Target Value (dBm)	23.1±1	23.1±1	23.1±1

Table 11.1-8: LTE

Band7					
Bandwidth	Mode	RB Size	Channel 20775 2502.5MHz	Channel 21100 2535MHz	Channel 21425 2567.5MHz
5MHz	QPSK	1	21.0±1	21.0±1	21.0±1
		12	20.5±1	20.5±1	20.5±1
		25	20.5±1	20.5±1	20.5±1
	16QAM	1	20.5±1	20.5±1	20.5±1
		12	19.5±1	19.5±1	19.5±1
		25	19.5±1	19.5±1	19.5±1
Bandwidth	Mode	RB Size	Channel 20800 2505MHz	Channel 21100 2535MHz	Channel 21400 2565MHz
10MHz	QPSK	1	21.0±1	21.0±1	21.0±1
		25	20.5±1	20.5±1	20.5±1
		50	20.5±1	20.5±1	20.5±1
	16QAM	1	20.5±1	20.5±1	20.5±1
		25	20.0±1	20.0±1	20.0±1
		50	20.0±1	20.0±1	20.0±1
Bandwidth	Mode	RB Size	Channel 20825 2507.5MHz	Channel 21100 2535MHz	Channel 21375 2562.5MHz
15MHz	QPSK	1	21.5±1	21.5±1	21.5±1
		36	20.5±1	20.5±1	20.5±1
		75	20.5±1	20.5±1	20.5±1
	16QAM	1	21.0±1	21.0±1	21.0±1
		36	19.0±1	19.0±1	19.0±1
		75	19.0±1	19.0±1	19.0±1
Bandwidth	Mode	RB Size	Channel 20850 2510MHz	Channel 21100 2535MHz	Channel 21350 2560MHz
20MHz	QPSK	1	21.5±1	21.5±1	21.5±1
		50	20.5±1	20.5±1	20.5±1
		100	20.5±1	20.5±1	20.5±1
	16QAM	1	20.5±1	20.5±1	20.5±1
		50	19.5±1	19.5±1	19.5±1
		100	19.5±1	19.5±1	19.5±1

Band41							
Bandwidth	Mode	RB Size	Channel 39675 2498.5MHz	Channel 40148 2545.8MHz	Channel 40620 2593MHz	Channel 41093 2640.3MHz	Channel 41565 2687.5MHz
5MHz	QPSK	1	22.0±1	22.0±1	22.0±1	22.0±1	22.0±1
		12	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
		25	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
	16QAM	1	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
		12	20.0±1	20.0±1	20.0±1	20.0±1	20.0±1
		25	20.0±1	20.0±1	20.0±1	20.0±1	20.0±1
Bandwidth	Mode	RB Size	Channel 39700 2501MHz	Channel 40160 2547MHz	Channel 40620 2593MHz	Channel 41080 2639MHz	Channel 41540 2685MHz
10MHz	QPSK	1	22.0±1	22.0±1	22.0±1	22.0±1	22.0±1
		25	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
		50	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
	16QAM	1	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
		25	20.0±1	20.0±1	20.0±1	20.0±1	20.0±1
		50	20.0±1	20.0±1	20.0±1	20.0±1	20.0±1
Bandwidth	Mode	RB Size	Channel 39725 2503.5MHz	Channel 40173 2548.3MHz	Channel 40620 2593MHz	Channel 41068 2637.8MHz	Channel 41515 2682.5MHz
15MHz	QPSK	1	22.0±1	22.0±1	22.0±1	22.0±1	22.0±1
		36	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
		75	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
	16QAM	1	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
		36	20.0±1	20.0±1	20.0±1	20.0±1	20.0±1
		75	20.0±1	20.0±1	20.0±1	20.0±1	20.0±1
Bandwidth	Mode	RB Size	Channel 39750 2506MHz	Channel 40185 2549.5Hz	Channel 40620 2593MHz	Channel 44055 2636.5MHz	Channel 41490 2680MHz
20MHz	QPSK	1	22.0±1	22.0±1	22.0±1	22.0±1	22.0±1
		50	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
		100	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
	16QAM	1	21.0±1	21.0±1	21.0±1	21.0±1	21.0±1
		50	20.0±1	20.0±1	20.0±1	20.0±1	20.0±1
		100	20.0±1	20.0±1	20.0±1	20.0±1	20.0±1

Table 11.1-9: BT

Mode	Conducted Power(dBm)		
	Channel 0(2402MHz)	Channel 39(2441MHz)	Channel 78(2480MHz)
GFSK	8.1±1	8.1±1	8.1±1
EDR2M-4_DQPSK	7.1±1	7.1±1	7.1±1
EDR3M-8DPSK	7.5±1	7.5±1	7.5±1
BLE	0.0±1	0.0±1	0.0±1

Table 11.1-10: WiFi 2.4GHz

Mode	Conducted Power(dBm)		
	Antenna Config.1	Antenna Config.2	Total
802.11b	15.0±1	12.0±1	/
802.11g	18.0±1	15.0±1	/
802.11g(20MHz)	17.5±1	15.0±1	19.5±1
802.11g(40MHz)	18.0±1	15.5±1	20.0±1

Table 11.1-11: WiFi 5GHz

Mode	Conducted Power(dBm)		
	Antenna Config.1	Antenna Config.2	Total
5.2GHz WiFi	17.0±1	8.5±1	17.5/±1
5.3GHz WiFi	17.0±1	8.5±1	17.5/±1/
5.6GHz WiFi	17.0±1	9.0±1	17.5/±1/
5.8GHz WiFi	16.5±1	8.0±1	17.0±1/

11.2. power measurement results

11.2.1 GSM Measurement result

During the process of testing, the EUT was controlled via R&S Digital Radio Communication tester (CMU200) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured peak output power should be greater and within 5% than EMI measurement.

Table 11.2-1: The conducted power measurement results for GSM850//1900

GSM 850MHZ	Tune-up (dBm)	Conducted Power (dBm)		
		Channel 128(824.2MHz)	**Channel 190(826.6MHz)**	**Channel 251(848.8MHz)**
	33.0	**32.6**	32.4	32.4
GSM 1900MHZ	**Tune-up (dBm)**	**Conducted Power(dBm)**		
		Channel 512(1850.2MHz)	**Channel 661(1880 MHz)**	**Channel 810(1909.8MHz)**
	28.5	**28.4**	28.1	28.3

Table 11.2-2: The conducted power measurement results for GPRS(GMSK)

GSM 850 GPRS	Tune-up (dBm)	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		128	**190**	**251**		**128**	**190**	**251**
1 Txslot	33.0	32.9	32.6	32.9	-9.03dB	23.87	23.57	23.87
2 Txslots	32.0	31.7	31.9	31.6	-6.02dB	25.68	25.88	25.58
3 Txslots	31.0	30.5	30.5	30.6	-4.26dB	26.24	26.24	26.34
4 Txslots	30.0	**29.5**	29.3	29.4	-3.01dB	26.49	26.29	26.39
GSM1900 GPRS	Tune-up (dBm)	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		512	**661**	**810**		**512**	**661**	**810**
1 Txslot	28.5	28.3	28.0	28.1	-9.03dB	19.27	18.97	19.07
2 Txslots	26.0	25.9	25.8	26.0	-6.02dB	19.88	19.78	19.98
3 Txslots	25.0	24.6	24.2	24.5	-4.26dB	20.34	19.94	20.24
4 Txslots	23.5	**23.5**	23.4	23.4	-3.01dB	20.49	20.39	20.39

Table 11.2-3: The conducted power measurement results for EGPRS(GMSK)

GSM 850 GPRS	Tune-up (dBm)	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		128	**190**	**251**		**128**	**190**	**251**
1 Txslot	33.0	32.8	32.5	32.7	-9.03dB	23.77	23.47	23.67
2 Txslots	32.0	31.6	21.8	31.5	-6.02dB	25.58	15.78	25.48
3 Txslots	31.0	30.6	30.6	30.6	-4.26dB	26.34	26.34	26.34
4 Txslots	30.0	**29.5**	29.4	29.4	-3.01dB	26.49	26.39	26.39
GSM1900 GPRS	Tune-up (dBm)	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		512	**661**	**810**		**512**	**661**	**810**
1 Txslot	28.5	28.3	28.0	28.1	-9.03dB	19.27	18.97	19.07
2 Txslots	26.0	25.9	25.8	26.0	-6.02dB	19.88	19.78	19.98

3 Txslots	25.0	24.6	24.1	24.6	-4.26dB	20.34	19.84	20.34
4 Txslots	23.5	23.5	23.4	23.4	-3.01dB	20.49	20.39	20.39

Table 11.2-4: The conducted power measurement results for EGPRS(8PSK)

GSM 850 GPRS	Tune-up (dBm)	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		128	**190**	**251**		**128**	**190**	**251**
1 Txslot	27.0	26.2	26.1	26.3	-9.03dB	17.17	17.07	17.27
2 Txslots	26.0	25.1	25.0	25.2	-6.02dB	19.08	18.98	19.18
3 Txslots	25.0	24.1	24.0	24.1	-4.26dB	19.84	19.74	19.84
4 Txslots	23.0	22.9	22.8	22.9	-3.01dB	19.89	19.79	19.89
GSM1900 GPRS	Tune-up (dBm)	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		512	**661**	**810**		**512**	**661**	**810**
1 Txslot	26.0	25.8	25.6	25.7	-9.03dB	16.77	16.57	16.67
2 Txslots	25.5	25.1	24.9	25.0	-6.02dB	19.08	18.88	18.98
3 Txslots	24.0	24.0	23.9	24.0	-4.26dB	19.74	19.64	19.74
4 Txslots	23.5	23.1	22.9	23.0	-3.01dB	20.09	19.89	19.99

NOTES:

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

According to the conducted power as above, the body measurements are performed with 4Txslots for 850MHz and 1900MHz.

11.2.2 WCDMA Measurement result

Table 11.2-5: The conducted Power for WCDMA

WCDMA Band V Result (dBm)					
Mode	Tune-up	ARFCN	Channel 4132 (826.4MHz)	Channel 4182 (836.4MHz)	Channel 4233 (846.6MHz)
WCDMA	24.5	RMC	**24.42**	24.26	24.26
HSDPA (QPSK)	23.5	1	23.38	23.28	23.30
	23.5	2	23.21	23.22	23.16
	22.0	3	21.85	21.86	21.74
	22.0	4	21.64	21.58	21.50
HSUPA (QPSK)	22.5	1	22.24	21.90	21.95
	22.5	2	22.11	21.91	21.94
	22.5	3	22.14	21.98	21.97
	22.5	4	22.11	21.94	22.04
	22.5	5	22.12	22.00	21.97
WCDMA Band II Result (dBm)					
Mode	Tune-up	ARFCN	Channel 9262 (1852.4MHz)	Channel 9400 (1880MHz)	Channel 9538 (1907.6MHz)
WCDMA	23.7	RMC	**23.67**	22.13	21.72
HSDPA (QPSK)	22.7	1	22.67	21.21	20.83
	23.0	2	22.88	21.41	21.01
	22.2	3	22.11	20.65	20.39
	22.0	4	21.97	20.67	20.11
HSUPA (QPSK)	22.5	1	22.43	21.15	20.57
	22.5	2	22.37	21.11	20.66
	22.5	3	22.49	21.08	20.60
	22.5	4	22.39	21.10	20.74
	22.5	5	22.38	21.09	20.67

11.2.3 CDMA 2000 Measurement result

Table 11.2-6: The conducted Power for CDMA 2000

			CDMA Maximum output power [dBm]				1x EvDo	
Band	Channel	Tune-up (dBm)	SO55		SO32		Rel.0	Rel.A
			RC1	RC3	RC1	RC3	RTAP	RETAP
BC0	1013	24.1	23.89	**23.94**	23.92	23.90	23.93	24.01
	384	24.1	23.96	23.87	23.88	23.84	23.98	23.92
	777	24.1	23.94	23.81	23.97	**23.92**	24.05	24.07
BC1	25	24.1	23.95	**23.98**	23.93	**24.01**	24.08	24.06
	600	24.1	23.84	23.84	23.87	23.88	23.95	24.03
	1175	24.1	23.93	23.97	23.96	23.94	24.01	24.10

11.2.4 LTE Measurement result

Table 11.2-7: The conducted Power for LET BAND

Band7							
Bandwidth	Mode	Tune-up (dBm)	RB Size	RB Offset	Actual output power(dBm)		
					Channel 20775 2502.5MHz	Channel 21100 2535MHz	Channel 21425 2567.5MHz
5MHz	QPSK	22.0	1	0	21.81	21.99	21.81
		22.0	1	13	21.93	21.91	21.76
		22.0	1	24	21.43	21.80	21.80
		21.5	12	0	21.42	20.47	20.73
		21.5	12	6	21.50	20.53	20.75
		21.5	12	13	21.03	20.51	20.74
		21.5	25	0	20.96	20.52	20.73
	16QAM	21.5	1	0	20.89	20.81	21.08
		21.5	1	13	20.78	20.95	21.10
		21.5	1	24	20.66	20.63	21.17
		20.5	12	0	20.02	19.67	19.78
		20.5	12	6	19.86	19.71	19.81
		20.5	12	13	19.87	19.68	19.80
		20.5	25	0	19.78	19.56	19.90
Bandwidth	Mode	Tune-up (dBm)	RB Size	RB Offset	Actual output power(dBm)		
					Channel 20800 2505MHz	Channel 21100 2535MHz	Channel 21400 2565MHz
10MHz	QPSK	22.0	1	0	21.92	21.80	21.95
		22.0	1	25	21.78	21.57	21.85
		22.0	1	49	21.34	21.64	21.71
		21.5	25	0	21.06	20.51	20.84
		21.5	25	13	20.93	20.59	20.65
		21.5	25	25	20.87	20.46	20.74
		21.5	50	0	20.92	20.56	20.76
	16QAM	21.5	1	0	21.34	20.87	21.11
		21.5	1	25	21.17	20.49	20.92
		21.5	1	49	20.88	20.63	21.09
		21.0	25	0	20.67	19.52	19.80
		21.0	25	13	20.49	19.55	19.74
		21.0	25	25	19.76	19.51	19.70
		21.0	50	0	20.57	19.54	19.80

Bandwidth	Mode	Tune-up (dBm)	RB Size	RB Offset	Actual output power(dBm)		
					Channel 20825 2507.5MHz	Channel 21100 2535MHz	Channel 21375 2562.5MHz
15MHz	QPSK	22.5	1	0	22.33	22.41	22.32
		22.5	1	38	22.13	21.89	22.01
		22.5	1	74	22.04	21.70	22.07
		21.5	36	0	20.92	20.63	21.13
		21.5	36	18	20.75	20.60	20.98
		21.5	36	39	20.72	20.56	20.79
		21.5	75	0	20.82	20.60	20.84
	16QAM	22.0	1	0	21.71	21.02	21.17
		22.0	1	38	21.59	20.79	21.00
		22.0	1	74	21.20	20.70	20.96
		20.0	36	0	19.76	19.71	19.89
		20.0	36	18	19.83	19.64	19.77
		20.0	36	39	19.69	19.60	19.72
		20.0	75	0	19.72	19.61	19.86
Bandwidth	Mode	Tune-up (dBm)	RB Size	RB Offset	Actual output power(dBm)		
					Channel 20850 2510MHz	Channel 21100 2535MHz	Channel 21350 2560MHz
20MHz	QPSK	22.5	1	0	22.22	21.92	**22.42**
		22.5	1	50	22.04	21.56	21.77
		22.5	1	99	21.71	21.61	21.73
		21.5	50	0	20.82	20.82	**21.34**
		21.5	50	25	20.66	20.68	20..93
		21.5	50	50	20.73	20.76	20.76
		21.5	100	0	21.01	20.72	20.78
	16QAM	21.5	1	0	21.39	21.21	21.36
		21.5	1	50	20.86	20.81	21.02
		21.5	1	99	20.99	20.76	21.22
		20.5	50	0	19.96	19.81	20.00
		20.5	50	25	19.77	19.68	19.86
		20.5	50	50	19.79	19.70	19.83
		20.5	100	0	19.94	19.83	19.91

Band41									
Bandwidth	Mode	Tune-up (dBm)	RB Size	RB Offset	Actual output power(dBm)				
					Channel 39675 2498.5MHz	Channel 40148 2545.8MHz	Channel 40620 2593MHz	Channel 41093 2640.3MHz	Channel 41565 2687.5MHz
5MHz	QPSK	23.0	1	0	21.08	21.34	21.78	22.16	22.53
		23.0	1	13	21.12	21.30	21.90	22.14	22.50
		23.0	1	24	21.10	21.29	21.87	22.13	22.43
		22.0	12	0	20.16	20.55	21.01	21.21	21.72
		22.0	12	6	20.17	20.51	21.02	21.14	21.71
		22.0	12	13	20.21	20.54	20.95	21.13	21.65
		22.0	25	0	20.14	20.49	21.01	21.15	21.64
	16QAM	22.0	1	0	21.10	20.58	21.08	21.39	21.79
		22.0	1	13	21.18	20.64	21.11	21.45	21.87
		22.0	1	24	21.12	20.49	21.05	21.36	21.75
		21.0	12	0	20.16	19.64	20.05	20.41	20.72
		21.0	12	6	20.19	19.61	20.05	20.31	20.71
		21.0	12	13	20.17	19.62	20.02	20.32	20.70
		21.0	25	0	20.18	19.54	20.00	20.19	20.69
Bandwidth	Mode	Tune-up (dBm)	RB Size	RB Offset	Actual output power(dBm)				
					Channel 39700 2501MHz	Channel 40160 2547MHz	Channel 40620 2593MHz	Channel 41080 2639MHz	Channel 41540 2685MHz
10MHz	QPSK	23.0	1	0	21.10	21.45	21.83	22.12	22.59
		23.0	1	25	21.08	21.32	21.84	22.01	22.43
		23.0	1	49	21.00	21.28	21.78	21.89	22.41
		22.0	25	0	20.28	20.55	20.92	21.25	21.67
		22.0	25	13	20.30	20.52	21.00	21.22	21.62
		22.0	25	25	20.32	20.51	21.10	21.23	21.72
		22.0	50	0	20.20	20.48	21.01	21.31	21.69
	16QAM	22.0	1	0	20.47	20.70	21.09	21.50	21.92
		22.0	1	25	20.46	20.60	21.04	21.31	21.86
		22.0	1	49	20.57	20.54	21.10	21.30	21.78
		21.0	25	0	19.36	19.64	19.94	20.32	20.77
		21.0	25	13	19.39	19.58	20.01	20.26	20.66
		21.0	25	25	19.40	19.48	20.02	20.28	20.62
		21.0	50	0	19.42	19.60	20.02	20.35	20.72

Bandwidth	Mode	Tune-up (dBm)	RB Size	RB Offset	Actual output power(dBm)				
					Channel 39725 2503.5MHz	Channel 40173 2548.3MHz	Channel 40620 2593MHz	Channel 41068 2637.8MHz	Channel 41515 2682.5MHz
15MHz	QPSK	23.0	1	0	21.14	21.64	21.89	22.24	22.68
		23.0	1	38	21.09	21.24	21.76	22.03	22.42
		23.0	1	74	21.22	21.18	21.72	21.91	22.43
		22.0	36	0	20.36	20.62	20.89	21.23	21.63
		22.0	36	18	20.24	20.36	20.95	21.08	21.54
		22.0	36	39	20.23	20.41	21.00	21.01	21.53
		22.0	75	0	20.42	20.46	20.88	21.06	21.52
	16QAM	22.0	1	0	20.37	21.04	21.20	21.46	21.99
		22.0	1	38	20.30	20.80	21.06	21.19	21.74
		22.0	1	74	20.41	20.74	21.07	21.06	21.78
		21.0	36	0	19.38	19.57	19.88	20.25	20.71
		21.0	36	18	19.30	19.53	19.94	20.17	20.57
		21.0	36	39	19.33	19.47	19.95	20.06	20.54
		21.0	75	0	19.31	19.49	19.93	20.14	20.58
Bandwidth	Mode	Tune-up (dBm)	RB Size	RB Offset	Actual output power(dBm)				
					Channel 39750 2506MHz	Channel 40185 2549.5Hz	Channel 40620 2593MHz	Channel 44055 2636.5MHz	Channel 41490 2680MHz
20MHz	QPSK	23.0	1	0	21.59	21.76	22.03	22.31	**22.79**
		23.0	1	50	21.15	21.29	21.74	21.91	22.33
		23.0	1	99	21.29	21.49	21.89	21.95	22.44
		22.0	50	0	20.38	20.75	20.92	21.16	**21.76**
		22.0	50	25	20.49	20.56	20.92	21.08	21.60
		22.0	50	50	20.34	20.49	20.97	21.06	21.59
		22.0	100	0	20.40	20.47	20.89	21.15	21.64
	16QAM	22.0	1	0	20.62	21.13	21.39	21.47	21.98
		22.0	1	50	20.38	20.76	21.23	20.97	21.61
		22.0	1	99	20.52	20.79	21.28	21.06	21.69
		21.0	50	0	19.42	19.78	20.00	20.34	20.82
		21.0	50	25	19.39	19.59	20.05	20.18	20.70
		21.0	50	50	19.50	19.56	20.17	20.14	20.64
		21.0	100	0	19.44	19.57	19.98	20.14	20.70

The conducted power measurement results of downlink LTE CA Conducted power are as below:

	PCC								SCC	Power	
DL LTE CA Class	PCC Band	PCC Bandwidth(MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UP Channel	PCC DL Channel	SCC Band	R8 LTE Tx Power(dBm)	R10 LTE DL LTE CA Tx Power(dBm)
CA_39A-41A	LTE Band 41	20	1	0	100	0	41490	41490	LTE Band 39	22.79	22.83

	PCC							SCC1	SCC2	Power	
DL LTE CA Class	PCC Band	PCC Bandwidth(MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UP Channel	SCC Band	SCC Band	R8 LTE Tx Power(dBm)	R10 LTE DL LTE CA Tx Power(dBm)
CA_41A+41A/41A	LTE Band 41	20	1	0	100	0	41490	LTE Band 41	LTE Band 41	22.79	22.81

11.2.5 Wi-Fi/BT Measurement result

Table11.2-8: The output power of BT antenna

Mode	Tune-up (dBm)	Conducted Power(dBm)		
		Channel 0(2402MHz)	Channel 39(2441MHz)	Channel 78(2480MHz)
GFSK	9.1	7.84	**9.09**	7.40
EDR2M-4_DQPSK	8.1	6.74	8.01	6.27
EDR3M-8DPSK	8.5	7.14	8.40	6.71

BLE

Mode	Tune-up (dBm)	Conducted Power(dBm)		
		Channel 0(2402MHz)	Channel 19(2440MHz)	Channel 39(2480MHz)
BLE	1.0	-0.48	0.99	0.11

Wifi 2.4GHz

wifi 2450MHz	Channel	Average Power (dBm)					
		Antenna Config.1(dBm)		Antenna Config.2(dBm)		Total(dBm)	
		Measure	Tune-up	Measure	Tune-up	Salde	Tune-up
802.11b	1	15.77	16.0	12.38	13.0	/	/
	6	**15.82**	16.0	12.36	13.0	/	/
	11	15.28	16.0	**12.41**	13.0	/	/
wifi 2450MHz	Channel	Measure	Tune-up	Measure	Tune-up	Measure	Tune-up
802.11g	1	18.18	19.0	15.83	16.0	/	/
	6	18.30	19.0	15.58	16.0	/	/
	11	17.46	19.0	15.28	16.0	/	/
wifi 2450MHz	Channel	Measure	Tune-up	Measure	Tune-up	Measure	Tune-up
802.11n 20M	1	18.34	18.5	15.28	16.0	20.08441	20.5
	6	17.92	18.5	15.63	16.0	19.93452	20.5
	11	17.34	18.5	15.44	16.0	19.50339	20.5
wifi 2450MHz	Channel	Measure	Tune-up	Measure	Tune-up	Measure	Tune-up
802.11n 40M	3	18.67	19.0	16.10	16.5	20.58269	21.0
	6	18.09	19.0	**16.25**	16.5	20.27703	21.0
	9	**18.68**	19.0	15.94	16.5	20.53289	21.0

Wifi 5GHz

wifi 5G	Channel	Average Power (dBm)					
		Antenna Config.1(dBm)		Antenna Config.2(dBm)		Total(dBm)	
		Measure	Tune-up	Measure	Tune-up	Salde	Tune-up
802.11a	**36**	16.99	18.0	8.11	9.5	/	/
	40	16.99	18.0	7.72	9.5	/	/
	44	17.10	18.0	7.72	9.5	/	/
	48	17.63	18.0	7.73	9.5	/	/
	52	**17.60**	18.0	8.09	9.5	/	/
	56	17.51	18.0	8.20	9.5	/	/
	60	17.53	18.0	8.87	9.5	/	/
	64	17.49	18.0	**8.98**	9.5	/	/
	100	**17.41**	18.0	8.01	10.0	/	/
	104	17.33	18.0	8.33	10.0	/	/
	108	17.14	18.0	8.27	10.0	/	/
	112	17.28	18.0	8.75	10.0	/	/
	116	17.00	18.0	**9.09**	10.0	/	/
	132	17.02	18.0	8.94	10.0	/	/
	136	16.88	18.0	8.77	10.0	/	/
	140	16.74	18.0	8.75	10.0	/	/
	149	**16.95**	17.5	7.43	9.0	/	/
	153	16.78	17.5	7.49	9.0	/	/
	157	16.87	17.5	7.06	9.0	/	/
	161	16.90	17.5	7.33	9.0	/	/
	165	16.88	17.5	**7.64**	9.0	/	/

wifi 5G	Channel	Average Power (dBm)					
		Antenna Config.1(dBm)		Antenna Config.2(dBm)		Total(dBm)	
		Measure	Tune-up	Measure	Tune-up	Salde	Tune-up
802.11ac 20M	36	16.80	18.0	8.04	9.5	17.34247	18.5
	40	16.91	18.0	7.65	9.5	17.39666	18.5
	44	17.00	18.0	7.63	9.5	17.47513	18.5
	48	17.52	18.0	7.64	9.5	17.94497	18.5
	52	17.50	18.0	7.96	9.5	17.95782	18.5
	56	17.45	18.0	8.05	9.5	17.92203	18.5
	60	17.44	18.0	8.83	9.5	18.00036	18.5
	64	17.39	18.0	8.86	9.5	17.96012	18.5
	100	17.23	18.0	7.89	10.0	17.70825	18.5
	104	16.99	18.0	7.66	10.0	17.46929	18.5
	108	17.12	18.0	8.34	10.0	17.66013	18.5
	112	16.84	18.0	8.75	10.0	17.46672	18.5
	116	16.93	18.0	8.96	10.0	17.57304	18.5
	132	16.88	18.0	8.92	10.0	17.52441	18.5
	136	16.76	18.0	8.87	10.0	17.41413	18.5
	140	16.67	18.0	8.73	10.0	17.31718	18.5
	149	16.84	17.5	7.31	9.0	17.29882	18.0
	153	16.76	17.5	7.23	9.0	17.21882	18.0
	157	16.86	17.5	7.94	9.0	17.38399	18.0
	161	16.83	17.5	7.64	9.0	17.32413	18.0
	165	16.80	17.5	7.55	9.0	17.28772	18.0

wifi 5G	Channel	Average Power (dBm)					
		Antenna Config.1(dBm)		Antenna Config.2(dBm)		Total(dBm)	
		Measure	Tune-up	Measure	Tune-up	Salde	Tune-up
802.11ac 40M	38	17.47	18.0	8.53	9.5	17.99172	18.5
	46	17.89	18.0	8.25	9.5	18.33792	18.5
	54	**17.92**	18.0	8.58	9.5	18.39825	18.5
	62	17.89	18.0	**9.34**	9.5	18.45766	18.5
	102	**17.76**	18.0	8.40	10.0	18.23617	18.5
	110	17.61	18.0	8.84	10.0	18.1513	18.5
	134	17.36	18.0	**9.79**	10.0	18.06032	18.5
	151	**17.36**	17.5	7.95	9.0	17.831	18.0
	159	17.25	17.5	**8.82**	9.0	17.83255	18.0

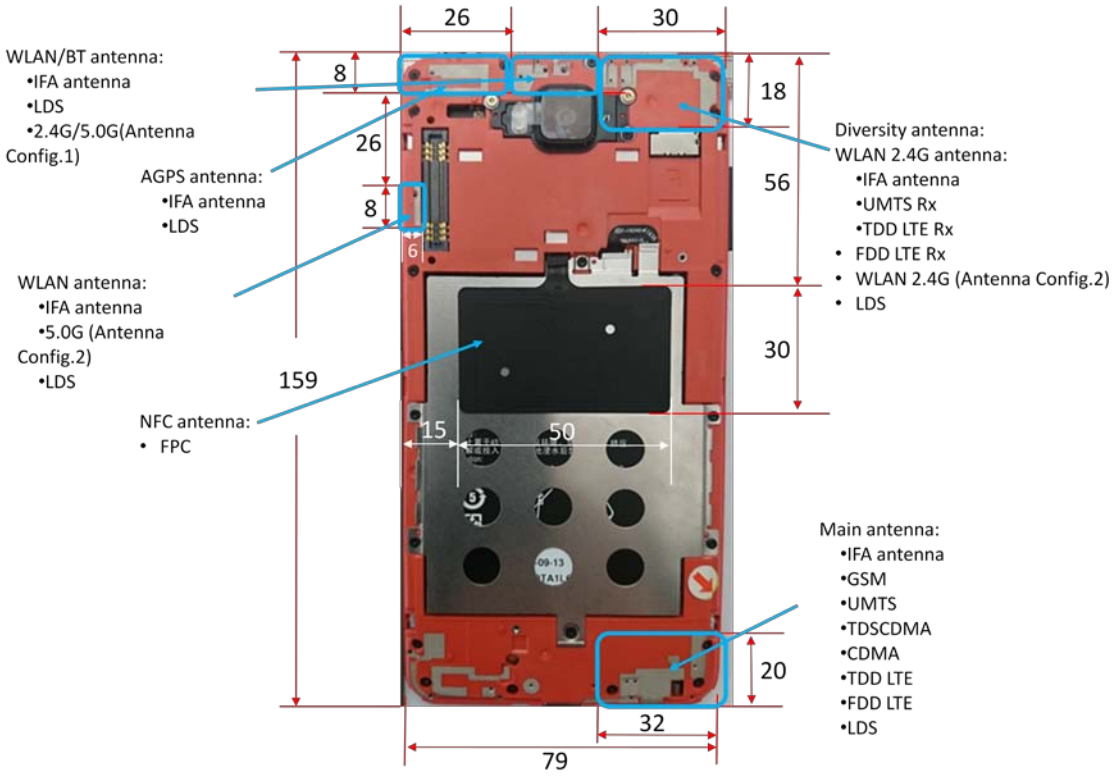
wifi 5G	Channel	Average Power (dBm)					
		Antenna Config.1(dBm)		Antenna Config.2(dBm)		Total(dBm)	
		Measure	Tune-up	Measure	Tune-up	Salde	Tune-up
802.11ac 80M	42	17.68	18.0	8.37	9.5	18.16139	18.5
	58	17.76	18.0	8.64	9.5	18.26172	18.5
	106	17.46	18.0	8.37	10.0	17.965	18.5
	138	17.24	18.0	9.42	10.0	17.90399	18.5
	155	17.27	17.5	8.08	9.0	17.76413	18.0

12. Simultaneous TX SAR Considerations

12.1. Introduction

The following procedures adopted from "FCC SAR Considerations for Cell Phones with Multiple Transmitters" are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter. For this device, the BT and Wi-Fi can transmit simultaneous with other transmitters.

12.2. Transmit Antenna Separation Distances



Picture 12.1 Antenna Locations

12.3. SAR Measurement Positions

According to the KDB941225 D06 Hotspot Mode SAR v02r01, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.

SAR measurement positions						
Mode	Back	Front	Left edge	Right edge	Top edge	Bottom edge
Main antenna	Yes	Yes	Yes	No	No	Yes
WLAN2.4G-Antenna1	Yes	Yes	Yes	No	Yes	No
WLAN2.4G-Antenna2	Yes	Yes	Yes	No	Yes	No
WLAN 5G-Antenna1	Yes	Yes	No	No	No	No
WLAN 5G-Antenna2	Yes	Yes	No	No	No	No
Note: The devices cannot operate in WLAN 5G “hotspot” modes.						

12.4. Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

The 1-g SAR test exclusion threshold 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, where

- 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

According to the KDB447498 appendix A, the SAR test exclusion threshold for 2450MHz at 5mm test separation distances is 10mW.

$$\text{Estimated SAR}=\frac{\sqrt{f(GHz)}}{7.5}\cdot\frac{(\text{Max Power of chananel ,mW})}{\text{Min .Separation Distance ,mm}}$$

Mode	Frequency(MHz)	Max.Tune-up Power (dBm)	Separation Distance(mm)	Estimated SAR 1g(W/kg)
Bluetooth-Head	2441	9.1	5	0.337
Bluetooth-Body	2441	9.1	10	0.169

12.5. Simultaneous multi-band transmission

Standalone Report SAR(1g) for 2/3/4G(W/Kg)											
Test Position			GSM 850	GSM 1900	WCDMA 1900	WCDMA 850	CDMA BC0	CDMA BC1	LTE Band7	LTE Band41	Highest SAR
Head	Left	Cheek	0.066	0.083	0.131	0.092	0.103	0.156	0.080	0.051	0.156
		Tilt 15°	0.025	0.044	0.076	0.042	0.040	0.092	0.038	0.022	0.092
	Right	Cheek	0.059	0.098	0.175	0.085	0.116	0.200	0.122	0.064	0.200
		Tilt 15°	0.027	0.036	0.072	0.044	0.052	0.075	0.026	0.025	0.075
Body 10mm	Ground Side		0.249	0.410	0.382	0.180	0.202	0.458	0.327	0.264	0.458
	Phantom Side		0.307	0.663	0.779	0.188	0.214	0.732	0.594	0.371	0.779
	Left Side		0.166	0.116	0.103	0.041	0.090	0.138	0.096	0.080	0.166
	Right Side		/	/	/	/	/	/	/	/	/
	Bottom Side		0.183	0.560	0.658	0.110	0.174	1.073	0.612	0.445	1.073
	Top Side		/	/	/		/	/	/	/	/

Standalone Report SAR(1g) for WiFi+BT(W/Kg)											
Test Position			2.4G Antenna1	2.4G Antenna2	5.3G Antenna1	5.3G Antenna2	5.6G Antenna1	5.6G Antenna2	5.8G Antenna1	5.8G Antenna2	Bluetooth
Head	Left	Cheek	0.309	0.106	0.412	0.152	0.291	0.175	0.108	0.101	0.337
		Tilt 15°	0.347	0.080	0.309	0.069	0.315	0.069	0.181	0.052	0.337
	Right	Cheek	0.235	0.263	0.469	0.109	0.162	0.047	0.133	0.003	0.337
		Tilt 15°	0.235	0.125	0.438	0.025	0.297	0.047	0.185	0.011	0.337
Body 10mm	Ground Side		0.045	0.014	0.345	0.274	0.304	0.440	0.150	0.318	0.169
	Phantom Side		0.070	0.068	0.117	0.017	0.042	0.022	0.006	0.002	0.169
	Left Side		/	0.024	/	/	/	/	/	/	0.169
	Right Side		/	/	/	/	/	/	/	/	0.169
	Bottom Side		/	/	/	/	/	/	/	/	0.169
	Top Side		0.085	0.013	/	/	/	/	/	/	0.169

Transmission SAR(W/Kg) 2/3/4G+WiFi(2.4G)						
Test Position			2/3/4G	WIFI 2.4G Antenna1	WIFI 2.4G Antenna2	SUM
Head	Left	Cheek	0.156	0.309	0.106	0.571
		Tilt 15°	0.092	0.347	0.080	0.519
	Right	Cheek	0.200	0.235	0.263	0.698
		Tilt 15°	0.075	0.235	0.125	0.435
Body 10mm	Ground Side		0.458	0.045	0.014	0.517
	Phantom Side		0.779	0.070	0.068	0.917
	Left Side		0.166	/	0.024	0.19
	Right Side		/	/	/	/
	Bottom Side		1.073	/	/	1.073
	Top Side		/	0.085	0.013	0.098

Transmission SAR(W/Kg) 2/3/4G+WiFi(5.3G)						
Test Position			2/3/4G	WIFI 5.3G Antenna1	WIFI 5.3G Antenna2	SUM
Head	Left	Cheek	0.156	0.412	0.152	0.720
		Tilt 15°	0.092	0.309	0.069	0.470
	Right	Cheek	0.200	0.469	0.109	0.778
		Tilt 15°	0.075	0.438	0.025	0.538
Body 10mm	Ground Side		0.458	0.345	0.274	1.077
	Phantom Side		0.779	0.117	0.017	0.913
	Left Side		0.166	/	/	0.166
	Right Side		/	/	/	/
	Bottom Side		1.073	/	/	1.073
	Top Side		/	/	/	/

Transmission SAR(W/Kg) 2/3/4G+WiFi(5.6G)						
Test Position			2/3/4G	WIFI 5.6G Antenna1	WIFI 5.6G Antenna2	SUM
Head	Left	Cheek	0.156	0.291	0.175	0.622
		Tilt 15°	0.092	0.315	0.069	0.476
	Right	Cheek	0.200	0.162	0.047	0.409
		Tilt 15°	0.075	0.297	0.047	0.419
Body 10mm	Ground Side		0.458	0.304	0.440	1.202
	Phantom Side		0.779	0.042	0.022	0.843
	Left Side		0.166	/	/	0.166
	Right Side		/	/	/	/
	Bottom Side		1.073	/	/	1.073
	Top Side		/	/	/	/

Transmission SAR(W/Kg) 2/3/4G+WiFi(5.8G)						
Test Position			2/3/4G	WIFI 5.8G Antenna1	WIFI 5.8G Antenna2	SUM
Head	Left	Cheek	0.156	0.108	0.101	0.365
		Tilt 15°	0.092	0.181	0.052	0.325
	Right	Cheek	0.200	0.133	0.003	0.336
		Tilt 15°	0.075	0.185	0.011	0.271
Body 10mm	Ground Side		0.458	0.150	0.318	0.926
	Phantom Side		0.779	0.006	0.002	0.787
	Left Side		0.166	/	/	0.166
	Right Side		/	/	/	/
	Bottom Side		1.073	/	/	1.073
	Top Side		/	/	/	/

Transmission SAR(W/Kg) 2/3/4G+BT					
Test Position			2/3/4G	BT	SUM
Head	Left	Cheek	0.156	0.337	0.493
		Tilt 15°	0.092	0.337	0.429
	Right	Cheek	0.200	0.337	0.537
		Tilt 15°	0.075	0.337	0.412
Body 10mm	Ground Side		0.458	0.169	0.627
	Phantom Side		0.779	0.169	0.948
	Left Side		0.166	0.169	0.335
	Right Side		/	0.169	0.169
	Bottom Side		1.073	0.169	1.242
	Top Side		/	0.169	0.169

So no simultaneous multi-band transmission test is required.

13. Measured and Reported (Scaled) SAR Results

SAR Test Reduction criteria are as follows:

KDB 447498 D01 General RF Exposure Guidance:

Testing of other required channels wi thin the operating mode of a frequency band i s not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
- ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

KDB 648474 D04 Handset SAR:

With headset attached, when the reported SAR for body-worn accessory, measured wi thout a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

KDB 648474 D04 Handset SAR (Phablet Only):

This device qualifies as a phablet (display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm as applicable), and phablet procedures have been applied. Extremity SAR (10g SAR) at 5mm for hot spot mode is not required as the 1g SAR values at 10mm are all less than 1.2W/Kg.

KDB 941225 D01 SAR test for 3G devices:

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

● Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% 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 for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.

● Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and Hi gh Channel when the highest reported SAR for 1 RB and 50% RB are > 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.

● Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and

its output power is not more than 0.5 dB higher than that of QPSK.

● Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

KDB 248227 D01 SAR meas for 802.11:

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions. An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements.

For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; these are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini -tablet configurations may be reduced according to the highest reported SAR determined using the initial test position(s) by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The initial test position(s) is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s). When the reported SAR for the initial test position is:

● ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.

● > 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions are tested.

○ For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.

○ When it is unclear, all equivalent conditions must be tested.

● For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required test channels are considered.

○ The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.

● When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.

● When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

13.1. SAR Test Results

Table 13.1: SAR Values (GSM 850 MHz Band-Head)

Frequency		Side	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.									
824.2	128	Left	Touch	32.6	33.0	1.10	0.0600	0.066	0.04	Fig.1
824.2	128	Left	Tilt	32.6	33.0	1.10	0.0231	0.02541	-0.13	/
824.2	128	Right	Touch	32.6	33.0	1.10	0.0539	0.05929	-0.11	/
824.2	128	Right	Tilt	32.6	33.0	1.10	0.0244	0.02684	-0.03	/

Table 13.2: SAR Values (GSM 850 MHz Band-Body)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
824.2	128	GPRS 4TS	Class12	Toward Ground	29.5	30.0	1.12	10	0.222	0.2486	0.07	/
824.2	128	GPRS 4TS	Class12	Toward Phantom	29.5	30.0	1.12	10	0.274	0.3069	0.08	Fig.2

Table 13.3: SAR Values (GSM 850 MHz Band-Hotspot)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
824.2	128	GPRS 4TS	Class12	Toward Ground	29.5	30.0	1.12	10	0.222	0.2486	0.07	/
824.2	128	GPRS 4TS	Class12	Toward Phantom	29.5	30.0	1.12	10	0.274	0.3069	0.08	Fig.2
824.2	128	GPRS 4TS	Class12	Toward Left	29.5	30.0	1.12	10	0.148	0.1658	-0.18	/
824.2	128	GPRS 4TS	Class12	Toward Bottom	29.5	30.0	1.12	10	0.163	0.1826	-0.09	/
824.2	128	EGPRS 4TS	Class12	Toward Phantom	29.5	30.0	1.12	10	0.181	0.2027	-0.07	/

Table 13.4: SAR Values (GSM 1900 MHz Band-Head)

Frequency		Side	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.									
1850.2	512	Left	Touch	28.4	28.5	1.02	0.081	0.0826	-0.07	/
1850.2	512	Left	Tilt	28.4	28.5	1.02	0.043	0.0439	0.06	/
1850.2	512	Right	Touch	28.4	28.5	1.02	0.0959	0.0978	0.13	Fig.3
1850.2	512	Right	Tilt	28.4	28.5	1.02	0.0351	0.0358	0.15	/

Table 13.5: SAR Values (GSM 1900 MHz Band-Body)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
1850.2	512	GPRS 4TS	Class12	Toward Ground	23.5	23.5	1.00	10	0.410	0.410	0.11	/
1850.2	512	GPRS 4TS	Class12	Toward Phantom	23.5	23.5	1.00	10	0.663	0.663	-0.08	Fig.4

Table 13.6: SAR Values (GSM 1900 MHz Band- Hotspot)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
1850.2	512	GPRS 4TS	Class12	Toward Ground	23.5	23.5	1.00	10	0.410	0.410	0.11	/
1850.2	512	GPRS 4TS	Class12	Toward Phantom	23.5	23.5	1.00	10	0.663	0.663	-0.08	Fig.4
1850.2	512	GPRS 4TS	Class12	Toward Left	23.5	23.5	1.00	10	0.116	0.116	-0.02	/
1850.2	512	GPRS 4TS	Class12	Toward Bottom	23.5	23.5	1.00	10	0.560	0.560	-0.06	/
1850.2	512	EGPRS 4TS	Class12	Toward Phantom	23.5	23.5	1.00	10	0.286	0.286	-0.04	/

Table 13.7: SAR Values (WCDMA 1900MHz Band-Head)

Frequency		Side	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.									
1852.4	9262	Left	Touch	23.67	23.7	1.01	0.130	0.1313	-0.08	/
1852.4	9262	Left	Tilt	23.67	23.7	1.01	0.075	0.0758	-0.05	/
1852.4	9262	Right	Touch	23.67	23.7	1.01	0.173	0.1747	-0.06	Fig.5
1852.4	9262	Right	Tilt	23.67	23.7	1.01	0.0713	0.072	0.18	/

Table 13.8: SAR Values (WCDMA 1900 MHz Band-Body)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
1852.4	9262	Band II	12.2kbps RMC	Toward Ground	23.67	23.7	1.01	10	0.378	0.3818	0.10	/
1852.4	9262	Band II	12.2kbps RMC	Toward Phantom	23.67	23.7	1.01	10	0.771	0.7787	0.07	Fig.6

Table 13.9: SAR Values (WCDMA 1900 MHz Band-Hotspot)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
1852.4	9262	Band II	12.2kbps RMC	Toward Ground	23.67	23.7	1.01	10	0.378	0.3818	0.10	/
1852.4	9262	Band II	12.2kbps RMC	Toward Phantom	23.67	23.7	1.01	10	0.771	0.7787	0.07	Fig.6
1852.4	9262	Band II	12.2kbps RMC	Toward Left	23.67	23.7	1.01	10	0.102	0.103	-0.04	/
1852.4	9262	Band II	12.2kbps RMC	Toward Bottom	23.67	23.7	1.01	10	0.651	0.6575	-0.07	/

Table 13.10: SAR Values (WCDMA 850MHz Band-Head)

Frequency		Side	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.									
826.4	4132	Left	Touch	24.42	24.5	1.02	0.0906	0.0924	-0.09	Fig.7
826.4	4132	Left	Tilt	24.42	24.5	1.02	0.0410	0.0418	-0.04	/
826.4	4132	Right	Touch	24.42	24.5	1.02	0.0835	0.0852	-0.14	/
826.4	4132	Right	Tilt	24.42	24.5	1.02	0.0435	0.0444	0.07	/

Table 13.11: SAR Values (WCDMA 850 MHz Band-Body)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
826.4	4132	Band V	12.2kbps RMC	Toward Ground	24.42	24.5	1.02	10	0.176	0.1795	0.08	/
826.4	4132	Band V	12.2kbps RMC	Toward Phantom	24.42	24.5	1.02	10	0.184	0.1877	-0.07	Fig.8

Table 13.12: SAR Values (WCDMA 850 MHz Band-Hotspot)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
826.4	4132	Band V	12.2kbps RMC	Toward Ground	24.42	24.5	1.02	10	0.176	0.1795	0.08	/
826.4	4132	Band V	12.2kbps RMC	Toward Phantom	24.42	24.5	1.02	10	0.184	0.1877	-0.07	Fig.8
826.4	4132	Band V	12.2kbps RMC	Toward Left	24.42	24.5	1.02	10	0.0406	0.0414	0.03	/
826.4	4132	Band V	12.2kbps RMC	Toward Bottom	24.42	24.5	1.02	10	0.108	0.1102	--0.14	/

Table 13.13: SAR Values (CDMA BC 0-Head)

Frequency		Side	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.									
824.7	1013	Left	Touch	23.94	24.1	1.04	0.0991	0.1028	0.06	/
824.7	1013	Left	Tilt	23.94	24.1	1.04	0.0387	0.0402	-0.09	/
824.7	1013	Right	Touch	23.94	24.1	1.04	0.112	0.1162	0.15	Fig.9
824.7	1013	Right	Tilt	23.94	24.1	1.04	0.0506	0.0525	0.12	/

Table 13.14: SAR Values (CDMA BC 0-Body)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
848.3	777	BC0	RC3 SO32	Toward Ground	23.92	24.1	1.04	10	0.194	0.2022	0.10	/
848.3	777	BC0	RC3 SO32	Toward Phantom	23.92	24.1	1.04	10	0.205	0.2137	0.09	Fig.10

Table 13.15: SAR Values (CDMA BC 0-Hotspot)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
848.3	777	BC0	RC3 SO32	Toward Ground	23.92	24.1	1.04	10	0.194	0.2022	0.10	/
848.3	777	BC0	RC3 SO32	Toward Phantom	23.92	24.1	1.04	10	0.205	0.2137	0.09	Fig.10
848.3	777	BC0	RC3 SO32	Toward Left	23.92	24.1	1.04	10	0.0865	0.0902	-0.12	/
848.3	777	BC0	RC3 SO32	Toward Bottom	23.92	24.1	1.04	10	0.167	0.1741	-0.04	/

Table 13.16: SAR Values (CDMA BC 1-Head)

Frequency		Side	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.									
1851.3	25	Left	Touch	23.98	24.1	1.03	0.151	0.1555	0.10	/
1851.3	25	Left	Tilt	23.98	24.1	1.03	0.0893	0.0920	0.17	/
1851.3	25	Right	Touch	23.98	24.1	1.03	0.194	0.1998	0.09	Fig.11
1851.3	25	Right	Tilt	23.98	24.1	1.03	0.0728	0.0750	-0.08	/

Table 12.17: SAR Values (CDMA BC 1-Body)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
1851.3	25	BC1	RC3 SO32	Toward Ground	24.01	24.1	1.02	10	0.449	0.4584	-0.08	/
1851.3	25	BC1	RC3 SO32	Toward Phantom	24.01	24.1	1.02	10	0.717	0.7320	0.06	Fig.12

Table 12.18: SAR Values (CDMA BC 1-Hotspot)

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
1851.3	25	BC1	RC3 SO32	Toward Ground	24.01	24.1	1.02	10	0.449	0.4584	-0.08	/
1851.3	25	BC1	RC3 SO32	Toward Phantom	24.01	24.1	1.02	10	0.717	0.7320	0.06	/
1851.3	25	BC1	RC3 SO32	Toward Left	24.01	24.1	1.02	10	0.135	0.1378	0.10	/
1851.3	25	BC1	RC3 SO32	Toward Bottom	24.01	24.1	1.02	10	0.890	0.9086	-0.13	/
1908.8	1175	BC1	RC3 SO32	Toward Bottom	23.94	24.1	1.04	10	1.020	1.0583	0.03	/
1880	600	BC1	RC3 SO32	Toward Bottom	23.88	24.1	1.05	10	1.020	1.0730	-0.02	Fig.13
First Retest												
1851.3	25	BC1	RC3 SO32	Toward Bottom	24.01	24.1	1.02	10	0.889	0.9076	-0.07	/
1908.8	1175	BC1	RC3 SO32	Toward Bottom	23.94	24.1	1.04	10	1.020	1.0583	0.03	/

1880	600	BC1	RC3 SO32	Toward Bottom	23.88	24.1	1.05	10	1.020	1.0730	0.00	/
Worse Case of SIM2												
1880	600	BC1	RC3 SO32	Toward Bottom	23.88	24.1	1.05	10	0.871	0.9352	0.04	/

Table 13.19: SAR Values (LTE Band 7（20MHz）-Head)

Frequency		RB Size	RB Offset	Side	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No
MHz	Ch.											
2560	21350	1	0	Left	Touch	22.42	22.5	1.02	0.0779	0.0795	0.16	/
2560	21350	1	0	Left	Tilt	22.42	22.5	1.02	0.0161	0.0164	0.00	/
2560	21350	1	0	Right	Touch	22.42	22.5	1.02	0.1200	0.1224	-0.10	Fig.14
2560	21350	1	0	Right	Tilt	22.42	22.5	1.02	0.0256	0.0261	0.08	/
2560	21350	50	0	Left	Touch	21.34	21.5	1.04	0.0563	0.0586	0.07	/
2560	21350	50	0	Left	Tilt	21.34	21.5	1.04	0.0369	0.0384	0.04	/
2560	21350	50	0	Right	Touch	21.34	21.5	1.04	0.0892	0.0928	0.09	/
2560	21350	50	0	Right	Tilt	21.34	21.5	1.04	0.0179	0.0186	0.09	/

Table 13.20: SAR Values (LTE Band 7（20MHz）-Body)

Frequency		RB Size	RB Offset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
2560	21350	1	0	Toward Ground	22.42	22.5	1.02	10	0.3210	0.3274	0.05	/
2560	21350	1	0	Toward Phantom	22.42	22.5	1.02	10	0.5820	0.5936	-0.14	Fig.15
2560	21350	50	0	Toward Ground	21.34	21.5	1.04	10	0.2500	0.26	-0.06	/
2560	21350	50	0	Toward Phantom	21.34	21.5	1.04	10	0.4370	0.4545	0.07	/

Table 13.21: SAR Values (LTE Band7（20MHz）-Hotspot)

Frequency		RB Size	RB Offset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
2560	21350	1	0	Toward Ground	22.42	22.5	1.02	10	0.3210	0.3274	0.05	/
2560	21350	1	0	Toward Phantom	22.42	22.5	1.02	10	0.5820	0.5936	-0.14	/
2560	21350	1	0	Toward Left	22.42	22.5	1.02	10	0.0939	0.0958	-0.12	/
2560	21350	1	0	Toward Bottom	22.42	22.5	1.02	10	0.6000	0.612	-0.07	Fig.16
2560	21350	50	0	Toward Ground	21.34	21.5	1.04	10	0.2500	0.26	-0.06	/
2560	21350	50	0	Toward Phantom	21.34	21.5	1.04	10	0.4370	0.4545	0.07	/
2560	21350	50	0	Toward Left	21.34	21.5	1.04	10	0.0718	0.0747	0.16	/
2560	21350	50	0	Toward Bottom	21.34	21.5	1.04	10	0.4510	0.469	-0.05	/

Table 13.22: SAR Values (LTE Band 41（20MHz）-Head)

Frequency		RB Size	RB Offset	Side	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No
MHz	Ch.											
2680	41490	1	0	Left	Touch	22.79	23.0	1.05	0.0489	0.0513	0.09	/
2680	41490	1	0	Left	Tilt	22.79	23.0	1.05	0.0207	0.0217	-0.04	/
2680	41490	1	0	Right	Touch	22.79	23.0	1.05	0.0609	0.0639	0.10	Fig.17
2680	41490	1	0	Right	Tilt	22.79	23.0	1.05	0.0238	0.0250	-0.14	/
2680	41490	50	0	Left	Touch	21.76	22.0	1.06	0.0368	0.0390	-0.04	/
2680	41490	50	0	Left	Tilt	21.76	22.0	1.06	0.0209	0.0222	0.00	/
2680	41490	50	0	Right	Touch	21.76	22.0	1.06	0.0409	0.0434	-0.05	/
2680	41490	50	0	Right	Tilt	21.76	22.0	1.06	0.0171	0.0181	0.07	/

Table 13.23: SAR Values (LTE Band 41（20MHz）-Body)

Frequency		RB Size	RB Offset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
2680	41490	1	0	Toward Ground	22.79	23.0	1.05	10	0.251	0.2636	0.13	/
2680	41490	1	0	Toward Phantom	22.79	23.0	1.05	10	0.353	0.3707	0.05	Fig.18
2680	41490	50	0	Toward Ground	21.76	22.0	1.06	10	0.193	0.2046	-0.12	/
2680	41490	50	0	Toward Phantom	21.76	22.0	1.06	10	0.265	0.2809	0.05	/

Table 13.24: SAR Values (LTE Band41（20MHz）-Hotspot)

Frequency		RB Size	RB Offset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
2680	41490	1	0	Toward Ground	22.79	23.0	1.05	10	0.251	0.2636	0.13	/
2680	41490	1	0	Toward Phantom	22.79	23.0	1.05	10	0.353	0.3707	0.05	/
2680	41490	1	0	Toward Left	22.79	23.0	1.05	10	0.0765	0.0803	0.15	/

2680	41490	1	0	Toward Bottom	22.79	23.0	1.05	10	0.424	0.4452	-0.06	Fig.19
2680	41490	50	0	Toward Ground	21.76	22.0	1.06	10	0.193	0.2046	-0.12	/
2680	41490	50	0	Toward Phantom	21.76	22.0	1.06	10	0.265	0.2809	0.05	/
2680	41490	50	0	Toward Left	21.76	22.0	1.06	10	0.0662	0.0702	0.06	/
2680	41490	50	0	Toward Bottom	21.76	22.0	1.06	10	0.370	0.3922	0.10	/

14.4 WLAN Evaluation

13.4.1 SAR measurement Result of WiFi 2.4G

Table 13.25: SAR Values (Antenna1-Head)

Frequency		Test Mode	Side	Test Position	Area Scan (W/kg)		Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No
MHz	Ch.				10g	1g							
2437	6	802.11b	Left	Touch	0.138	0.297	15.82	16.0	1.04	/	0.30888	0.11	/
2437	6	802.11b	Left	Tilt	0.146	0.313	15.82	16.0	1.04	0.334	0.3474	0.15	Fig.20
2437	6	802.11b	Right	Touch	0.106	0.226	15.82	16.0	1.04	/	0.23504	0.11	/
2437	6	802.11b	Right	Tilt	0.109	0.226	15.82	16.0	1.04	/	0.23504	-0.08	/
2452	9	802.11n 40M	Left	Tilt	0.132	0.247	18.68	19.0	1.08	/	0.26676	0.08	/

Table 13.26: SAR Values (Antenna1-Body)

Frequency		Test Mode	Test Position	Area Scan (W/kg)		Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.			10g	1g								
2437	6	802.11b	Toward Ground	0.0189	0.0433	15.82	16.0	1.04	10	/	0.045032	0.06	/
2437	6	802.11b	Toward Phantom	0.0325	0.0676	15.82	16.0	1.04	10	0.067	0.070304	0.09	Fig.21

Table 13.27: SAR Values (Antenna1-Hotspot)

Frequency		Test Mode	Test Position	Area Scan (W/kg)		Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.			10g	1g								
2437	6	802.11b	Toward Ground	0.0189	0.0433	15.82	16.0	1.04	10	/	0.045032	0.06	/
2437	6	802.11b	Toward Phantom	0.0325	0.0676	15.82	16.0	1.04	10	/	0.070304	0.09	/
2437	6	802.11b	Toward Top	0.0394	0.0818	15.82	16.0	1.04	10	0.0819	0.0852	-0.07	Fig.22
2452	9	802.11n 40M	Toward Top	0.0141	0.0272	18.68	19.0	1.08	10	/	0.028288	0.02	/

Table 13.28: SAR Values (Antenna2-Head)

Frequency		Test Mode	Side	Test Position	Area Scan (W/kg)		Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No
MHz	Ch.				10g	1g							
2462	11	802.11b	Left	Touch	0.0475	0.0922	12.41	13.0	1.15	/	0.10603	0.19	/
2462	11	802.11b	Left	Tilt	0.0365	0.0700	12.41	13.0	1.15	/	0.0805	-0.16	/
2462	11	802.11b	Right	Touch	0.113	0.206	12.41	13.0	1.15	0.196	0.2250	0.04	/
2462	11	802.11b	Right	Tilt	0.0556	0.109	12.41	13.0	1.15	/	0.12535	0.07	/
2437	6	802.11n 40M	Right	Touch	0.140	0.255	16.25	16.5	1.06	0.248	0.2630	0.14	Fig.23

Table 13.29: SAR Values (Antenna2-Body)

Frequency		Test Mode	Test Position	Area Scan (W/kg)		Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.			10g	1g								
2462	11	802.11b	Toward Ground	0.00663	0.0119	12.41	13.0	1.15	10	/	0.013685	0.05	/
2462	11	802.11b	Toward Phantom	0.014	0.0245	12.41	13.0	1.15	10	0.0242	0.0278	0.11	Fig.24

Table 13.30: SAR Values (Antenna2-Hotspot)

Frequency		Test Mode	Test Position	Area Scan (W/kg)		Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.			10g	1g								
2462	11	802.11b	Toward Ground	0.00663	0.0119	12.41	13.0	1.15	10	/	0.013685	0.05	/
2462	11	802.11b	Toward Phantom	0.014	0.0245	12.41	13.0	1.15	10	0.0242	0.0278	0.11	/
2462	11	802.11b	Toward Left	0.0107	0.0208	12.41	13.0	1.15	10	/	0.02392	0.08	/
2462	11	802.11b	Toward Top	0.0062	0.0116	12.41	13.0	1.15	10	/	0.01334	-0.14	/
2437	6	802.11n 40M	Toward Phantom	0.0367	0.0649	16.25	16.5	1.06	10	0.0641	0.0680	0.05	Fig.25

13.4.2 SAR measurement Result of WiFi 5G

Table 13.31: SAR Values (Antenna1-Head)

Frequency		Test Mode	Side	Test Position	Area Scan (W/kg)		Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No
MHz	Ch.				10g	1g							
Test data of 5.3GHz Band													
5260	52	802.11a	Left	Touch	0.129	0.375	17.60	18.0	1.10	/	0.4125	0.13	/
5260	52	802.11a	Left	Tilt	0.115	0.281	17.60	18.0	1.10	/	0.3091	0.09	/
5260	52	802.11a	Right	Touch	0.173	0.480	17.60	18.0	1.10	0.426	0.4686	-0.10	Fig.26
5260	52	802.11a	Right	Tilt	0.166	0.530	17.60	18.0	1.10	0.398	0.4378	0.11	/
5270	54	802.11ac 40M	Right	Touch	0.173	0.462	17.92	18.0	1.02	0.408	0.4162	-0.16	/
Test data of 5.6GHz Band													
5500	100	802.11a	Left	Touch	0.079	0.253	17.41	18.0	1.15	/	0.29095	-0.12	/
5500	100	802.11a	Left	Tilt	0.0973	0.293	17.41	18.0	1.15	0.274	0.3151	0.17	Fig.27
5500	100	802.11a	Right	Touch	0.0547	0.141	17.41	18.0	1.15	/	0.16215	0.07	/
5500	100	802.11a	Right	Tilt	0.0864	0.258	17.41	18.0	1.15	/	0.2967	-0.14	/
5510	102	802.11ac 40M	Left	Tilt	0.100	0.279	17.76	18.0	1.06	0.295	0.3127	0.13	/
Test data of 5.8GHz Band													
5745	149	802.11a	Left	Touch	0.0342	0.0948	16.95	17.5	1.14	/	0.108072	-0.14	/
5745	149	802.11a	Left	Tilt	0.0505	0.161	16.95	17.5	1.14	0.159	0.1813	0.11	/
5745	149	802.11a	Right	Touch	0.0299	0.117	16.95	17.5	1.14	/	0.13338	0.05	/
5745	149	802.11a	Right	Tilt	0.0460	0.151	16.95	17.5	1.14	0.162	0.1847	0.13	Fig.28
5755	151	802.11ac 40M	Right	Tilt	0.0036	0.0138	17.36	17.5	1.03	/	0.14214	-0.04	/

Note: The same maximum output power is specified for U-NII-1 and U-NII-2A Bands, the highest reported SAR of U-NII-2A Bands for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.

Table 13.32: SAR Values (Antenna1-Body)

Frequency		Test Mode	Test Position	Area Scan (W/kg)		Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.			10g	1g								
Test data of 5.3GHz Band													
5260	52	802.11a	Toward Ground	0.171	0.442	17.60	18.0	1.10	10	0.314	0.3454	0.16	Fig.29
5260	52	802.11a	Toward Phantom	0.0358	0.106	17.60	18.0	1.10	10	/	0.1166	0.08	/
5270	54	802.11ac 40M	Toward Ground	0.164	0.408	17.92	18.0	1.02	10	0.312	0.3203	0.16	/
Test data of 5.6GHz Band													
5500	100	802.11a	Toward Ground	0.108	0.285	17.41	18.0	1.15	10	0.258	0.2967	-0.06	/
5500	100	802.11a	Toward Phantom	0.012	0.0361	17.41	18.0	1.15	10	/	0.041515	0.00	/
5510	102	802.11ac 40M	Toward Ground	0.117	0.316	17.76	18.0	1.06	10	0.287	0.3042	0.07	Fig.30
Test data of 5.8GHz Band													
5745	149	802.11a	Toward Ground	0.0499	0.143	16.95	17.5	1.14	10	0.132	0.1505	0.12	Fig.31
5745	149	802.11a	Toward Phantom	0.0008	0.0053	16.95	17.5	1.14	10	/	0.006042	0.17	/
5755	151	802.11ac 40M	Toward Ground	0.0413	0.120	17.36	17.5	1.03	10	/	0.1236	-0.07	/

Note: 1. The same maximum output power is specified for U-NII-1 and U-NII-2A Bands, the highest reported SAR of U-NII-2A Bands for a test configuration is ⩽ 1.2 W/kg, SAR is not required for U-NII-1 band.

2. The devices cannot operate in WLAN 5G "hotspot" modes.

Table 13.33: SAR Values (Antenna2-Head)

Frequency		Test Mode	Side	Test Position	Area Scan (W/kg)		Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No
MHz	Ch.				10g	1g							
Test data of 5.3GHz Band													
5320	64	802.11a	Left	Touch	0.053	0.133	8.98	9.5	1.13	0.129	0.146	0.14	/
5320	64	802.11a	Left	Tilt	0.0251	0.0612	8.98	9.5	1.13	/	0.069156	0.07	/
5320	64	802.11a	Right	Touch	0.0338	0.0968	8.98	9.5	1.13	/	0.109384	0.08	/
5320	64	802.11a	Right	Tilt	0.00657	0.0221	8.98	9.5	1.13	/	0.024973	0.09	/
5310	62	802.11ac 40M	Left	Touch	0.0552	0.138	9.34	9.5	1.04	0.146	0.152	-0.06	Fig.32
Test data of 5.6GHz Band													
5580	116	802.11a	Left	Touch	0.0376	0.107	9.09	10.0	1.23	0.100	0.123	-0.14	/
5580	116	802.11a	Left	Tilt	0.0202	0.0561	9.09	10.0	1.23	/	0.069003	0.09	/
5580	116	802.11a	Right	Touch	0.0119	0.0386	9.09	10.0	1.23	/	0.047478	0.10	/
5580	116	802.11a	Right	Tilt	0.0096	0.0385	9.09	10.0	1.23	/	0.047355	0.07	/
5670	134	802.11ac 40M	Left	Touch	0.0557	0.142	9.79	10.0	1.05	0.167	0.1754	0.09	Fig.33
Test data of 5.8GHz Band													
5825	165	802.11a	Left	Touch	0.0191	0.0566	7.64	9.0	1.37	0.0712	0.0975	0.12	/
5825	165	802.11a	Left	Tilt	0.0165	0.0385	7.64	9.0	1.37	/	0.052745	0.05	/
5825	165	802.11a	Right	Touch	0.00028	0.00232	7.64	9.0	1.37	/	0.003178	-0.08	/
5825	165	802.11a	Right	Tilt	0.00143	0.00866	7.64	9.0	1.37	/	0.011864	0.00	/
5795	159	802.11ac 40M	Left	Touch	0.0118	0.0552	8.82	9.0	1.04	0.0967	0.1006	0.05	Fig.34

Note: The same maximum output power is specified for U-NII-1 and U-NII-2A Bands, the highest reported SAR of U-NII-2A Bands for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.

Table 13.34: SAR Values (antenna2-Body)

Frequency		Test Mode	Test Position	Area Scan (W/kg)		Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.			10g	1g								
Test data of 5.3GHz Band													
5320	64	802.11a	Toward Ground	0.104	0.266	8.98	9.5	1.13	10	0.241	0.2723	0.16	/
5320	64	802.11a	Toward Phantom	0.0026	0.015	8.98	9.5	1.13	10	/	0.01695	-0.08	/
5310	62	802.11ac 40M	Toward Ground	0.109	0.278	9.34	9.5	1.04	10	0.263	0.2735	0.14	Fig.35
Test data of 5.6GHz Band													
5580	116	802.11a	Toward Ground	0.148	0.404	9.09	10.0	1.23	10	0.358	0.4403	0.18	Fig.36
5580	116	802.11a	Toward Phantom	0.00375	0.0181	9.09	10.0	1.23	10	/	0.022263	0.00	/
5670	134	802.11ac 40M	Toward Ground	0.140	0.375	9.79	10.0	1.05	10	0.347	0.3644	0.09	/
Test data of 5.8GHz Band													
5825	165	802.11a	Toward Ground	0.0996	0.265	7.64	9.0	1.37	10	0.232	0.3178	0.16	Fig.37
5825	165	802.11a	Toward Phantom	0.001	0.0016	7.64	9.0	1.37	10	/	0.002192	0.16	/
5795	159	802.11ac 40M	Toward Ground	0.116	0.319	8.82	9.0	1.04	10	0.277	0.2881	0.14	/

Note: 1. The same maximum output power is specified for U-NII-1 and U-NII-2A Bands, the highest reported SAR of U-NII-2A Bands for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.

2. The devices cannot operate in WLAN 5G "hotspot" modes.

SAR results for Standard procedure

There is zoom scan measurement to be added for the highest measured SAR in each exposure configuration/band.

Table 13.35: SAR Values for 2/3/4G Head

Frequency		Side	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)	Figure No.
Band	Fre									
824.2	128	Left	Touch	32.6	33.0	1.10	0.0600	0.066	0.04	Fig.1
1850.2	512	Right	Touch	28.4	28.5	1.02	0.0959	0.0978	0.13	Fig.3
1852.4	9262	Right	Touch	23.67	23.7	1.01	0.173	0.1747	-0.06	Fig.5
826.4	4132	Left	Touch	24.42	24.5	1.02	0.0906	0.0924	-0.09	Fig.7
824.7	1013	Right	Touch	23.94	24.1	1.04	0.112	0.1162	0.15	Fig.9
1851.3	25	Right	Touch	23.98	24.1	1.03	0.194	0.1998	0.09	Fig.11

Frequency		RB Size	RB Offset	Side	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No
MHz	Ch.											
2560	21350	1	0	Right	Touch	22.42	22.5	1.02	0.1200	0.1224	-0.10	Fig.14
2680	41490	1	0	Right	Touch	22.79	23.0	1.05	0.0609	0.0639	0.10	Fig.17

Table 13.36: SAR Values for 2/3/4G Body worn

Frequency		Mode/Band	Service/Headset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
824.2	128	GPRS 4TS	Class12	Toward Phantom	29.5	30.0	1.12	10	0.274	0.3069	0.08	Fig.2
1850.2	512	GPRS 4TS	Class12	Toward Phantom	23.5	23.5	1.00	10	0.663	0.663	-0.08	Fig.4
1852.4	9262	Band II	12.2kbps RMC	Toward Phantom	23.67	23.7	1.01	10	0.771	0.7787	0.07	Fig.6
826.4	4132	Band V	12.2kbps RMC	Toward Phantom	24.42	24.5	1.02	10	0.184	0.1877	-0.07	Fig.8
848.3	777	BC0	RC3 SO32	Toward Phantom	23.92	24.1	1.04	10	0.205	0.2137	0.09	Fig.10
1851.3	25	BC1	RC3 SO32	Toward Phantom	24.01	24.1	1.02	10	0.717	0.7320	0.06	Fig.12
1880	600	BC1	RC3 SO32	Toward Bottom	23.88	24.1	1.05	10	1.020	1.0730	-0.02	Fig.13

Frequency		RB Size	RB Offset	Test Position	Conducted Power (dBm)	Max.Tune-up Power (dBm)	Scaling factor	Spacing (mm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)	Figure No.
MHz	Ch.											
2560	21350	1	0	Toward Phantom	22.42	22.5	1.02	10	0.5820	0.5936	-0.14	Fig.15
2560	21350	1	0	Toward Bottom	22.42	22.5	1.02	10	0.6000	0.612	-0.07	Fig.16
2680	41490	1	0	Toward Phantom	22.79	23.0	1.05	10	0.353	0.3707	0.05	Fig.18
2680	41490	1	0	Toward Bottom	22.79	23.0	1.05	10	0.424	0.4452	-0.06	Fig.19

Table 13.37: SAR Values（WiFi 2.4G Antenna1-Head）

Frequency		Mode/Band	Side	Test Position	Figure No.	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.							
2437	6	802.11b	Left	Tilt	Fig.20	0.334	0.3474	0.15

Table 13.38: SAR Values（WiFi 2.4G Antenna1-Body）

Frequency		Mode/Band	Test Position	Spacing (mm)	Figure No.	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.							
2437	6	802.11b	Toward Phantom	10	Fig.21	0.067	0.070304	0.09
2437	6	802.11b	Toward Top	10	Fig.22	0.0819	0.0852	-0.07

Table 13.39: SAR Values（WiFi 2.4G Antenna2-Head）

Frequency		Mode/Band	Side	Test Position	Figure No.	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.							
2437	6	802.11n 40M	Right	Touch	Fig.23	0.248	0.2630	0.14

Table 13.40: SAR Values（WiFi 2.4G Antenna2-Body）

Frequency		Mode/Band	Test Position	Spacing (mm)	Figure No.	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.							
2462	11	802.11b	Toward Phantom	10	Fig.24	0.0242	0.0278	0.11
2437	6	802.11n 40M	Toward Phantom	10	Fig.25	0.0641	0.0680	0.05

Table 13.41: SAR Values（WiFi 5G Antenna1-Head）

Frequency		Mode/Band	Side	Test Position	Figure No.	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.							
5260	52	802.11a	Right	Touch	Fig.26	0.426	0.4686	-0.10
5500	100	802.11a	Left	Tilt	Fig.27	0.274	0.3151	0.17
5745	149	802.11a	Right	Tilt	Fig.28	0.162	0.1847	0.13

Table 13.42: SAR Values（WiFi 5G Antenna1-Body）

Frequency		Mode/Band	Test Position	Spacing (mm)	Figure No.	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.							
5260	52	802.11a	Toward Ground	10	Fig.29	0.314	0.3454	0.16
5510	102	802.11ac 40M	Toward Ground	10	Fig.30	0.287	0.3042	0.07
5745	149	802.11a	Toward Ground	10	Fig.31	0.132	0.1505	0.12

Table 13.43: SAR Values（WiFi 5G Antenna2-Head）

Frequency		Mode/Band	Side	Test Position	Figure No.	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.							
5310	62	802.11ac 40M	Left	Touch	Fig.32	0.146	0.152	-0.06
5670	134	802.11ac 40M	Left	Touch	Fig.33	0.167	0.1754	0.09
5795	159	802.11ac 40M	Left	Touch	Fig.34	0.0967	0.1006	0.05

Table 13.44: SAR Values（WiFi 5G Antenna2-Body）

Frequency		Mode/Band	Test Position	Spacing (mm)	Figure No.	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
MHz	Ch.							
5310	62	802.11ac 40M	Toward Ground	10	Fig.35	0.263	0.2735	0.14
5580	116	802.11a	Toward Ground	10	Fig.36	0.358	0.4403	0.18
5825	165	802.11a	Toward Ground	10	Fig.37	0.232	0.3178	0.16

14. SAR Measurement Variability

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium.

The following procedures are applied to determine if repeated measurements are required.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps2) 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 ≥1.45W/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.

Table 14.1: SAR Measurement Variability for Body (1g)

Frequency		Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
MHz	Ch.						
1851.3	25	Toward Bottom	10	0.890	0.889	1.001	/
1908.8	1175	Toward Bottom	10	1.020	1.020	1.0	/
1880	600	Toward Bottom	10	1.020	1.020	1.0	/

15. Measurement Uncertainty

Measurement uncertainty evaluation for SAR test

Error Description	Unc. value, ±%	Prob. Dist.	Div.	c_i 1g	c_i 10g	Std.Unc. ±%,1g	Std.Unc. ±%,10g	V_i v_{eff}
Measurement System								
Probe Calibration	6.0	N	1	1	1	6.0	6.0	∞
Axial Isotropy	0.5	R	√3	0.7	0.7	0.2	0.2	∞
Hemispherical Isotropy	2.6	R	√3	0.7	0.7	1.1	1.1	∞
Boundary Effects	0.8	R	√3	1	1	0.5	0.5	∞
Linearity	0.6	R	√3	1	1	0.3	0.3	∞
System Detection Limits	1.0	R	√3	1	1	0.6	0.6	∞
Readout Electronics	0.7	N	1	1	1	0.7	0.7	∞
Response Time	0	R	√3	1	1	0	0	∞
Integration Time	2.6	R	√3	1	1	1.5	1.5	∞
RF Ambient Noise	3.0	R	√3	1	1	1.7	1.7	∞
RF Ambient Reflections	3.0	R	√3	1	1	1.7	1.7	∞
Probe Positioner	1.5	R	√3	1	1	0.9	0.9	∞
Probe Positioning	2.9	R	√3	1	1	1.7	1.7	∞
Max. SAR Eval.	1.0	R	√3	1	1	0.6	0.6	∞
Test Sample Related								
Device Positioning	2.9	N	1	1	1	2.9	2.9	145
Device Holder	3.6	N	1	1	1	3.6	3.6	5
Phantom and Setup								
Phantom Uncertainty	4.0	R	√3	1	1	2.3	2.3	∞
Liquid Conductivity (target)	5.0	R	√3	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (meas.)	2.5	N	1	0.64	0.43	1.6	1.1	∞
Liquid Permittivity (target)	5.0	R	√3	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (meas.)	2.5	N	1	0.6	0.49	1.5	1.2	∞

Measurement uncertainty evaluation for system validation

Error Description	Unc. value, ±%	Prob. Dist.	Div.	c_i 1g	c_i 10g	Std.Unc. ±%,1g	Std.Unc. ±%,10g	V_i v_{eff}
Measurement System								
Probe Calibration	6.0	N	1	1	1	6.0	6.0	∞
Axial Isotropy	0.5	R	√3	0.7	0.7	0.2	0.2	∞
Hemispherical Isotropy	2.6	R	√3	0.7	0.7	1.1	1.1	∞
Boundary Effects	0.8	R	√3	1	1	0.5	0.5	∞
Linearity	0.6	R	√3	1	1	0.3	0.3	∞
System Detection Limits	1.0	R	√3	1	1	0.6	0.6	∞
Readout Electronics	0.7	N	1	1	1	0.7	0.7	∞
Response Time	0	R	√3	1	1	0	0	∞
Integration Time	2.6	R	√3	1	1	1.5	1.5	∞
RF Ambient Noise	3.0	R	√3	1	1	1.7	1.7	∞
RF Ambient Reflections	3.0	R	√3	1	1	1.7	1.7	∞
Probe Positioner	1.5	R	√3	1	1	0.9	0.9	∞
Probe Positioning	2.9	R	√3	1	1	1.7	1.7	∞
Max. SAR Eval.	1.0	R	√3	1	1	0.6	0.6	∞
Diople								
Power Drift	5.0	R	√3	1	1	2.9	2.9	∞
Dipole Positioning	2.0	N	1	1	1	2.0	2.0	∞
Dipole Input Power	5.0	N	1	1	1	5.0	5.0	∞
Phantom and Setup								
Phantom Uncertainty	4.0	R	√3	1	1	2.3	2.3	∞
Liquid Conductivity (target)	5.0	R	√3	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (meas.)	2.5	N	1	0.64	0.43	1.6	1.1	∞
Liquid Permittivity (target)	5.0	R	√3	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (meas.)	2.5	N	1	0.6	0.49	1.5	1.2	∞
Combined Std Uncertainty						±11.2%	±10.9%	387
Expanded Std Uncertainty						**±22.4%**	**±21.8%**	

16. MAIN TEST INSTRUMENTS

Table 16.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	probe	EX3DV4	3844	2016-04-15	2017-04-14
02	DAE	DAE4	797	2016-04-15	2017-04-14
03	Power Meter	N1914A	MY50001660	2017-03-04	2018-03-03
04	Radio Communication Analyzer	CMW500	128181	2017-03-04	2018-03-03
05	Radio Communication Analyzer	CMU200	122818	2017-03-04	2018-03-03
06	Signal Generator	N5181A	MY50143363	2017-03-04	2018-03-03
07	Power Sensor	E8481H	MY51020011	2017-03-04	2018-03-03
08	Power Amplifier	ZHL	QA1202003	2017-03-03	2017-08-02
09	Power Amplifier	ZVE	421401127	2017-03-03	2017-08-02
10	Attenuator	8491A	MY39267989	2017-03-04	2018-03-03
11	Probe kit	85070E	3G-S-00139	NA	NA
12	Network Analyzer	E5071C	US39175666	2017-03-04	2018-03-03
13	D850V2	dipole	4d135	2017-03-29	2018-03-28
14	D1900V2	dipole	5d153	2016-03-30	2017-03-29
15	D2450V2	dipole	886	2016-04-01	2017-03-31
16	D2600V2	dipole	1045	2016-03-31	2017-03-30
17	D5GHzV2	dipole	1121	2016-04-08	2017-04-07

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

Annex A Graphical Measurement Results

GSM 850MHz Head Left Check Low

Date/Time: 2017/3/10
Electronics: DAE4 Sn797
Medium: Head 850MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.899 S/m; εr = 42.082; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 850MHz; Frequency: 824.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 – SN3844ConvF(9.57, 9.57, 9.57);
Low Cheek Left GSM 850MHz/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0610 W/kg
Low Cheek Left GSM 850MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.067 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.0770 W/kg
SAR(1 g) = 0.060 W/kg; SAR(10 g) = 0.046 W/kg
Maximum value of SAR (measured) = 0.0630 W/kg

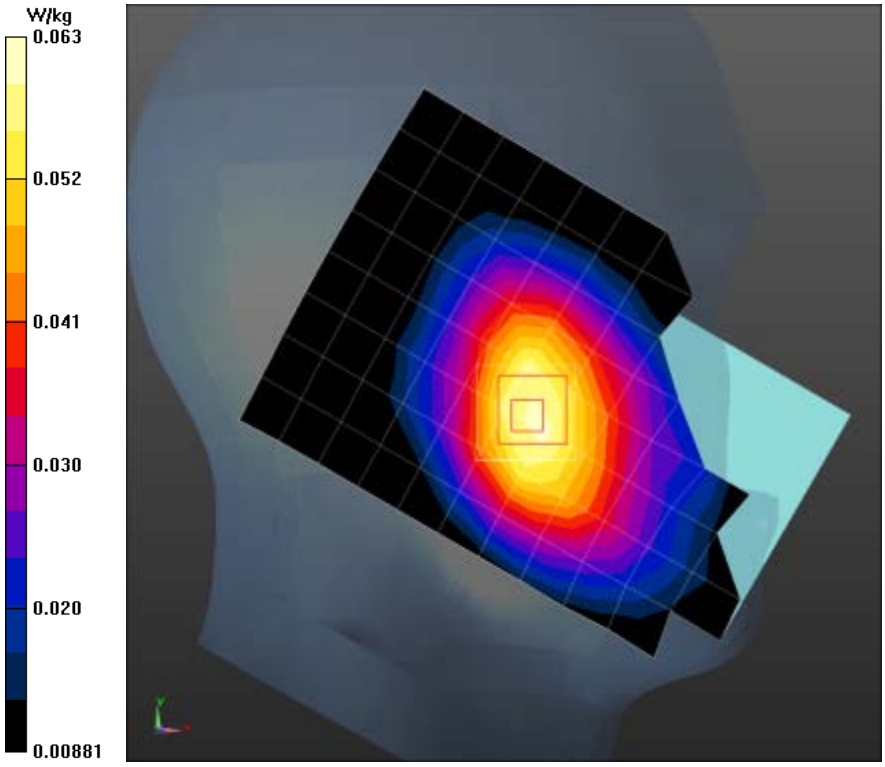
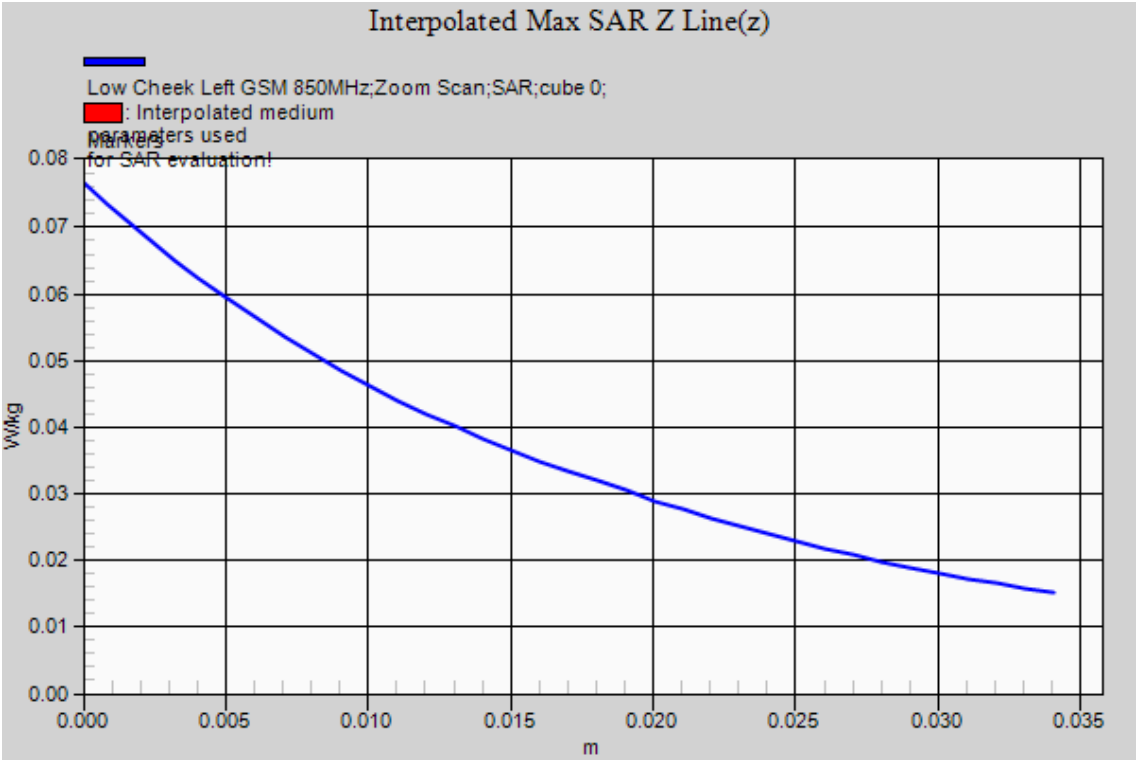


Fig.1 GSM 850MHz Left Cheek Low


Interpolated Max SAR Z Line(z)
Low Cheek Left GSM 850MHz;Zoom Scan;SAR;cube 0;
: Interpolated medium
parameters used
Markers
for SAR evaluation!
W/kg
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

GPRS 850MHz 4TS Body Toward Phantom Low

Date/Time: 2017/3/14
Electronics: DAE4 Sn797
Medium: Body 850MHz
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.978 S/m; εr = 54.682; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GRPS 850MHz 4TS; Frequency: 824.2 MHz; Duty Cycle: 1:2
Probe: EX3DV4 – SN3844ConvF(9.99, 9.99, 9.99);
Low Toward Phantom GPRS 850MHz 4TS/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.302 W/kg
Low Toward Phantom GPRS 850MHz 4TS/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.86 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.517 W/kg
SAR(1 g) = 0.274 W/kg; SAR(10 g) = 0.156 W/kg
Maximum value of SAR (measured) = 0.300 W/kg

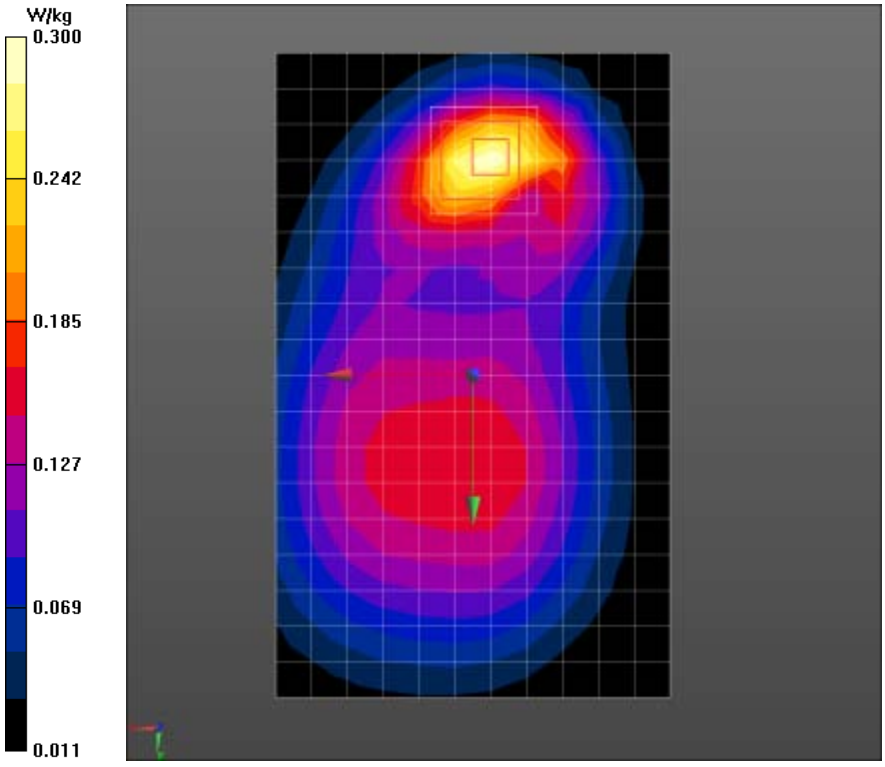
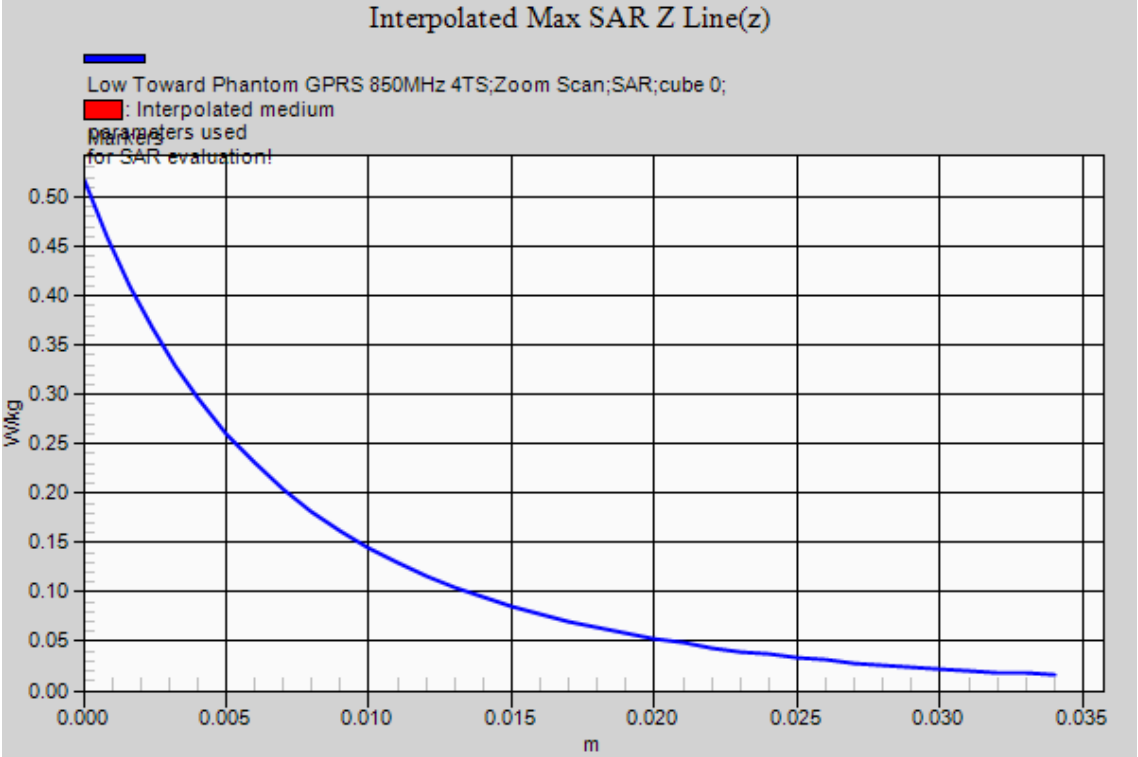


Fig.2 GPRS 850MHz 4TS Phantom Mode Low 10mm


Interpolated Max SAR Z Line(z)
Low Toward Phantom GPRS 850MHz 4TS;Zoom Scan;SAR;cube 0;
: Interpolated medium
parameters used
for SAR evaluation!
W/kg
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

GSM 1900MHz Head Right Check Low

Date/Time: 2017/3/12
Electronics: DAE4 Sn797
Medium: Head 1900MHz
Medium parameters used (extrapolated): f = 1850.2 MHz; σ = 1.35 S/m; εr = 40.137; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GSM 1900MHz; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3
Probe: EX3DV4 – SN3844ConvF(8.17, 8.17, 8.17);
Low Cheek Right GSM 1900MHz/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.102 W/kg
Low Cheek Right GSM 1900MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.644 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.145 W/kg
SAR(1 g) = 0.096 W/kg; SAR(10 g) = 0.059 W/kg
Maximum value of SAR (measured) = 0.104 W/kg

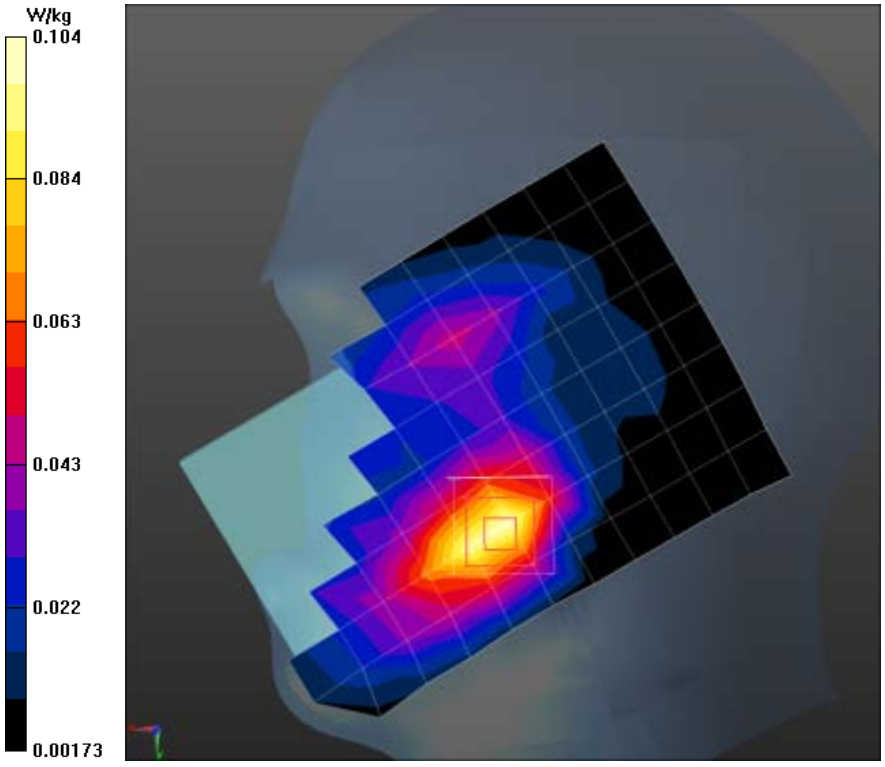
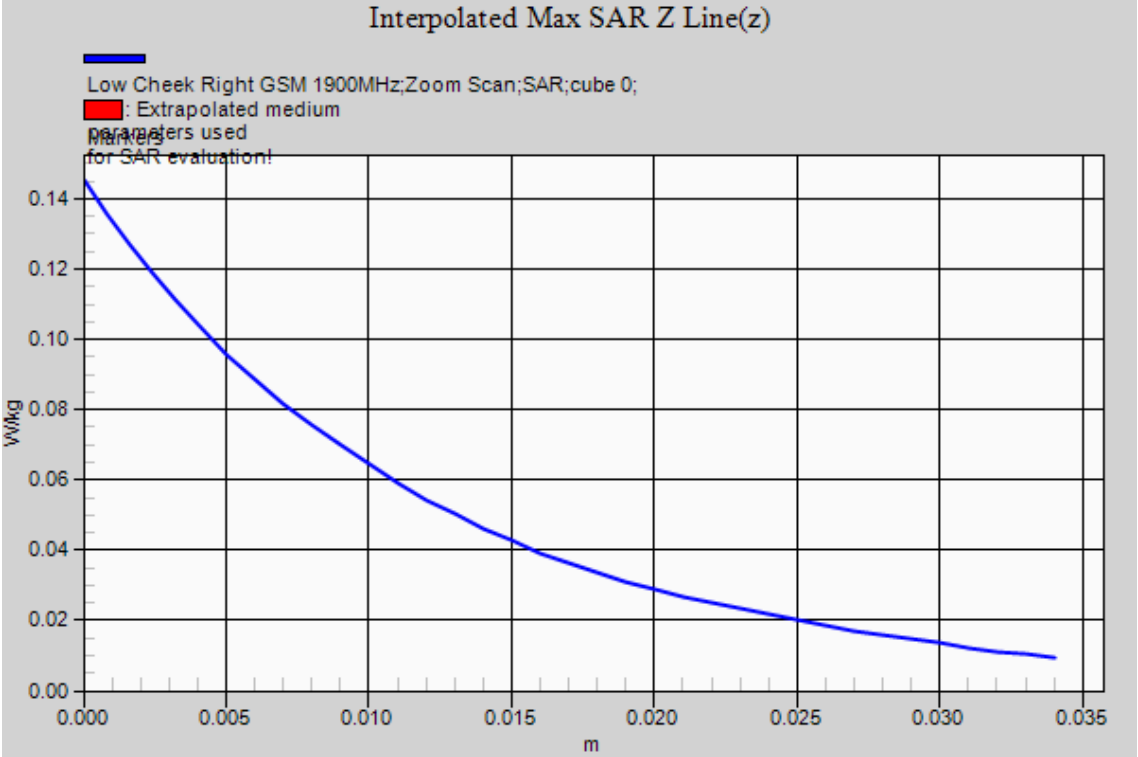


Fig.3 GSM 1900MHz Right Cheek Low


Interpolated Max SAR Z Line(z)
Low Cheek Right GSM 1900MHz;Zoom Scan;SAR;cube 0;
: Extrapolated medium
parameters used
for SAR evaluation!
Markers
W/kg
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

GPRS 1900MHz 4TS Body Toward Phantom Low

Date/Time: 2017/3/28
Electronics: DAE4 Sn797
Medium: Body 1900MHz
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.459 S/m; εr = 51.138; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: GRPS 1900MHz 4TS; Frequency: 1850.2 MHz; Duty Cycle: 1:2
Probe: EX3DV4 – SN3844ConvF(7.93, 7.93, 7.93);
Low Toward Phantom GPRS 1900MHz 4TS/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.743 W/kg
Low Toward Phantom GPRS 1900MHz 4TS/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.671 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.663 W/kg; SAR(10 g) = 0.338 W/kg
Maximum value of SAR (measured) = 0.769 W/kg

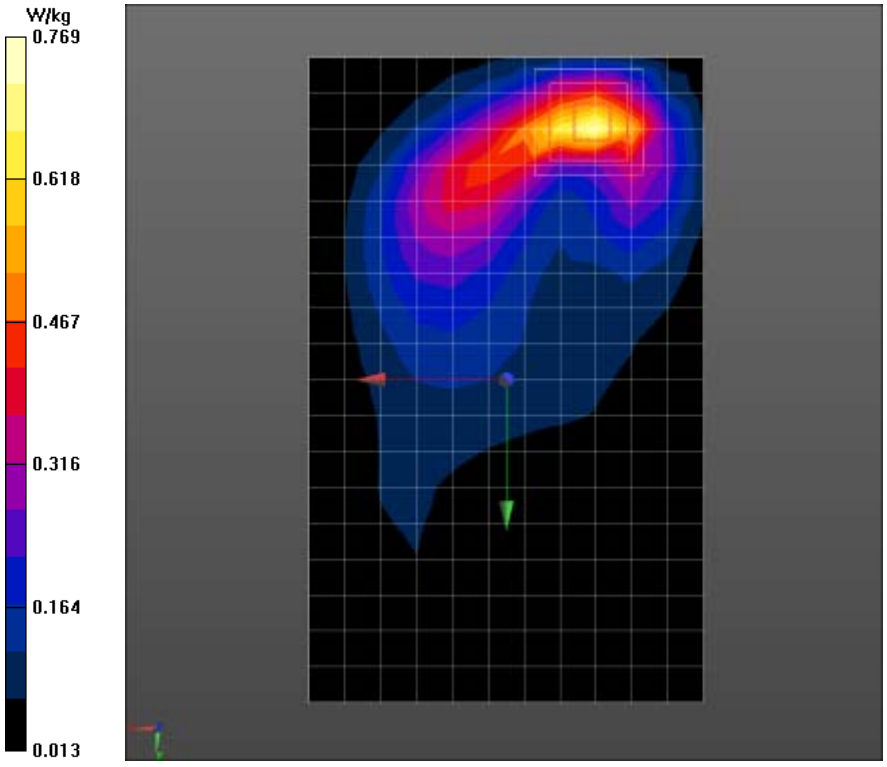
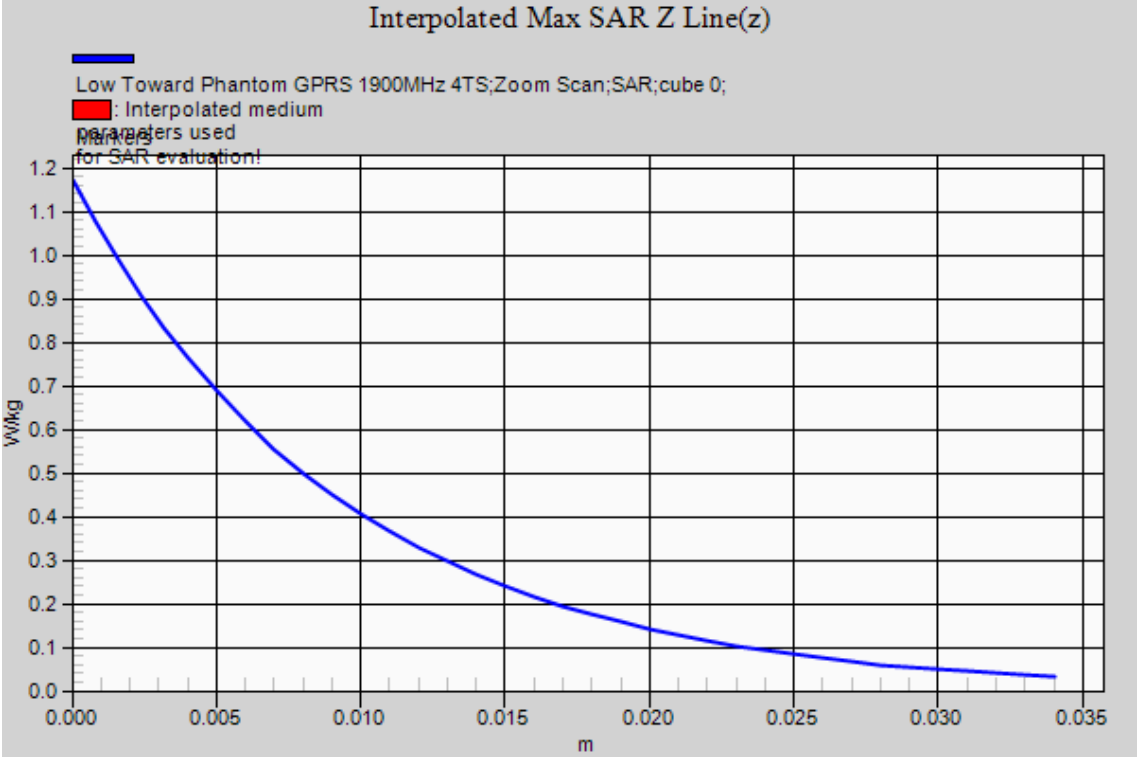


Fig.4 GPRS 1900MHz 4TS Phantom Mode Low 10mm


Interpolated Max SAR Z Line(z)
Low Toward Phantom GPRS 1900MHz 4TS;Zoom Scan;SAR;cube 0;
: Interpolated medium
parameters used
for SAR evaluation!
Markers
W/kg
m
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035

WCDMA Band II Head Right Check Low

Date/Time: 2017/3/6
Electronics: DAE4 Sn797
Medium: Head 1900MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.283 S/m; εr = 40.126; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: WCDMA Band II; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(8.17, 8.17, 8.17);
Low Cheek Right WCDMA Band II/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.182 W/kg
Low Cheek Right WCDMA Band II/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.528 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.258 W/kg
SAR(1 g) = 0.173 W/kg; SAR(10 g) = 0.109 W/kg
Maximum value of SAR (measured) = 0.187 W/kg

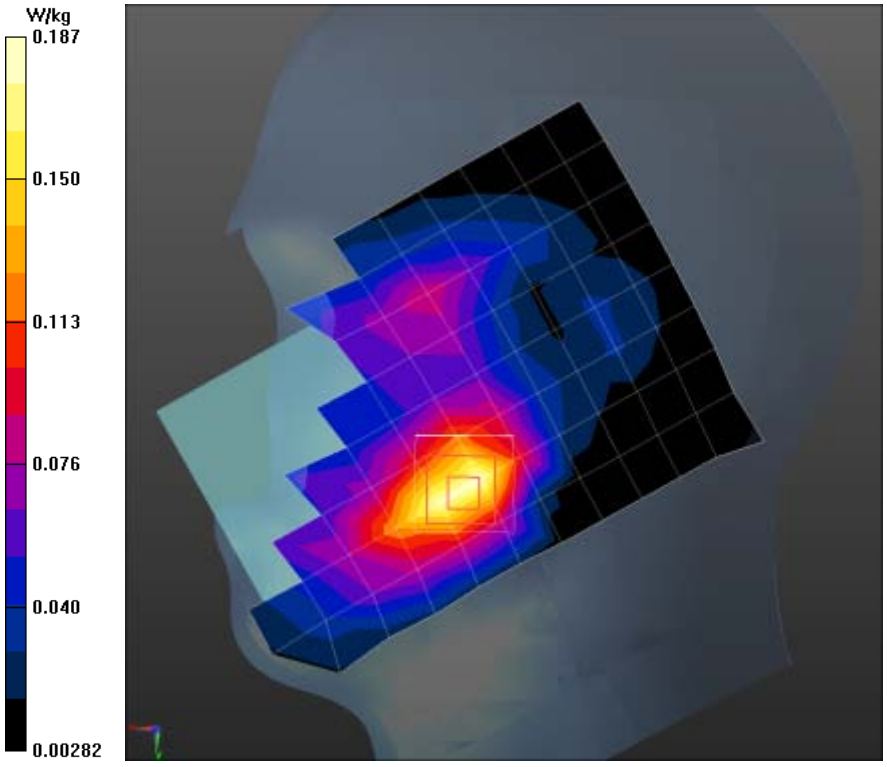
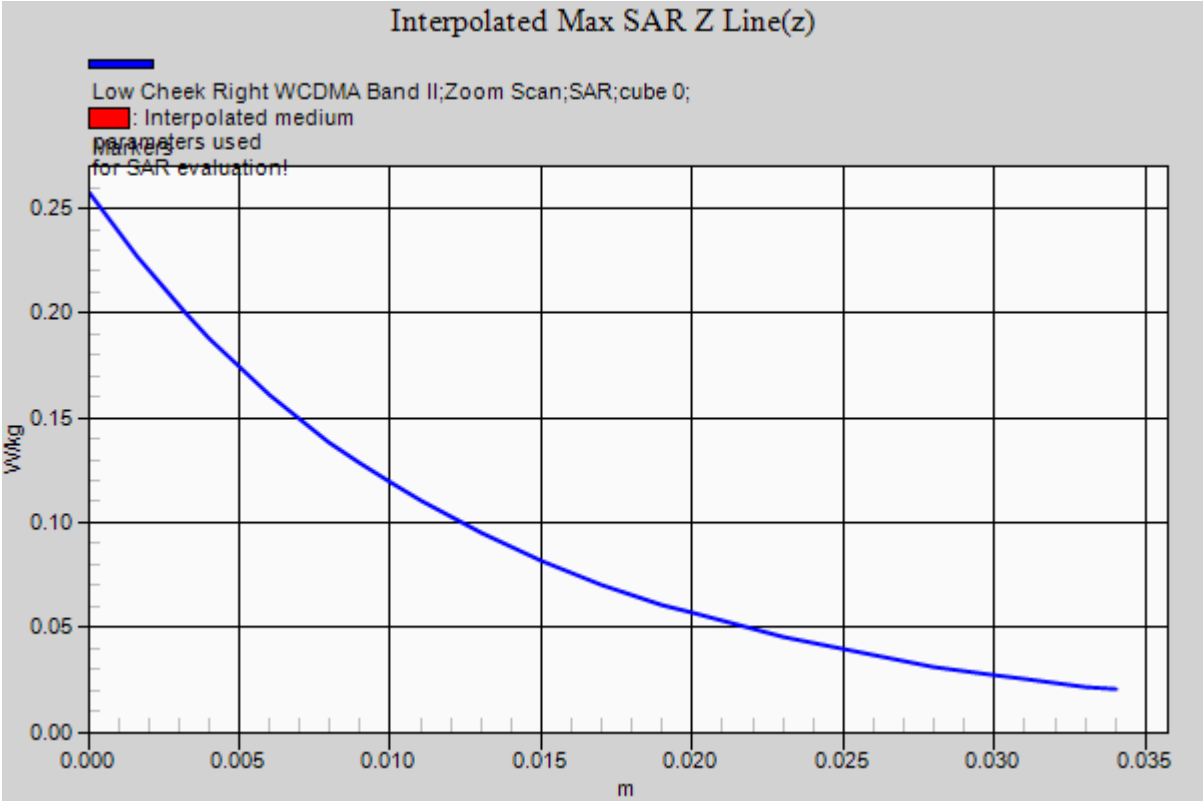


Fig.5 WCDMA 1900MHz Right Cheek Low


Interpolated Max SAR Z Line(z)
Low Cheek Right WCDMA Band II;Zoom Scan;SAR;cube 0;
: Interpolated medium
parameters used
for SAR evaluation!
Markers
W/kg
0.25
0.20
0.15
0.10
0.05
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WCDMA Band II Body Toward Phantom Low

Date/Time: 2017/3/28
Electronics: DAE4 Sn797
Medium: Body 1900MHz
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.461 S/m; εr = 51.126; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: WCDMA Band II; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.93, 7.93, 7.93);
Low Toward Phantom WCDMA Band II/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.769 W/kg
Low Toward Phantom WCDMA Band II/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.669 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.771 W/kg; SAR(10 g) = 0.385 W/kg
Maximum value of SAR (measured) = 0.894 W/kg

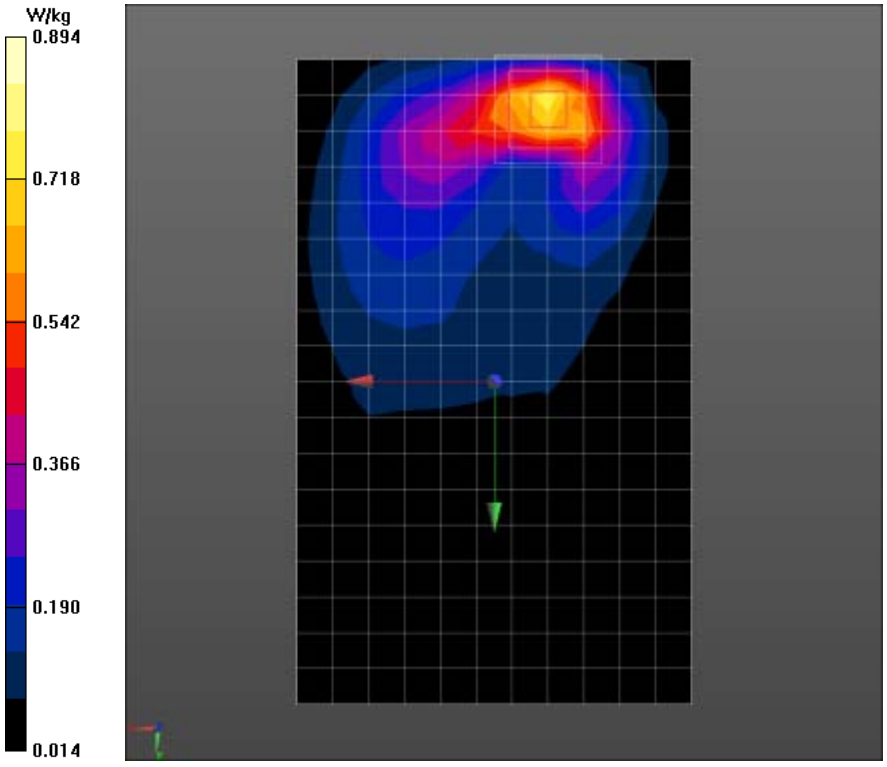
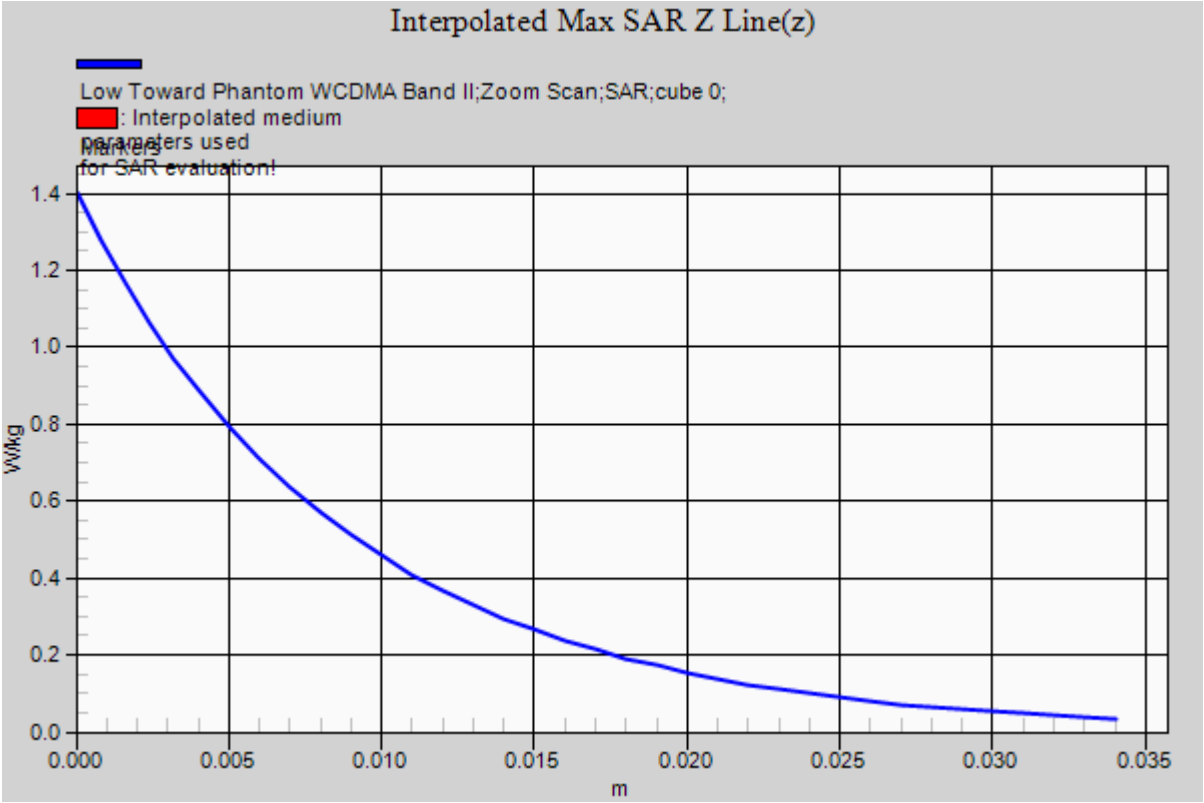


Fig.6 WCDMA 1900MHz Phantom Mode Low 10mm


Interpolated Max SAR Z Line(z)
Low Toward Phantom WCDMA Band II;Zoom Scan;SAR;cube 0;
: Interpolated medium
parameters used
for SAR evaluation!
Markers
W/kg
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WCDMA Band V Head Left Check Low

Date/Time: 2017/3/10
Electronics: DAE4 Sn797
Medium: Head 850MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.901 S/m; εr = 42.06; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(9.57, 9.57, 9.57);
Low Cheek Left WCDMA Band V/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0917 W/kg
Low Cheek Left WCDMA Band V/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.468 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.110 W/kg
SAR(1 g) = 0.091 W/kg; SAR(10 g) = 0.071 W/kg
Maximum value of SAR (measured) = 0.0947 W/kg

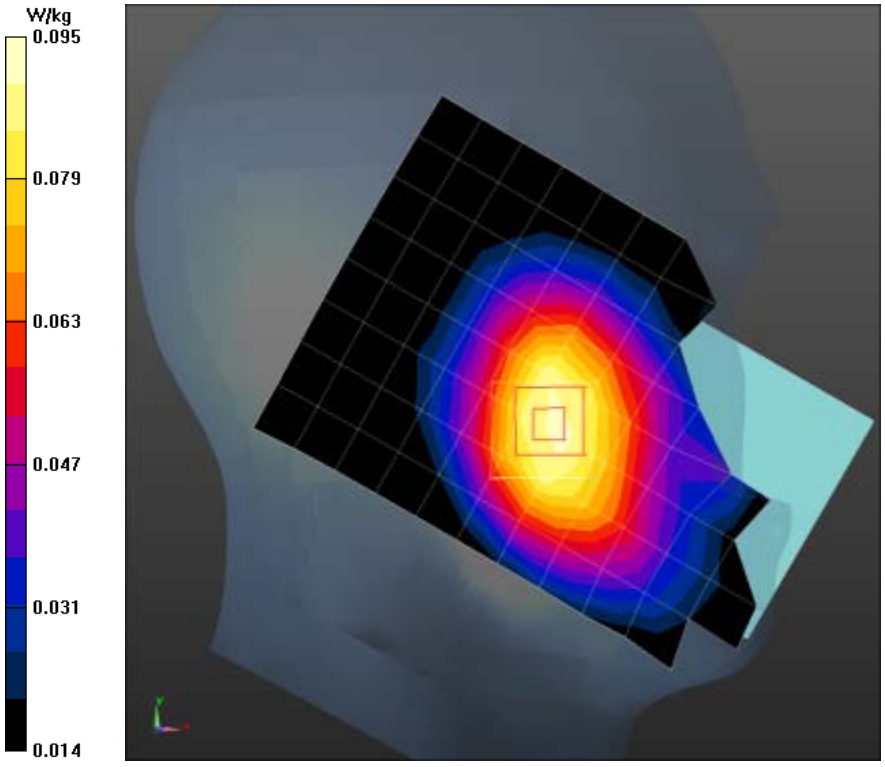
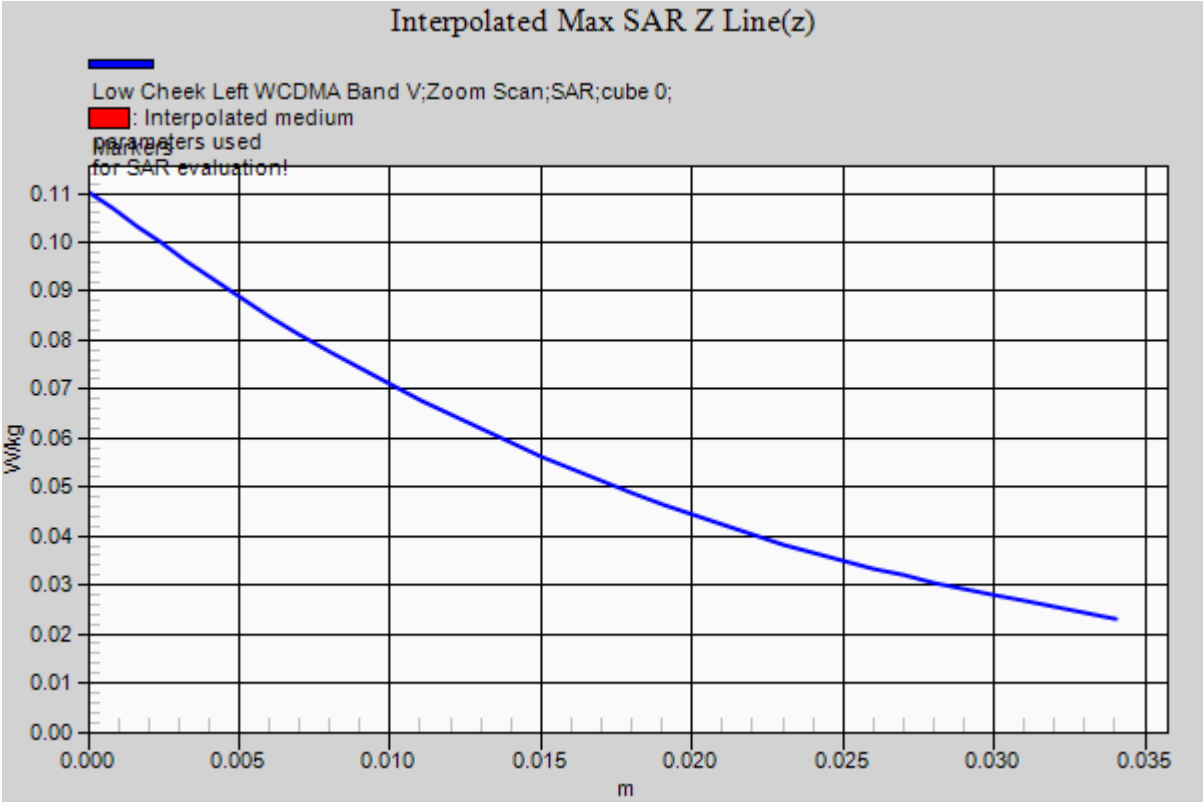


Fig.7 WCDMA 850MHz Left Cheek Low


Interpolated Max SAR Z Line(z)
Low Cheek Left WCDMA Band V;Zoom Scan;SAR;cube 0;
: Interpolated medium
parameters used
for SAR evaluation!
Markers
W/kg
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WCDMA Band V Body Toward Phantom Low

Date/Time: 2017/3/4
Electronics: DAE4 Sn797
Medium: Body 850MHz
Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.96 S/m; εr = 54.404; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(9.99, 9.99, 9.99);
Low Toward Phantom WCDMA Band V/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.193 W/kg
Low Toward Phantom WCDMA Band V/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.629 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.336 W/kg
SAR(1 g) = 0.184 W/kg; SAR(10 g) = 0.106 W/kg
Maximum value of SAR (measured) = 0.203 W/kg

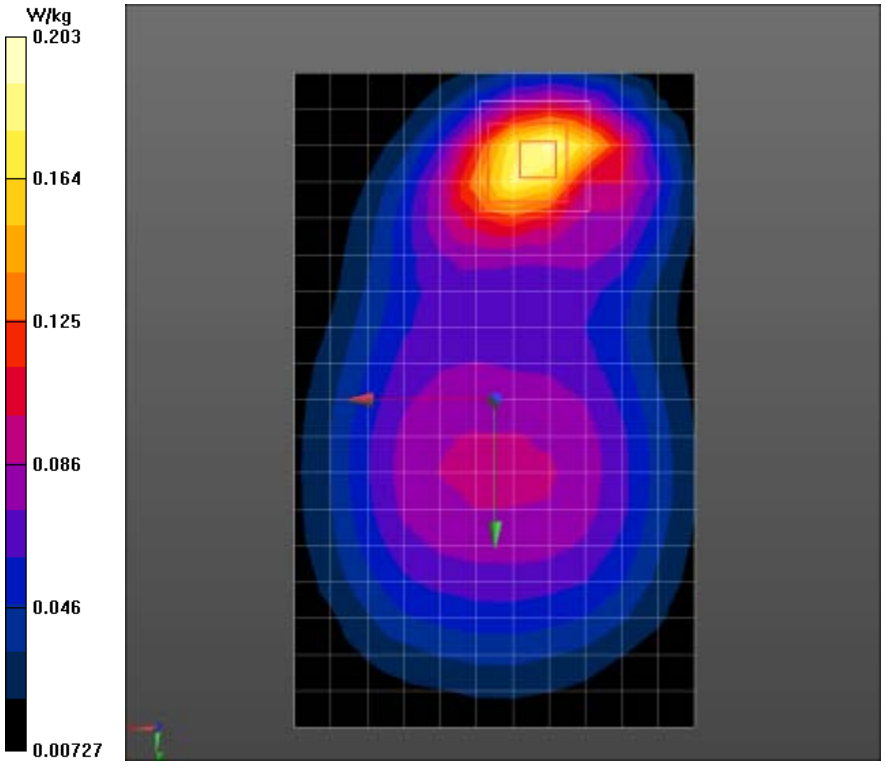
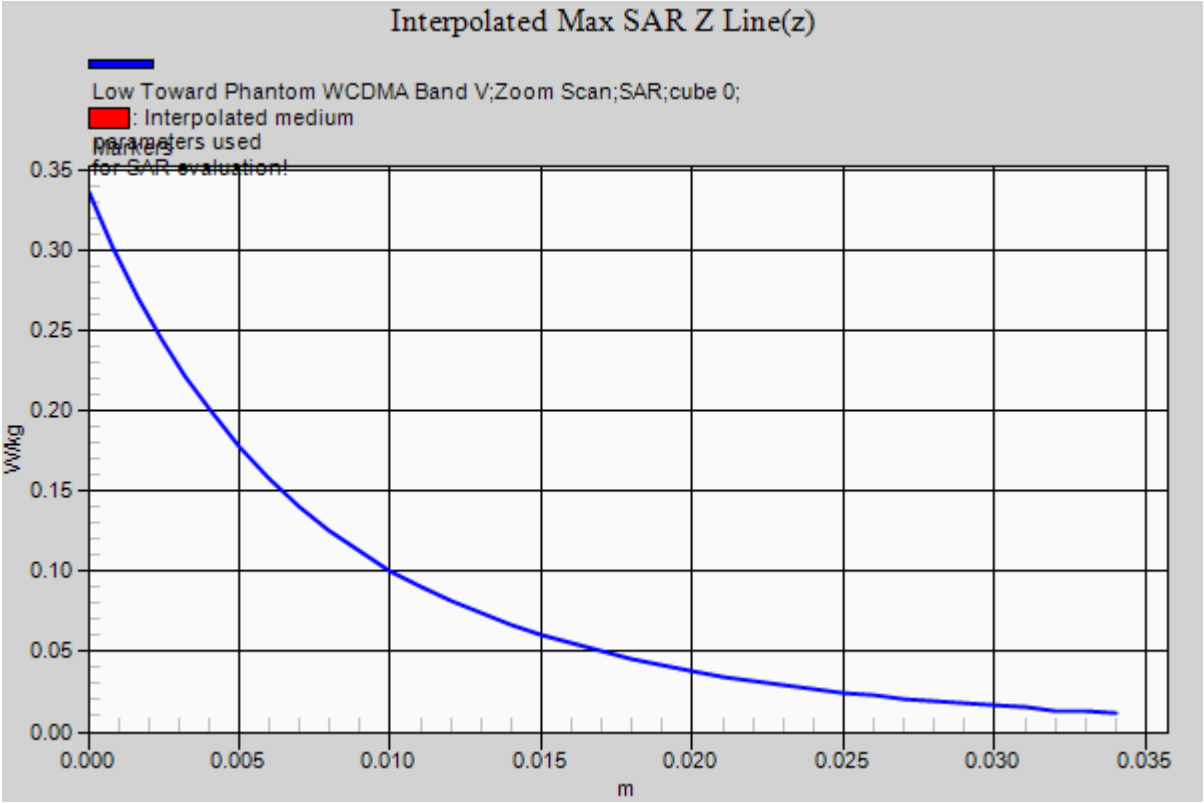


Fig.8 WCDMA 850MHz Phantom Mode Low 10mm


Interpolated Max SAR Z Line(z)
Low Toward Phantom WCDMA Band V;Zoom Scan;SAR;cube 0;
: Interpolated medium
parameters used
Markers
for SAR evaluation!
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
W/kg
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

CDMA2000 BC0 Head Right Check Low

Date/Time: 2017/3/10
Electronics: DAE4 Sn797
Medium: Head 850MHz
Medium parameters used: f = 825 MHz; σ = 0.9 S/m; εr = 42.073; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CDMA2000 BC0; Frequency: 824.7 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(9.57, 9.57, 9.57);
Low Cheek Right CDMA2000 BC0/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.112 W/kg
Low Cheek Right CDMA2000 BC0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.799 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.138 W/kg
SAR(1 g) = 0.112 W/kg; SAR(10 g) = 0.086 W/kg
Maximum value of SAR (measured) = 0.118 W/kg

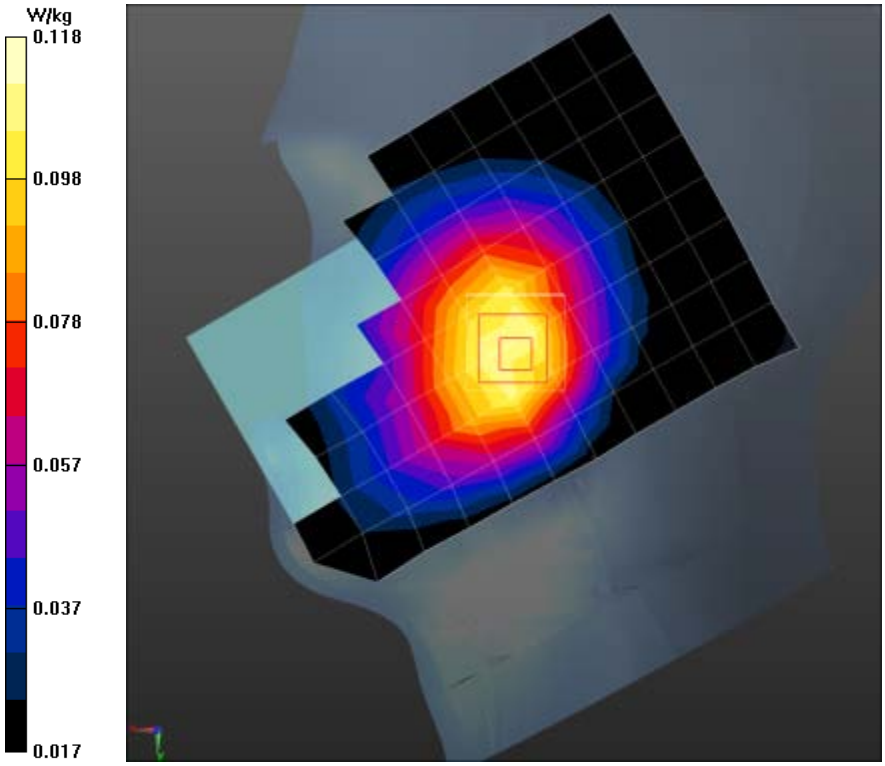
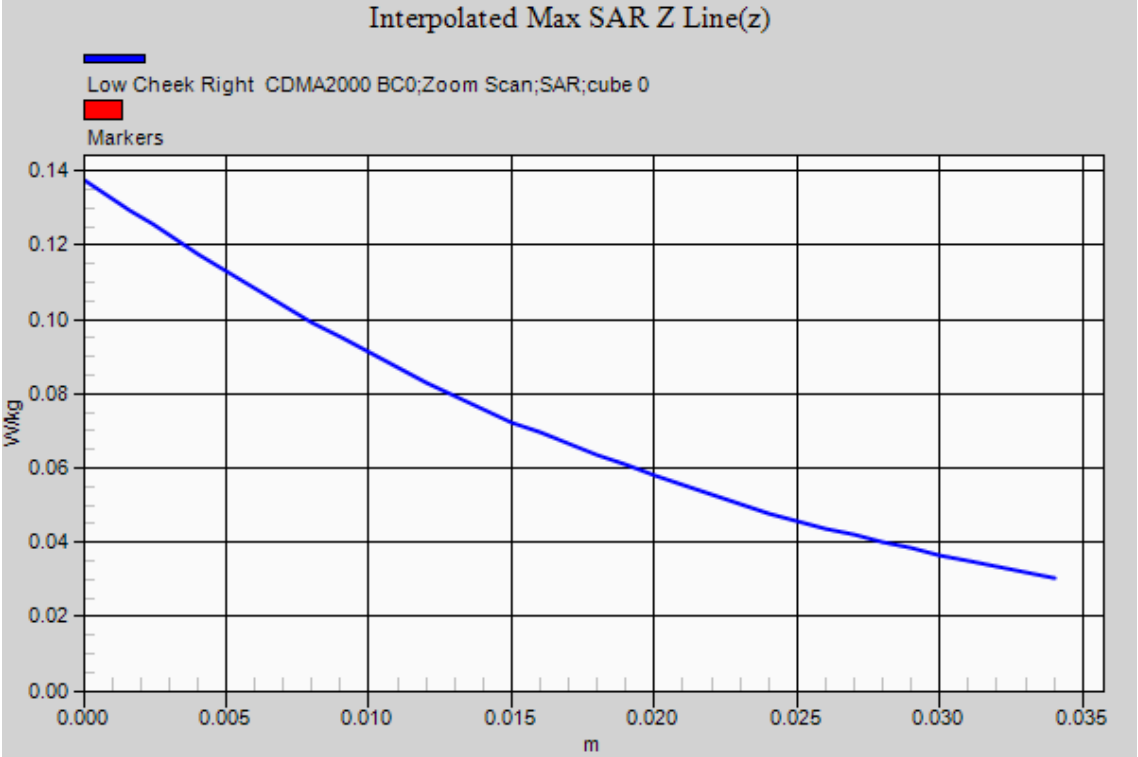


Fig.9 CDMA2000 BC0 Right Cheek Low


Interpolated Max SAR Z Line(z)
Low Cheek Right CDMA2000 BC0;Zoom Scan;SAR;cube 0
Markers
W/kg
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

CDMA2000 BC0 Body Toward Phantom High

Date/Time: 2017/3/14
Electronics: DAE4 Sn797
Medium: Body 850MHz
Medium parameters used (interpolated): f = 848.31 MHz; σ = 1 S/m; εr = 54.388; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CDMA2000 BC0; Frequency: 848.31 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(9.99, 9.99, 9.99);
High Toward Phantom CDMA2000 BC0/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.224 W/kg
High Toward Phantom CDMA2000 BC0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.901 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.374 W/kg
SAR(1 g) = 0.205 W/kg; SAR(10 g) = 0.117 W/kg
Maximum value of SAR (measured) = 0.226 W/kg

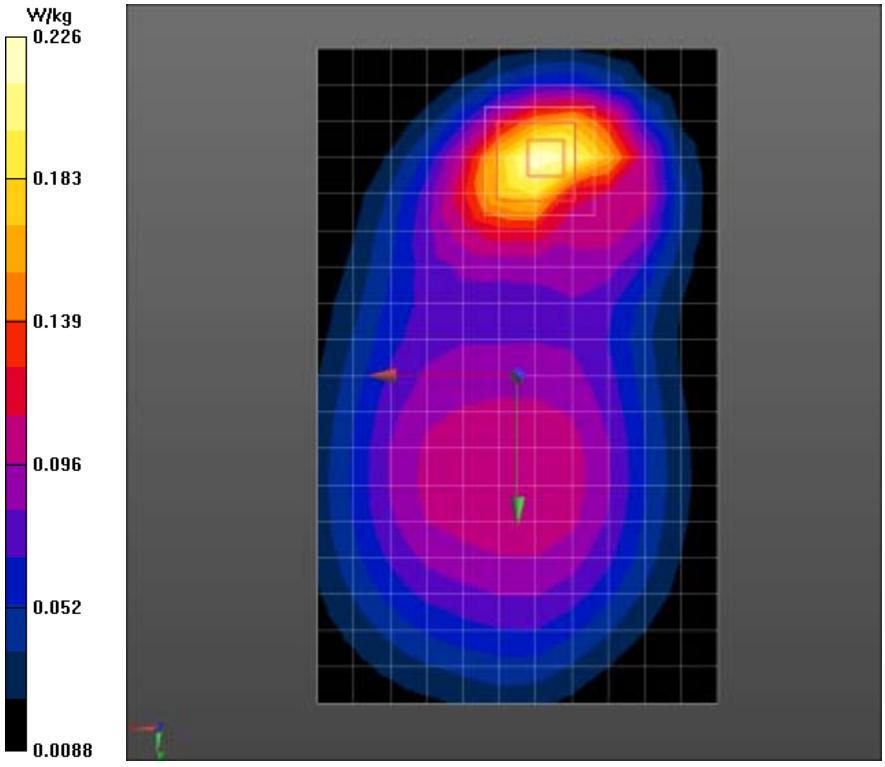
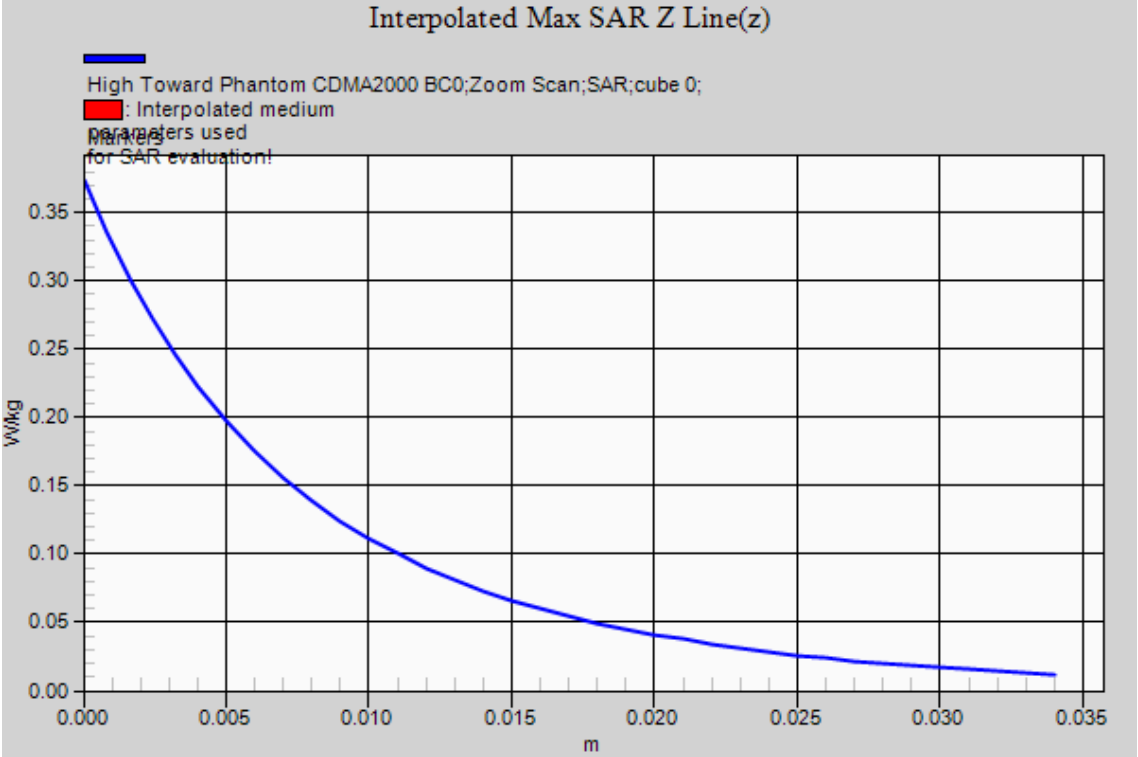


Fig.10 CDMA2000 BC0 Phantom Mode High 10mm


Interpolated Max SAR Z Line(z)
High Toward Phantom CDMA2000 BC0;Zoom Scan;SAR;cube 0;
: Interpolated medium
parameters used
for SAR evaluation!
Markers
W/kg
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

CDMA2000 BC1 Head Right Check Low

Date/Time: 2017/3/12
Electronics: DAE4 Sn797
Medium: Head 1900MHz
Medium parameters used (interpolated): f = 1851.3 MHz; σ = 1.351 S/m; εr = 40.132; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CDMA2000 BC1; Frequency: 1851.3 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(8.17, 8.17, 8.17);
Low Cheek Right CDMA2000 BC1/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.209 W/kg
Low Cheek Right CDMA2000 BC1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.298 W/kg
SAR(1 g) = 0.194 W/kg; SAR(10 g) = 0.119 W/kg
Maximum value of SAR (measured) = 0.211 W/kg

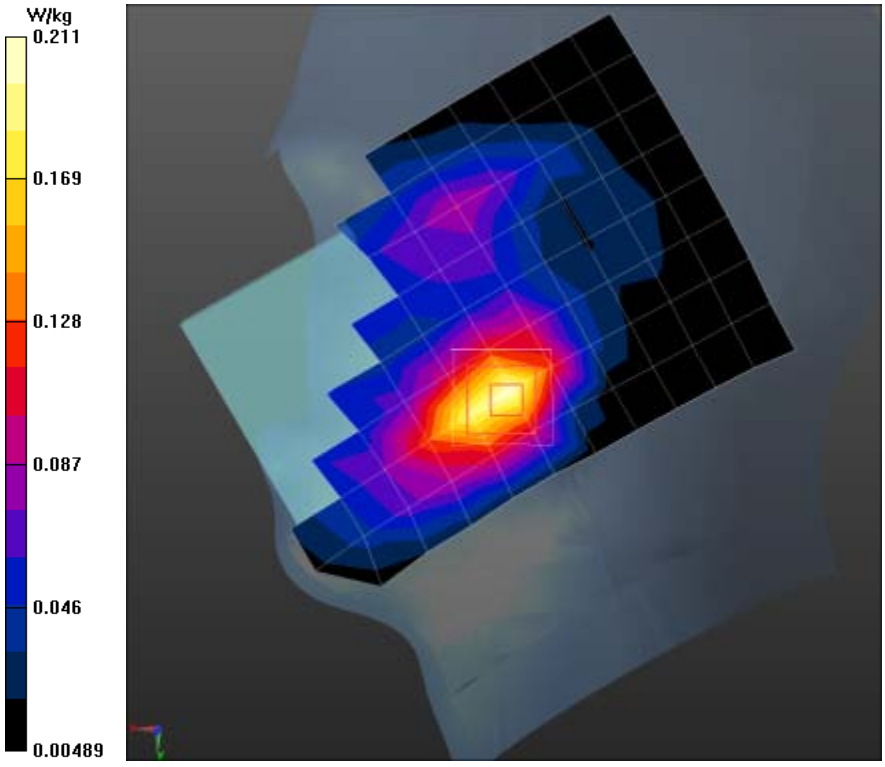
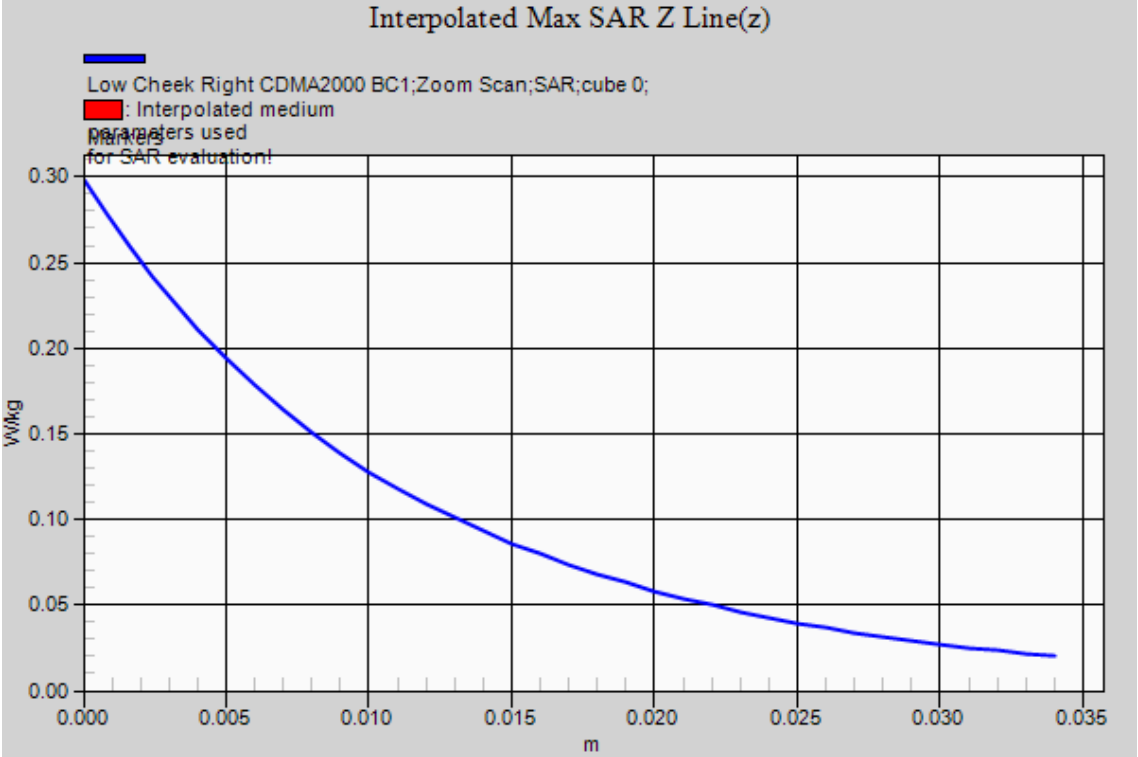


Fig.11 CDMA2000 BC1 Right Cheek Low


Interpolated Max SAR Z Line(z)
Low Cheek Right CDMA2000 BC1;Zoom Scan;SAR;cube 0;
: Interpolated medium
parameters used
for SAR evaluation!
0.30
0.25
0.20
0.15
0.10
0.05
0.00
W/kg
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Address：No. 8,Yuma Road, Chayuan New City, Nan'an District, Chongqing, P. R. China,401336 Tel：0086-23-88069965
FAX:0086-23-88608777

CDMA2000 BC1 Body Toward Phantom Low

Date/Time: 2017/3/28
Electronics: DAE4 Sn797
Medium: Body 1900MHz
Medium parameters used (interpolated): f = 1851.3 MHz; σ = 1.46 S/m; εr = 51.132; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CDMA2000 BC1; Frequency: 1851.3 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.93, 7.93, 7.93);
Low Toward Phantom CDMA2000 BC1/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.783 W/kg
Low Toward Phantom CDMA2000 BC1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.74 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.717 W/kg; SAR(10 g) = 0.377 W/kg
Maximum value of SAR (measured) = 0.819 W/kg

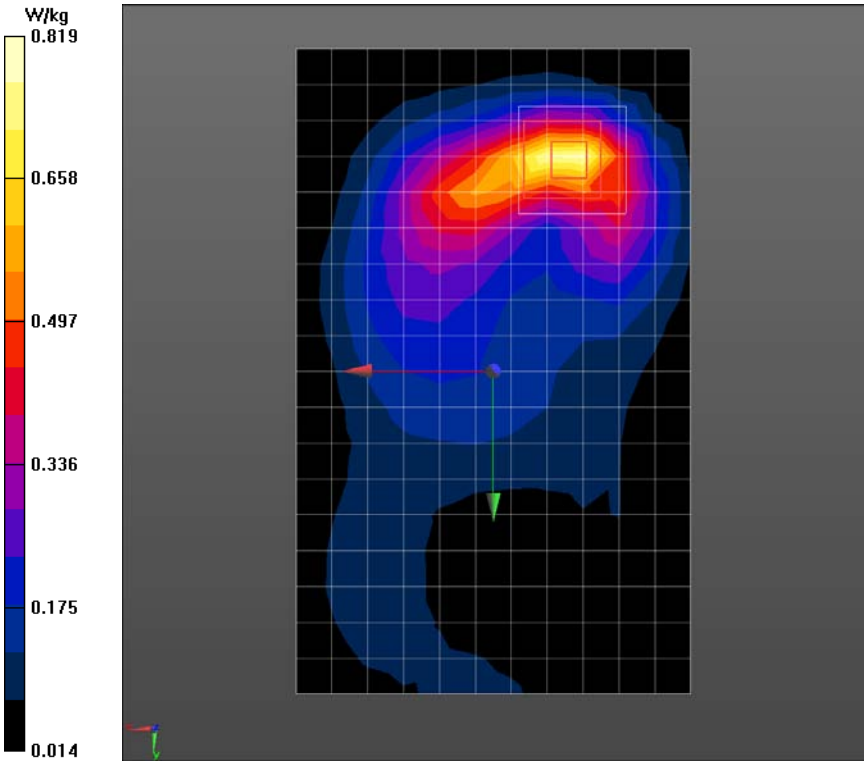
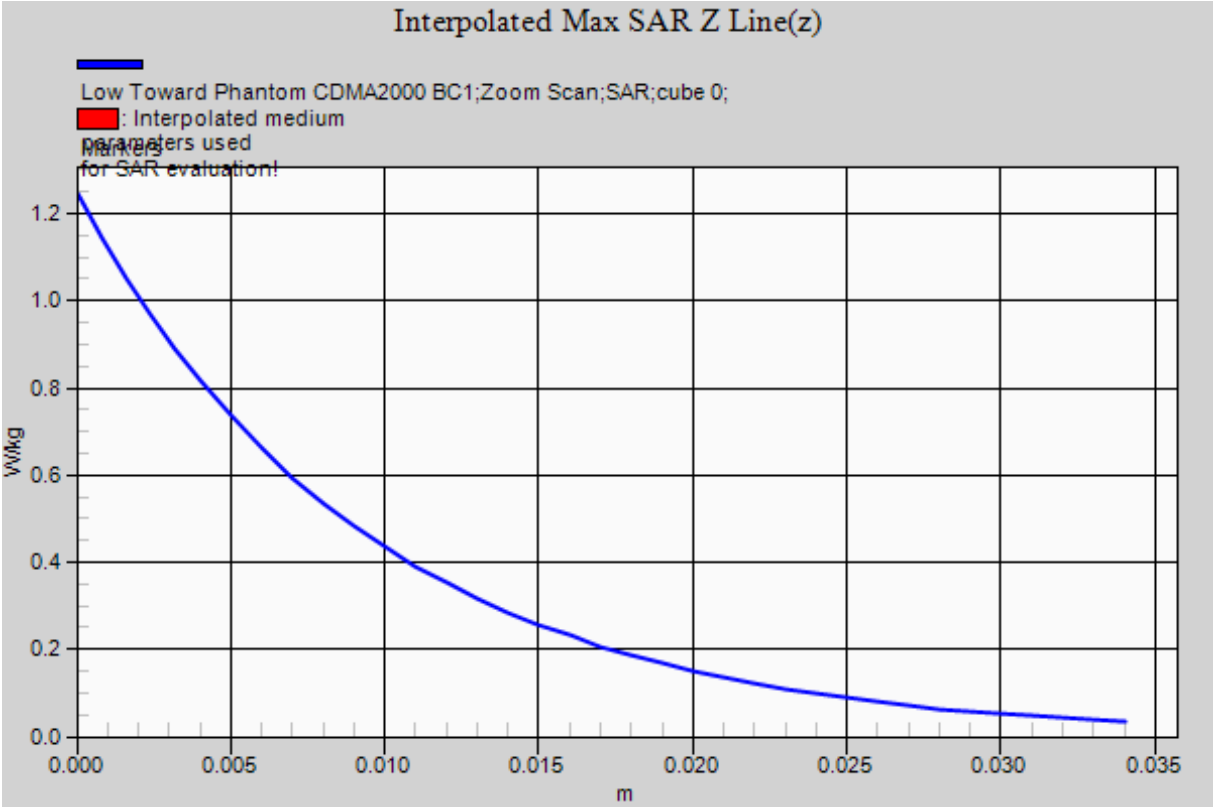


Fig.12 CDMA2000 BC1 Phantom Mode Low 10mm


Interpolated Max SAR Z Line(z)
Low Toward Phantom CDMA2000 BC1;Zoom Scan;SAR;cube 0;
: Interpolated medium
parameters used
for SAR evaluation!
Markers
1.2
1.0
0.8
0.6
0.4
0.2
0.0
W/kg
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

CDMA2000 BC1 Body Toward Bottom Middle

Date/Time: 2017/3/28
Electronics: DAE4 Sn797
Medium: Body 1900MHz
Medium parameters used: f = 1880 MHz; σ = 1.484 S/m; εr = 50.897; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CDMA2000 BC1; Frequency: 1908.8 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.93, 7.93, 7.93);
Middle Toward Bottom CDMA2000 BC1/Area Scan (5x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.02 W/kg
Middle Toward Bottom CDMA2000 BC1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.04 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.80 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.555 W/kg
Maximum value of SAR (measured) = 1.15 W/kg

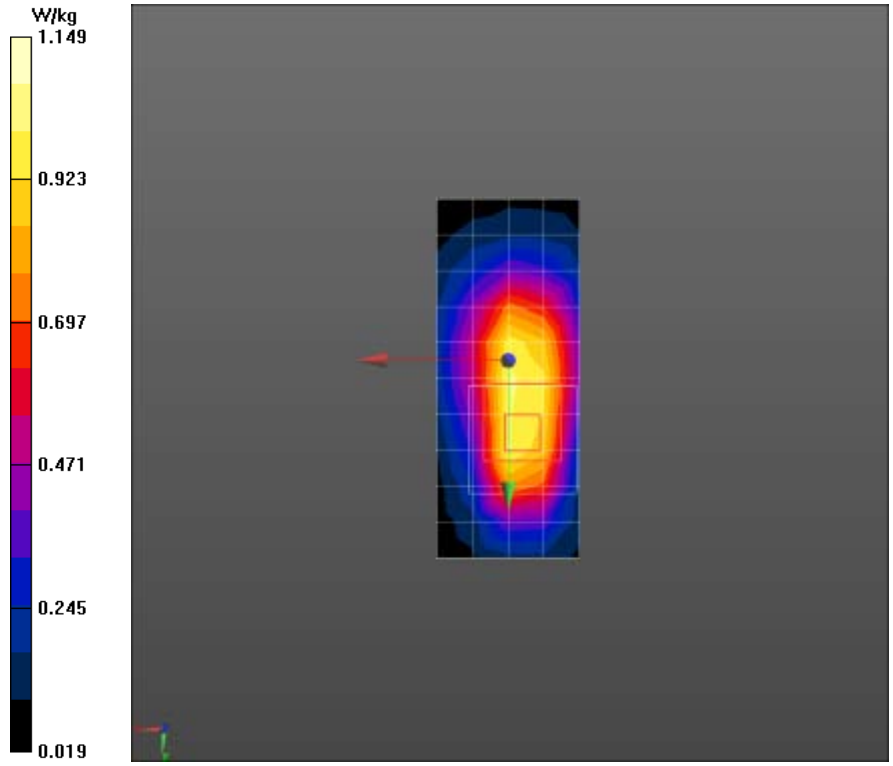
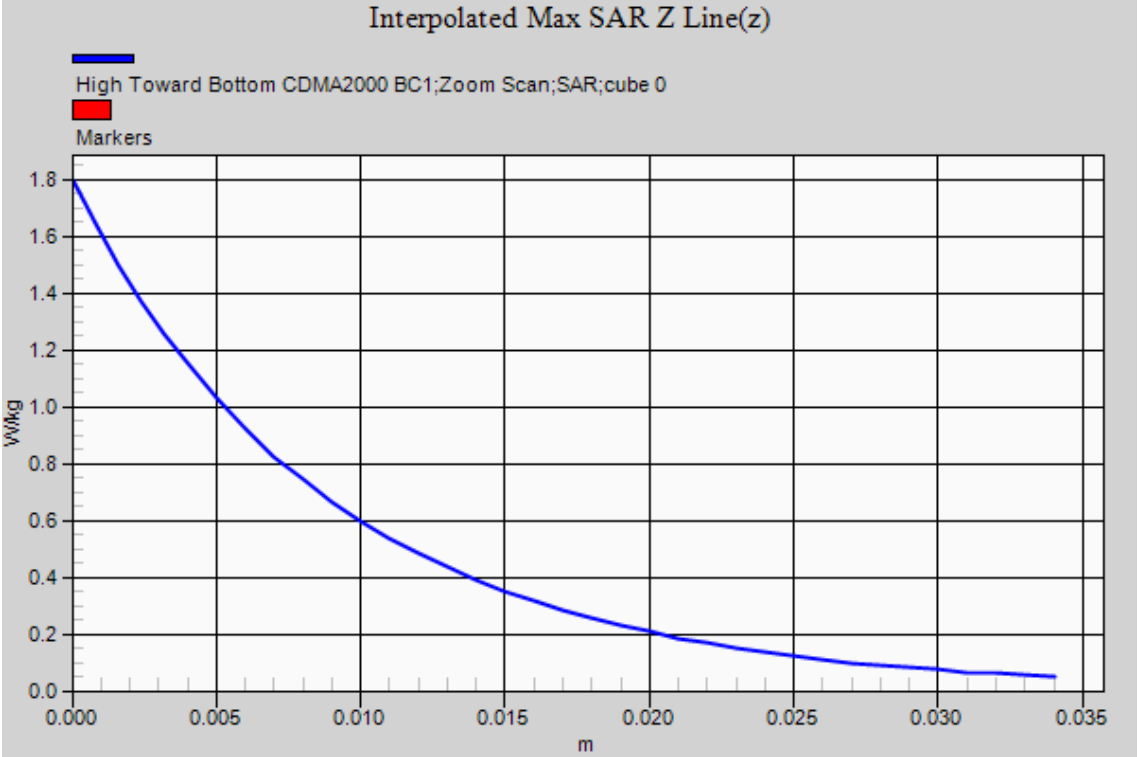


Fig.13 CDMA2000 BC1 Bottom Mode Middle 10mm


Interpolated Max SAR Z Line(z)
High Toward Bottom CDMA2000 BC1;Zoom Scan;SAR;cube 0
Markers
W/kg
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

LTE Band 7 20MHz 1RB Head Right Check High

Date/Time: 2017/3/16
Electronics: DAE4 Sn797
Medium: Head 2600MHz
Medium parameters used: f = 2560 MHz; σ = 1.947 S/m; εr = 38.115; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.42, 7.42, 7.42);
High Cheek Right LTE Band 7 20MHz 1RB/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.109 W/kg
High Cheek Right LTE Band 7 20MHz 1RB/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.165 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.226 W/kg
SAR(1 g) = 0.120 W/kg; SAR(10 g) = 0.060 W/kg
Maximum value of SAR (measured) = 0.134 W/kg

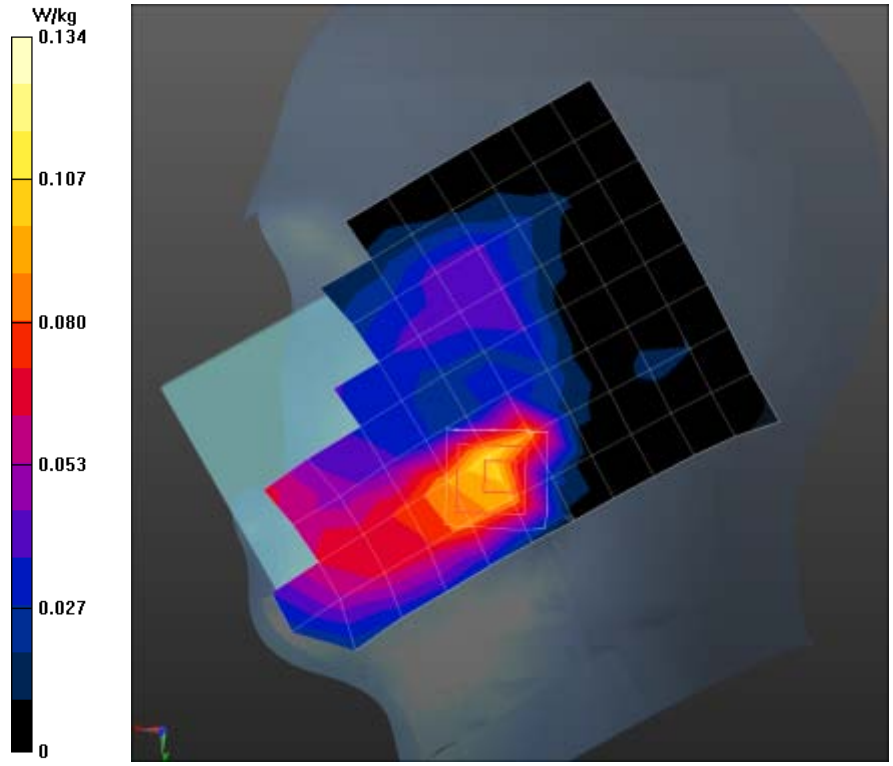
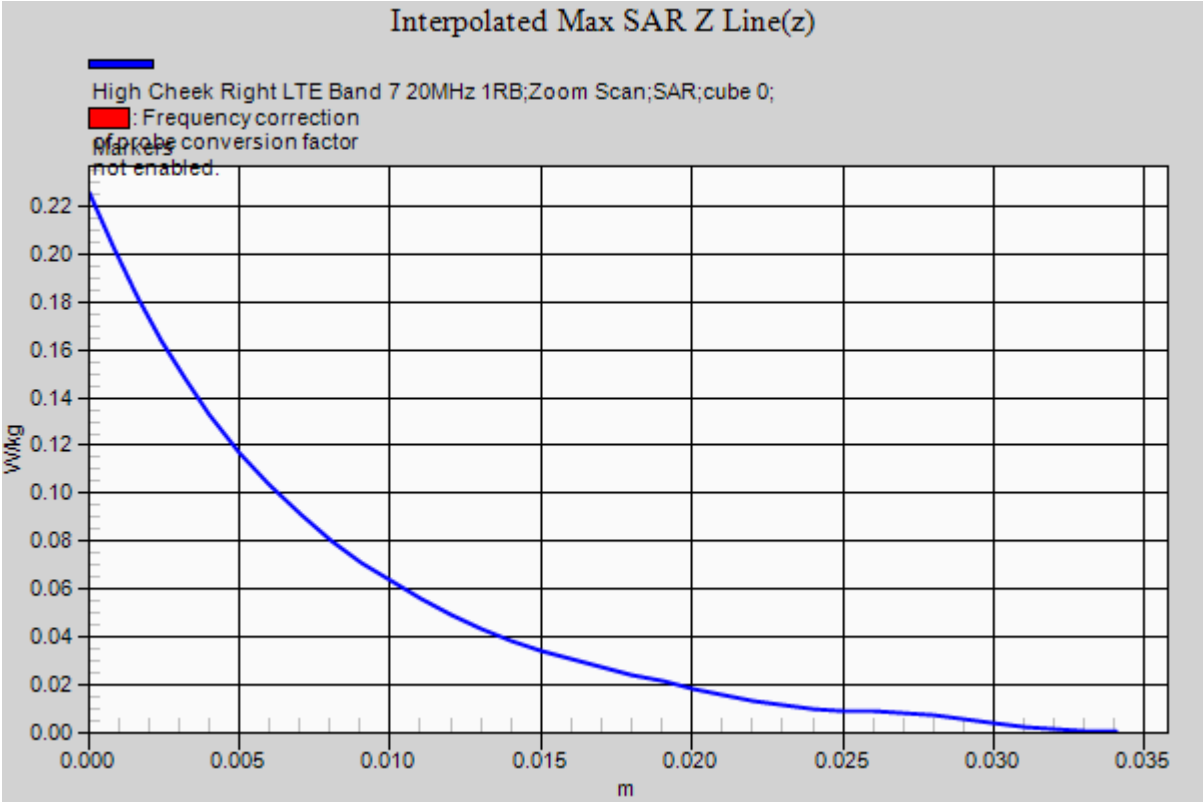


Fig.14 LTE Bnad7 Right Cheek High


Interpolated Max SAR Z Line(z)
High Cheek Right LTE Band 7 20MHz 1RB;Zoom Scan;SAR;cube 0;
: Frequency correction
of probe conversion factor
Markers
not enabled.
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
W/kg
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

LTE Band 7 20MHz 1RB Body Toward Phantom High

Date/Time: 2017/3/15
Electronics: DAE4 Sn797
Medium: Body 2600MHz
Medium parameters used: f = 2560 MHz; σ = 2.126 S/m; εr = 51.138; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.39, 7.39, 7.39);
High Toward Phantom LTE Band 7 20MHz 1RB/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.604 W/kg
High Toward Phantom LTE Band 7 20MHz 1RB/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.268 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.12 W/kg
SAR(1 g) = 0.582 W/kg; SAR(10 g) = 0.281 W/kg
Maximum value of SAR (measured) = 0.673 W/kg

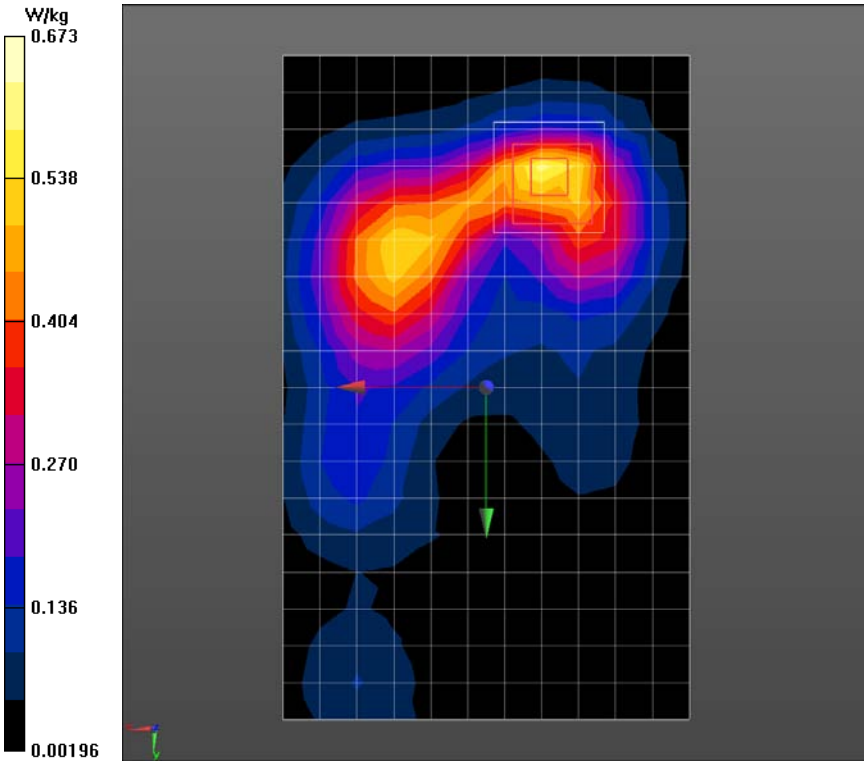
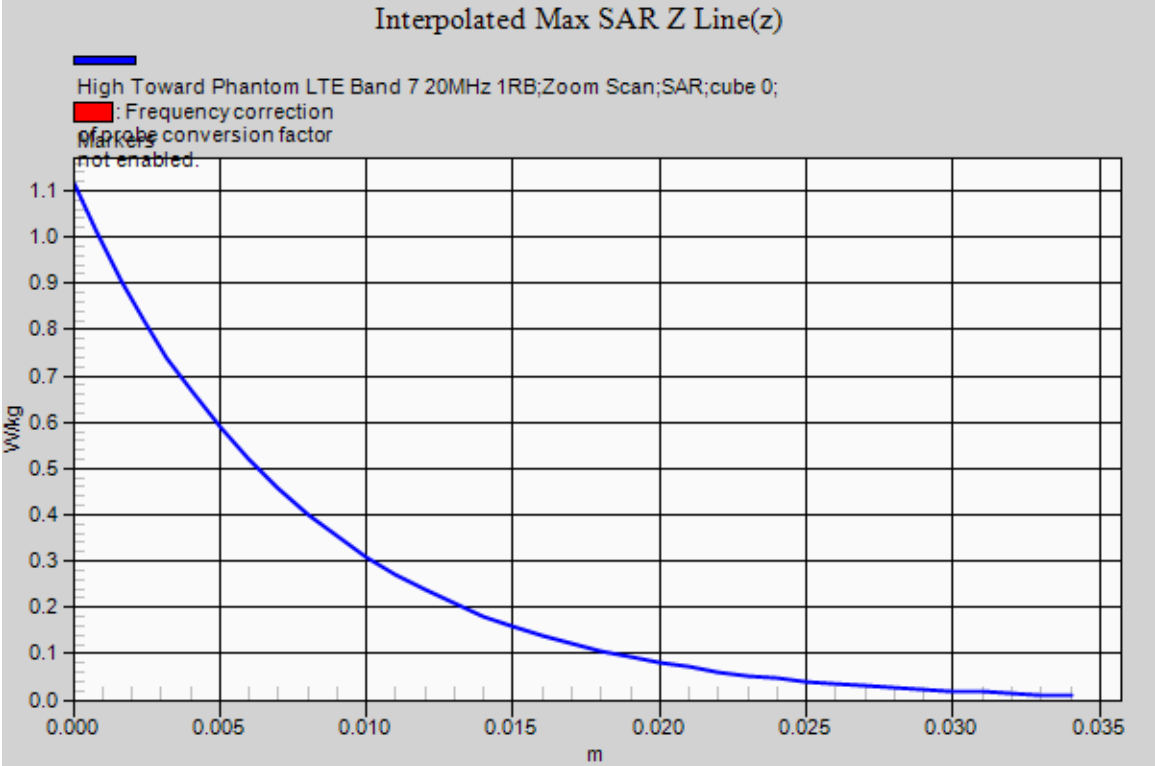


Fig.15 LTE Band7 Phantom Mode High 10mm


Interpolated Max SAR Z Line(z)
High Toward Phantom LTE Band 7 20MHz 1RB;Zoom Scan;SAR;cube 0;
: Frequency correction
of probe conversion factor
Markers
not enabled.
W/kg
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

LTE Band 7 20MHz 1RB Body Toward Bottom High

Date/Time: 2017/3/15
Electronics: DAE4 Sn797
Medium: Body 2600MHz
Medium parameters used: f = 2560 MHz; σ = 2.126 S/m; εr = 51.138; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.39, 7.39, 7.39);
High Toward Bottom LTE Band 7 20MHz 1RB/Area Scan (5x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.637 W/kg
High Toward Bottom LTE Band 7 20MHz 1RB/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.67 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.600 W/kg; SAR(10 g) = 0.274 W/kg
Maximum value of SAR (measured) = 0.697 W/kg

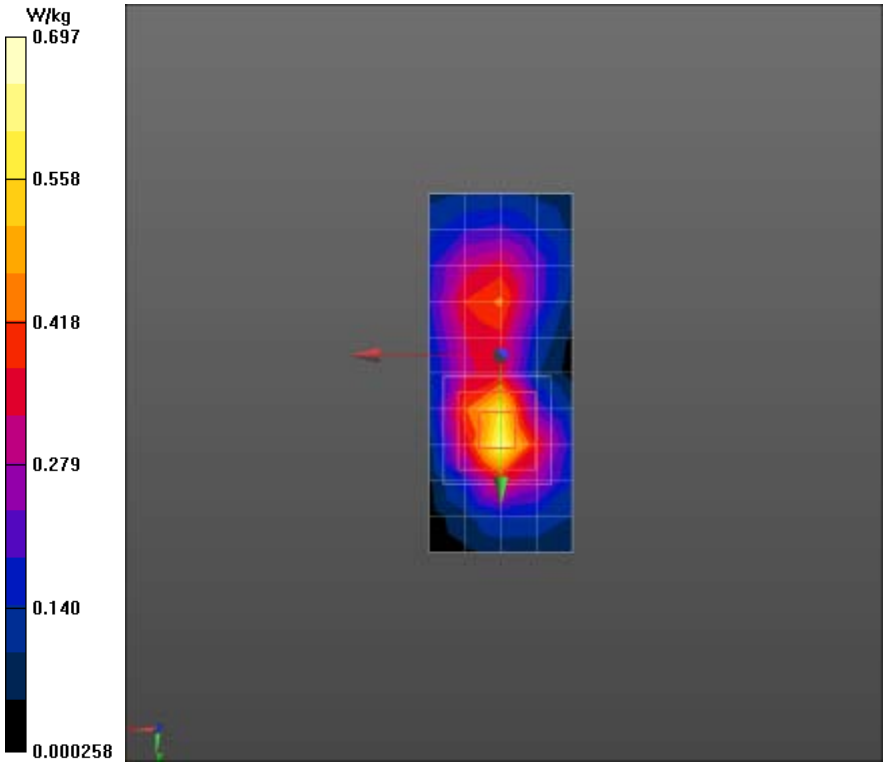
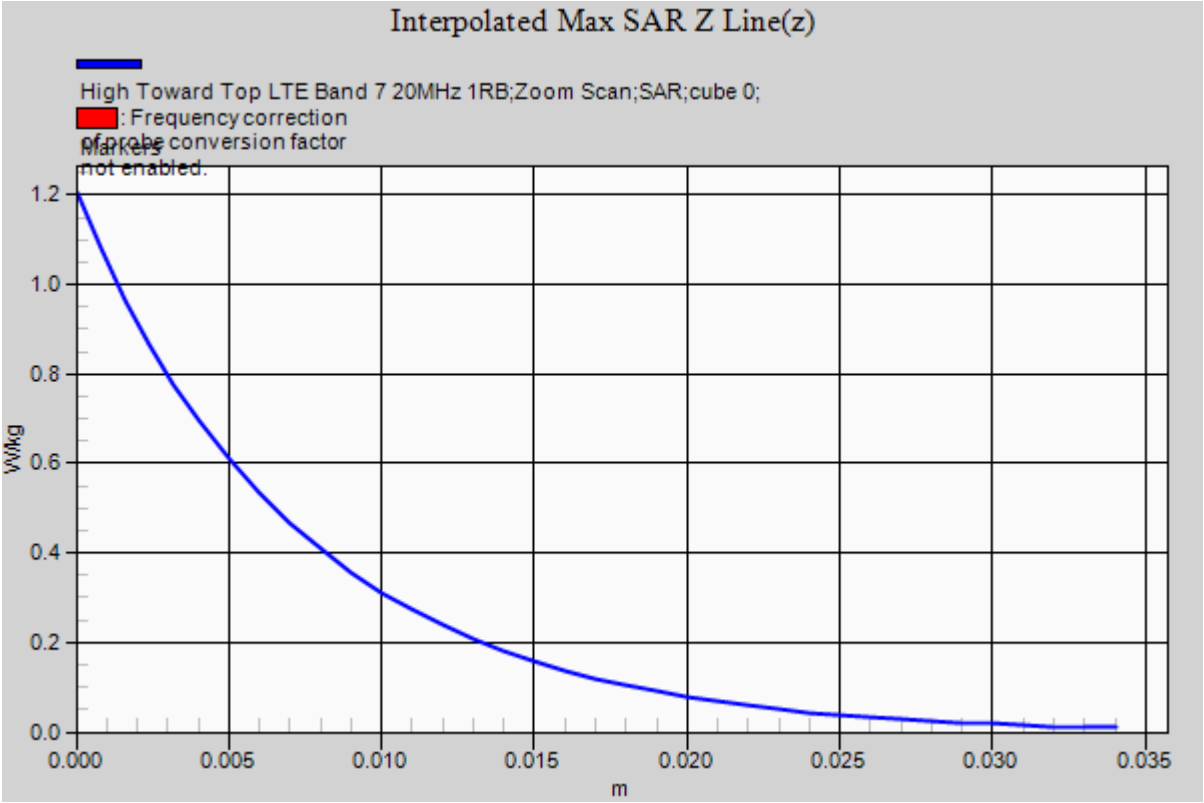


Fig.16 LTE Band7 Bottom Mode High 10mm


Interpolated Max SAR Z Line(z)
High Toward Top LTE Band 7 20MHz 1RB;Zoom Scan;SAR;cube 0;
: Frequency correction
of probe conversion factor
Markers
not enabled.
1.2
1.0
0.8
0.6
0.4
0.2
0.0
W/kg
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

LTE Band 41 20MHz 1RB Head Right Check High

Date/Time: 2017/3/16
Electronics: DAE4 Sn797
Medium: Head 2600MHz
Medium parameters used: f = 2680 MHz; σ = 2.076 S/m; εr = 37.624; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: LTE Band 41; Frequency: 2680 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.42, 7.42, 7.42);
High Cheek Right LTE Band 41 20MHz 1RB/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0539 W/kg
High Cheek Right LTE Band 41 20MHz 1RB/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.121 W/kg
SAR(1 g) = 0.061 W/kg; SAR(10 g) = 0.030 W/kg
Maximum value of SAR (measured) = 0.0680 W/kg

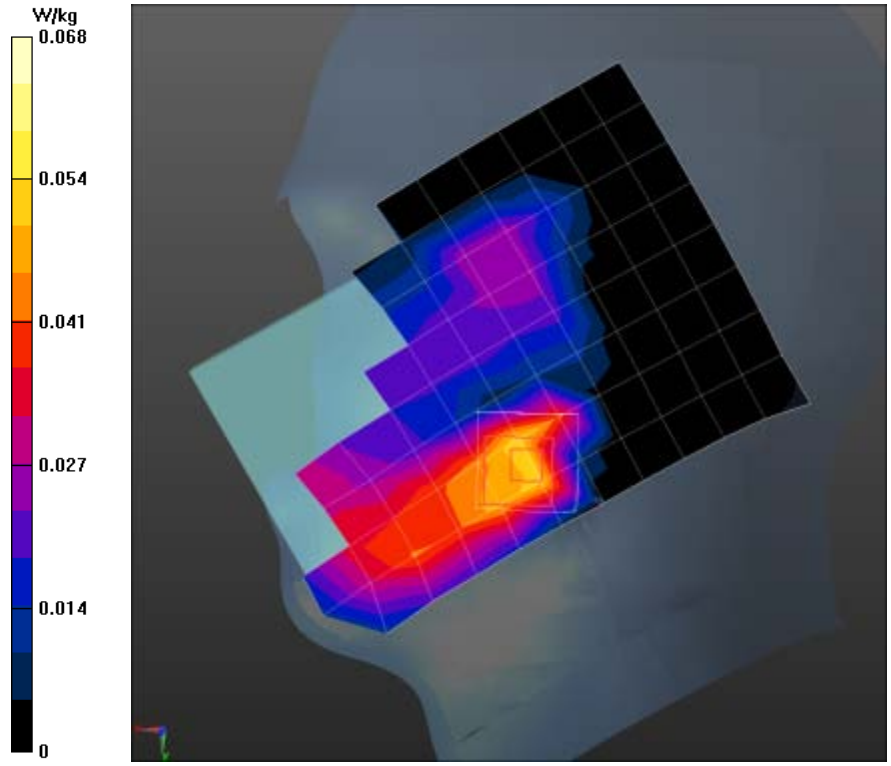
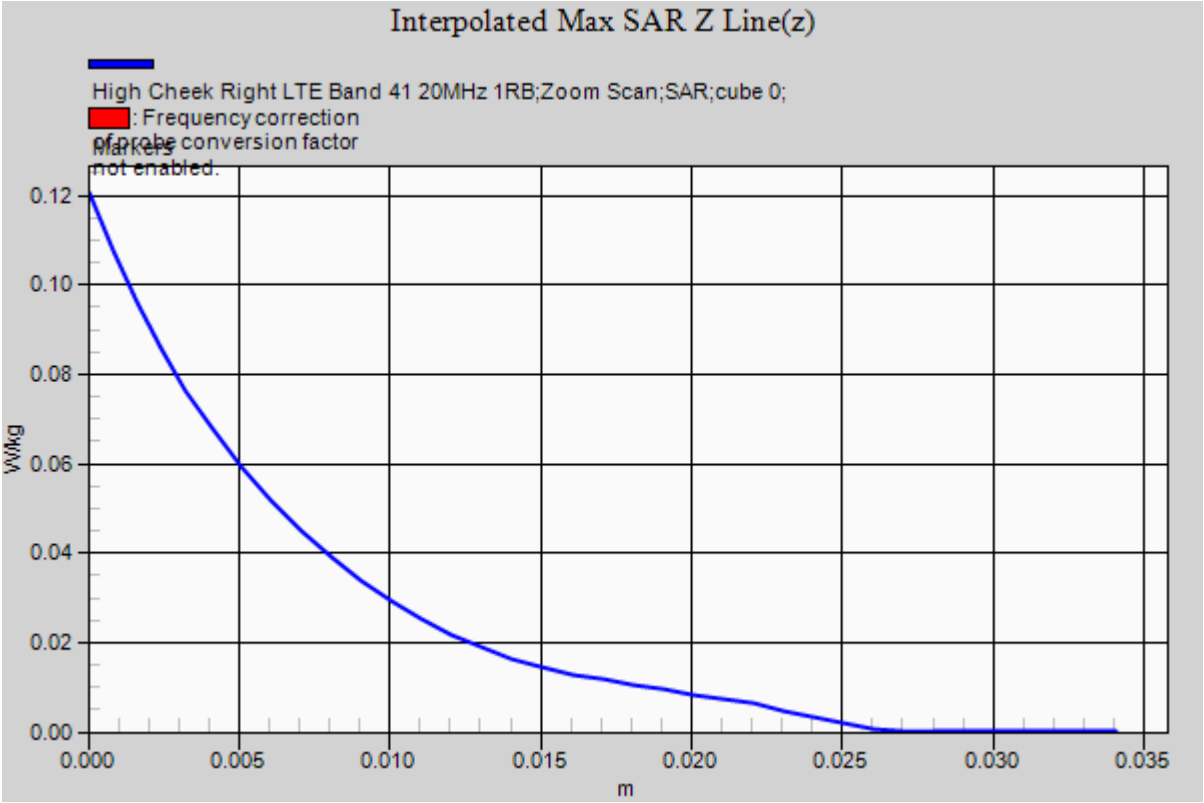


Fig.17 LTE Band41 Right Cheek High


Interpolated Max SAR Z Line(z)
High Cheek Right LTE Band 41 20MHz 1RB;Zoom Scan;SAR;cube 0;
: Frequency correction
of probe conversion factor
Markers
not enabled.
0.12
0.10
0.08
0.06
0.04
0.02
0.00
W/kg
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

LTE Band 41 20MHz 1RB Body Toward Phantom High

Date/Time: 2017/3/15
Electronics: DAE4 Sn797
Medium: Body 2600MHz
Medium parameters used: f = 2680 MHz; σ = 2.322 S/m; εr = 50.249; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: LTE Band 41; Frequency: 2680 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.39, 7.39, 7.39);
High Toward Phantom LTE Band 41 20MHz 1RB/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.367 W/kg
High Toward Phantom LTE Band 41 20MHz 1RB/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.785 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.693 W/kg
SAR(1 g) = 0.353 W/kg; SAR(10 g) = 0.173 W/kg
Maximum value of SAR (measured) = 0.399 W/kg

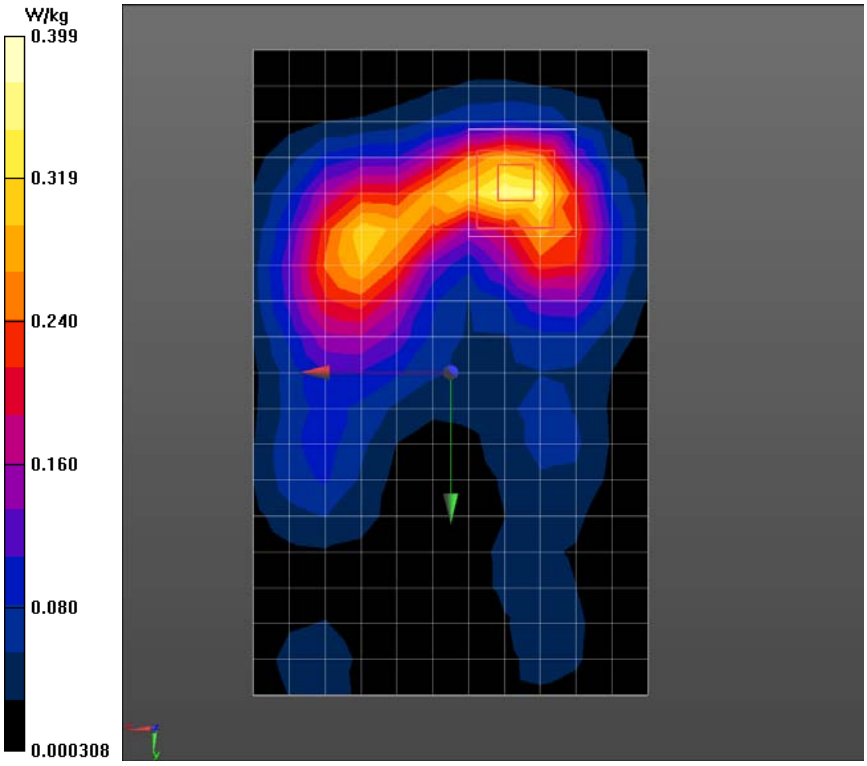
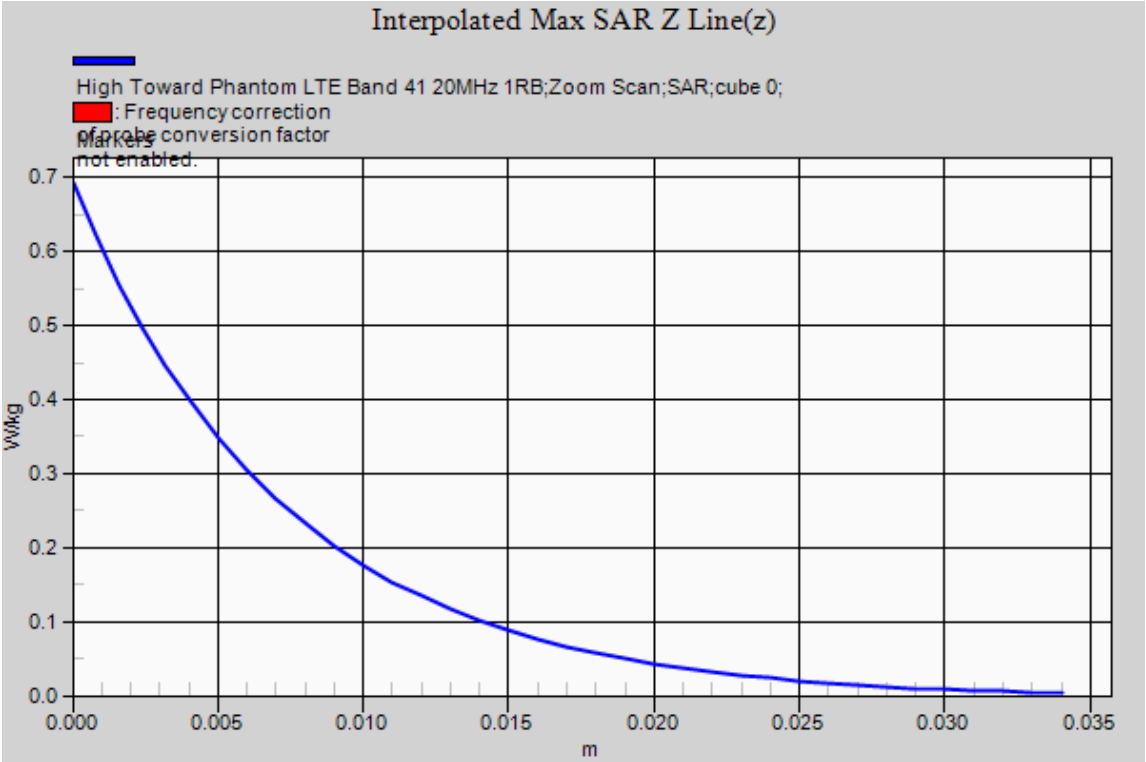


Fig.18 LTE Band41 Phantom Mode High 10mm


Interpolated Max SAR Z Line(z)
High Toward Phantom LTE Band 41 20MHz 1RB;Zoom Scan;SAR;cube 0;
: Frequency correction
of probe conversion factor
Markers
not enabled.
W/kg
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

LTE Band 41 20MHz 1RB Body Toward Bottom High

Date/Time: 2017/3/15
Electronics: DAE4 Sn797
Medium: Body 2600MHz
Medium parameters used: f = 2680 MHz; σ = 2.322 S/m; εr = 50.249; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: LTE Band 41; Frequency: 2680 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.39, 7.39, 7.39);
High Toward Bottom LTE Band 41 20MHz 1RB/Area Scan (5x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.470 W/kg
High Toward Bottom LTE Band 41 20MHz 1RB/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.281 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.848 W/kg
SAR(1 g) = 0.424 W/kg; SAR(10 g) = 0.195 W/kg
Maximum value of SAR (measured) = 0.490 W/kg

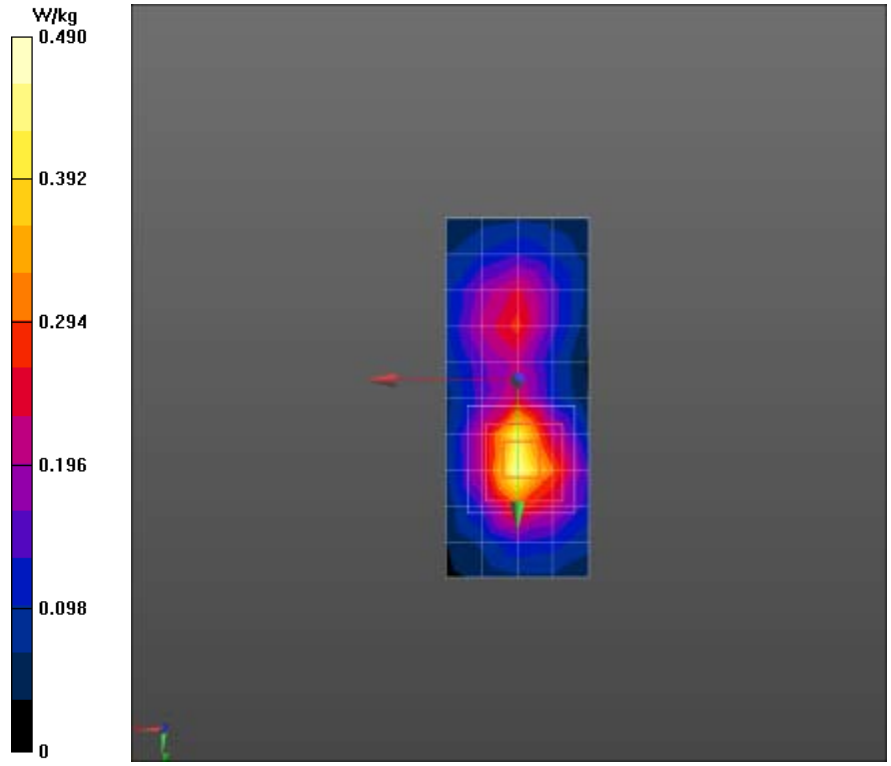
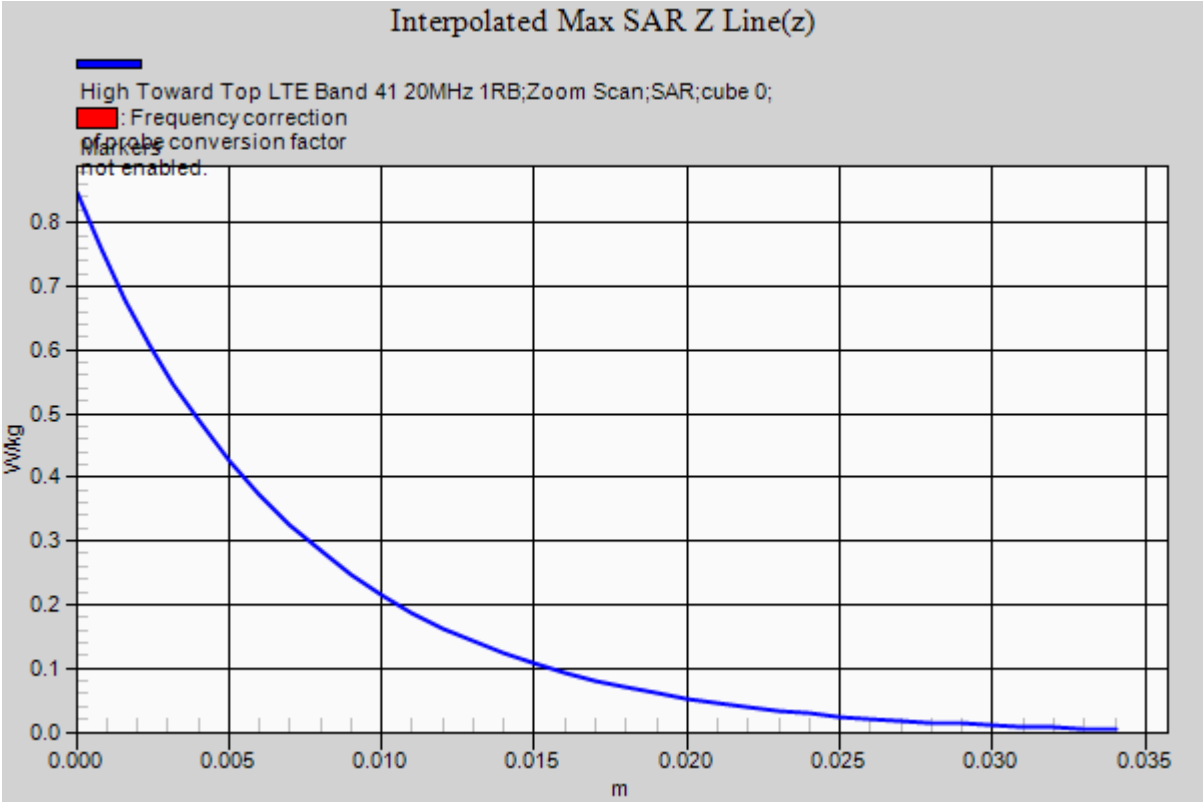


Fig.19 LTE Band41 Bottom Mode High 10mm


Interpolated Max SAR Z Line(z)
High Toward Top LTE Band 41 20MHz 1RB;Zoom Scan;SAR;cube 0;
: Frequency correction
of probe conversion factor
Markers
not enabled.
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
W/kg
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Wi-Fi 802.11b Antenna1 Head Left Tilt CH6

Date/Time: 2017/3/17
Electronics: DAE4 Sn797
Medium: Head 2450MHz
Medium parameters used: f = 2437 MHz; σ = 1.818 S/m; εr = 38.658; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 2437 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.54, 7.54, 7.54);
CH6 Tilt Left WiFi 802.11b Chain0/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.369 W/kg
CH6 Tilt Left WiFi 802.11b Chain0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.37 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.787 W/kg
SAR(1 g) = 0.334 W/kg; SAR(10 g) = 0.140 W/kg
Maximum value of SAR (measured) = 0.376 W/kg

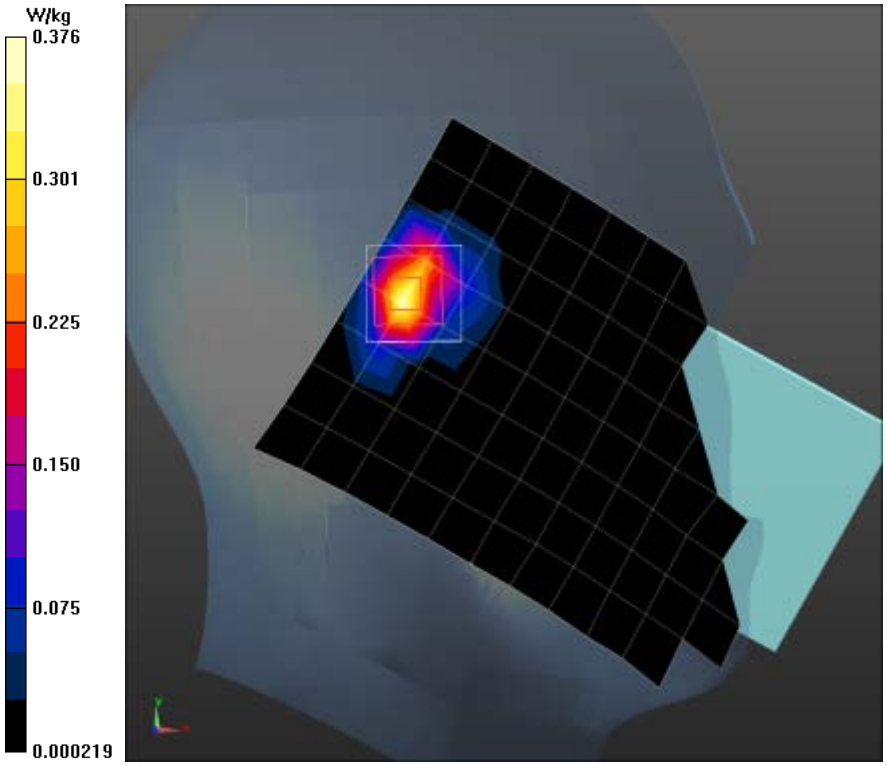
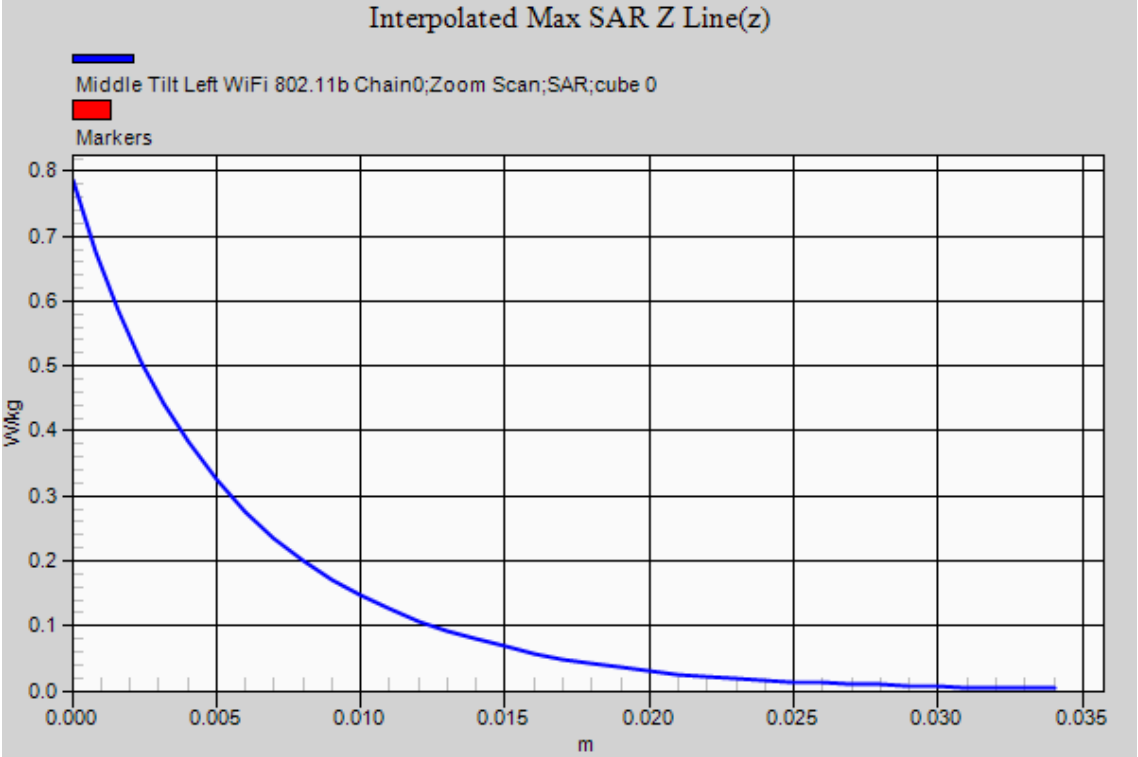


Fig.20 WiFi 802.11b Left Tilt CH6


Interpolated Max SAR Z Line(z)
Middle Tilt Left WiFi 802.11b Chain0;Zoom Scan;SAR;cube 0
Markers
W/kg
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Wi-Fi 802.11b Antenna1 Body Toward Phantom CH6

Date/Time: 2017/3/17
Electronics: DAE4 Sn797
Medium: Body 2450MHz
Medium parameters used: f = 2437 MHz; σ = 1.937 S/m; εr = 52.036; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 2437 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.56, 7.56, 7.56);
Middle Toward Phantom WiFi 802.11b Chain0/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.0721 W/kg
Middle Toward Phantom WiFi 802.11b Chain0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.129 W/kg
SAR(1 g) = 0.067 W/kg; SAR(10 g) = 0.032 W/kg
Maximum value of SAR (measured) = 0.0764 W/kg

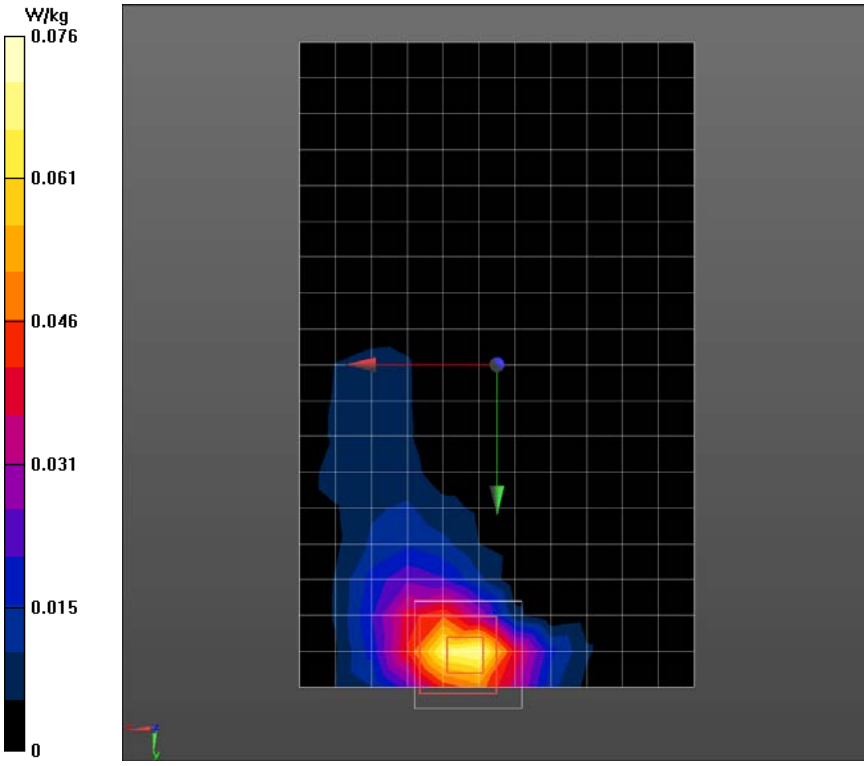
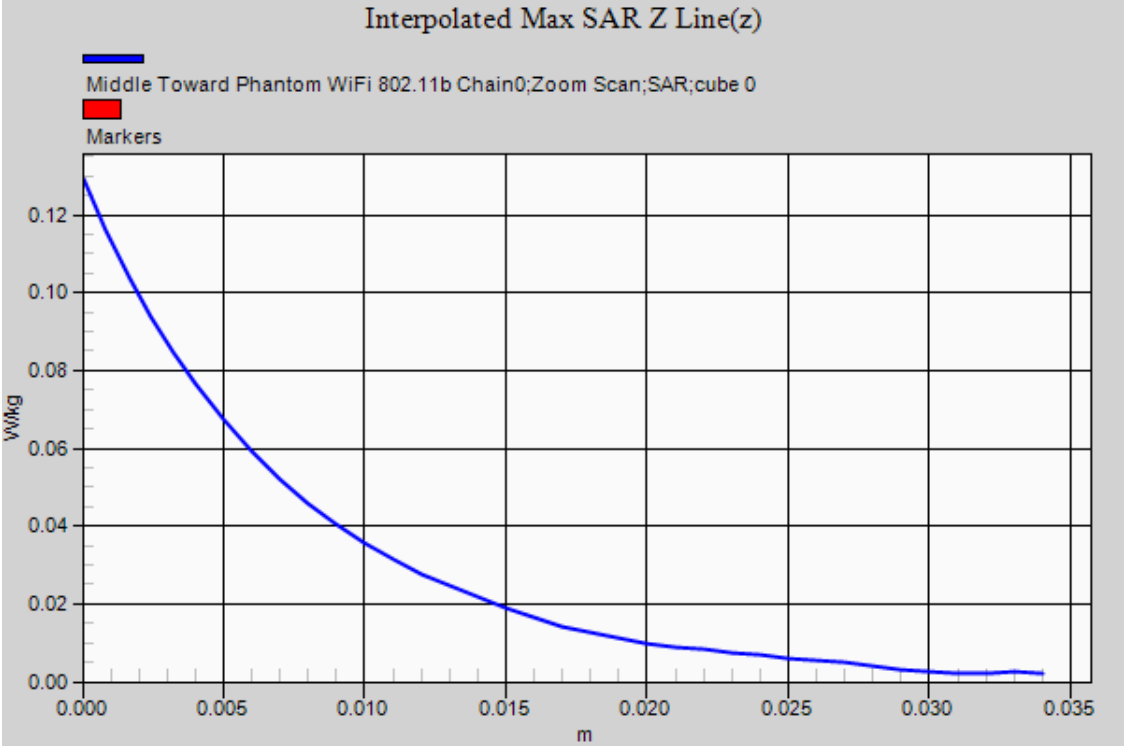


Fig.21 WiFi 802.11b Phantom Mode CH6 10mm


Interpolated Max SAR Z Line(z)
Middle Toward Phantom WiFi 802.11b Chain0;Zoom Scan;SAR;cube 0
Markers
0.12
0.10
0.08
0.06
0.04
0.02
0.00
W/kg
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Wi-Fi 802.11b Antenna1 Body Toward Top CH6

Date/Time: 2017/3/17
Electronics: DAE4 Sn797
Medium: Body 2450MHz
Medium parameters used: f = 2437 MHz; σ = 1.937 S/m; εr = 52.036; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 2437 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.56, 7.56, 7.56);
CH6 Toward Top WiFi 802.11b Chain0/Area Scan (5x11x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.0919 W/kg
CH6 Toward Top WiFi 802.11b Chain0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.621 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.152 W/kg
SAR(1 g) = 0.082 W/kg; SAR(10 g) = 0.040 W/kg
Maximum value of SAR (measured) = 0.0925 W/kg

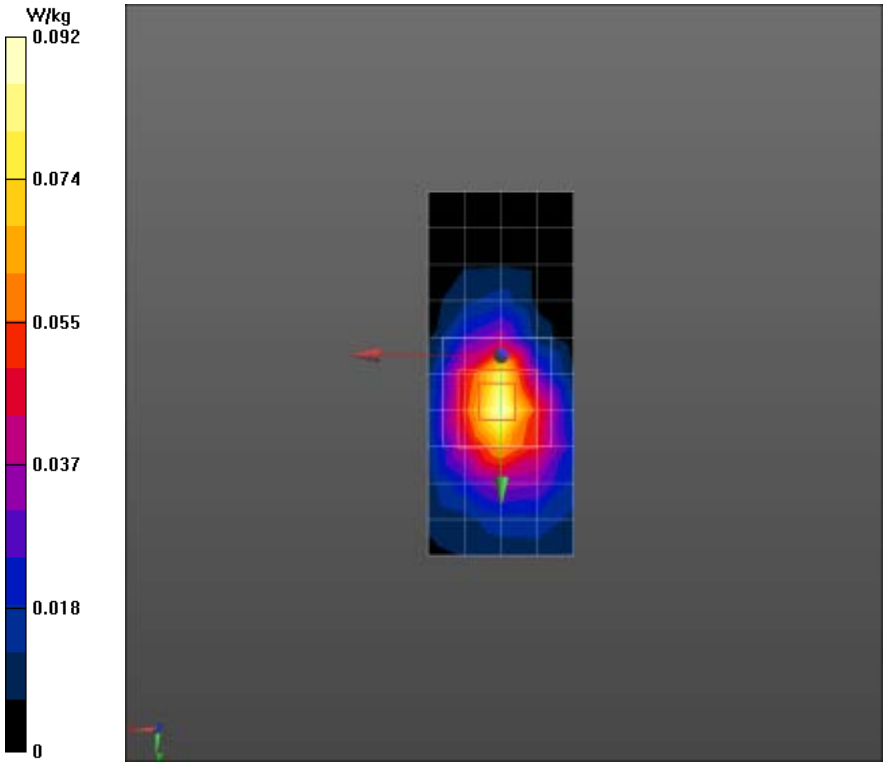
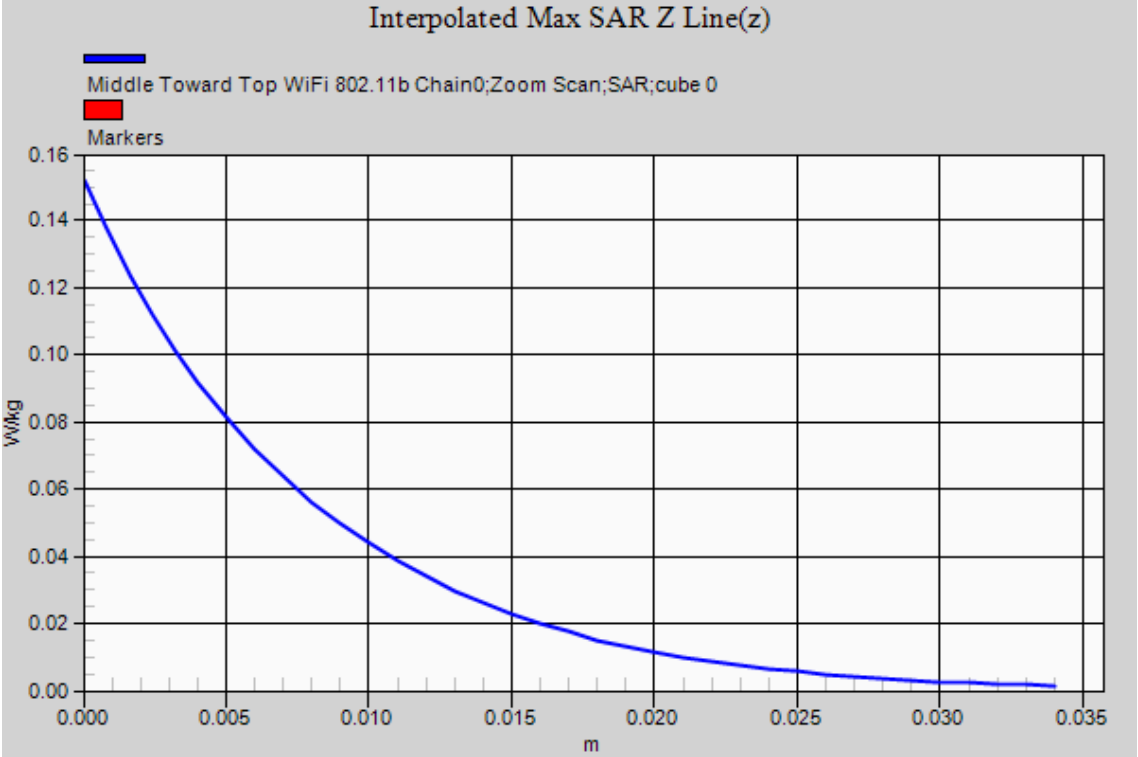


Fig.22 WiFi 802.11b Top Mode CH6 10mm


Interpolated Max SAR Z Line(z)
Middle Toward Top WiFi 802.11b Chain0;Zoom Scan;SAR;cube 0
Markers
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
W/kg
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Wi-Fi 802.11n 40MHz Antenna2 Head Right Cheek CH6

Date/Time: 2017/3/17
Electronics: DAE4 Sn797
Medium: Head 24500MHz
Medium parameters used: f = 2437 MHz; σ = 1.818 S/m; εr = 38.658; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 2437 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.54, 7.54, 7.54);
CH6 Cheek Right WiFi 802.11n 40MHz Chain1/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.263 W/kg
CH6 Cheek Right WiFi 802.11n 40MHz Chain1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.327 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.616 W/kg
SAR(1 g) = 0.248 W/kg; SAR(10 g) = 0.121 W/kg
Maximum value of SAR (measured) = 0.262 W/kg

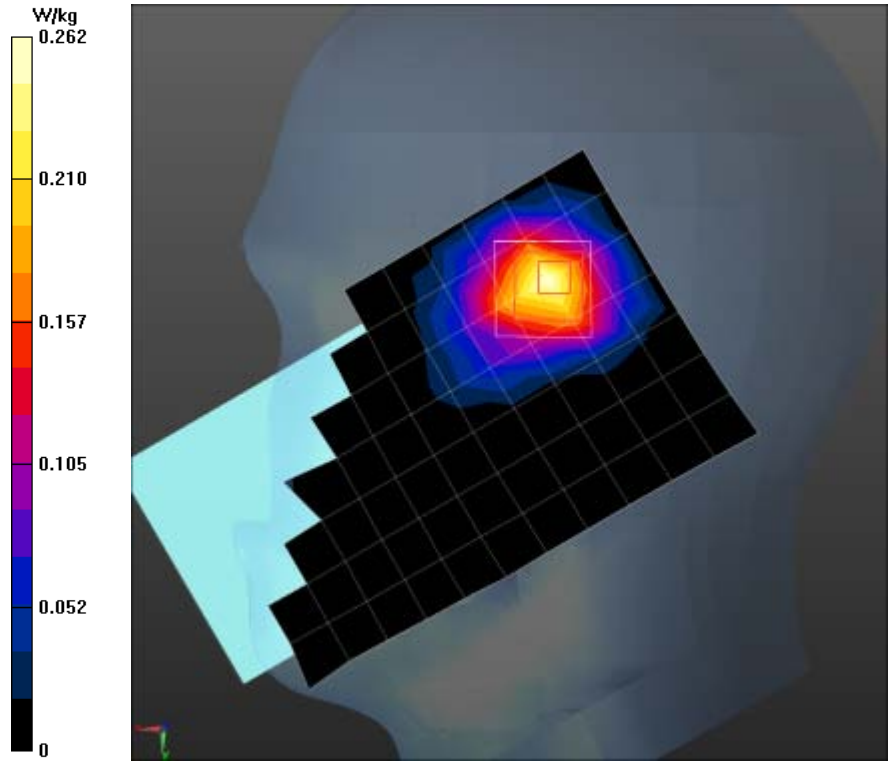
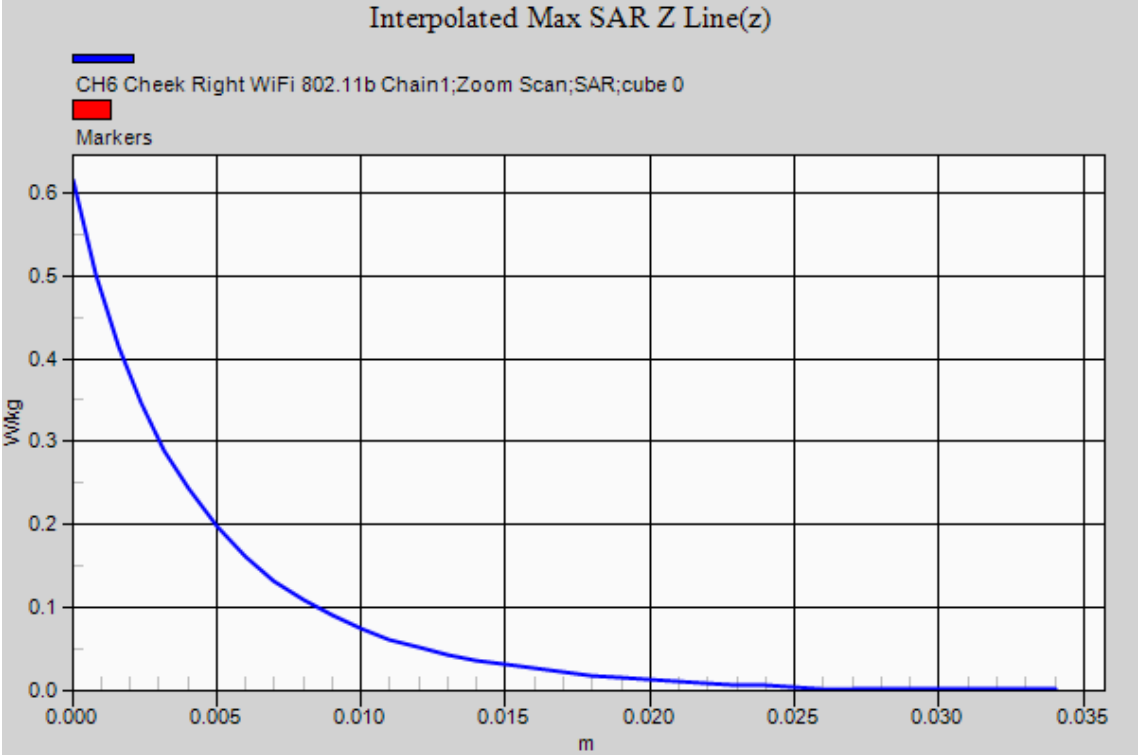


Fig.23 WiFi 802.11n 40MHz Right Cheek CH6


Interpolated Max SAR Z Line(z)
CH6 Cheek Right WiFi 802.11b Chain1;Zoom Scan;SAR;cube 0
Markers
W/kg
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Wi-Fi 802.11b Antenna2 Body Toward Phantom CH11

Date/Time: 2017/3/17
Electronics: DAE4 Sn797
Medium: Body 2450MHz
Medium parameters used: f = 2462 MHz; σ = 1.972 S/m; εr = 51.863; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 2462 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.56, 7.56, 7.56);
High Toward Phantom WiFi 802.11b Chain1/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.0251 W/kg
High Toward Phantom WiFi 802.11b Chain1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.513 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.0440 W/kg
SAR(1 g) = 0.024 W/kg; SAR(10 g) = 0.014 W/kg
Maximum value of SAR (measured) = 0.0266 W/kg

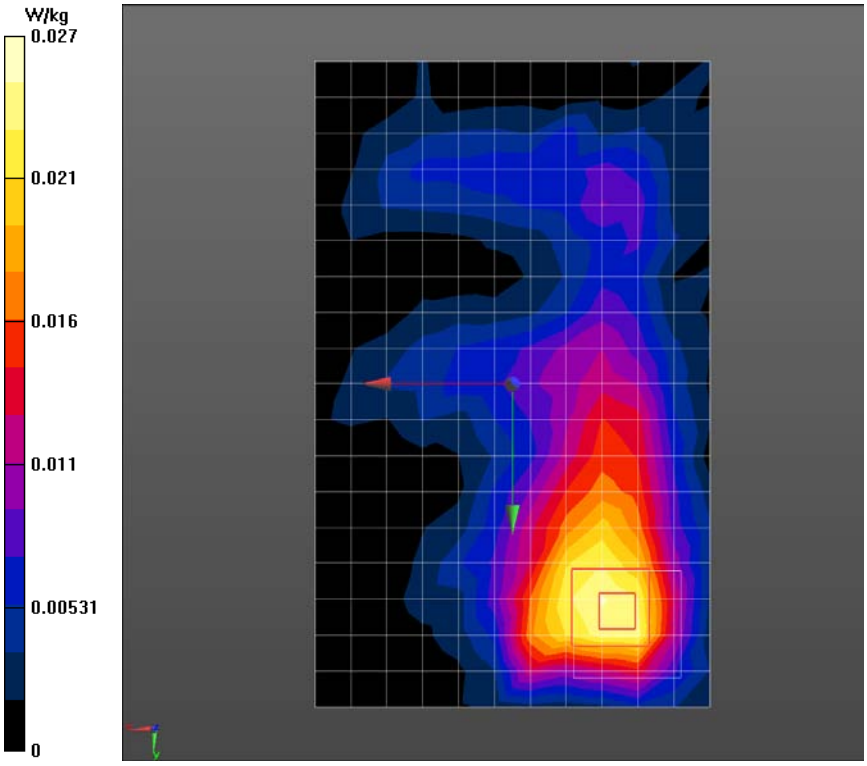


Fig.24 WiFi 802.11b Phantom Mode CH11 10mm

Wi-Fi 802.11n 40MHz Antenna2 Body Toward Phantom CH6

Date/Time: 2017/3/17
Electronics: DAE4 Sn797
Medium: Body 2450MHz
Medium parameters used: f = 2437 MHz; σ = 1.937 S/m; εr = 52.036; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 2437 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.56, 7.56, 7.56);
CH6 Toward Phantom WiFi 802.11n 40MHz Chain1/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.0678 W/kg
CH6 Toward Phantom WiFi 802.11n 40MHz Chain1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.019 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.115 W/kg
SAR(1 g) = 0.064 W/kg; SAR(10 g) = 0.036 W/kg
Maximum value of SAR (measured) = 0.0699 W/kg

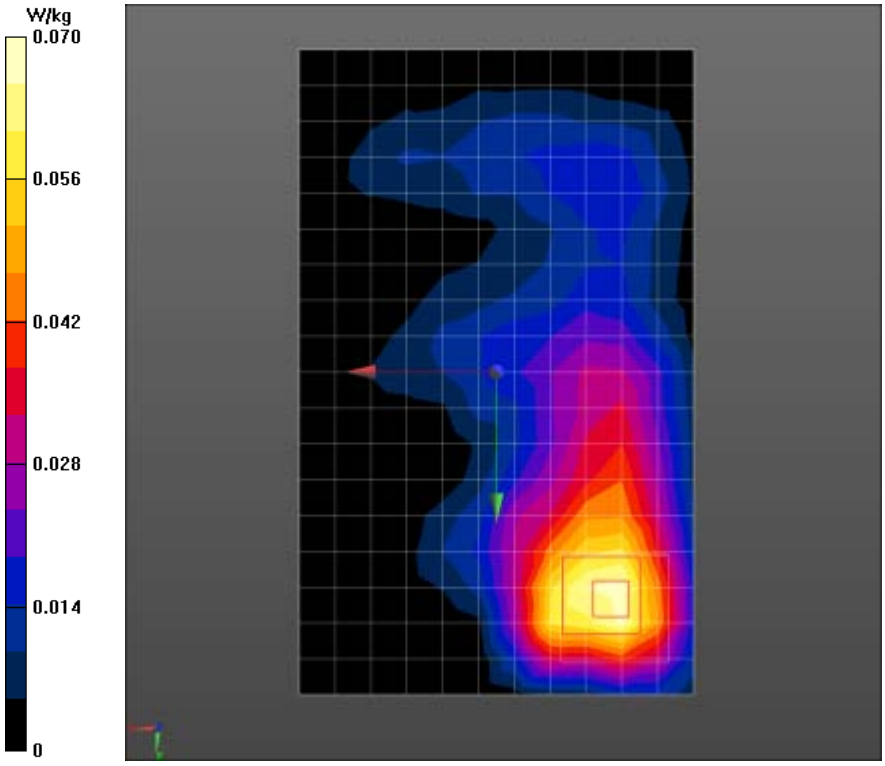
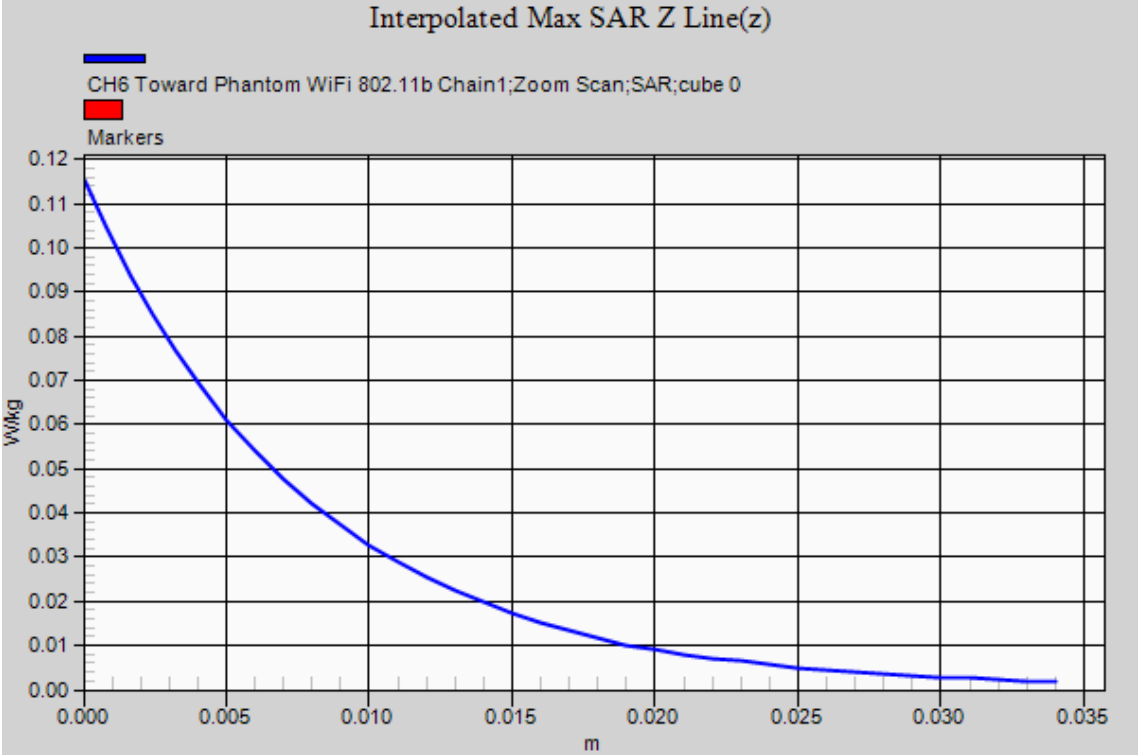


Fig.25 WiFi 802.11n 40MHz Phantom Mode CH6 10mm


Interpolated Max SAR Z Line(z)
CH6 Toward Phantom WiFi 802.11b Chain1;Zoom Scan;SAR;cube 0
Markers
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
W/kg
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11a Antenna1 Head Right Check CH52

Date/Time: 2017/3/20
Electronics: DAE4 Sn797
Medium: Head 5300MHz
Medium parameters used: f = 5260 MHz; σ = 4.672 S/m; εr = 34.929; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5260 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(5.41, 5.41, 5.41);
CH52 Cheek Right WiFi 802.11a Chain0/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.453 W/kg
CH52 Cheek Right WiFi 802.11a Chain0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.15 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.426 W/kg; SAR(10 g) = 0.135 W/kg
Maximum value of SAR (measured) = 0.499 W/kg

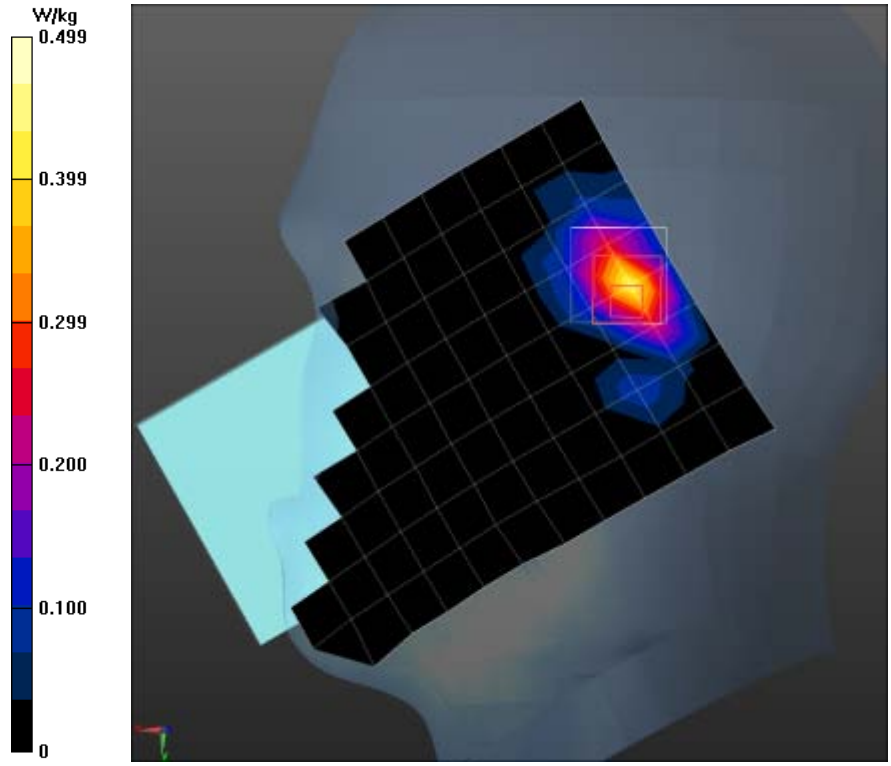
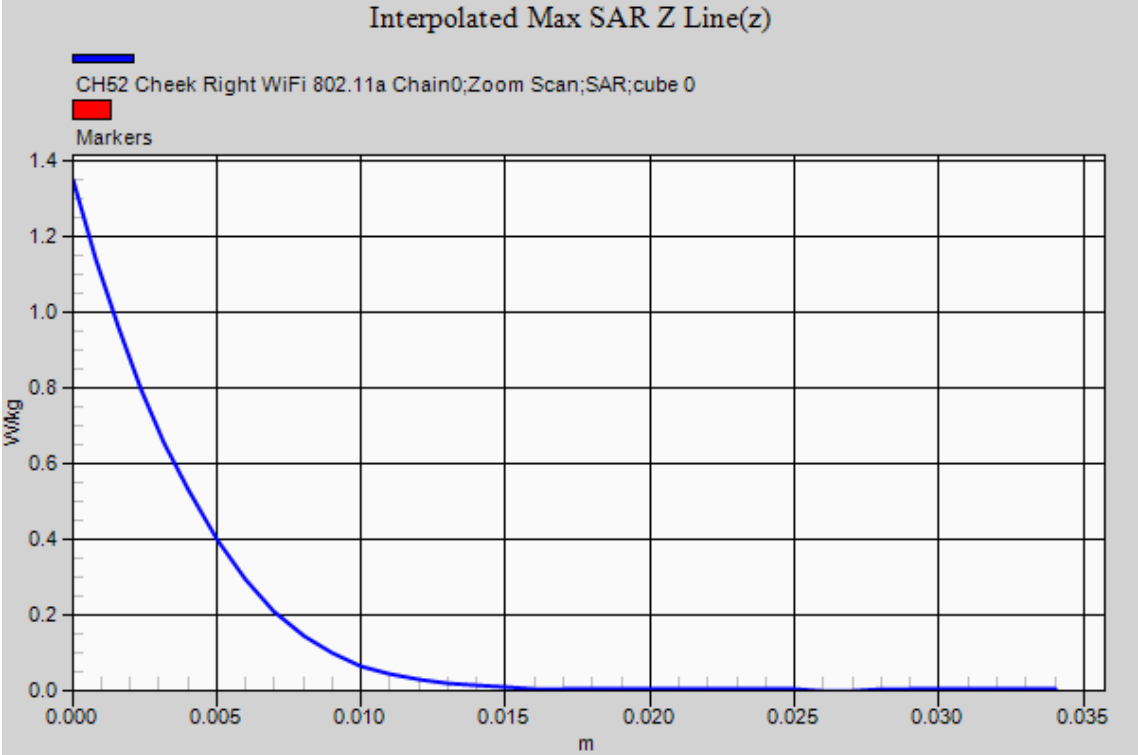


Fig.26 WiFi 802.11a Right Cheek CH52


Interpolated Max SAR Z Line(z)
CH52 Cheek Right WiFi 802.11a Chain0;Zoom Scan;SAR;cube 0
Markers
W/kg
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11a Antenna1 Head Left Tilt CH100

Date/Time: 2017/3/20
Electronics: DAE4 Sn797
Medium: Head 5600MHz
Medium parameters used: f = 5500 MHz; σ = 5.014 S/m; εr = 35.254; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5500 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(5.14, 5.14, 5.14);
CH100 Tilt Left WiFi 802.11a Chain0/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.321 W/kg
CH100 Tilt Left WiFi 802.11a Chain0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.065 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.906 W/kg
SAR(1 g) = 0.274 W/kg; SAR(10 g) = 0.075 W/kg
Maximum value of SAR (measured) = 0.361 W/kg

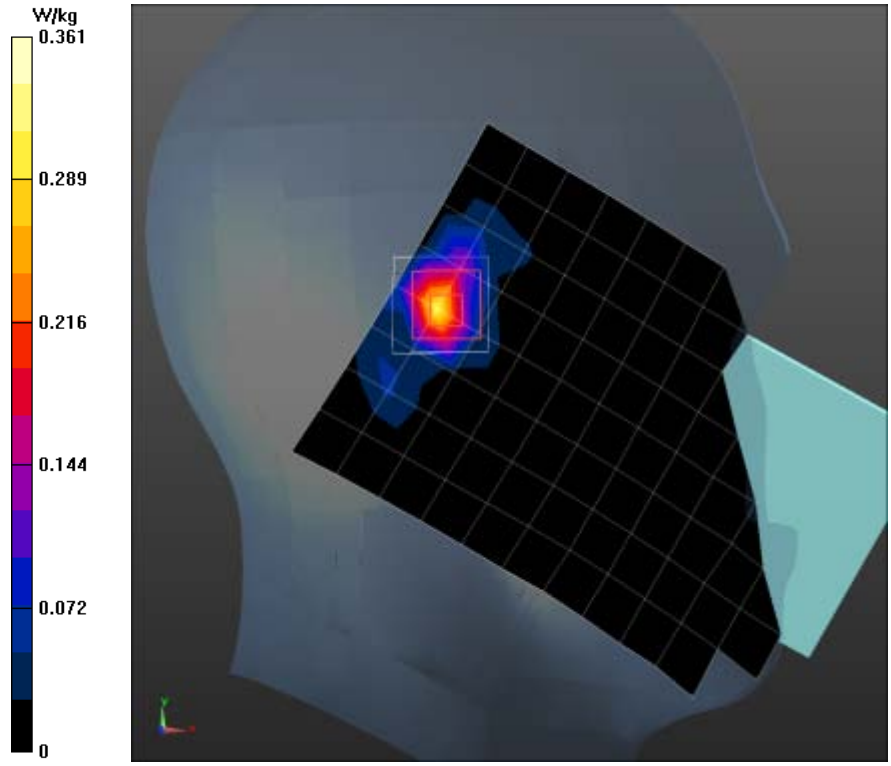
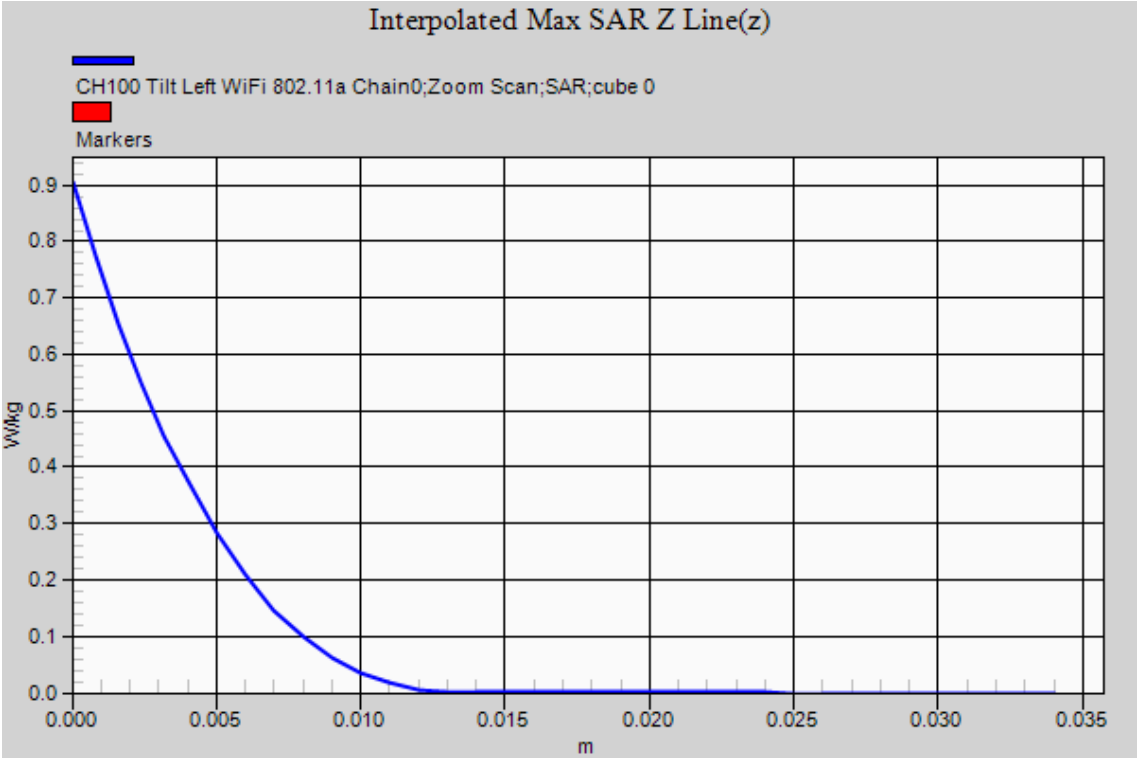


Fig.27 WiFi 802.11a Left Tilt CH100


Interpolated Max SAR Z Line(z)
CH100 Tilt Left WiFi 802.11a Chain0;Zoom Scan;SAR;cube 0
Markers
W/kg
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11a Antenna1 Head Right Tilt CH149

Date/Time: 2017/3/20
Electronics: DAE4 Sn797
Medium: Head 5800MHz
Medium parameters used: f = 5745 MHz; σ = 5.281 S/m; εr = 35.685; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5745 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.95, 4.95, 4.95);
CH149 Tilt Right WiFi 802.11a Chain0/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.172 W/kg
CH149 Tilt Right WiFi 802.11a Chain0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.725 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.653 W/kg
SAR(1 g) = 0.162 W/kg; SAR(10 g) = 0.050 W/kg
Maximum value of SAR (measured) = 0.196 W/kg

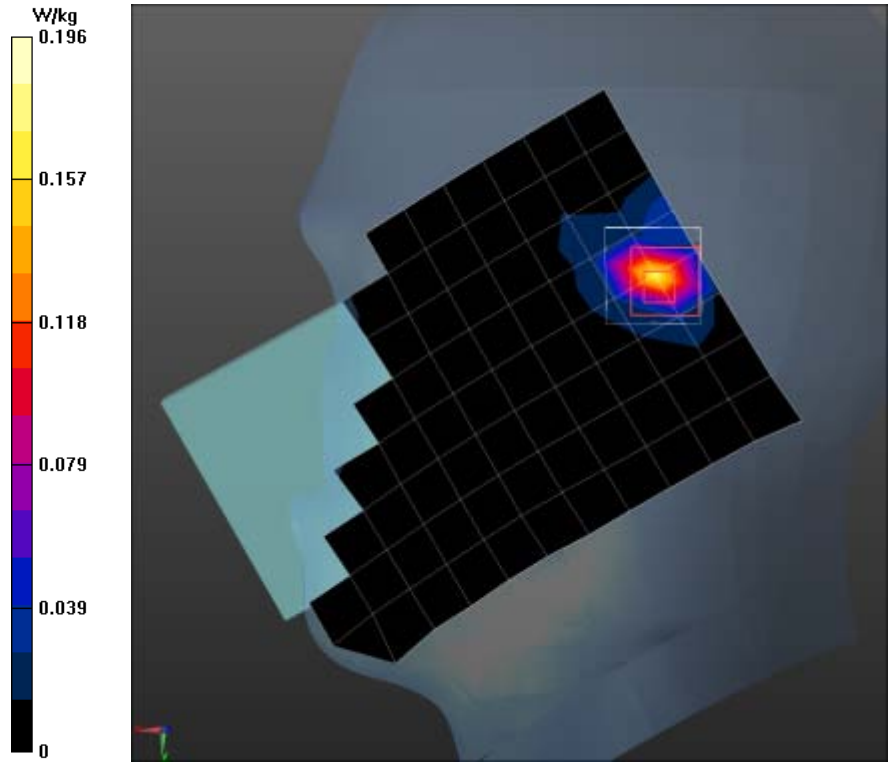
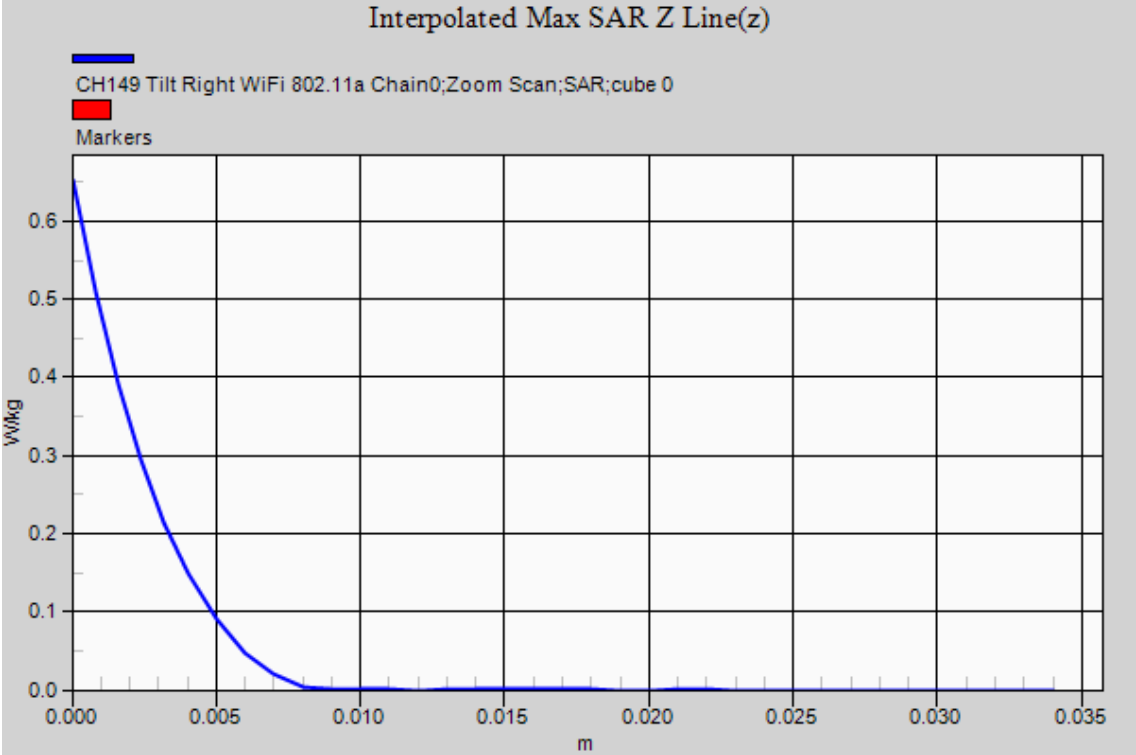


Fig.28 WiFi 802.11a Right Tilt CH149


Interpolated Max SAR Z Line(z)
CH149 Tilt Right WiFi 802.11a Chain0;Zoom Scan;SAR;cube 0
Markers
W/kg
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11a Antenna1 Body Toward Ground CH52

Date/Time: 2017/3/31
Electronics: DAE4 Sn797
Medium: Body 5300MHz
Medium parameters used: f = 5260 MHz; σ = 5.369 S/m; εr = 47.028; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5260 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.98, 4.98, 4.98);
CH52 Toward Ground WiFi 802.11a Chain0/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.460 W/kg
CH52 Toward Ground WiFi 802.11a Chain0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.825 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.560 W/kg
SAR(1 g) = 0.314 W/kg; SAR(10 g) = 0.119 W/kg
Maximum value of SAR (measured) = 0.473 W/kg

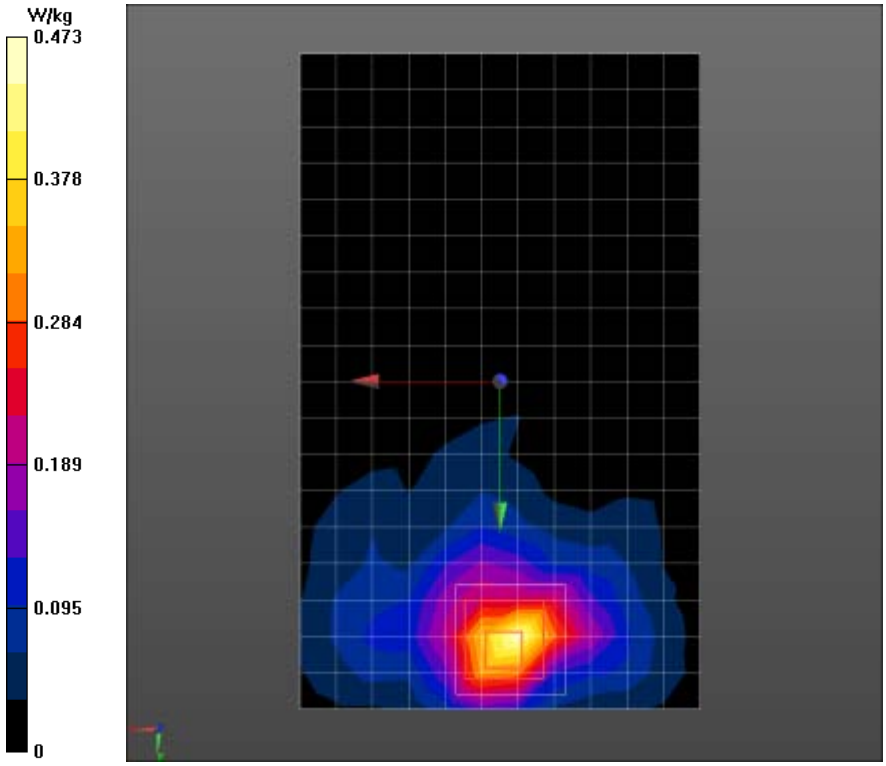
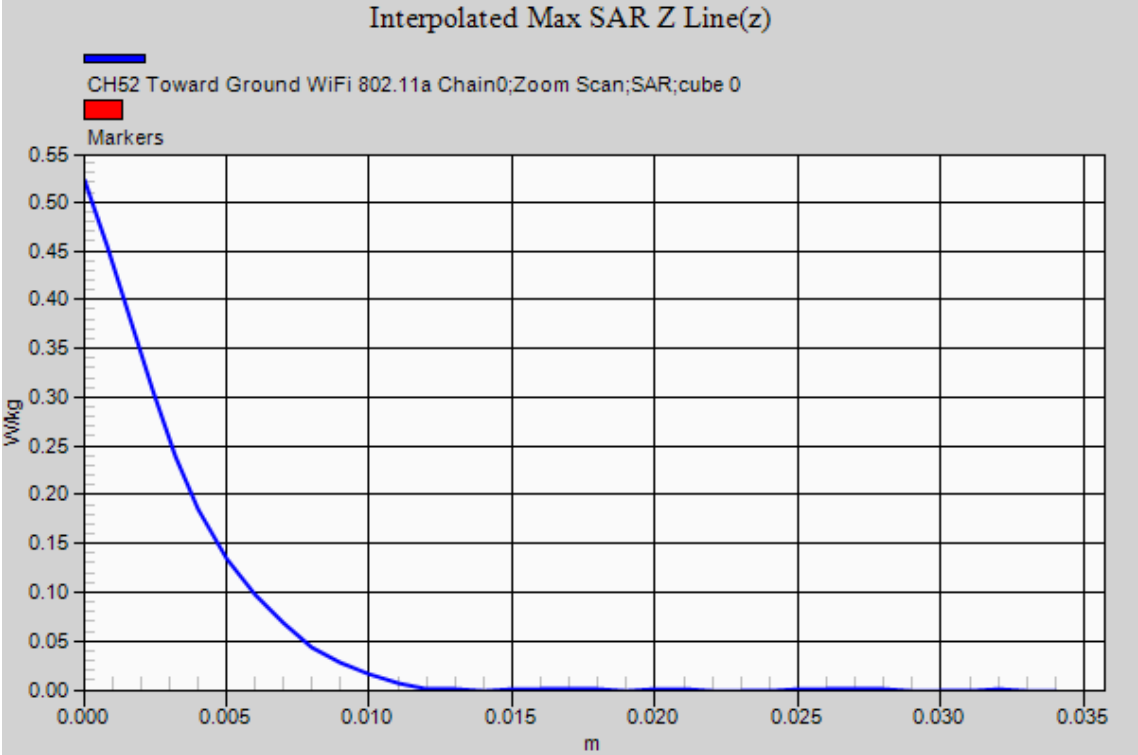


Fig.29 WiFi 802.11a Ground Mode CH52 10mm


Interpolated Max SAR Z Line(z)
CH52 Toward Ground WiFi 802.11a Chain0;Zoom Scan;SAR;cube 0
Markers
W/kg
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11ac 40MHz Antenna1 Body Toward Ground CH102

Date/Time: 2017/3/31
Electronics: DAE4 Sn797
Medium: Body 5600MHz
Medium parameters used: f = 5510 MHz; σ = 5.876 S/m; εr = 47.469; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5510 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.56, 4.56, 4.56);

CH102 Toward Ground WiFi 802.11ac 40MHz Chain0/Area Scan (12x19x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.327 W/kg

CH102 Toward Ground WiFi 802.11ac 40MHz Chain0/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.646 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.851 W/kg
SAR(1 g) = 0.287 W/kg; SAR(10 g) = 0.105 W/kg
Maximum value of SAR (measured) = 0.337 W/kg

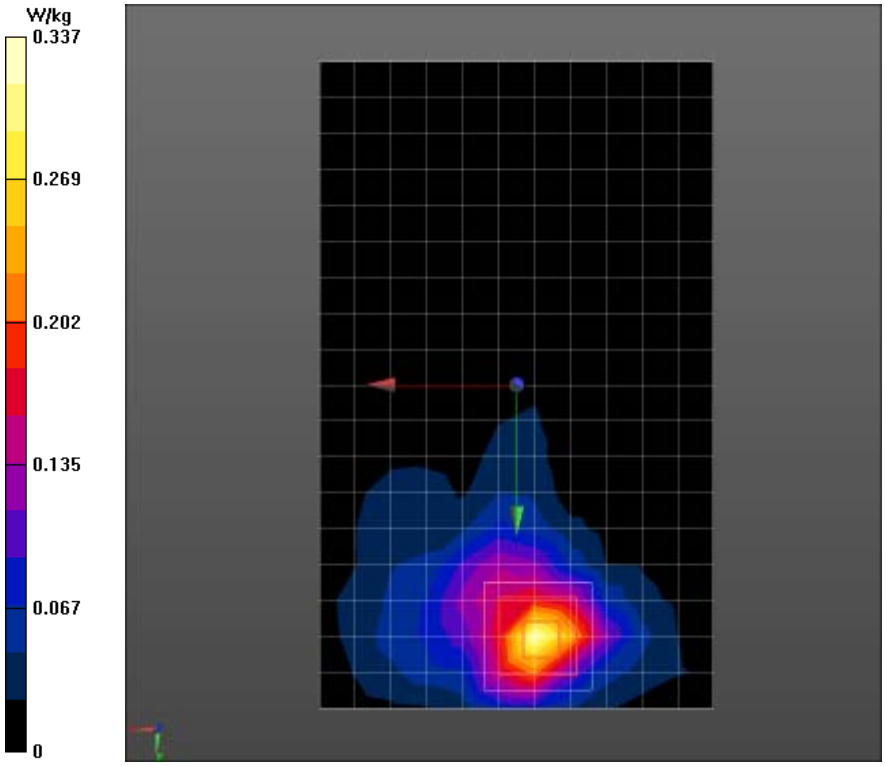
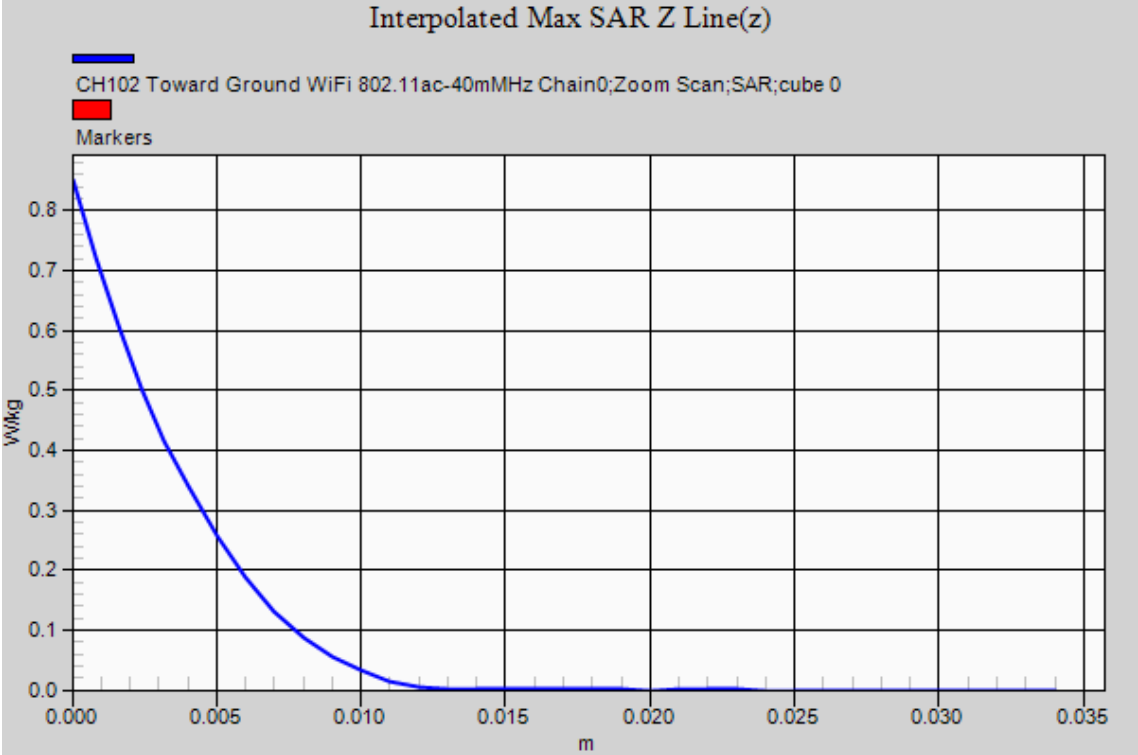


Fig.30 WiFi 802.11ac 40MHz Ground Mode CH102 10mm


Interpolated Max SAR Z Line(z)
CH102 Toward Ground WiFi 802.11ac-40mMHz Chain0;Zoom Scan;SAR;cube 0
Markers
W/kg
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11a Antenna1 Body Toward Ground CH149

Date/Time: 2017/3/31
Electronics: DAE4 Sn797
Medium: Body 5800MHz
Medium parameters used: f = 5745 MHz; σ = 6.133 S/m; εr = 46.795; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5745 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.58, 4.58, 4.58);
CH149 Toward Ground WiFi 802.11a Chain0/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.0991 W/kg
CH149 Toward Ground WiFi 802.11a Chain0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.6100 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.627 W/kg
SAR(1 g) = 0.132 W/kg; SAR(10 g) = 0.047 W/kg
Maximum value of SAR (measured) = 0.112 W/kg

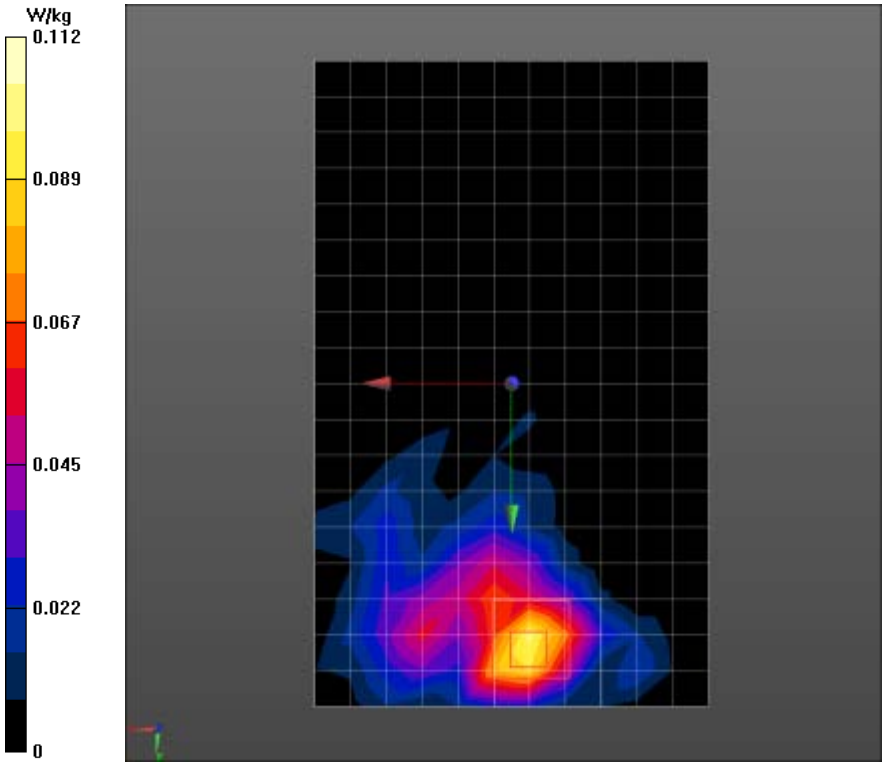
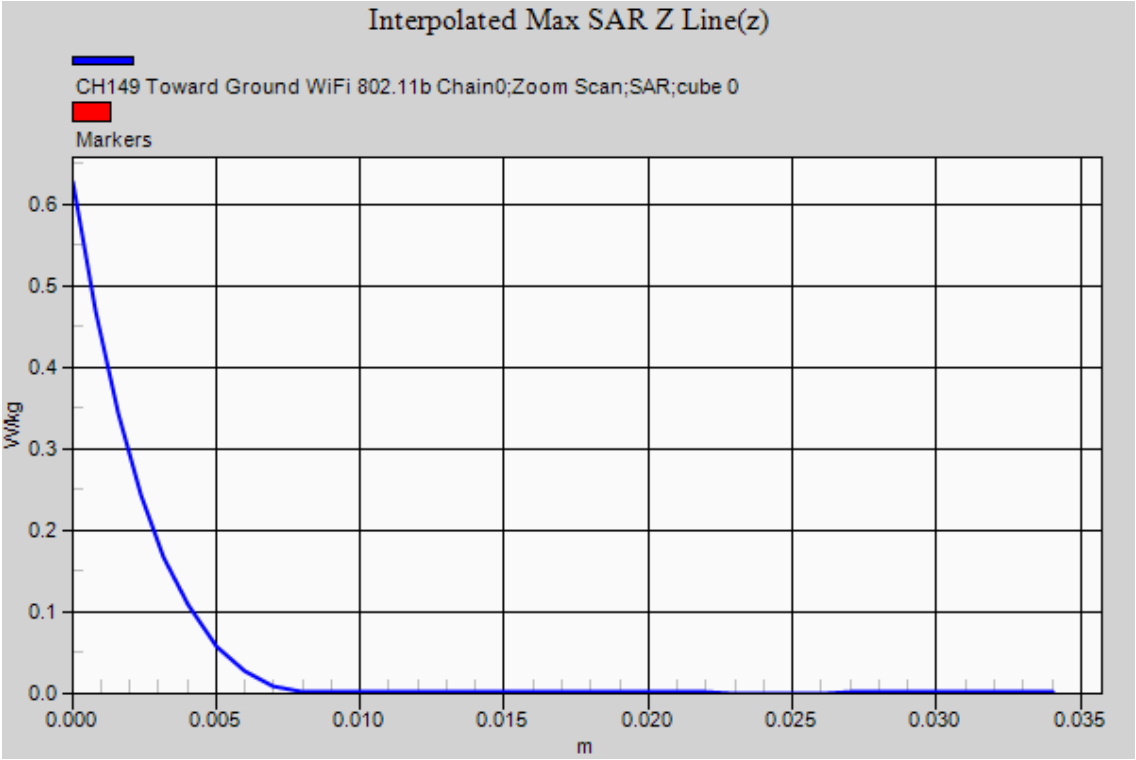


Fig.31 WiFi 802.11a Ground Mode CH149 10mm


Interpolated Max SAR Z Line(z)
CH149 Toward Ground WiFi 802.11b Chain0;Zoom Scan;SAR;cube 0
Markers
W/kg
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11ac 40MHz Antenna2 Head Left Check CH62

Date/Time: 2017/3/20
Electronics: DAE4 Sn797
Medium: Head 5300MHz
Medium parameters used: f = 5310 MHz; σ = 4.69 S/m; εr = 37.396; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5310 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(5.41, 5.41, 5.41);
CH62 Cheek Left WiFi 802.11ac 40MHz Chain1/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.138 W/kg
CH62 Cheek Left WiFi 802.11ac 40MHz Chain1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.7800 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.554 W/kg
SAR(1 g) = 0.146 W/kg; SAR(10 g) = 0.054 W/kg
Maximum value of SAR (measured) = 0.159 W/kg

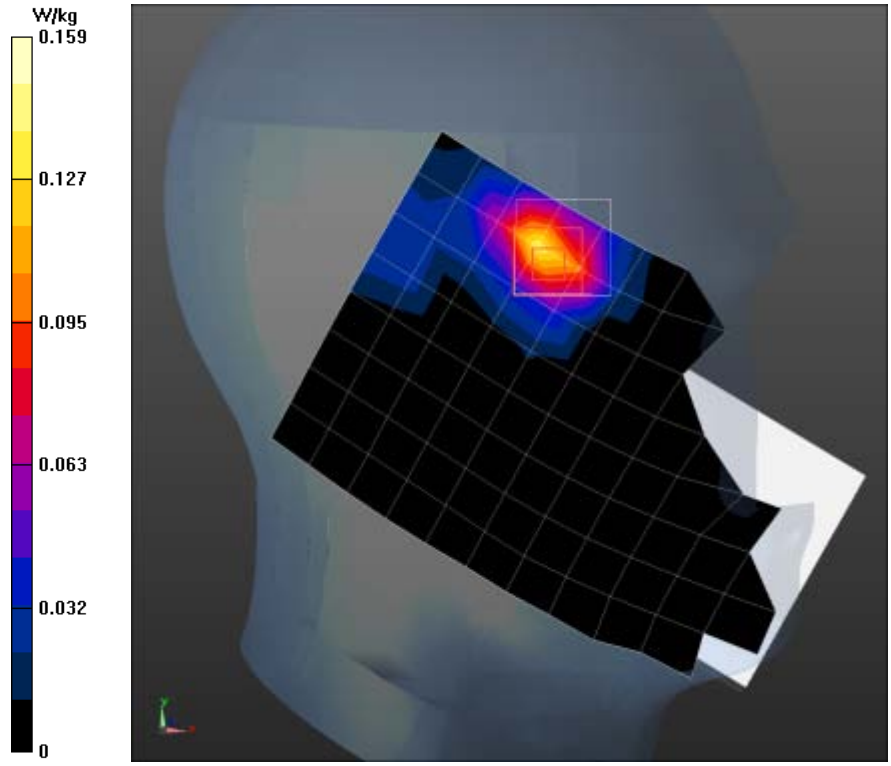
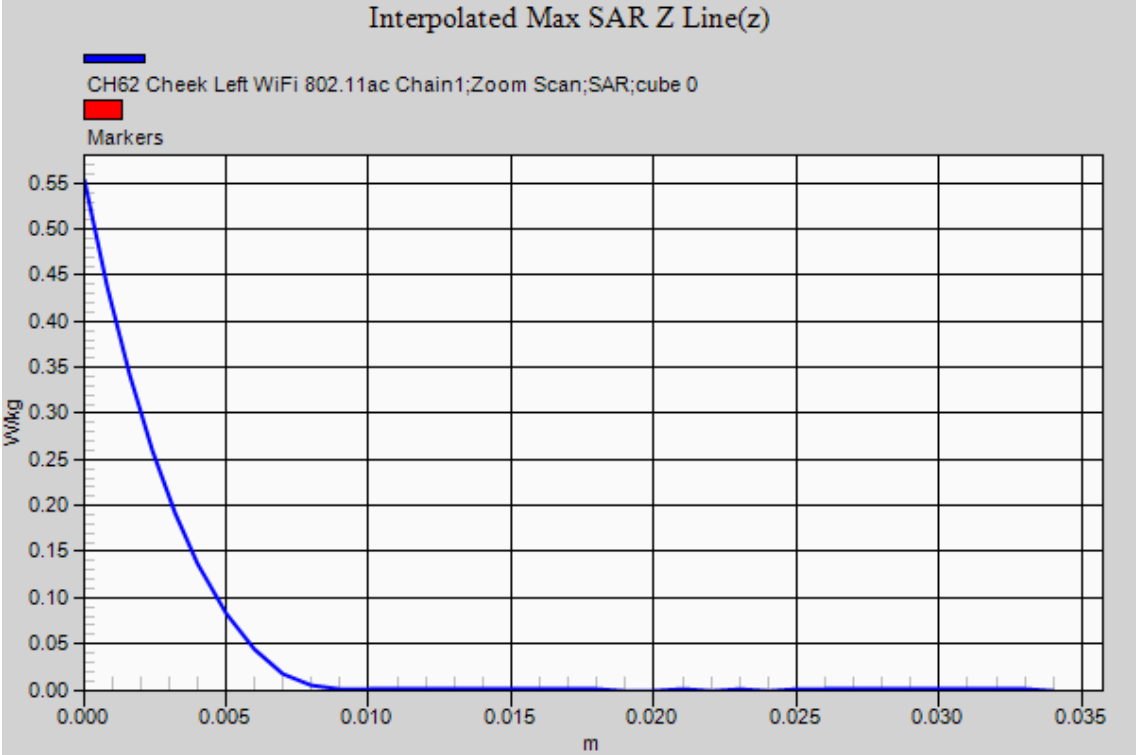


Fig.32 WiFi 802.11ac 40MHz Left Cheek CH62


Interpolated Max SAR Z Line(z)
CH62 Cheek Left WiFi 802.11ac Chain1;Zoom Scan;SAR;cube 0
Markers
W/kg
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11ac 40MHz Antenna2 Head Left Check CH134

Date/Time: 2017/3/20
Electronics: DAE4 Sn797
Medium: Head 5600MHz
Medium parameters used: f = 5670 MHz; σ = 5.218 S/m; εr = 36.651; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5670 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.87, 4.87, 4.87);
CH134 Cheek Left WiFi 802.11a 40MHz Chain1/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.120 W/kg
CH134 Cheek Left WiFi 802.11a 40MHz Chain1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.570 W/kg
SAR(1 g) = 0.167 W/kg; SAR(10 g) = 0.062 W/kg
Maximum value of SAR (measured) = 0.180 W/kg

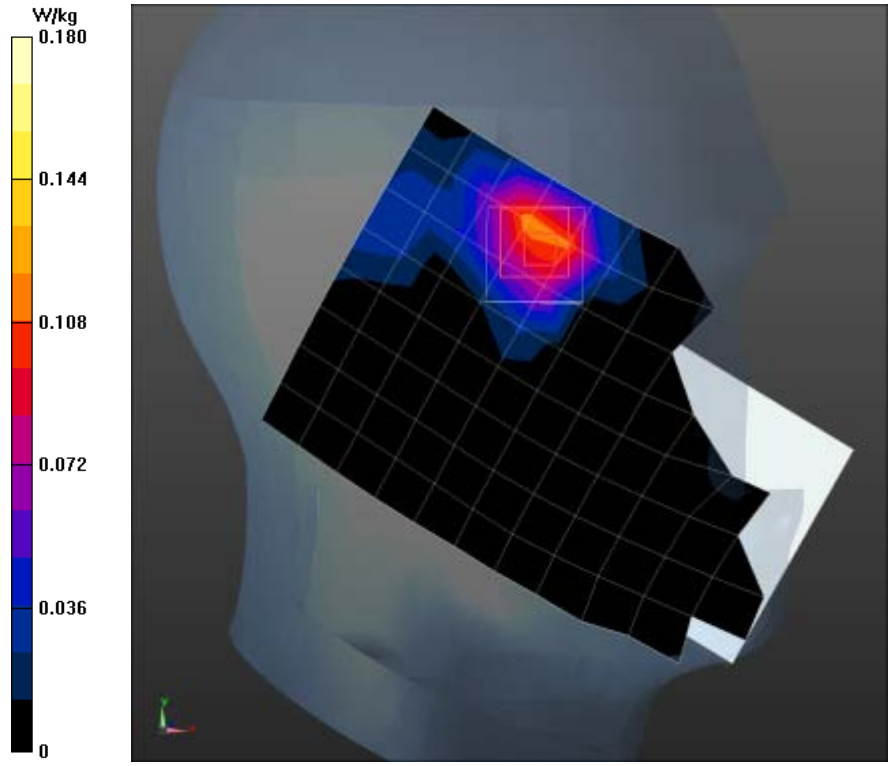
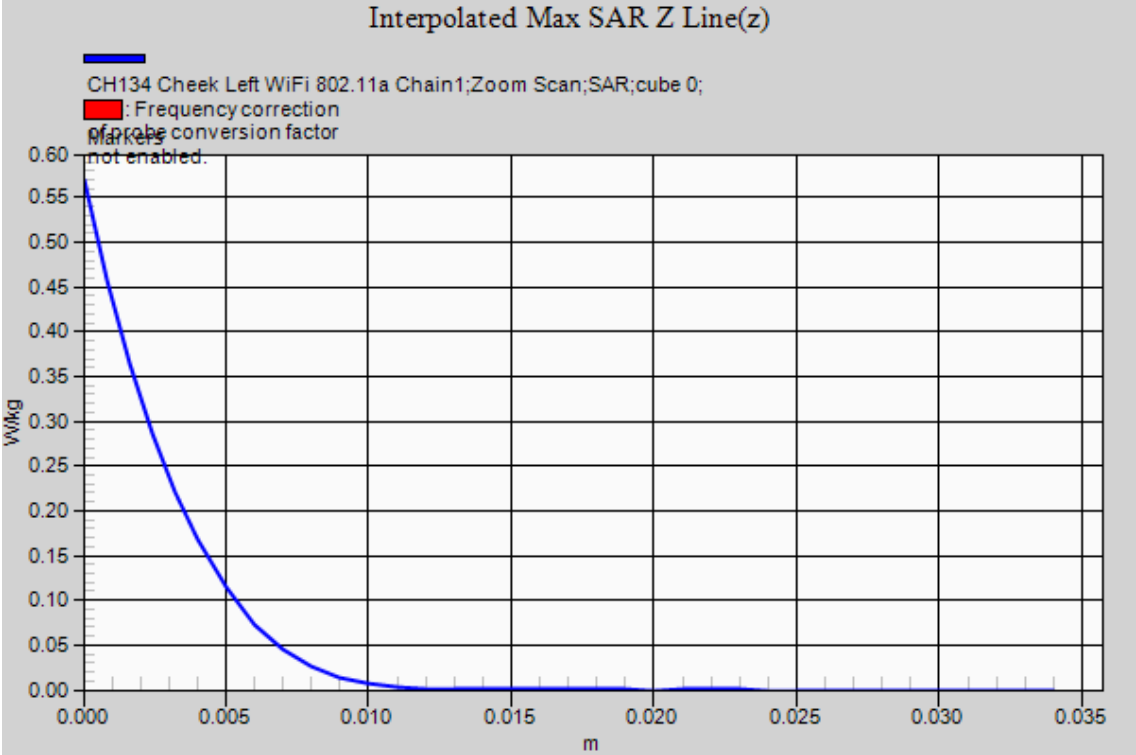


Fig.33 WiFi 802.11ac 40MHz Left Cheek CH134


Interpolated Max SAR Z Line(z)
CH134 Cheek Left WiFi 802.11a Chain1;Zoom Scan;SAR;cube 0;
: Frequency correction
of probe conversion factor
Markers
not enabled.
W/kg
0.60
0.55
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11ac 40MHz Antenna2 Head Left Check CH159

Date/Time: 2017/3/20
Electronics: DAE4 Sn797
Medium: Head 5800MHz
Medium parameters used: f = 5795 MHz; σ = 5.288 S/m; εr = 36.137; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5795 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.95, 4.95, 4.95);
CH159 Cheek Left WiFi 802.11ac 40MHzChain1/Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0544 W/kg
CH159 Cheek Left WiFi 802.11ac 40MHz Chain1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.492 W/kg
SAR(1 g) = 0.097 W/kg; SAR(10 g) = 0.032 W/kg
Maximum value of SAR (measured) = 0.0825 W/kg

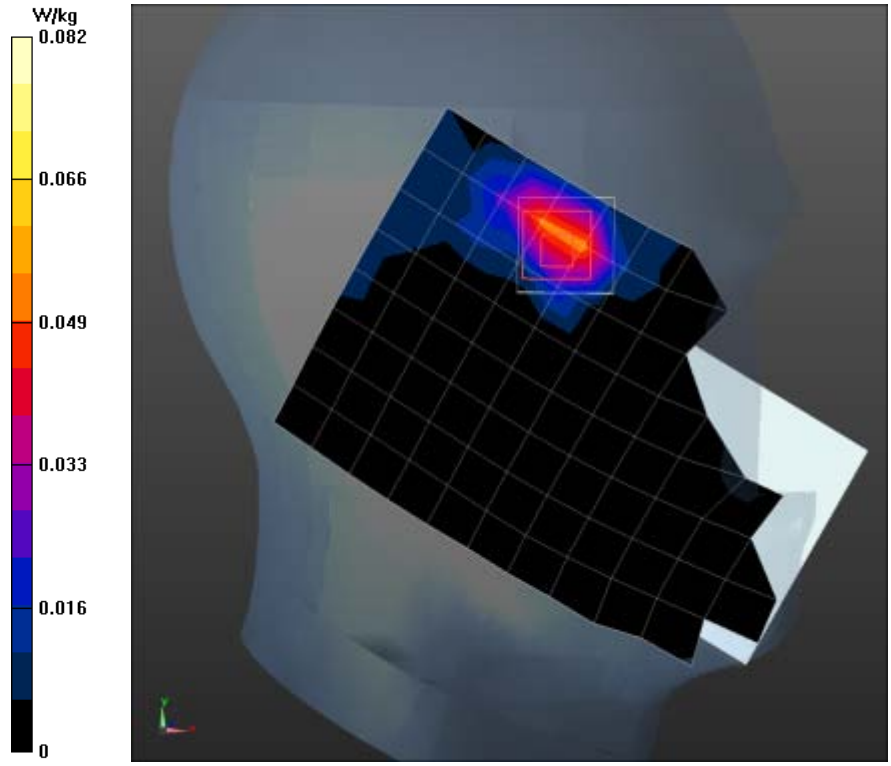
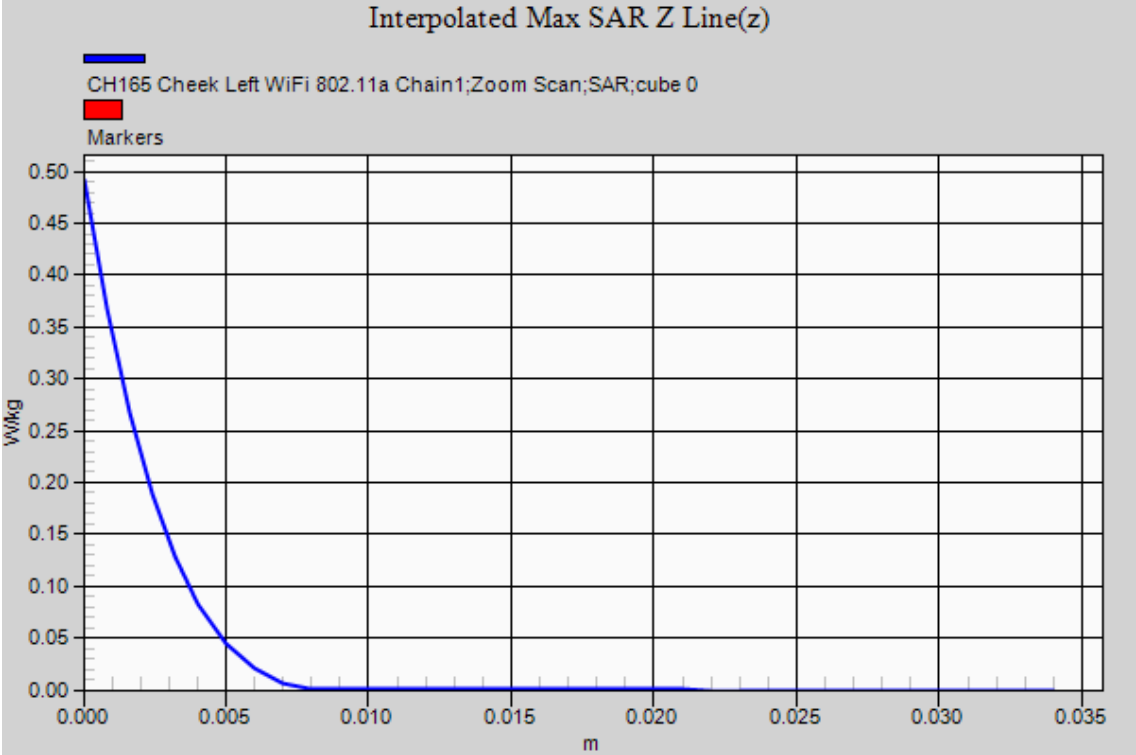


Fig.34 WiFi 802.11ac 40MHz Left Cheek CH159


Interpolated Max SAR Z Line(z)
CH165 Cheek Left WiFi 802.11a Chain1;Zoom Scan;SAR;cube 0
Markers
W/kg
0.50
0.45
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11ac 40MHz Antenna2 Body Toward Ground CH62

Date/Time: 2017/3/31
Electronics: DAE4 Sn797
Medium: Body 5300MHz
Medium parameters used: f = 5310 MHz; σ = 5.355 S/m; εr = 49.655; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5310 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.98, 4.98, 4.98);

CH62 Toward Ground WiFi 802.11ac 40MHz Chain1/Area Scan (12x19x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.280 W/kg

CH62 Toward Ground WiFi 802.11ac 40MHz Chain1/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.283 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.796 W/kg
SAR(1 g) = 0.263 W/kg; SAR(10 g) = 0.099 W/kg
Maximum value of SAR (measured) = 0.304 W/kg

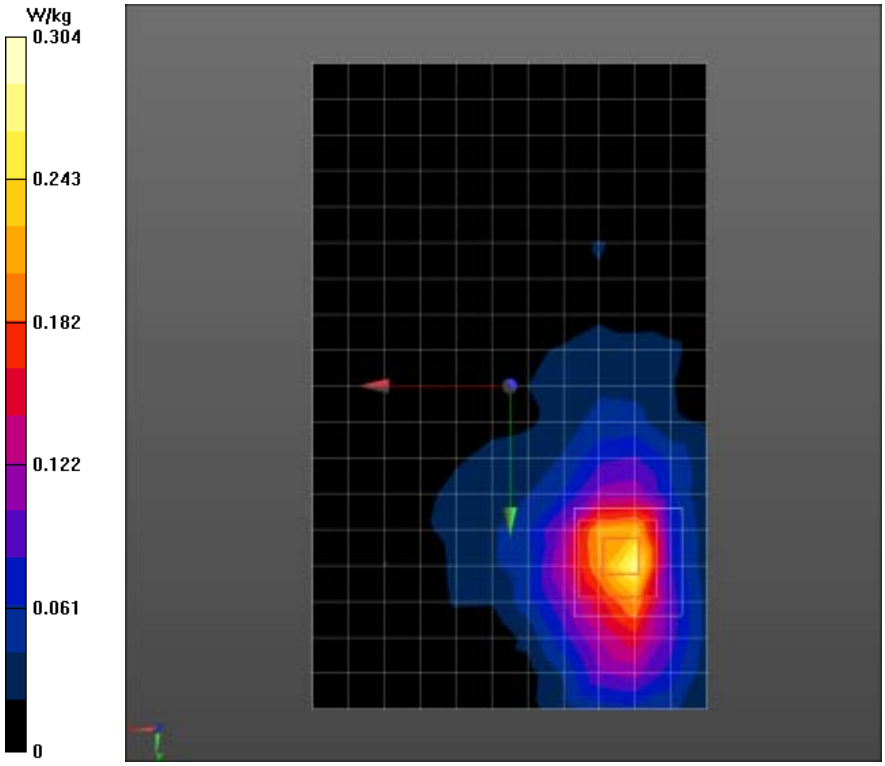
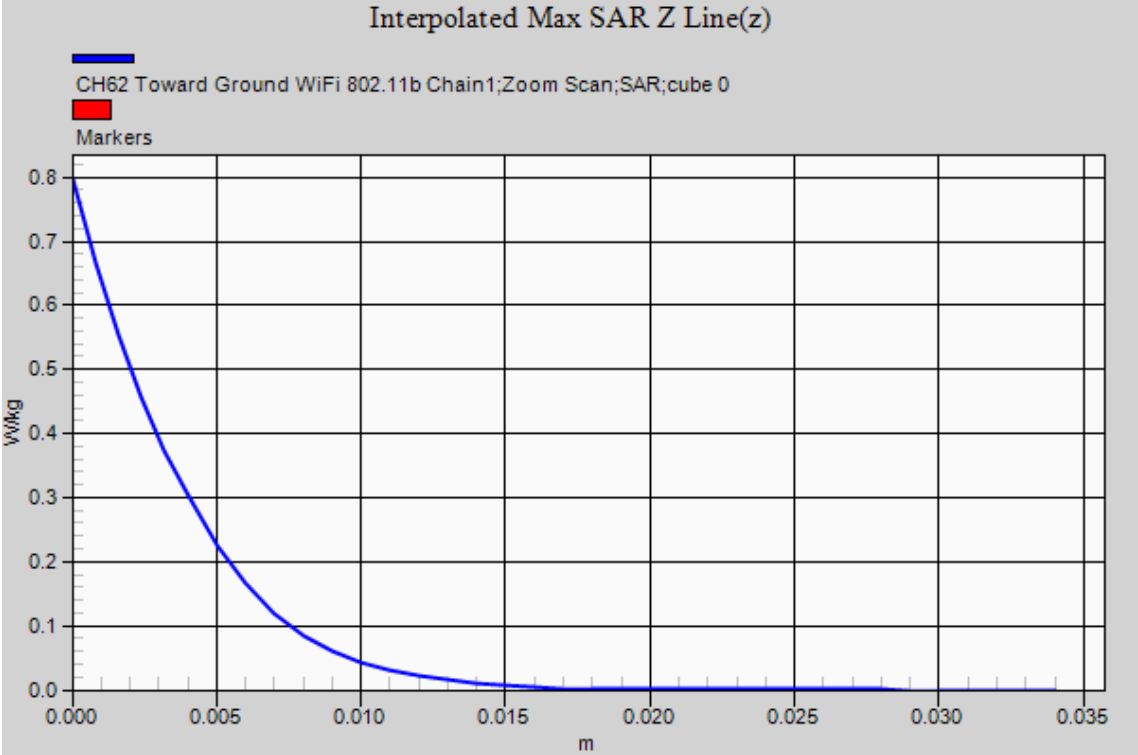


Fig.35 WiFi 802.11ac 40MHz Ground Mode CH62 10mm


Interpolated Max SAR Z Line(z)
CH62 Toward Ground WiFi 802.11b Chain1;Zoom Scan;SAR;cube 0
Markers
W/kg
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11a Antenna2 Body Toward Ground CH116

Date/Time: 2017/3/31
Electronics: DAE4 Sn797
Medium: Body 5600MHz
Medium parameters used: f = 5580 MHz; σ = 5.63 S/m; εr = 47.365; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5580 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.51, 4.51, 4.51);
CH116 Toward Ground WiFi 802.11a Chain1/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.404 W/kg
CH116 Toward Ground WiFi 802.11a Chain1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.109 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.358 W/kg; SAR(10 g) = 0.132 W/kg
Maximum value of SAR (measured) = 0.408 W/kg

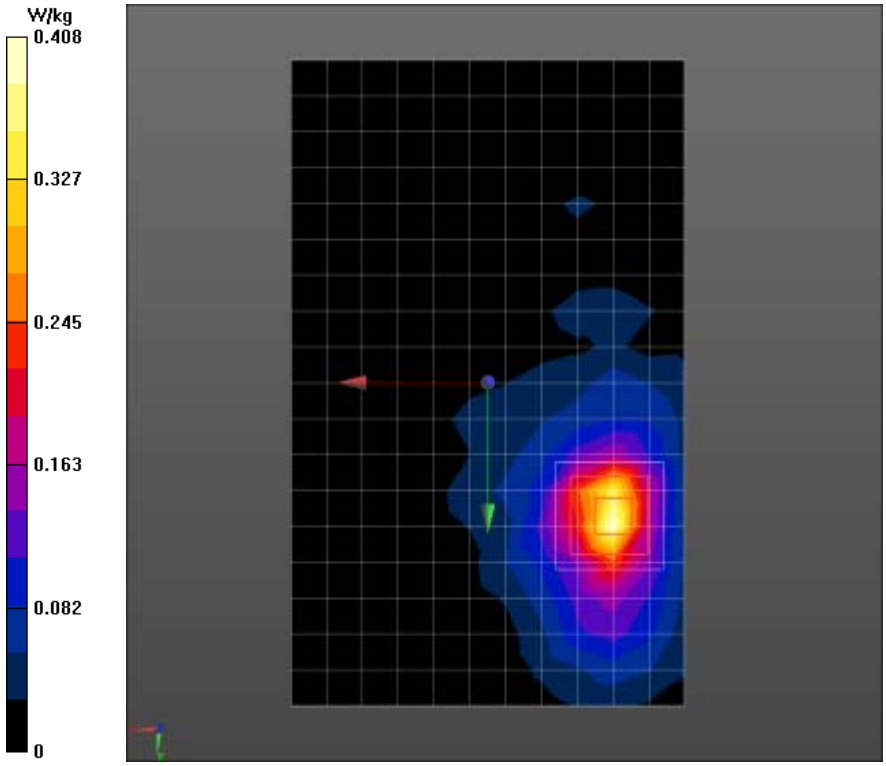
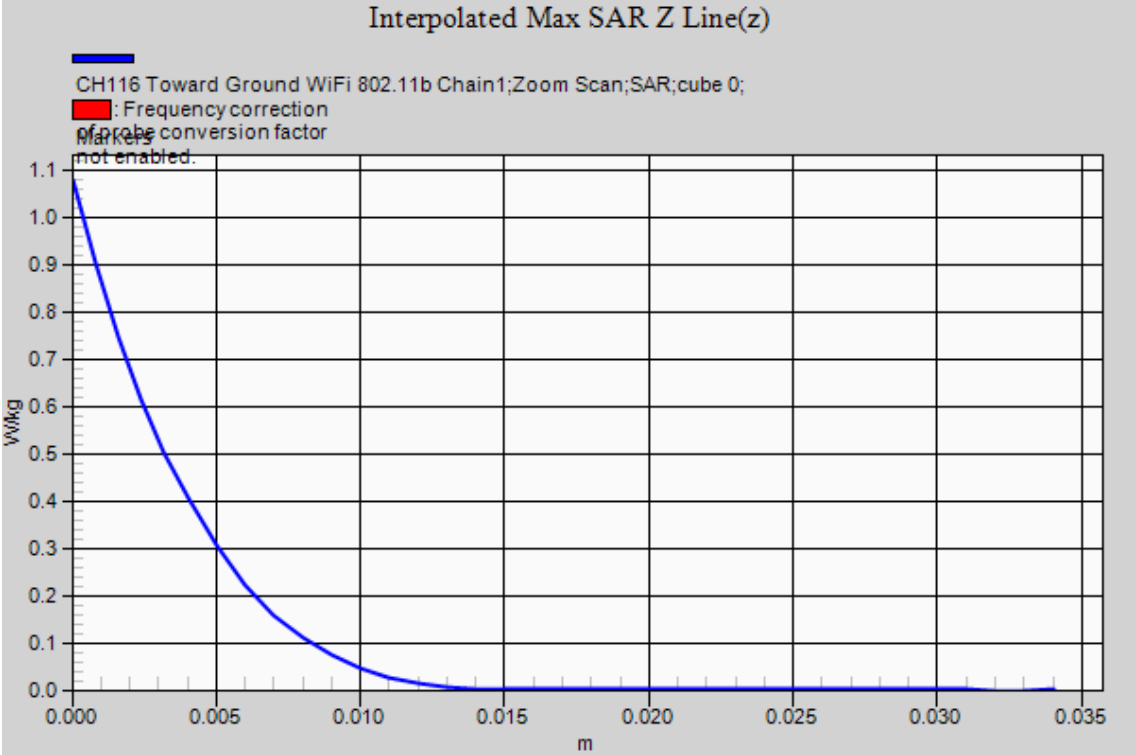


Fig.36 WiFi 802.11a Ground Mode CH116 10mm


Interpolated Max SAR Z Line(z)
CH116 Toward Ground WiFi 802.11b Chain1;Zoom Scan;SAR;cube 0;
: Frequency correction
of probe conversion factor
Markers
not enabled.
W/kg
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

WI-FI 802.11a Antenna2 Body Toward Ground CH165

Date/Time: 2017/3/31
Electronics: DAE4 Sn797
Medium: Body 5800MHz
Medium parameters used (extrapolated): f = 5825 MHz; σ = 5.904 S/m; εr = 47.673; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: Wi-Fi; Frequency: 5825 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.58, 4.58, 4.58);
CH165 Toward Ground WiFi 802.11a Chain1/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.232 W/kg
CH165 Toward Ground WiFi 802.11a Chain1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.9400 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.742 W/kg
SAR(1 g) = 0.232 W/kg; SAR(10 g) = 0.086 W/kg
Maximum value of SAR (measured) = 0.263 W/kg

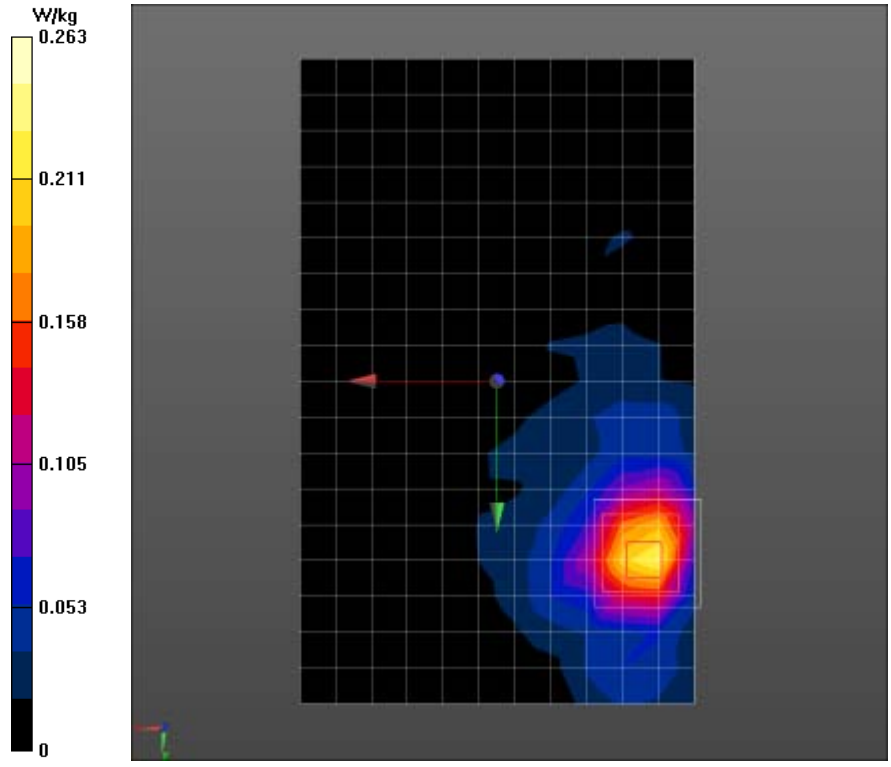
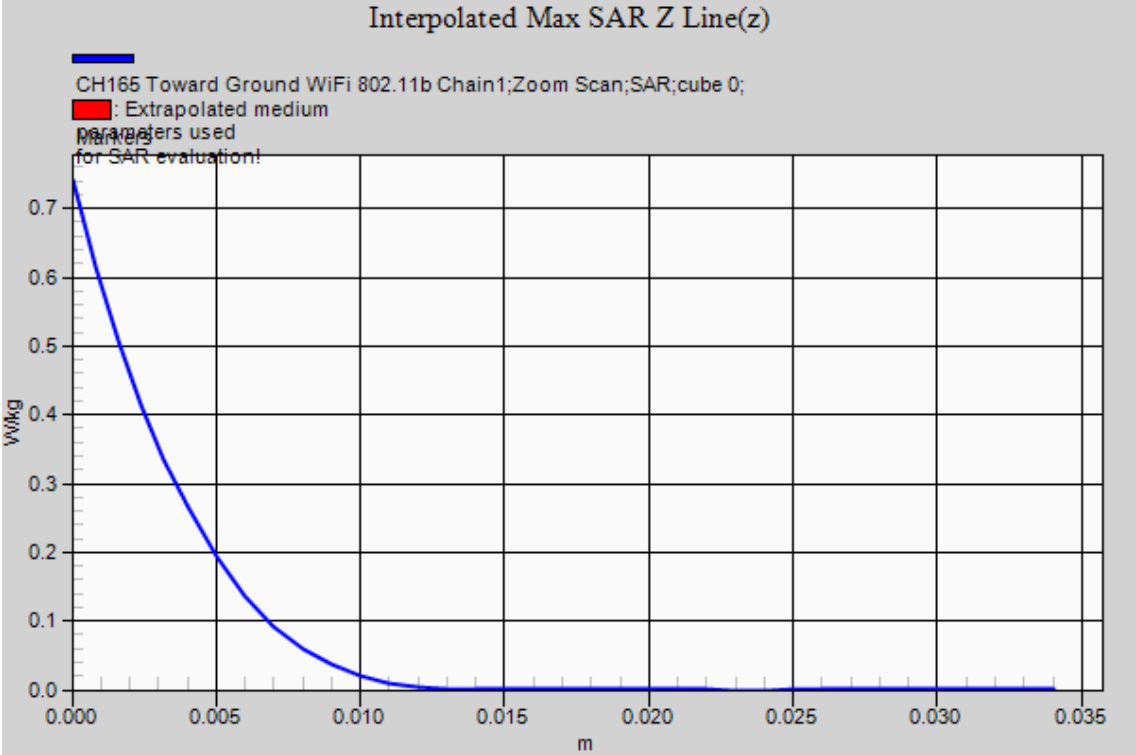


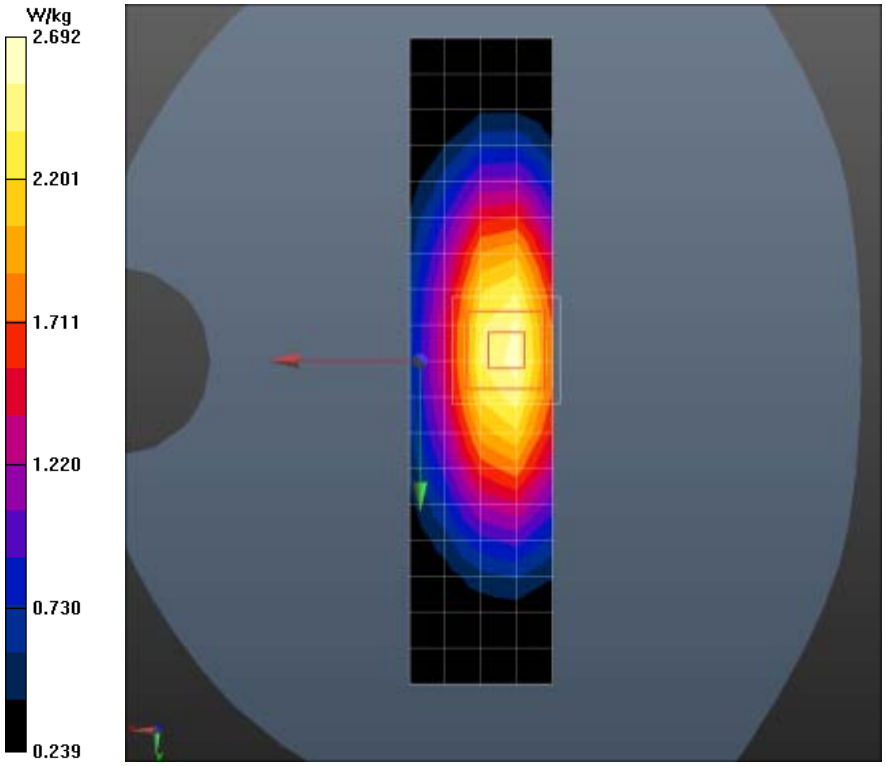
Fig.37 WiFi 802.11a Ground Mode CH165 10mm


Interpolated Max SAR Z Line(z)
CH165 Toward Ground WiFi 802.11b Chain1;Zoom Scan;SAR;cube 0;
: Extrapolated medium
parameters used
for SAR evaluation!
Markers
W/kg
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
0.000
0.005
0.010
0.015
0.020
0.025
0.030
0.035
m

Annex B System Performance Check Graphical Results

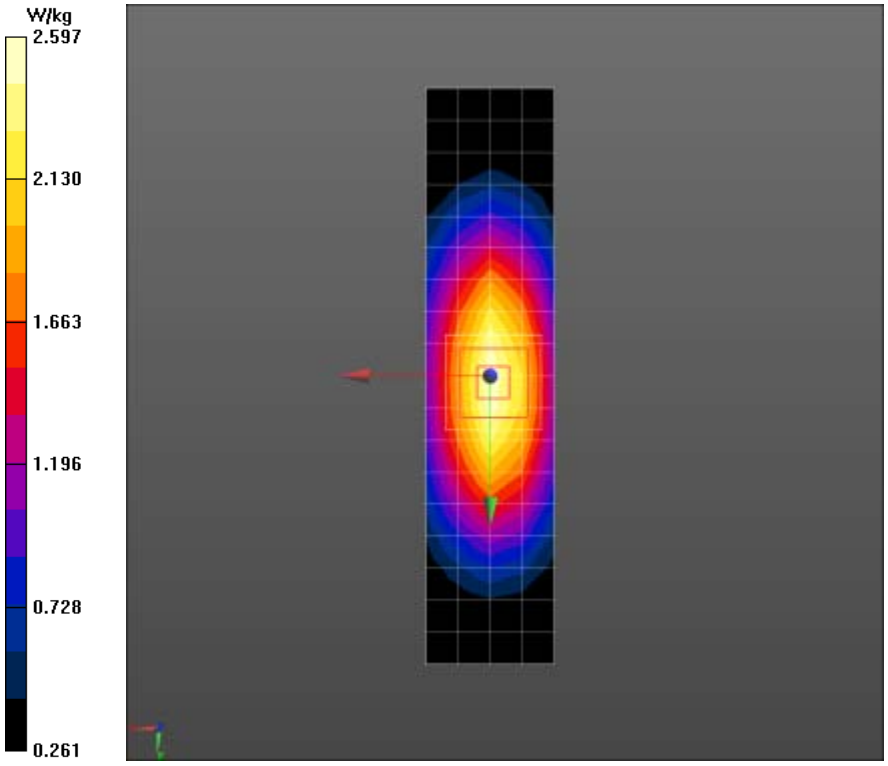
System 835MHz Head

Date/Time: 2017/3/10
Electronics: DAE4 Sn797
Medium: Head 850MHz
Medium parameters used: f = 835 MHz; σ = 0.909 S/m; εr = 41.944; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(9.57, 9.57, 9.57);
System Check Dipole 835 MHz/Area Scan (5x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 2.61 W/kg
System Check Dipole 835 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.83 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.62 W/kg
SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.63 W/kg
Maximum value of SAR (measured) = 2.69 W/kg



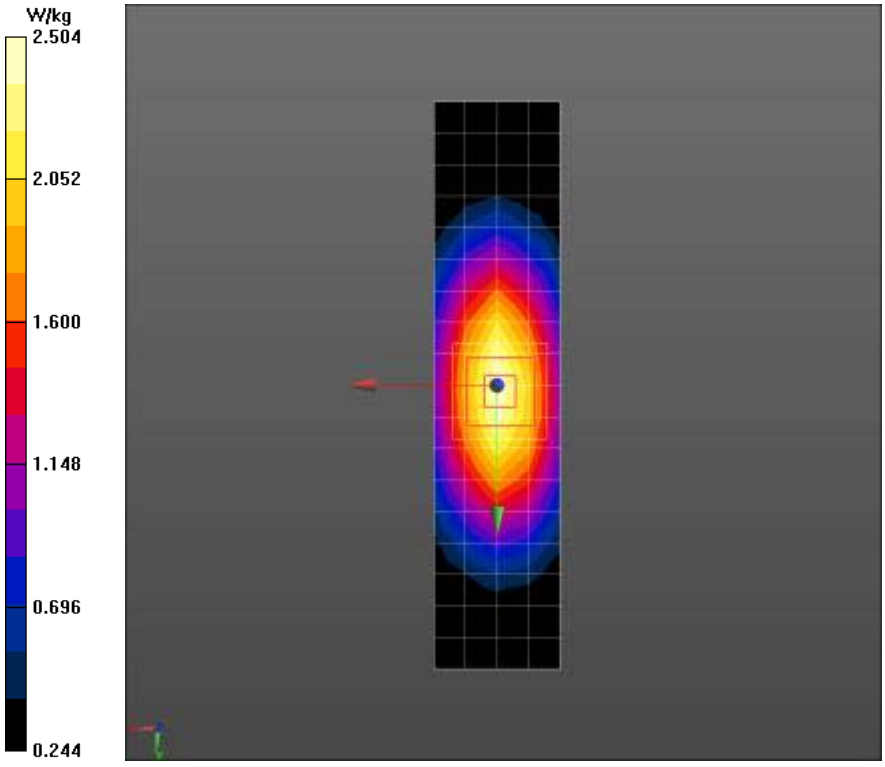
System 835MHz-1 Body

Date/Time: 2017/3/4
Electronics: DAE4 Sn797
Medium: Body 850MHz
Medium parameters used: f = 835 MHz; σ = 0.969 S/m; εr = 54.343; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(9.99, 9.99, 9.99);
System Check Dipole 835 MHz/Area Scan (5x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 2.59 W/kg
System Check Dipole 835 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.72 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 3.52 W/kg
SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.6 W/kg
Maximum value of SAR (measured) = 2.60 W/kg



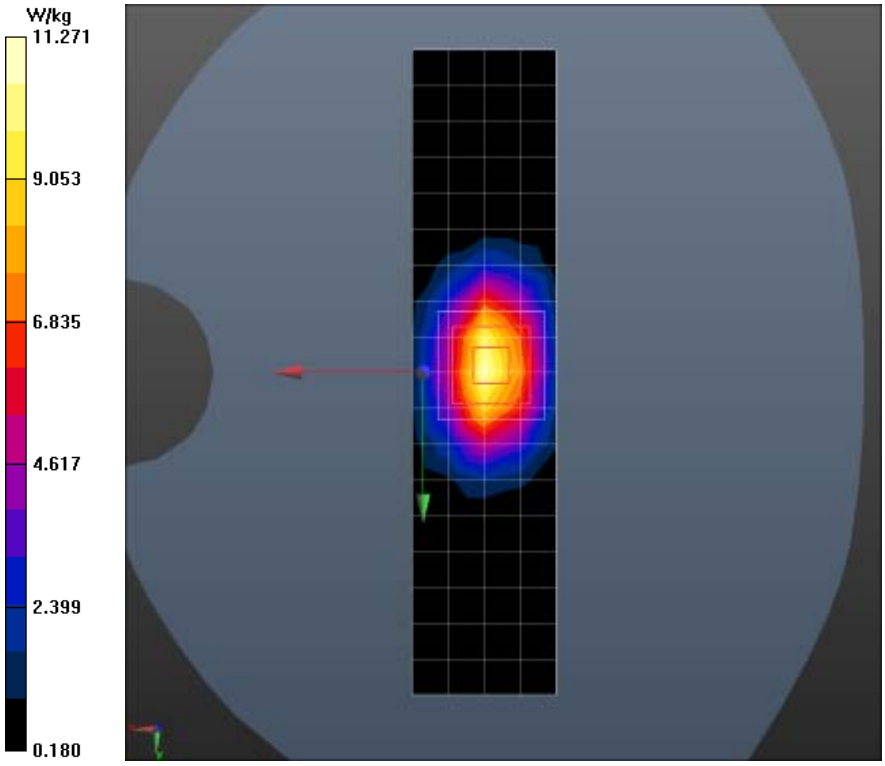
System 835MHz-2 Body

Date/Time: 2017/3/14
Electronics: DAE4 Sn797
Medium: Body 850MHz
Medium parameters used: f = 835 MHz; σ = 0.988 S/m; εr = 54.544; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(9.99, 9.99, 9.99);
System Check Dipole 835 MHz/Area Scan (5x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 2.50 W/kg
System Check Dipole 835 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.74 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 3.40 W/kg
SAR(1 g) = 2.32 W/kg; SAR(10 g) = 1.53 W/kg



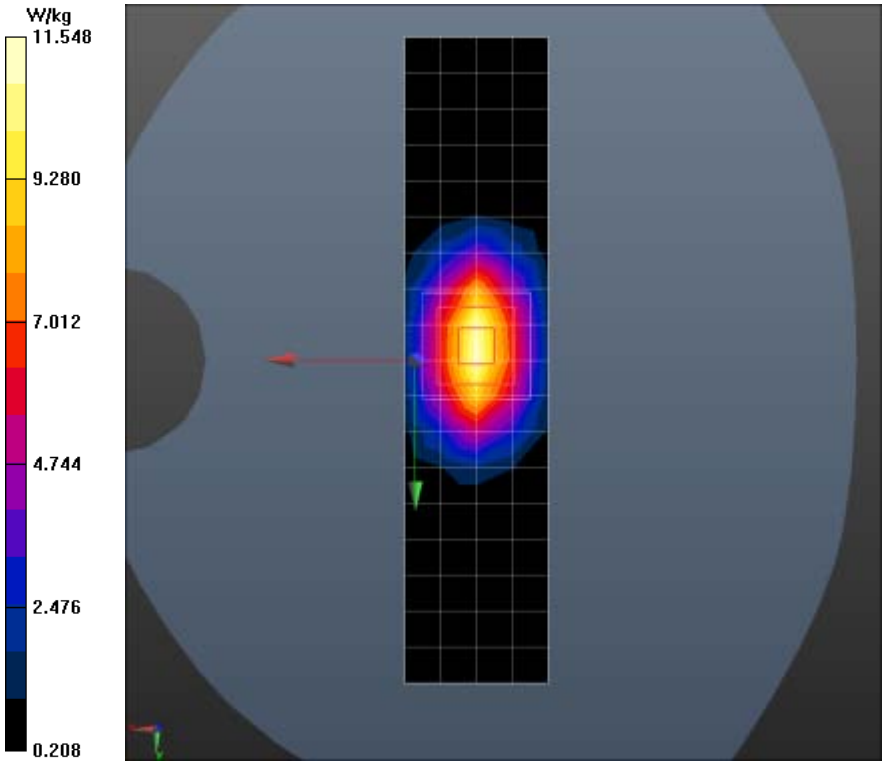
System 1900MHz-1 Head

Date/Time: 2017/3/6
Electronics: DAE4 Sn797
Medium: Head 1900MHz
Medium parameters used: f = 1900 MHz; σ = 1.376 S/m; εr = 39.919; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Probe: EX3DV4 - SN3844ConvF(8.17, 8.17, 8.17);
System Check Dipole 1900 MHz/Area Scan (5x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.9 W/kg
System Check Dipole 1900 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 89.41 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 18.8 W/kg
SAR(1 g) = 9.97 W/kg; SAR(10 g) = 5.1 W/kg
Maximum value of SAR (measured) = 11.3 W/kg



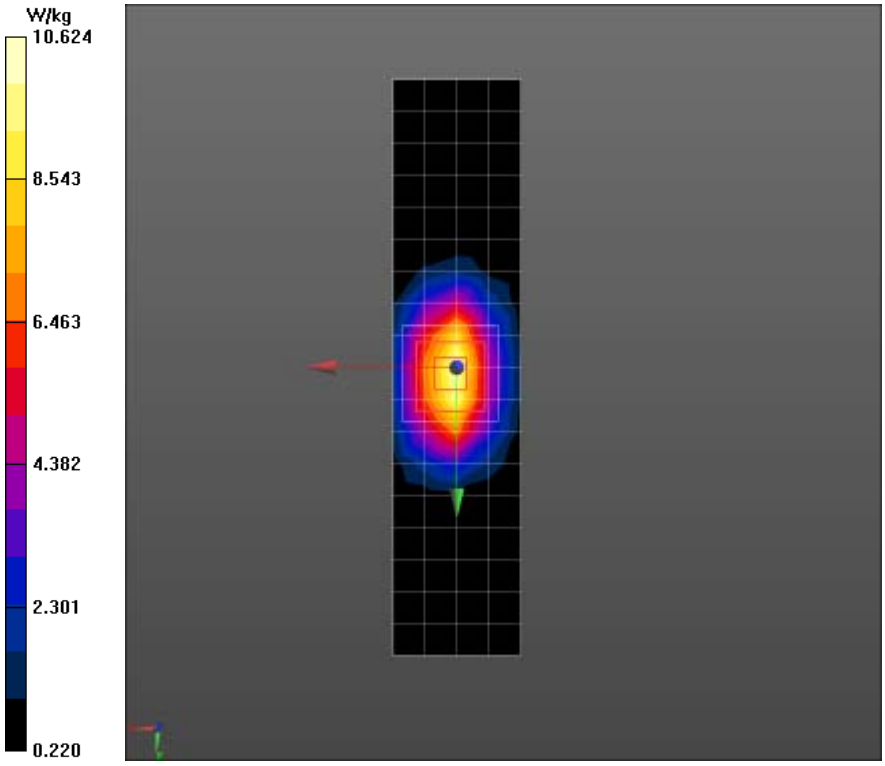
System 1900MHz-2 Head

Date/Time: 2017/3/12
Electronics: DAE4 Sn797
Medium: Head 1900MHz
Medium parameters used: f = 1900 MHz; σ = 1.391 S/m; εr = 39.919; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(8.17, 8.17, 8.17);
System Check Dipole 1900 MHz/Area Scan (5x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 11.3 W/kg
System Check Dipole 1900 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 92.04 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 19.2 W/kg
SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.34 W/kg
Maximum value of SAR (measured) = 11.5 W/kg



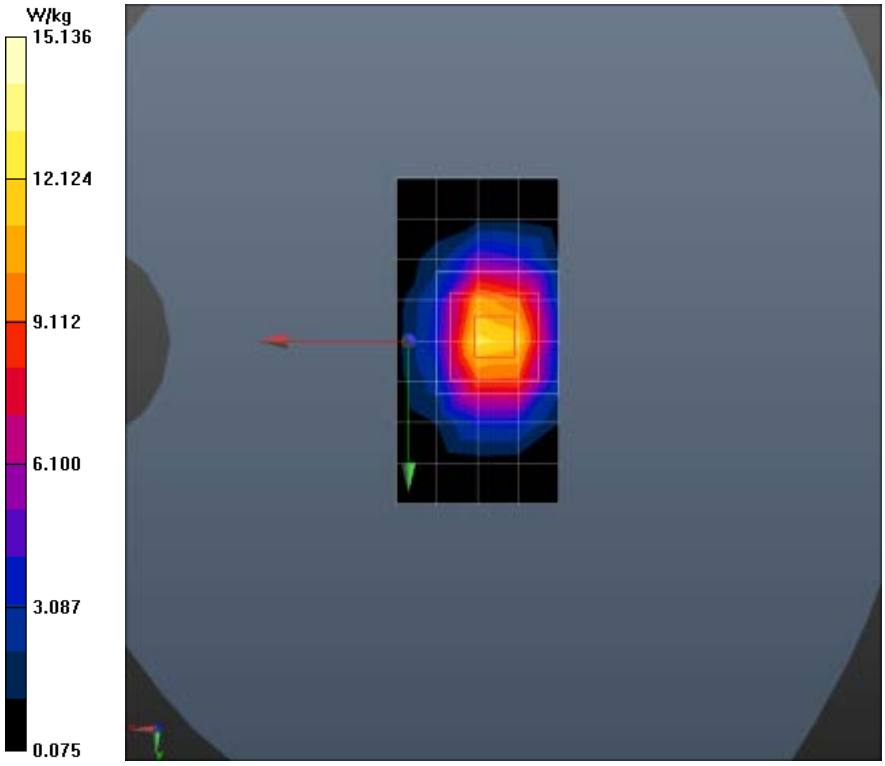
System 1900MHz Body

Date/Time: 2017/3/28
Electronics: DAE4 Sn797
Medium: Body 1900MHz
Medium parameters used: f = 1900 MHz; σ = 1.501 S/m; εr = 50.919; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.93, 7.93, 7.93);
System Check Dipole 1900 MHz/Area Scan (5x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.4 W/kg
System Check Dipole 1900 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 85.96 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 17.1 W/kg
SAR(1 g) = 9.42 W/kg; SAR(10 g) = 4.96 W/kg
Maximum value of SAR (measured) = 10.6 W/kg



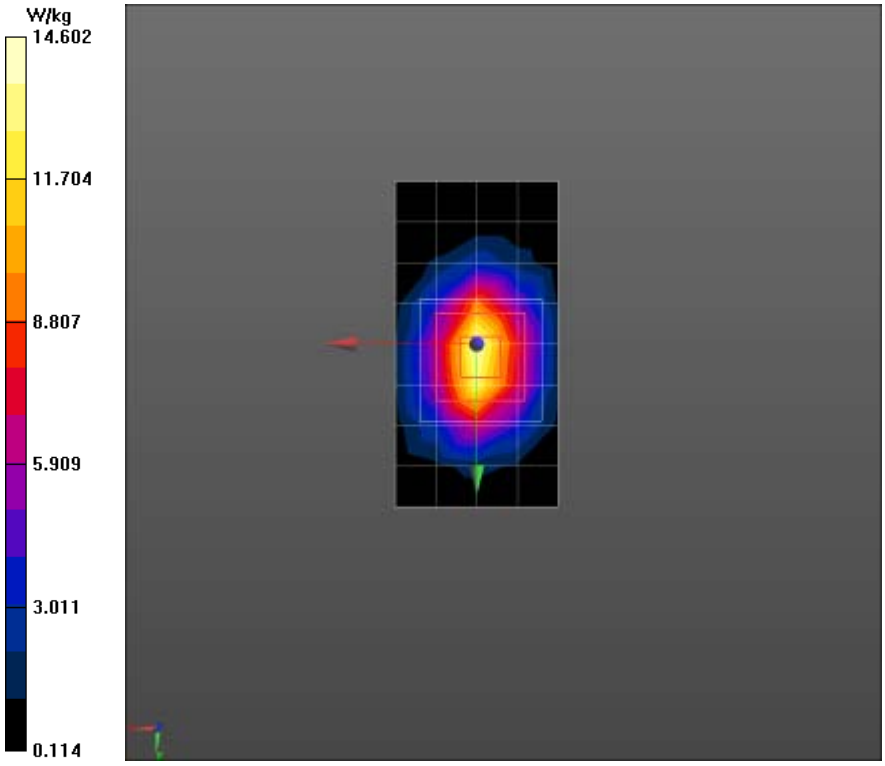
System 2450MHz Head

Date/Time: 2017/3/17
Electronics: DAE4 Sn797
Medium: Head 2450MHz
Medium parameters used: f = 2450 MHz; σ = 1.829 S/m; εr = 38.538; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.54, 7.54, 7.54);
System Check Dipole 2450 MHz/Area Scan (5x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 12.5 W/kg
System Check Dipole 2450 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 82.90 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 28.6 W/kg
SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.06 W/kg
Maximum value of SAR (measured) = 15.1 W/kg



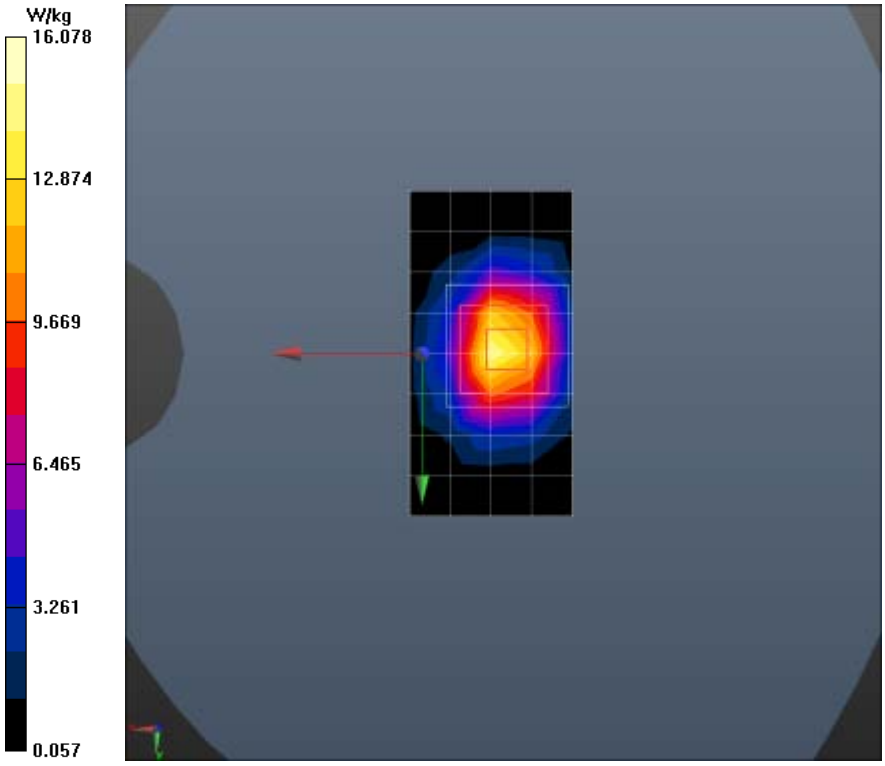
System 2450MHz Body

Date/Time: 2017/3/17
Electronics: DAE4 Sn797
Medium: Body 2450MHz
Medium parameters used: f = 2450 MHz; σ = 1.954 S/m; εr = 51.952; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.56, 7.56, 7.56);
System Check Dipole 2450 MHz/Area Scan (5x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 14.3 W/kg
System Check Dipole 2450 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 87.46 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 24.8 W/kg
SAR(1 g) = 12.7 W/kg; SAR(10 g) = 5.97 W/kg
Maximum value of SAR (measured) = 14.6 W/kg



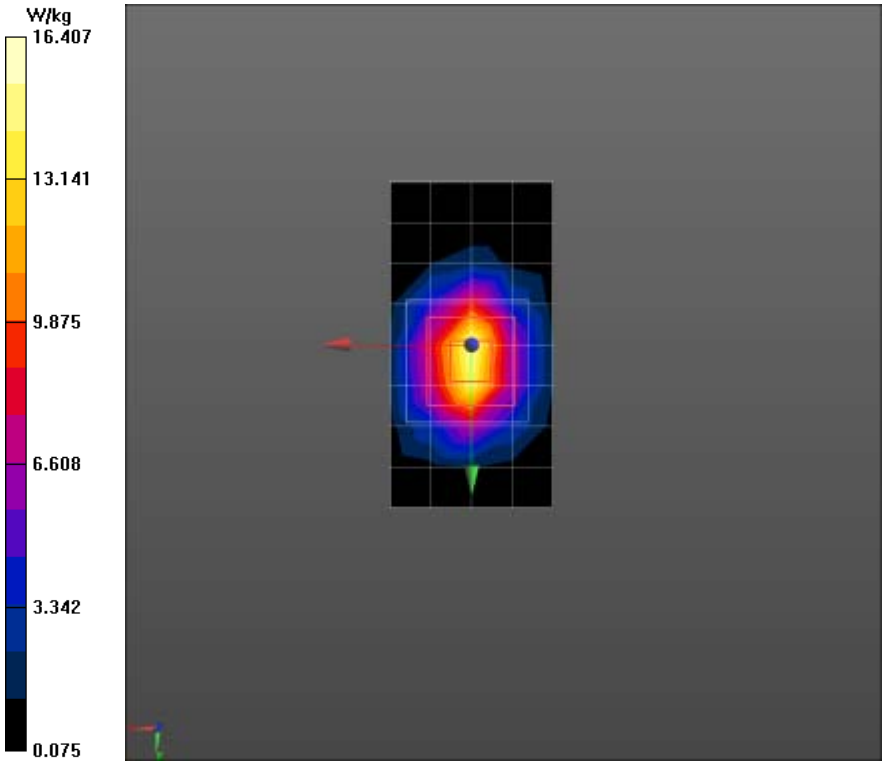
System 2600MHz Head

Date/Time: 2017/3/16
Electronics: DAE4 Sn797
Medium: Head 2600MHz
Medium parameters used: f = 2600 MHz; σ = 2.022 S/m; εr = 37.648; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.42, 7.42, 7.42);
System Check Dipole 2600 MHz/Area Scan (5x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 14.9 W/kg
System Check Dipole 2600 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 85.69 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 31.8 W/kg
SAR(1 g) = 14.1 W/kg; SAR(10 g) = 6.19 W/kg
Maximum value of SAR (measured) = 16.1 W/kg



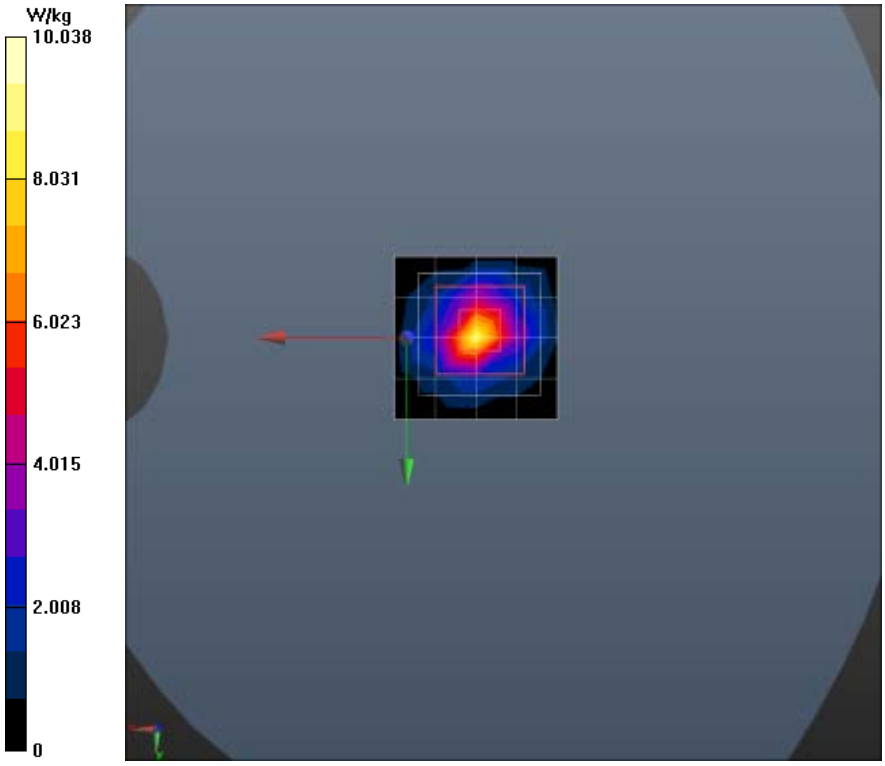
System 2600MHz Body

Date/Time: 2017/3/15
Electronics: DAE4 Sn797
Medium: Body 2600MHz
Medium parameters used: f = 2600 MHz; σ = 2.19 S/m; εr = 50.842; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(7.39, 7.39, 7.39);
System Check Dipole 2600 MHz/Area Scan (5x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 15.7 W/kg
System Check Dipole 2600 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 85.03 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 29.6 W/kg
SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.3 W/kg
Maximum value of SAR (measured) = 16.4 W/kg



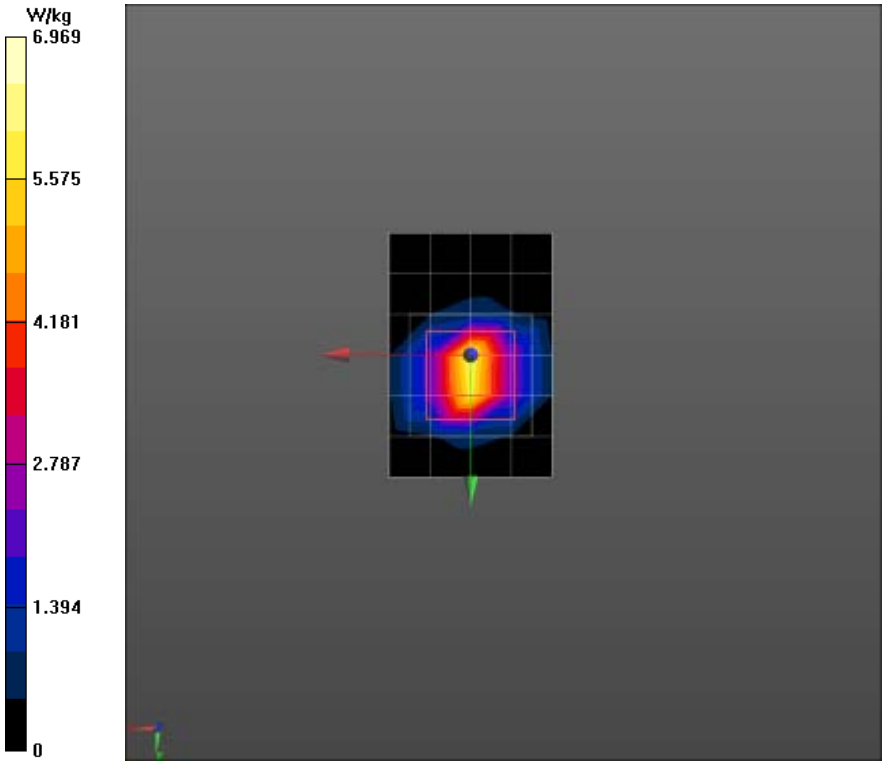
System 5300MHz Head

Date/Time: 2017/3/20
Electronics: DAE4 Sn797
Medium: Head 5300MHz
Medium parameters used: f = 5300 MHz; σ = 4.876 S/m; εr = 37.343; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 5300 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(5.41, 5.41, 5.41);
System Check Dipole 5300 MHz/Area Scan (5x5x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.00 W/kg
System Check Dipole 5300 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 43.55 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 26.7 W/kg
SAR(1 g) = 7.88 W/kg; SAR(10 g) = 2.27 W/kg
Maximum value of SAR (measured) = 10.0 W/kg



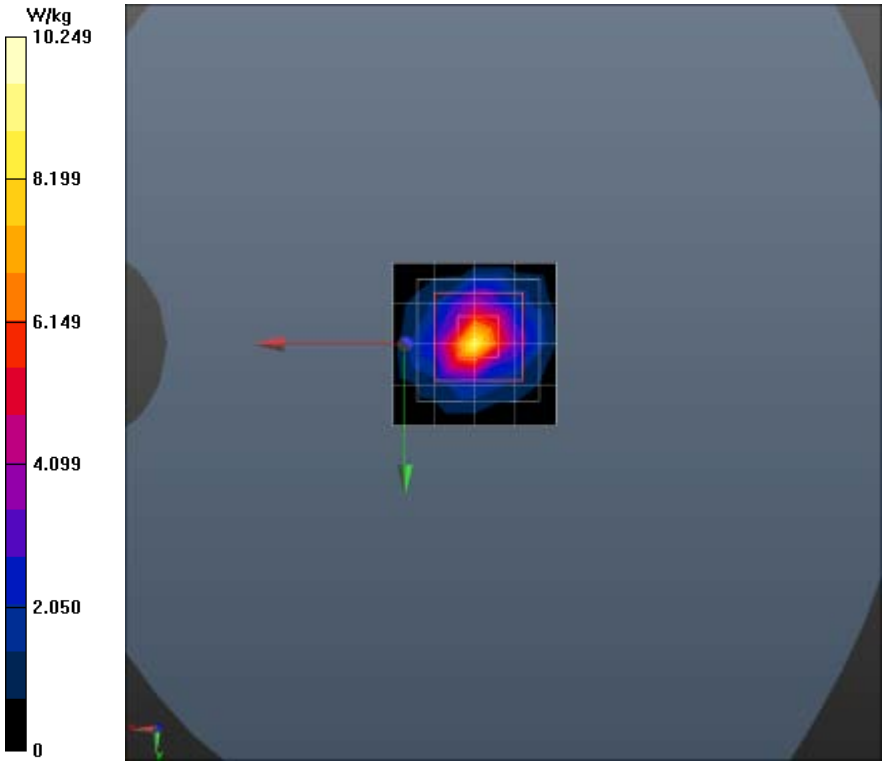
System 5300MHz Body

Date/Time: 2017/3/31
Electronics: DAE4 Sn797
Medium: Body 5300MHz
Medium parameters used: f = 5300 MHz; σ = 5.545 S/m; εr = 49.483; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 5300 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.98, 4.98, 4.98);
System Check Dipole 5300 MHz/Area Scan (5x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 6.23 W/kg
System Check Dipole 5300 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 33.82 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 48.5 W/kg
SAR(1 g) = 7.66 W/kg; SAR(10 g) = 2.03 W/kg
Maximum value of SAR (measured) = 6.97 W/kg



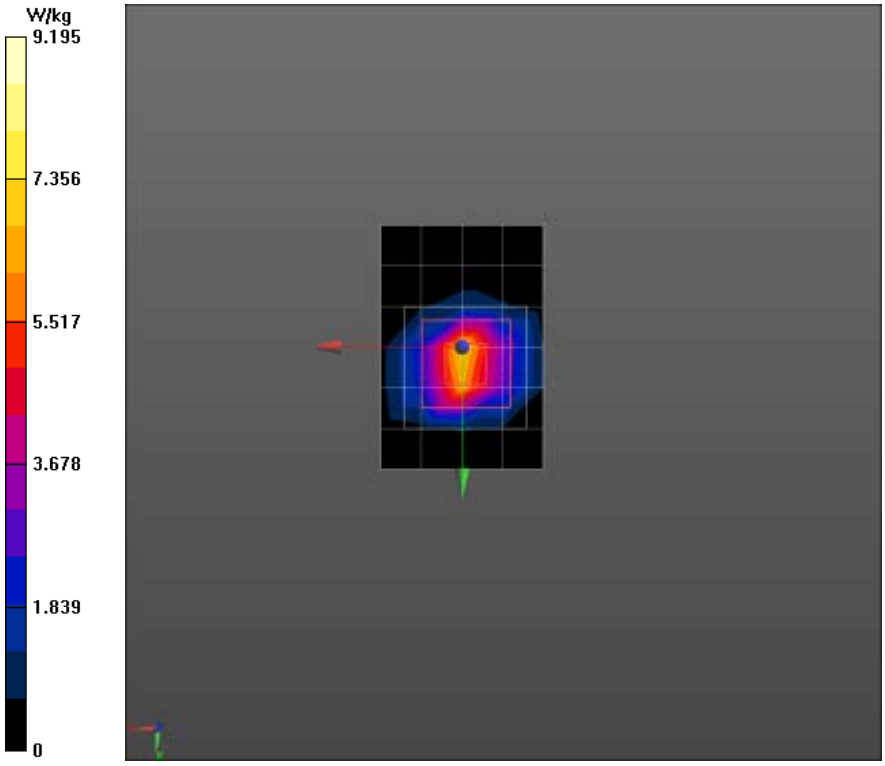
System 5600MHz Head

Date/Time: 2017/3/20
Electronics: DAE4 Sn797
Medium: Head 5600MHz
Medium parameters used: f = 5600 MHz; σ = 4.966 S/m; εr = 34.847; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.87, 4.87, 4.87);
System Check Dipole 5600 MHz/Area Scan (5x5x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.07 W/kg
System Check Dipole 5600 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 43.58 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 27.2 W/kg
SAR(1 g) = 8.06 W/kg; SAR(10 g) = 2.33 W/kg
Maximum value of SAR (measured) = 10.2 W/kg



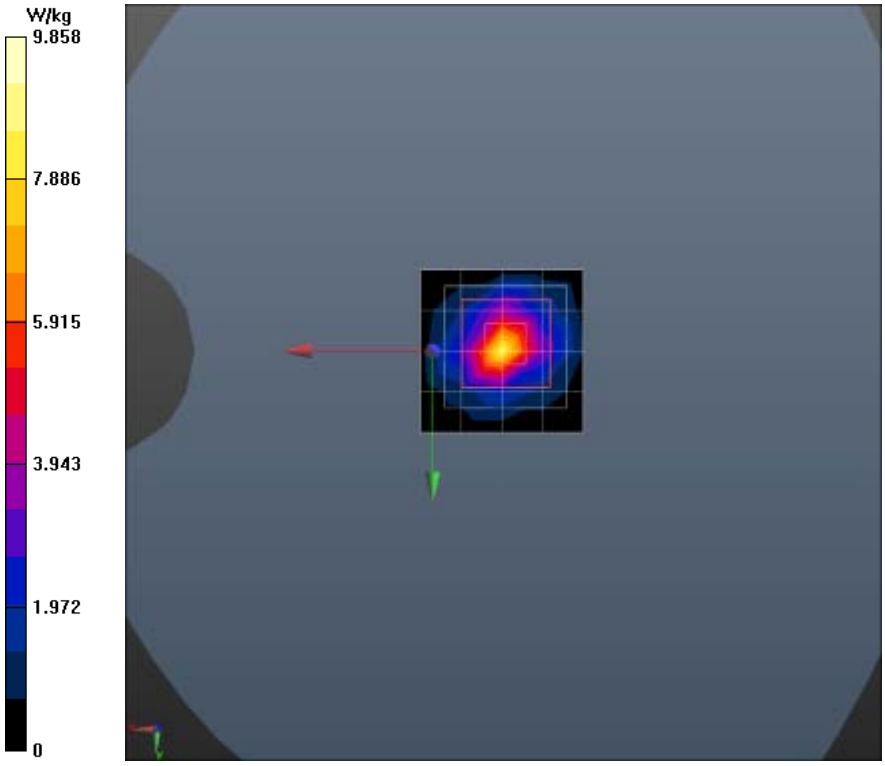
System 5600MHz Body

Date/Time: 2017/3/31
Electronics: DAE4 Sn797
Medium: Body 5600MHz
Medium parameters used: f = 5600 MHz; σ = 5.701 S/m; εr = 46.427; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.51, 4.51, 4.51);
System Check Dipole 5600 MHz/Area Scan (5x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 7.18 W/kg
System Check Dipole 5600 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 36.58 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 24.3 W/kg
SAR(1 g) = 7.23 W/kg; SAR(10 g) = 2.09 W/kg
Maximum value of SAR (measured) = 9.20 W/kg



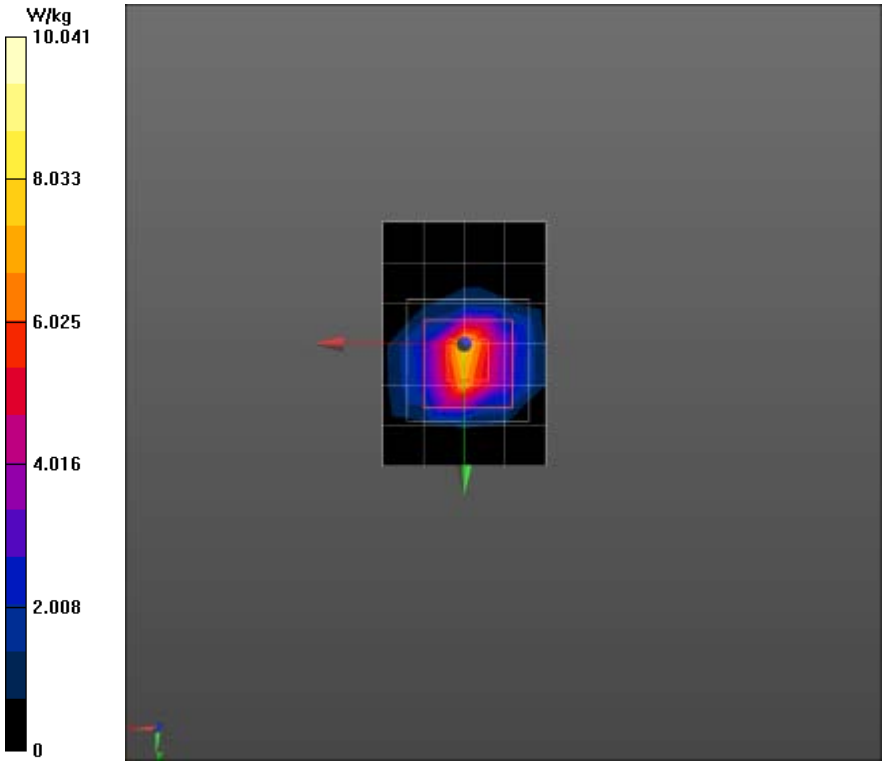
System 5800MHz Head

Date/Time: 2017/3/20
Electronics: DAE4 Sn797
Medium: Head 5800MHz
Medium parameters used: f = 5800 MHz; σ = 5.252 S/m; εr = 35.915; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.95, 4.95, 4.95);
System Check Dipole 5800 MHz/Area Scan (5x5x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.65 W/kg
System Check Dipole 5800 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 41.34 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 26.0 W/kg
SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.23 W/kg
Maximum value of SAR (measured) = 9.86 W/kg



System 5800MHz Body

Date/Time: 2017/3/31
Electronics: DAE4 Sn797
Medium: Body 5800MHz
Medium parameters used: f = 5800 MHz; σ = 5.995 S/m; εr = 47.476; ρ = 1000 kg/m3
Ambient Temperature:22.5°C Liquid Temperature:22.5°C
Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1
Probe: EX3DV4 – SN3844ConvF(4.58, 4.58, 4.58);
System Check Dipole 5800 MHz/Area Scan (5x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 7.90 W/kg
System Check Dipole 5800 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.69 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 26.2 W/kg
SAR(1 g) = 7.87 W/kg; SAR(10 g) = 2.26 W/kg
Maximum value of SAR (measured) = 10.0 W/kg



Annex C EUT Test Setup Photos

See the Pic1~Pic10in the document"A1-901-SAR test setup photos".

Annex D External Photos

See the document"A1-901-External Photos".

Annex E Internal Photos

See the document"A1-901-Internal Photos".

Annex F Calibration Certificates

See the documents"A1-901_DAE Calibration Certificate", "A1-901_Dipole Calibration Certificate" and "A1-901_Probe Calibration Certificate".

*****End Of Report******