

SAR Test Report

APPLICANT : Sony Mobile Communications AB
EQUIPMENT : Smart phone
BRAND NAME : Sony
MODEL NAME : PM-0261-BV
MARKETING NAME : C1604
FCC ID : PY7PM-0261
IC : 4170B-PM0261
STANDARD : FCC 47 CFR Part 2 (2.1093)
ANSI/IEEE C95.1-1992
IEEE 1528-2003
FCC OET Bulletin 65 Supplement C (Edition 01-01)
IC RSS-102 Issue 4 (2010)
IEC 62209-2 (2010)

The product was completely tested on Oct. 31, 2012. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the procedures and shown the compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:



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FCC ID : PY7PM-0261

IC : 4170B-PM0261

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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA290405	Rev. 01	Initial issue of report	Nov. 09, 2012
FA290405	Rev. 02	Updated report for adding Scaled SAR value in the section 12.5.	Nov. 21, 2012
FA290405	Rev. 03	Removed battery picture	Nov. 26, 2012
FA290405	Rev. 04	Updated IC ID	Nov. 27, 2012
FA290405	Rev. 05	1. In section 11, the base station simulator used for measurement was added. 2. In page 38 and 39, the symbol "V" was added into the tablet to indicate headset plugged 3. In section 12, the modulation information was inserted in the SAR measurement data table. 4. Updated the zoom-scan procedure in page 26 to include 2nd peak zoom-scan procedure.	Dec. 11, 2012
FA290405	Rev. 06	1. Revised the SAR table and a statement in the section 1. 2. Revised the name of RMC12.2Kbps and added modulation type in section 12. 3. Removed the section 12.5. 4. Add description for DTM mode measurement in page 30 and 31	Dec. 13, 2012
FA290405	Rev. 07	1. Modify the Body-worn test gap to 1.5cm gap 2. Address the test reduction used for normal voice call and DTM multi-slot by the test lab and their rational that address the FCC KDB. 3. Clarify the head hotspot is not required.	Dec. 14, 2012

1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **Sony Mobile Communications AB Smart phone, Sony, PM-0261-BV, C1604** are as follows.

<Standalone SAR>

Technology Mode/Band	Configuration	Channel Number	Mode	Measured output power [dBm]	Maximum Rated Power Including Tolerance [dBm]	Measured SAR(W/kg)	Scaled-up SAR(W/kg)
						1g mass	1g mass
GSM850	Head	251	Data / Voice	33.72	34	1.08	1.15
	Hotspot(1cm gap)	189	Data	33.82	34	1.24	1.29
	Body-worn(1.5cm gap)	189	Voice	33.80	34	0.66	0.69
PCS1900	Head	810	Data / Voice	28.4	28.98	0.79	0.91
	Hotspot(1cm gap)	810	Data	25.5	26	0.90	1.01
	Body-worn(1.5cm gap)	810	Voice	28.4	28.98	0.55	0.63
WCDMA FDD V	Head	4233	Voice(RMC)	24.83	25	0.98	1.02
	Hotspot(1cm gap)	4233	Data(RMC)	24.83	25	1.32	1.37
	Body-worn(1.5cm gap)	4233	Voice(RMC)	24.83	25	0.69	0.72
WCDMA FDD II	Head	9400	Voice(RMC)	23.46	23.5	1.11	1.12
	Hotspot(1cm gap)	9538	Data(RMC)	23.42	23.5	1.34	1.37
	Body-worn(1.5cm gap)	9400	Voice(RMC)	23.46	23.5	0.78	0.79
WiFi 802.11b	Head	6	Data	15.59	16	0.16	0.18
	Hotspot(1cm gap)	6	Data	15.59	16	0.06	0.06
	Body-worn(1.5cm gap)	6	Data	15.59	16	0.03	0.04

<Simultaneous transmission SAR>

	WWAN SAR			Scale WWAN SAR				WLANSAR		Scale WLAN SAR				Sum	Sum(Scaled)
Position	WWAN Band	Plot No	Max. WWAN SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	Scaled WWAN (W/kg)	Plot No	Max. WLAN SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Scaling Factor	Scaled WWAN (W/kg)	WWANSAR + WLAN SAR	WWANSAR + WLANSAR
Back	GSM850	54	1.24	33.82	34	1.042	1.292	84	0.058	15.59	16	1.099	0.064	1.30	1.36
	GSM1900	45	0.899	25.50	26	1.122	1.009	84	0.058	15.59	16	1.099	0.064	0.96	1.07
	WCDMA Band V	75	1.29	24.62	25	1.091	1.408	84	0.058	15.59	16	1.099	0.064	1.35	1.47
	WCDMA Band II	33	1.34	23.42	23.5	1.019	1.365	84	0.058	15.59	16	1.099	0.064	1.40	1.43

Note:

“Simultaneous transmission was not evaluated as the sum of the individual SAR for WWAN including DTM mode and WLAN was < 1.6 W/kg. This meets the requirements and simultaneous transmission exclusion specified in FCC KDB publication “648474 D01 - SAR Handsets Multi Xmitter and Ant, v01r05” ”.

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in IC RSS-102 Issue 4 (2010), FCC 47 CFR part 2 (2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2003 and FCC OET Bulletin 65 Supplement C (Edition 01-01).

2. Administration Data

2.1 Testing Laboratory

Test Site	SPORTON INTERNATIONAL INC.
Test Site Location	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978

2.2 Applicant

Company Name	Sony Mobile Communications AB
Address	Nya Vattentorget, 22188 Lund, Sweden

2.3 Manufacturer

Company Name	Arima Communications Corp.
Address	6F., No. 866, Jhongjheng Rd., Jhonghe City, Taipei County 23586, Taiwan

2.4 Application Details

Date of Start during the Test	Oct. 29, 2012
Date of End during the Test	Oct. 31, 2012

3. General Information

3.1 Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT	Smart phone
Brand Name	Sony
Model Name	PM-0261-BV
Marketing Name	C1604
FCC ID	PY7PM-0261
IC	4170B-PM0261
EUT Serial No	WUJ012D9H4
IMEI Code	004402146214212
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8 MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz WLAN2.4G: 2412 MHz ~ 2462 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Measure Maximum Average Output Power to Antenna	GSM850: 33.82 dBm GSM1900: 30.83 dBm WCDMA Band V: 24.83 dBm WCDMA Band II: 23.46 dBm 802.11b: 15.59 dBm 802.11g: 15.10 dBm 802.11n-HT20 (2.4GHz) : 12.71 dBm Bluetooth: 5.65 dBm
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna
HW Version	AP
SW Version	11.1.A.0.21
Uplink Modulations	GSM: GMSK GPRS: GMSK EDGE: GMSK / 8PSK WCDMA (Rel 99): QPSK HSDPA (Rel 6): QPSK HSUPA (Rel 6): QPSK 802.11b: DSSS (DBPSK / QPSK / CCK) 802.11g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) Bluetooth : GFSK Bluetooth EDR : $\pi/4$ -DQPSK, 8-DPSK
Dual Transfer Mode (DTM) Category	Class A – EUT can support Packet Switched and Circuit Switched Network simultaneously.
EUT Stage	Production Unit
Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.	

Per KDB 941225 D04 requirement, the required test configuration for this device is as below:

1. This EUT is class A device
2. This EUT supports (E)GPRS multi-slot class 12 (max. uplink : 4, max. downlink : 4, total timeslots : 5)
3. This EUT supports DTM multi-slot class 11 (max. uplink : 3 for 1 CS & 2 PS, max. downlink : 4, total timeslots : 5)
4. The measured maximum conducted power can be referred to section 10.2 of this report
5. For DTM multi-slot class 11 link mode, the device was linked with system emulator (Agilent E5515C) and transmit maximum power on maximum number of Tx slots (one CS timeslot and two PS timeslots per frame).

3.2 Product Photos

Please refer to Appendix D.

3.3 Applied Standard

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards:

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2003
- IC RSS-102 Issue 4 (2010)
- IEC 62209-2 (2010)
- FCC OET Bulletin 65 Supplement C (Edition 01-01)
- FCC KDB 447498 D01 v04
- FCC KDB 648474 D01 v01r05
- FCC KDB 941225 D03 v01
- FCC KDB 941225 D04 v01
- FCC KDB 941225 D06 v01
- FCC KDB 248227 D01 v01r02

3.4 Device Category and SAR Limits

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user. Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

3.5 Test Conditions

3.5.1 Ambient Condition

Ambient Temperature	20 to 24 °C
Humidity	< 60 %

3.5.2 Test Configuration

The device was controlled by using a base station emulator. Communication between the device and the emulator was established by air link. The distance between the EUT and the antenna of the emulator is larger than 50 cm and the output power radiated from the emulator antenna is at least 30 dB smaller than the output power of EUT. The EUT was set from the emulator to radiate maximum output power during all tests.

For WLAN SAR testing, WLAN engineering testing software installed on the EUT can provide continuous transmitting RF signal.

The maximum rated power of WWAN and WLAN is listed in "Tune-Up Procedure" exhibit, the scaling factor is calculated according to the difference between measured output power and maximum tolerance power on this device.

4. Specific Absorption Rate (SAR)

4.1 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.

4.2 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:

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

SAR is expressed in units of Watts per kilogram (W/kg)

SAR measurement can be either related to the temperature elevation in tissue by

$$\text{SAR} = C \left(\frac{\delta T}{\delta t} \right)$$

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

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

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

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

5. SAR Measurement System

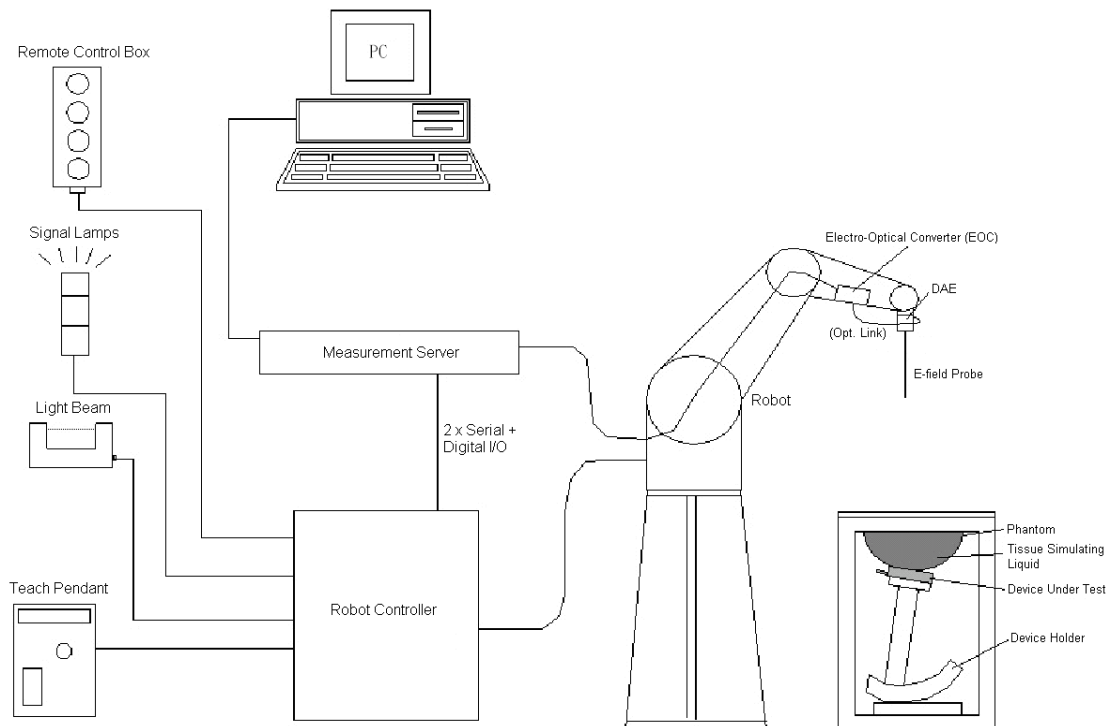


Fig 5.1 SPEAG DASY System Configurations

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

- A standard high precision 6-axis robot with controller, a teach pendant and software
- A data acquisition electronic (DAE) attached to the robot arm extension
- A dosimetric probe equipped with an optical surface detector system
- The electro-optical converter (EOC) performs the conversion between optical and electrical signals
- A measurement server performs the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- A probe alignment unit which improves the accuracy of the probe positioning
- A computer operating Windows XP
- DASY software
- Remote control with teach pendant and additional circuitry for robot safety such as warning lamps, etc.
- The SAM twin phantom
- A device holder
- Tissue simulating liquid
- Dipole for evaluating the proper functioning of the system

Component details are described in in the following sub-sections.

5.1 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG). The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

5.1.1 E-Field Probe Specification

<EX3DV4 / ES3DV4 Probe>

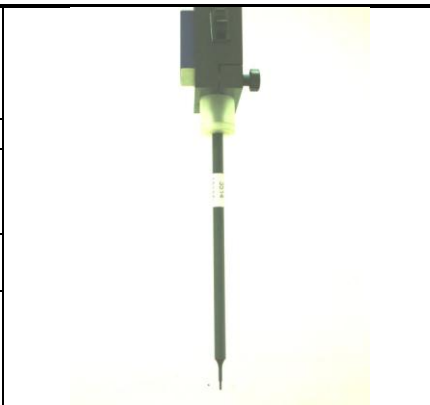
Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	10 MHz to 6 GHz; Linearity: ± 0.2 dB	
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)	
Dynamic Range	10 μ W/g to 100 mW/g; Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)	
Dimensions	Overall length: 337 mm (Tip: 9 mm) Tip diameter: 2.5 mm (Body: 10 mm) Typical distance from probe tip to dipole centers: 1 mm	

Fig 5.2 Photo of EX3DV4/ES3DV4

5.1.2 E-Field Probe Calibration

Each probe needs to be calibrated according to a dosimetric assessment procedure with accuracy better than $\pm 10\%$. The spherical isotropy shall be evaluated and within ± 0.25 dB. The sensitivity parameters (NormX, NormY, and NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested. The calibration data can be referred to appendix C of this report.

5.2 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists 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 and 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 input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.



Fig 5.3 Photo of DAE

5.3 Robot

The SPEAG DASY system uses the high precision robots (DASY4: RX90BL; DASY5: TX90XL) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version (DASY4: CS7MB; DASY5: CS8c) from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability ± 0.035 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

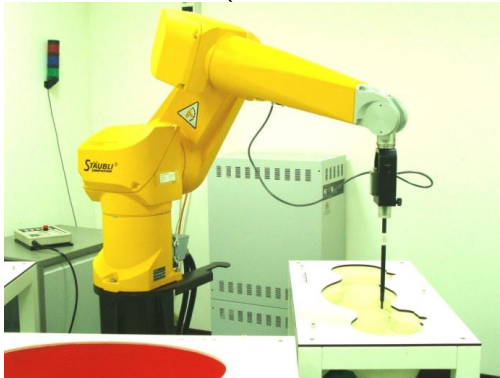


Fig 5.4 Photo of DASY4



Fig 5.5 Photo of DASY5

5.4 Measurement Server

The measurement server is based on a PC/104 CPU board with CPU (DASY4: 166 MHz, Intel Pentium; DASY5: 400 MHz, Intel Celeron), chipdisk (DASY4: 32 MB; DASY5: 128 MB), RAM (DASY4: 64 MB, DASY5: 128 MB). 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 board, which is directly connected to the PC/104 bus of the CPU board.

The measurement server performs all the real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operations.



Fig 5.6 Photo of Server for DASY4



Fig 5.7 Photo of Server for DASY5

5.5 Phantom

<SAM Twin Phantom>

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm
Filling Volume	Approx. 25 liters
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet
Measurement Areas	Left Hand, Right Hand, Flat Phantom



Fig 5.8 Photo of SAM Phantom

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

<ELI4 Phantom>

Shell Thickness	2 ± 0.2 mm (sagging: <1%)
Filling Volume	Approx. 30 liters
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm

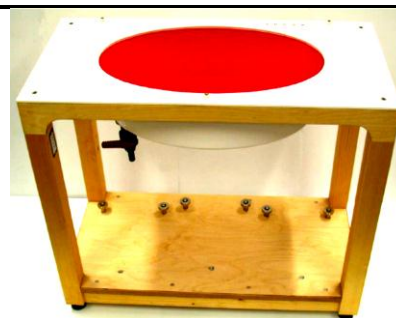


Fig 5.9 Photo of ELI4 Phantom

The ELI4 phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

5.6 Device Holder

<Device Holder for SAM Twin Phantom>

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5 mm distance, a positioning uncertainty of ± 0.5 mm 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 different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (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 $\epsilon = 3$ and loss tangent $\delta = 0.02$. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.



Fig 5.10 Device Holder

<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 positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.

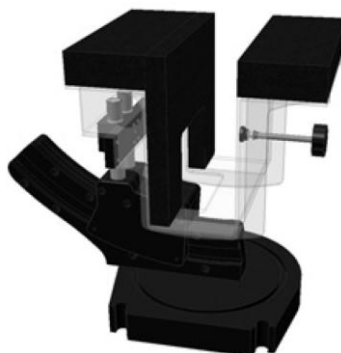


Fig 5.11 Laptop Extension Kit

5.7 Data Storage and Evaluation

5.7.1 Data Storage

The DASY software stores the assessed data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all the necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files. The post-processing software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of erroneous parameter settings. For example, if a measurement has been performed with an incorrect crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be reevaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type (e.g., [V/m], [A/m], [mW/g]). Some of these units are not available in certain situations or give meaningless results, e.g., a SAR-output in a non-lose media, will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

5.7.2 Data Evaluation

The DASY post-processing software (SEMCAD) automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software :

Probe parameters :	- Sensitivity	$\text{Norm}_i, a_{i0}, a_{i1}, a_{i2}$
	- Conversion factor	ConvF_i
	- Diode compression point	dcp_i
Device parameters :	- Frequency	f
	- Crest factor	cf
Media parameters :	- Conductivity	σ
	- Density	ρ

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY components. In the direct measuring mode of the multi-meter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power.

The formula for each channel can be given as :

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

with V_i = compensated signal of channel i, (i = x, y, z)
 U_i = input signal of channel i, (i = x, y, z)
 cf = crest factor of exciting field (DASY parameter)
 dcp_i = diode compression point (DASY parameter)

From the compensated input signals, the primary field data for each channel can be evaluated :

$$\text{E-field Probes : } E_i = \sqrt{\frac{V_i}{\text{Norm}_i \cdot \text{ConvF}}}$$

$$\text{H-field Probes : } H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1}f + a_{i2}f^2}{f}$$

with V_i = compensated signal of channel i, (i = x, y, z)
 Norm_i = sensor sensitivity of channel i, (i = x, y, z), $\mu\text{V}/(\text{V/m})^2$ for E-field Probes
 ConvF = sensitivity enhancement in solution
 a_{ij} = sensor sensitivity factors for H-field probes
 f = carrier frequency [GHz]
 E_i = electric field strength of channel i in V/m
 H_i = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude) :

$$E_{\text{tot}} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$\text{SAR} = E_{\text{tot}}^2 \cdot \frac{\sigma}{\rho \cdot 1000}$$

with SAR = local specific absorption rate in mW/g
 E_{tot} = total field strength in V/m
 σ = conductivity in [mho/m] or [Siemens/m]
 ρ = equivalent tissue density in g/cm^3

Note that the density is set to 1, to account for actual head tissue density rather than the density of the tissue simulating liquid.

5.8 Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	835MHz System Validation Kit	D835V2	499	Mar. 22, 2010	Mar. 21, 2013
SPEAG	1900MHz System Validation Kit	D1900V2	5d041	Mar. 23, 2010	Mar. 22, 2013
SPEAG	2450MHz System Validation Kit	D2450V2	736	Jul. 25, 2011	Jul. 24, 2013
SPEAG	Data Acquisition Electronics	DAE4	778	Aug. 27, 2012	Aug. 26, 2013
SPEAG	Dosimetric E-Field Probe	EX3DV4	3801	Jun. 22, 2012	Jun. 21, 2013
SPEAG	Device Holder	N/A	N/A	NCR	NCR
Wisewind	Thermometer	ETP-101	TM560	Nov. 16, 2011	Nov. 15, 2012
Wisewind	Thermometer	HTC-1	TM685	Nov. 16, 2011	Nov. 15, 2012
SPEAG	SAM Phantom	QD 000 P40 CD	TP-1644	NCR	NCR
SPEAG	SAM Phantom	SM 000 T01 DA	TP-1542	NCR	NCR
Agilent	Network Analyzer	E5071C	MY46101588	May 11, 2012	May 10, 2013
Agilent	ESG Vector Series Signal Generator	E4438C	MY49070755	Oct. 02, 2012	Oct. 01, 2013
Anritsu	Power Meter	ML2495A	1132003	Aug. 14, 2012	Aug. 13, 2013
Agilent	Wireless Communication Test Set	E5515C	MY48360820	Jan. 05, 2012	Jan. 04, 2014
Agilent	Dual Directional Coupler	778D	50422	Note 4	
Woken	Attenuator 1	WK0602-XX	N/A	Note 4	
PE	Attenuator 2	PE7005-10	N/A	Note 4	
PE	Attenuator 3	PE7005- 3	N/A	Note 4	
Agilent	Dielectric Probe Kit	85070D	US01440205	Note 5	
AR	Power Amplifier	5S1G4M2	0328767	Note 6	
R&S	Spectrum Analyzer	FSP	101131	Jul. 23, 2012	Jul. 22, 2013

Table 5.1 Test Equipment List

Note:

1. The calibration certificate of DASY can be referred to appendix C of this report.
2. Referring to KDB 450824 D02, the dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval.
3. The justification data of dipole D835V2, SN: 499, D1900V2, SN: 5d041, and D2450V2, SN: 736 can be found in appendix C. The return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration.
4. The Insertion Loss calibration of Dual Directional Coupler and Attenuator were characterized via the network analyzer and compensated during system check.
5. The dielectric probe kit was calibrated via the network analyzer, with the specified procedure (calibrated in pure water) and calibration kit (standard) short circuit, before the dielectric measurement. The specific procedure and calibration kit are provided by Agilent.
6. In system check we need to monitor the level on the power meter, and adjust the power amplifier level to have 24dBm to the dipole. For system check, power amplifier is deemed not required for correct measurement; the power meter is critical and we do have calibration for it
7. Attenuator 1 insertion loss is calibrated by the network Analyzer, which the calibration is valid, before system check.

6. Tissue Simulating Liquids

For the measurement of the field distribution inside the SAM phantom with DASY, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For head SAR testing, the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 6.1. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Fig. 6.2.

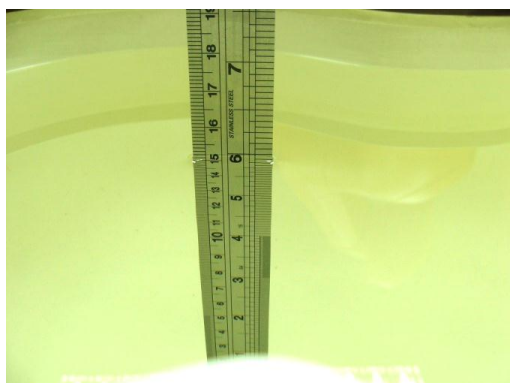


Fig 6.1 Photo of Liquid Height for Head SAR



Fig 6.2 Photo of Liquid Height for Body SAR

The following table gives the recipes for tissue simulating liquid.

Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity (σ)	Permittivity (ϵ_r)
For Head								
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0	0	45.0	1.80	39.2
For Body								
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0	0	31.4	1.95	52.7

Table 6.1 Recipes of Tissue Simulating Liquid

The dielectric parameters of the liquids were verified prior to the SAR evaluation using an Agilent 85070D Dielectric Probe Kit and an Agilent Network Analyzer.

The following table shows the measuring results for simulating liquid.

Freq. (MHz)	Liquid Type	Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
835	Head	21.4	0.909	43.261	0.90	41.5	1.00	4.24	±5	Oct. 29, 2012
835	Body	21.6	0.963	54.541	0.97	55.2	-0.72	-1.19	±5	Oct. 30, 2012
1900	Head	21.6	1.422	40.021	1.4	40	1.57	0.05	±5	Oct. 29, 2012
1900	Body	21.5	1.545	53.277	1.52	53.3	1.64	-0.04	±5	Oct. 30, 2012
2450	Head	21.6	1.827	39.417	1.8	39.2	1.50	0.55	±5	Oct. 31, 2012
2450	Body	21.1	2.015	53.957	1.95	52.7	3.33	2.39	±5	Oct. 31, 2012

Table 6.2 Measuring Results for Simulating Liquid

CH	Freq. (MHz)	Liquid Type	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
128	824.2	Head	0.9	43.386	0.90	41.6	0.00	4.29	± 5	Oct. 29, 2012
189	836.4	Head	0.909	43.247	0.90	41.5	1.00	4.21	± 5	Oct. 29, 2012
251	848.8	Head	0.918	43.079	0.91	41.5	0.88	3.80	± 5	Oct. 29, 2012
4132	826.4	Head	0.902	43.35	0.90	41.5	0.22	4.46	± 5	Oct. 29, 2012
4182	836.4	Head	0.909	43.247	0.90	41.5	1.00	4.21	± 5	Oct. 29, 2012
4233	846.6	Head	0.917	43.112	0.91	41.5	0.77	3.88	± 5	Oct. 29, 2012
512	1850.2	Head	1.381	40.22	1.38	40.1	0.07	0.30	± 5	Oct. 29, 2012
661	1880	Head	1.407	40.07	1.39	40.0	1.22	0.18	± 5	Oct. 29, 2012
810	1909.8	Head	1.431	40.004	1.39	40.0	2.95	0.01	± 5	Oct. 29, 2012
9262	1852.4	Head	1.383	40.204	1.38	40.1	0.22	0.26	± 5	Oct. 29, 2012
9400	1880	Head	1.407	40.072	1.39	40.0	1.22	0.18	± 5	Oct. 29, 2012
9538	1907.6	Head	1.429	40.001	1.39	40.0	2.81	0.00	± 5	Oct. 29, 2012
512	1850.2	Body	1.488	53.41	1.50	53.36	-0.80	0.02	± 5	Oct. 30, 2012
661	1880	Body	1.523	53.341	1.51	53.35	0.86	0.08	± 5	Oct. 30, 2012
810	1909.8	Body	1.557	53.214	1.51	53.34	3.11	-0.16	± 5	Oct. 30, 2012
9262	1852.4	Body	1.49	53.406	1.50	53.36	-0.67	0.01	± 5	Oct. 30, 2012
9400	1880	Body	1.523	53.341	1.51	53.35	0.86	0.08	± 5	Oct. 30, 2012
9538	1907.6	Body	1.554	53.222	1.51	53.34	2.91	-0.15	± 5	Oct. 30, 2012
128	824.2	Body	0.952	54.662	0.97	55.2	-1.86	-0.97	± 5	Oct. 30, 2012
189	836.4	Body	0.964	54.526	0.97	55.2	-0.62	-1.22	± 5	Oct. 30, 2012
251	848.8	Body	0.976	54.414	0.99	55.2	-1.41	-1.42	± 5	Oct. 30, 2012
4132	826.4	Body	0.955	54.63	0.97	55.2	-1.55	-1.03	± 5	Oct. 30, 2012
4182	836.4	Body	0.964	54.526	0.97	55.2	-0.62	-1.22	± 5	Oct. 30, 2012
4233	846.6	Body	0.974	54.432	0.98	55.2	-0.61	-1.39	± 5	Oct. 30, 2012
1	2412	Head	1.784	39.53	1.76	39.25	1.36	0.84	± 5	Oct. 31, 2012
6	2437	Head	1.812	39.457	1.79	39.22	1.23	0.66	± 5	Oct. 31, 2012
11	2462	Head	1.841	39.37	1.81	39.19	1.71	0.43	± 5	Oct. 31, 2012
1	2412	Body	1.959	54.05	1.90	52.75	3.11	2.56	± 5	Oct. 31, 2012
6	2437	Body	1.996	53.979	1.93	52.72	3.42	2.43	± 5	Oct. 31, 2012
11	2462	Body	2.032	53.94	1.97	52.68	3.15	2.35	± 5	Oct. 31, 2012

Table 6.3 Low/Middle/High Channel for Liquid Validation

7. SAR Measurement Evaluation

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 performance check and system validation. System validation kit includes a dipole, tripod holder to fix it underneath the flat phantom and a corresponding distance holder.

7.1 Purpose of System Performance check

The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

7.2 System Setup

In the simplified setup for system evaluation, the EUT 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:

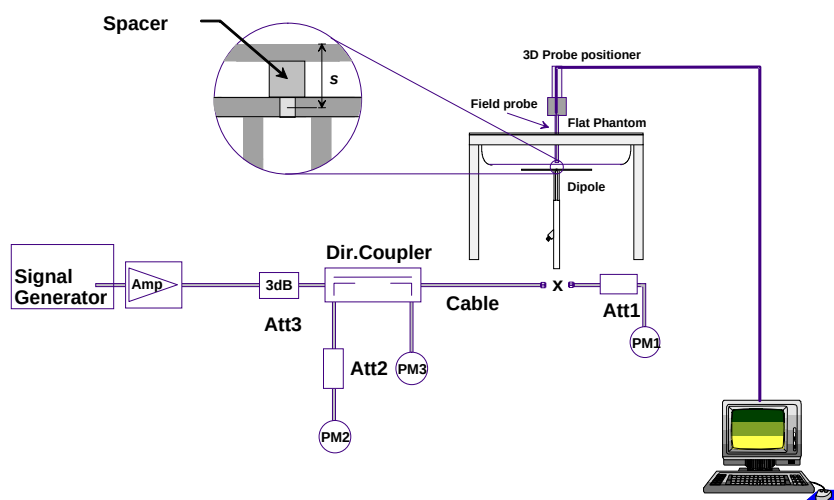


Fig 7.1 System Setup for System Evaluation



Fig 7.2 Photo of Dipole Setup

1. Signal Generator
2. Amplifier
3. Directional Coupler
4. Power Meter
5. Calibrated Dipole

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

7.3 SAR System Verification Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Table 7.1 shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the verification criterion and the plots can be referred to Appendix A of this report.

Measurement Date	Frequency (MHz)	Liquid Type	Targeted SAR _{1g} (W/kg)	Measured SAR _{1g} (W/kg)	Normalized SAR _{1g} (W/kg)	Deviation (%)
Oct. 29, 2012	835	Head	9.71	2.46	9.84	1.34
Oct. 30, 2012	835	Body	9.82	2.32	9.28	-5.50
Oct. 29, 2012	1900	Head	39.8	10.2	40.80	2.51
Oct. 30, 2012	1900	Body	40	10.4	41.60	4.00
Oct. 31, 2012	2450	Head	54.8	13.4	53.60	-2.19
Oct. 31, 2012	2450	Body	52.3	13.1	52.40	0.19

Table 7.1 Target and Measurement SAR after Normalized

8. EUT Testing Position

8.1 Define two imaginary lines on the handset

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

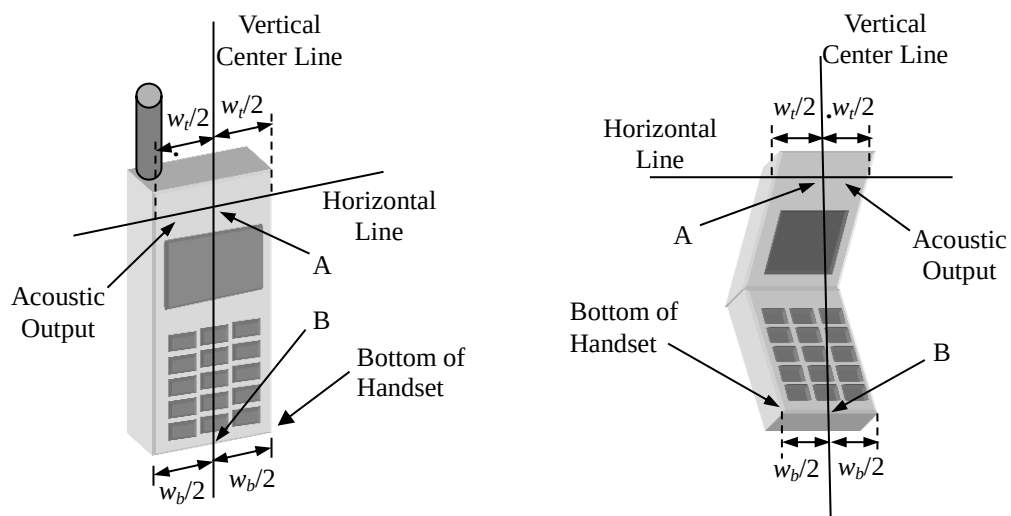


Fig 8.1 Illustration for Handset Vertical and Horizontal Reference Lines

8.2 Cheek Position

- To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost (see Fig. 8.2).

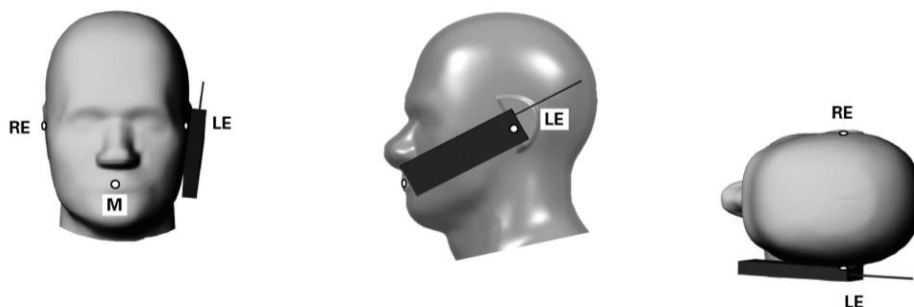


Fig 8.2 Illustration for Cheek Position

8.3 Tilted Position

- To position the device in the “cheek” position described above.
- While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost (see Fig. 8.3).



Fig 8.3 Illustration for Tilted Position

8.4 Body Worn Position

- (a) To position the device parallel to the phantom surface with either keypad up or down.
- (b) To adjust the device parallel to the flat phantom.
- (c) To adjust the distance between the device surface and the flat phantom to 1.5cm.

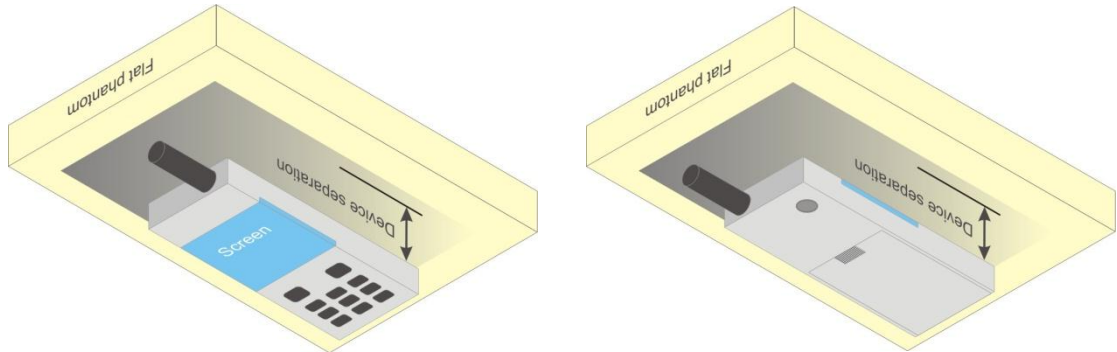


Fig 8.4 Illustration for Body Worn Position

8.5 Hotspot Position

- (a) To position the device parallel to the phantom surface with all sides and either keypad up or down.
- (b) To adjust the device parallel to the flat phantom.
- (c) To adjust the distance between the device and the flat phantom to 1.0cm.

<EUT Setup Photos>

Please refer to Appendix E for the test setup photos.

9. Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

- (a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.
- (b) Read the WWAN RF power level from the base station simulator.
- (c) For WLAN/BT power measurement, use engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power in each supported wireless interface and frequency band
- (d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/BT output power

<SAR measurement>

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/BT continuously transmission, at maximum RF power, in the highest power channel.
- (b) Place the EUT in the positions as Appendix E demonstrates.
- (c) Set scan area, grid size and other setting on the DASY software.
- (d) Measure SAR results for the highest power channel on each testing position.
- (e) Find out the largest SAR result on these testing positions of each band
- (f) Measure SAR results for other channels in worst SAR testing position if the SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

9.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

9.2 Area & Zoom Scan Procedures

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan measures 5x5x7 points with step size 8, 8 and 5 mm for 300 MHz to 3 GHz, and 8x8x8 points with step size 4, 4 and 2.5 mm for 3 GHz to 6 GHz. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g.

For any secondary peaks found in the area scan which are within 2 dB of the maximum peak and are not within this zoom scan, the zoom scan should be repeated.

9.3 Volume Scan Procedures

The volume scan is used for assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing (step-size is 4, 4 and 2.5 mm). When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

9.4 SAR Averaged Methods

In DASY, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.

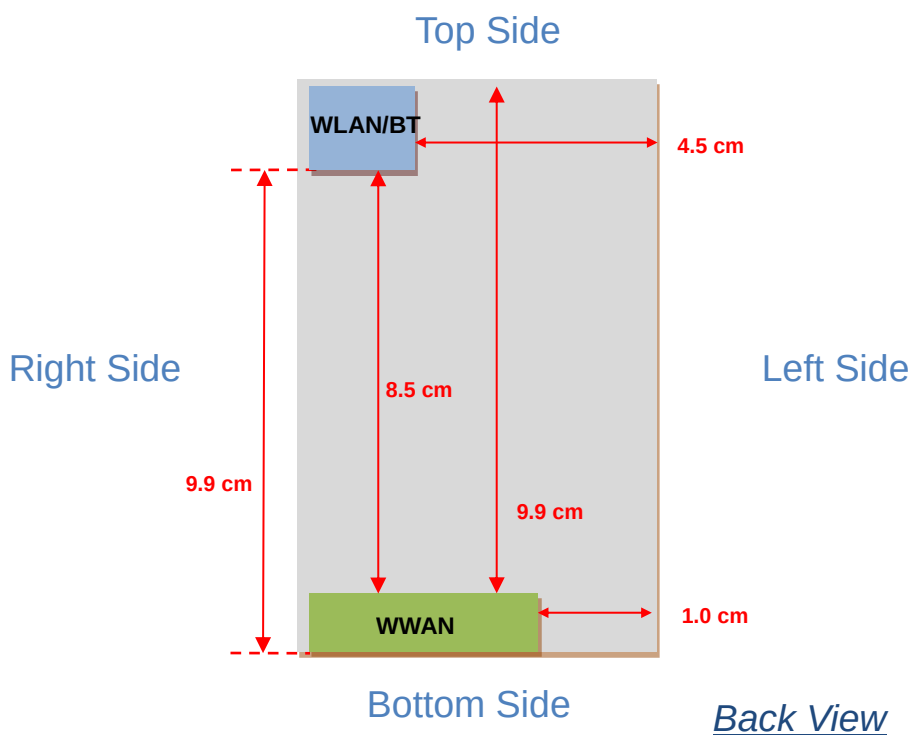
Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger than 5 mm.

9.5 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

10. SAR Test Configurations

10.1 Exposure Positions Consideration



EUT Length: 11.3 cm
EUT Width: 6.3 cm

Antennas	Wireless Interface
WWAN Antenna (Tx / Rx)	GSM 850 GSM 1900 WCDMA Band V WCDMA Band II
WLAN/BT Antenna (Tx / Rx)	WLAN 2.4GHz Bluetooth

Sides for Head SAR tests				
Antennas	Right Cheek	Left Cheek	Right Tilt	Left Tilt
WWAN	YES	YES	YES	YES
WLAN/BT	YES	YES	YES	YES

Sides for SAR tests; Hotspot mode Test distance: 10 mm						
Antennas	Back	Front	Top Side	Bottom Side	Right Side	Left Side
WWAN	YES	YES	NO	YES	YES	YES
WLAN/BT	YES	YES	YES	NO	YES	NO

Sides for SAR tests; Body-worn mode Test distance: 15 mm		
Antennas	Back w/ headset	Front w/ headset
WWAN	YES	YES
WLAN/BT	YES	YES

Note:

1. Head/Body-worn/Hotspot mode SAR assessments are required.
2. Referring to KDB 941225 D06, when the overall device length and width are $\geq 9\text{cm} \times 5\text{cm}$, the test distance is 10 mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.
3. For 2G/3G antenna, SAR measurements at Top side is not required since the distance between the transmitting antenna and surface of device is $> 25\text{mm}$.
4. For BT&WLAN antenna, SAR measurements Bottom/Left side are not required since the distance between the transmitting antenna and surface of device is $> 25\text{mm}$.
5. Per KDB 648474 D01, Bluetooth output power $\leq 2 \cdot P_{\text{Ref}}$ and the distance to other antennas $\geq 5\text{cm}$, therefore, stand-alone SAR is not required.

11. Conducted RF Output Power (Unit: dBm)

<GSM Conducted Power>

Band: GSM850		Burst Average Power (dBm)			Frame-Average Power (dBm)		
Channel		128	189	251	128	189	251
Frequency (MHz)		824.2	836.4	848.8	824.2	836.4	848.8
GSM (GMSK, 1 Tx slot)		33.79	33.80	33.72	24.79	24.80	24.72
GPRS (GMSK, 1 Tx slot) – CS1		33.81	33.82	33.73	24.81	24.82	24.73
GPRS (GMSK, 2 Tx slots) – CS1		30.79	30.80	30.71	24.79	24.80	24.71
GPRS (GMSK, 3 Tx slots) – CS1		28.88	28.94	28.80	24.62	24.68	24.54
GPRS (GMSK, 4 Tx slots) – CS1		27.71	27.75	27.70	24.71	24.75	24.70
EDGE (GMSK, 1 Tx slot) – MCS1		33.81	33.80	33.72	24.81	24.80	24.72
EDGE (GMSK, 2 Tx slots) – MCS1		30.74	30.76	30.70	24.74	24.76	24.70
EDGE (GMSK, 3 Tx slots) – MCS1		28.85	28.93	28.75	24.59	24.67	24.49
EDGE (GMSK, 4 Tx slots) – MCS1		27.68	27.73	27.68	24.68	24.73	24.68
EDGE (8PSK, 1 Tx slot) – MCS5		28.88	28.91	28.84	19.88	19.91	19.84
EDGE (8PSK, 2 Tx slots) – MCS5		25.91	25.90	25.81	19.91	19.90	19.81
EDGE (8PSK, 3 Tx slots) – MCS5		24.00	24.01	23.94	19.74	19.75	19.68
EDGE (8PSK, 4 Tx slots) – MCS5		22.86	22.89	22.81	19.86	19.89	19.81
DTM 5 (2Tx slots)	GSM (GMSK, 1 Tx slot)	30.79	30.77	30.70	24.76	24.74	24.67
	GPRS (GMSK, 1 Tx slot) – CS1	30.78	30.76	30.68			
DTM 9 (2Tx slots)	GSM (GMSK, 1 Tx slot)	30.78	30.76	30.69	24.75	24.74	24.66
	GPRS (GMSK, 1 Tx slot) – CS1	30.77	30.76	30.68			
DTM 11(3Tx slots)	GSM (GMSK, 1 Tx slot)	28.85	28.89	28.80	24.58	24.61	24.53
	GPRS (GMSK, 2 Tx slots) – CS1	28.83	28.86	28.79			
DTM 5 (2Tx slots)	GSM (GMSK, 1 Tx slot)	30.79	30.80	30.71	22.96	22.97	22.88
	EDGE (8PSK, 1 Tx slot) – MCS5	25.83	25.84	25.76			
DTM 9(2Tx slots)	GSM (GMSK, 1 Tx slot)	30.78	30.78	30.70	22.95	22.95	22.87
	EDGE (8PSK, 1 Tx slot) – MCS5	25.81	25.83	25.74			
DTM 11(3Tx slots)	GSM (GMSK, 1 Tx slot)	28.90	28.92	28.82	22.02	22.04	21.95
	EDGE (8PSK, 2 Tx slots) – MCS5	23.95	23.97	23.90			
Remark: The frame-averaged power is linearly scaled the maximum burst averaged power over 8 time slots. The calculated method are shown as below: Frame-averaged power = Maximum burst averaged power (1 Tx slot) - 9 dB Frame-averaged power = Maximum burst averaged power (2 Tx slots) - 6 dB Frame-averaged power = Maximum burst averaged power (3 Tx slots) - 4.26 dB Frame-averaged power = Maximum burst averaged power (4 Tx slots) - 3 dB							

Note:

- For Head SAR testing, GSM and DTM should be evaluated, therefore the EUT was set in GSM Voice for GSM850 due to its highest frame-average power.
- For Body worn SAR testing, GSM and DTM should be evaluated, therefore the EUT was set in GSM Voice for GSM850 due to its highest frame-average power.
- For hotspot mode SAR testing, GPRS, EDGE and DTM should be evaluated, therefore the EUT was set in GPRS 1 Tx slot for GSM850 due to its highest frame-average power.
- Per KDB 648474, the maximum output power channel is used for SAR testing and for further SAR test reduction.
- Agilent E5515C was used to setup the device operated under DTM mode for power measurement and SAR testing. For conducted power, the power of the burst for voice and the power of the bursts for data was reported separately in the table above, and the frame-average power is derived below to determine SAR testing.

$$DTM \text{ frame average power (dBm)} = 10 \cdot \log \left[\frac{\sum (\text{power of each slot, in mW})}{8} \right]$$

Band: GSM1900		Burst Average Power (dBm)			Frame-Average Power (dBm)		
Channel		512	661	810	512	661	810
Frequency (MHz)		1850.2	1880.0	1909.8	1850.2	1880.0	1909.8
GSM (GMSK, 1 Tx slot)		30.48	30.67	30.82	21.48	21.67	21.82
GPRS (GMSK, 1 Tx slot) – CS1		30.49	30.68	30.83	21.49	21.68	21.83
GPRS (GMSK, 2 Tx slots) – CS1		28.11	28.36	28.47	22.11	22.36	22.47
GPRS (GMSK, 3 Tx slots) – CS1		26.26	26.44	26.58	22.00	22.18	22.32
GPRS (GMSK, 4 Tx slots) – CS1		25.10	25.34	25.50	22.10	22.34	22.50
EDGE (GMSK, 1 Tx slot) – MCS1		30.45	30.66	30.82	21.45	21.66	21.82
EDGE (GMSK, 2 Tx slots) – MCS1		28.10	28.32	28.46	22.10	22.32	22.46
EDGE (GMSK, 3 Tx slots) – MCS1		26.24	26.43	26.55	21.98	22.17	22.29
EDGE (GMSK, 4 Tx slots) – MCS1		25.08	25.32	25.48	22.08	22.32	22.48
EDGE (8PSK, 1 Tx slot) – MCS5		28.20	28.49	28.60	19.20	19.49	19.60
EDGE (8PSK, 2 Tx slots) – MCS5		25.27	25.40	25.57	19.27	19.40	19.57
EDGE (8PSK, 3 Tx slots) – MCS5		23.30	23.49	23.64	19.04	19.23	19.38
EDGE (8PSK, 4 Tx slots) – MCS5		22.17	22.36	22.53	19.17	19.36	19.53
DTM 5 (2Tx slots)	GSM (GMSK, 1 Tx slot)	28.07	28.24	28.40	22.04	22.21	22.37
	GPRS (GMSK, 1 Tx slot) – CS1	28.06	28.23	28.38			
DTM 9 (2Tx slots)	GSM (GMSK, 1 Tx slot)	28.06	28.23	28.39	22.04	22.20	22.37
	GPRS (GMSK, 1 Tx slot) – CS1	28.06	28.21	28.39			
DTM 11(3Tx slots)	GSM (GMSK, 1 Tx slot)	26.22	26.45	26.56	21.95	22.18	22.29
	GPRS (GMSK, 2 Tx slots) –CS1	26.21	26.43	26.55			
DTM 5 (2Tx slots)	GSM (GMSK, 1 Tx slot)	28.15	28.32	28.45	20.89	21.06	21.21
	EDGE (8PSK, 1 Tx slot) –MCS5	25.16	25.34	25.52			
DTM 9(2Tx slots)	GSM (GMSK, 1 Tx slot)	28.14	28.31	28.44	20.87	21.05	21.20
	EDGE (8PSK, 1 Tx slot) –MCS5	25.13	25.32	25.51			
DTM 11(3Tx slots)	GSM (GMSK, 1 Tx slot)	26.28	26.46	26.65	20.26	20.46	20.64
	EDGE (8PSK, 2 Tx slots) MCS5	23.28	23.50	23.66			
Remark: The frame-averaged power is linearly scaled the maximum burst averaged power over 8 time slots. The calculated method are shown as below: Frame-averaged power = Maximum burst averaged power (1 Tx slots) - 9 dB Frame-averaged power = Maximum burst averaged power (2 Tx slots) - 6 dB Frame-averaged power = Maximum burst averaged power (3 Tx slots) - 4.26 dB Frame-averaged power = Maximum burst averaged power (4 Tx slots) - 3 dB							

Note:

- For Head SAR testing, GSM and DTM should be evaluated, therefore the EUT was set in DTM Multi-slot class 5 for GSM1900 due to its highest frame-average power.
- For Body worn SAR testing, GSM and DTM should be evaluated, therefore the EUT was set in DTM Multi-slot class 5 for GSM1900 due to its highest frame-average power.
- For hotspot mode SAR testing, GPRS, EDGE and DTM should be evaluated, therefore the EUT was set in GPRS 4 Tx slots for GSM1900 due to its highest frame-average power.
- Per KDB 648474, the maximum output power channel is used for SAR testing and for further SAR test reduction.
- Agilent E5515C was used to setup the device operated under DTM mode for power measurement and SAR testing. For conducted power, the power of the burst for voice and the power of the bursts for data was reported separately in the table above, and the frame-average power is derived below to determine SAR testing.

$$DTM \text{ frame average power (dBm)} = 10 \cdot \log \left[\sum (\text{power of each slot, in mW}) / 8 \right]$$

<WCDMA Conducted Power>

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification.

A summary of these settings are illustrated below:

HSDPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the drawing of Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting:
 - i. Set Gain Factors (β_c and β_d) and parameters were set according to each
 - ii. Specific sub-test in the following table, C10.1.4, quoted from the TS 34.121
 - iii. Set RMC 12.2Kbps + HSDPA mode.
 - iv. Set Cell Power = -86 dBm
 - v. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
 - vi. Select HSDPA Uplink Parameters
 - vii. Set Delta ACK, Delta NACK and Delta CQI = 8
 - viii. Set Ack-Nack Repetition Factor to 3
 - ix. Set CQI Feedback Cycle (k) to 4 ms
 - x. Set CQI Repetition Factor to 2
 - xi. Power Ctrl Mode = All Up bits
- d. The transmitted maximum output power was recorded.

Table C.10.1.4: β values for transmitter characteristics tests with HS-DPCCH

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

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

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA, Δ_{ACK} and $\Delta_{NACK} = 30/15$ with $\beta_{hs} = 30/15 * \beta_c$, and $\Delta_{CQI} = 24/15$ with $\beta_{hs} = 24/15 * \beta_c$.

Note 3: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

Setup Configuration

HSUPA Setup Configuration:

- a. The EUT was connected to Base Station Agilent E5515C referred to the drawing of Setup Configuration.
- b. The RF path losses were compensated into the measurements.
- c. A call was established between EUT and Base Station with following setting * :
 - i. Call Configs = 5.2B, 5.9B, 5.10B, and 5.13.2B with QPSK
 - ii. Set the Gain Factors (β_c and β_d) and parameters (AG Index) were set according to each specific sub-test in the following table, C11.1.3, quoted from the TS 34.121
 - iii. Set Cell Power = -86 dBm
 - iv. Set Channel Type = 12.2k + HSPA
 - v. Set UE Target Power
 - vi. Power Ctrl Mode= Alternating bits
 - vii. Set and observe the E-TFCI
 - viii. Confirm that E-TFCI is equal to the target E-TFCI of 75 for sub-test 1, and other subtest's E-TFCI
- d. The transmitted maximum output power was recorded.

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

Sub-test	β_c	β_d	β_d (SF)	β_c/β_d	β_{HS} (Note 1)	β_{ec}	β_{ed} (Note 5) (Note 6)	β_{ed} (SF)	β_{ed} (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 6)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/225	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

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

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 6: β_{ed} can not be set directly, it is set by Absolute Grant Value.

Setup Configuration

WCDMA Average power (dBm)							
Band		WCDMA Band V			WCDMA Band II		
Channel		4132	4182	4233	9262	9400	9538
Frequency (MHz)		826.4	836.4	846.6	1852.4	1880.0	1907.6
3GPP Rel 99	AMR 12.2Kbps	24.70	24.64	24.80	23.34	23.44	23.38
3GPP Rel 99	RMC 12.2Kbps	24.73	24.70	24.83	23.36	23.46	23.42
3GPP Rel 6	HSDPA Subtest-1	24.49	24.45	24.62	23.24	23.42	23.38
3GPP Rel 6	HSDPA Subtest-2	24.31	24.20	24.46	23.21	23.34	23.40
3GPP Rel 6	HSDPA Subtest-3	23.88	23.83	23.96	22.81	22.97	22.87
3GPP Rel 6	HSDPA Subtest-4	23.82	23.73	23.94	22.76	22.89	22.84
3GPP Rel 6	HSUPA Subtest-1	24.40	24.10	24.17	22.89	22.91	22.76
3GPP Rel 6	HSUPA Subtest-2	22.34	22.28	22.56	21.76	21.84	21.80
3GPP Rel 6	HSUPA Subtest-3	23.72	23.87	23.67	21.50	21.61	21.70
3GPP Rel 6	HSUPA Subtest-4	23.42	23.52	23.69	21.63	21.72	21.62
3GPP Rel 6	HSUPA Subtest-5	24.64	24.57	24.72	22.87	22.96	22.92

MPR (dB)								
3GPP MPR	Subtest		WCDMA Band V			WCDMA Band II		
0	3GPP Rel 6	HSDPA Subtest-1	0.00	0.00	0.00	0.00	0.00	0.00
0	3GPP Rel 6	HSDPA Subtest-2	0.18	0.25	0.16	0.03	0.08	-0.02
≤ 0.5	3GPP Rel 6	HSDPA Subtest-3	0.61	0.62	0.66	0.43	0.45	0.51
≤ 0.5	3GPP Rel 6	HSDPA Subtest-4	0.67	0.72	0.68	0.48	0.53	0.54
0	3GPP Rel 6	HSUPA Subtest-1	0.24	0.47	0.55	-0.02	0.05	0.16
≤ 2	3GPP Rel 6	HSUPA Subtest-2	2.30	2.29	2.16	1.11	1.12	1.12
≤ 1	3GPP Rel 6	HSUPA Subtest-3	0.92	0.70	1.05	1.37	1.35	1.22
≤ 2	3GPP Rel 6	HSUPA Subtest-4	1.22	1.05	1.03	1.24	1.24	1.30
0	3GPP Rel 6	HSUPA Subtest-5	0.00	0.00	0.00	0.00	0.00	0.00

Note:

- Applying the subtest setup in Table C.11.1.3 of 3GPP TS 34.121-1 V9.1.0 to Rel. 6 HSPA.
- For Head SAR, per KDB 941225 D01, RMC 12.2kbps setting is used to evaluate SAR. If AMR 12.2kbps power is < 0.25dB higher than RMC 12.2kbps, SAR tests with AMR 12.2kbps can be excluded.
- For Body SAR, per KDB 941225 D01, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA/HSUPA output power is < 0.25dB higher than RMC, or SAR with RMC 12.2kbps setting is ≤ 1.2W/kg, HSDPA/HSUPA SAR evaluation can be excluded.
- By design, AMR, HSDPA/HSUPA RF power will not be larger than RMC 12.2kbps, detailed information is included in Tune-up Procure exhibit.
- It is expected by the manufacturer that MPR for some HSDPA/HSUPA, subtests may differ from the specification of 3GPP, according to the chipset implementation in this model. The implementation and expected deviation are detailed in tune-up procedure exhibit.

<WLAN 2.4GHz Conducted Power>

WLAN 2.4G 802.11b Average Power (dBm)						
Power vs. Channel			Power vs. Data Rate			
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)		
		1M		2M	5.5M	11M
CH 01	2412	15.30	06	15.58	15.58	15.55
CH 06	2437	15.59				
CH 11	2462	14.99				

WLAN 2.4G 802.11g Average Power (dBm)										
Power vs. Channel			Power vs. Data Rate							
Channel	Frequency (MHz)	Data Rate (bps)	Channel	Data Rate (bps)						
		6M		9M	12M	18M	24M	36M	48M	54M
CH 01	2412	15.10	01	15.07	14.96	15.00	15.05	14.68	14.66	14.61
CH 06	2437	14.71								
CH 11	2462	14.41								

WLAN 2.4G 802.11n (BW 20MHz) Average Power (dBm)										
Power vs. Channel			Power vs. Data Rate							
Channel	Frequency (MHz)	MCS Index	Channel	MCS Index						
		MCS0		MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
CH 01	2412	12.71	01	12.61	12.70	12.48	12.39	12.48	11.53	8.84
CH 06	2437	12.65								
CH 11	2462	12.28								

Note:

1. Per KDB 248227, choose the highest output power channel to test SAR and determine further SAR exclusion
2. Per KDB 248227, 11g and 11n-HT20 output power is less than 0.25dB higher than 11b mode, thus the SAR can be excluded.
3. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 0.25dB higher than those measured at the lowest data rate.

<Bluetooth Conducted Power>

Channel	Frequency (MHz)	Average power (dBm)		
		Mode		
		GFSK	$\pi/4$ -DQPSK	8-DPSK
CH 0	2402	4.83	3.26	3.32
CH 39	2441	5.37	3.79	3.81
CH 78	2480	5.65	4.05	4.09

Note: Per KDB 648474, 2.4GHz Bluetooth SAR is excluded due to highest output power $\leq 60/f$ (GHz) mW, where $60/f$ (GHz) = 24mW = 13.8dBm.

12. SAR Test Results

12.1 Test Records for Head SAR Test

<GSM SAR>

Plot No.	Band	Mode	Modulation Type	Test Position	Ch.	Freq. (MHz)	Burst Average Power (dBm)	Power Drift (dB)	SAR _{1g} (W/kg)	SAR _{10g} (W/kg)
1	GSM850	GSM Voice	GMSK	Right Cheek	189	836.4	33.80	-0.03	0.902	0.684
2	GSM850	GSM Voice	GMSK	Right Tilted	189	836.4	33.80	-0.08	0.534	0.407
3	GSM850	GSM Voice	GMSK	Left Cheek	189	836.4	33.80	0.124	0.781	0.582
4	GSM850	GSM Voice	GMSK	Left Tilted	189	836.4	33.80	-0.09	0.519	0.394
5	GSM850	GSM Voice	GMSK	Right Cheek	128	824.2	33.79	0.05	0.779	0.592
6	GSM850	GSM Voice	GMSK	Right Cheek	251	848.8	33.72	0.1	1.08	0.811
15	GSM1900	DTM Multi-slot class 5	GMSK	Right Cheek	810	1909.8	28.40	-0.01	0.499	0.324
16	GSM1900	DTM Multi-slot class 5	GMSK	Right Tilted	810	1909.8	28.40	-0.03	0.337	0.193
17	GSM1900	DTM Multi-slot class 5	GMSK	Left Cheek	810	1909.8	28.40	0.17	0.794	0.466
18	GSM1900	DTM Multi-slot class 5	GMSK	Left Tilted	810	1909.8	28.40	-0.02	0.294	0.181

Note:

- Per KDB 648474 and KDB 447498, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.
- Considering GSM voice call and DTM mode RF exposure at the head exposure positions, per KDB 941225 D03 for TDMA application, the mode of the highest source-based time-averaged power was selected for SAR testing to show RF exposure compliance and cover the mode with lower source-based time-average power. GSM voice call was chosen for cellular band, and DTM (1CS, 1PS) was chosen for PCS band.

<WCDMA SAR>

Plot No.	Band	Mode	Modulation Type	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Power Drift (dB)	SAR _{1g} (W/kg)	SAR _{10g} (W/kg)
7	WCDMA V	RMC12.2Kbps	QPSK	Right Cheek	4233	846.6	24.83	0.01	0.981	0.739
8	WCDMA V	RMC12.2Kbps	QPSK	Right Tilted	4233	846.6	24.83	-0.11	0.569	0.433
9	WCDMA V	RMC12.2Kbps	QPSK	Left Cheek	4233	846.6	24.83	0.09	0.838	0.624
10	WCDMA V	RMC12.2Kbps	QPSK	Left Tilted	4233	846.6	24.83	0.02	0.541	0.411
11	WCDMA V	RMC12.2Kbps	QPSK	Right Cheek	4132	826.4	24.73	0.1	0.783	0.593
12	WCDMA V	RMC12.2Kbps	QPSK	Right Cheek	4182	836.4	24.70	-0.02	0.88	0.666
13	WCDMA V	RMC12.2Kbps	QPSK	Left Cheek	4132	826.4	24.73	0.06	0.659	0.495
14	WCDMA V	RMC12.2Kbps	QPSK	Left Cheek	4182	836.4	24.70	0.123	0.755	0.565
19	WCDMA II	RMC12.2Kbps	QPSK	Right Cheek	9400	1880	23.46	0.05	0.722	0.47
20	WCDMA II	RMC12.2Kbps	QPSK	Right Tilted	9400	1880	23.46	0.06	0.478	0.278
21	WCDMA II	RMC12.2Kbps	QPSK	Left Cheek	9400	1880	23.46	0.06	1.11	0.656
22	WCDMA II	RMC12.2Kbps	QPSK	Left Tilted	9400	1880	23.46	-0.09	0.44	0.275
23	WCDMA II	RMC12.2Kbps	QPSK	Left Cheek	9262	1852.4	23.36	-0.03	0.955	0.565
24	WCDMA II	RMC12.2Kbps	QPSK	Left Cheek	9538	1907.6	23.42	0.15	1.09	0.638

Note:

- Per KDB 648474 and KDB 447498, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

<WLAN SAR>

Plot No.	Band	Mode	Modulation Type	Data Rate	Test Position	Ch.	Freq. (MHz)	Average Power (dBm)	Power Drift (dB)	SAR _{1g} (W/kg)	SAR _{10g} (W/kg)
89	WLAN2.4G	802.11b	DBPSK	1Mbps	Right Cheek	6	2437	15.59	0.18	0.106	0.058
90	WLAN2.4G	802.11b	DBPSK	1Mbps	Right Tilted	6	2437	15.59	0.01	0.114	0.059
91	WLAN2.4G	802.11b	DBPSK	1Mbps	Left Cheek	6	2437	15.59	0.19	0.16	0.082
92	WLAN2.4G	802.11b	DBPSK	1Mbps	Left Tilted	6	2437	15.59	0.05	0.11	0.056

Note:

- Per KDB 648474 and KDB 248227, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

12.2 Test Records for Hotspot SAR Test
<GSM SAR>

Plot No.	Band	Mode	Modulation Type	Test Position	Gap (cm)	Ch.	Freq. (MHz)	Burst Average Power (dBm)	Power Drift (dB)	SAR _{1g} (W/kg)	SAR _{10g} (W/kg)
53	GSM850	GPRS (1 Tx slots)	GMSK	Front	1cm	189	836.4	33.82	-0.07	0.866	0.65
58	GSM850	GPRS (1 Tx slots)	GMSK	Front	1cm	128	824.2	33.81	0.07	0.728	0.548
59	GSM850	GPRS (1 Tx slots)	GMSK	Front	1cm	251	848.8	33.73	0.06	0.884	0.663
54	GSM850	GPRS (1 Tx slots)	GMSK	Back	1cm	189	836.4	33.82	-0.14	1.24	0.898
60	GSM850	GPRS (1 Tx slots)	GMSK	Back	1cm	128	824.2	33.81	-0.02	1.19	0.866
61	GSM850	GPRS (1 Tx slots)	GMSK	Back	1cm	251	848.8	33.73	-0.04	1.1	0.802
55	GSM850	GPRS (1 Tx slots)	GMSK	Left Side	1cm	189	836.4	33.82	-0.01	0.668	0.461
56	GSM850	GPRS (1 Tx slots)	GMSK	Right Side	1cm	189	836.4	33.82	0.01	0.737	0.517
57	GSM850	GPRS (1 Tx slots)	GMSK	Bottom Side	1cm	189	836.4	33.82	0.13	0.174	0.104
44	GSM1900	GPRS (4 Tx slots)	GMSK	Front	1cm	810	1909.8	25.50	0.04	0.598	0.365
45	GSM1900	GPRS (4 Tx slots)	GMSK	Back	1cm	810	1909.8	25.50	-0.01	0.899	0.51
49	GSM1900	GPRS (4 Tx slots)	GMSK	Back	1cm	512	1850.2	25.10	0.05	0.805	0.469
50	GSM1900	GPRS (4 Tx slots)	GMSK	Back	1cm	661	1880	25.34	0.05	0.882	0.496
46	GSM1900	GPRS (4 Tx slots)	GMSK	Left Side	1cm	810	1909.8	25.50	-0.11	0.242	0.135
47	GSM1900	GPRS (4 Tx slots)	GMSK	Right Side	1cm	810	1909.8	25.50	0.1	0.161	0.091
48	GSM1900	GPRS (4 Tx slots)	GMSK	Bottom Side	1cm	810	1909.8	25.50	0.07	0.693	0.374

Note:

- Per KDB 941225 D06, for EUT dimension $\geq 9\text{cm} \times 5\text{cm}$, the test distance is 1cm. SAR must be measured for all surfaces and sides with a transmitting antenna located within 2.5cm from that surface or edge.
- As in (1), SAR for Front / Back / Bottom Side / Left Side / Right Side is necessary.
- Per KDB 648474 and KDB 447498 if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.
- Hotspot mode for head was addressed as the device was tested using the highest source-based time-average power channel of GSM850 voice mode. DTM mode which address data allocated and voice call simultaneously was found to have a lower output power which would not result in the most conservative SAR level. The sum of SAR level for simultaneous transmission for head mode WWAN and WLAN was also < 1.6 w/kg. For GSM1900 mode DTM mode was found to give the highest source-based time-average power, this mode addressed data allocated mode and the possible use of hotspot mode in the head configuration. The sum of SAR level for simultaneous transmission for head mode WWAN and WLAN was also < 1.6 w/kg.

<WCDMA SAR>

Plot No.	Band	Mode	Modulation Type	Test Position	Gap (cm)	Ch.	Freq. (MHz)	Average Power (dBm)	Power Drift (dB)	SAR _{1g} (W/kg)	SAR _{10g} (W/kg)
64	WCDMA V	RMC12.2Kbps	QPSK	Front	1cm	4233	846.6	24.83	0.16	0.97	0.725
69	WCDMA V	RMC12.2Kbps	QPSK	Front	1cm	4132	826.4	24.73	-0.08	0.809	0.608
70	WCDMA V	RMC12.2Kbps	QPSK	Front	1cm	4182	836.4	24.70	0.11	0.874	0.654
65	WCDMA V	RMC12.2Kbps	QPSK	Back	1cm	4233	846.6	24.83	-0.13	1.32	0.959
71	WCDMA V	RMC12.2Kbps	QPSK	Back	1cm	4132	826.4	24.73	0.03	1.31	0.948
72	WCDMA V	RMC12.2Kbps	QPSK	Back	1cm	4182	836.4	24.70	0	1.28	0.927
73	WCDMA V	HSDPA Subtest 1	QPSK	Back	1cm	4132	826.4	24.49	0.06	1.25	0.907
74	WCDMA V	HSDPA Subtest 1	QPSK	Back	1cm	4182	836.4	24.45	-0.02	1.21	0.874
75	WCDMA V	HSDPA Subtest 1	QPSK	Back	1cm	4233	846.6	24.62	0.03	1.29	0.932
76	WCDMA V	HSUPA Subtest 5	QPSK	Back	1cm	4132	826.4	24.64	-0.02	1.23	0.889
77	WCDMA V	HSUPA Subtest 5	QPSK	Back	1cm	4182	836.4	24.57	0.01	1.19	0.864
78	WCDMA V	HSUPA Subtest 5	QPSK	Back	1cm	4233	846.6	24.72	0.05	1.29	0.927
66	WCDMA V	RMC12.2Kbps	QPSK	Left Side	1cm	4233	846.6	24.83	0.16	0.701	0.483
81	WCDMA V	RMC12.2Kbps	QPSK	Right Side	1cm	4132	826.4	24.73	0.09	0.708	0.497
82	WCDMA V	RMC12.2Kbps	QPSK	Right Side	1cm	4182	836.4	24.70	0.01	0.727	0.51
67	WCDMA V	RMC12.2Kbps	QPSK	Right Side	1cm	4233	846.6	24.83	0.06	0.805	0.563
68	WCDMA V	RMC12.2Kbps	QPSK	Bottom Side	1cm	4233	846.6	24.83	-0.03	0.195	0.115
25	WCDMA II	RMC12.2Kbps	QPSK	Front	1cm	9400	1880	23.46	0.02	0.895	0.544
30	WCDMA II	RMC12.2Kbps	QPSK	Front	1cm	9262	1852.4	23.36	-0.02	0.772	0.465
31	WCDMA II	RMC12.2Kbps	QPSK	Front	1cm	9538	1907.6	23.42	-0.09	0.87	0.528
26	WCDMA II	RMC12.2Kbps	QPSK	Back	1cm	9400	1880	23.46	0.14	1.31	0.753
32	WCDMA II	RMC12.2Kbps	QPSK	Back	1cm	9262	1852.4	23.36	0.04	1.12	0.653
33	WCDMA II	RMC12.2Kbps	QPSK	Back	1cm	9538	1907.6	23.42	-0.03	1.34	0.757
34	WCDMA II	HSDPA Subtest 1	QPSK	Back	1cm	9262	1852.4	23.24	0.1	1.09	0.639
35	WCDMA II	HSDPA Subtest 1	QPSK	Back	1cm	9400	1880	23.42	0.03	1.29	0.742
36	WCDMA II	HSDPA Subtest 1	QPSK	Back	1cm	9538	1907.6	23.38	0.02	1.32	0.746
37	WCDMA II	HSUPA Subtest 5	QPSK	Back	1cm	9262	1852.4	22.87	0.16	1.09	0.637
38	WCDMA II	HSUPA Subtest 5	QPSK	Back	1cm	9400	1880	22.96	0.03	1.32	0.76
39	WCDMA II	HSUPA Subtest 5	QPSK	Back	1cm	9538	1907.6	22.92	0.01	1.32	0.746
27	WCDMA II	RMC12.2Kbps	QPSK	Left Side	1cm	9400	1880	23.46	0.06	0.43	0.237
28	WCDMA II	RMC12.2Kbps	QPSK	Right Side	1cm	9400	1880	23.46	0.13	0.236	0.136
29	WCDMA II	RMC12.2Kbps	QPSK	Bottom Side	1cm	9400	1880	23.46	0.12	1.01	0.551
42	WCDMA II	RMC12.2Kbps	QPSK	Bottom Side	1cm	9262	1852.4	23.36	0.13	0.846	0.464
43	WCDMA II	RMC12.2Kbps	QPSK	Bottom Side	1cm	9538	1907.6	23.42	0.06	1.01	0.547

Note:

1. Per KDB 941225 D06, for EUT dimension $\geq 9\text{cm} \times 5\text{cm}$, the test distance is 1cm. SAR must be measured for all surfaces and sides with a transmitting antenna located within 2.5cm from that surface or edge.
2. As in (1), SAR for Front / Back / Bottom Side / Left Side / Right Side is necessary.
3. Per KDB 648474 and KDB 447498 if the highest output channel SAR for each exposure position $\leq 0.8 \text{ W/kg}$ other channels SAR tests are not necessary.
4. For Body SAR, per KDB 941225 D01, RMC 12.2kbps setting is used to evaluate SAR. If HSDPA/HSUPA output power is $< 0.25\text{dB}$ higher than RMC, or SAR with RMC 12.2kbps setting is $\leq 1.2\text{W/kg}$, HSDPA/HSUPA SAR evaluation can be excluded.

<WLAN SAR>

Plot No.	Band	Mode	Modulation Type	Data Rate	Test Position	Gap (cm)	Ch.	Freq. (MHz)	Average Power (dBm)	Power Drift (dB)	SAR _{1g} (W/kg)	SAR _{10g} (W/kg)
83	WLAN2.4G	802.11b	DBPSK	1Mbps	Front	1cm	6	2437	15.59	0.17	0.037	0.022
84	WLAN2.4G	802.11b	DBPSK	1Mbps	Back	1cm	6	2437	15.59	0.11	0.058	0.033
85	WLAN2.4G	802.11b	DBPSK	1Mbps	Right Side	1cm	6	2437	15.59	0.09	0.039	0.02
86	WLAN2.4G	802.11b	DBPSK	1Mbps	Top Side	1cm	6	2437	15.59	0.19	0.042	0.022

Note:

- Per KDB 941225 D06, for EUT dimension $\geq 9\text{cm} \times 5\text{cm}$, the test distance is 1cm. SAR must be measured for all surfaces and sides with a transmitting antenna located within 2.5cm from that surface or edge.
- As in (1), SAR for Front / Back / Top Side / Right Side is necessary.
- Per KDB 648474 and KDB 248227, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.

12.3 Test Records for Body-worn SAR Test
<GSM SAR>

Plot No.	Band	Mode	Modulation Type	Test Position	Gap (cm)	Headset	Ch.	Freq. (MHz)	Burst Average Power (dBm)	Power Drift (dB)	SAR _{1g} (W/kg)	SAR _{10g} (W/kg)
62	GSM850	GSM Voice	GMSK	Front	1.5cm	v	189	836.4	33.80	0.05	0.414	0.305
63	GSM850	GSM Voice	GMSK	Back	1.5cm	v	189	836.4	33.80	-0.01	0.662	0.479
51	GSM1900	DTM Multi-slot class 5	GMSK	Front	1.5cm	v	810	1909.8	28.40	0.08	0.393	0.24
52	GSM1900	DTM Multi-slot class 5	GMSK	Back	1.5cm	v	810	1909.8	28.40	-0.02	0.547	0.32

Note:

- Per KDB 648474 and KDB 447498, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.
- "V" in the Headset column means the Headset is plugged during SAR testing.

<WCDMA SAR>

Plot No.	Band	Mode	Modulation Type	Test Position	Gap (cm)	Headset	Ch.	Freq. (MHz)	Average Power (dBm)	Power Drift (dB)	SAR _{1g} (W/kg)	SAR _{10g} (W/kg)
79	WCDMA V	RMC12.2Kbps	QPSK	Front	1.5cm	v	4233	846.6	24.83	0.07	0.468	0.348
80	WCDMA V	RMC12.2Kbps	QPSK	Back	1.5cm	v	4233	846.6	24.83	0.18	0.694	0.508
40	WCDMA II	RMC12.2Kbps	QPSK	Front	1.5cm	v	9400	1880	23.46	0.01	0.571	0.351
41	WCDMA II	RMC12.2Kbps	QPSK	Back	1.5cm	v	9400	1880	23.46	0.04	0.782	0.466

Note:

- Per KDB 648474 and KDB 447498, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.
- "V" in the Headset column means the Headset is plugged during SAR testing.

**<WLAN SAR>**

Plot No.	Band	Mode	Modulation Type	Data Rate	Test Position	Gap (cm)	Headset	Ch.	Freq. (MHz)	Average Power (dBm)	Power Drift (dB)	SAR _{1g} (W/kg)	SAR _{10g} (W/kg)
87	WLAN2.4G	802.11b	DBPSK	1Mbps	Front	1.5cm	v	6	2437	15.59	0.18	0.018	0.01
88	WLAN2.4G	802.11b	DBPSK	1Mbps	Back	1.5cm	v	6	2437	15.59	0.14	0.033	0.018

Note:

1. Per KDB 648474 and KDB 248227, if the highest output channel SAR for each exposure position ≤ 0.8 W/kg other channels SAR tests are not necessary.
2. "V" in the Headset column means the Headset is plugged during SAR testing.

12.4 Simultaneous Multi-band Transmission Analysis

No.	Applicable Simultaneous Transmission Combination
1.	GSM/WCDMA(voice) + BT
2.	GSM/WCDMA(voice) + WLAN 2.4G (data)
3.	GPRS/EGPRS/WCDMA(data) + WLAN 2.4G (router)
4.	DTM(voice/data)+ WLAN(router)

Note:

1. WLAN and BT share the same antenna, and cannot transmit simultaneously.
2. The maximum SAR summation is calculated based on the same configuration and test position.
3. Per KDB 648474, Bluetooth simultaneous SAR consideration is not required due to power $< 2 \cdot P_{ref}$ and the distance to the WWAN antenna is $> 5\text{cm}$.
4. If 1g-SAR scalar summation $< 1.6\text{W/kg}$, simultaneous SAR measurement is not necessary.
5. Per "IC RSS102 Issue 4", Bluetooth output power $\leq 20\text{mw}$ therefore, stand-alone SAR is not required.

<Head SAR>

Position	WWAN			WLAN		WWAN + WLAN
	WWAN Band	Plot No	Max. WWAN SAR (W/kg)	Plot No	Max. WLAN SAR (W/kg)	
Right Cheek	GSM850	6	1.08	89	0.106	1.19
	GSM1900	15	0.499	89	0.106	0.61
	WCDMA Band V	7	0.981	89	0.106	1.09
	WCDMA Band II	19	0.722	89	0.106	0.83
Right Tilted	GSM850	2	0.534	90	0.114	0.65
	GSM1900	16	0.337	90	0.114	0.45
	WCDMA Band V	8	0.569	90	0.114	0.68
	WCDMA Band II	20	0.478	90	0.114	0.59
Left Cheek	GSM850	3	0.781	91	0.16	0.94
	GSM1900	17	0.794	91	0.16	0.95
	WCDMA Band V	9	0.838	91	0.16	1.00
	WCDMA Band II	21	1.11	91	0.16	1.27
Left Tilted	GSM850	4	0.519	92	0.11	0.63
	GSM1900	18	0.294	92	0.11	0.40
	WCDMA Band V	10	0.541	92	0.11	0.65
	WCDMA Band II	22	0.44	92	0.11	0.55

<Hotspot SAR>

Position	WWAN			WLAN		WWAN + WLAN
	WWAN Band	Plot No	Max. WWAN SAR (W/kg)	Plot No	Max. WLAN SAR (W/kg)	
Front	GSM850	59	0.884	83	0.037	0.92
	GSM1900	44	0.598	83	0.037	0.64
	WCDMA Band V	64	0.97	83	0.037	1.01
	WCDMA Band II	25	0.895	83	0.037	0.93
Back	GSM850	54	1.24	84	0.058	1.30
	GSM1900	45	0.899	84	0.058	0.96
	WCDMA Band V	75	1.29	84	0.058	1.35
	WCDMA Band II	33	1.34	84	0.058	1.40
Left Side	GSM850	55	0.668	-	-	0.67
	GSM1900	46	0.242	-	-	0.24
	WCDMA Band V	66	0.701	-	-	0.70
	WCDMA Band II	27	0.43	-	-	0.43
Right Side	GSM850	56	0.737	85	0.039	0.78
	GSM1900	47	0.161	85	0.039	0.20
	WCDMA Band V	67	0.805	85	0.039	0.84
	WCDMA Band II	28	0.236	85	0.039	0.28
Top Side	GSM850	-	-	86	0.042	0.04
	GSM1900	-	-	86	0.042	0.04
	WCDMA Band V	-	-	86	0.042	0.04
	WCDMA Band II	-	-	86	0.042	0.04
Bottom Side	GSM850	57	0.174	-	-	0.17
	GSM1900	48	0.693	-	-	0.69
	WCDMA Band V	68	0.195	-	-	0.20
	WCDMA Band II	43	1.01	-	-	1.01

<Body-worn SAR>

Position	WWAN			WLAN		WWAN + WLAN
	WWAN Band	Plot No	Max. WWAN SAR (W/kg)	Plot No	Max. WLAN SAR (W/kg)	
Front (w/ Headset)	GSM850	62	0.414	87	0.018	0.43
	GSM1900	51	0.393	87	0.018	0.41
	WCDMA Band V	79	0.468	87	0.018	0.49
	WCDMA Band II	40	0.571	87	0.018	0.59
Back (w/ Headset)	GSM850	63	0.662	88	0.033	0.70
	GSM1900	52	0.547	88	0.033	0.58
	WCDMA Band V	80	0.694	88	0.033	0.73
	WCDMA Band II	41	0.782	88	0.033	0.82

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13. Uncertainty Assessment

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in Table 12.1

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	1/ κ ^(b)	1/ $\sqrt{3}$	1/ $\sqrt{6}$	1/ $\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) κ is the coverage factor

Table 13.1 Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)
Measurement System							
Probe Calibration	6.0	Normal	1	1	1	± 6.0 %	± 6.0 %
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	± 1.9 %	± 1.9 %
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	± 3.9 %	± 3.9 %
Boundary Effects	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Linearity	4.7	Rectangular	√3	1	1	± 2.7 %	± 2.7 %
System Detection Limits	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Readout Electronics	0.3	Normal	1	1	1	± 0.3 %	± 0.3 %
Response Time	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Integration Time	2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %
RF Ambient Noise	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
RF Ambient Reflections	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Probe Positioner	0.4	Rectangular	√3	1	1	± 0.2 %	± 0.2 %
Probe Positioning	2.9	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Max. SAR Eval.	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Test Sample Related							
Device Positioning	2.9	Normal	1	1	1	± 2.9 %	± 2.9 %
Device Holder	3.6	Normal	1	1	1	± 3.6 %	± 3.6 %
Power Drift	5.0	Rectangular	√3	1	1	± 2.9 %	± 2.9 %
Phantom and Setup							
Phantom Uncertainty	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Liquid Conductivity (Target)	5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %
Liquid Conductivity (Meas.)	2.5	Normal	1	0.64	0.43	± 1.6 %	± 1.1 %
Liquid Permittivity (Target)	5.0	Rectangular	√3	0.6	0.49	± 1.7 %	± 1.4 %
Liquid Permittivity (Meas.)	2.5	Normal	1	0.6	0.49	± 1.5 %	± 1.2 %
Combined Standard Uncertainty						± 11.0 %	± 10.8 %
Coverage Factor for 95 %						K=2	
Expanded Uncertainty						± 22.0 %	± 21.5 %

**Table 13.2 Uncertainty Budget of DASY for frequency range 300 MHz to 3 GHz
According to IEEE1528-2003**

Error Description	Uncertainty Value (±%)	Probability Distribution	Divisor	Ci (1g)	Ci (10g)	Standard Uncertainty (1g)	Standard Uncertainty (10g)
Measurement System							
Probe Calibration	6.0	Normal	1	1	1	± 6.0 %	± 6.0 %
Axial Isotropy	4.7	Rectangular	√3	0.7	0.7	± 1.9 %	± 1.9 %
Hemispherical Isotropy	9.6	Rectangular	√3	0.7	0.7	± 3.9 %	± 3.9 %
Linearity	4.7	Rectangular	√3	1	1	± 2.7 %	± 2.7 %
Modulation Response	2.4	Rectangular	√3	1	1	± 1.4 %	± 1.4 %
System Detection Limits	1.0	Rectangular	√3	1	1	± 0.6 %	± 0.6 %
Readout Electronics	2.0	Normal	1	1	1	± 2.0 %	± 2.0 %
Response Time	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Integration Time	2.6	Rectangular	√3	1	1	± 1.5 %	± 1.5 %
RF Ambient Noise	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
RF Ambient Reflections	3.0	Rectangular	√3	1	1	± 1.7 %	± 1.7 %
Probe Positioner	0.8	Rectangular	√3	1	1	± 0.5 %	± 0.5 %
Probe Positioning	6.7	Rectangular	√3	1	1	± 3.9 %	± 3.9 %
Post-processing	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Test Sample Related							
Device Positioning	3.6	Normal	1	1	1	± 3.6 %	± 3.6 %
Device Holder	2.9	Normal	1	1	1	± 2.9 %	± 2.9 %
Power Drift	5.0	Rectangular	√3	1	1	± 0.0 %	± 2.9 %
Power Scaling	0	Rectangular	√3	1	1	± 2.9 %	± 0 %
Phantom and Setup							
Phantom Uncertainty	4.0	Rectangular	√3	1	1	± 2.3 %	± 2.3 %
Liquid Conductivity (Target.)	5.0	Rectangular	√3	0.64	0.43	± 1.8 %	± 1.2 %
Liquid Permittivity (Target.)	5.0	Rectangular	√3	0.6	0.49	± 1.7 %	± 1.4 %
Liquid Conductivity (Meas.)	2.5	Normal	1	0.78	0.71	± 2.0 %	± 1.8 %
Liquid Permittivity (Meas.)	2.5	Normal	1	0.26	0.26	± 0.7 %	± 0.7 %
Temp. unc. - Conductivity	1.7	Rectangular	√3	0.78	0.71	± 0.8 %	± 0.7 %
Temp. unc. - Permittivity	0.3	Rectangular	√3	0.23	0.26	± 0.0 %	± 0.0 %
Combined Standard Uncertainty						± 11.8 %	± 11.7 %
Coverage Factor for 95 %						K=2	
Expanded Uncertainty						± 23.7 %	± 23.4 %

**Table 13.3 Uncertainty Budget of DASY for frequency range 30 MHz to 3 GHz
According to IEC 62209-2/2010**

14. References

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
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- [4] FCC OET Bulletin 65 (Edition 97-01) Supplement C (Edition 01-01), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields", June 2001
- [5] SPEAG DASY System Handbook
- [6] IC RSS-102 Issue 4, "Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)", March 2010
- [7] IEC 62209-2, "Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices. Human models, instrumentation, and procedures. Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- [8] FCC KDB 248227 D01 v01r02, "SAR Measurement Procedures for 802.11 a/b/g Transmitters", May 2007
- [9] FCC KDB 447498 D01 v04, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", November 2009
- [10] FCC KDB 648474 D01 v01r05, "SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas", September 2008
- [11] FCC KDB 941225 D01 v02, "SAR Measurement Procedures for 3G Devices – CDMA 2000 / Ev-Do / WCDMA / HSDPA / HSPA", October 2007
- [12] FCC KDB 941225 D02 v02 "3GPP R6 HSPA and R7 HSPA+ SAR Guidance", December 2009.
- [13] FCC KDB 941225 D03 v01, "Recommended SAR Test Reduction Procedures for GSM / GPRS / EDGE", December 2008
- [14] FCC KDB 941225 D04 v01, "Evaluating SAR for GSM/(E)GPRS Dual Transfer Mode", January 27 2010
- [15] FCC KDB 941225 D06 v01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", April 2011



Appendix A. Plots of System Performance Check

The plots are shown as follows.



Appendix B. Plots of SAR Measurement

The plots are shown as follows.



Appendix C. DASY Calibration Certificate

The DASY calibration certificates are shown as follows.

System Check_Head_1900MHz_121029**DUT: D1900V2-SN:5d041**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL_1900_121029 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.422$ mho/m; $\epsilon_r = 40.021$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 11.3 W/kg

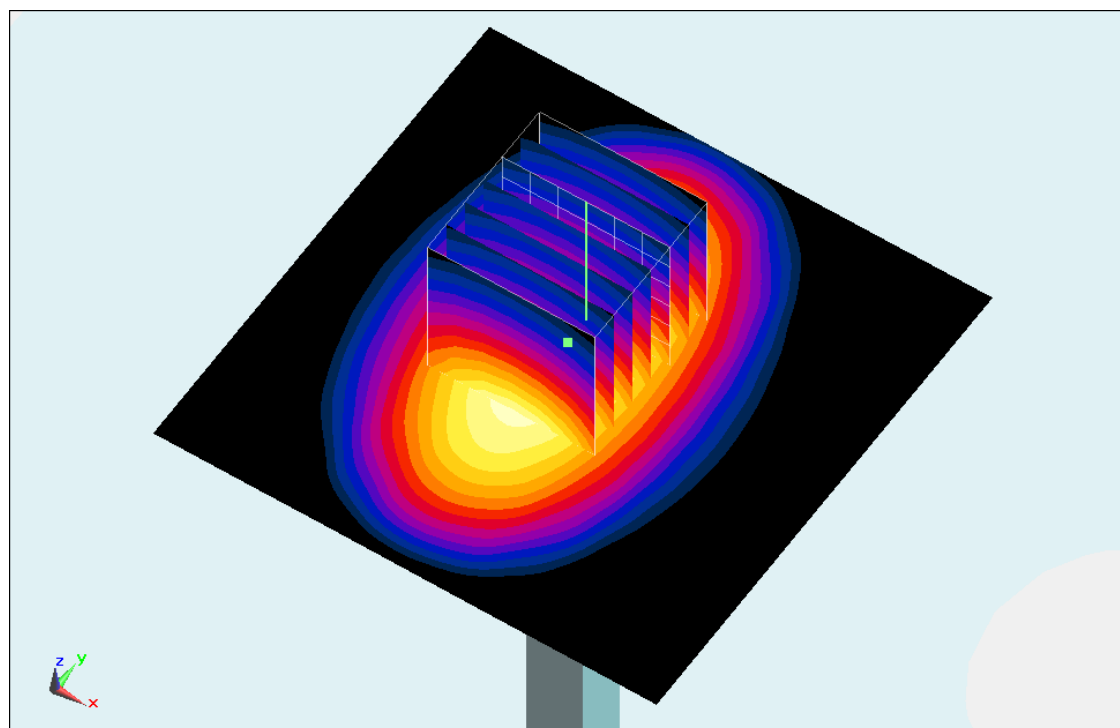
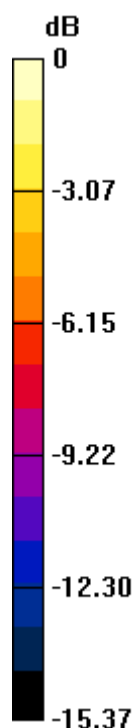
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 86.570 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 18.469 mW/g

SAR(1 g) = 10.2 mW/g; SAR(10 g) = 5.66 mW/g

Maximum value of SAR (measured) = 11.2 W/kg



0 dB = 11.2 W/kg = 20.98 dB W/kg

System Check_Body_1900MHz_121030**DUT: D1900V2-SN:5d041**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.545$ mho/m; $\epsilon_r = 53.277$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Pin=250mW/Area Scan (61x61x1): Measurement grid: dx=15 mm, dy=15 mm

Maximum value of SAR (interpolated) = 11.7 W/kg

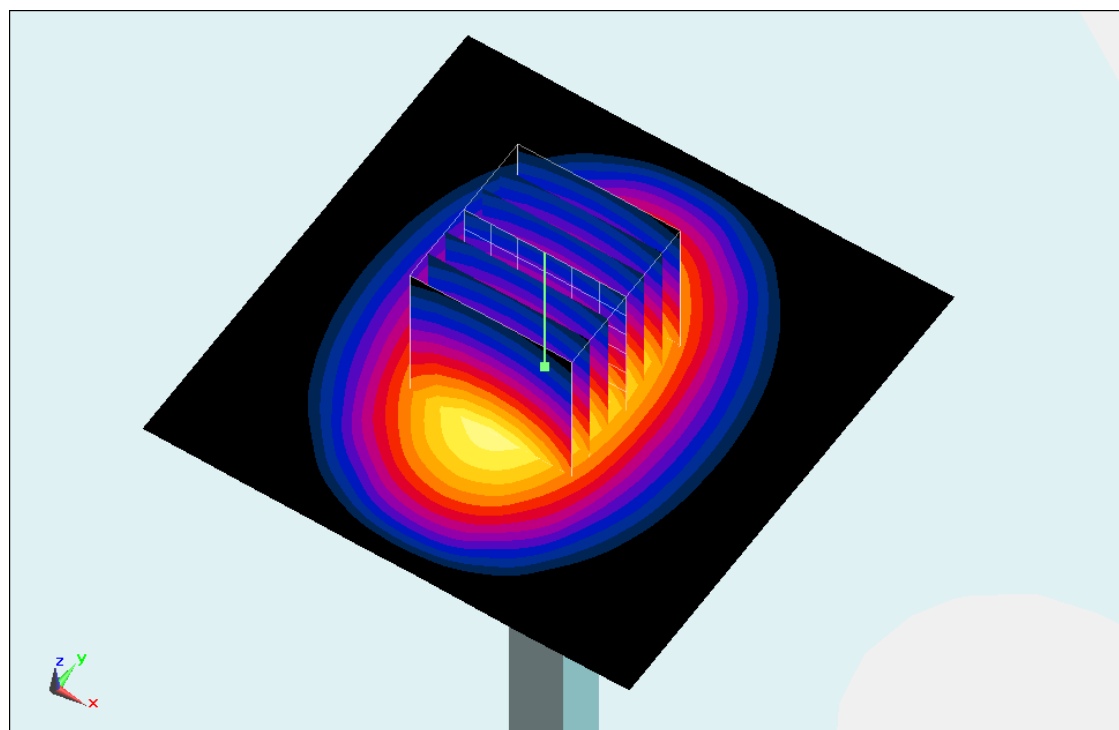
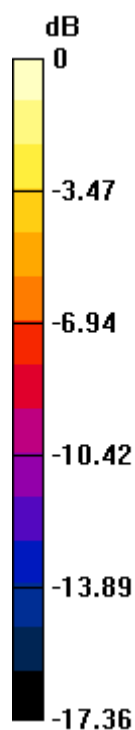
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 86.964 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 19.309 mW/g

SAR(1 g) = 10.4 mW/g; SAR(10 g) = 5.42 mW/g

Maximum value of SAR (measured) = 11.6 W/kg



0 dB = 11.6 W/kg = 21.29 dB W/kg

System Check_Head_2450MHz_121031**DUT: D2450V2-SN:736**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450_121031 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.827$ mho/m; $\epsilon_r = 39.417$; $\rho = 1000$ kg/m³

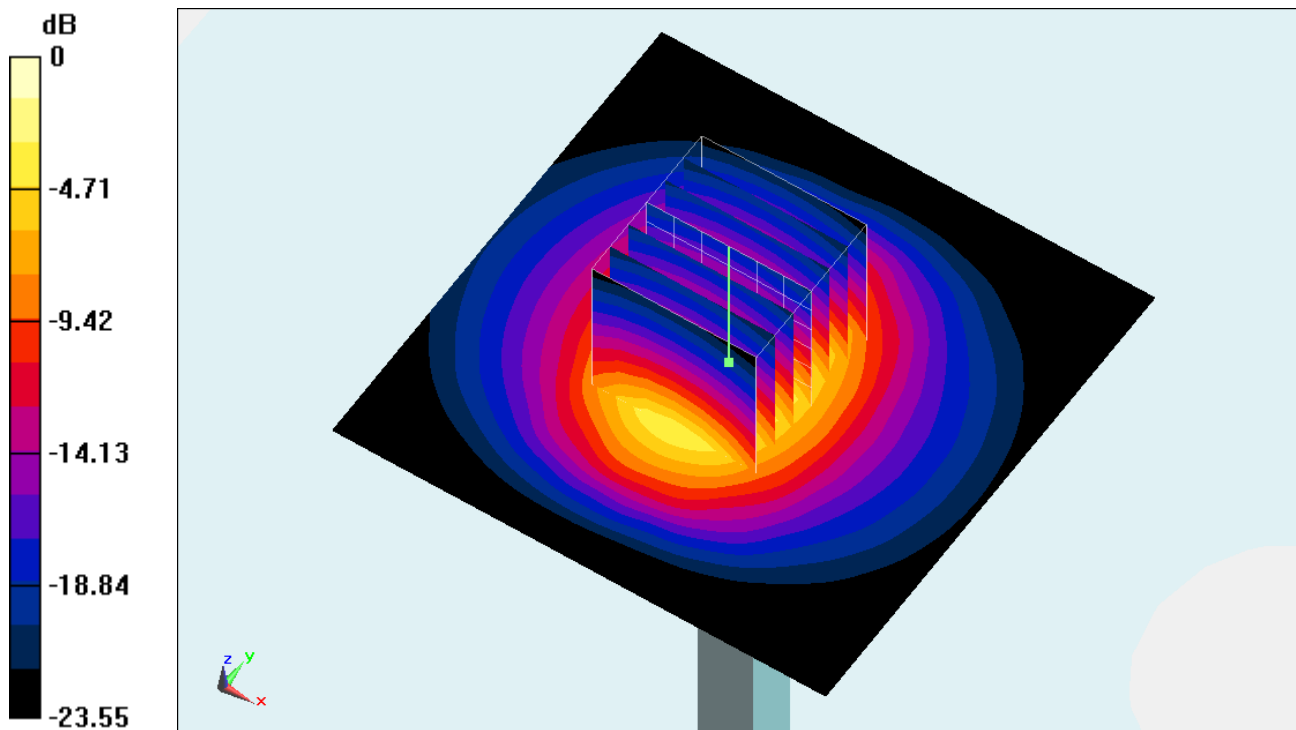
Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.7, 6.7, 6.7); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10 mm, dy=10 mm
Maximum value of SAR (interpolated) = 15.6 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 89.952 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 30.266 mW/g
SAR(1 g) = 13.4 mW/g; SAR(10 g) = 5.98 mW/g
Maximum value of SAR (measured) = 15.3 W/kg



0 dB = 15.3 W/kg = 23.69 dB W/kg

System Check_Body_2450MHz_121031**DUT: D2450V2-SN:736**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: MSL_2450_121031 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.015$ mho/m; $\epsilon_r = 53.957$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.59, 6.59, 6.59); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Pin=250mW/Area Scan (91x91x1): Measurement grid: dx=10 mm, dy=10 mm

Maximum value of SAR (interpolated) = 15.1 W/kg

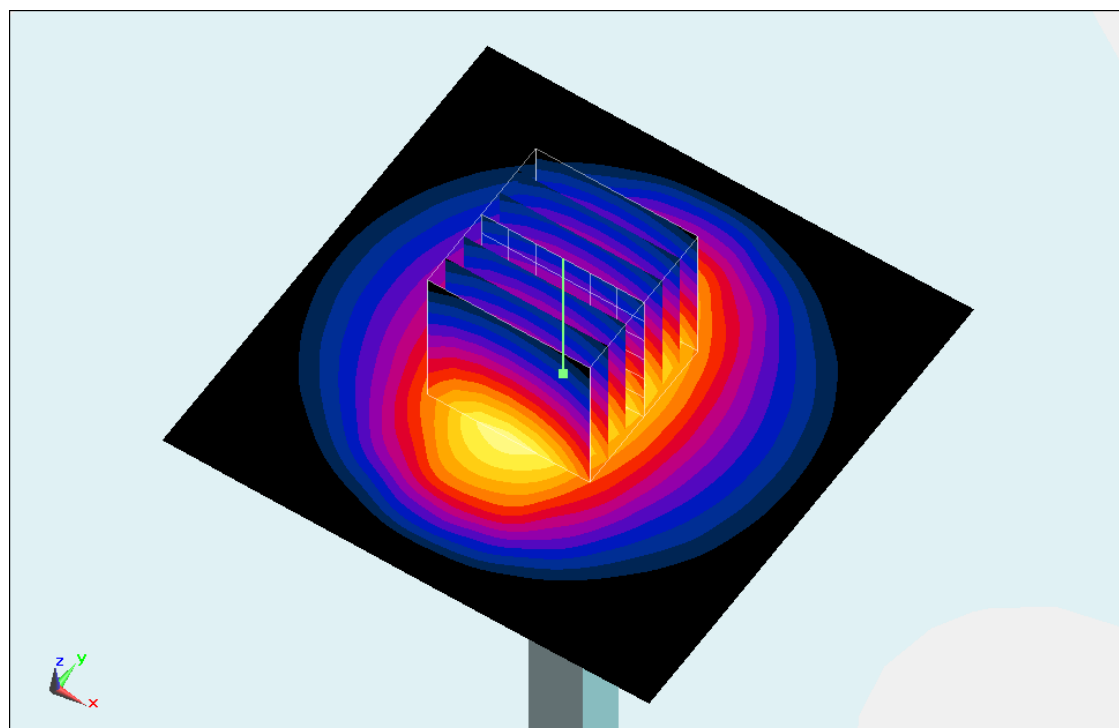
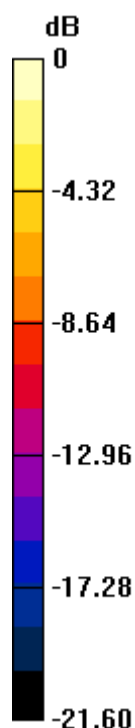
Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 84.288 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 26.813 mW/g

SAR(1 g) = 13.1 mW/g; SAR(10 g) = 6.25 mW/g

Maximum value of SAR (measured) = 14.8 W/kg



0 dB = 14.8 W/kg = 23.41 dB W/kg



Appendix B. Plots of SAR Measurement

The plots are shown as follows.

#01_GSM850_GSM Voice_Right Cheek_Ch189**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: HSL_850_121029 Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.909$ mho/m; $\epsilon_r = 43.247$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.962 W/kg

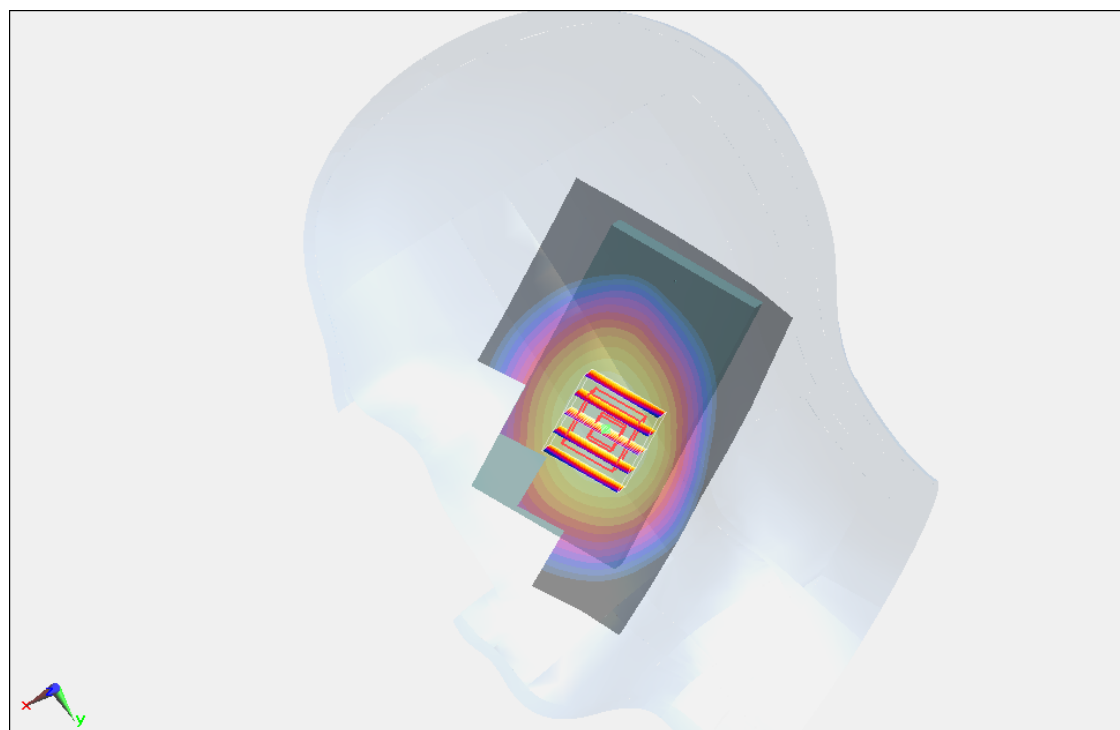
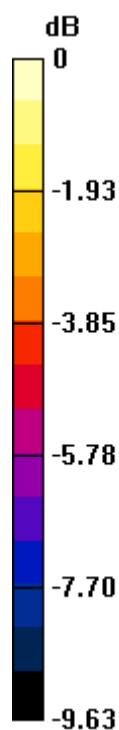
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.204 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.088 mW/g

SAR(1 g) = 0.902 mW/g; SAR(10 g) = 0.684 mW/g

Maximum value of SAR (measured) = 0.947 W/kg



0 dB = 0.947 W/kg = -0.47 dB W/kg

#02_GSM850_GSM Voice_Right Tilted_Ch189**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: HSL_850_121029 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.909$ mho/m; $\epsilon_r = 43.247$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.563 W/kg

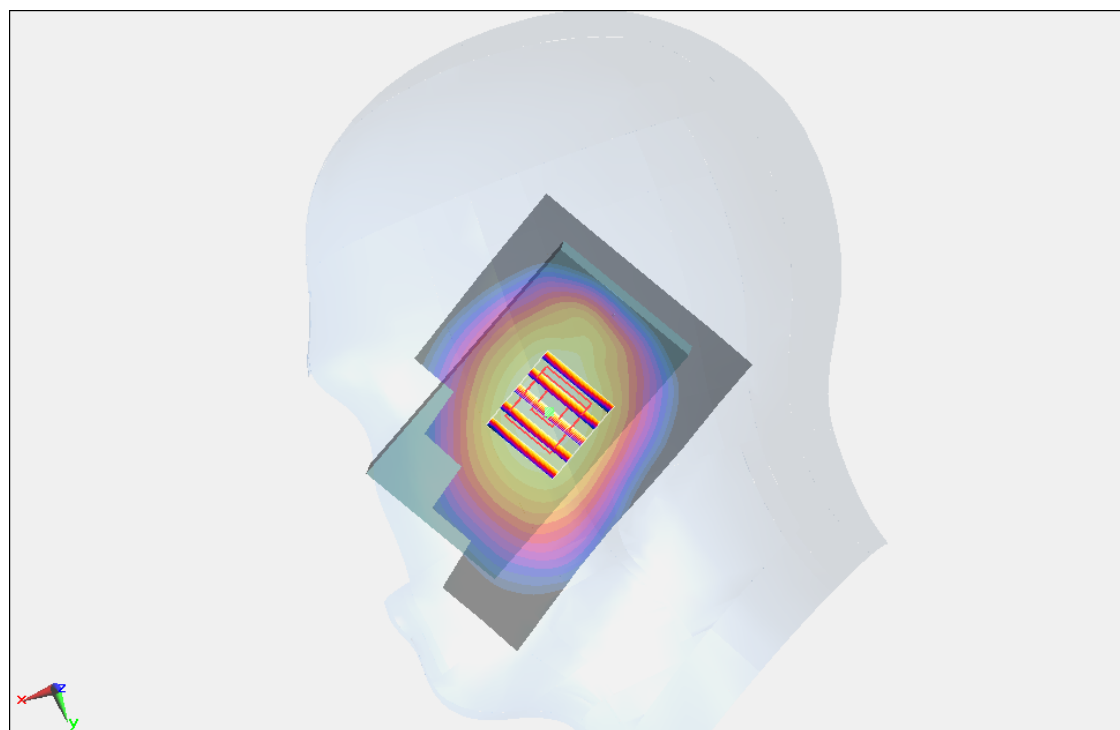
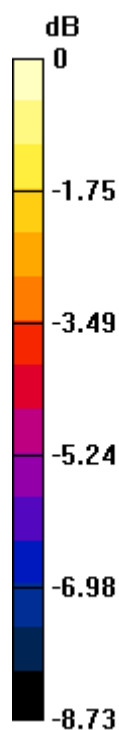
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.465 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.662 mW/g

SAR(1 g) = 0.534 mW/g; SAR(10 g) = 0.407 mW/g

Maximum value of SAR (measured) = 0.558 W/kg



0 dB = 0.558 W/kg = -5.07 dB W/kg

#03_GSM850_GSM Voice_Left Cheek_Ch189**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: HSL_850_121029 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.909$ mho/m; $\epsilon_r = 43.247$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.837 W/kg

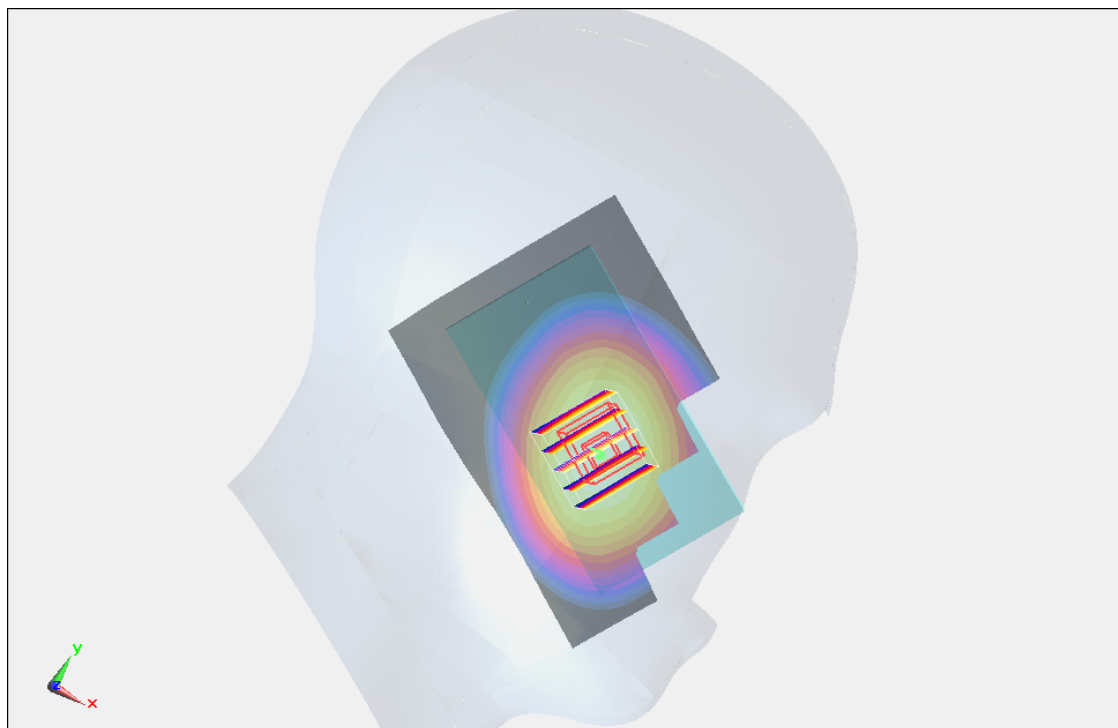
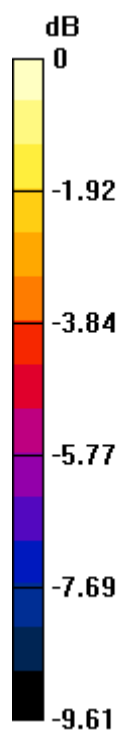
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.640 V/m; Power Drift = 0.124 dB

Peak SAR (extrapolated) = 1.003 mW/g

SAR(1 g) = 0.781 mW/g; SAR(10 g) = 0.582 mW/g

Maximum value of SAR (measured) = 0.828 W/kg



0 dB = 0.828 W/kg = -1.64 dB W/kg

#04_GSM850_GSM Voice_Left Tilted_Ch189**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: HSL_850_121029 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.909$ mho/m; $\epsilon_r = 43.247$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.544 W/kg

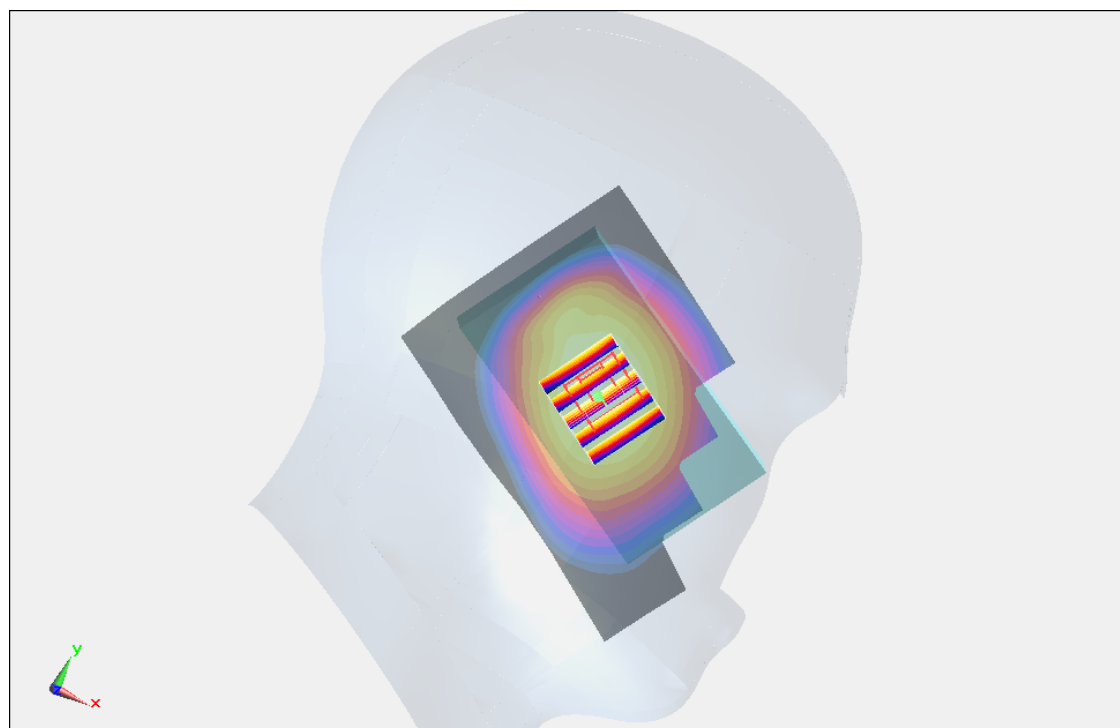
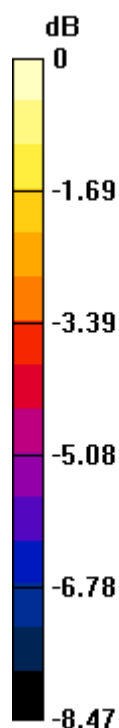
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.384 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.646 mW/g

SAR(1 g) = 0.519 mW/g; SAR(10 g) = 0.394 mW/g

Maximum value of SAR (measured) = 0.540 W/kg



0 dB = 0.540 W/kg = -5.35 dB W/kg

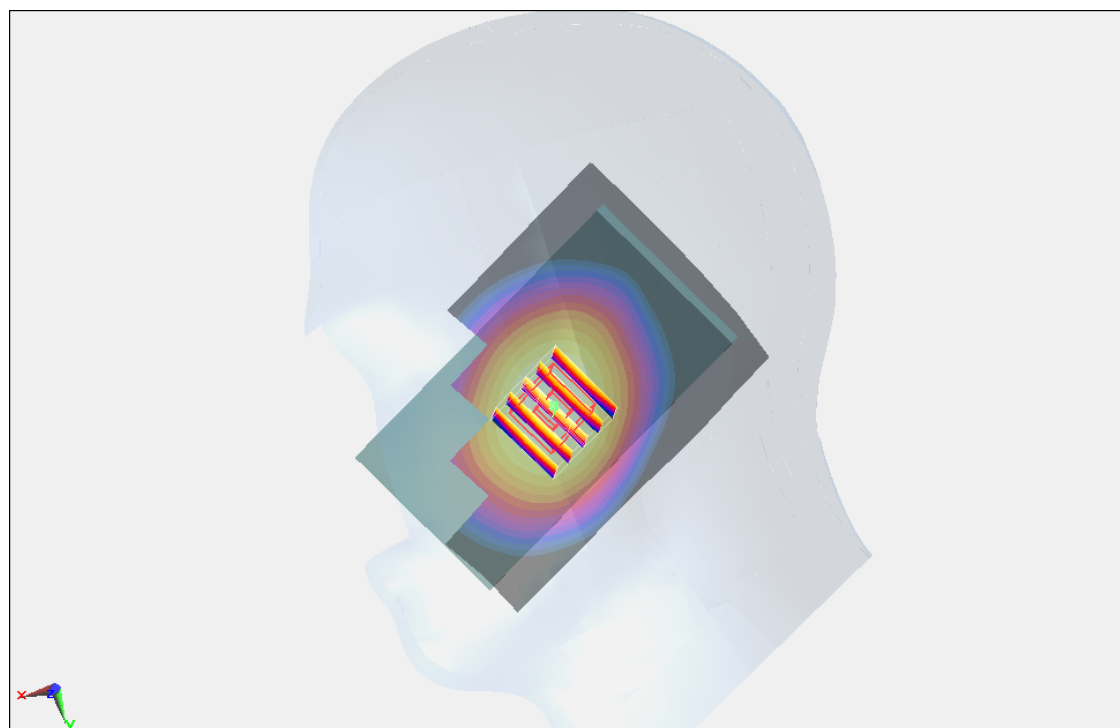
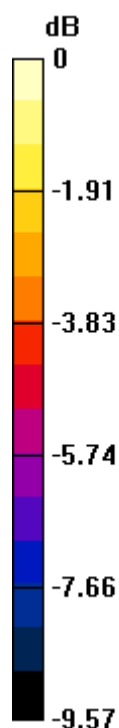
#05_GSM850_GSM Voice_Right Cheek_Ch128**DUT: 290405**

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: HSL_850_121029 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.9$ mho/m; $\epsilon_r = 43.386$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch128/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mmMaximum value of SAR (interpolated) = 0.839 W/kg **Ch128/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mmReference Value = 9.451 V/m ; Power Drift = 0.05 dB Peak SAR (extrapolated) = 0.940 mW/g **SAR(1 g) = 0.779 mW/g ; SAR(10 g) = 0.592 mW/g** Maximum value of SAR (measured) = 0.820 W/kg  $0 \text{ dB} = 0.820 \text{ W/kg} = -1.72 \text{ dB W/kg}$

#06_GSM850_GSM Voice_Right Cheek_Ch251**DUT: 290405**

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL_850_121029 Medium parameters used: $f = 849$ MHz; $\sigma = 0.918$ mho/m; $\epsilon_r = 43.079$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C ; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch251/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.14 W/kg

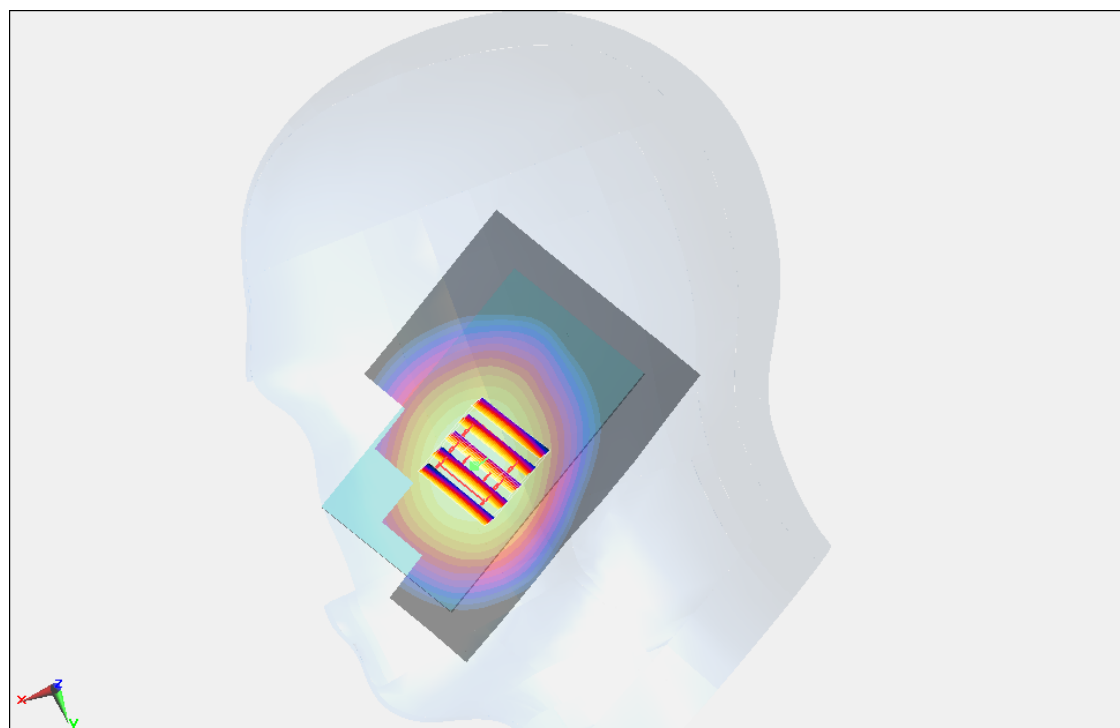
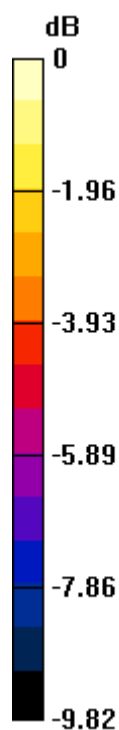
Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.773 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.311 mW/g

SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.811 mW/g

Maximum value of SAR (measured) = 1.13 W/kg



0 dB = 1.13 W/kg = 1.06 dB W/kg

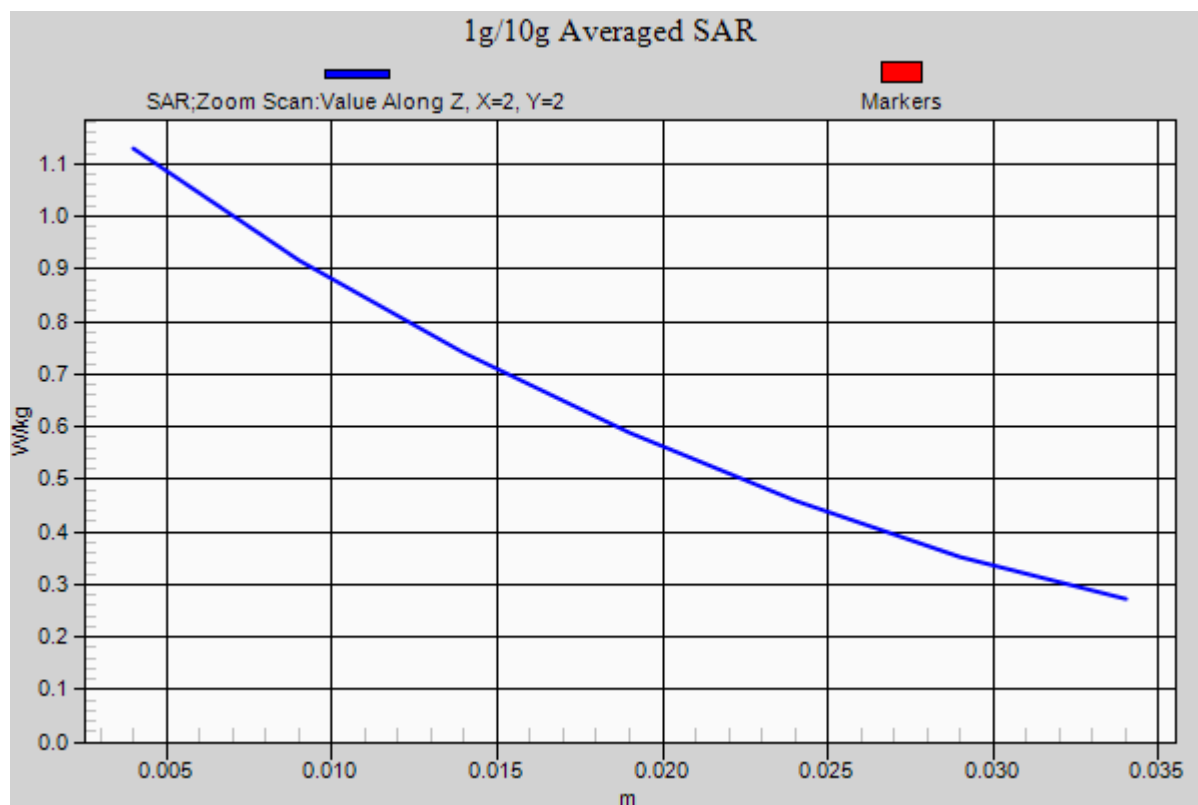
#06_GSM850_GSM Voice_Right Cheek_Ch251_2D**DUT: 290405**

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: HSL_850_121029 Medium parameters used: $f = 849$ MHz; $\sigma = 0.918$ mho/m; $\epsilon_r = 43.079$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch251/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mmMaximum value of SAR (interpolated) = 1.14 W/kg **Ch251/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mmReference Value = 10.773 V/m ; Power Drift = 0.10 dB Peak SAR (extrapolated) = 1.311 mW/g **SAR(1 g) = 1.08 mW/g ; SAR(10 g) = 0.811 mW/g** Maximum value of SAR (measured) = 1.13 W/kg 

#15_GSM1900_DTM Multi-slot class 5_Right Cheek_Ch810**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium: HSL_1900_121029 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.431$ mho/m; $\epsilon_r = 40.004$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.555 W/kg

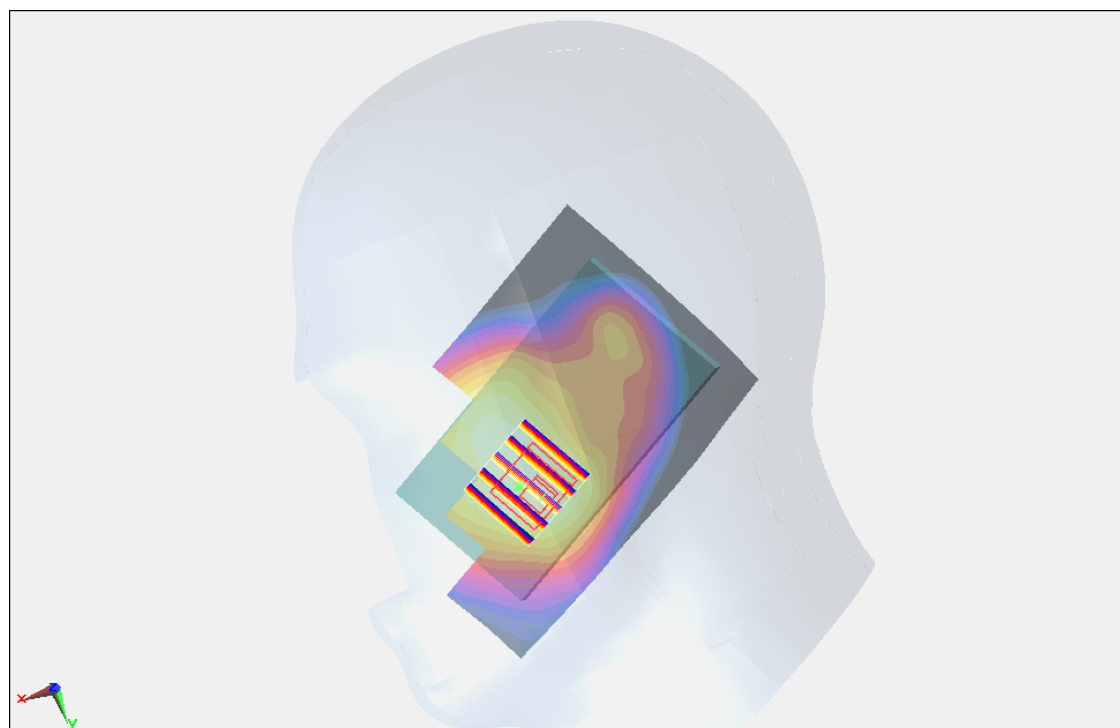
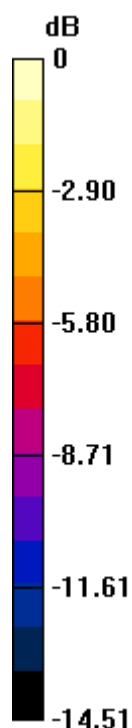
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.669 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.713 mW/g

SAR(1 g) = 0.499 mW/g; SAR(10 g) = 0.324 mW/g

Maximum value of SAR (measured) = 0.533 W/kg



0 dB = 0.533 W/kg = -5.47 dB W/kg

#16_GSM1900_DTM Multi-slot class 5_Right Tilted_Ch810**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium: HSL_1900_121029 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.431$ mho/m; $\epsilon_r = 40.004$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.407 W/kg

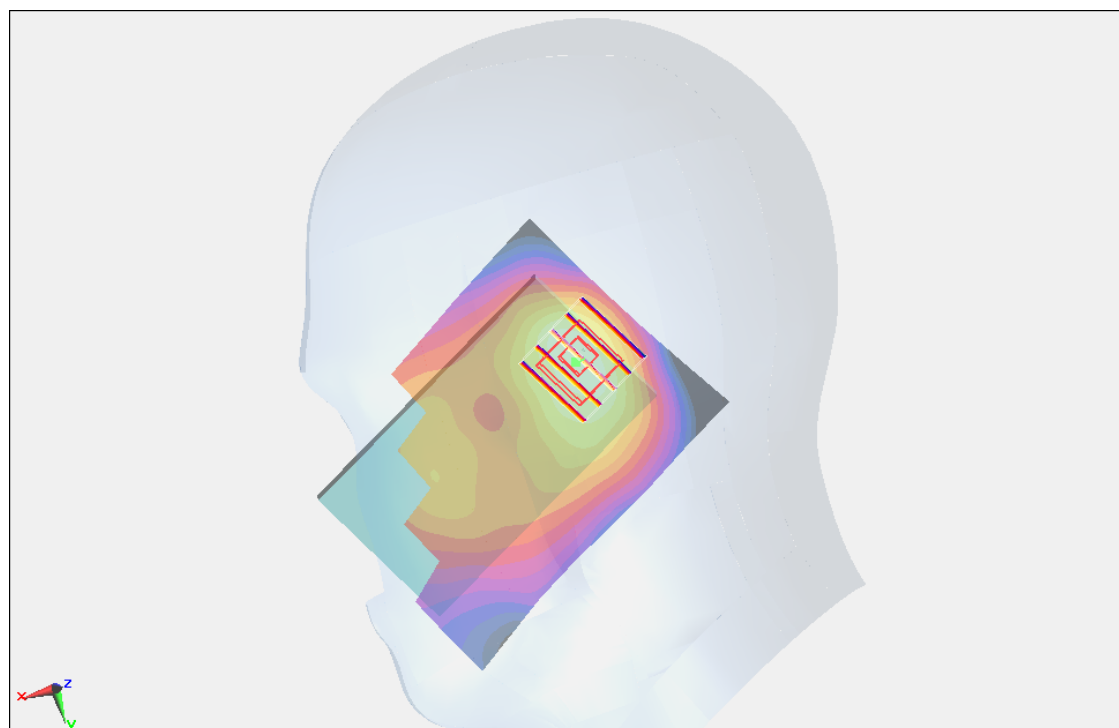
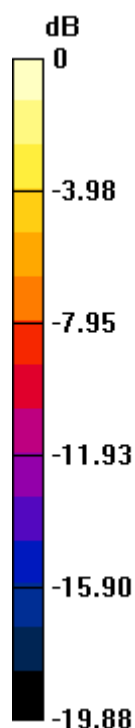
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.681 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.549 mW/g

SAR(1 g) = 0.337 mW/g; SAR(10 g) = 0.193 mW/g

Maximum value of SAR (measured) = 0.373 W/kg



0 dB = 0.373 W/kg = -8.57 dB W/kg

#17_GSM1900_DTM Multi-slot class 5_Left Cheek_Ch810**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium: HSL_1900_121029 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.431$ mho/m; $\epsilon_r = 40.004$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.833 W/kg

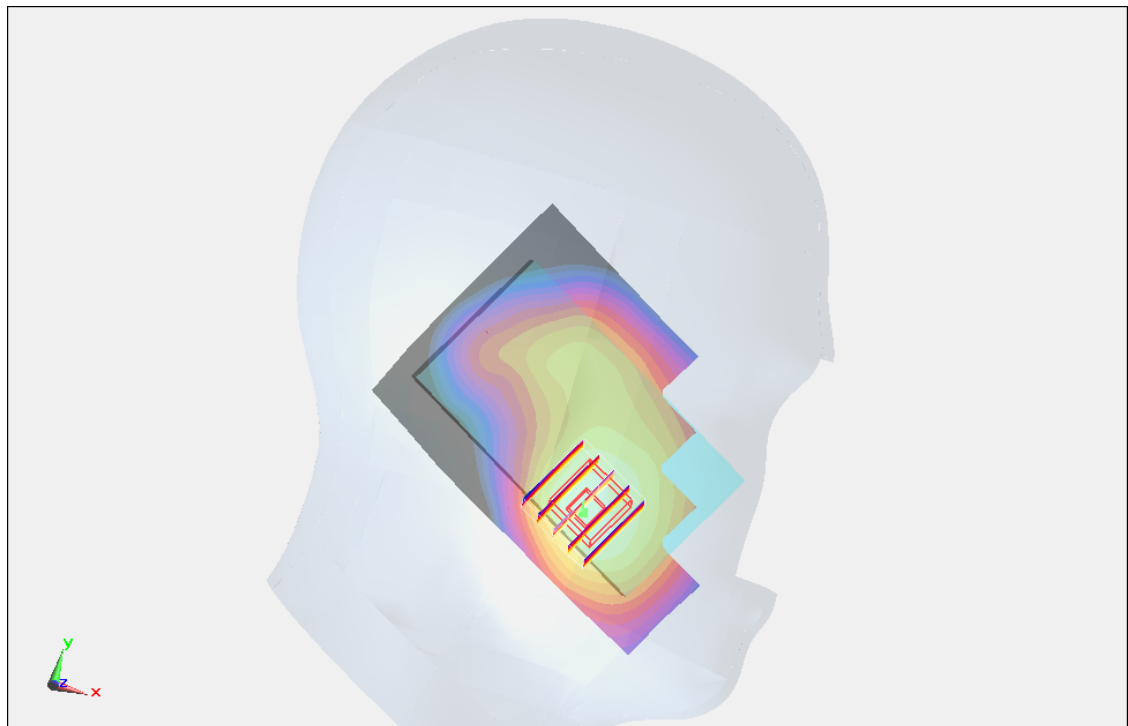
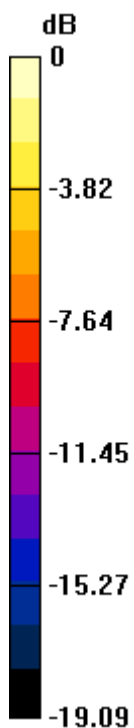
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.493 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 1.315 mW/g

SAR(1 g) = 0.794 mW/g; SAR(10 g) = 0.466 mW/g

Maximum value of SAR (measured) = 0.873 W/kg



0 dB = 0.873 W/kg = -1.18 dB W/kg

#17_GSM1900_DTM Multi-slot class 5_Left Cheek_Ch810_2D**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium: HSL_1900_121029 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.431$ mho/m; $\epsilon_r = 40.004$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.833 W/kg

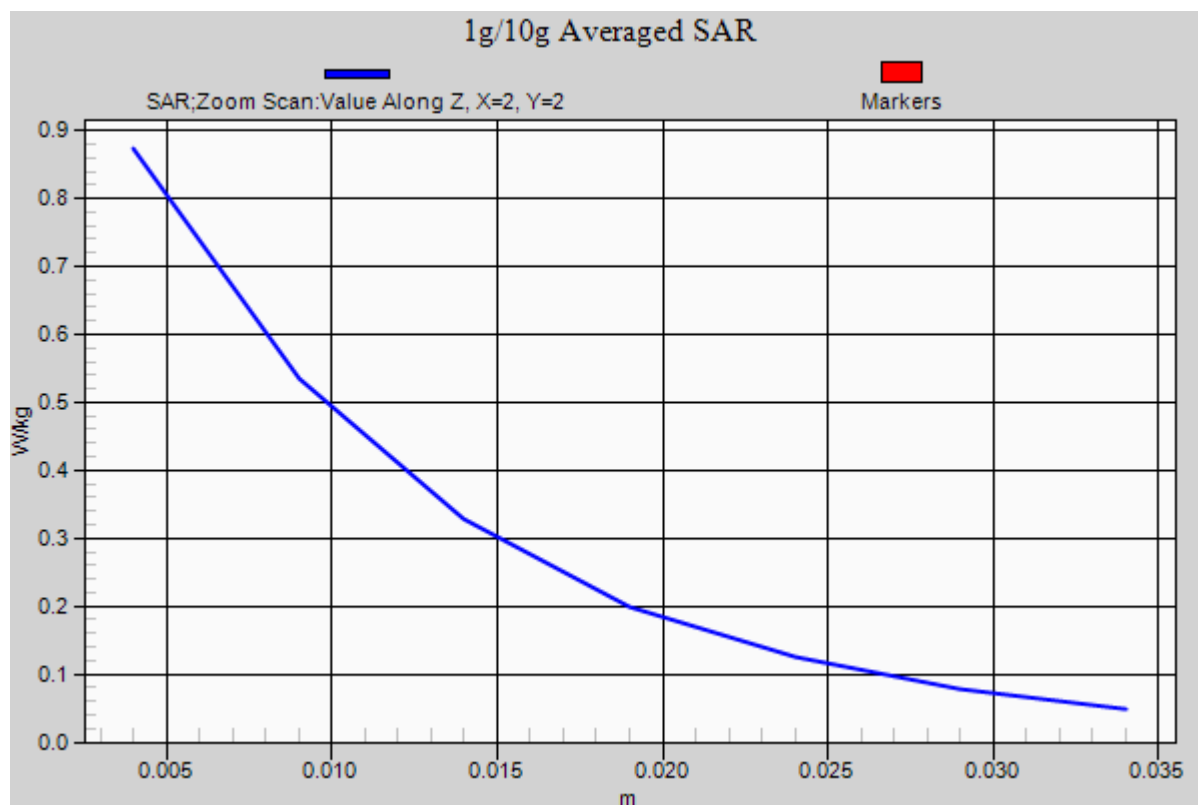
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.493 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 1.315 mW/g

SAR(1 g) = 0.794 mW/g; SAR(10 g) = 0.466 mW/g

Maximum value of SAR (measured) = 0.873 W/kg



#18_GSM1900_DTM Multi-slot class 5_Left Tilted_Ch810**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium: HSL_1900_121029 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.431$ mho/m; $\epsilon_r = 40.004$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.401 W/kg

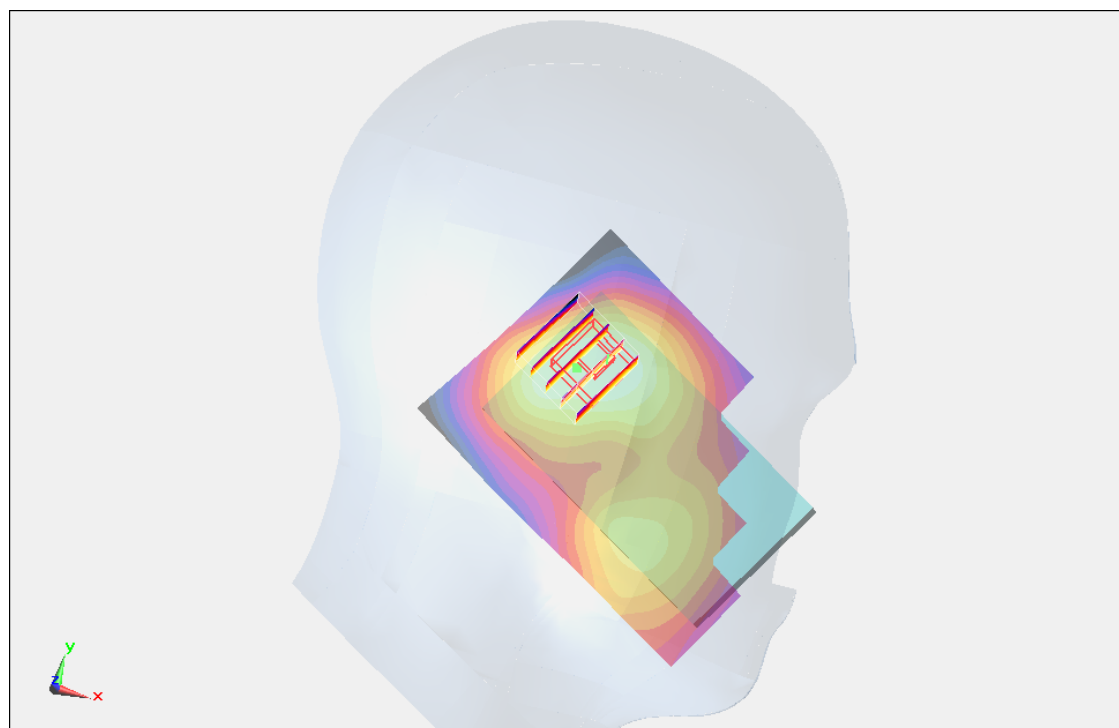
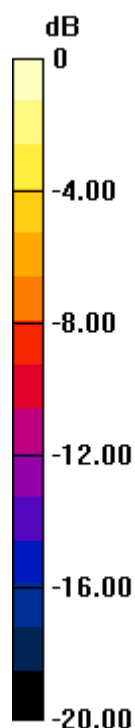
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.223 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.450 mW/g

SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.181 mW/g

Maximum value of SAR (measured) = 0.313 W/kg



0 dB = 0.313 W/kg = -10.09 dB W/kg

#07_WCDMA V_RMC12.2K_Right Cheek_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: HSL_850_121029 Medium parameters used: $f = 847$ MHz; $\sigma = 0.917$ mho/m; $\epsilon_r = 43.112$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: $dx=20 \text{ mm}$, $dy=20 \text{ mm}$

Maximum value of SAR (interpolated) = 1.09 W/kg

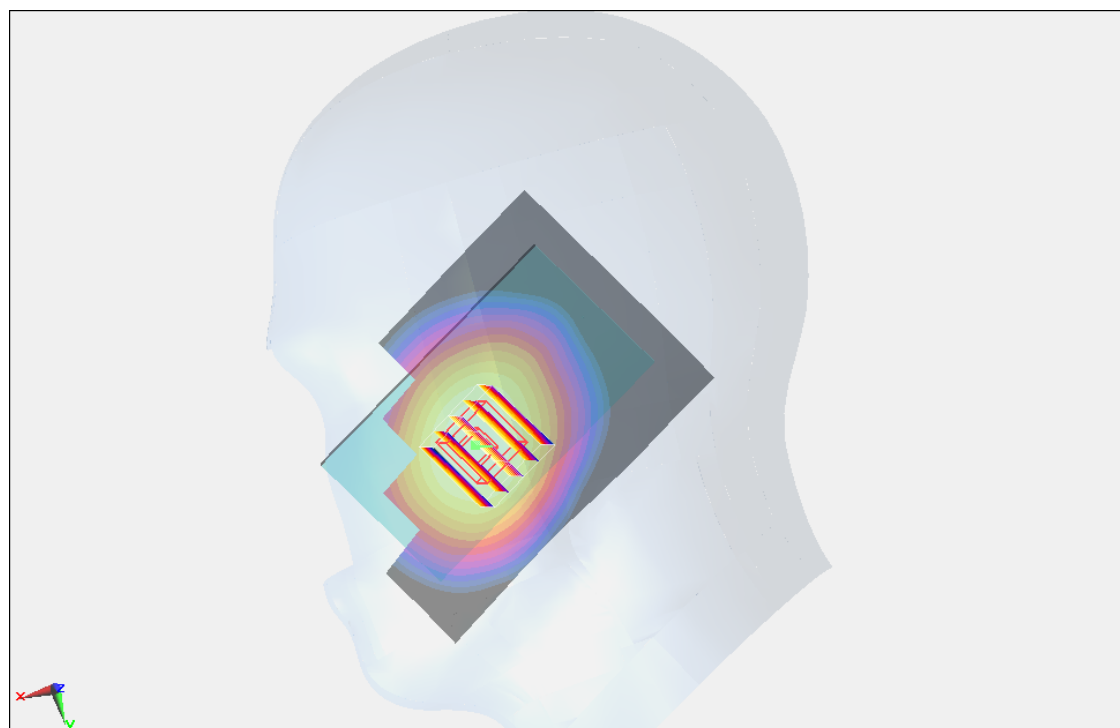
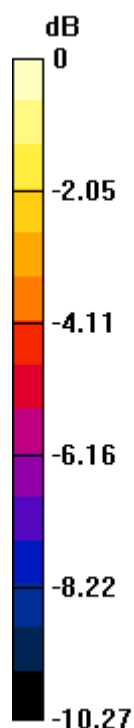
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.785 V/m ; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.197 mW/g

SAR(1 g) = 0.981 mW/g ; SAR(10 g) = 0.739 mW/g

Maximum value of SAR (measured) = 1.04 W/kg



0 dB = 1.04 W/kg = 0.34 dB W/kg

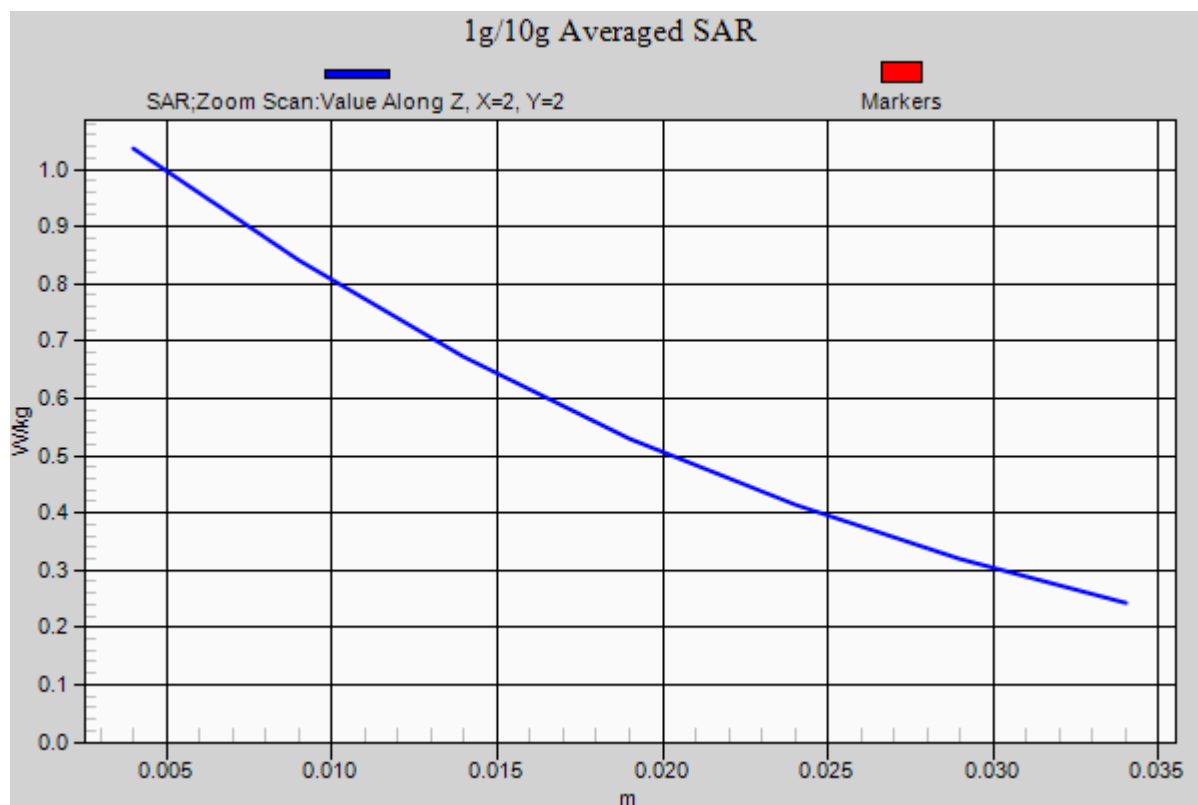
#07_WCDMA V_RMC12.2K_Right Cheek_Ch4233_2D**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: HSL_850_121029 Medium parameters used: $f = 847$ MHz; $\sigma = 0.917$ mho/m; $\epsilon_r = 43.112$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mmMaximum value of SAR (interpolated) = 1.09 W/kg **Ch4233/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mmReference Value = 9.785 V/m ; Power Drift = 0.01 dB Peak SAR (extrapolated) = 1.197 mW/g **SAR(1 g) = 0.981 mW/g ; SAR(10 g) = 0.739 mW/g** Maximum value of SAR (measured) = 1.04 W/kg 

#08_WCDMA V_RMC12.2K_Right Tilted_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: HSL_850_121029 Medium parameters used: $f = 847$ MHz; $\sigma = 0.917$ mho/m; $\epsilon_r = 43.112$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm
Maximum value of SAR (interpolated) = 0.603 W/kg

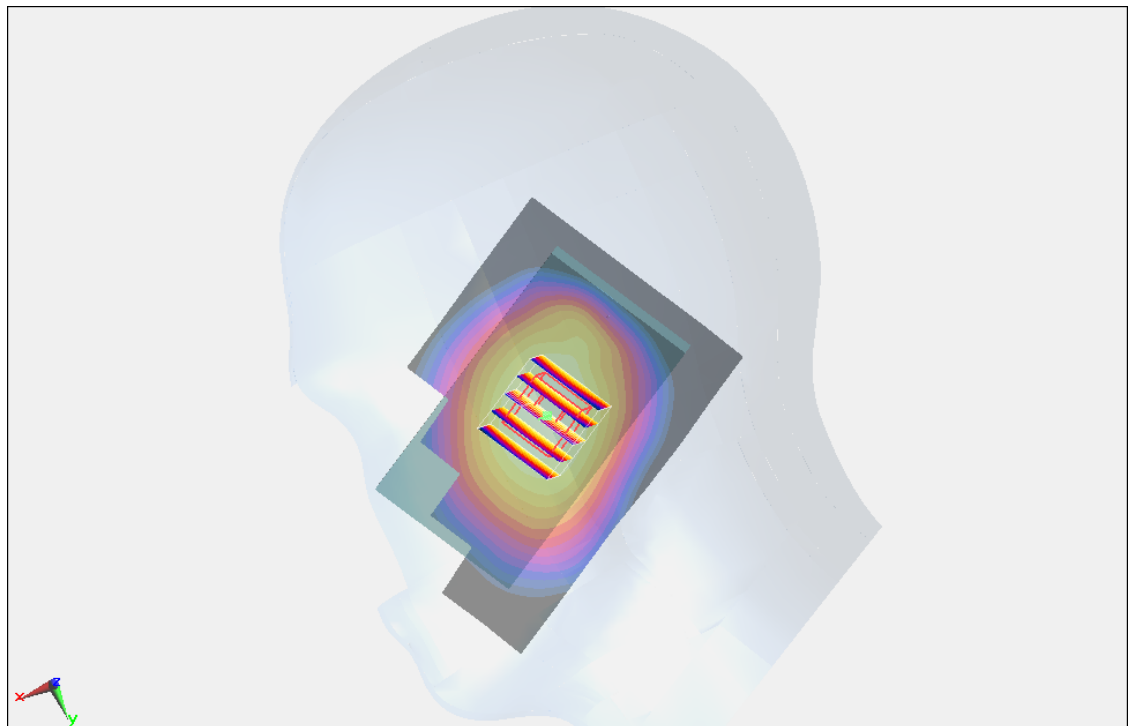
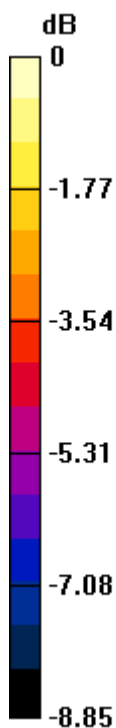
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.819 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.703 mW/g

SAR(1 g) = 0.569 mW/g; SAR(10 g) = 0.433 mW/g

Maximum value of SAR (measured) = 0.595 W/kg



0 dB = 0.595 W/kg = -4.51 dB W/kg

#09_WCDMA V_RMC12.2K_Left Cheek_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: HSL_850_121029 Medium parameters used: $f = 847$ MHz; $\sigma = 0.917$ mho/m; $\epsilon_r = 43.112$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.903 W/kg

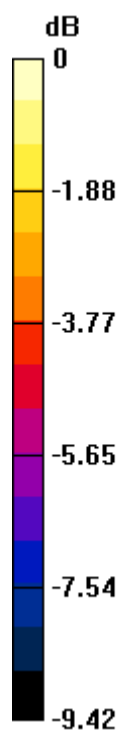
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.842 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.068 mW/g

SAR(1 g) = 0.838 mW/g; SAR(10 g) = 0.624 mW/g

Maximum value of SAR (measured) = 0.887 W/kg



0 dB = 0.887 W/kg = -1.04 dB W/kg

#10_WCDMA V_RMC12.2K_Left Tilted_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: HSL_850_121029 Medium parameters used: $f = 847$ MHz; $\sigma = 0.917$ mho/m; $\epsilon_r = 43.112$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (interpolated) = 0.568 W/kg

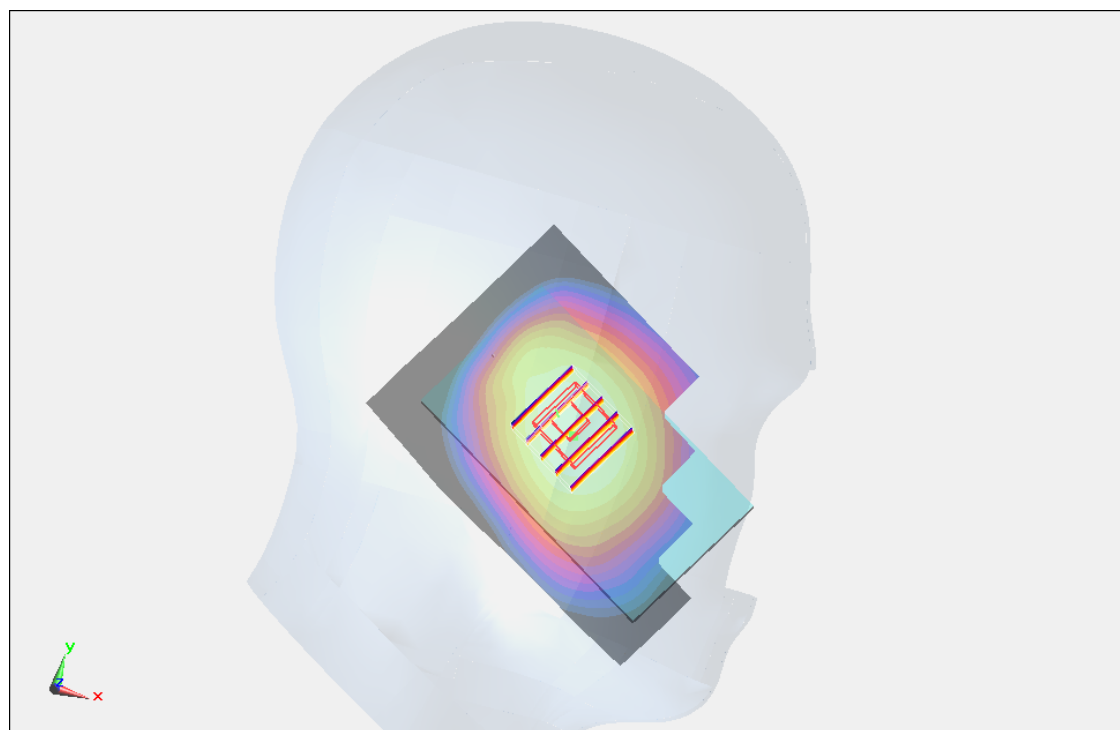
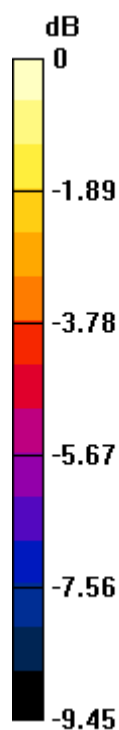
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 15.040 V/m ; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.672 mW/g

SAR(1 g) = 0.541 mW/g ; SAR(10 g) = 0.411 mW/g

Maximum value of SAR (measured) = 0.559 W/kg



0 dB = 0.559 W/kg = -5.05 dB W/kg

#11_WCDMA V_RMC12.2K_Right Cheek_Ch4132**DUT: 290405**

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: HSL_850_121029 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.902$ mho/m; $\epsilon_r = 43.35$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4132/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.837 W/kg

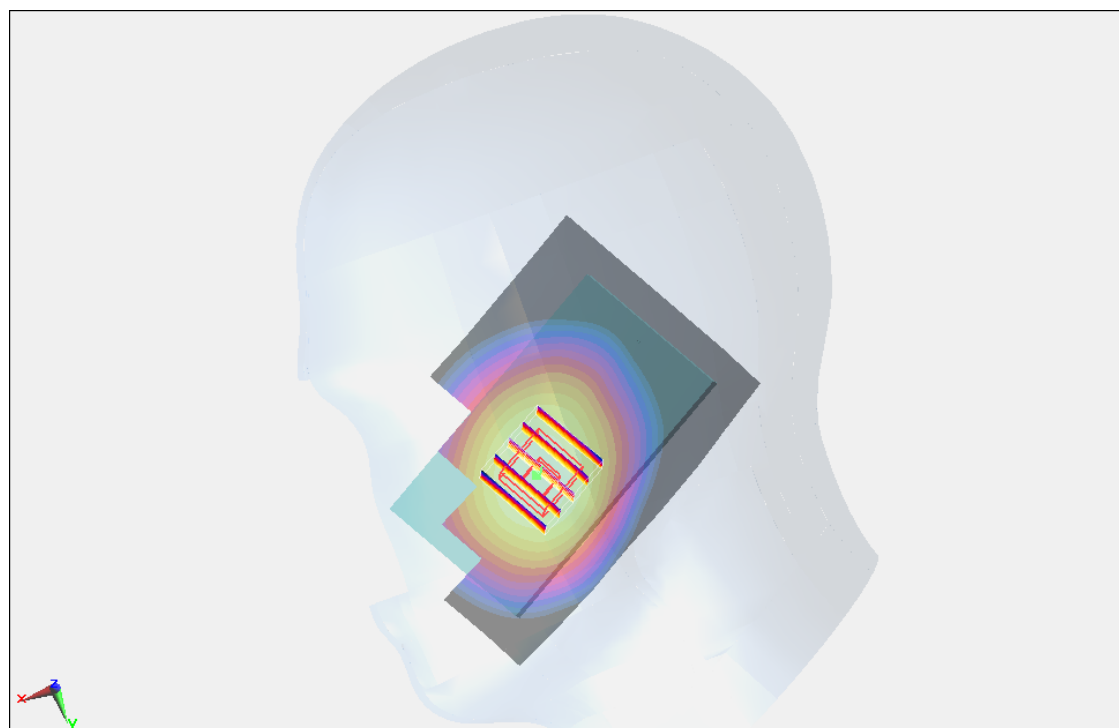
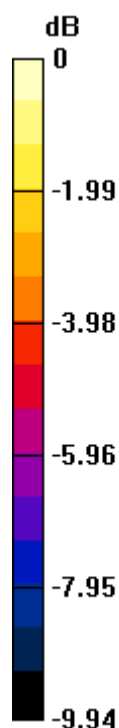
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.836 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.950 mW/g

SAR(1 g) = 0.783 mW/g; SAR(10 g) = 0.593 mW/g

Maximum value of SAR (measured) = 0.826 W/kg



0 dB = 0.826 W/kg = -1.66 dB W/kg

#12_WCDMA V_RMC12.2K_Right Cheek_Ch4182**DUT: 290405**

Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: HSL_850_121029 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.909$ mho/m; $\epsilon_r = 43.247$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4182/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.968 W/kg

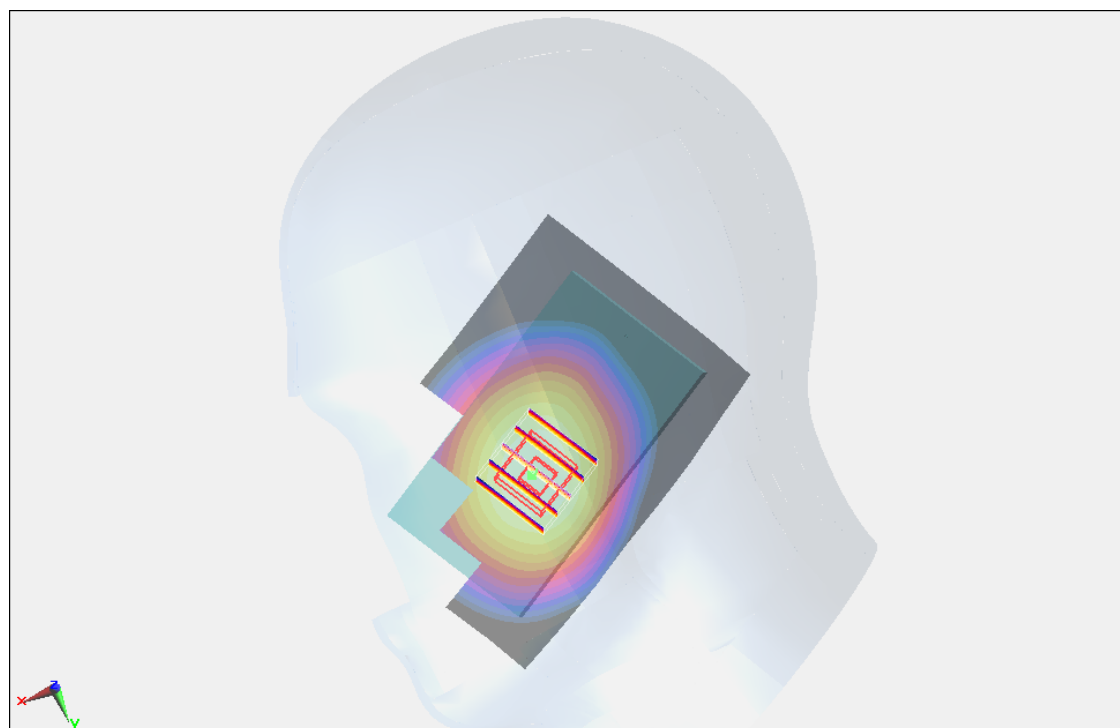
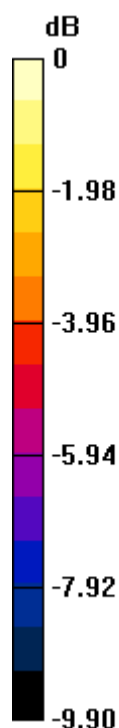
Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.094 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.074 mW/g

SAR(1 g) = 0.880 mW/g; SAR(10 g) = 0.666 mW/g

Maximum value of SAR (measured) = 0.928 W/kg



0 dB = 0.928 W/kg = -0.65 dB W/kg

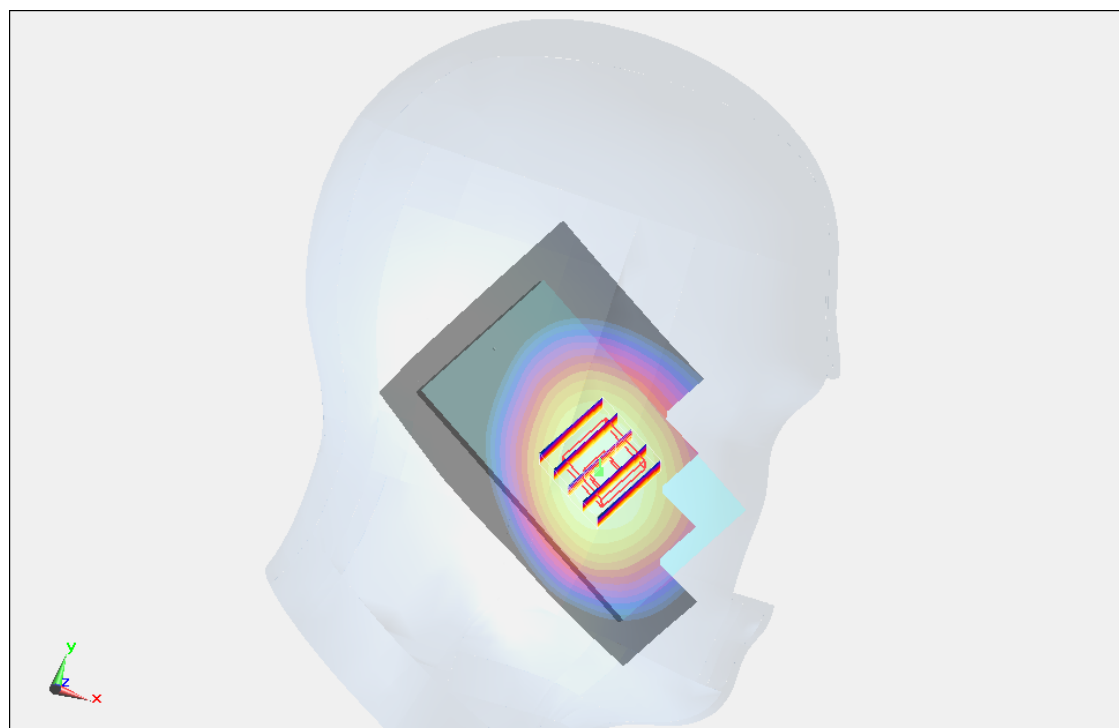
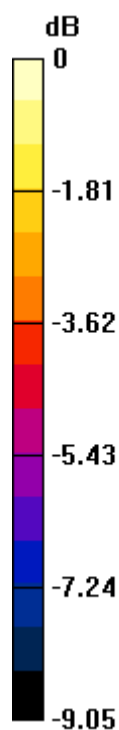
#13_WCDMA V_RMC12.2K_Left Cheek_Ch4132**DUT: 290405**

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: HSL_850_121029 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.902$ mho/m; $\epsilon_r = 43.35$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.4°C ; Liquid Temperature : 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4132/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mmMaximum value of SAR (interpolated) = 0.719 W/kg **Ch4132/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mmReference Value = 8.233 V/m ; Power Drift = 0.06 dB Peak SAR (extrapolated) = 0.837 mW/g **SAR(1 g) = 0.659 mW/g ; SAR(10 g) = 0.495 mW/g** Maximum value of SAR (measured) = 0.693 W/kg  $0 \text{ dB} = 0.693 \text{ W/kg} = -3.19 \text{ dB W/kg}$

#14_WCDMA V_RMC12.2K_Left Cheek_Ch4182**DUT: 290405**

Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: HSL_850_121029 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.909$ mho/m; $\epsilon_r = 43.247$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.4 °C; Liquid Temperature : 21.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.71, 8.71, 8.71); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4182/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.825 W/kg

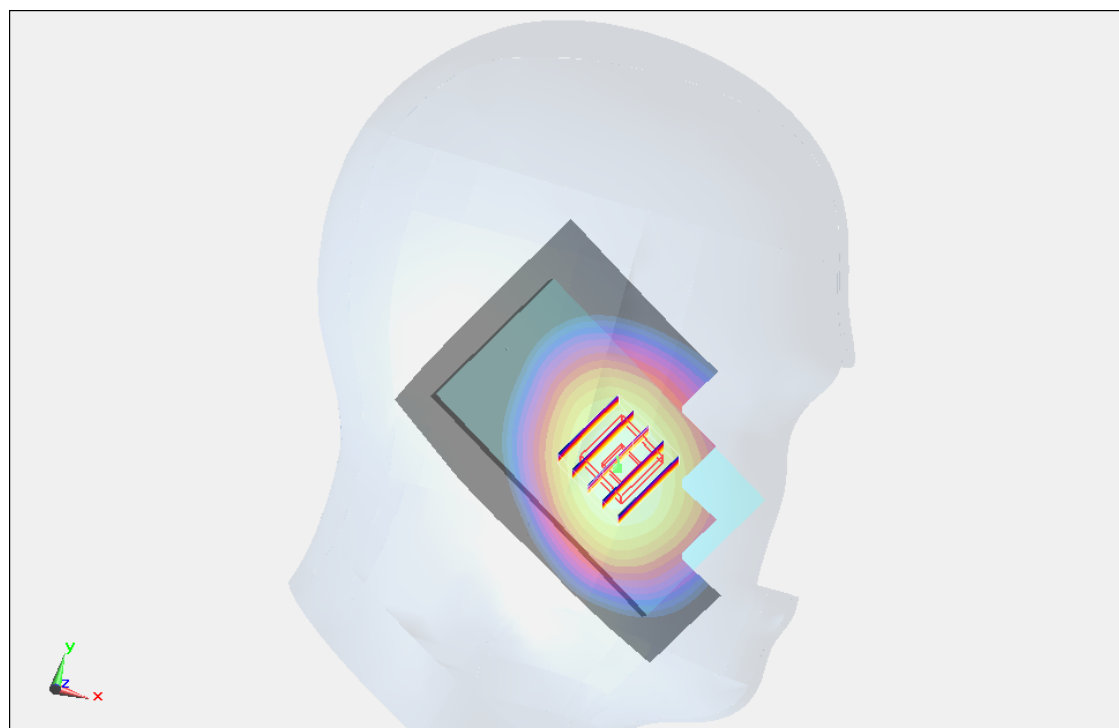
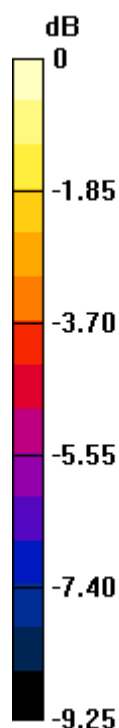
Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.557 V/m; Power Drift = 0.123 dB

Peak SAR (extrapolated) = 0.959 mW/g

SAR(1 g) = 0.755 mW/g; SAR(10 g) = 0.565 mW/g

Maximum value of SAR (measured) = 0.797 W/kg



0 dB = 0.797 W/kg = -1.97 dB W/kg

#19_WCDMA II_RMC12.2K_Right Cheek_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL_1900_121029 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.407$ mho/m; $\epsilon_r = 40.072$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.804 W/kg

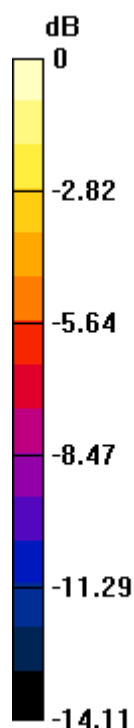
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.834 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.026 mW/g

SAR(1 g) = 0.722 mW/g; SAR(10 g) = 0.470 mW/g

Maximum value of SAR (measured) = 0.776 W/kg



0 dB = 0.776 W/kg = -2.20 dB W/kg

#20_WCDMA II_RMC12.2K_Right Tilted_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL_1900_121029 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.407$ mho/m; $\epsilon_r = 40.072$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.569 W/kg

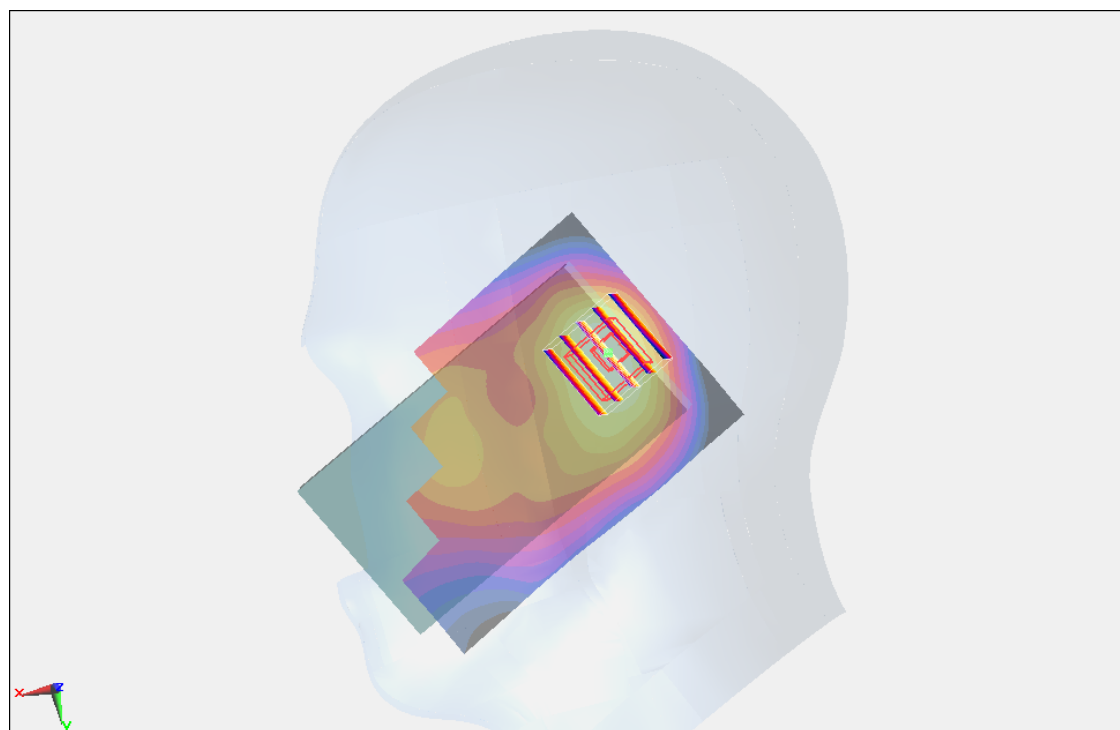
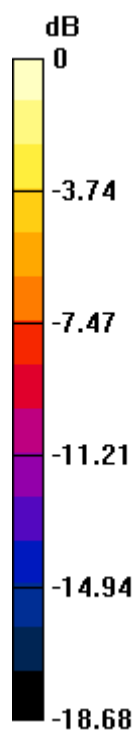
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.008 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.762 mW/g

SAR(1 g) = 0.478 mW/g; SAR(10 g) = 0.278 mW/g

Maximum value of SAR (measured) = 0.532 W/kg



0 dB = 0.532 W/kg = -5.48 dB W/kg

#21_WCDMA II_RMC12.2K_Left Cheek_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL_1900_121029 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.407$ mho/m; $\epsilon_r = 40.072$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.12 W/kg

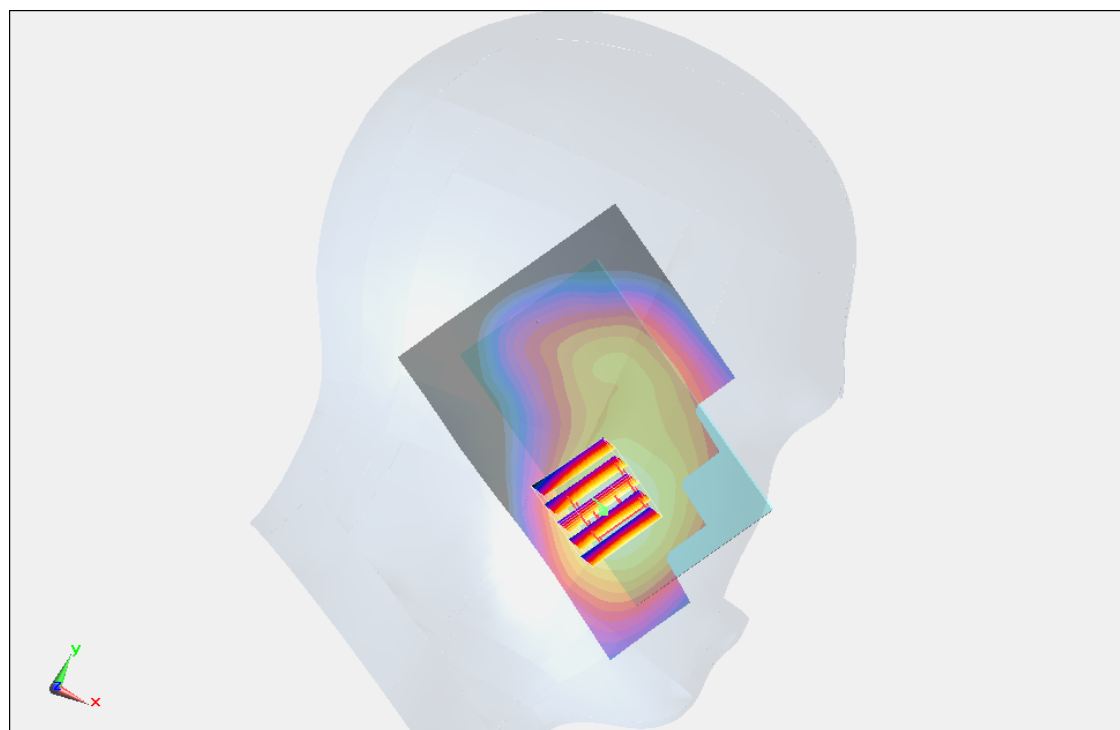
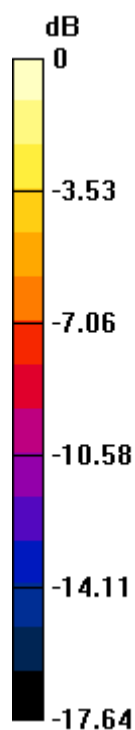
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.962 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.785 mW/g

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.656 mW/g

Maximum value of SAR (measured) = 1.21 W/kg



0 dB = 1.21 W/kg = 1.66 dB W/kg

#21_WCDMA II_RMC12.2K_Left Cheek_Ch9400_2D**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL_1900_121029 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.407$ mho/m; $\epsilon_r = 40.072$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.12 W/kg

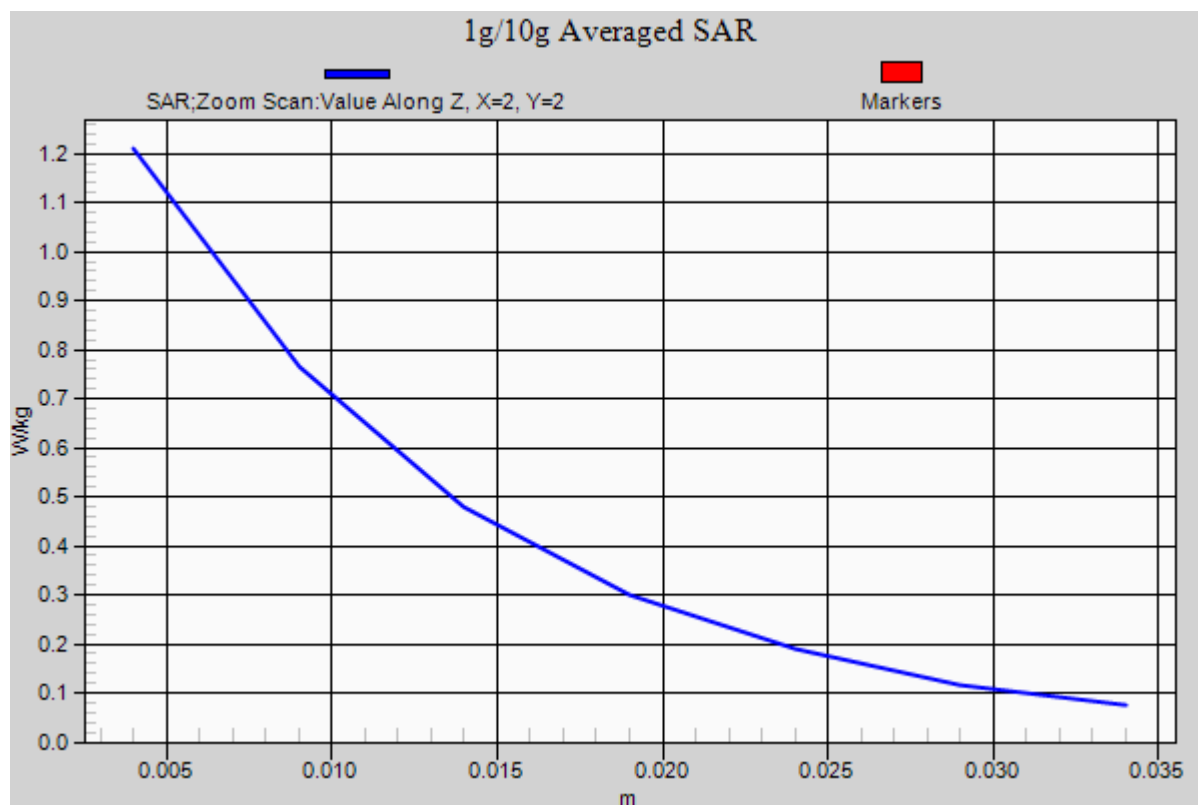
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.962 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.785 mW/g

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.656 mW/g

Maximum value of SAR (measured) = 1.21 W/kg



#22_WCDMA II_RMC12.2K_Left Tilted_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: HSL_1900_121029 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.407$ mho/m; $\epsilon_r = 40.072$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.577 W/kg

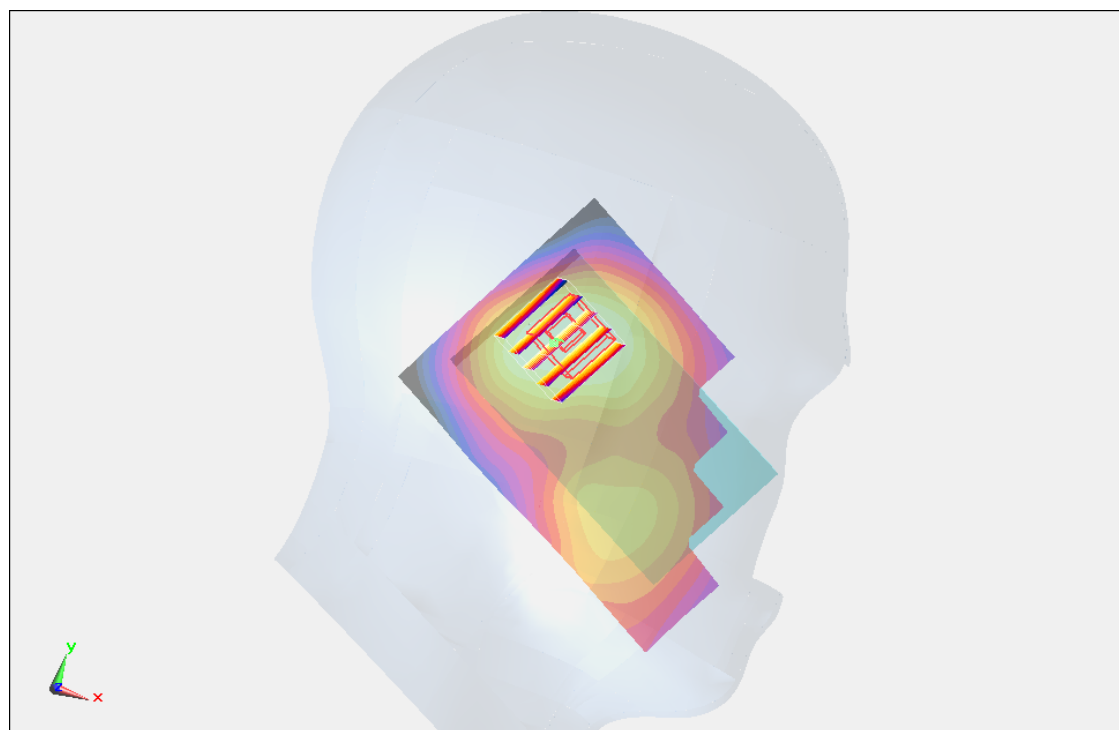
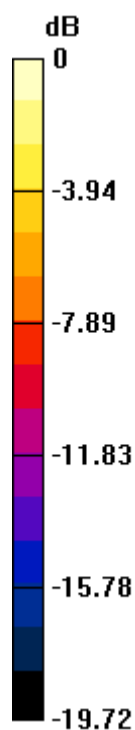
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.240 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.675 mW/g

SAR(1 g) = 0.440 mW/g; SAR(10 g) = 0.275 mW/g

Maximum value of SAR (measured) = 0.469 W/kg



0 dB = 0.469 W/kg = -6.58 dB W/kg

#23_WCDMA II_RMC12.2K_Left Cheek_Ch9262**DUT: 290405**

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: HSL_1900_121029 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.383$ mho/m; $\epsilon_r = 40.204$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9262/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.979 W/kg

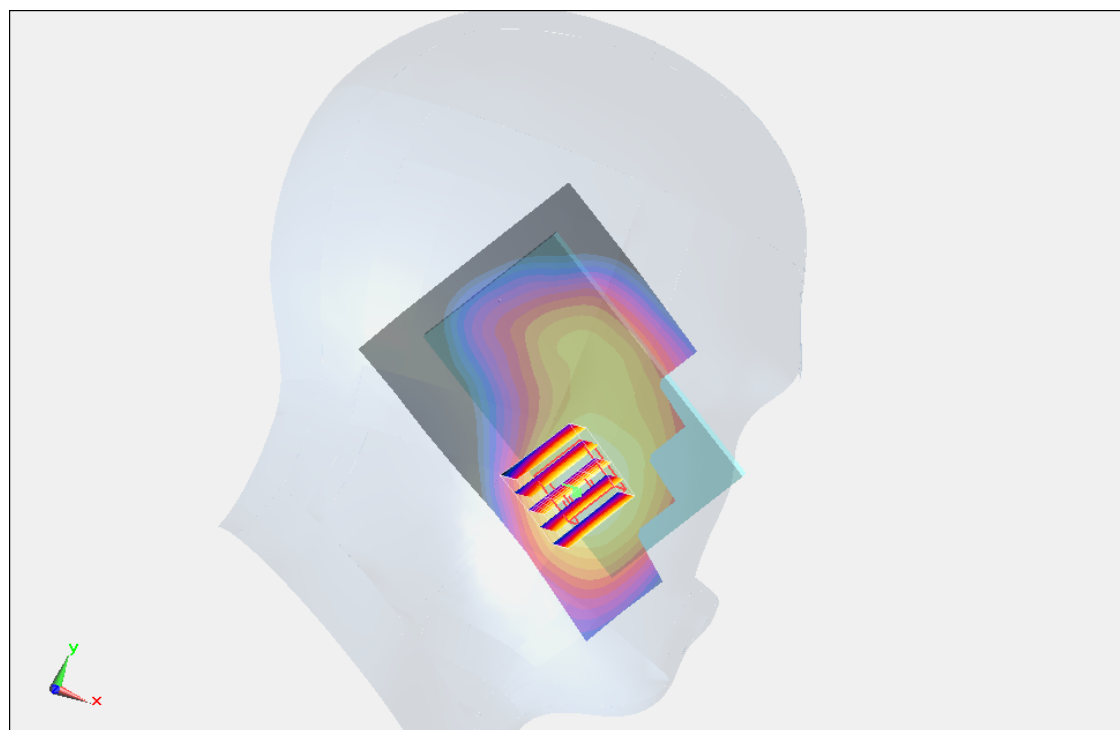
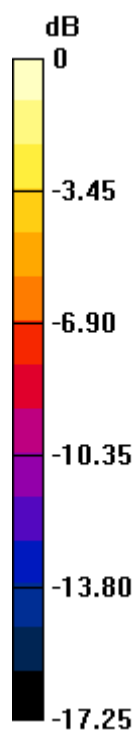
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.885 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.543 mW/g

SAR(1 g) = 0.955 mW/g; SAR(10 g) = 0.565 mW/g

Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 1.06 W/kg = 0.51 dB W/kg

#24_WCDMA II_RMC12.2K_Left Cheek_Ch9538**DUT: 290405**

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL_1900_121029 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.429$ mho/m; $\epsilon_r = 40.001$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.42, 7.42, 7.42); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9538/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.11 W/kg

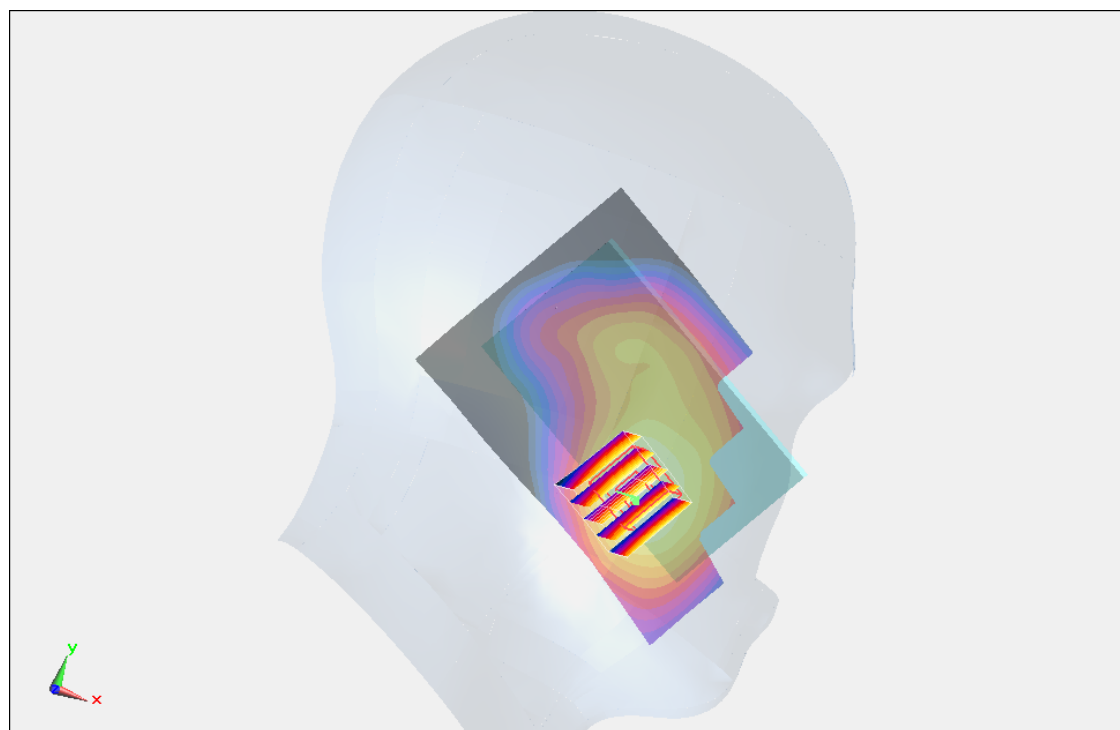
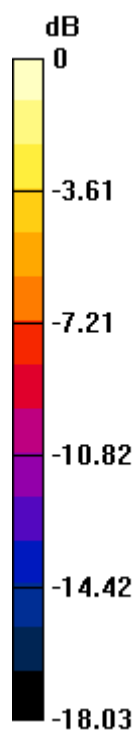
Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.876 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 1.775 mW/g

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.638 mW/g

Maximum value of SAR (measured) = 1.20 W/kg



0 dB = 1.20 W/kg = 1.58 dB W/kg

#89_WLAN2.4G_802.11b_Right Cheek_Ch6**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.812$ mho/m; $\epsilon_r = 39.457$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.7, 6.7, 6.7); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.133 W/kg

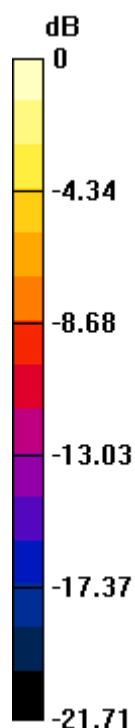
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.501 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.188 mW/g

SAR(1 g) = 0.106 mW/g; SAR(10 g) = 0.058 mW/g

Maximum value of SAR (measured) = 0.118 W/kg



0 dB = 0.118 W/kg = -18.56 dB W/kg

#90_WLAN2.4G_802.11b_Right Tilted_Ch6**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.812$ mho/m; $\epsilon_r = 39.457$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.7, 6.7, 6.7); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (51x81x1): Measurement grid: $dx=20 \text{ mm}$, $dy=20 \text{ mm}$

Maximum value of SAR (interpolated) = 0.145 W/kg

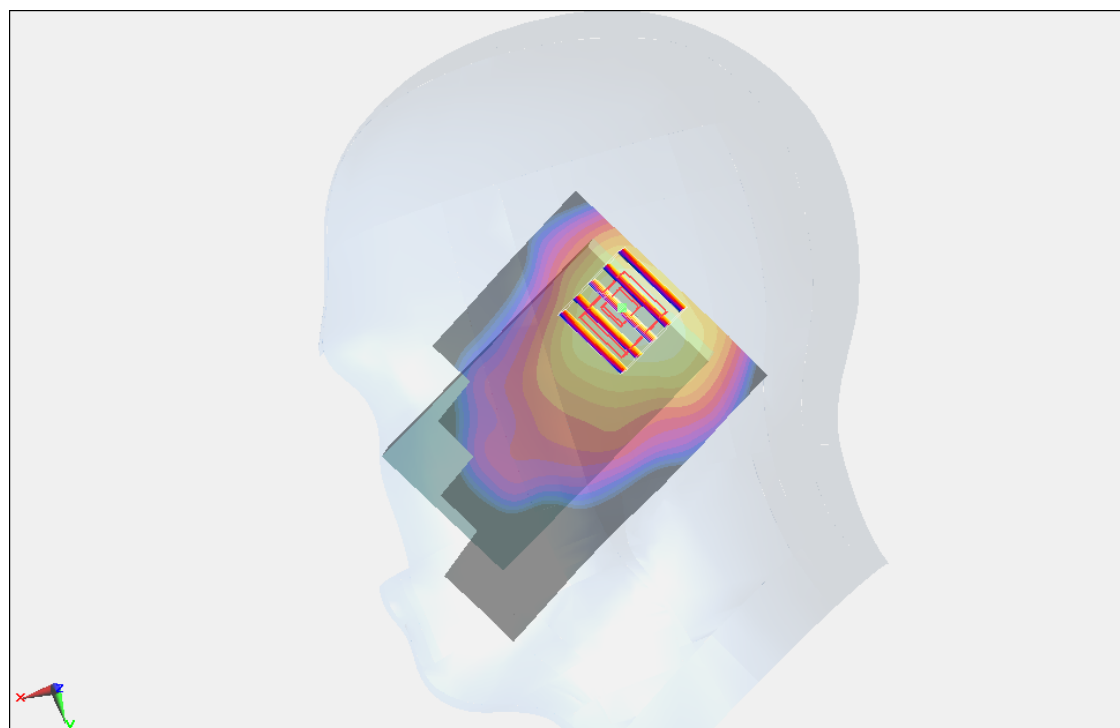
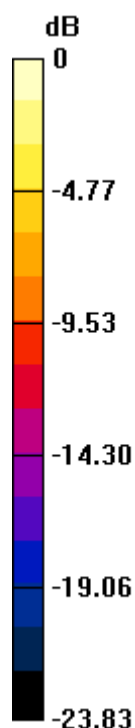
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.215 V/m ; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.212 mW/g

SAR(1 g) = 0.114 mW/g ; SAR(10 g) = 0.059 mW/g

Maximum value of SAR (measured) = 0.127 W/kg



0 dB = 0.127 W/kg = -17.92 dB W/kg

#91_WLAN2.4G_802.11b_Left Cheek_Ch6**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.812$ mho/m; $\epsilon_r = 39.457$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.7, 6.7, 6.7); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.206 W/kg

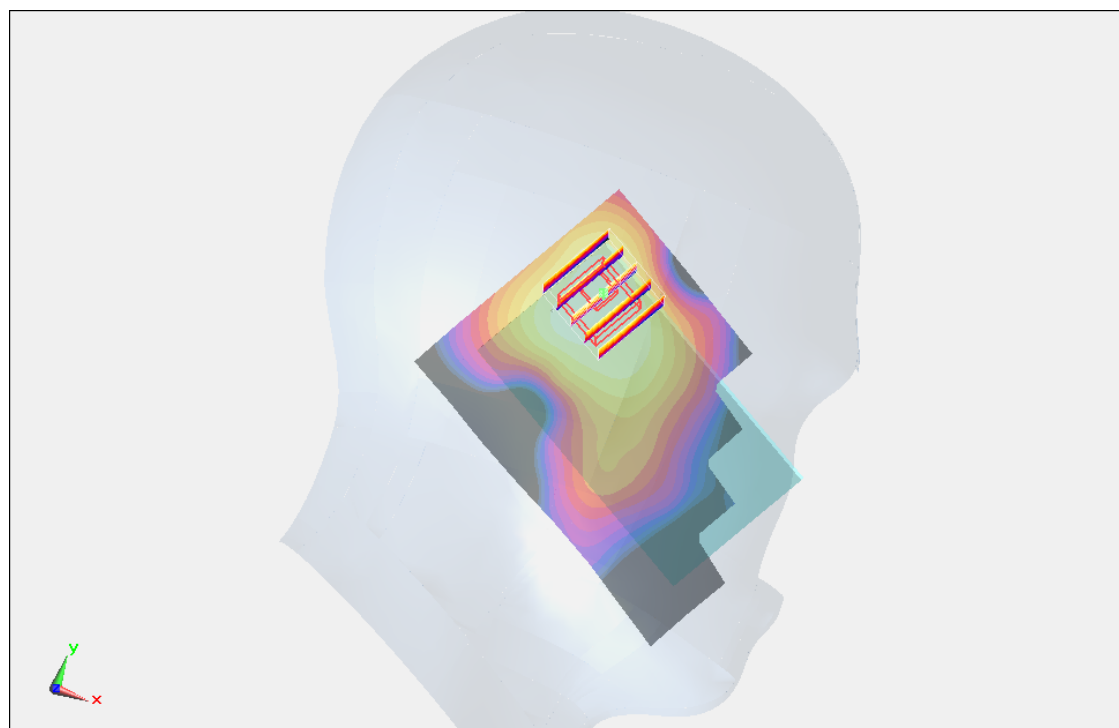
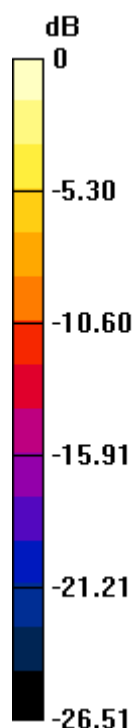
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.908 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.330 mW/g

SAR(1 g) = 0.160 mW/g; SAR(10 g) = 0.082 mW/g

Maximum value of SAR (measured) = 0.170 W/kg



0 dB = 0.170 W/kg = -15.39 dB W/kg

#91_WLAN2.4G_802.11b_Left Cheek_Ch6_2D**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.812$ mho/m; $\epsilon_r = 39.457$; $\rho =$

1000 kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.7, 6.7, 6.7); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.206 W/kg

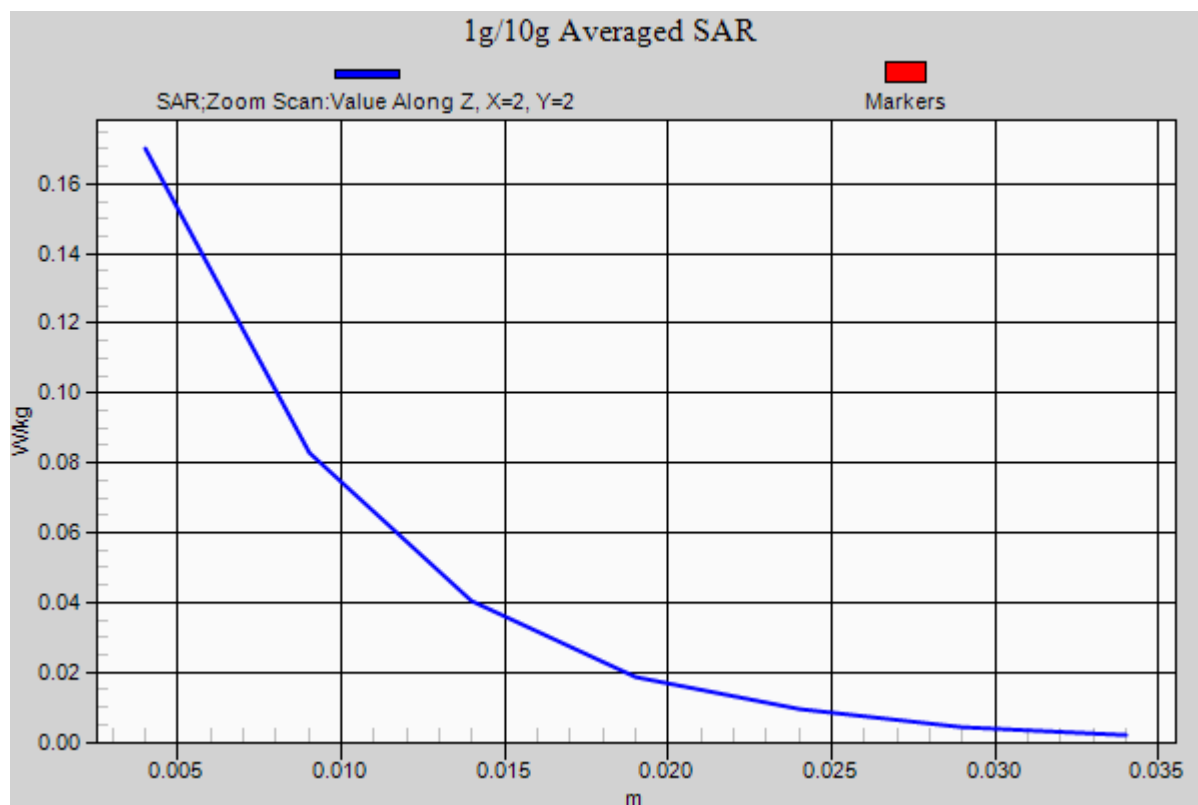
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.908 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.330 mW/g

SAR(1 g) = 0.160 mW/g; SAR(10 g) = 0.082 mW/g

Maximum value of SAR (measured) = 0.170 W/kg



#92_WLAN2.4G_802.11b_Left Tilted_Ch6**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: HSL2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.812$ mho/m; $\epsilon_r = 39.457$; $\rho = 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.7, 6.7, 6.7); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.136 W/kg

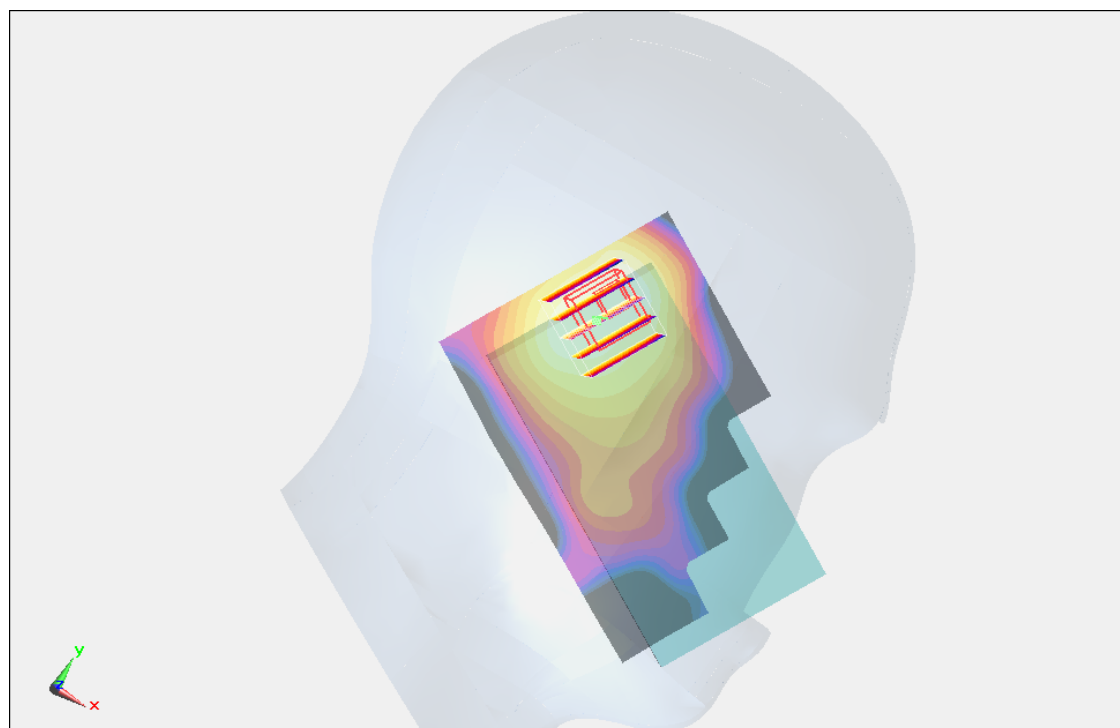
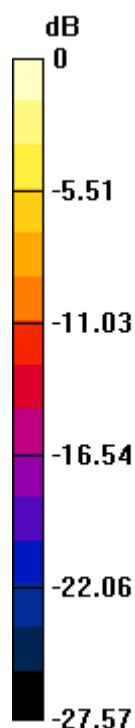
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.574 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.240 mW/g

SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.056 mW/g

Maximum value of SAR (measured) = 0.119 W/kg



0 dB = 0.119 W/kg = -18.49 dB W/kg

#53_GSM850_GPRS (1 Tx slots)_Front_1cm_Ch189**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.928 W/kg

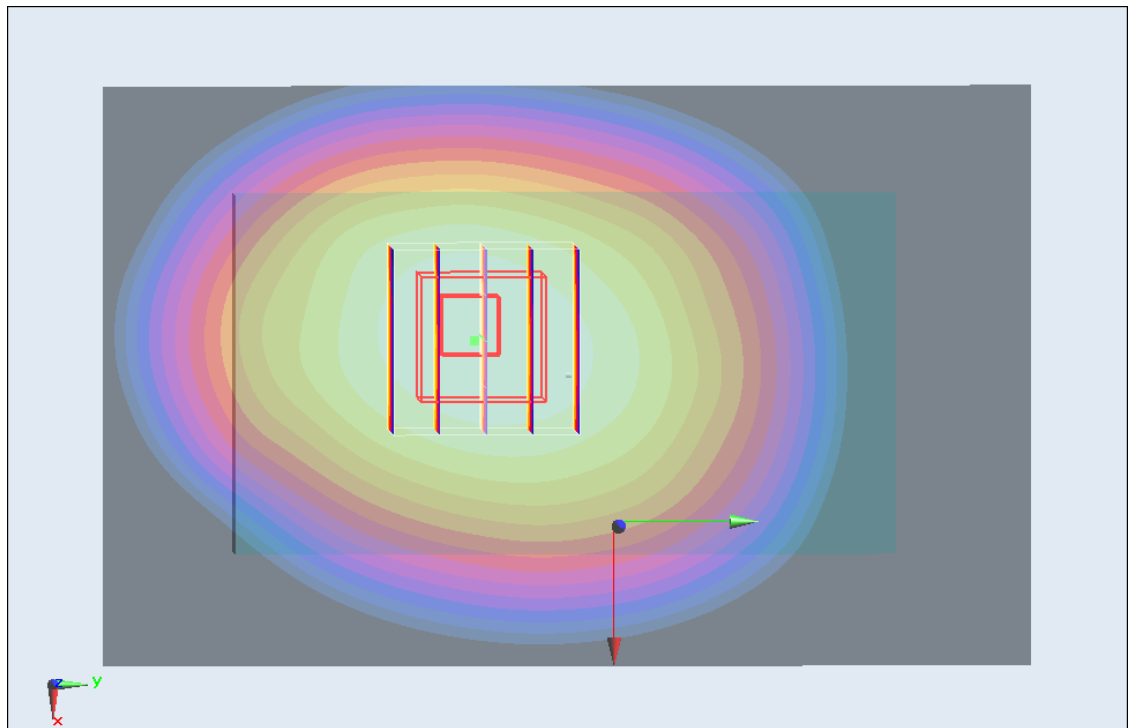
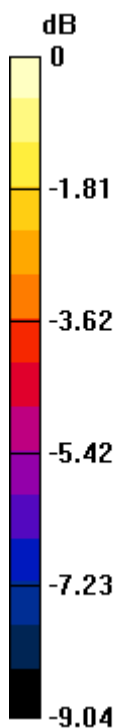
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.949 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.104 mW/g

SAR(1 g) = 0.866 mW/g; SAR(10 g) = 0.650 mW/g

Maximum value of SAR (measured) = 0.905 W/kg



0 dB = 0.905 W/kg = -0.87 dB W/kg

#58_GSM850_GPRS (1 Tx slots)_Front_1cm_Ch128**DUT: 290405**

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.952$ mho/m; $\epsilon_r = 54.662$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch128/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.765 W/kg

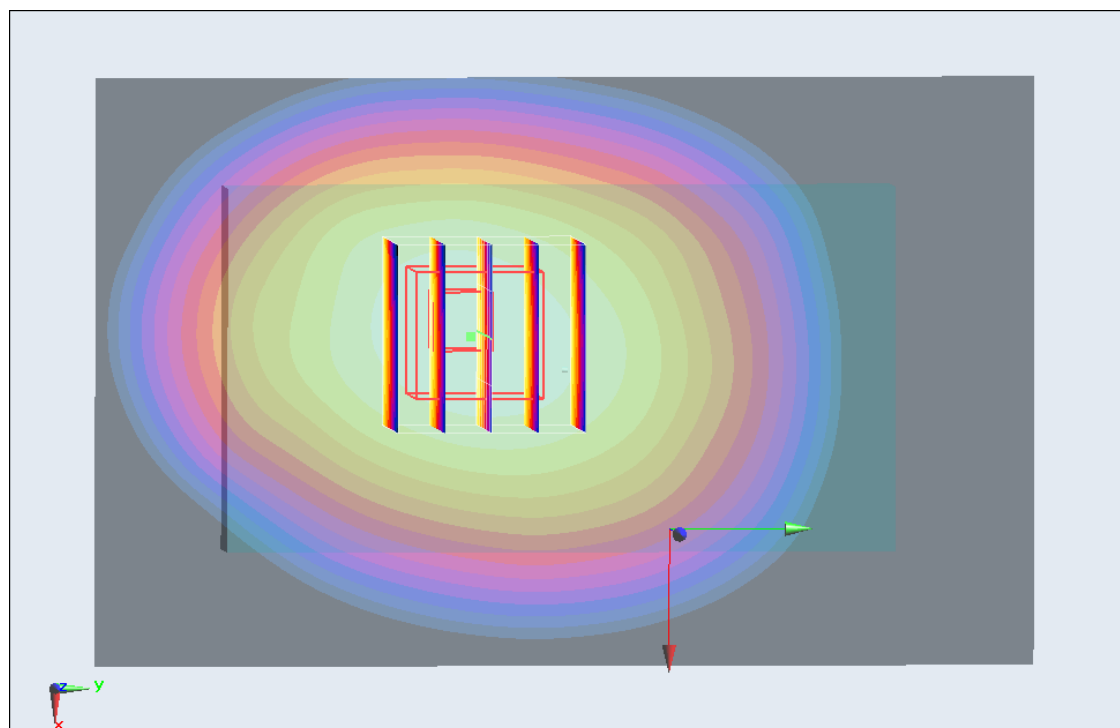
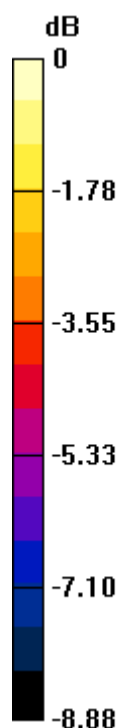
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.184 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.941 mW/g

SAR(1 g) = 0.728 mW/g; SAR(10 g) = 0.548 mW/g

Maximum value of SAR (measured) = 0.757 W/kg



0 dB = 0.757 W/kg = -2.42 dB W/kg

#59_GSM850_GPRS (1 Tx slots)_Front_1cm_Ch251**DUT: 290405**

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used: $f = 849$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.414$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch251/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (interpolated) = 0.929 W/kg

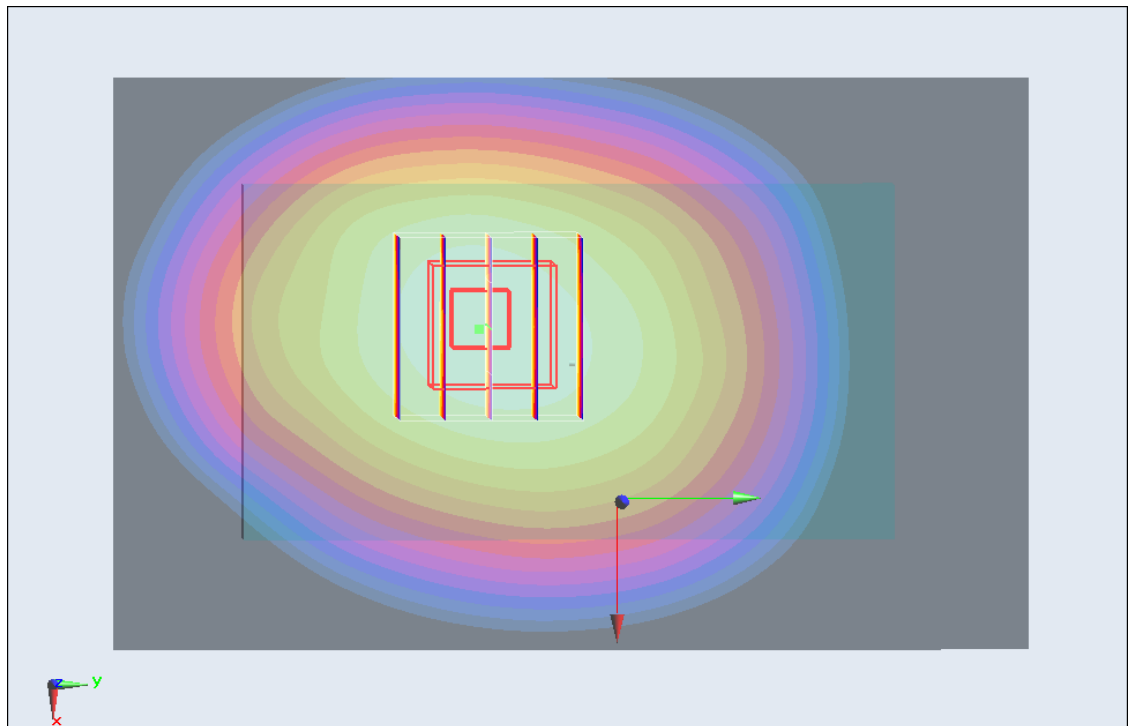
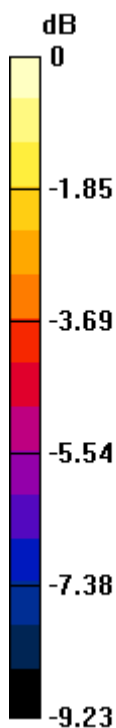
Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 28.904 V/m ; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.141 mW/g

SAR(1 g) = 0.884 mW/g ; SAR(10 g) = 0.663 mW/g

Maximum value of SAR (measured) = 0.926 W/kg



0 dB = 0.926 W/kg = -0.67 dB W/kg

#54_GSM850_GPRS (1 Tx slots)_Back_1cm_Ch189**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.39 W/kg

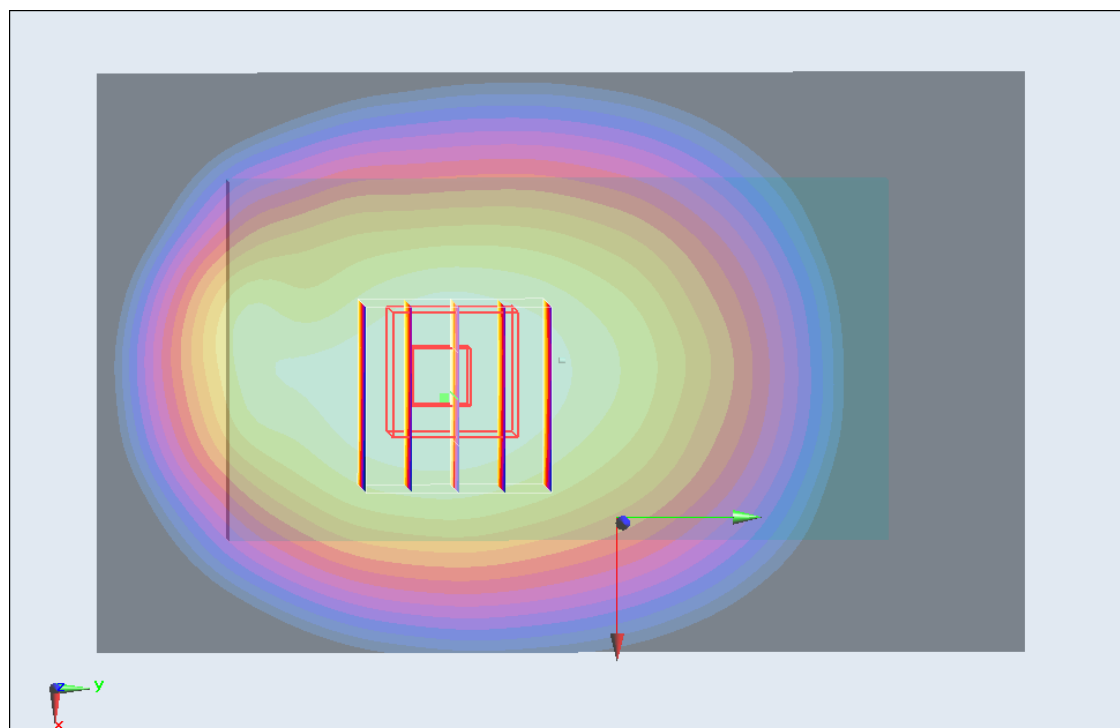
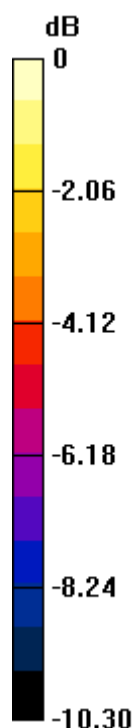
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 33.985 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.663 mW/g

SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.898 mW/g

Maximum value of SAR (measured) = 1.29 W/kg



0 dB = 1.29 W/kg = 2.21 dB W/kg

#54_GSM850_GPRS (1 Tx slots)_Back_1cm_Ch189_2D**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C ; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.39 W/kg

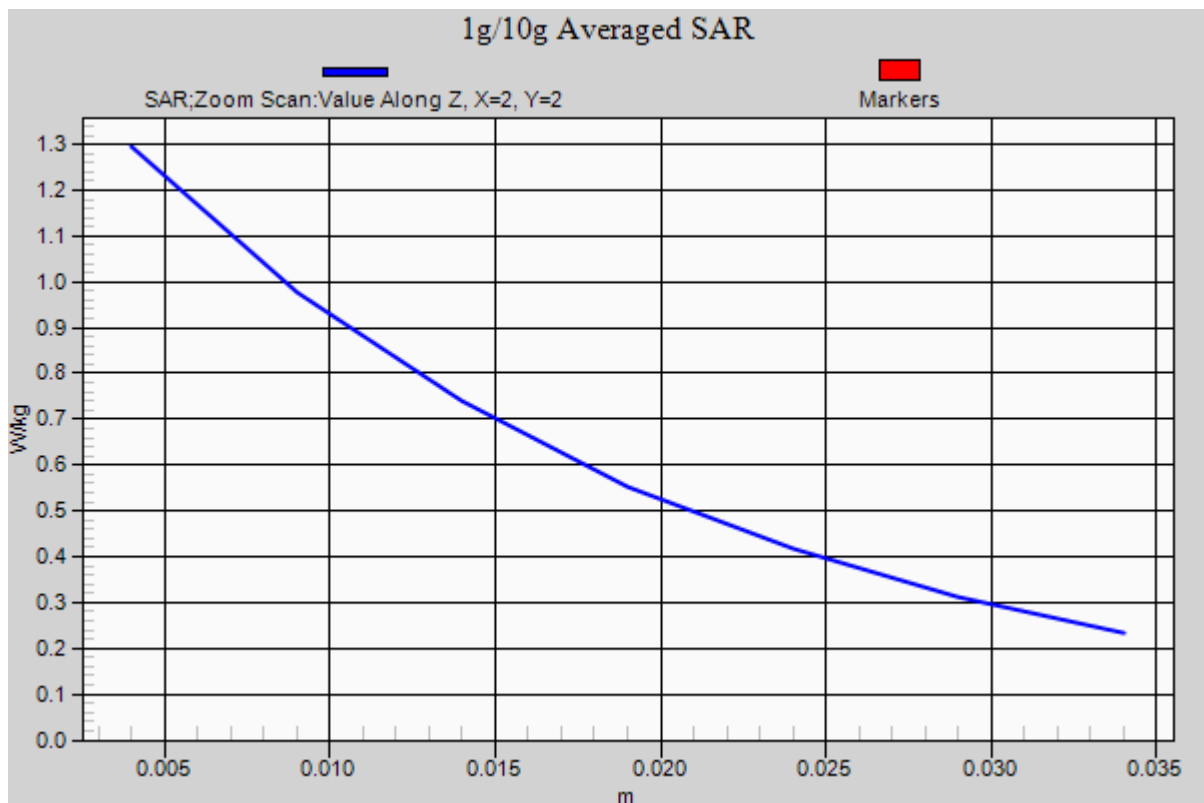
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 33.985 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.663 mW/g

SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.898 mW/g

Maximum value of SAR (measured) = 1.29 W/kg



#60_GSM850_GPRS (1 Tx slots)_Back_1cm_Ch128**DUT: 290405**

Communication System: GSM850; Frequency: 824.2 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used : $f = 824.2$ MHz; $\sigma = 0.952$ mho/m; $\epsilon_r = 54.662$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch128/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.26 W/kg

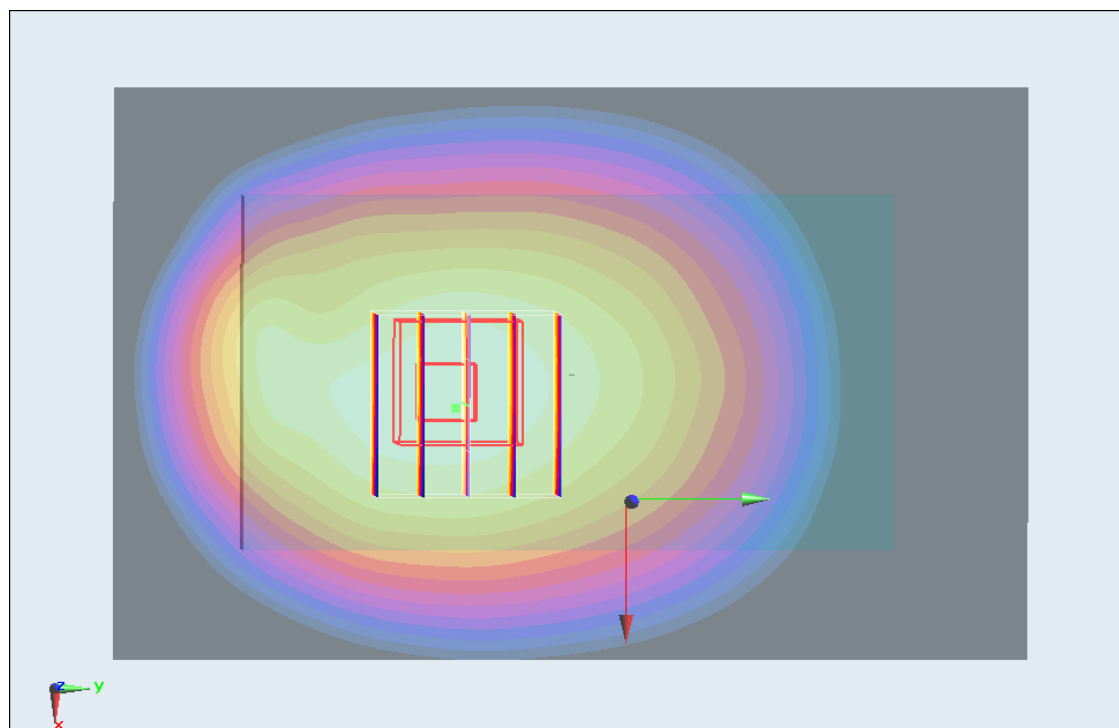
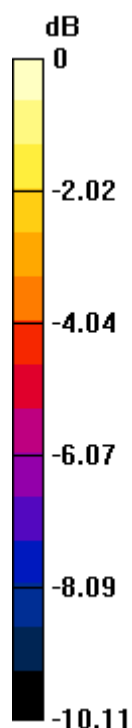
Ch128/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 32.298 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.613 mW/g

SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.866 mW/g

Maximum value of SAR (measured) = 1.25 W/kg



0 dB = 1.25 W/kg = 1.94 dB W/kg

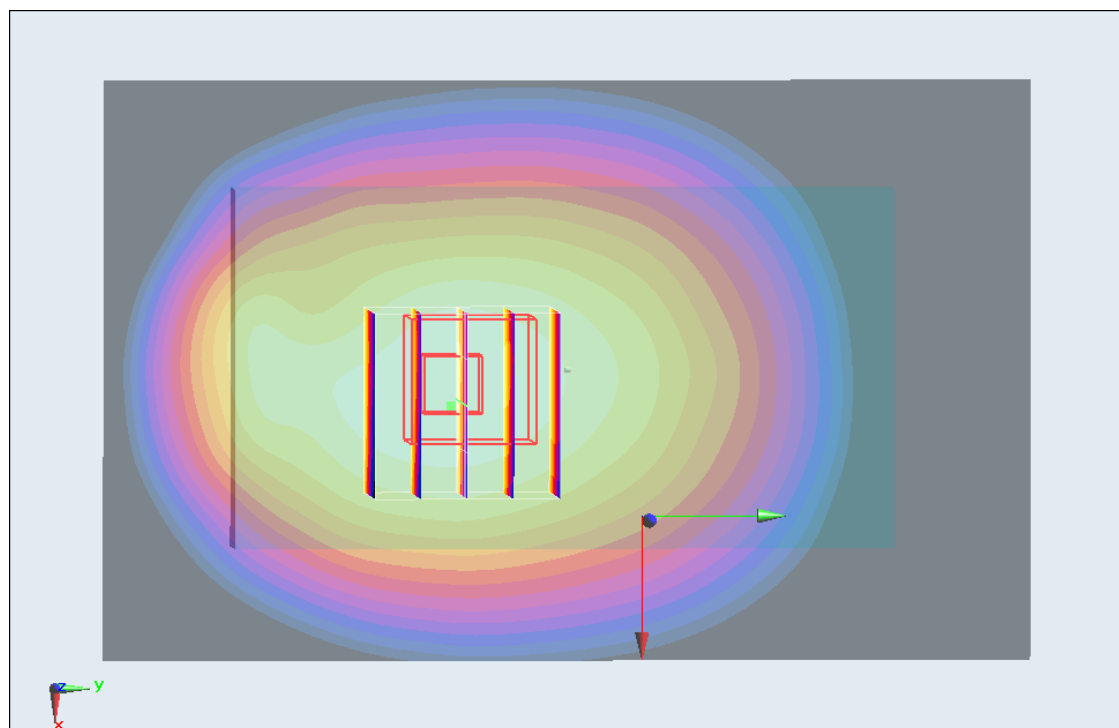
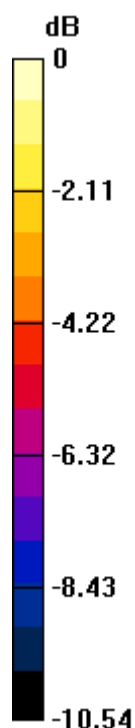
#61_GSM850_GPRS (1 Tx slots)_Back_1cm_Ch251**DUT: 290405**

Communication System: GSM850; Frequency: 848.8 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used: $f = 849$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.414$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch251/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mmMaximum value of SAR (interpolated) = 1.18 W/kg **Ch251/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mmReference Value = 31.366 V/m ; Power Drift = -0.04 dB Peak SAR (extrapolated) = 1.449 mW/g **SAR(1 g) = 1.1 mW/g ; SAR(10 g) = 0.802 mW/g** Maximum value of SAR (measured) = 1.15 W/kg  $0 \text{ dB} = 1.15 \text{ W/kg} = 1.21 \text{ dB W/kg}$

#55_GSM850_GPRS (1 Tx slots)_Left Side_1cm_Ch189**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (31x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.705 W/kg

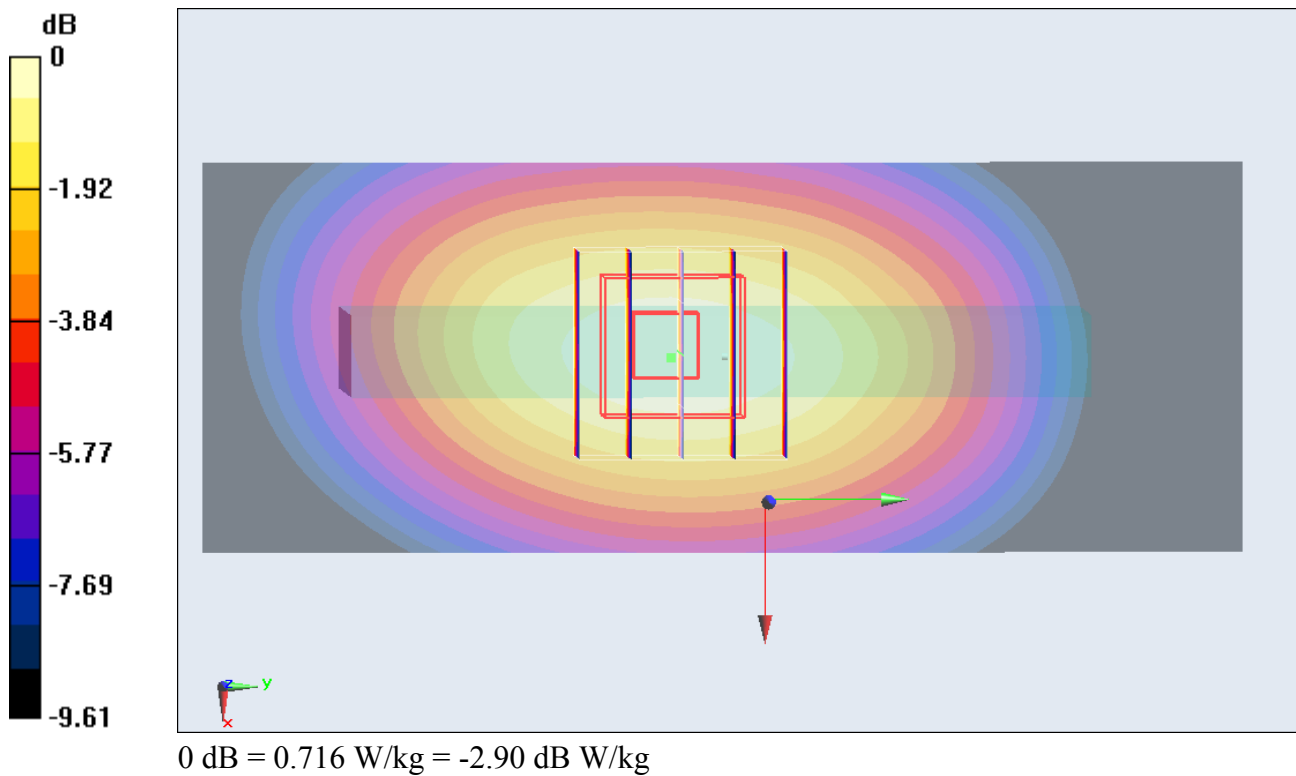
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.867 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.947 mW/g

SAR(1 g) = 0.668 mW/g; SAR(10 g) = 0.461 mW/g

Maximum value of SAR (measured) = 0.716 W/kg



#56_GSM850_GPRS (1 Tx slots)_Right Side_1cm_Ch189**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (31x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.767 W/kg

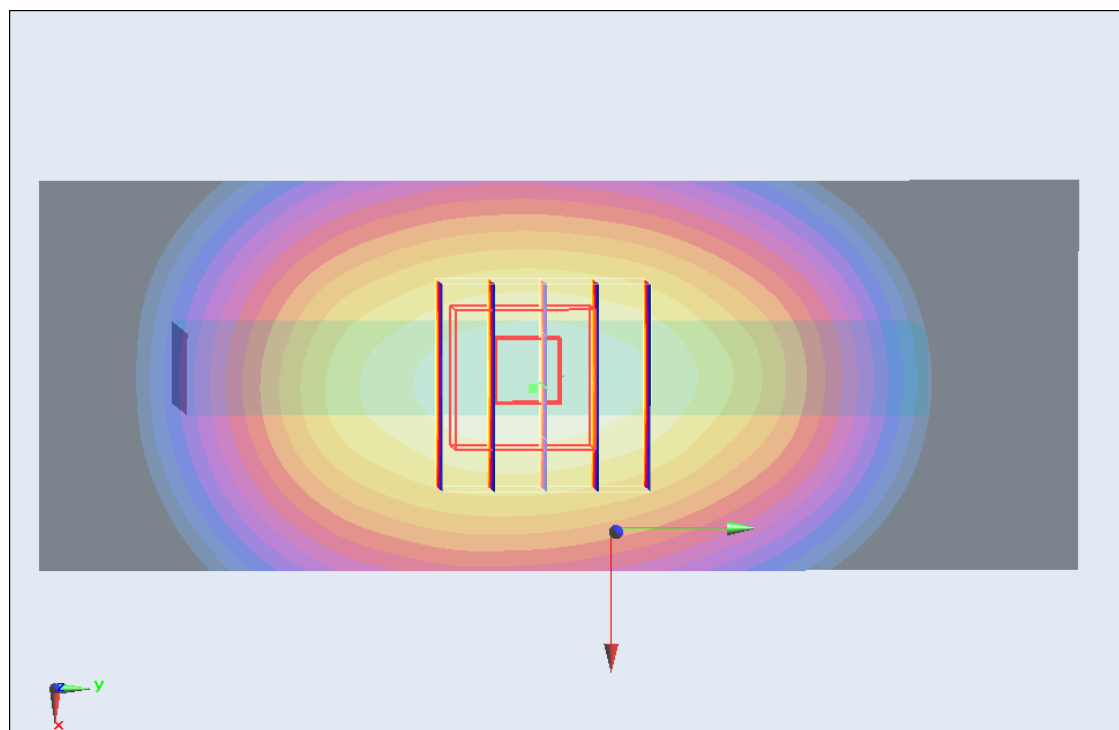
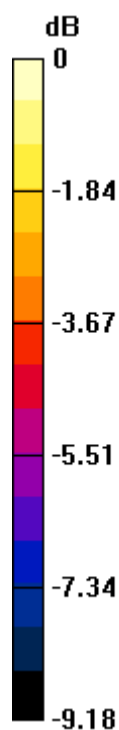
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.385 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.031 mW/g

SAR(1 g) = 0.737 mW/g; SAR(10 g) = 0.517 mW/g

Maximum value of SAR (measured) = 0.782 W/kg



0 dB = 0.782 W/kg = -2.14 dB W/kg

#57_GSM850_GPRS (1 Tx slots)_Bottom Side_1cm_Ch189**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (31x61x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.184 W/kg

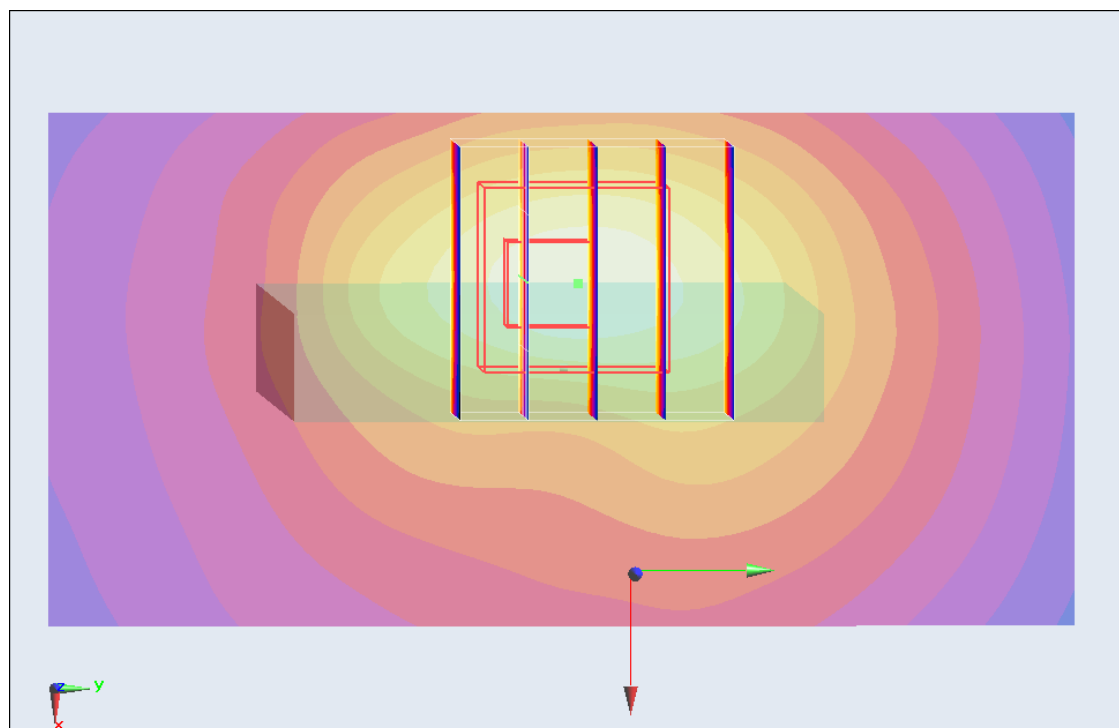
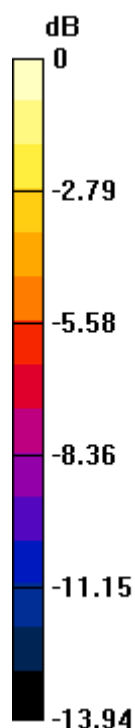
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.505 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.292 mW/g

SAR(1 g) = 0.174 mW/g; SAR(10 g) = 0.104 mW/g

Maximum value of SAR (measured) = 0.188 W/kg



0 dB = 0.188 W/kg = -14.52 dB W/kg

#62_GSM850_GSM Voice_Front_1.5cm_Ch189;Headset**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.434 W/kg

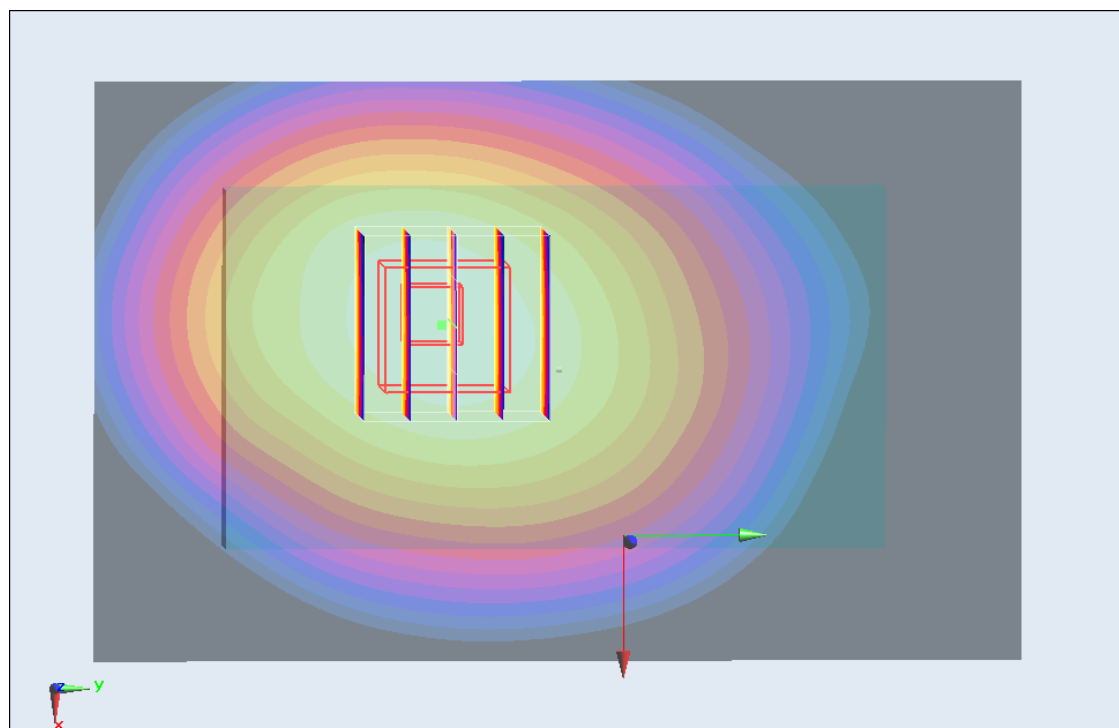
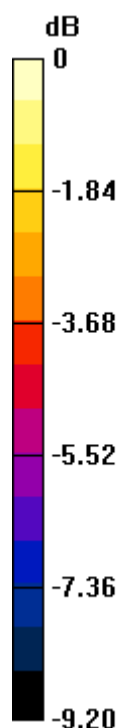
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.736 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.543 mW/g

SAR(1 g) = 0.414 mW/g; SAR(10 g) = 0.305 mW/g

Maximum value of SAR (measured) = 0.434 W/kg



0 dB = 0.434 W/kg = -7.25 dB W/kg

#63_GSM850_GSM Voice_Back_1.5cm_Ch189;Headset**DUT: 290405**

Communication System: GSM850; Frequency: 836.4 MHz; Duty Cycle: 1:8.3

Medium: MSL_850_121030 Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch189/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.701 W/kg

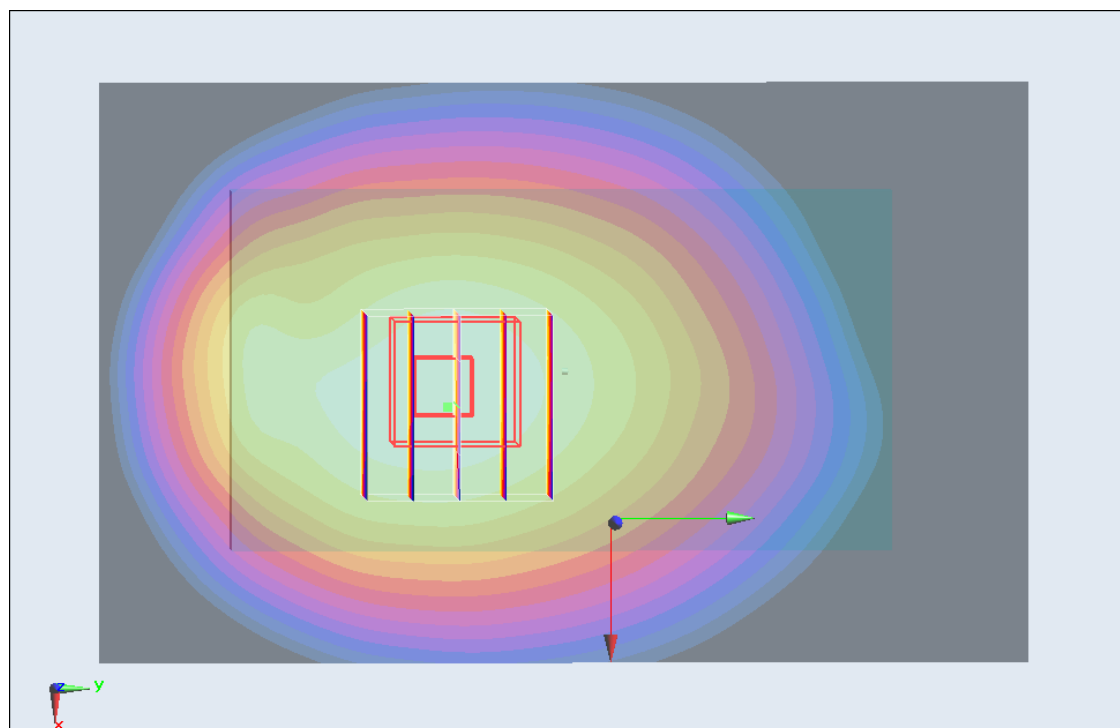
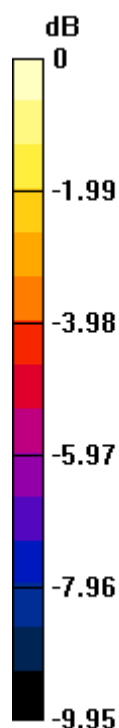
Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.017 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.882 mW/g

SAR(1 g) = 0.662 mW/g; SAR(10 g) = 0.479 mW/g

Maximum value of SAR (measured) = 0.695 W/kg



0 dB = 0.695 W/kg = -3.16 dB W/kg

#44_GSM1900_GPRS (4 Tx slots)_Front_1cm_Ch810**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:2

Medium: MSL_1900_121030 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.557$ mho/m; $\epsilon_r = 53.214$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.685 W/kg

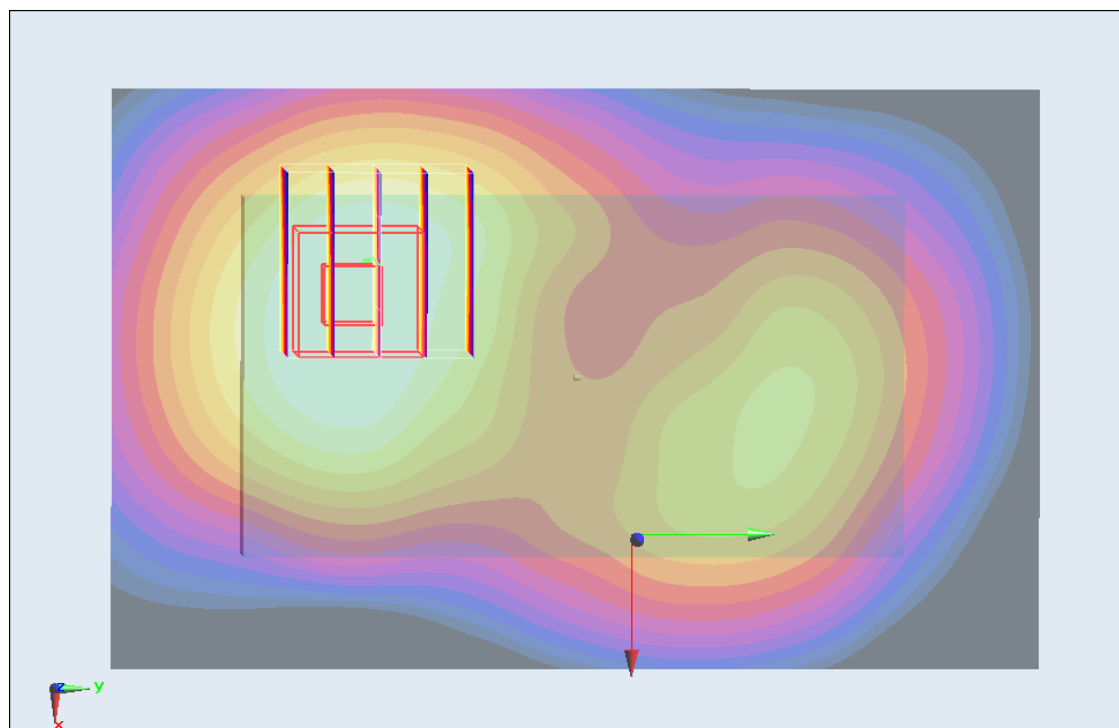
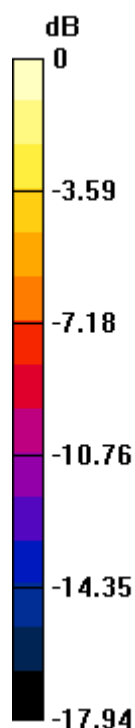
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.583 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.984 mW/g

SAR(1 g) = 0.598 mW/g; SAR(10 g) = 0.365 mW/g

Maximum value of SAR (measured) = 0.628 W/kg



0 dB = 0.628 W/kg = -4.04 dB W/kg

#45_GSM1900_GPRS (4 Tx slots)_Back_1cm_Ch810**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:2

Medium: MSL_1900_121030 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.557$ mho/m; $\epsilon_r = 53.214$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.965 W/kg

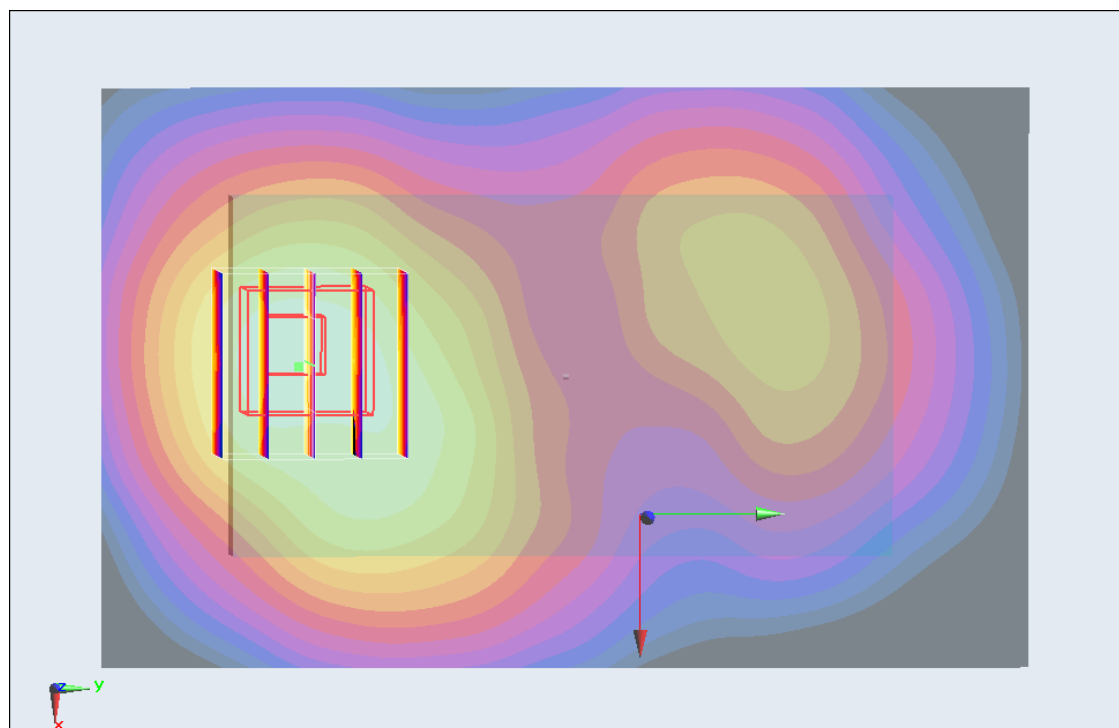
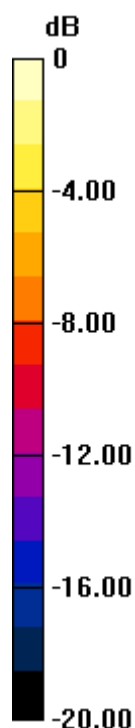
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.785 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.492 mW/g

SAR(1 g) = 0.899 mW/g; SAR(10 g) = 0.510 mW/g

Maximum value of SAR (measured) = 0.972 W/kg



0 dB = 0.972 W/kg = -0.25 dB W/kg

#45_GSM1900_GPRS (4 Tx slots)_Back_1cm_Ch810_2D**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:2

Medium: MSL_1900_121030 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.557$ mho/m; $\epsilon_r = 53.214$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.965 W/kg

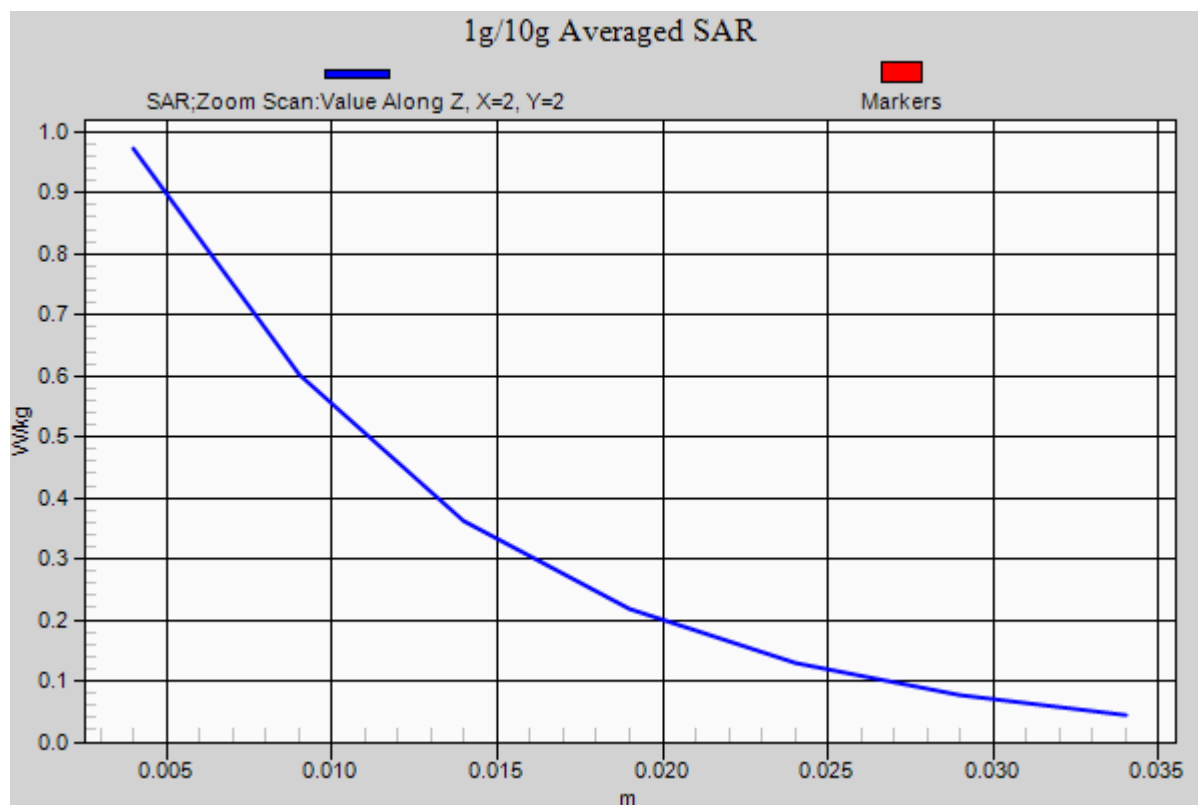
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.785 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.492 mW/g

SAR(1 g) = 0.899 mW/g; SAR(10 g) = 0.510 mW/g

Maximum value of SAR (measured) = 0.972 W/kg



#49_GSM1900_GPRS (4 Tx slots)_Back_1cm_Ch512**DUT: 290405**

Communication System: PCS; Frequency: 1850.2 MHz; Duty Cycle: 1:2

Medium: MSL_1900_121030 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.488$ mho/m; $\epsilon_r = 53.41$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch512/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.924 W/kg

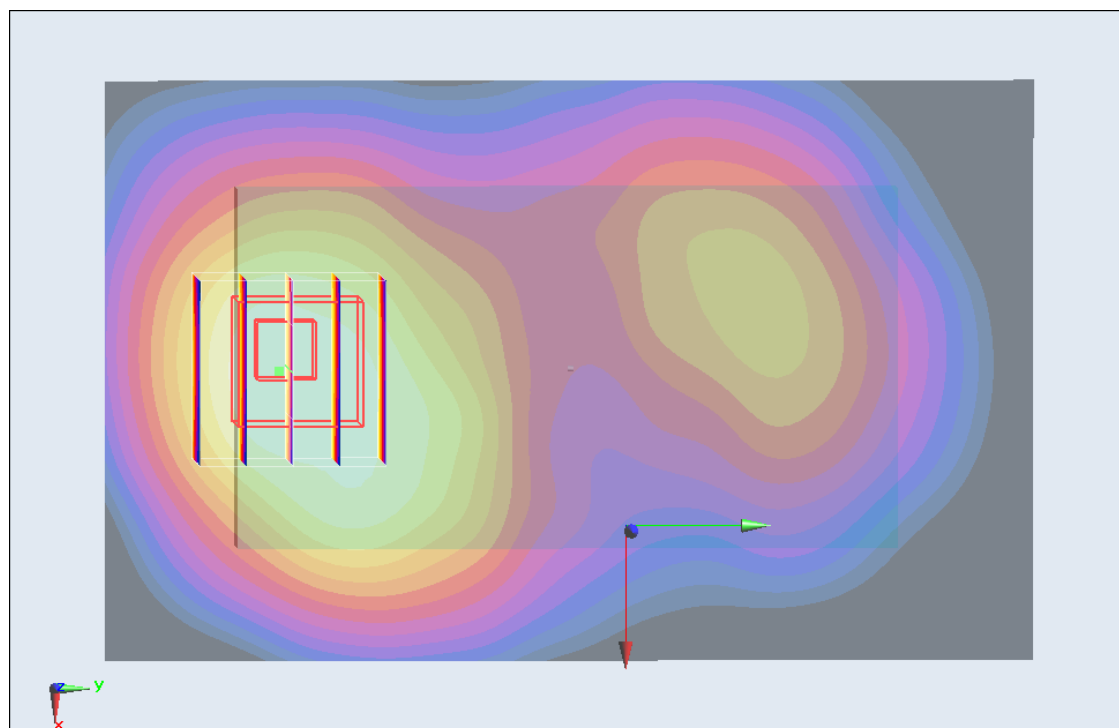
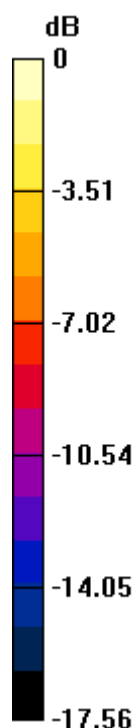
Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.727 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.319 mW/g

SAR(1 g) = 0.805 mW/g; SAR(10 g) = 0.469 mW/g

Maximum value of SAR (measured) = 0.874 W/kg



0 dB = 0.874 W/kg = -1.17 dB W/kg

#50_GSM1900_GPRS (4 Tx slots)_Back_1cm_Ch661**DUT: 290405**

Communication System: PCS; Frequency: 1880 MHz; Duty Cycle: 1:2

Medium: MSL_1900_121030 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 53.341$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch661/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.00 W/kg

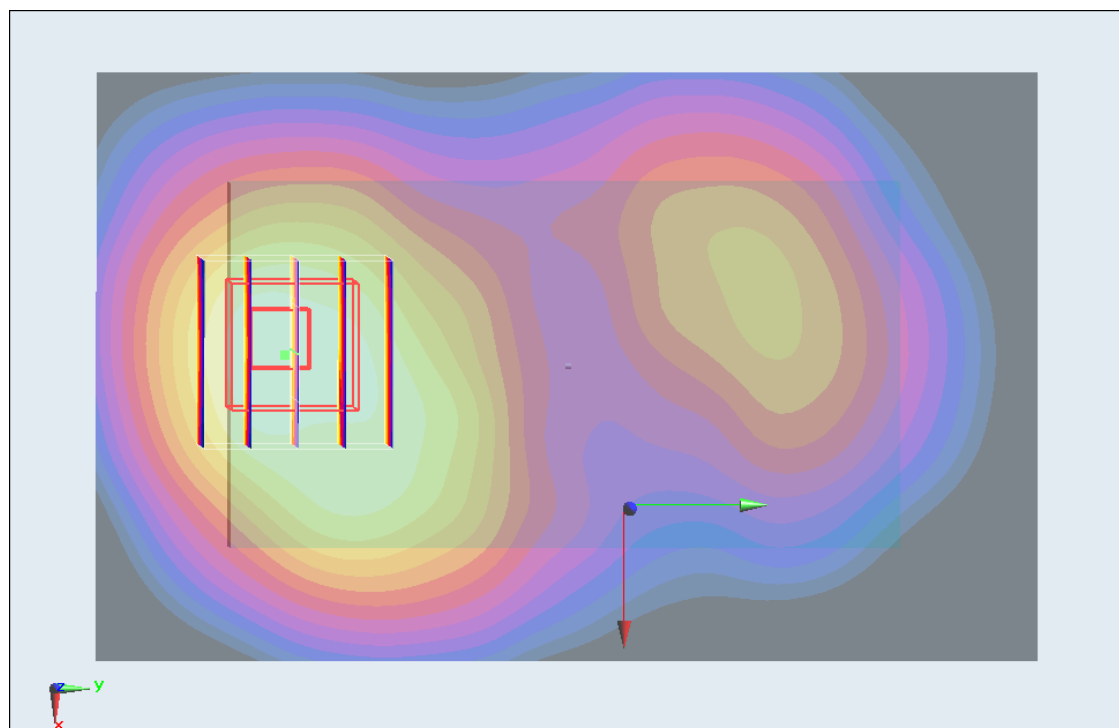
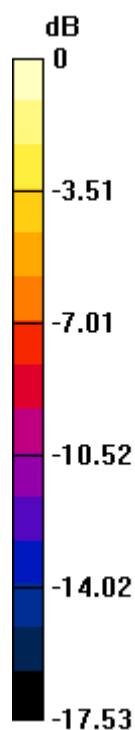
Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.490 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.439 mW/g

SAR(1 g) = 0.882 mW/g; SAR(10 g) = 0.496 mW/g

Maximum value of SAR (measured) = 0.958 W/kg



0 dB = 0.958 W/kg = -0.37 dB W/kg

#46_GSM1900_GPRS (4 Tx slots)_Left Side_1cm_Ch810**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:2

Medium: MSL_1900_121030 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.557$ mho/m; $\epsilon_r = 53.214$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (31x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.275 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.144 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.419 mW/g

SAR(1 g) = 0.242 mW/g; SAR(10 g) = 0.135 mW/g

Maximum value of SAR (measured) = 0.265 W/kg

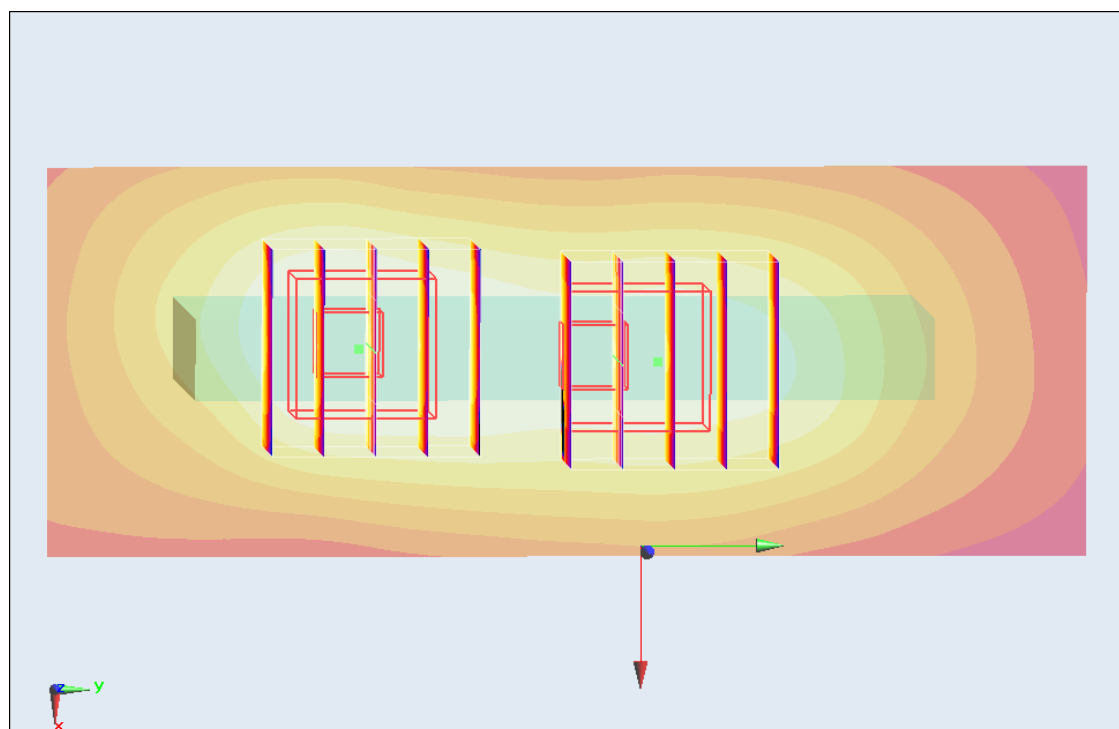
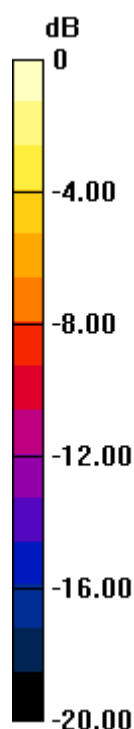
Ch810/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.144 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.468 mW/g

SAR(1 g) = 0.178 mW/g; SAR(10 g) = 0.104 mW/g

Maximum value of SAR (measured) = 0.189 W/kg



0 dB = 0.189 W/kg = -14.47 dB W/kg

For any 2nd peak found in area scan within 2 dB of the maximum peak

and greater than 0.012W/kg, and is not within the zoom scan, zoom scan is repeated.

#47_GSM1900_GPRS (4 Tx slots)_Right Side_1cm_Ch810**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:2

Medium: MSL_1900_121030 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.557$ mho/m; $\epsilon_r = 53.214$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (31x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.175 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.914 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.273 mW/g

SAR(1 g) = 0.161 mW/g; SAR(10 g) = 0.091 mW/g

Maximum value of SAR (measured) = 0.176 W/kg

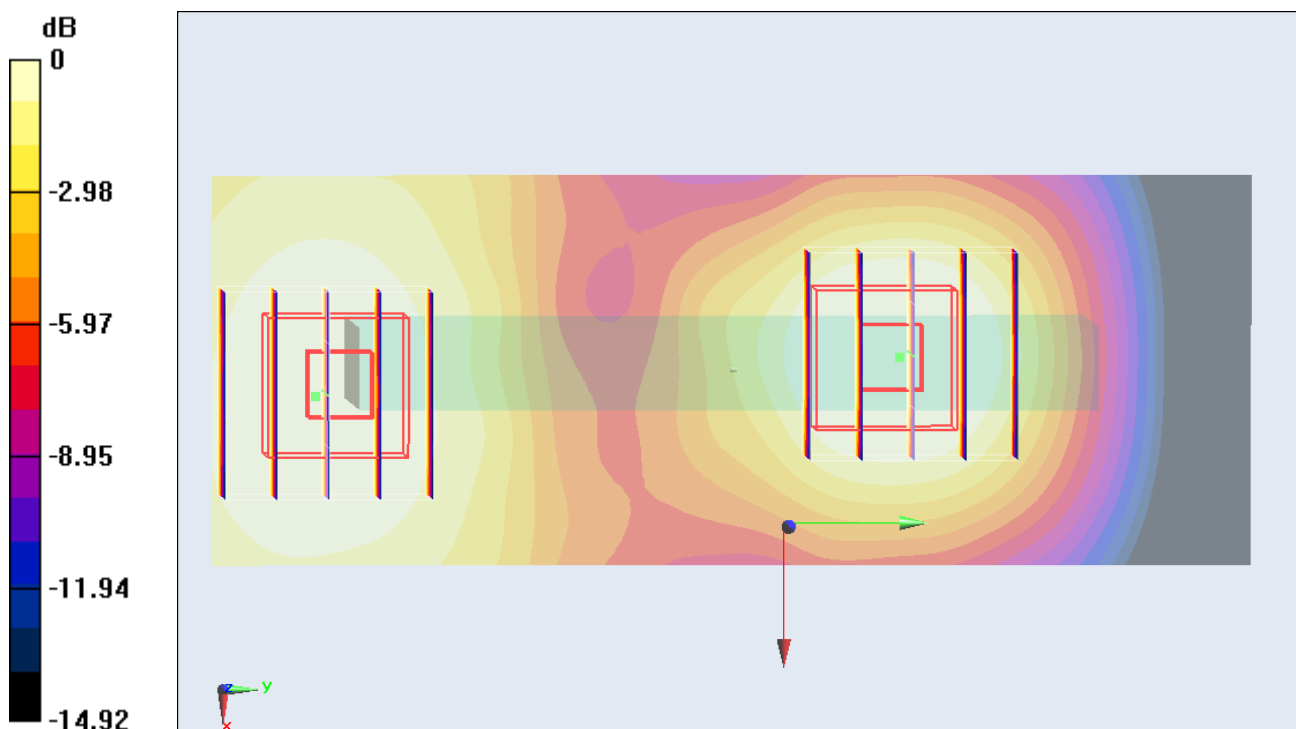
Ch810/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.914 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.243 mW/g

SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.072 mW/g

Maximum value of SAR (measured) = 0.122 W/kg



0 dB = 0.122 W/kg = -18.27 dB W/kg

For any 2nd peak found in area scan within 2 dB of the maximum peak

and greater than 0.012W/kg, and is not within the zoom scan, zoom scan is repeated.

#48_GSM1900_GPRS (4 Tx slots)_Bottom Side_1cm_Ch810**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:2

Medium: MSL_1900_121030 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.557$ mho/m; $\epsilon_r = 53.214$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (31x61x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.759 W/kg

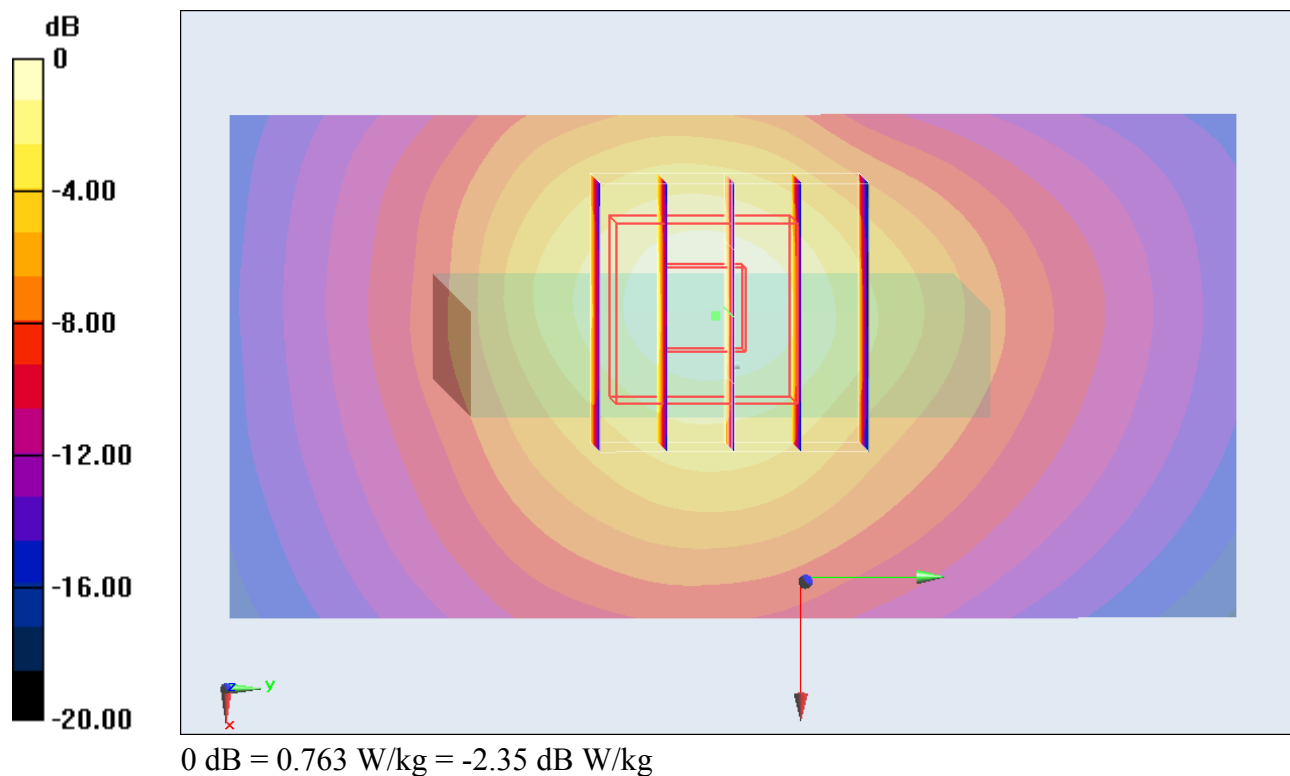
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.282 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.233 mW/g

SAR(1 g) = 0.693 mW/g; SAR(10 g) = 0.374 mW/g

Maximum value of SAR (measured) = 0.763 W/kg



#51_GSM1900_DTM Multi-slot class 5_Front_1.5cm_Ch810;Headset**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium: MSL_1900_121030 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.557$ mho/m; $\epsilon_r = 53.214$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.432 W/kg

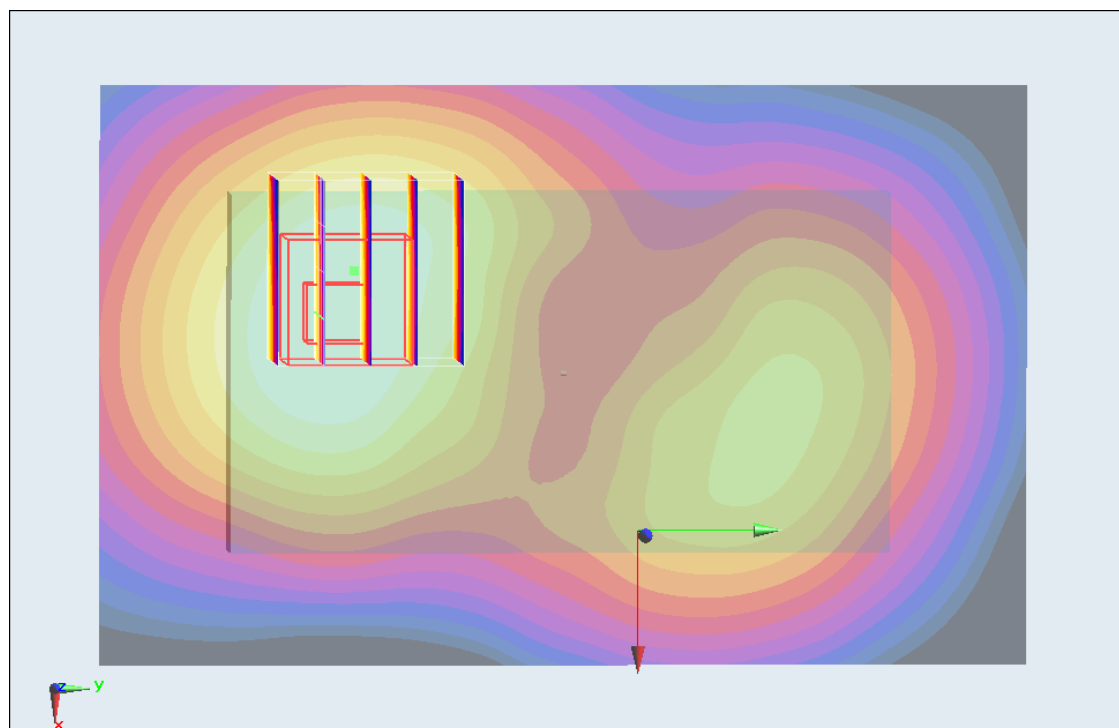
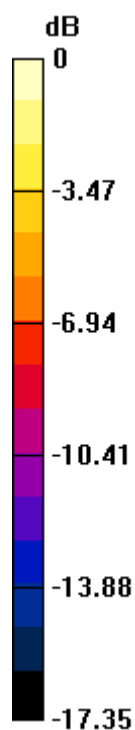
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.819 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.647 mW/g

SAR(1 g) = 0.393 mW/g; SAR(10 g) = 0.240 mW/g

Maximum value of SAR (measured) = 0.416 W/kg



0 dB = 0.416 W/kg = -7.62 dB W/kg

#52_GSM1900_DTM Multi-slot class 5_Back_1.5cm_Ch810;Headset**DUT: 290405**

Communication System: PCS; Frequency: 1909.8 MHz; Duty Cycle: 1:4

Medium: MSL_1900_121030 Medium parameters used: $f = 1910$ MHz; $\sigma = 1.557$ mho/m; $\epsilon_r = 53.214$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch810/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.592 W/kg

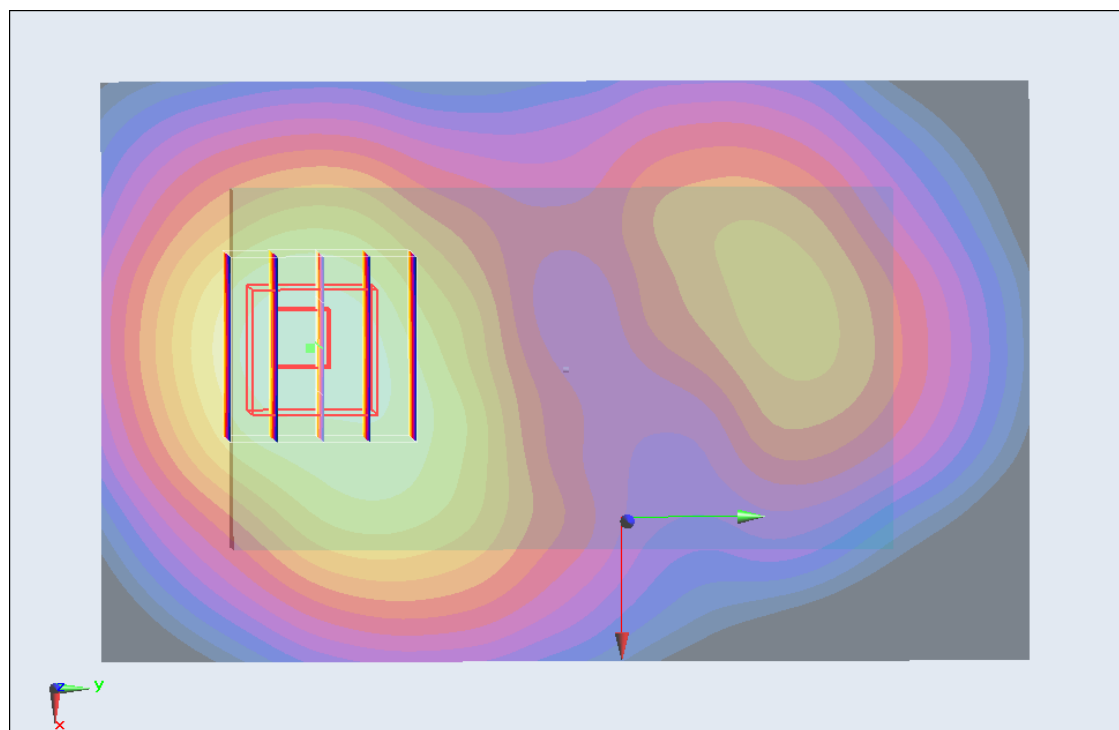
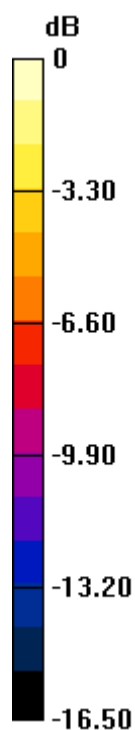
Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.632 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.907 mW/g

SAR(1 g) = 0.547 mW/g; SAR(10 g) = 0.320 mW/g

Maximum value of SAR (measured) = 0.589 W/kg



0 dB = 0.589 W/kg = -4.60 dB W/kg

#64_WCDMA V_RMC12.2K_Front_1cm_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 54.432$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: $dx=20 \text{ mm}$, $dy=20 \text{ mm}$

Maximum value of SAR (interpolated) = 1.00 W/kg

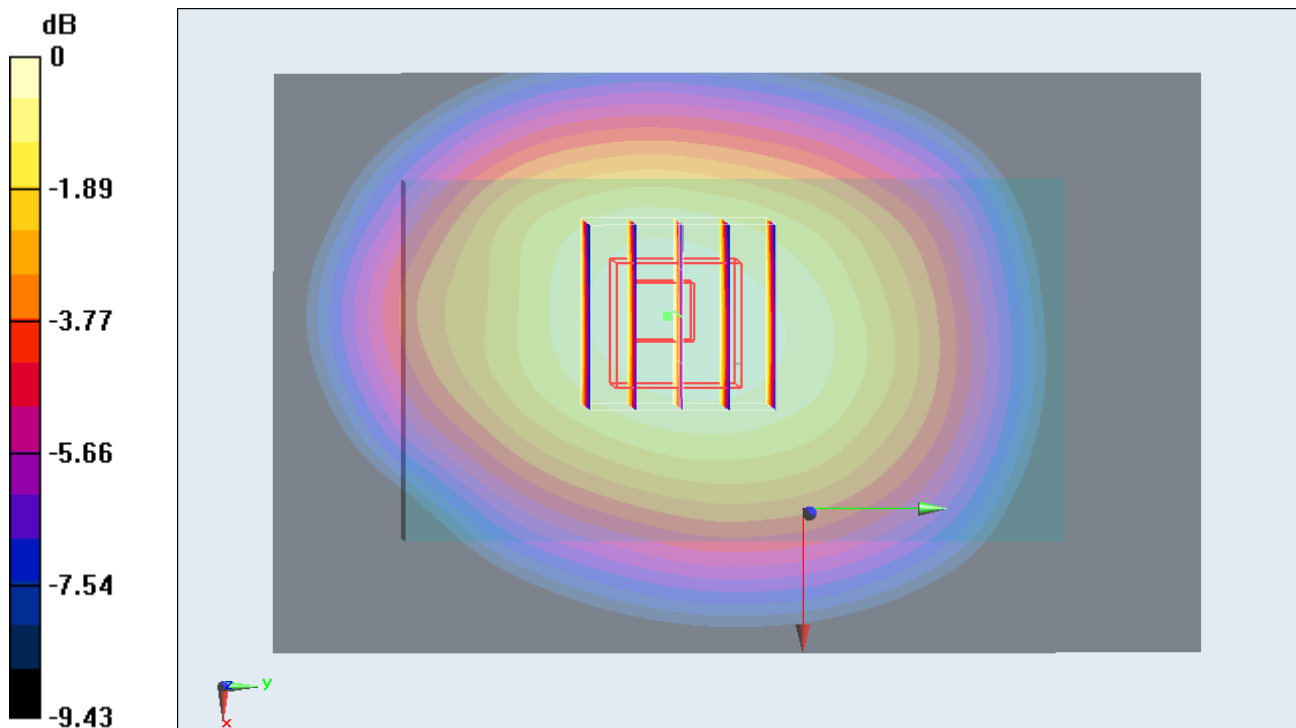
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 30.370 V/m ; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 1.253 mW/g

SAR(1 g) = 0.970 mW/g ; SAR(10 g) = 0.725 mW/g

Maximum value of SAR (measured) = 1.02 W/kg



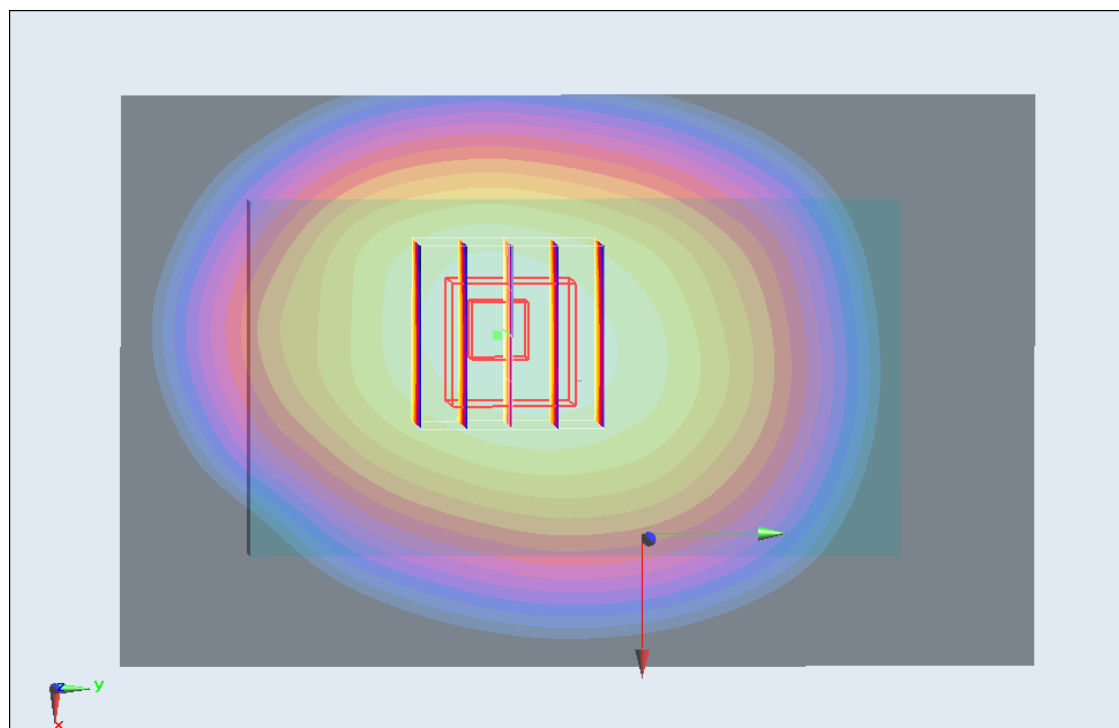
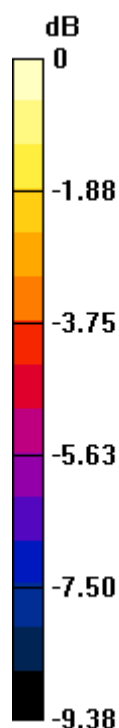
#69_WCDMA V_RMC12.2K_Front_1cm_Ch4132**DUT: 290405**

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 54.63$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4132/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mmMaximum value of SAR (interpolated) = 0.844 W/kg **Ch4132/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mmReference Value = 28.623 V/m ; Power Drift = -0.08 dB Peak SAR (extrapolated) = 1.054 mW/g **SAR(1 g) = 0.809 mW/g ; SAR(10 g) = 0.608 mW/g** Maximum value of SAR (measured) = 0.851 W/kg  $0 \text{ dB} = 0.851 \text{ W/kg} = -1.40 \text{ dB W/kg}$

#70_WCDMA V_RMC12.2K_Front_1cm_Ch4182**DUT: 290405**

Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4182/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.897 W/kg

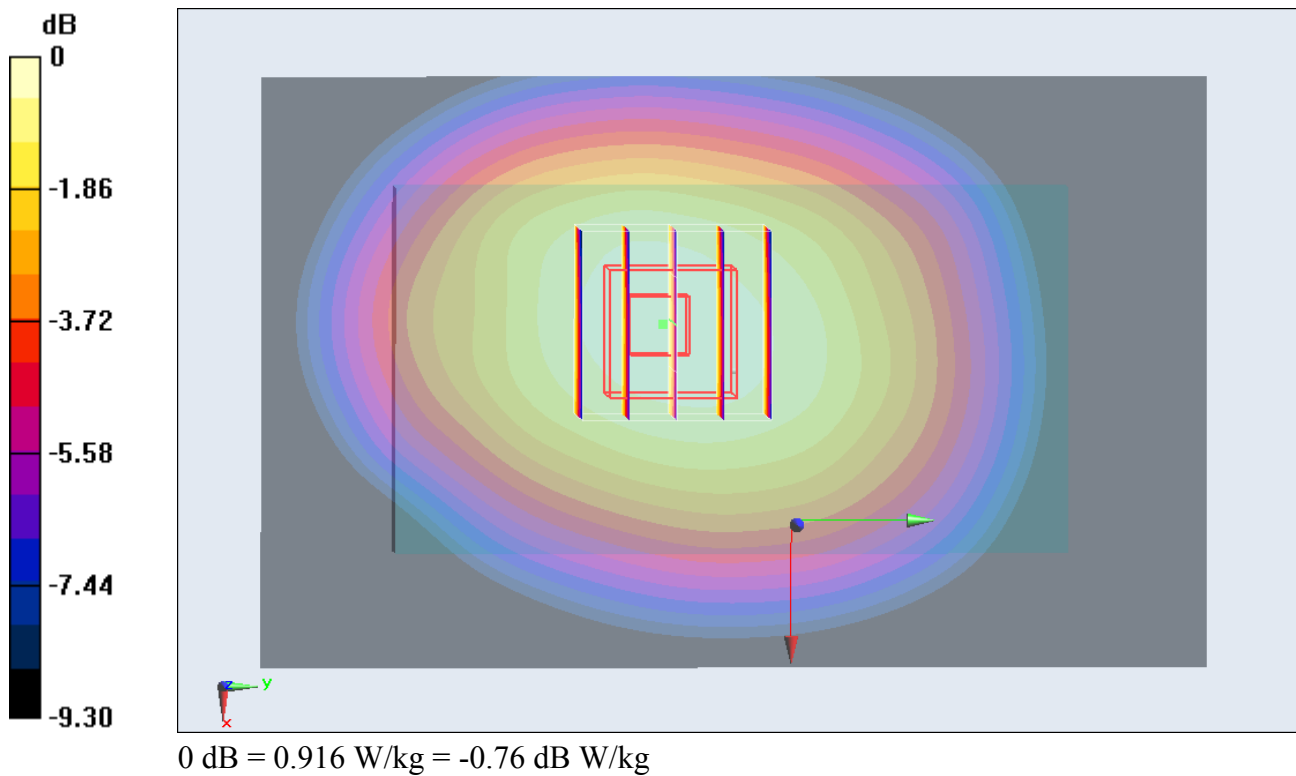
Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.140 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.126 mW/g

SAR(1 g) = 0.874 mW/g; SAR(10 g) = 0.654 mW/g

Maximum value of SAR (measured) = 0.916 W/kg



#65_WCDMA V_RMC12.2K_Back_1cm_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 54.432$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (interpolated) = 1.50 W/kg

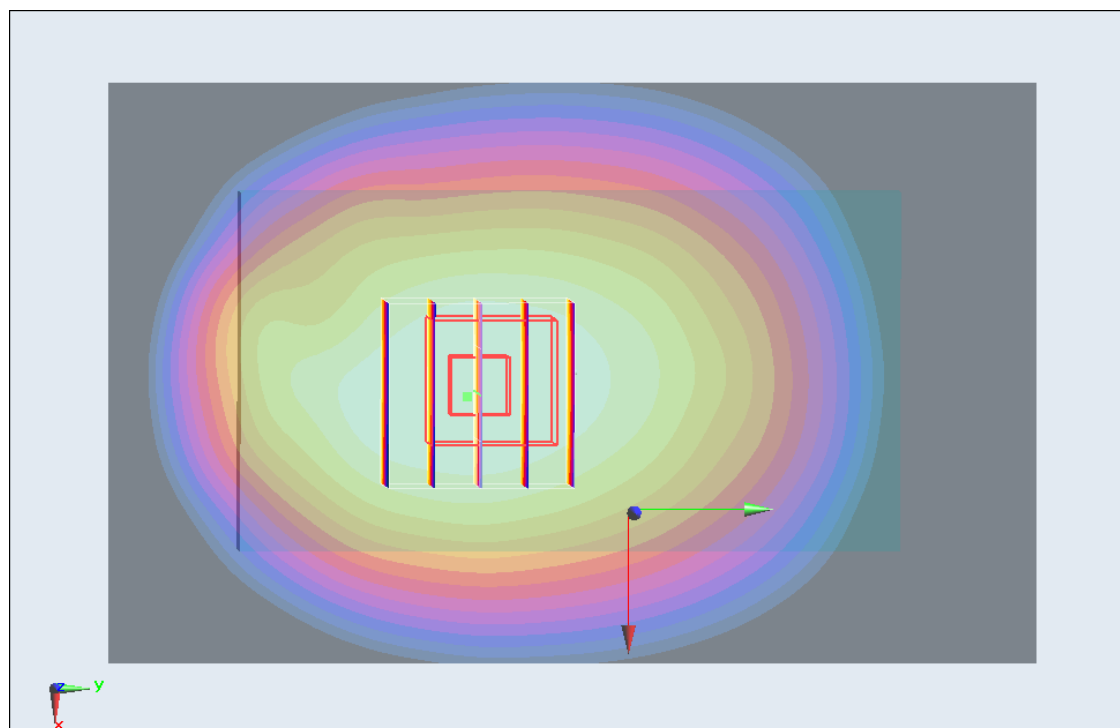
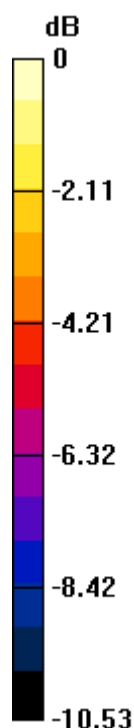
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 35.835 V/m ; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.763 mW/g

SAR(1 g) = 1.32 mW/g ; SAR(10 g) = 0.959 mW/g

Maximum value of SAR (measured) = 1.40 W/kg



0 dB = 1.40 W/kg = 2.92 dB W/kg

#65_WCDMA V_RMC12.2K_Back_1cm_Ch4233_2D**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 54.432$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: $dx=20 \text{ mm}$, $dy=20 \text{ mm}$

Maximum value of SAR (interpolated) = 1.50 W/kg

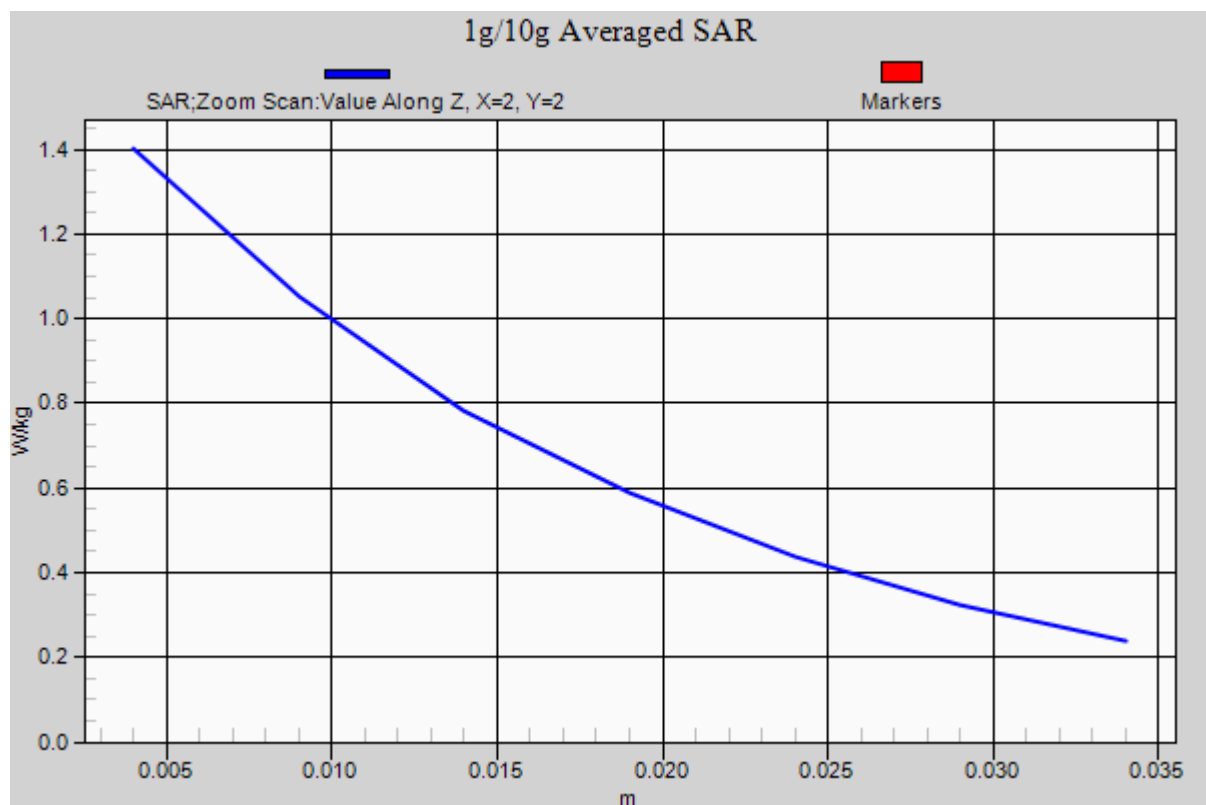
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 35.835 V/m ; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.763 mW/g

SAR(1 g) = 1.32 mW/g ; SAR(10 g) = 0.959 mW/g

Maximum value of SAR (measured) = 1.40 W/kg



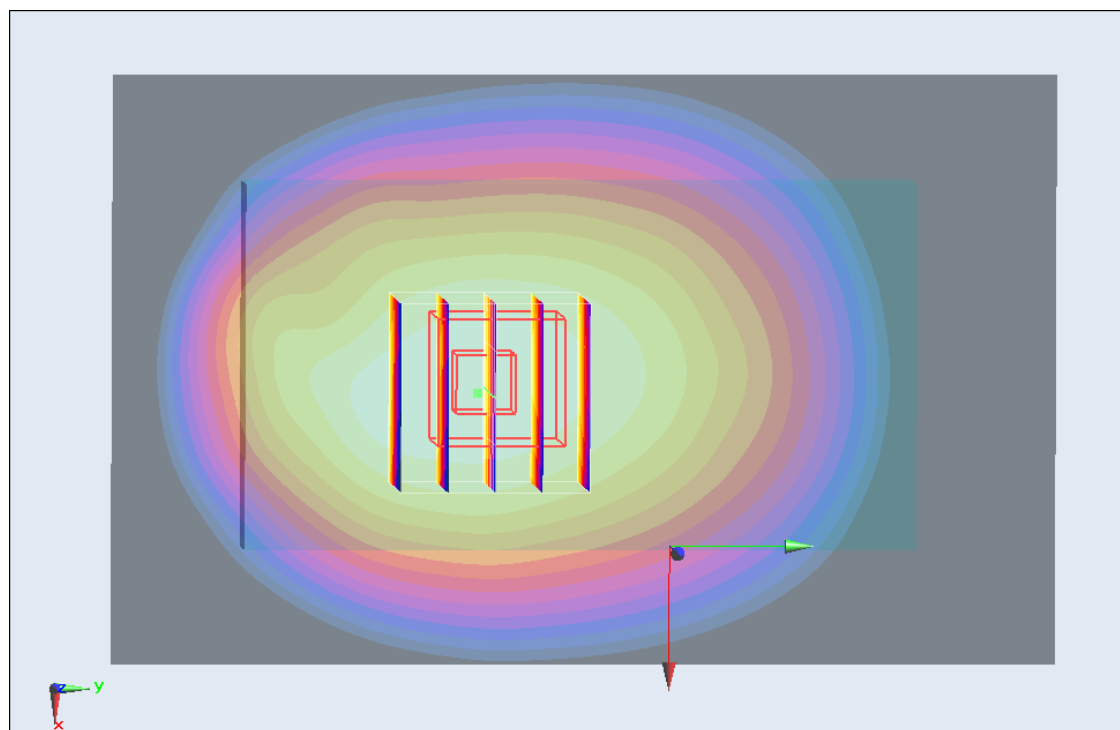
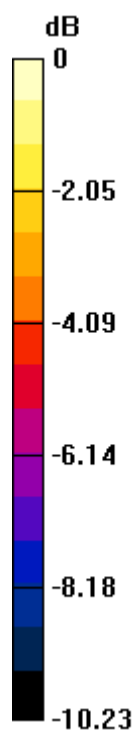
#71_WCDMA V_RMC12.2K_Back_1cm_Ch4132**DUT: 290405**

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 54.63$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4132/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mmMaximum value of SAR (interpolated) = 1.42 W/kg **Ch4132/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mmReference Value = 34.929 V/m ; Power Drift = 0.03 dB Peak SAR (extrapolated) = 1.745 mW/g **SAR(1 g) = 1.31 mW/g ; SAR(10 g) = 0.948 mW/g** Maximum value of SAR (measured) = 1.38 W/kg  $0 \text{ dB} = 1.38 \text{ W/kg} = 2.80 \text{ dB W/kg}$

#72_WCDMA V_RMC12.2K_Back_1cm_Ch4182**DUT: 290405**

Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4182/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.37 W/kg

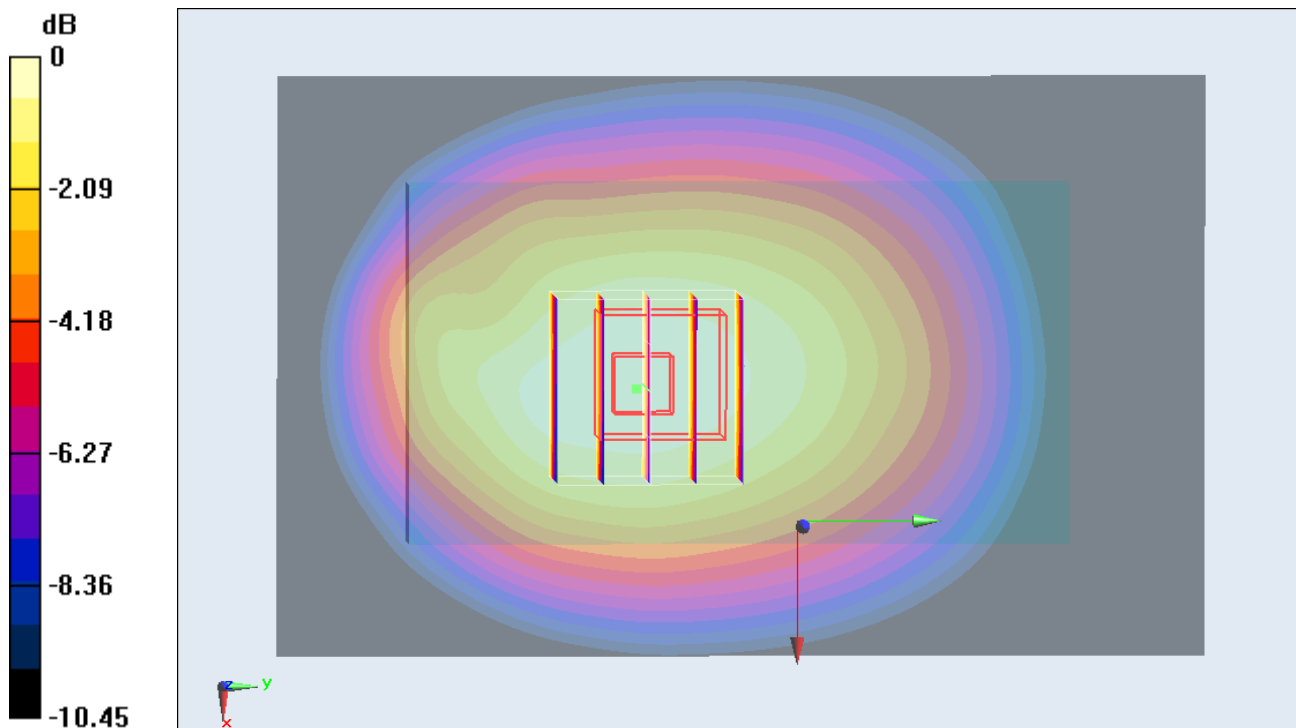
Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 34.648 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 1.712 mW/g

SAR(1 g) = 1.28 mW/g; SAR(10 g) = 0.927 mW/g

Maximum value of SAR (measured) = 1.36 W/kg



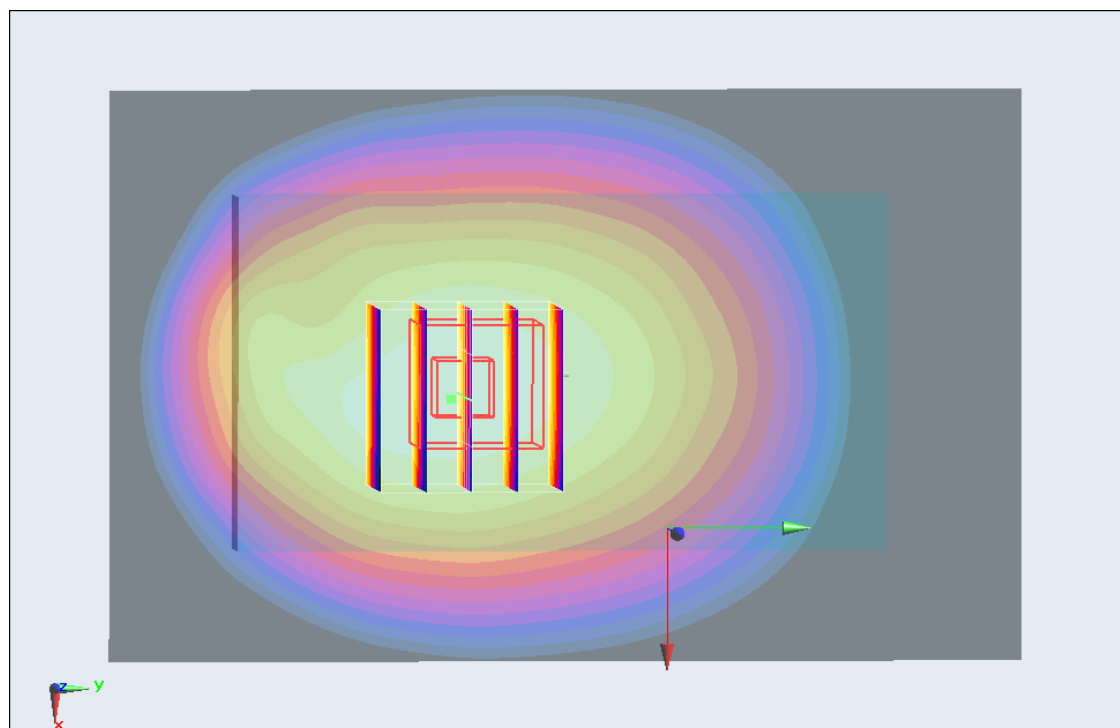
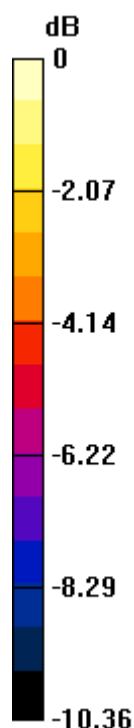
#73_WCDMA V_HSDPA_Back_1cm_Ch4132**DUT: 290405**

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 54.63$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4132/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mmMaximum value of SAR (interpolated) = 1.32 W/kg **Ch4132/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mmReference Value = 33.755 V/m ; Power Drift = 0.06 dB Peak SAR (extrapolated) = 1.664 mW/g **SAR(1 g) = 1.25 mW/g ; SAR(10 g) = 0.907 mW/g** Maximum value of SAR (measured) = 1.32 W/kg  $0 \text{ dB} = 1.32 \text{ W/kg} = 2.41 \text{ dB W/kg}$

#74_WCDMA V_HSDPA_Back_1cm_Ch4182**DUT: 290405**

Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4182/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.28 W/kg

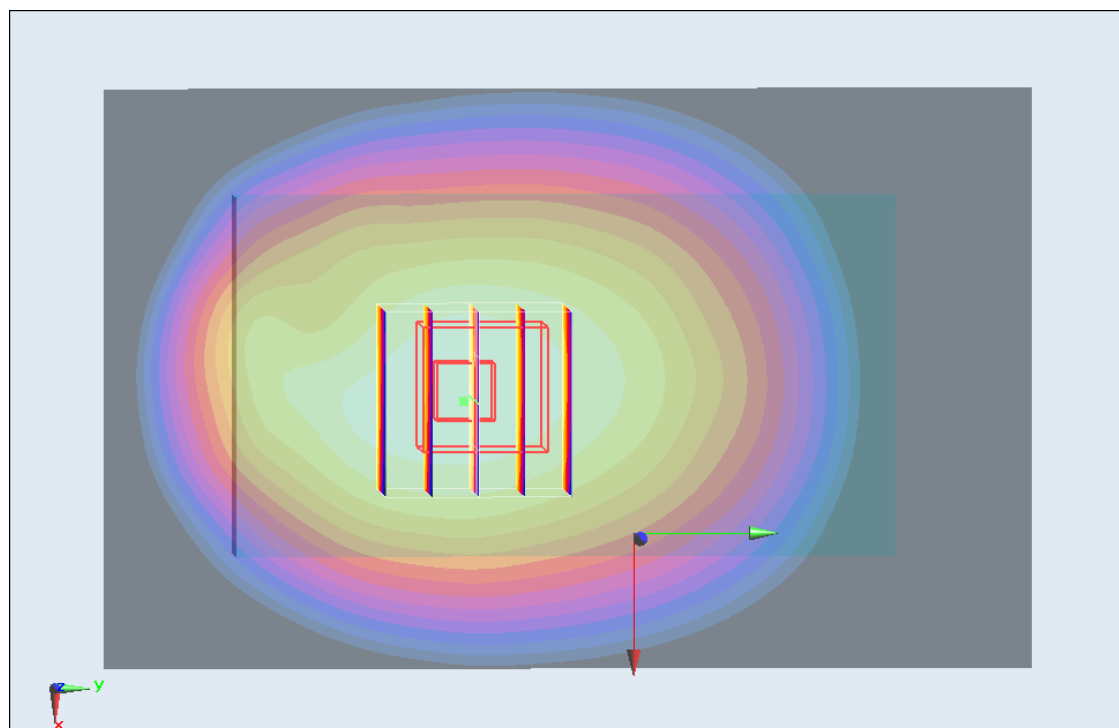
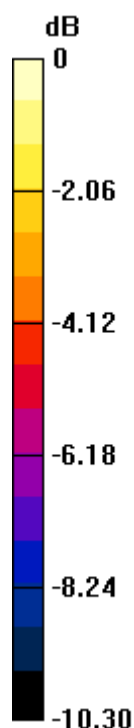
Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 33.503 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.616 mW/g

SAR(1 g) = 1.21 mW/g; SAR(10 g) = 0.874 mW/g

Maximum value of SAR (measured) = 1.27 W/kg



0 dB = 1.27 W/kg = 2.08 dB W/kg

#75_WCDMA V_HSDPA_Back_1cm_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 54.432$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (interpolated) = 1.37 W/kg

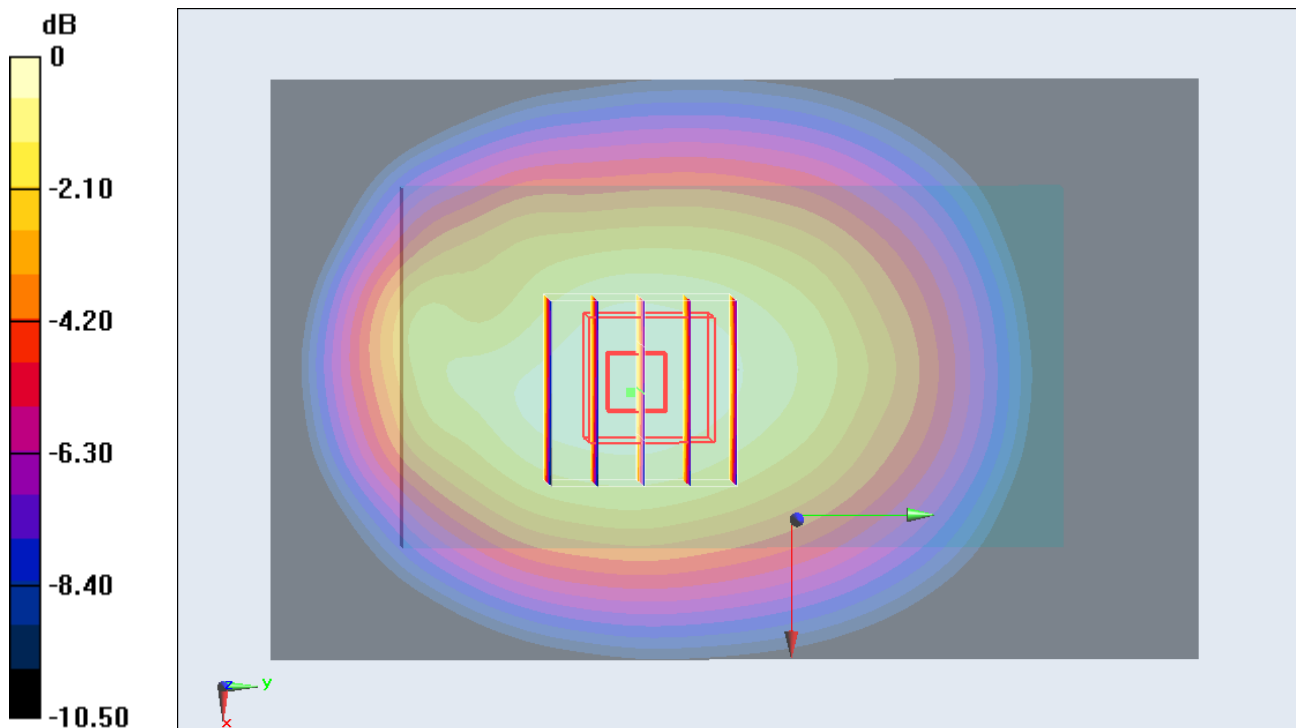
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 34.339 V/m ; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.713 mW/g

SAR(1 g) = 1.29 mW/g ; SAR(10 g) = 0.932 mW/g

Maximum value of SAR (measured) = 1.36 W/kg



#76_WCDMA V_HSUPA_Back_1cm_Ch4132**DUT: 290405**

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used : $f = 826.4$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 54.63$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4132/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (interpolated) = 1.32 W/kg

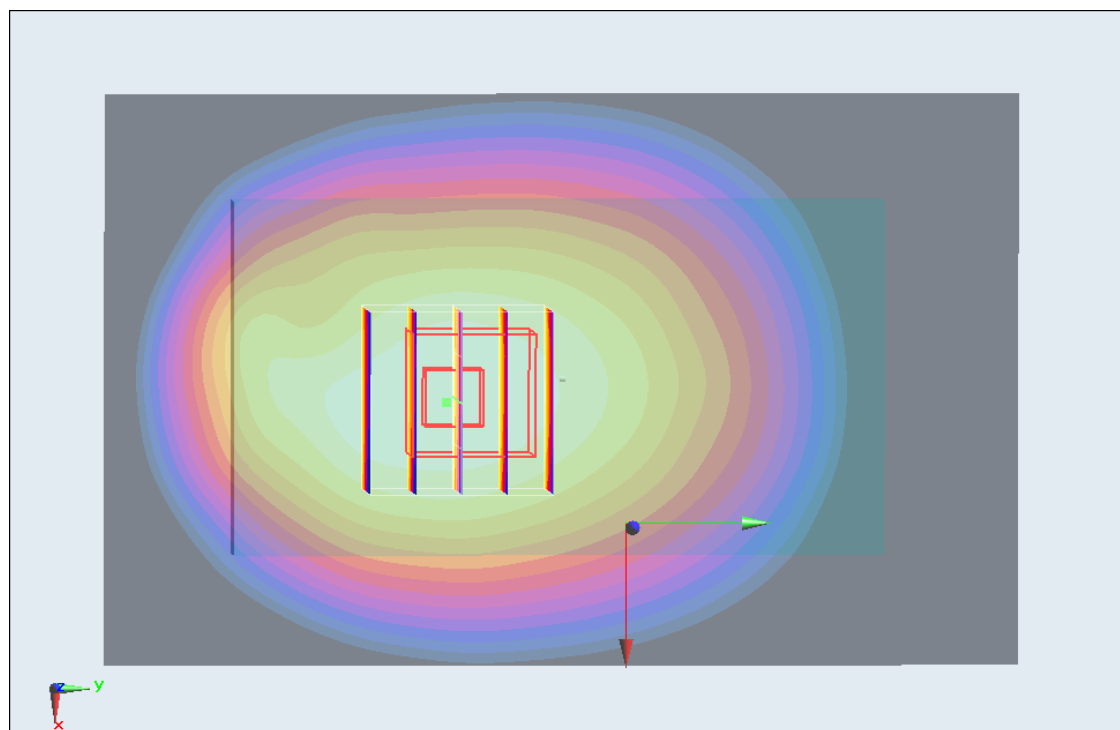
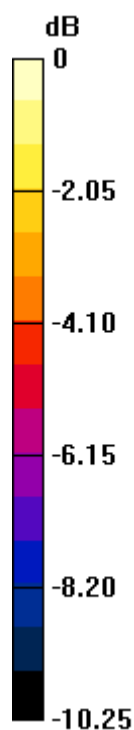
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 33.552 V/m ; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.638 mW/g

SAR(1 g) = 1.23 mW/g ; SAR(10 g) = 0.889 mW/g

Maximum value of SAR (measured) = 1.29 W/kg



0 dB = 1.29 W/kg = 2.21 dB W/kg

#77_WCDMA V_HSUPA_Back_1cm_Ch4182**DUT: 290405**

Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used : $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4182/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.28 W/kg

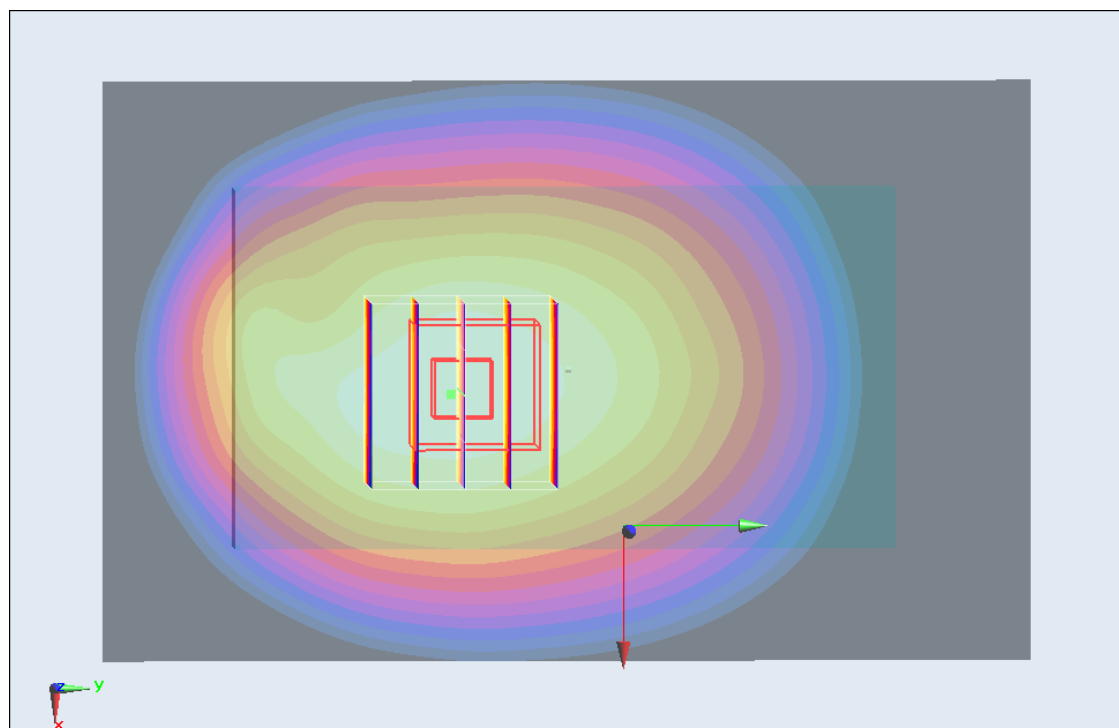
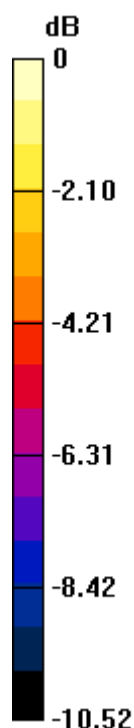
Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 33.023 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.598 mW/g

SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.864 mW/g

Maximum value of SAR (measured) = 1.27 W/kg



0 dB = 1.27 W/kg = 2.08 dB W/kg

#78_WCDMA V_HSUPA_Back_1cm_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 54.432$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (interpolated) = 1.36 W/kg

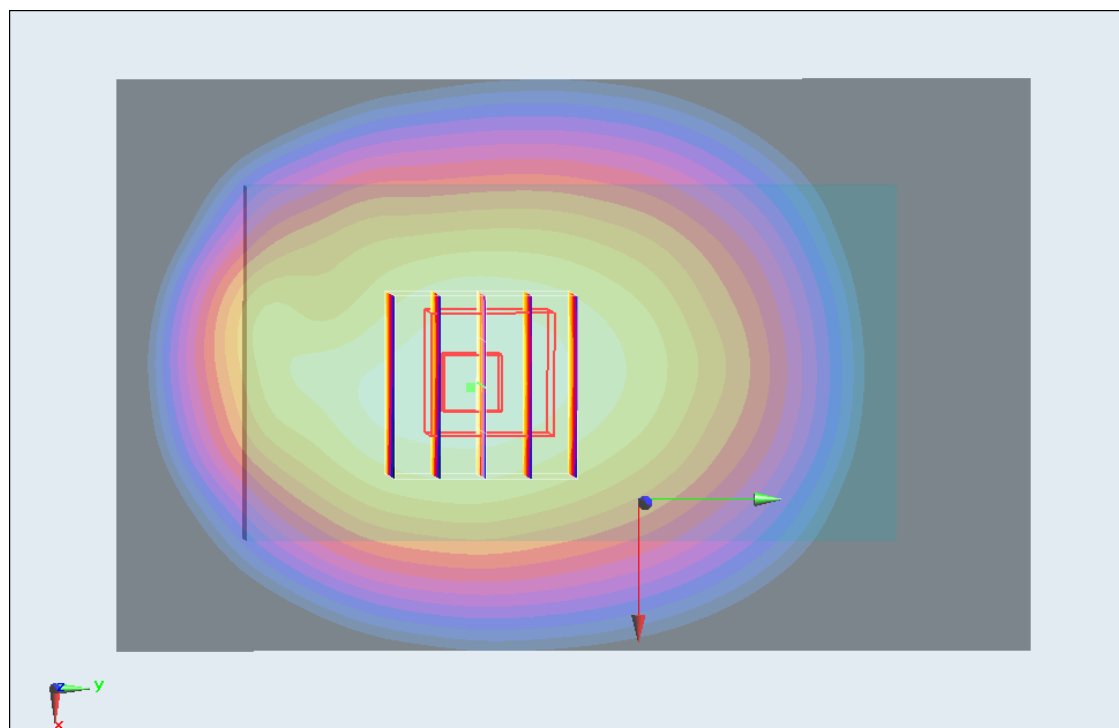
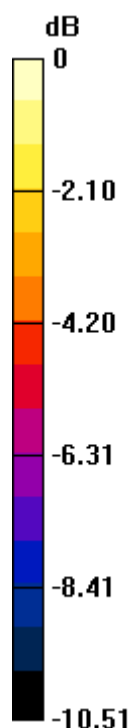
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 34.253 V/m ; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.727 mW/g

SAR(1 g) = 1.29 mW/g ; SAR(10 g) = 0.927 mW/g

Maximum value of SAR (measured) = 1.37 W/kg



0 dB = 1.37 W/kg = 2.73 dB W/kg

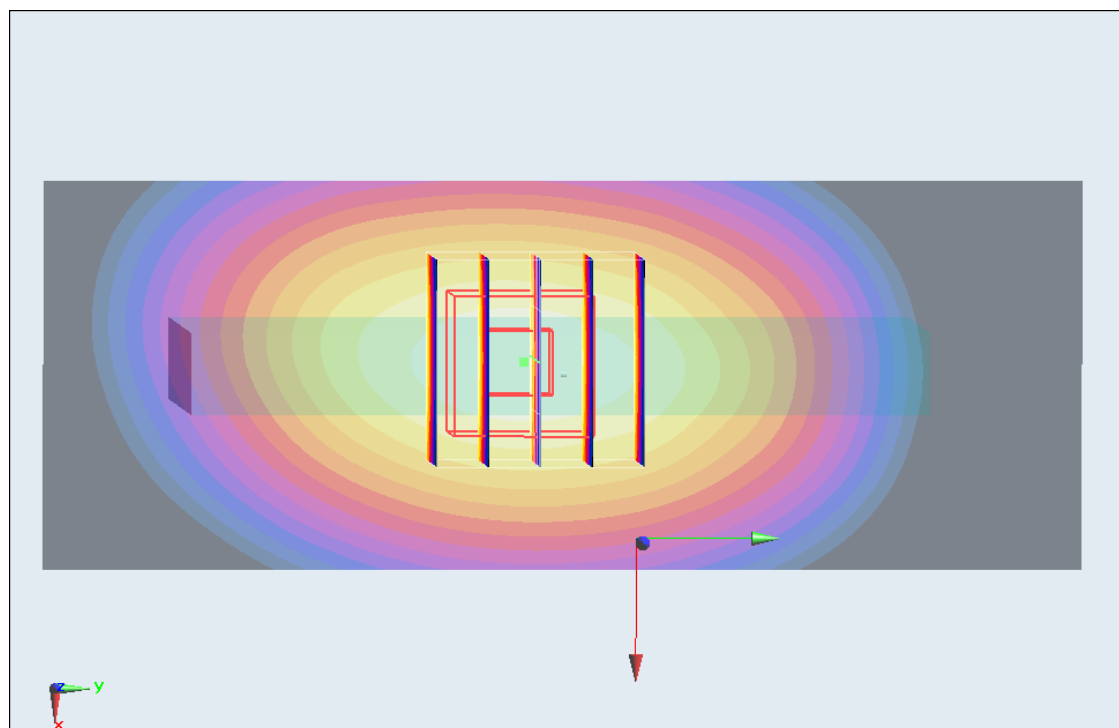
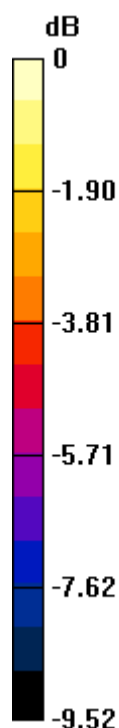
#66_WCDMA V_RMC12.2K_Left Side_1cm_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 54.432$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (31x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mmMaximum value of SAR (interpolated) = 0.731 W/kg **Ch4233/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mmReference Value = 27.136 V/m ; Power Drift = 0.16 dB Peak SAR (extrapolated) = 0.990 mW/g **SAR(1 g) = 0.701 mW/g ; SAR(10 g) = 0.483 mW/g** Maximum value of SAR (measured) = 0.745 W/kg  $0 \text{ dB} = 0.745 \text{ W/kg} = -2.56 \text{ dB W/kg}$

#81_WCDMA V_RMC12.2K_Right Side_1cm_Ch4132**DUT: 290405**

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.955$ mho/m; $\epsilon_r = 54.63$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4132/Area Scan (31x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (interpolated) = 0.737 W/kg

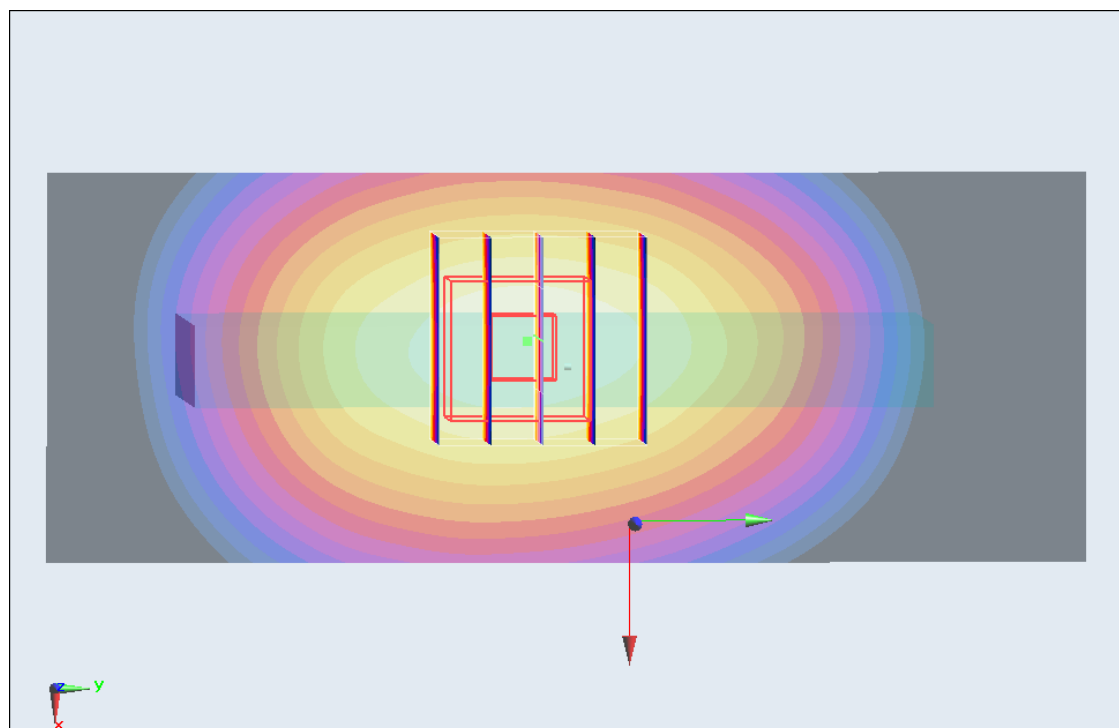
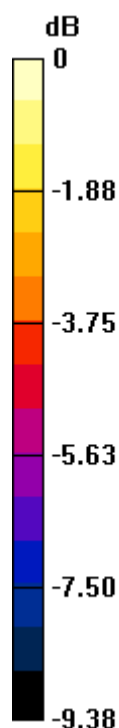
Ch4132/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 27.448 V/m ; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.986 mW/g

SAR(1 g) = 0.708 mW/g ; SAR(10 g) = 0.497 mW/g

Maximum value of SAR (measured) = 0.750 W/kg



0 dB = 0.750 W/kg = -2.50 dB W/kg

#82_WCDMA V_RMC12.2K_Right Side_1cm_Ch4182**DUT: 290405**

Communication System: WCDMA; Frequency: 836.4 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 836.4$ MHz; $\sigma = 0.964$ mho/m; $\epsilon_r = 54.526$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.6 °C; Liquid Temperature : 21.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4182/Area Scan (31x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.760 W/kg

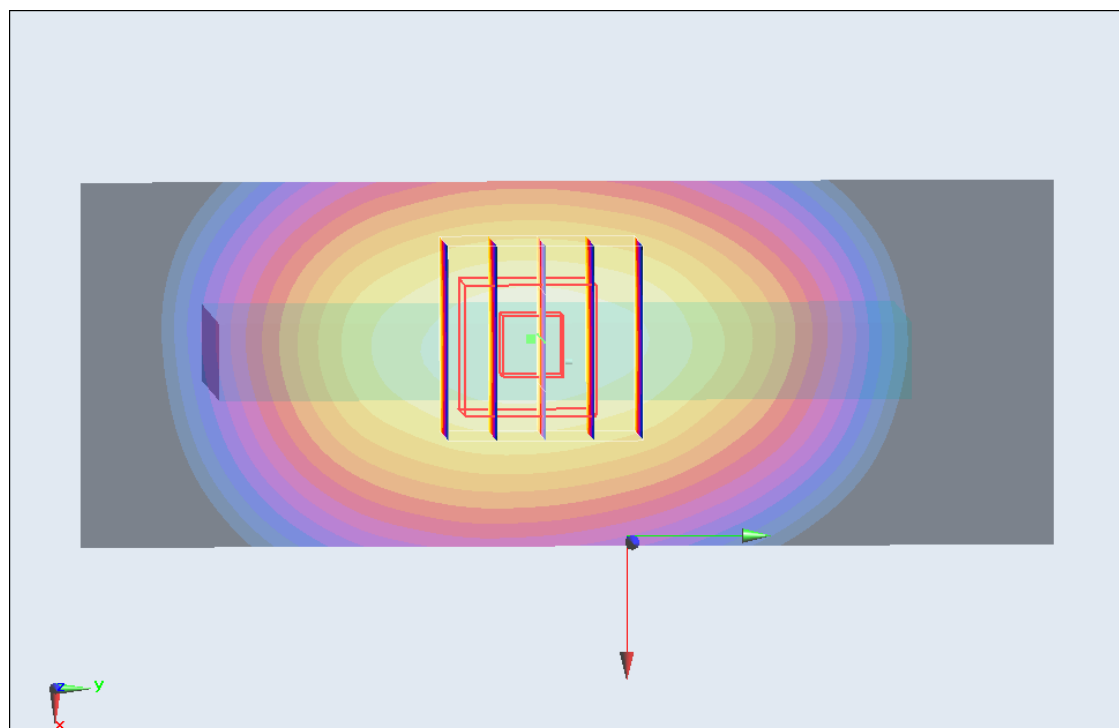
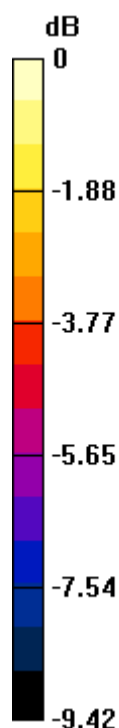
Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.992 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.010 mW/g

SAR(1 g) = 0.727 mW/g; SAR(10 g) = 0.510 mW/g

Maximum value of SAR (measured) = 0.771 W/kg



0 dB = 0.771 W/kg = -2.26 dB W/kg

#67_WCDMA V_RMC12.2K_Right Side_1cm_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 54.432$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (31x81x1): Measurement grid: $dx=20 \text{ mm}$, $dy=20 \text{ mm}$

Maximum value of SAR (interpolated) = 0.840 W/kg

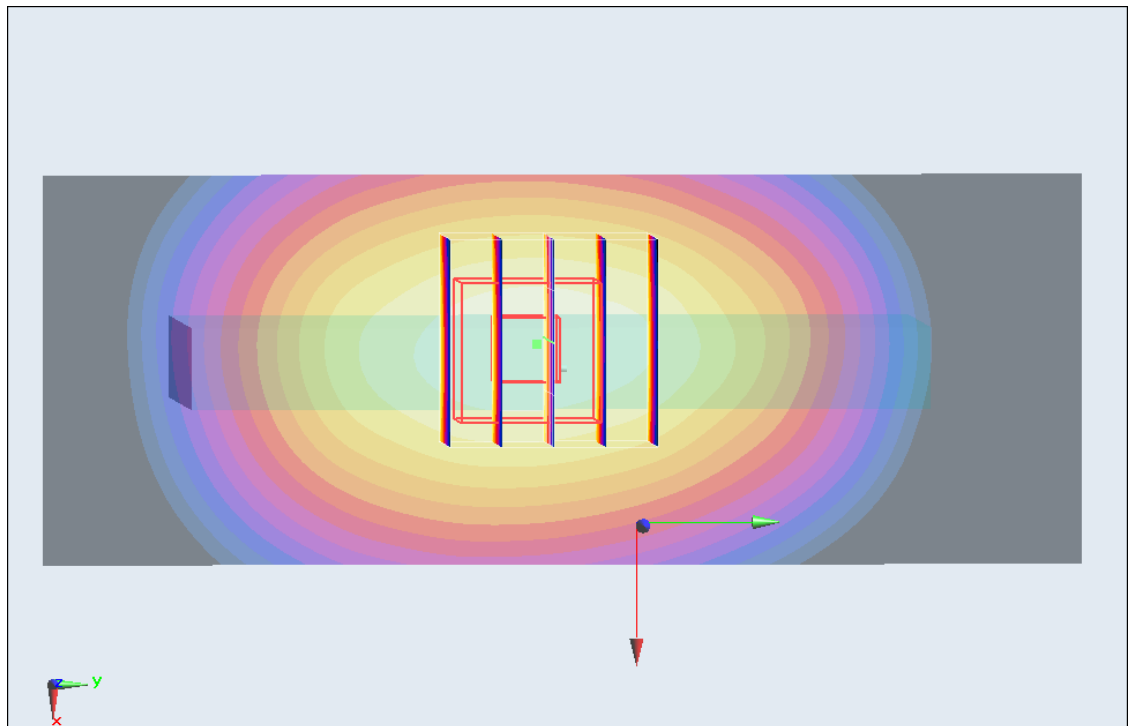
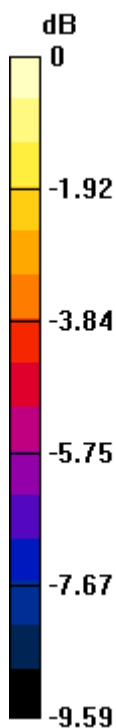
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 29.054 V/m ; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.126 mW/g

SAR(1 g) = 0.805 mW/g ; SAR(10 g) = 0.563 mW/g

Maximum value of SAR (measured) = 0.851 W/kg



0 dB = 0.851 W/kg = -1.40 dB W/kg

#68_WCDMA V_RMC12.2K_Bottom Side_1cm_Ch4233**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 54.432$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (31x51x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (interpolated) = 0.209 W/kg

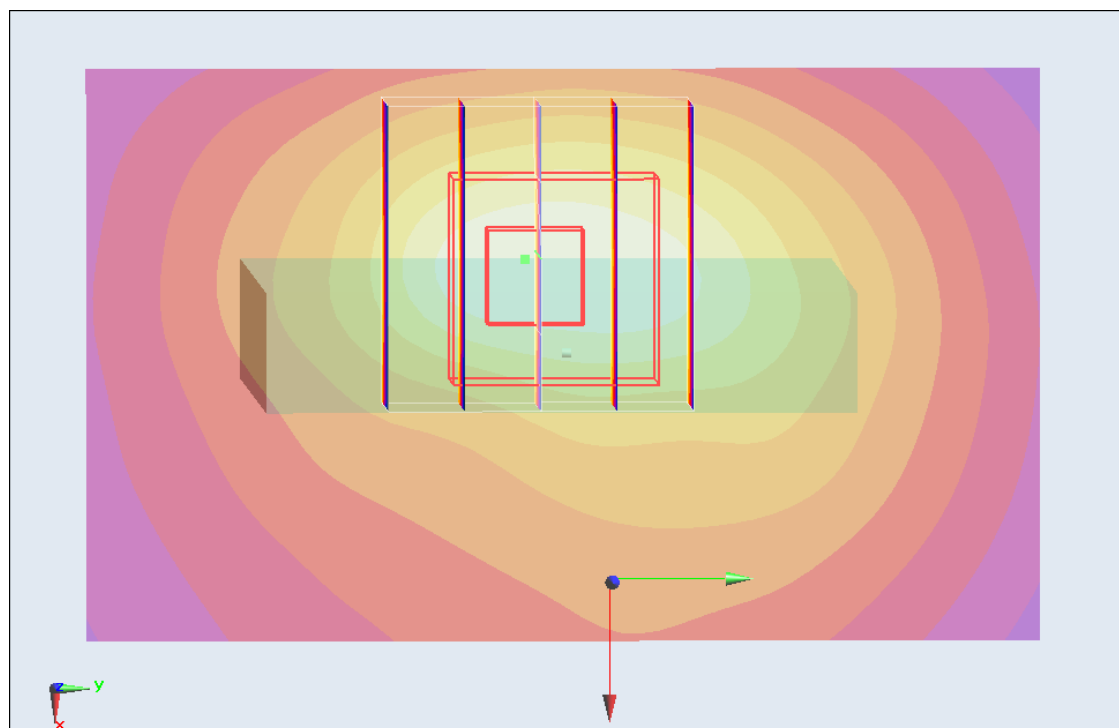
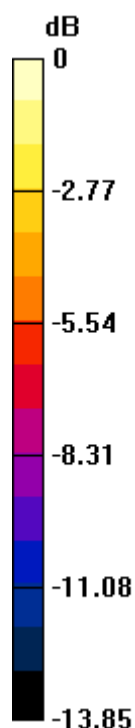
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 13.140 V/m ; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.336 mW/g

SAR(1 g) = 0.195 mW/g ; SAR(10 g) = 0.115 mW/g

Maximum value of SAR (measured) = 0.207 W/kg



0 dB = 0.207 W/kg = -13.68 dB W/kg

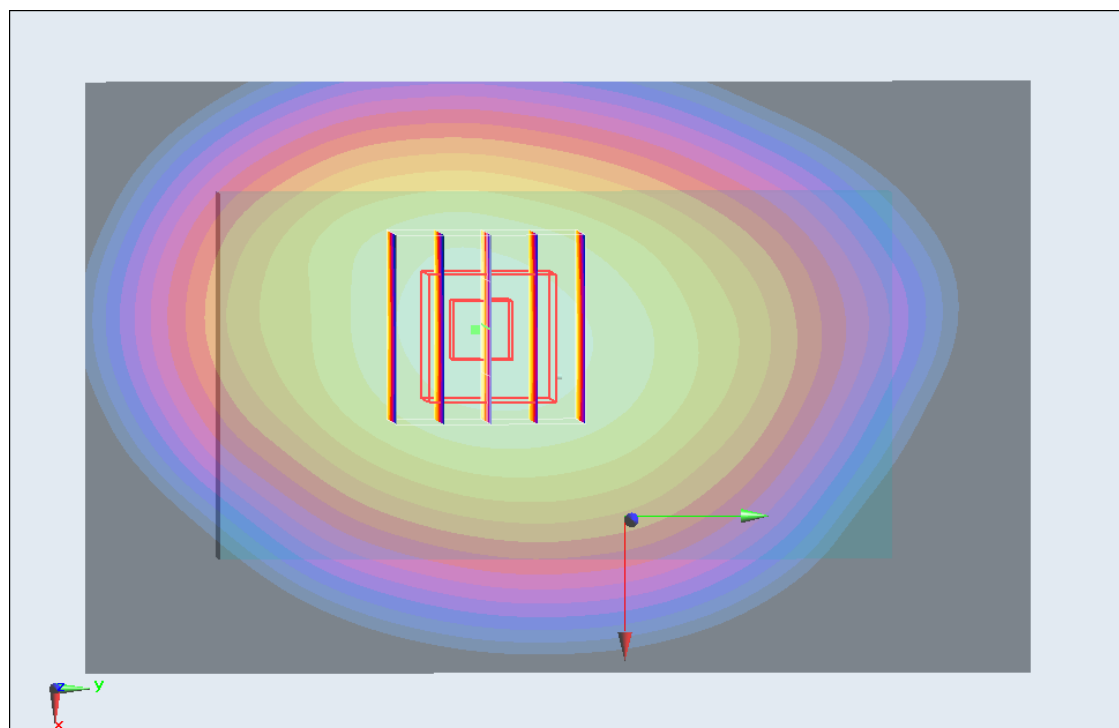
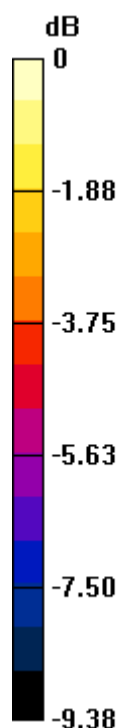
#79_WCDMA V_RMC12.2K_Front_1.5cm_Ch4233;Headset**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 54.432$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: $dx=20$ mm, $dy=20$ mmMaximum value of SAR (interpolated) = 0.478 W/kg **Ch4233/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mmReference Value = 21.393 V/m ; Power Drift = 0.07 dB Peak SAR (extrapolated) = 0.610 mW/g **SAR(1 g) = 0.468 mW/g ; SAR(10 g) = 0.348 mW/g** Maximum value of SAR (measured) = 0.495 W/kg  $0 \text{ dB} = 0.495 \text{ W/kg} = -6.11 \text{ dB W/kg}$

#80_WCDMA V_RMC12.2K_Back_1.5cm_Ch4233;Headset**DUT: 290405**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: MSL_850_121030 Medium parameters used: $f = 847$ MHz; $\sigma = 0.974$ mho/m; $\epsilon_r = 54.432$; $\rho =$

1000 kg/m^3

Ambient Temperature : 22.6°C ; Liquid Temperature : 21.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(8.82, 8.82, 8.82); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch4233/Area Scan (51x81x1): Measurement grid: $dx=20 \text{ mm}$, $dy=20 \text{ mm}$

Maximum value of SAR (interpolated) = 0.728 W/kg

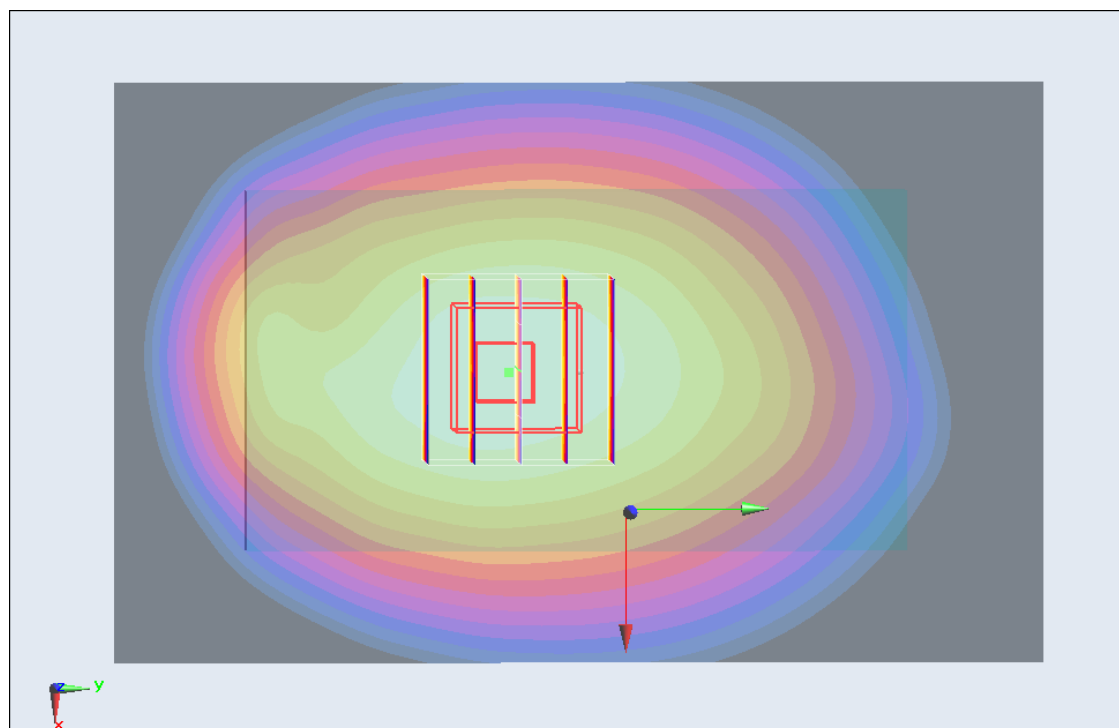
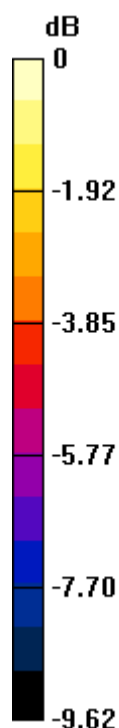
Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.745 V/m ; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.925 mW/g

SAR(1 g) = 0.694 mW/g ; SAR(10 g) = 0.508 mW/g

Maximum value of SAR (measured) = 0.729 W/kg



0 dB = 0.729 W/kg = -2.75 dB W/kg

#25_WCDMA II_RMC12.2K_Front_1cm_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 53.341$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.971 W/kg

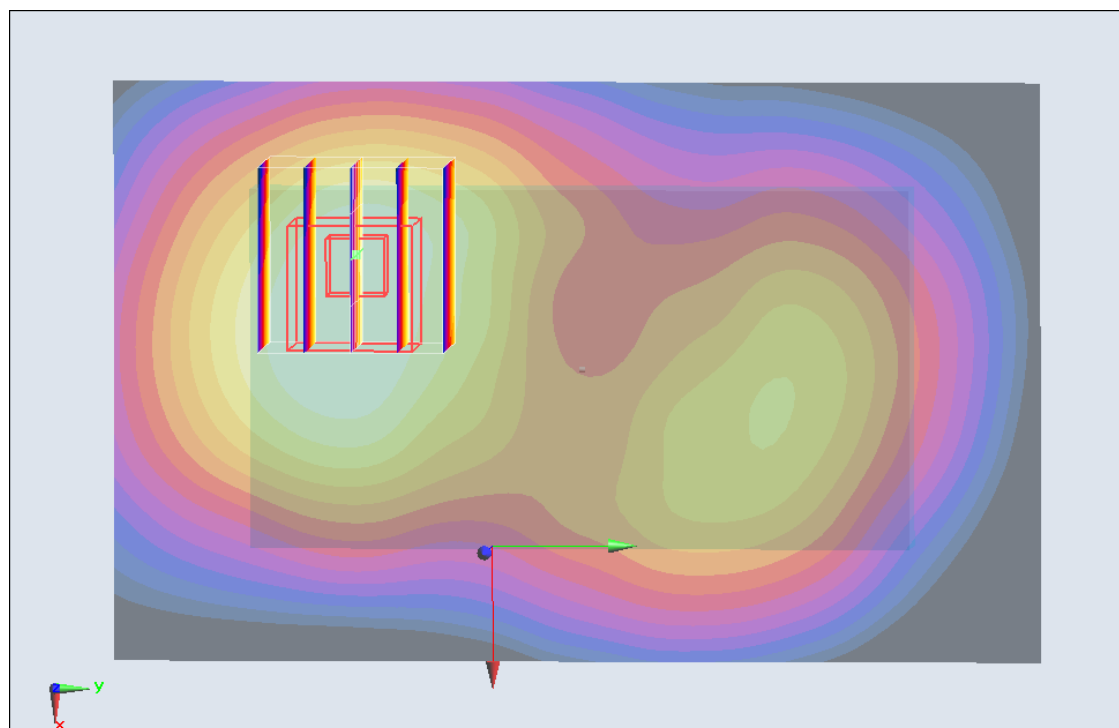
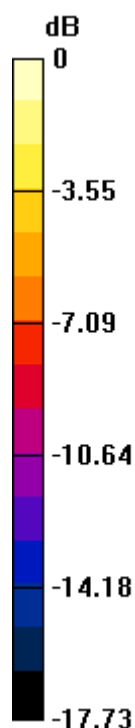
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.076 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.500 mW/g

SAR(1 g) = 0.895 mW/g; SAR(10 g) = 0.544 mW/g

Maximum value of SAR (measured) = 0.962 W/kg



0 dB = 0.962 W/kg = -0.34 dB W/kg

#30_WCDMA II_RMC12.2K_Front_1cm_Ch9262**DUT: 290405**

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.406$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9262/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.840 W/kg

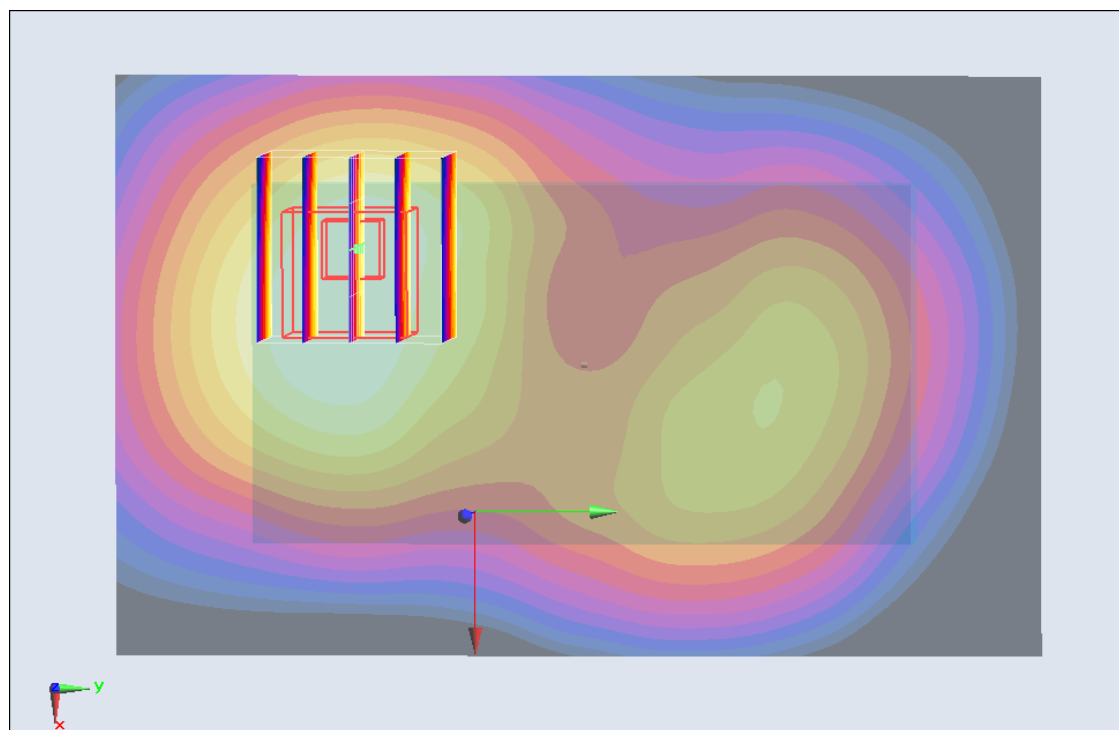
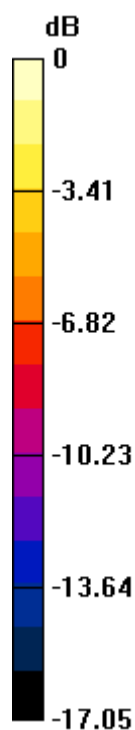
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.813 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.301 mW/g

SAR(1 g) = 0.772 mW/g; SAR(10 g) = 0.465 mW/g

Maximum value of SAR (measured) = 0.833 W/kg



0 dB = 0.833 W/kg = -1.59 dB W/kg

#31_WCDMA II_RMC12.2K_Front_1cm_Ch9538**DUT: 290405**

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.554$ mho/m; $\epsilon_r = 53.222$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9538/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.962 W/kg

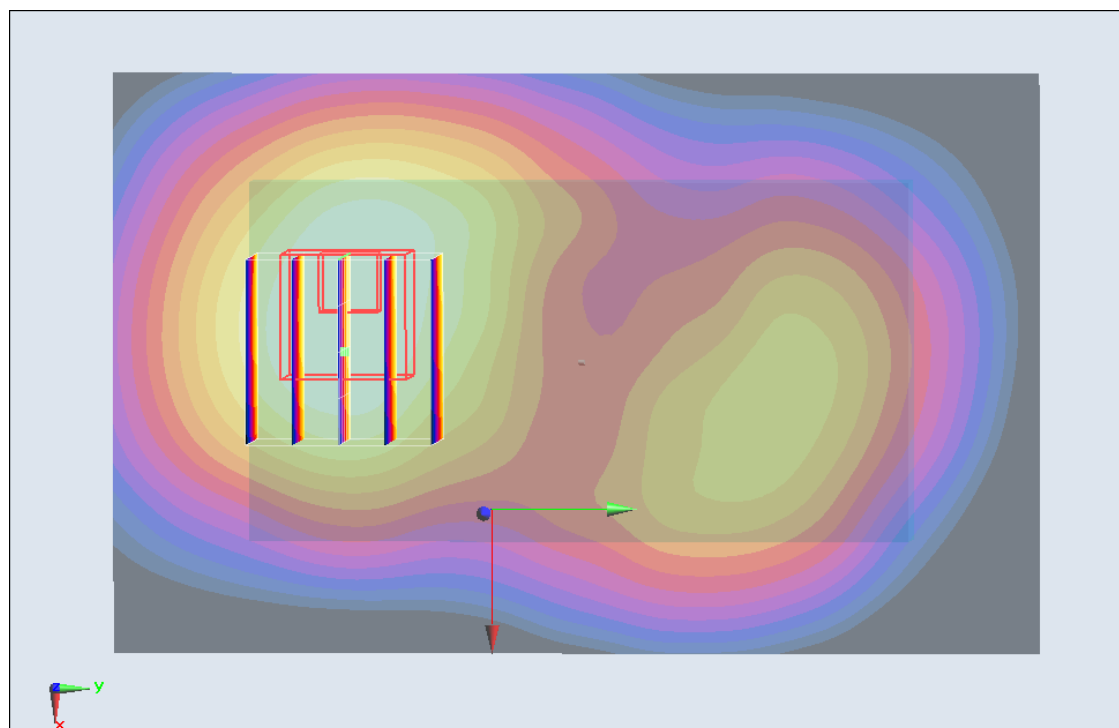
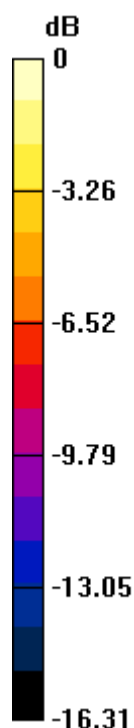
Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.562 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.446 mW/g

SAR(1 g) = 0.870 mW/g; SAR(10 g) = 0.528 mW/g

Maximum value of SAR (measured) = 0.930 W/kg



0 dB = 0.930 W/kg = -0.63 dB W/kg

#26_WCDMA II_RMC12.2K_Back_1cm_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 53.341$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.44 W/kg

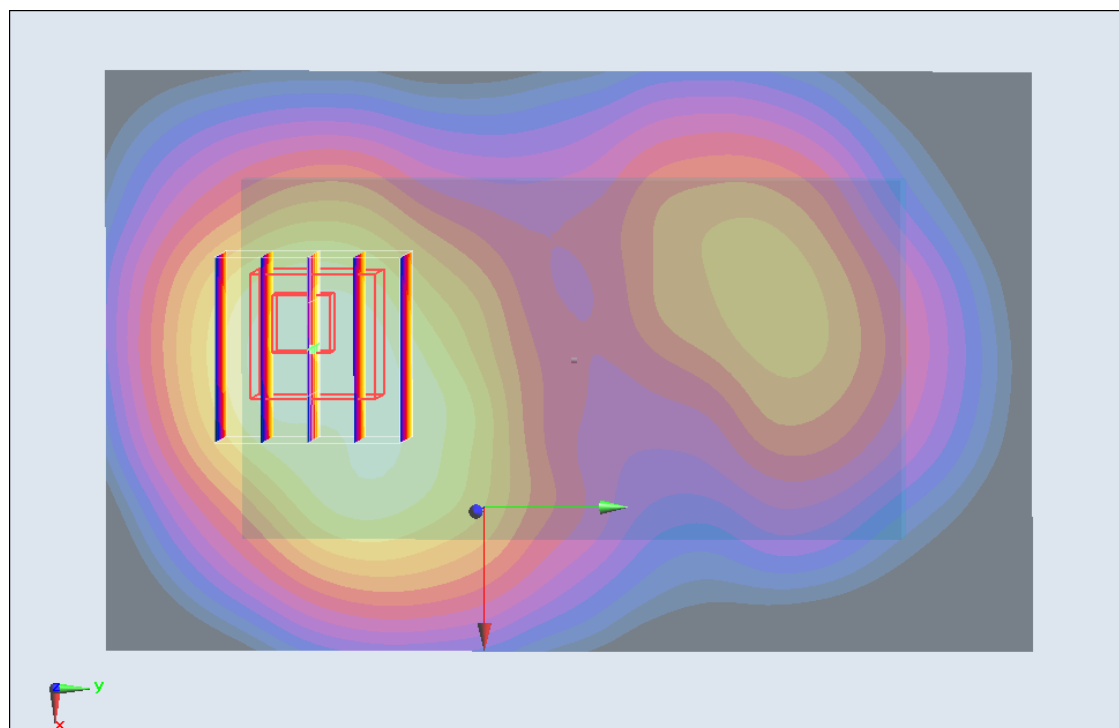
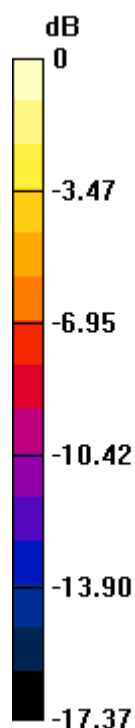
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.304 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 2.169 mW/g

SAR(1 g) = 1.31 mW/g; SAR(10 g) = 0.753 mW/g

Maximum value of SAR (measured) = 1.37 W/kg



0 dB = 1.37 W/kg = 2.73 dB W/kg

#32_WCDMA II_RMC12.2K_Back_1cm_Ch9262**DUT: 290405**

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.406$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9262/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.21 W/kg

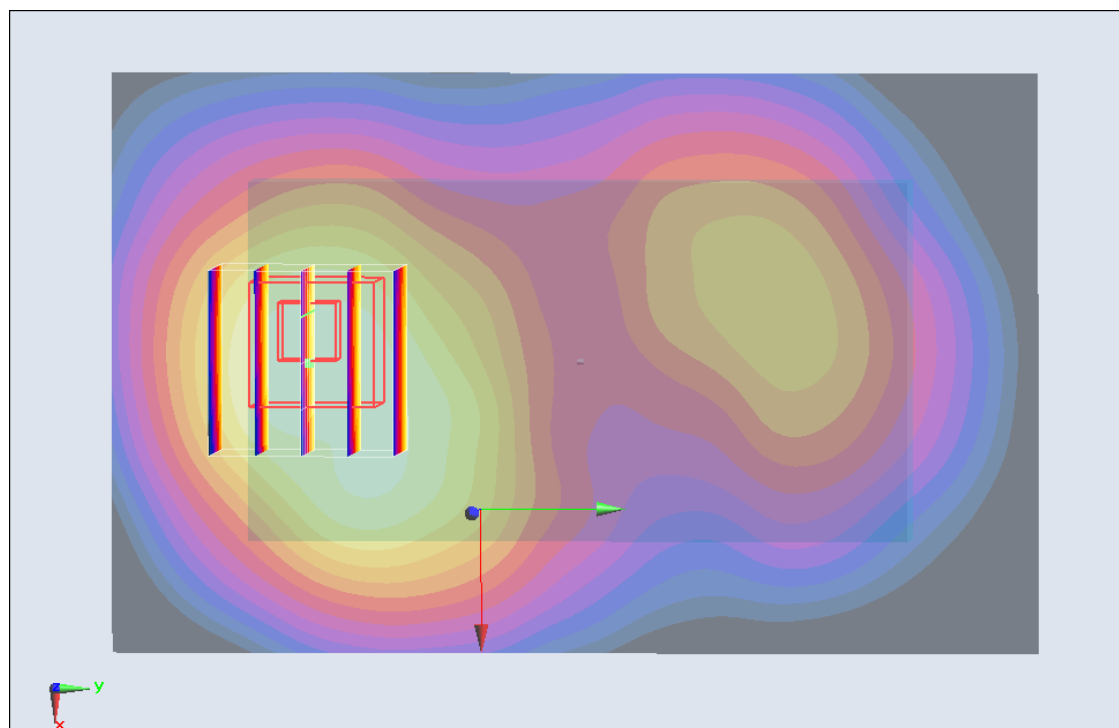
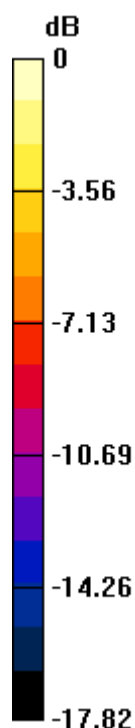
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.007 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.833 mW/g

SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.653 mW/g

Maximum value of SAR (measured) = 1.21 W/kg



0 dB = 1.21 W/kg = 1.66 dB W/kg

#33_WCDMA II_RMC12.2K_Back_1cm_Ch9538**DUT: 290405**

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.554$ mho/m; $\epsilon_r = 53.222$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9538/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.45 W/kg

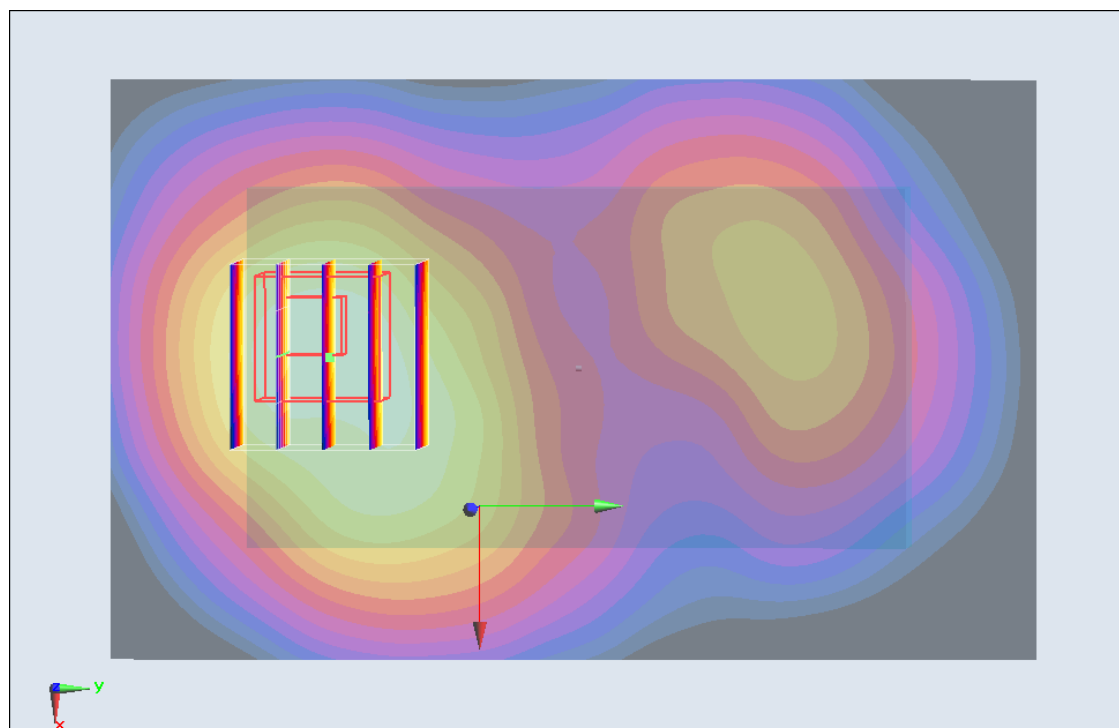
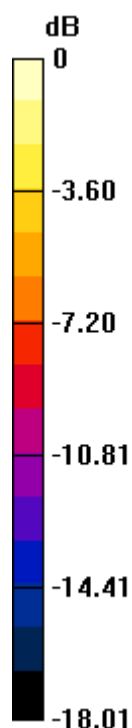
Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.400 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.267 mW/g

SAR(1 g) = 1.34 mW/g; SAR(10 g) = 0.757 mW/g

Maximum value of SAR (measured) = 1.37 W/kg



0 dB = 1.37 W/kg = 2.73 dB W/kg

#33_WCDMA II_RMC12.2K_Back_1cm_Ch9538_2D**DUT: 290405**

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.554$ mho/m; $\epsilon_r = 53.222$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9538/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.45 W/kg

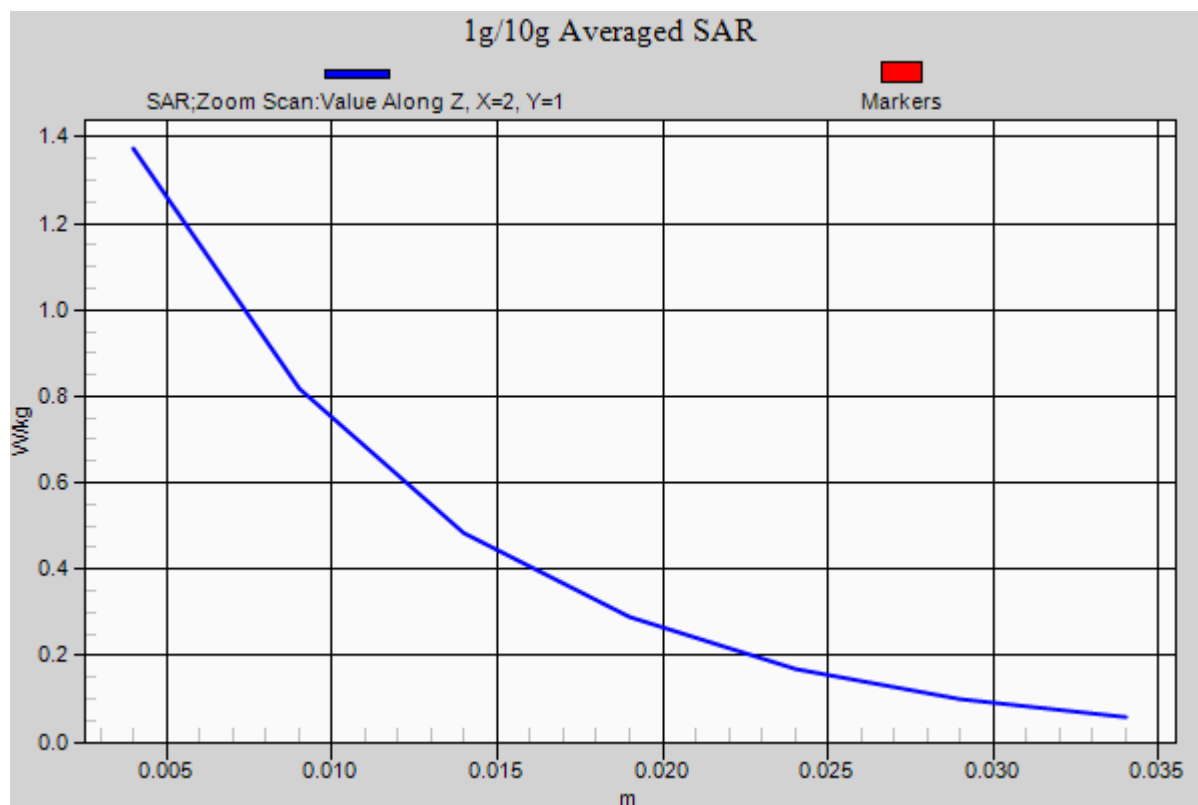
Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.400 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.267 mW/g

SAR(1 g) = 1.34 mW/g; SAR(10 g) = 0.757 mW/g

Maximum value of SAR (measured) = 1.37 W/kg



#34_WCDMA II_HSDPA_Back_1cm_Ch9262**DUT: 290405**

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.406$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9262/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.16 W/kg

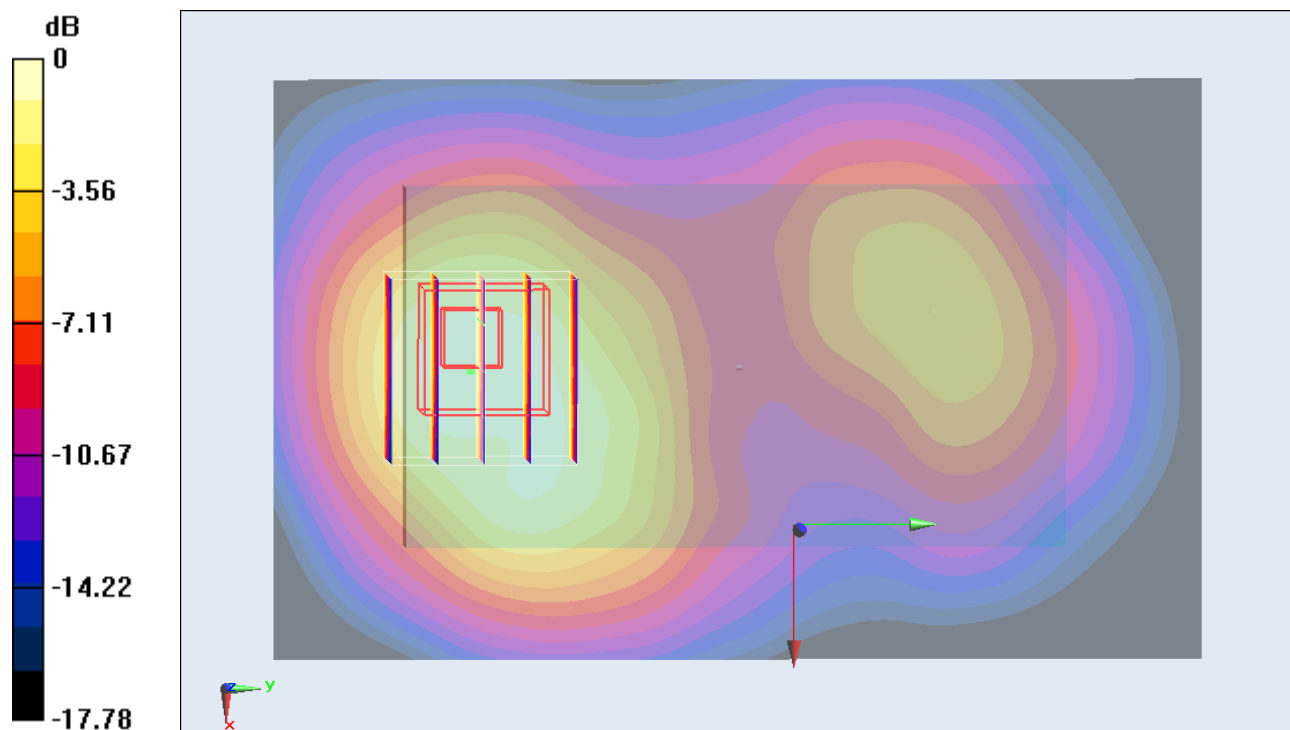
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.739 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.785 mW/g

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.639 mW/g

Maximum value of SAR (measured) = 1.18 W/kg



#35_WCDMA II_HSDPA_Back_1cm_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 53.341$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.42 W/kg

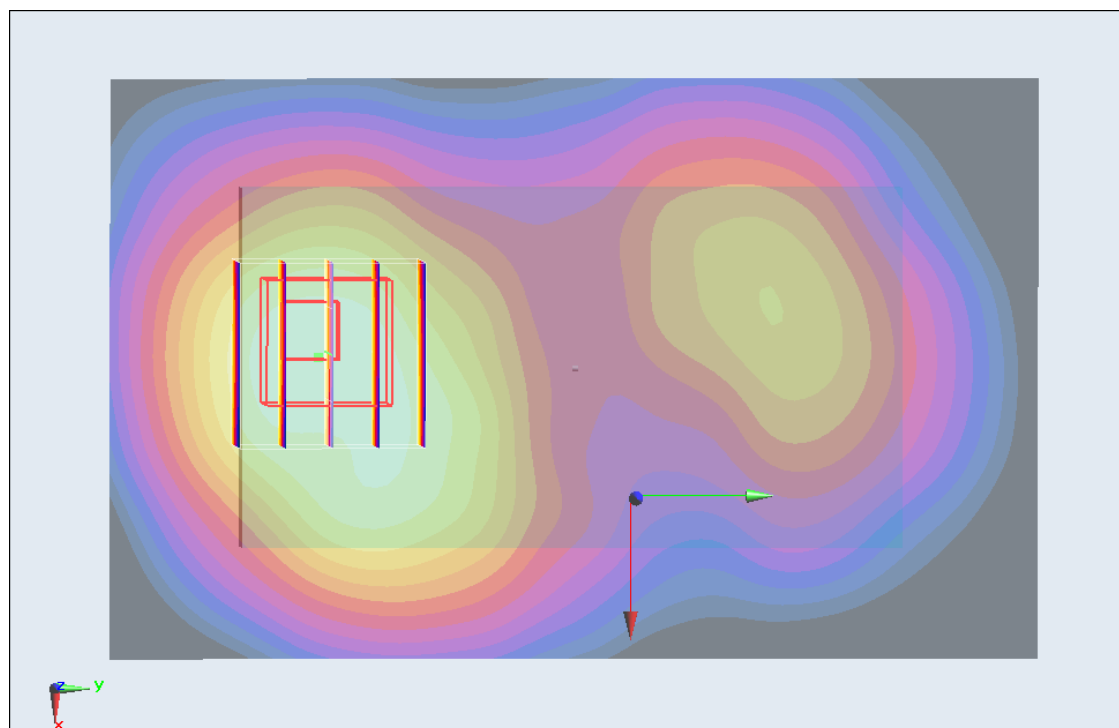
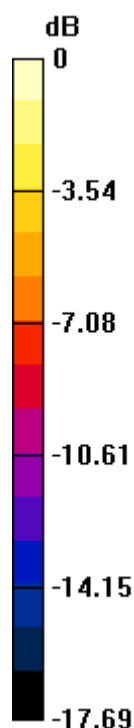
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.368 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.134 mW/g

SAR(1 g) = 1.29 mW/g; SAR(10 g) = 0.742 mW/g

Maximum value of SAR (measured) = 1.35 W/kg



0 dB = 1.35 W/kg = 2.61 dB W/kg

#36_WCDMA II_HSDPA_Back_1cm_Ch9538**DUT: 290405**

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.554$ mho/m; $\epsilon_r = 53.222$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9538/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.43 W/kg

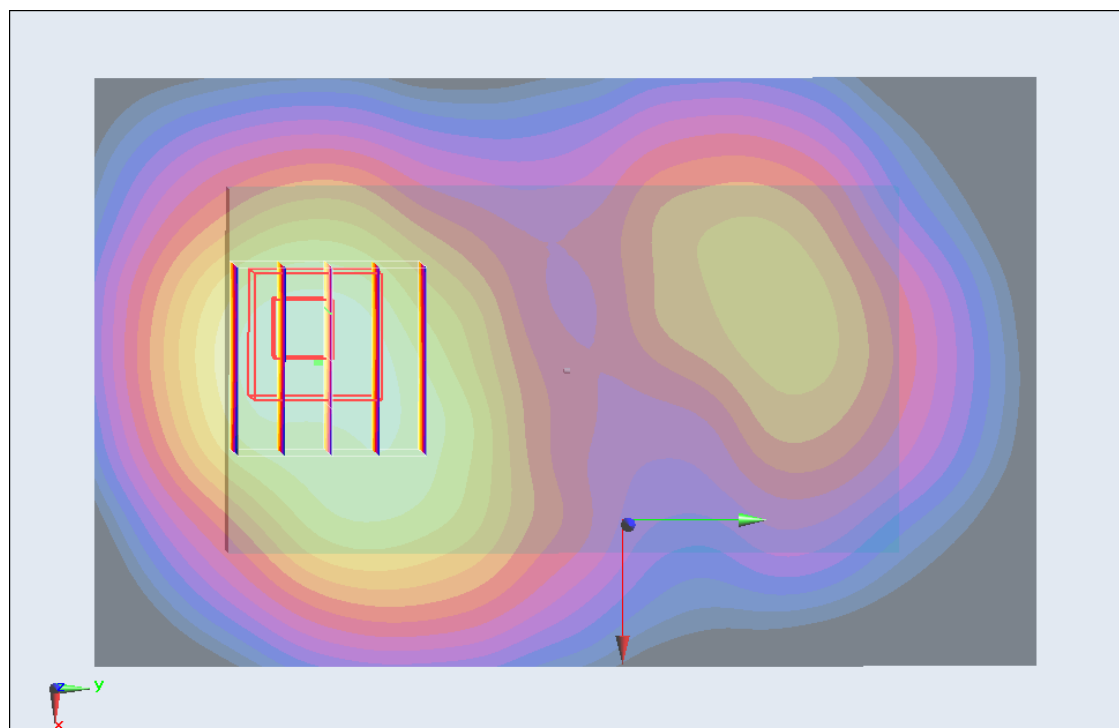
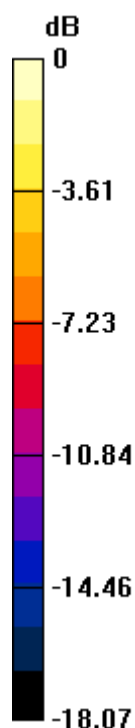
Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.238 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.220 mW/g

SAR(1 g) = 1.32 mW/g; SAR(10 g) = 0.746 mW/g

Maximum value of SAR (measured) = 1.35 W/kg



0 dB = 1.35 W/kg = 2.61 dB W/kg

#37_WCDMA II_HSUPA_Back_1cm_Ch9262**DUT: 290405**

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.406$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9262/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.21 W/kg

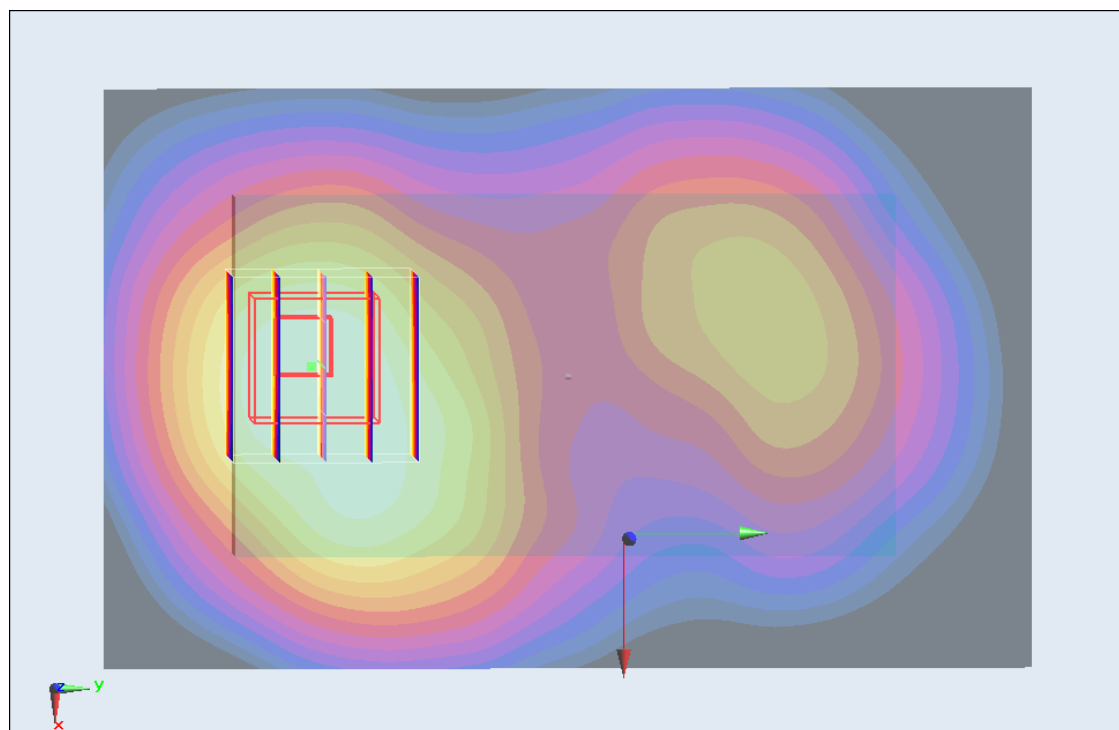
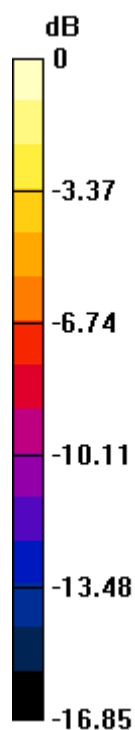
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.876 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 1.776 mW/g

SAR(1 g) = 1.09 mW/g; SAR(10 g) = 0.637 mW/g

Maximum value of SAR (measured) = 1.14 W/kg



0 dB = 1.14 W/kg = 1.14 dB W/kg

#38_WCDMA II_HSUPA_Back_1cm_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 53.341$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.43 W/kg

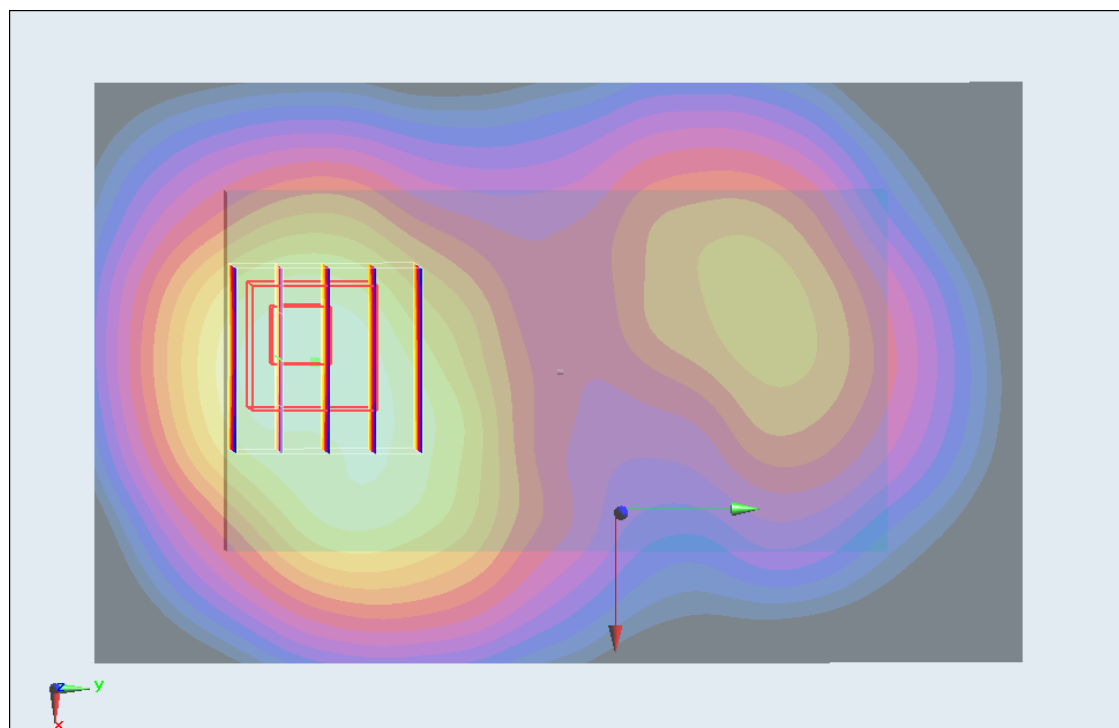
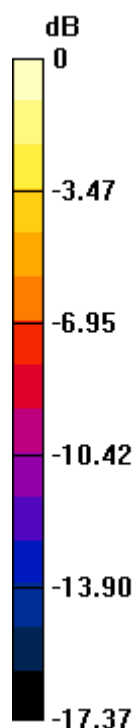
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.632 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.202 mW/g

SAR(1 g) = 1.32 mW/g; SAR(10 g) = 0.760 mW/g

Maximum value of SAR (measured) = 1.38 W/kg



0 dB = 1.38 W/kg = 2.80 dB W/kg

#39_WCDMA II_HSUPA_Back_1cm_Ch9538**DUT: 290405**

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.554$ mho/m; $\epsilon_r = 53.222$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9538/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.43 W/kg

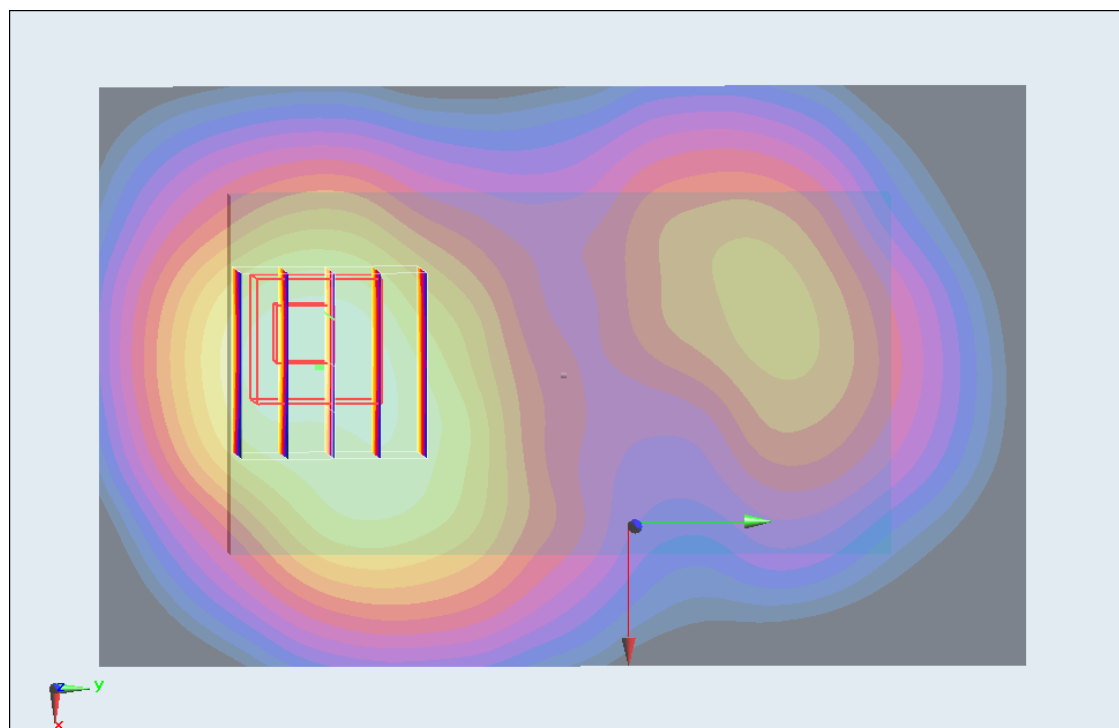
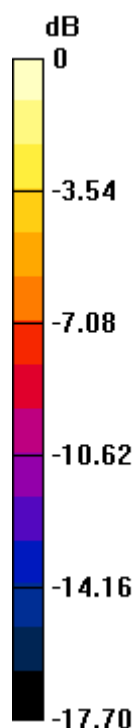
Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.500 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.224 mW/g

SAR(1 g) = 1.32 mW/g; SAR(10 g) = 0.746 mW/g

Maximum value of SAR (measured) = 1.36 W/kg



0 dB = 1.36 W/kg = 2.67 dB W/kg

#27_WCDMA II_RMC12.2K_Left Side_1cm_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 53.341$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (31x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.460 W/kg

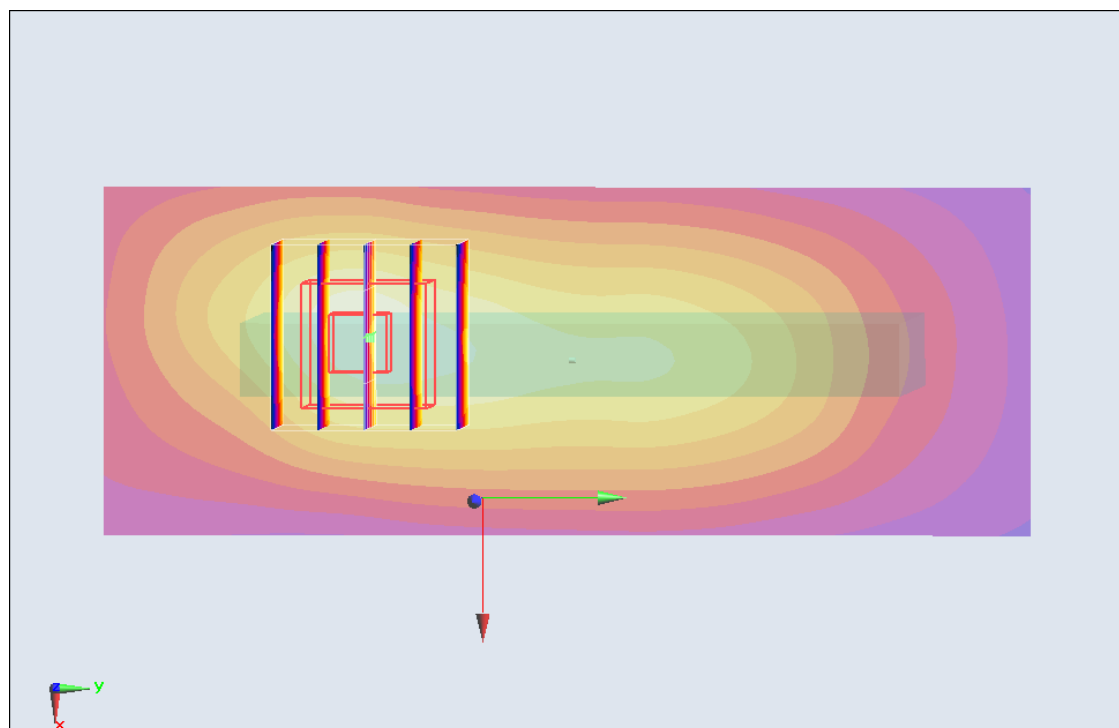
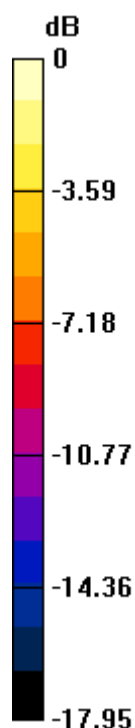
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.007 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.761 mW/g

SAR(1 g) = 0.430 mW/g; SAR(10 g) = 0.237 mW/g

Maximum value of SAR (measured) = 0.472 W/kg



0 dB = 0.472 W/kg = -6.52 dB W/kg

#28_WCDMA II_RMC12.2K_Right Side_1cm_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 53.341$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (31x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.260 W/kg

Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.635 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.390 mW/g

SAR(1 g) = 0.236 mW/g; SAR(10 g) = 0.136 mW/g

Maximum value of SAR (measured) = 0.253 W/kg

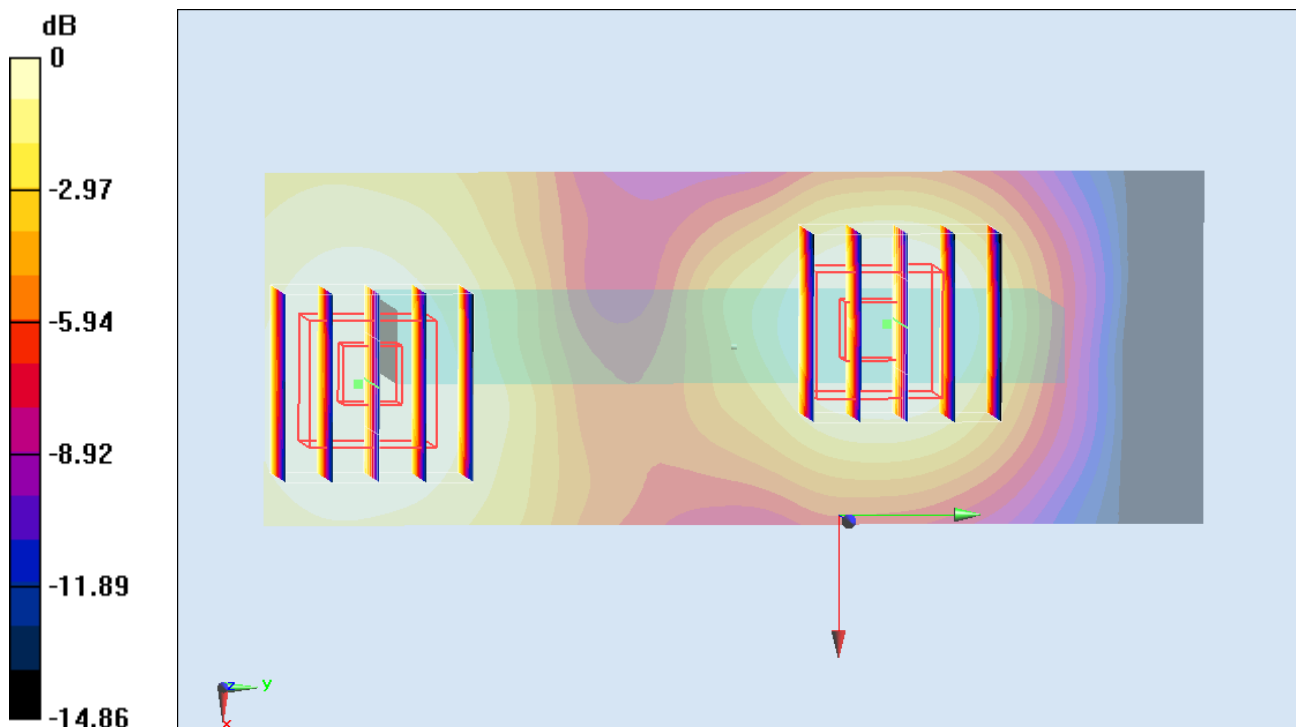
Ch9400/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.635 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.272 mW/g

SAR(1 g) = 0.172 mW/g; SAR(10 g) = 0.109 mW/g

Maximum value of SAR (measured) = 0.184 W/kg



0 dB = 0.184 W/kg = -14.70 dB W/kg

For any 2nd peak found in area scan within 2 dB of the maximum peak and greater than 0.012W/kg, and is not within the zoom scan, zoom scan is repeated.

#29_WCDMA II_RMC12.2K_Bottom Side_1cm_Ch9400**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 53.341$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (31x61x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.08 W/kg

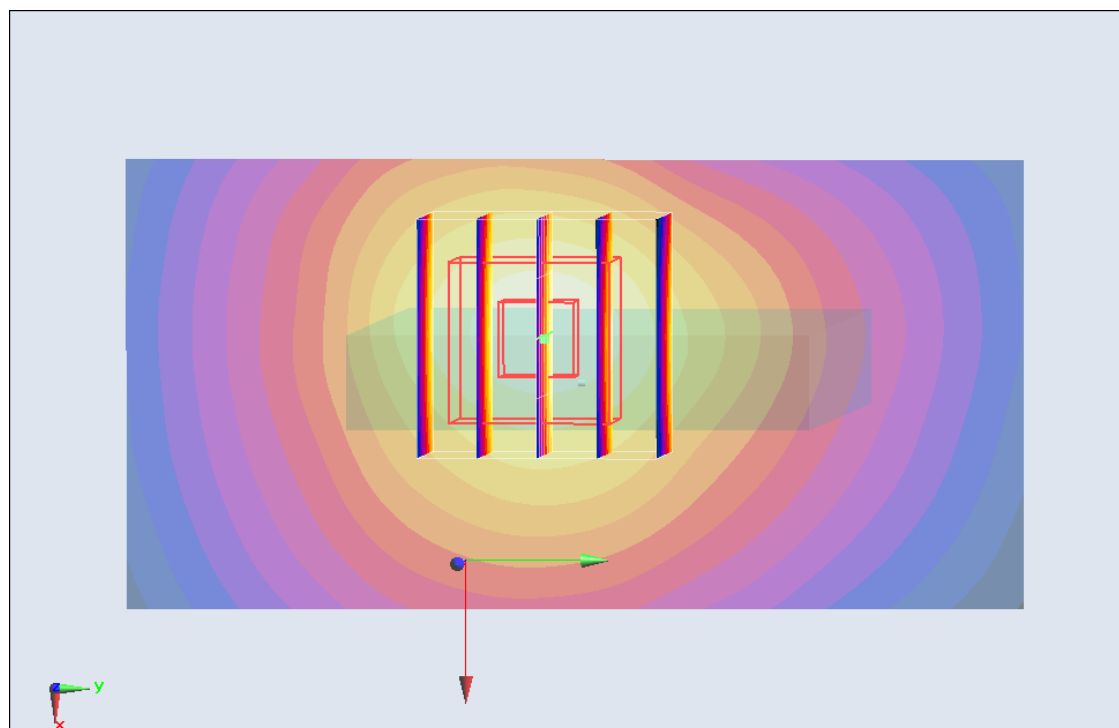
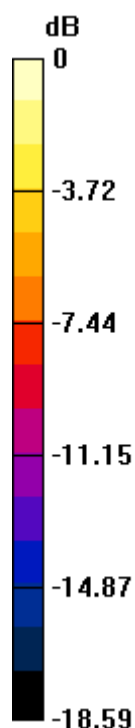
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.553 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.749 mW/g

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.551 mW/g

Maximum value of SAR (measured) = 1.11 W/kg



0 dB = 1.11 W/kg = 0.91 dB W/kg

#42_WCDMA II_RMC12.2K_Bottom Side_1cm_Ch9262**DUT: 290405**

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 53.406$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9262/Area Scan (31x61x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.896 W/kg

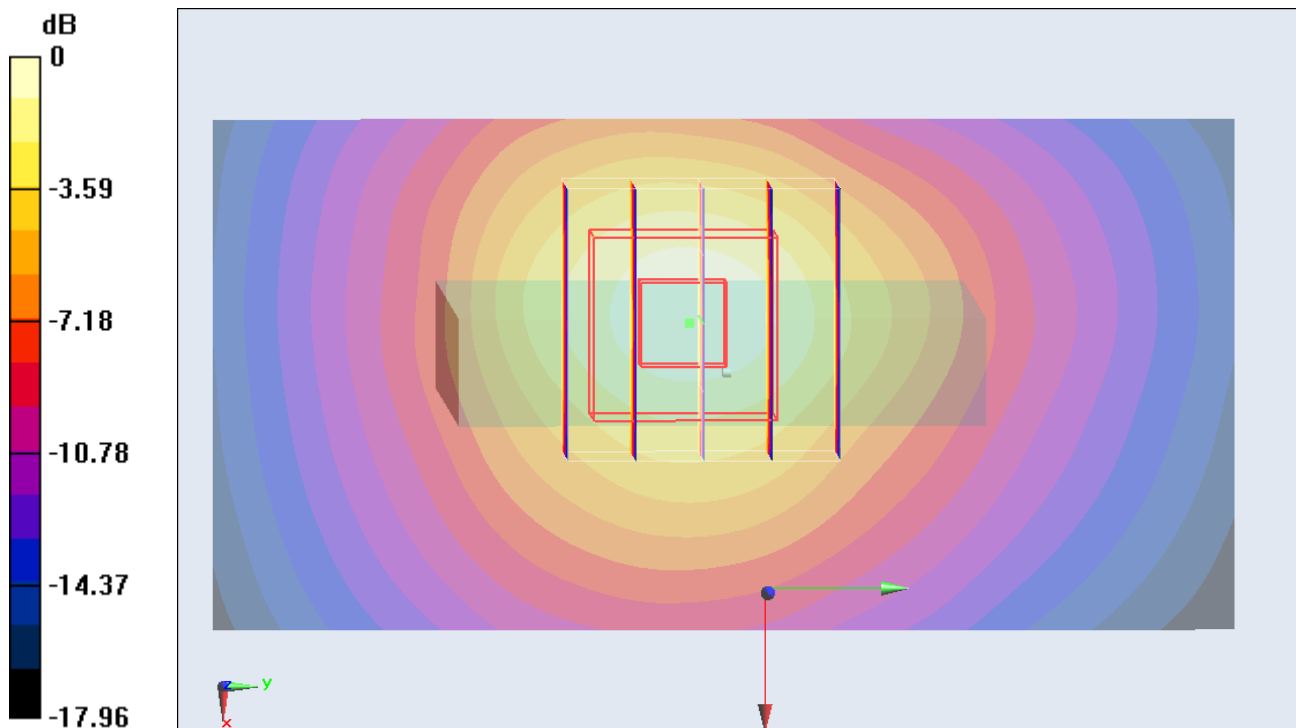
Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.660 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.455 mW/g

SAR(1 g) = 0.846 mW/g; SAR(10 g) = 0.464 mW/g

Maximum value of SAR (measured) = 0.933 W/kg



0 dB = 0.933 W/kg = -0.60 dB W/kg

#43_WCDMA II_RMC12.2K_Bottom Side_1cm_Ch9538**DUT: 290405**

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.554$ mho/m; $\epsilon_r = 53.222$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9538/Area Scan (31x61x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 1.09 W/kg

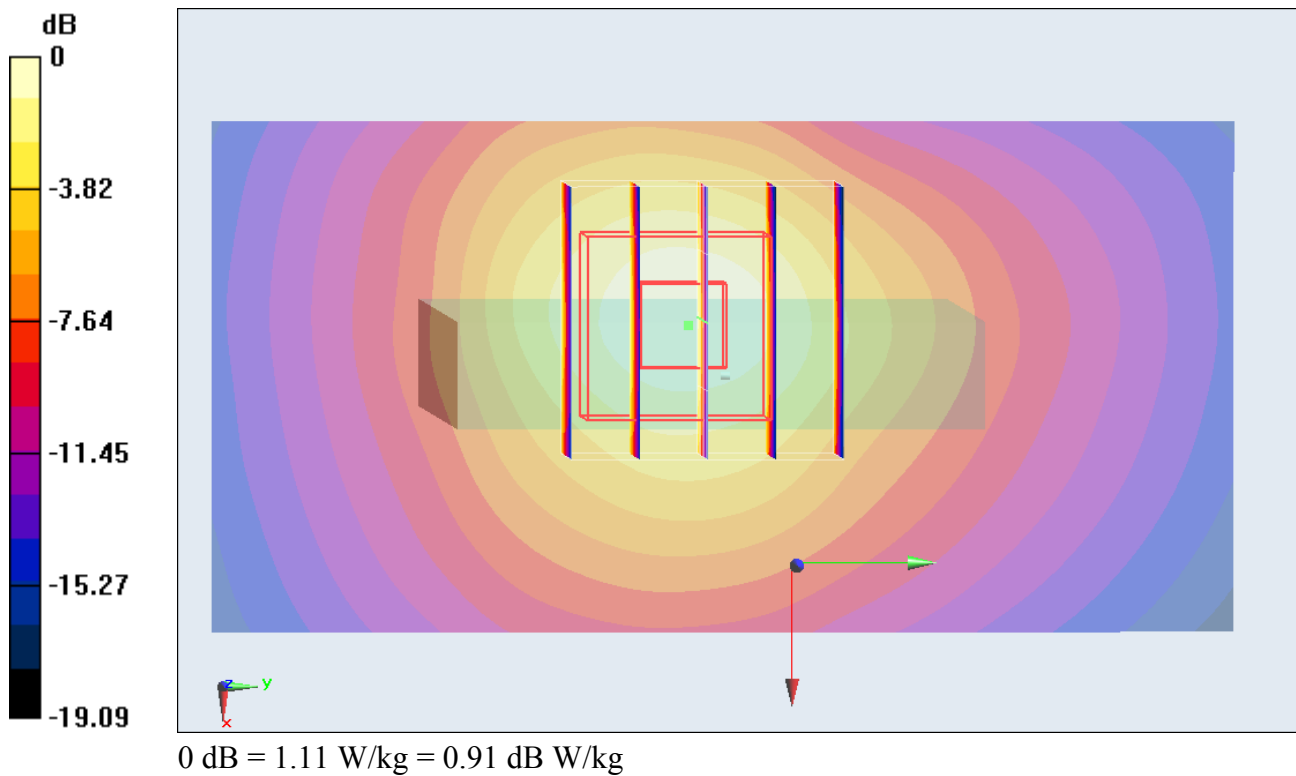
Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.460 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.774 mW/g

SAR(1 g) = 1.01 mW/g; SAR(10 g) = 0.547 mW/g

Maximum value of SAR (measured) = 1.11 W/kg



#40_WCDMA II_RMC12.2K_Front_1.5cm_Ch9400;Headset**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 53.341$; ρ $= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.634 W/kg

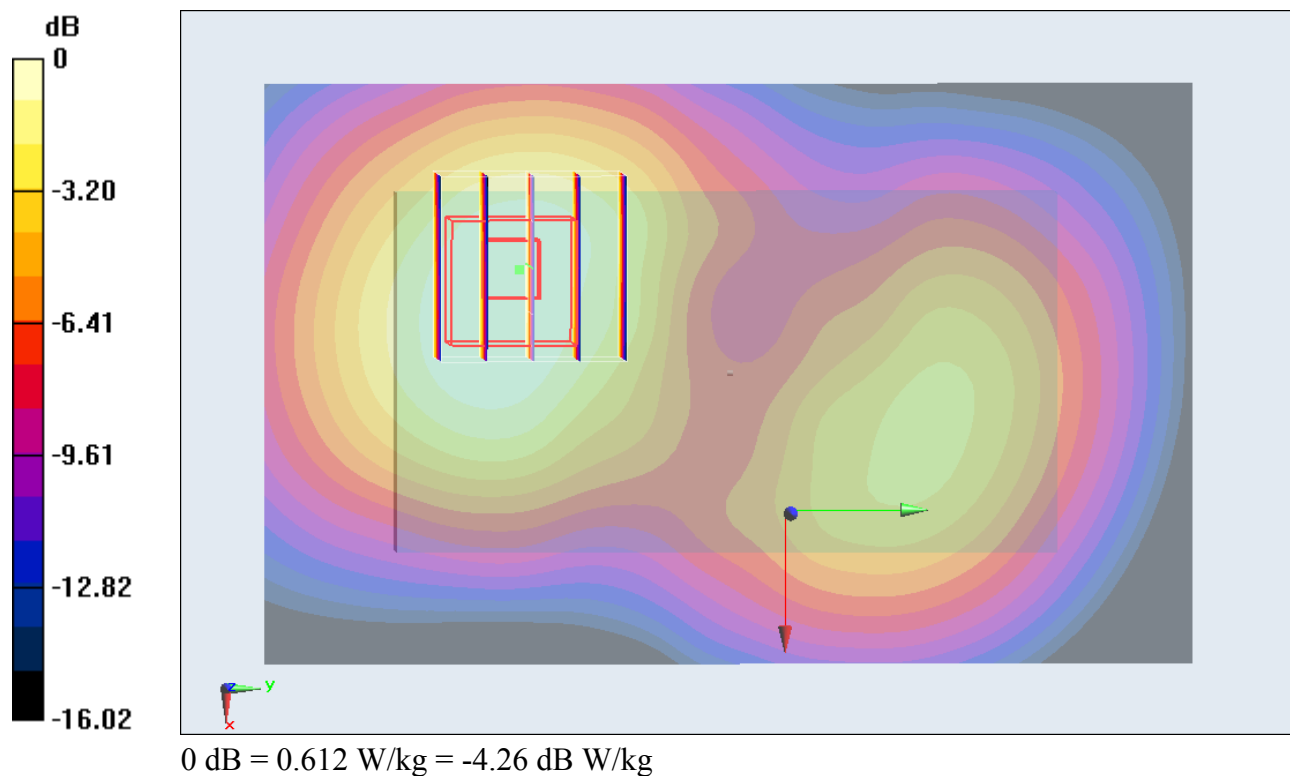
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.756 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.929 mW/g

SAR(1 g) = 0.571 mW/g; SAR(10 g) = 0.351 mW/g

Maximum value of SAR (measured) = 0.612 W/kg



#41_WCDMA II_RMC12.2K_Back_1.5cm_Ch9400;Headset**DUT: 290405**

Communication System: WCDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: MSL_1900_121030 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.523$ mho/m; $\epsilon_r = 53.341$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.5 °C ; Liquid Temperature : 21.5 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(7.13, 7.13, 7.13); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Right; Type: QD000P40CD; Serial: TP:1644
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch9400/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.862 W/kg

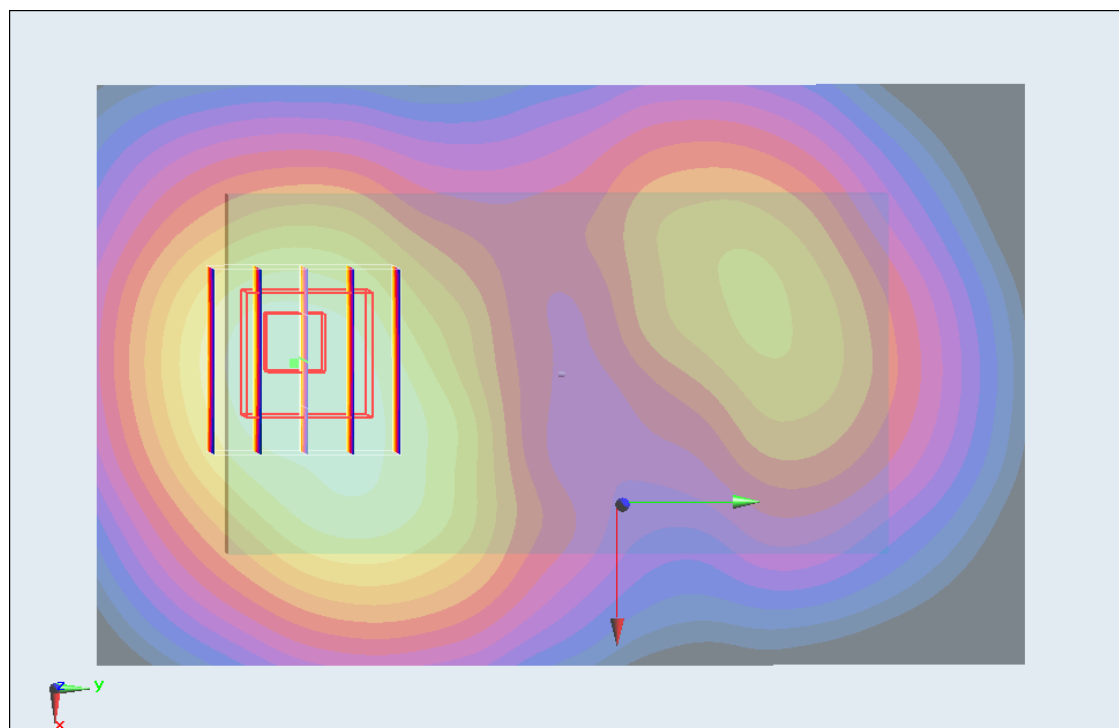
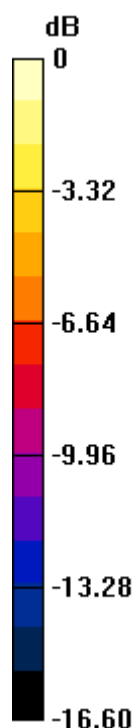
Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.914 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.270 mW/g

SAR(1 g) = 0.782 mW/g; SAR(10 g) = 0.466 mW/g

Maximum value of SAR (measured) = 0.842 W/kg



0 dB = 0.842 W/kg = -1.49 dB W/kg

#83_WLAN2.4G_802.11b_Front_1cm_Ch6**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: MSL_2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.996$ mho/m; $\epsilon_r = 53.979$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.59, 6.59, 6.59); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.0464 W/kg

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.435 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.061 mW/g

SAR(1 g) = 0.037 mW/g; SAR(10 g) = 0.022 mW/g

Maximum value of SAR (measured) = 0.0404 W/kg

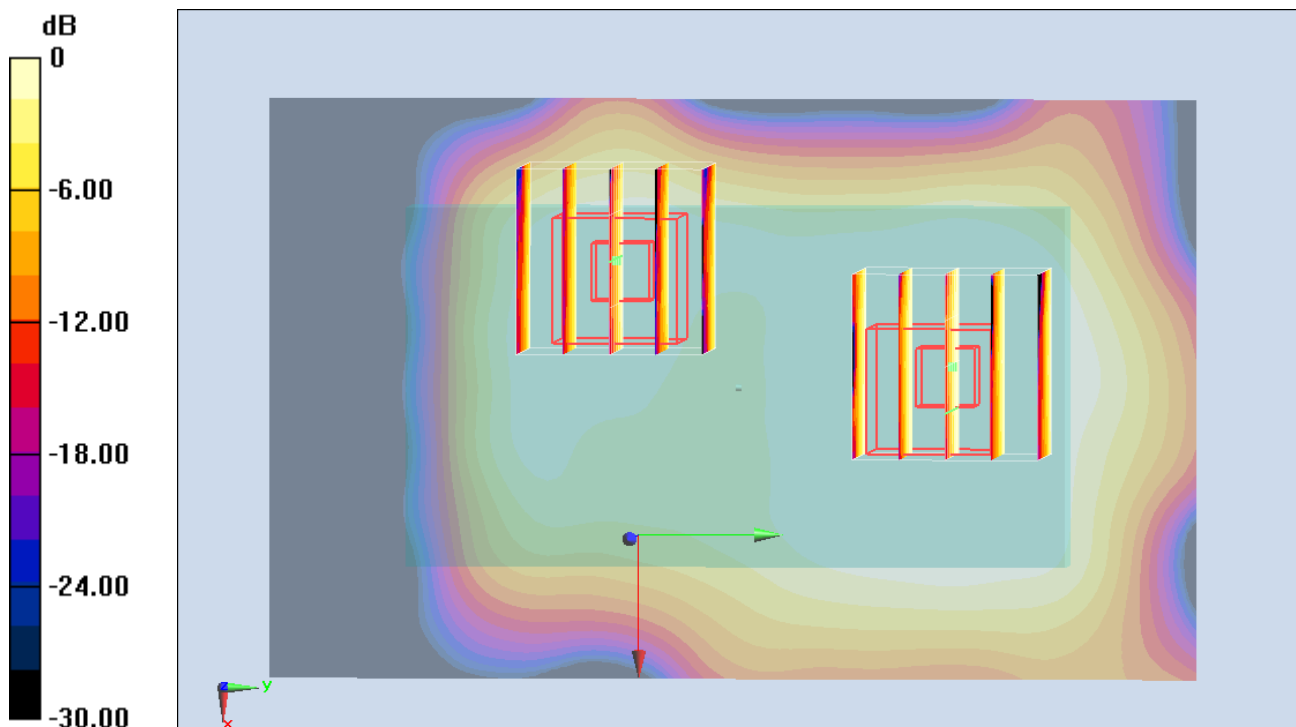
Ch6/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.435 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.034 mW/g

SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.0244 W/kg



0 dB = 0.0244 W/kg = -32.25 dB W/kg

For any 2nd peak found in area scan within 2 dB of the maximum peak and greater than 0.012W/kg, and is not within the zoom scan, zoom scan is repeated.

#84_WLAN2.4G_802.11b_Back_1cm_Ch6**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: MSL_2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.996$ mho/m; $\epsilon_r = 53.979$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.59, 6.59, 6.59); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.0723 W/kg

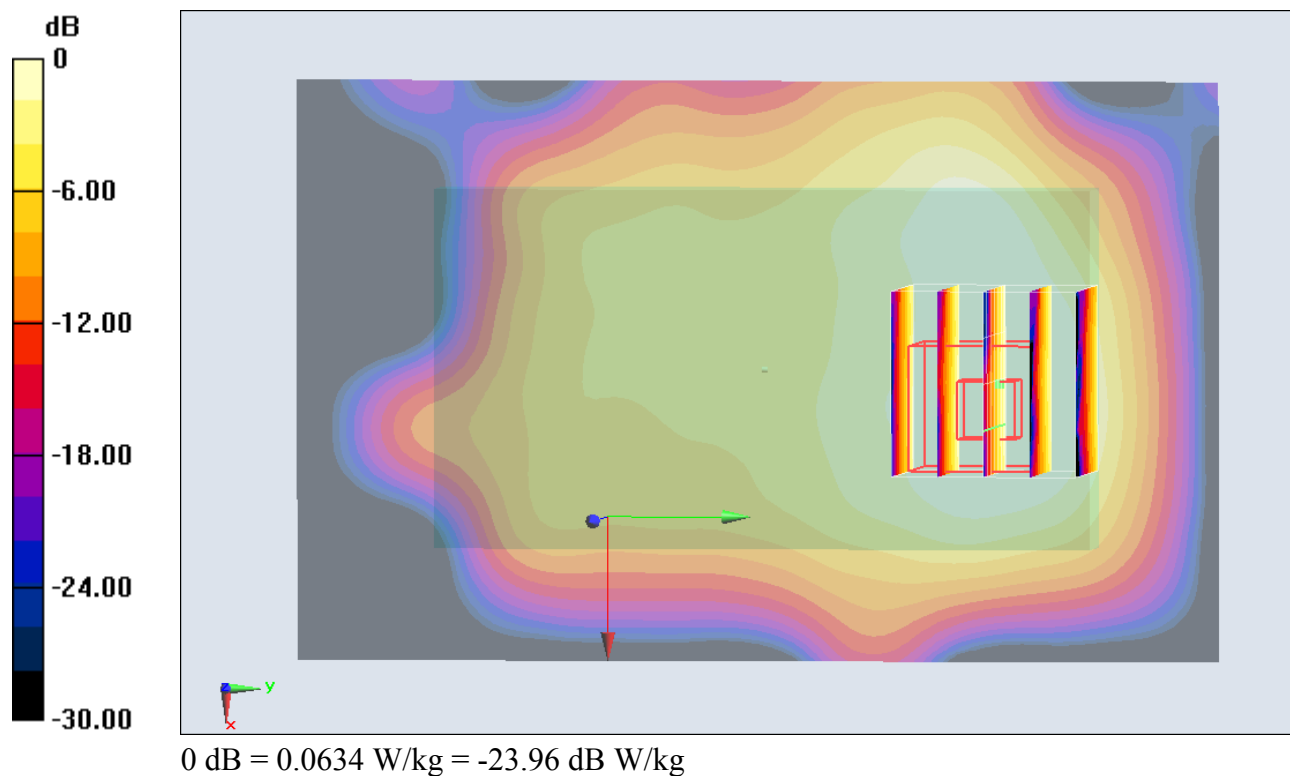
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.015 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.104 mW/g

SAR(1 g) = 0.058 mW/g; SAR(10 g) = 0.033 mW/g

Maximum value of SAR (measured) = 0.0634 W/kg



#84_WLAN2.4G_802.11b_Back_1cm_Ch6_2D**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: MSL_2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.996$ mho/m; $\epsilon_r = 53.979$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.59, 6.59, 6.59); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.0723 W/kg

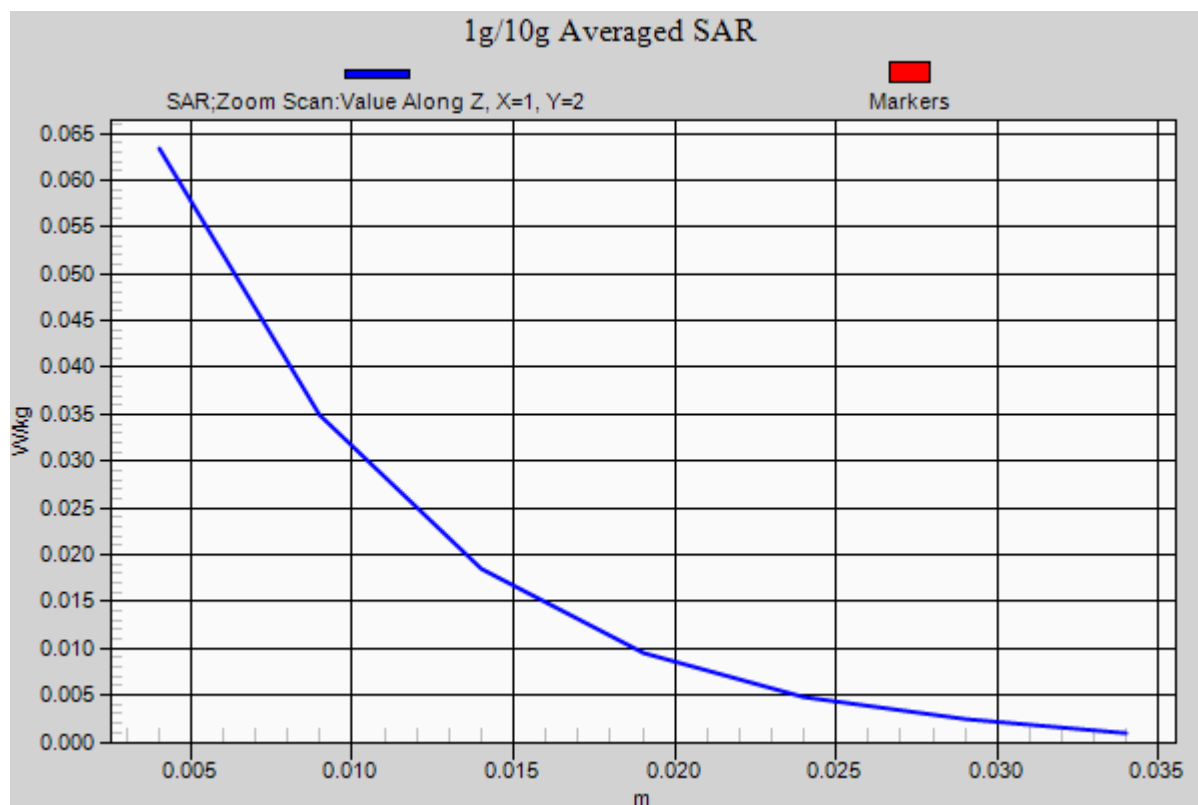
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.015 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.104 mW/g

SAR(1 g) = 0.058 mW/g; SAR(10 g) = 0.033 mW/g

Maximum value of SAR (measured) = 0.0634 W/kg



#85_WLAN2.4G_802.11b_Right Side_1cm_Ch6**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: MSL_2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.996$ mho/m; $\epsilon_r = 53.979$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.59, 6.59, 6.59); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (31x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.0454 W/kg

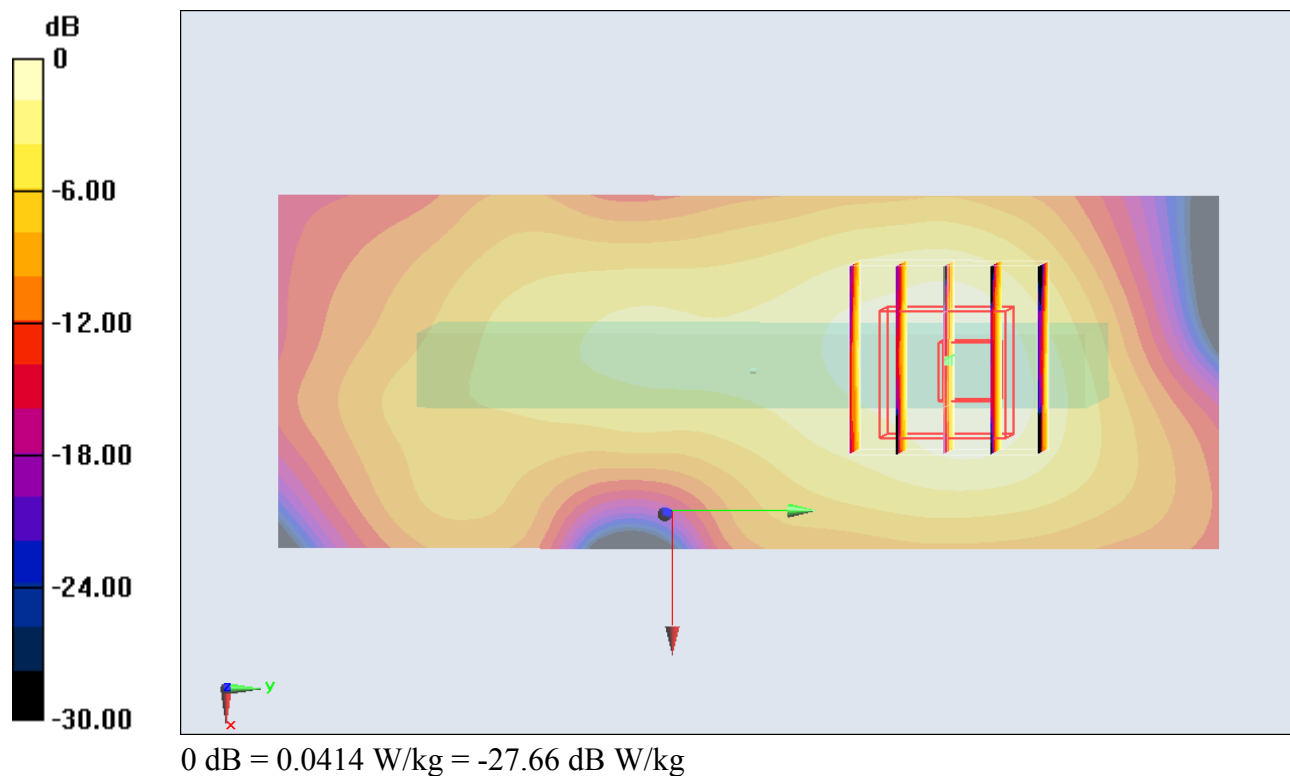
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.171 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.077 mW/g

SAR(1 g) = 0.039 mW/g; SAR(10 g) = 0.020 mW/g

Maximum value of SAR (measured) = 0.0414 W/kg



#86_WLAN2.4G_802.11b_Top Side_1cm_Ch6**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: MSL_2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.996$ mho/m; $\epsilon_r = 53.979$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.59, 6.59, 6.59); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (31x61x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.0370 W/kg

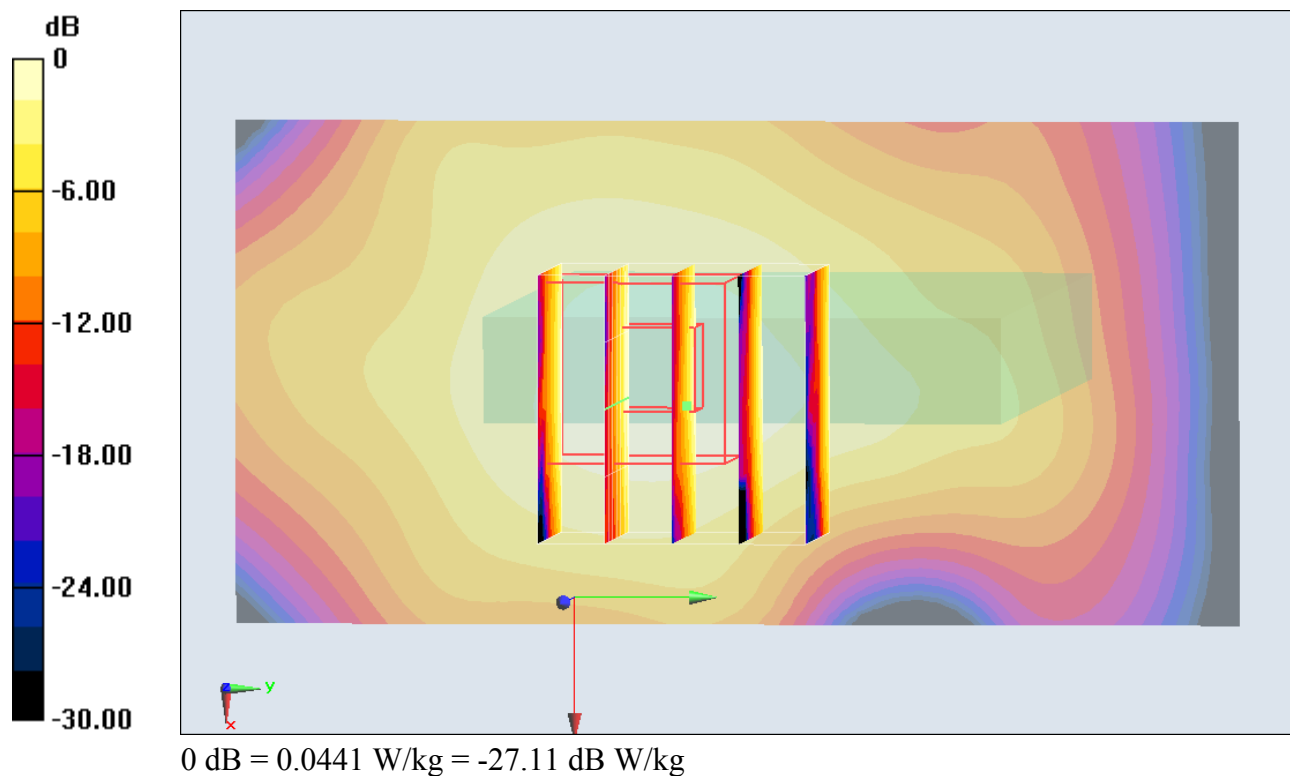
Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.374 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.080 mW/g

SAR(1 g) = 0.042 mW/g; SAR(10 g) = 0.022 mW/g

Maximum value of SAR (measured) = 0.0441 W/kg



#87_WLAN2.4G_802.11b_Front_1.5cm_Ch6;Headset**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: MSL_2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.996$ mho/m; $\epsilon_r = 53.979$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.59, 6.59, 6.59); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.0216 W/kg

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.911 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.030 mW/g

SAR(1 g) = 0.018 mW/g; SAR(10 g) = 0.010 mW/g

Maximum value of SAR (measured) = 0.0198 W/kg

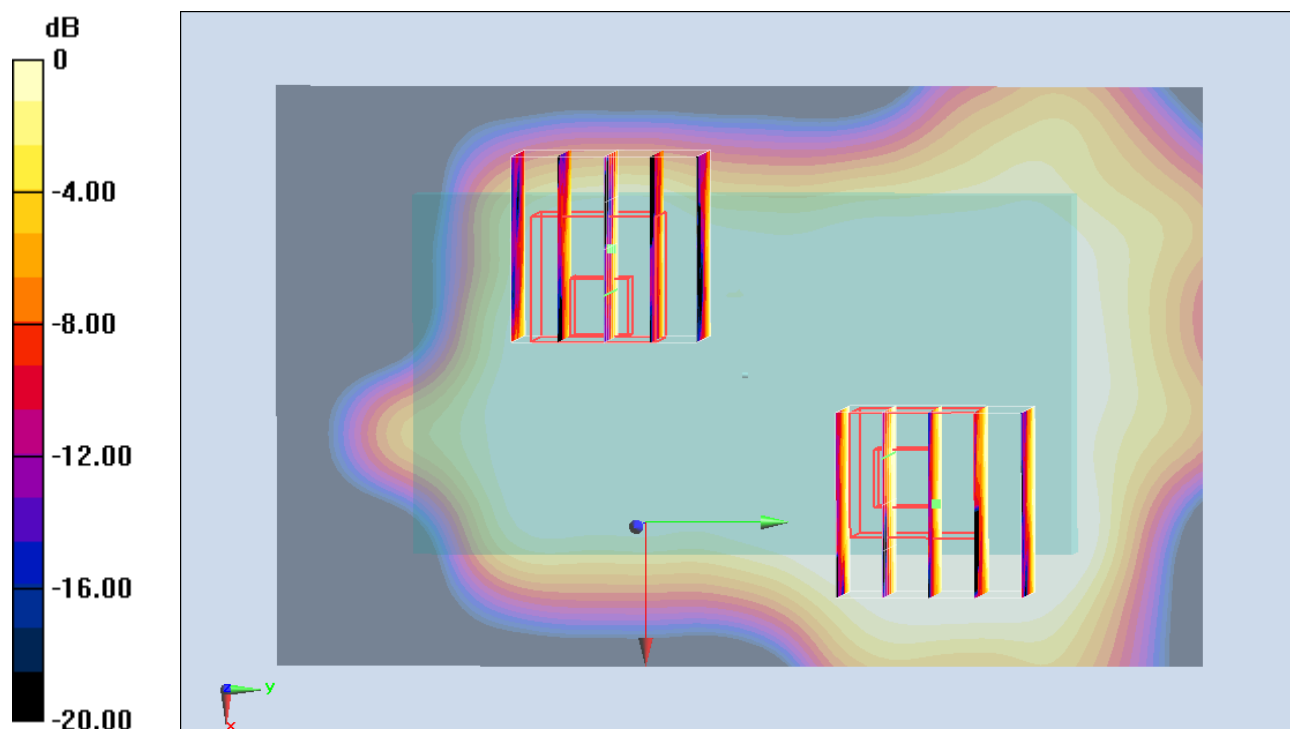
Ch6/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.911 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.016 mW/g

SAR(1 g) = 0.00879 mW/g; SAR(10 g) = 0.00467 mW/g

Maximum value of SAR (measured) = 0.0100 W/kg



0 dB = 0.0100 W/kg = -40.00 dB W/kg

For any 2nd peak found in area scan within 2 dB of the maximum peak and greater than 0.012W/kg, and is not within the zoom scan, zoom scan is repeated.

#88_WLAN2.4G_802.11b_Back_1.5cm_Ch6;Headset**DUT: 290405**

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: MSL_2450_121031 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.996$ mho/m; $\epsilon_r = 53.979$; ρ

$= 1000$ kg/m³

Ambient Temperature : 22.1 °C; Liquid Temperature : 21.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3801; ConvF(6.59, 6.59, 6.59); Calibrated: 2012/6/22;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2012/8/27
- Phantom: SAM Left; Type: QD000P40CD; Serial: TP:1542
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Ch6/Area Scan (51x81x1): Measurement grid: dx=20 mm, dy=20 mm

Maximum value of SAR (interpolated) = 0.0387 W/kg

Ch6/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.277 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.059 mW/g

SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.018 mW/g

Maximum value of SAR (measured) = 0.0367 W/kg

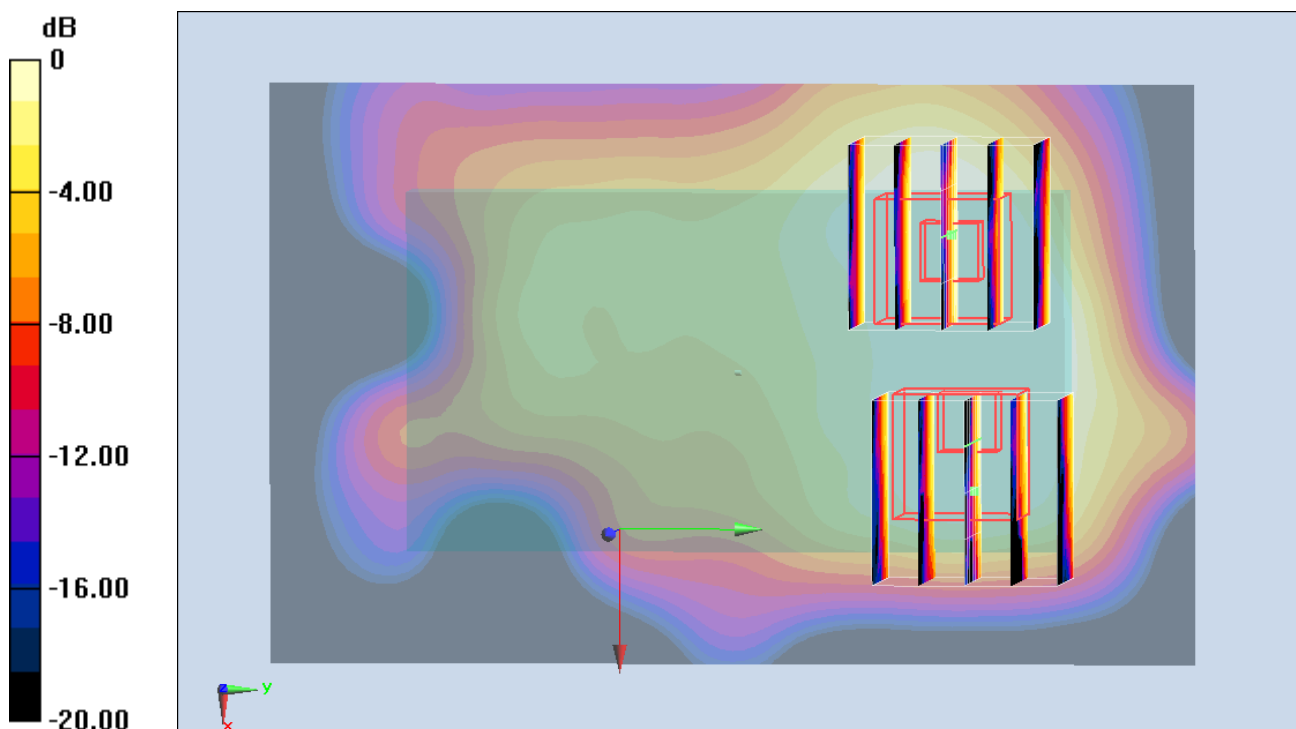
Ch6/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.277 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.124 mW/g

SAR(1 g) = 0.025 mW/g; SAR(10 g) = 0.013 mW/g

Maximum value of SAR (measured) = 0.0286 W/kg



0 dB = 0.0286 W/kg = -30.87 dB W/kg

For any 2nd peak found in area scan within 2 dB of the maximum peak and greater than 0.012W/kg, and is not within the zoom scan, zoom scan is repeated.



Appendix C. DASY Calibration Certificate

The DASY calibration certificates are shown as follows.