

Tejet



Report No. 2013SAR077

SAR TEST REPORT

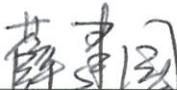
Report No. 2013SAR077

FCC ID: Q78-V865M
Applicant: ZTE Corporation
Product: WCDMA Digital Mobile Handset
Model: ZTE 865M
HW Version: V865M_V1AMB_A
SW Version: V865M_SACCommon_1.05
Issue Date: 2013-04-10

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Reviewed by:


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Approved by:



Remark: This report details the results of the testing carried out on the samples specified in this report, the results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. The report shall be reproduced except in full, without written approval of the Company.

Standards

| | |
|------------------------------|--|
| Applicable Limit Regulations | <p>ANSI/IEEE C95.1-2005 Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields. 3 kHz to 300 GHz</p> |
| | <p>ANSI/IEEE C95.3-2002 Recommended Practice For Measurements and Computations of Radio Frequency Electromagnetic Fields with Respect to Human Exposure to such Fields. 100 kHz-300 GHz</p> |
| Applicable Standards | <p>IEEE Std 1528™-2003: IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques</p> |
| | <p>OET Bulletin 65-(Edition 97-01) Supplement C (edition01-01) Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields---Additional Supplement C (Edition 01-01)Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions</p> |

Conclusion

Localized Specific Absorption Rate (SAR) of this equipment has been measured in all cases requested by the relevant standards above. Maximum localized SAR is below exposure limits as well.

Change History

| Version | Change Contents | Author | Date |
|----------------|--|---------------|-------------|
| V1.0 | First edition | Yin Xiaoming | 2013-03-20 |
| V2.0 | Page6, Add Statement of Compliance, Add BT SAR evaluation. | Yin Xiaoming | 2013-03-25 |
| V3.0 | Page14,correct the estimated SAR of BT. | Yin Xiaoming | 2013-04-01 |
| V4.0 | Page6/14, correct the reported SAR of each band. | Yin Xiaoming | 2013-04-07 |
| V56.0 | Page6/14/29/41,update the output power and estimated SAR of BT. | Yin Xiaoming | 2013-04-07 |

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1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for **ZTE CORPORATION GSM Dual-Mode Digital Mobile Phone ZTE S519//Movistar Kick** are as follows.

Highest standalone SAR Summary:

| Exposure Position | Frequency Band | Maximum reported 1g SAR (W/kg) | Highest reported 1g SAR (W/kg) |
|-------------------|----------------|--------------------------------|--------------------------------|
| Head | GSM835 | 0.181 | 0.579 |
| | GSM1900 | 0.225 | |
| | WCDMA BAND II | 0.579 | |
| | WCDMA BAND V | 0.196 | |
| | Wi-Fi (2.45G) | 0.069 | |
| Body-worn (10mm) | GSM835 | 0.523 | 1.046 |
| | GSM1900 | 0.975 | |
| | WCDMA BAND II | 1.046 | |
| | WCDMA BAND V | 0.355 | |
| | Wi-Fi (2.45G) | 0.206 | |

| Evaluation for Simultaneous SAR | | | |
|---------------------------------|-------------------|--------------------------------|--------------------------|
| Summation BAND | Exposure Position | Maximum reported 1g SAR (W/kg) | Summation SAR(1g) (W/kg) |
| WCDMA BAND II +WiFi | Head | 0.579+0.069=0.648 | <1.6 |
| | Body-worn(10mm) | 1.046+0.206=1.252 | <1.6 |
| WCDMA BAND II +BT | Head | 0.579+0.209=0.788 | <1.6 |
| | Body-worn(10mm) | 1.046+0.105=1.151 | <1.6 |

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits(1.6W/kg) specified in 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. Administrative Information

2.1 Project Information

Date of start test 2013-03-01
Date of end test: 2012-03-20

2.2 Test Laboratory Information

Company: Shanghai Tejet Communications Technology Co., Ltd Testing Center
Address: Room 6205-6208, Building 6, No.399 Cailun Rd. Zhangjiang Hi-Tech
 Park, Shanghai, China
Post Code: 210203
Tel: +86-21-61650880
Fax: +86-21-61650881
Website: www.tejet.cn

2.3 Test Environment

Temperature: 20°C~25 °C
Relative Humidity: 20%~70%

3. Client Information

3.1 Applicant information

Company Name: ZTE Corporation
Address: ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China
City: Shenzhen
Postal Code: 518057
Country: China
Telephone: +86-755-86360200
Fax: +86-755-86360298

3.2 Manufacturer Information

Company Name: ZTE Corporation
Address: ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China
City: Shenzhen
Postal Code: 518057
Country: China
Telephone: +86-755-86360200
Fax: +86-755-86360298

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

4.1 Information of EUT

| | | |
|---------------------------------|--|---------------|
| Device Type | Portable device | |
| Product | WCDMA Digital Mobile Handset | |
| Model | ZTE 865M | |
| Type | Identical Prototype | |
| Exposure Category | Uncontrolled environment / general population | |
| Device operation configuration: | | |
| Operating Mode(s): | GSM850 | |
| | PCS1900 | |
| | WCDMA BAND II/V | |
| Test Modulation | (GSM)GMSK, (WCDMA) QPSK | |
| GPRS Operation Class | B | |
| GPRS Multislot Class | 12 | |
| EDGE Multislot Class | 12 | |
| DTM Support | N/A | |
| AP Support | Yes | |
| Rated Output Power | GSM 850:33dBm | |
| | PCS1900: 30dBm | |
| | WCDMA BAND II/V: 24dBm | |
| Antenna Type: | Internal antenna | |
| Operating Frequency Range(s): | Band | Tx(MHz) |
| | GSM850 | 824.2~848.8 |
| | PCS1900 | 1850.2~1909.8 |
| | WCDMA BAND II | 1852.4~1907.6 |
| | WCDMA BAND V | 826.4~846.6 |
| Power Class | GSM850: 4, test with power level 5 | |
| | PCS1900: 1, test with power level 0 | |
| | WCDMA BAND II/V: 3, test with maximum output power | |

4.2 Identification of EUT

| EUT ID | SN or IMEI | HW Version | SW Version | Received Date |
|--------|-----------------|---------------|----------------------|---------------|
| TN03 | 864339010002142 | V865M_V1AMB_A | V865M_SACCommon_1.05 | 2013-02-28 |

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

4.3 Identification of AE

| AE ID* | Description |
|--------|----------------|
| AE1 | Battery |
| AE2 | Travel Adaptor |
| AE3 | Earphone |

AE1

| | |
|-----------------|--------------------|
| Model | Li3725T42P3h796342 |
| Manufacturer | ZTE CORPORATION |
| Capacitance | 2500mAh |
| Nominal Voltage | 3.7V |

AE2

| | |
|-------------------|------------------------|
| Model | STC-A22O50I1000USBA-C |
| Manufacturer | ZTE CORPORATION |
| Length of DC line | 0cm with USB connector |

AE3

| | |
|-------------------|-----------------------|
| Model | HMZ8-C4-OMTP-3.5-CMMB |
| Manufacturer | ZTE CORPORATION |
| Length of DC line | 135cm |

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

5. Operational Conditions during Test

5.1 General description of test procedures

A communication link is set up with a system simulator by air link, and a call is established. The absolute radio frequency channel is allocated to low, middle and high respectively in the case of each band. The EUT is commanded to operate at maximum transmitting power.

Connection to the EUT is established via air interface with CMU200, and the EUT is set to maximum output power by CMU200. The antenna connected to the output of the base station simulator shall be placed at least 50 cm away from the EUT. The signal transmitted by the simulator to the antenna feeding point shall be lower than the output power level of the EUT by at least 30dB.

The AP is supported,

According to KDB941225 D06,

1. The device size is 14.2 cm x 7.5 cm > 9 cm x 5 cm, so test separation distance was 10mm. The test separation distance is given by user manual
2. SAR must be tested for all surfaces and edges with a transmit antenna within 2.5cm, at a test separation distance of 10mm. And also the worst position of head are tested with Wi-Fi keep transmitting.

5.2 GSM Test Configuration

SAR test for GSM 850/1900, a communication link is set up with a system simulator by air link. Using CMU200 the power level is set to “5” in SAR of GSM850, set to “0” in SAR of GSM 1900, The tests in the band of GSM850/1900 are performed in the mode of voice and data transfer function.

5.3 WCDMA Test Configuration

SAR test for WCDMA BANDII/V, a communication link is set up with a system simulator by air link. Using CMU200 the power level is set to “3” in SAR of WCDMA BAND II/V. The tests in the band of WCDMA BAND II/V are performed in the mode of RMC 12.2kbps transfer function.

SAR for body exposure configurations in voice and data modes is measured using 12.2kbps RMC with TPC bits configured to all “1’s”. SAR for other spreading codes and multiple DPDCHn, when supported by the DYT, are not required when the maximum average output of each RF channel, for each spreading code and DPDCHn configuration, are less than 1/4 dB higher than those measured in 12.2 kbps RMC. Otherwise, SAR is measured on the maximum

output channel with an applicable RMC configuration for the corresponding spreading code or DPDCHn using the exposure configuration that results in the highest SAR with 12.2 kbps RMC. When more than 2 DPDCHn are supported by the DUT, it may be necessary to configure additional DPDCHn for a DUT using FTM(Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384kbps and 968 kbps RMC.

HSDPA Test Configuration

Body SAR is also measured for HSDPA when the maximum average output of each RF channel with HSDPA active is at least 1/4 dB higher than that measured without HSDPA using 12.2 kbps RMC or the maximum SAR 12.2 kbps RMC is above 75% of the SAR limit. Body SAR is measured using an FRC with H-Set 1 in Sub-test 1 and a 12.2 kbps RMC configured in Test Loop Mode 1, using the highest body SAR configuration in 12.2 kbps RMC without HSDPA. HSDPA should be configured according to the UE category of a test device. The number of HS-DSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set f. To maintain a consistent test configuration and stable transmission condition, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DODCH gain factors (β_c, β_d), and HS_DPCCH power offset parameters ($\Delta_{ACK}, \Delta_{NACK}, \Delta_{CQI}$) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS_PDSCHs and modulation used in the H-set.

Table 1: Subtest for UMTS Release 5 HSDPA

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

Note 1: $\Delta_{ACK}, \Delta_{NACK}, \Delta_{CQI}=8 \Leftrightarrow A_{hs}=\beta_{hs}/\beta_c=30/15 \Leftrightarrow \beta_{hs}=30/15c$
 Note 2: CM=1 for $\beta_c/\beta_d=12/15, \beta_{hs}/\beta_c=24/15$
 Note 3: For subset 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1,TF0) is achieved by setting the signaled gain factor for the reference TFC (TFC1,TF1) to $\beta_c=11/15$ and $\beta_d=15/15$.

Table 2: Settings of required H-set 1 QPSK in HSDPA mode

| Parameter | Unit | Value |
|-----------------------------|-----------|-------|
| Nominal Avg. Inf. Bit Rate | Kbps | 534 |
| Inter-TTI Distance | TTI's | 3 |
| Number of HARQ Processes | Processes | 2 |
| Information Bit Payload | Bitw | 3202 |
| Number Code Blocks | Blocks | 1 |
| Binary Channel Bits Per TTI | Bots | 4800 |
| Total Available SML's in UE | SML's | 19200 |

| | | |
|----------------------------------|-------|------|
| Number of SML's per HARQ Proc. | SML's | 9600 |
| Coding Rate | / | 0.67 |
| Number of Physical Channel Codes | Codes | 5 |
| Modulation | / | QPSK |

Table 3: HSDPA UE category

| HS-DSCH Category | Maximum HS_DSCH Codes Received | Minimum Inter-TTI Interval | Maximum Transport Bits/HS-DSCH | Total Channel |
|------------------|--------------------------------|----------------------------|--------------------------------|---------------|
| 1 | 5 | 3 | 7298 | 19200 |
| 2 | 5 | 3 | 7298 | 28800 |
| 3 | 5 | 2 | 7298 | 28800 |
| 4 | 5 | 2 | 7298 | 38400 |
| 5 | 5 | 1 | 7298 | 57600 |
| 6 | 5 | 1 | 7298 | 67200 |
| 7 | 10 | 1 | 14411 | 115200 |
| 8 | 10 | 1 | 14411 | 134400 |
| 9 | 15 | 1 | 25251 | 172800 |
| 1 2 | 15 | 1 | 27952 | 172800 |
| 1 1 | 5 | 2 | 3630 | 14400 |
| 1 2 | 5 | 1 | 3630 | 28800 |
| 1 3 | 15 | 1 | 34800 | 259200 |
| 1 4 | 15 | 1 | 42196 | 259200 |
| 1 5 | 15 | 1 | 23370 | 345600 |
| 1 6 | 15 | 1 | 27952 | 345600 |

HSUPA Test Configuration

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

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

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{br}/\beta_c = 24/15$. 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 signaled 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 signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Table 5.1g.

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

applicable only if Maximum Power Reduction (MPR) is implemented according to Cubic Metric (CM) requirements.³⁷

5.4 Bluetooth Test Configuration

The Bluetooth transmitter of the device under test can be excluded from stand-alone and simultaneous SAR evaluation, per the requirements from FCC KDB 648474, as follows:

1. The separation between the Bluetooth antenna and the main antenna is 8.3 cm > 5cm
2. The maximum conducted output power of Bluetooth is 7dBm = 5.01mW $P_{max} = 19mW$

According to FCC KDB648474, stand along SAR and Simultaneous Transmission SAR are not required.

According to FCC KDB447498v05, Apppendix A,

For 2450MHz, 10mm test distance, $P_{max} = 19mW$

For Simultaneous Transmission analysis, Bluetooth SAR is estimated per KDB 447498 D01v05 based on the formula below.

$(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm}) \cdot [\sqrt{f(\text{GHz})/x}] \text{ W/kg}$ for test separation distances $\leq 50 \text{ mm}$;

where $x = 7.5$ for 1-g SAR, and $x = 18.75$ for 10-g SAR.

0.4 W/kg for 1-g SAR and 1.0 W/kg for 10-g SAR, when the test separation distances is $> 50 \text{ mm}$

| Bluetooth | Turn-up Maximum Power(dBm) | Head 0mm gap | Body-worn 10mm gap |
|---------------------|----------------------------|--------------|--------------------|
| Estimated SAR(W/kg) | 7 | 0.209 | 0.105 |

According to FCC KDB447498v05, Apppendix D

For 2450MHz, 10mm test distance ,SAR1g (BT) = 0.105 W/Kg

5.5 Wi-Fi Test Configuration

The Wi-Fi is set to different data rate and channels by the software.

According to KDB648474:

1. The separation between the Wi-Fi antenna and the main antenna is $8.3\text{cm} \geq 5\text{cm}$
 2. The maximum conducted output power of Wi-Fi is $25.64\text{mW} > P(\text{max}) = 19\text{mW}$
- So stand along SAR is needed.

According to KDB248227

SAR is not required for 802.11g channels when the maximum average output power is less than 0.25dB higher than that measured on the corresponding 802.11b channels.



Picture of antennas

| Band | Position for test (yes or n/a) | | | | | |
|------|--------------------------------|--------|--------------------|-----------|--------------------|--------------------|
| | Top | Bottom | Leftside | Rightside | Front | Back |
| WWAN | yes | yes | yes | yes | yes | n/a 8.3cm>2.5cm |
| WLAN | yes | yes | n/a 4.5cm>2.5cm | yes | n/a 8.3cm>2.5cm | yes |

SAR must be tested for all surfaces and edges with a transmit antenna within 2.5cm, at a test separation distance of 10mm. And also the worst position of head are tested with Wi-Fi keep transmitting.

Top—toward pantom

Bottom---towards ground

6. SAR Measurements system configuration

6.1 SAR Measurement set-up

The DASY5 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Staubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic _field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The generic twin phantom enabling the testing of left-hand and right-hand usage.
- The device holder for handheld mobile phones.
- Tissue simulating liquid mixed according to the given recipes.
- System validation dipoles allowing to validate the proper functioning of the system.

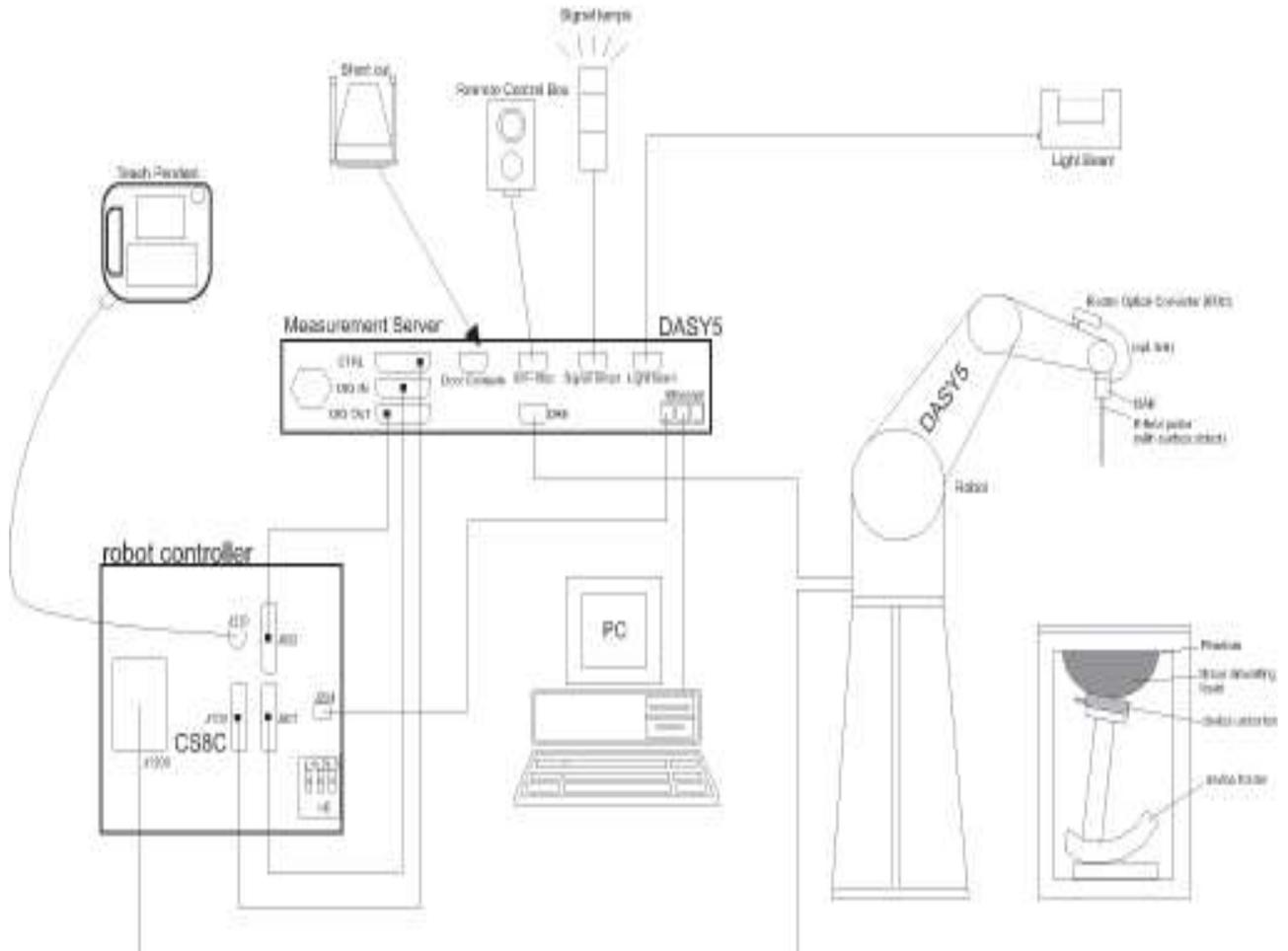


Figure 5-1 SAR Lab Test Measurement Set-up

6.2 DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe ES3DV3 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

6.2.1 Es3DV3 Probe Specification

| | |
|---------------|---|
| Construction | Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE) |
| Calibration | Basic Broad Band Calibration in air Conversion Factors (CF) for HSL 850 and HSL 1750 Additional CF for other liquids and frequencies upon request |
| Frequency | 10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz) |
| Directivity | ± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis) |
| Dynamic Range | 10 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g) |

| | |
|-------------|--|
| Dimensions | Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm |
| Application | High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%. |



Figure 5-2.ES3DV3 E-field Probe



Figure 5-3. ES3DV3 E-field probe

6.2.2 E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than $\pm 10\%$. The spherical isotropy was evaluated and found to be better than $\pm 0.25\text{dB}$. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies below 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

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

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

Where: Δt = Exposure time (30 seconds),
 C = Heat capacity of tissue (brain or muscle),
 ΔT = Temperature increase due to RF exposure.
 Or

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

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m³).

6.3 Other Test Equipment

6.3.1 Device Holder for Transmitters

The DASY5 device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales are the ear reference point (ERP). Thus the device needs no repositioning when changing the angles. 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.



Figure 5-4. Device Holder

6.3.2 Phantom

The Generic Twin Phantom is constructed of a fiberglass shell integrated in a wooden frame. The shape of the shell is based on data from an anatomical study designed to determine the maximum exposure in at least 90% of all users. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents the evaporation of the liquid. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot.

| | |
|-----------------|---------------------------------|
| Shell Thickness | 2±0.1 mm |
| Filling Volume | Approx. 20 liters |
| Dimensions | 810 x 1000 x 500 mm (H x L x W) |



Figure 5-5. Generic Twin Phantom

6.4 Scanning procedure

The DASY5 installation includes predefined files with recommended procedures for measurements and validation. They are read-only document files and destined as fully defined but unmeasured masks. All test positions (head or body-worn) are tested with the same configuration of test steps differing only in the grid definition for the different test positions.

- The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure. The indicated drift is mainly the variation of the DUT’s output power and should vary max. $\pm 5\%$.

- The “surface check” measurement tests the optical surface detection system of the DASY5 system by repeatedly detecting the surface with the optical and mechanical surface detector and comparing the results. The output gives the detecting heights of both systems, the difference between the two systems and the standard deviation of the detection repeatability. Air bubbles or refraction in the liquid due to separation of the sugar-water mixture gives poor repeatability (above $\pm 0.1\text{mm}$). To prevent wrong results tests are only executed when the liquid is free of air bubbles. The difference between the optical surface detection and the actual surface depends on the probe and is specified with each probe. (It does not depend on the surface reflectivity or the probe angle to the surface within $\pm 30^\circ$.)

- Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values before running a detailed measurement around the hot spot. Before starting the area scan a grid spacing of 15 mm x 15 mm is set. During the scan the distance of the probe to the phantom remains unchanged.

After finishing area scan, the field maxima within a range of 2 dB will be ascertained.

- Zoom Scan

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

- Spatial Peak Detection

The procedure for spatial peak SAR evaluation has been implemented and can determine values of masses of 1g and 10g, as well as for user-specific masses. The DASY5 system allows evaluations that combine measured data and robot positions, such as:

- maximum search
- extrapolation
- boundary correction
- peak search for averaged SAR

During a maximum search, global and local maxima searches are automatically performed in 2-D after each Area Scan measurement with at least 6 measurement points. It is based on the evaluation of the local SAR gradient calculated by the Quadratic Shepard's method. The algorithm will find the global maximum and all local maxima within -2 dB of the global maxima for all SAR distributions.

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. Several measurements at different distances are necessary for the extrapolation. Extrapolation routines require at least 10 measurement points in 3-D space.

They are used in the Zoom Scan to obtain SAR values between the lowest measurement points and the inner phantom surface. The routine uses the modified Quadratic Shepard's method for extrapolation. For a grid using 7x7x7 measurement points with 5mm resolution amounting to 343 measurement points, the uncertainty of the extrapolation routines is less than 1% for 1g and 10g cubes.

- A Z-axis scan measures the total SAR value at the x-and y-position of the maximum SAR value found during the cube 7x7x7 scan. The probe is moved away in z-direction from the bottom of the SAM phantom in 5mm steps.

6.5 Data Storage and Evaluation

6.5.1 Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters

for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension “.DA4”. The 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 incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated. The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [mW/g], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

6.5.2 Data Evaluation by SEMCAD

The SEMCAD software 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 | 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 | |
| | - Density | |

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 DASY5 components. In the direct measuring mode of the multimeter 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:

$$V_i = U_i + U_i^2 \cdot c f / d c p_i$$

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:

E-field probes: $E_i = (V_i / Norm_i \cdot ConvF)^{1/2}$

H-field probes: $H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1} f + a_{i2} f^2) / f$

With **V_i** = compensated signal of channel i (i = x, y, z)

Norm_i = sensor sensitivity of channel i (i = x, y, z)

[mV/(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):

$$E_{tot} = (E_x^2 + E_y^2 + E_z^2)^{1/2}$$

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

$$SAR = (E_{tot}^2 \cdot \epsilon) / (\rho \cdot 1000)$$

with **SAR** = local specific absorption rate in mW/g

E_{tot} = total field strength in V/m

= conductivity in [mho/m] or [Siemens/m]

= equivalent tissue density in g/cm³

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = E_{tot}^2 / 3770 \quad \text{or} \quad P_{pwe} = H_{tot}^2 \cdot 37.7$$

with P_{pwe} = equivalent power density of a plane wave in mW/cm^2

E_{tot} = total electric field strength in V/m

H_{tot} = total magnetic field strength in A/m

6.6 System check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulates were measured every day using the dielectric probe kit and the network analyzer. A system check measurement was made following the determination of the dielectric parameters of the simulates, using the dipole validation kit. A power level of 250 mW was supplied to the dipole antenna, which was placed under the flat section of the twin SAM phantom. The system check results (dielectric parameters and SAR values) are given in the 6.2.1 and 6.2.2

System check results have to be equal or near the values determined during dipole calibration with the relevant liquids and test system ($\pm 10\%$). System check is performed regularly on all frequency bands where tests are performed with the DASY 5 system.

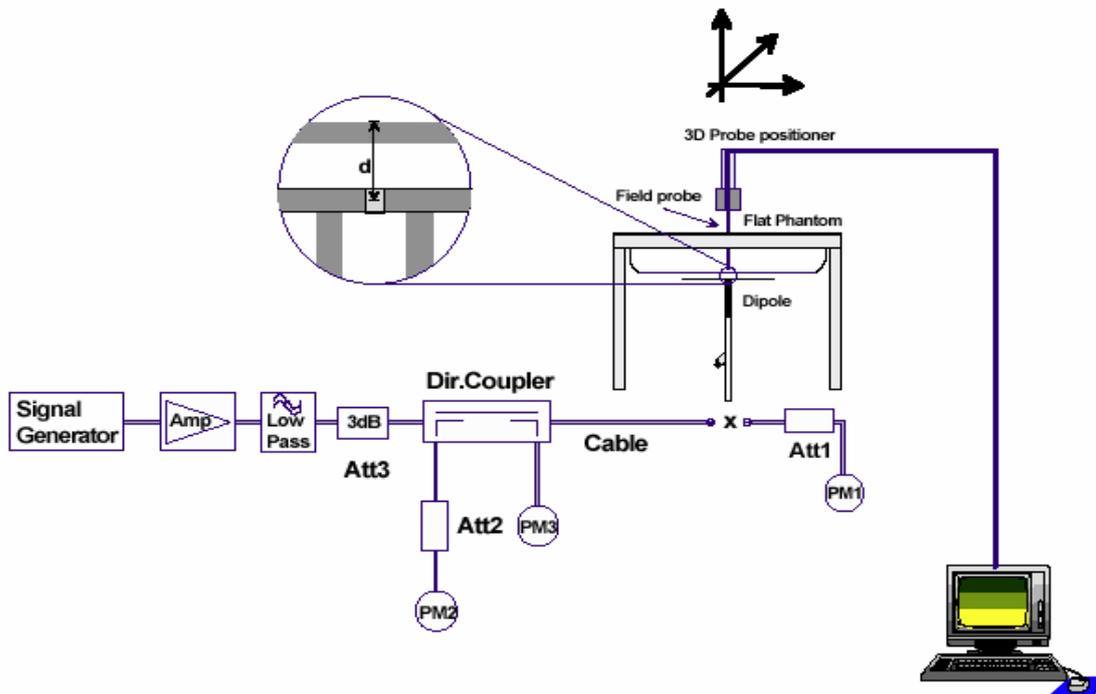


Figure 5-6. System Check Set-up

6.7 Equivalent Tissues

The liquid is consisted of water, salt, Glycol, Sugar, Preventol and Cellulose. The liquid has previously been proven to be suited for worst-case. The Table show the detail solution. It's

satisfying the latest tissue dielectric parameters requirements proposed by the OET 65.

| | |
|---|--|
| MIXTURE% | FREQUENCY(head) 835MHz |
| Water | 40.4 |
| Sugar | 56 |
| Salt | 2.5 |
| Preventol | 0.1 |
| Cellulose | 1.0 |
| Dielectric Parameters Target Value | f=835MHz $\epsilon=41.5$ $\sigma=0.90$ |
| MIXTURE% | FREQUENCY(body) 835MHz |
| Water | 52.5 |
| Sugar | 45 |
| Salt | 1.4 |
| Preventol | 0.1 |
| Cellulose | 1.0 |
| Dielectric Parameters Target Value | f=835MHz $\epsilon=55.2$ $\sigma=0.97$ |
| MIXTURE% | FREQUENCY(head)1900MHz |
| Water | 55.242 |
| Glycol monobutyl | 44.452 |
| Salt | 0.306 |
| Dielectric Parameters Target Value | f=1900MHz $\epsilon=40.0$ $\sigma=1.40$ |
| MIXTURE% | FREQUENCY(body)1900MHz |
| Water | 69.91 |
| Glycol monobutyl | 29.96 |
| Salt | 0.13 |
| Dielectric Parameters Target Value | f=1900MHz $\epsilon=53.3$ $\sigma=1.52$ |
| MIXTURE% | FREQUENCY(head)2450MHz |
| Water | 56 |
| Glycol monobutyl | 44 |
| Salt | 0.00 |
| Dielectric Parameters Target Value | f=2450MHz $\epsilon=39.2$ $\sigma=1.8$ |

| MIXTURE% | FREQUENCY(body)2450MHz |
|---------------------------------------|---|
| Water | 70 |
| Glycol monobutyl | 30 |
| Salt | 0 |
| Dielectric Parameters Target Value | f=2450MHz $\epsilon=52.7$ $\sigma=1.95$ |

7. Summary of Test Results

7.1 Conducted Output Power Measurement

7.1.1 Summary

The DUT is tested using a CMU200 communications tester as controller unit to set test channels and maximum output power to the DUT, as well as for measuring the conducted power.

Conducted output power was measured using an integrated RF connector and attached RF cable.

This result contains conducted output power for the EUT.

7.1.2 Conducted Power Results

| GSM850 | | Conducted output power(dBm) | | | | | | |
|----------------|------------------|-----------------------------|----------|----------|-------|--------------|--------------|--------------|
| | | low | middle | high | | | | |
| | | CH128 | CH189 | CH251 | | | | |
| | | 824.2MHz | 836.6MHz | 848.8MHz | | | | |
| GSM | | 32.3 | 32.5 | 32.6 | (dB) | CH128 | CH189 | CH251 |
| GPRS | 1 TX-slot result | 32.3 | 32.5 | 32.6 | -9.03 | 23.27 | 23.47 | 23.57 |
| | 2 TX-slot result | 31.2 | 31.5 | 31.1 | -6.02 | 25.18 | 25.48 | 25.08 |
| | 3 TX-slot result | 29.6 | 29.7 | 29.8 | -4.26 | 25.34 | 25.44 | 25.54 |
| | 4 TX-slot result | 28.9 | 29.0 | 29.1 | -3.01 | 25.89 | 25.99 | 26.09 |
| EDGE (GMSK) | 1 TX-slot result | 32.2 | 32.4 | 32.5 | -9.03 | 23.17 | 23.37 | 23.47 |
| | 2 TX-slot result | 31.3 | 31.5 | 31.6 | -6.02 | 25.28 | 25.48 | 25.58 |
| | 3 TX-slot result | 29.6 | 29.7 | 29.8 | -4.26 | 25.34 | 25.44 | 25.54 |
| | 4 TX-slot result | 28.8 | 28.9 | 29.1 | -3.01 | 25.79 | 25.89 | 26.09 |

Note: To average the power, the division factor is as follows:

1 TX-slot =1 transmit time slot of 8 time slots

=>conducted power divided by (8/1) =>-9.03dB

2 TX-slot =2 transmit time slot of 8 time slots

=>conducted power divided by (8/2) =>-6.02dB

3 TX-slot =3 transmit time slot of 8 time slots

=>conducted power divided by (8/3) =>-4.26dB

4 TX-slot =4 transmit time slot of 8 time slots

=>conducted power divided by (8/4) =>-3.01dB

| GSM1900 | | Conducted output power(dBm) | | | | | | |
|----------------|------------------|-----------------------------|---------|-----------|-------|--------------|--------------|--------------|
| | | low | middle | high | | | | |
| | | CH512 | CH661 | CH810 | | | | |
| | | 1850.2MHz | 1880MHz | 1909.8MHz | | | | |
| GSM | | 29.6 | 29.4 | 29.3 | (dB) | CH512 | CH661 | CH810 |
| GPRS | 1 TX-slot result | 29.6 | 29.4 | 29.3 | -9.03 | 20.57 | 20.37 | 20.27 |
| | 2 TX-slot result | 28.6 | 28.5 | 28.3 | -6.02 | 22.58 | 22.48 | 22.28 |
| | 3 TX-slot result | 26.8 | 26.7 | 26.4 | -4.26 | 22.54 | 22.44 | 22.14 |
| | 4 TX-slot result | 25.2 | 25.3 | 25.1 | -3.01 | 22.19 | 22.29 | 22.09 |
| EDGE (GMSK) | 1 TX-slot result | 29.6 | 29.4 | 29.3 | -9.03 | 20.57 | 20.37 | 20.27 |
| | 2 TX-slot result | 28.6 | 28.4 | 28.3 | -6.02 | 22.58 | 22.38 | 22.28 |
| | 3 TX-slot result | 26.8 | 26.6 | 26.5 | -4.26 | 22.54 | 22.34 | 22.24 |
| | 4 TX-slot result | 25.2 | 25.3 | 25.1 | -3.01 | 22.19 | 22.29 | 22.09 |

Note: To average the power, the division factor is as follows:

1 TX-slot =1 transmit time slot of 8 time slots

=>conducted power divided by (8/1) =>-9.03dB

2 TX-slot =2 transmit time slot of 8 time slots

=>conducted power divided by (8/2) =>-6.02dB

3 TX-slot =3 transmit time slot of 8 time slots

=>conducted power divided by (8/3) =>-4.26dB

4 TX-slot =4 transmit time slot of 8 time slots

=>conducted power divided by (8/4) =>-3.01dB

| WCDMA BAND II | | Conducted Output power (dBm) | | |
|---------------|------------|------------------------------|---------|-----------|
| | | low | middle | high |
| | | CH9262 | CH9400 | CH9538 |
| | | 1852.4MHz | 1800MHz | 1907.6MHz |
| 12.2kbps RMC | | 23.22 | 23.15 | 23.02 |
| HSDPA | SUB-TEST 1 | 22.94 | 22.90 | 22.88 |
| | SUB-TEST 2 | 20.48 | 20.40 | 20.38 |
| | SUB-TEST 3 | 19.44 | 19.37 | 19.32 |
| | SUB-TEST 4 | 18.66 | 18.73 | 18.87 |
| HSUPA | SUB-TEST 1 | 22.74 | 22.81 | 22.69 |
| | SUB-TEST 2 | 20.26 | 20.56 | 20.38 |
| | SUB-TEST 3 | 21.61 | 21.32 | 21.43 |
| | SUB-TEST 4 | 20.40 | 20.58 | 20.55 |
| | SUB-TEST 5 | 22.04 | 22.11 | 21.95 |

| WCDMA BAND V | | Conducted Output power (dBm) | | |
|--------------|------------|------------------------------|----------|----------|
| | | low | middle | high |
| | | CH4132 | CH4183 | CH4233 |
| | | 826.4 MHz | 836.6MHz | 846.6MHz |
| 12.2kbps RMC | | 23.16 | 23.21 | 23.38 |
| HSDPA | SUB-TEST 1 | 22.94 | 23.01 | 23.14 |
| | SUB-TEST 2 | 20.39 | 20.46 | 20.54 |
| | SUB-TEST 3 | 19.54 | 19.52 | 19.64 |
| | SUB-TEST 4 | 18.54 | 18.53 | 18.67 |
| HSUPA | SUB-TEST 1 | 22.15 | 22.20 | 22.34 |
| | SUB-TEST 2 | 20.47 | 20.21 | 20.46 |
| | SUB-TEST 3 | 21.25 | 21.57 | 21.79 |
| | SUB-TEST 4 | 20.11 | 20.77 | 20.23 |
| | SUB-TEST 5 | 21.89 | 21.87 | 22.15 |

BlueTooth

| channel | Ch0 2402MHz | Ch39 2441MHz | Ch78 2480MHz |
|----------------------------------|----------------|-----------------|-----------------|
| Peak conducted output power(dBm) | 6.50 | 6.73 | 6.97 |

Wi-Fi

Peak Conducted Power

802. 11b (dBm)

| Channel\data rate | | | 1Mbps | 2Mbps | 5.5Mbps | 11Mbps |
|-------------------|---------|----|-------|-------|---------|--------|
| low | 2412MHz | 1 | 16.76 | 16.69 | 16.07 | 15.74 |
| middle | 2437MHz | 6 | 16.64 | 15.95 | 16.21 | 16.17 |
| high | 2462MHz | 11 | 16.89 | 16.03 | 16.35 | 15.80 |

802. 11g (dBm)

| Channel\data rate | | | 6Mbps | 9Mbps | 12Mbps | 18Mbps | 24Mbps | 36Mbps | 48Mbps | 54Mbps |
|-------------------|---------|----|-------|-------|--------|--------|--------|--------|--------|--------|
| low | 2412MHz | 1 | 16.68 | 16.52 | 16.69 | 16.46 | 15.83 | 15.44 | 14.97 | 14.75 |
| middle | 2437MHz | 6 | 16.66 | 16.61 | 16.35 | 16.12 | 15.86 | 15.62 | 15.12 | 14.92 |
| high | 2462MHz | 11 | 17.03 | 16.78 | 16.50 | 16.57 | 15.99 | 14.68 | 15.20 | 15.22 |

802. 11n (20M) (dBm)

| Channel\data rate | | | MCS0 | MCS1 | MCS2 | MCS3 | MCS4 | MCS5 | MCS6 | MCS7 |
|-------------------|---------|----|-------|-------|-------|-------|-------|-------|-------|-------|
| low | 2412MHz | 1 | 14.84 | 14.81 | 12.66 | 12.54 | 11.98 | 12.94 | 11.62 | 12.58 |
| middle | 2437MHz | 6 | 14.71 | 14.67 | 14.74 | 14.07 | 13.71 | 13.30 | 13.47 | 12.95 |
| high | 2462MHz | 11 | 15.03 | 14.83 | 14.94 | 14.26 | 13.83 | 13.60 | 13.60 | 13.05 |

Average Conducted Power

802.11b (dBm)

| Channel\data rate | | | 1Mbps | 2Mbps | 5.5Mbps | 11Mbps |
|-------------------|---------|----|-------|-------|---------|--------|
| low | 2412MHz | 1 | 14.09 | 14.08 | 13.06 | 13.32 |
| middle | 2437MHz | 6 | 13.48 | 13.34 | 13.20 | 13.75 |
| high | 2462MHz | 11 | 13.56 | 13.42 | 13.34 | 13.38 |

802.11g (dBm)

| Channel\data rate | | | 6Mbps | 9Mbps | 12Mbps | 18Mbps | 24Mbps | 36Mbps | 48Mbps | 54Mbps |
|-------------------|---------|----|-------|-------|--------|--------|--------|--------|--------|--------|
| low | 2412MHz | 1 | 13.17 | 12.92 | 13.34 | 12.84 | 12.54 | 12.04 | 11.50 | 11.24 |
| middle | 2437MHz | 6 | 13.15 | 13.01 | 13.00 | 12.50 | 12.57 | 12.22 | 11.65 | 11.41 |
| high | 2462MHz | 11 | 13.52 | 13.28 | 13.15 | 12.95 | 12.70 | 11.28 | 11.73 | 11.71 |

802.11n (20M) (dBm)

| Channel\data rate | | | MCS0 | MCS1 | MCS2 | MCS3 | MCS4 | MCS5 | MCS6 | MCS7 |
|-------------------|---------|----|-------|-------|-------|-------|-------|-------|-------|-------|
| low | 2412MHz | 1 | 12.08 | 11.88 | 11.74 | 11.56 | 11.28 | 10.81 | 10.68 | 10.53 |
| middle | 2437MHz | 6 | 11.72 | 11.65 | 11.36 | 11.2 | 10.92 | 10.64 | 10.55 | 10.51 |
| high | 2462MHz | 11 | 11.38 | 11.29 | 11.09 | 10.85 | 10.68 | 10.37 | 10.32 | 10.18 |

7.2 Test Results

7.2.1. Dielectric Performance

Dielectric Performance of Tissue Simulating Liquid

| Frequency | Description | Dielectric Parameters ϵ_r | σ (s/m) | temp °C |
|-----------------------|---------------------------------|------------------------------------|--------------------|---------|
| 835MHz (head) | Target value 5% window | 41.5 39.43-43.58 | 0.90 0.89- 0.99 | / |
| | Measurement value 2013-03-12 | 42.85 | 0.91 | 21.8 |
| | Measurement value 2013-03-13 | 43.05 | 0.90 | 21.7 |
| 835MHz (body) | Target value 5% window | 55.2 52.44-57.96 | 0.97 0.92-1.02 | / |
| | Measurement value 2013-03-18 | 54.26 | 0.95 | 21.7 |
| | Measurement value 2013-03-19 | 54.37 | 0.96 | 22.1 |
| 1900MHz (head) | Target value 5% window | 40.0 38-42 | 1.40 1.33 -1.47 | / |
| | Measurement value 2013-03-06 | 39.05 | 1.38 | 21.7 |
| 1900MHz (body) | Target value 5% window | 53.3 50.63-55.96 | 1.52 1.44 -1.60 | / |
| | Measurement value 2013-03-07 | 52.37 | 1.49 | 22.1 |
| | Measurement value 2013-03-11 | 52.54 | 1.49 | 21.8 |
| | Measurement value 2013-03-14 | 52.57 | 1.50 | 21.7 |
| | Measurement value 2013-03-15 | 52.73 | 1.50 | 22.0 |
| 2450MHz (head) | Target value 5% window | 39.2 37.24-41.16 | 1.8 1.71-1.89 | / |
| | Measurement value 2013-03-01 | 38.26 | 1.78 | 21.9 |
| | Measurement value 2013-03-04 | 38.61 | 1.79 | 21.7 |
| 2450MHz (body) | Target value 5% window | 52.7 50.06-55.33 | 1.95 1.85 -2.05 | / |
| | Measurement value 2013-03-20 | 51.93 | 1.92 | 21.8 |

7.2.2. System Check Results

System Check for tissue simulation liquid

| Frequency | Description | SAR(W/kg) | | Targeted SAR1g (W/kg) | Normalized SAR1g (W/kg) | Deviation (%) |
|----------------|--------------------------------------|-------------------|---------------------|-----------------------|-------------------------|---------------|
| | | 10g | 1g | | | |
| 835 MHz (head) | Recommended result $\pm 10\%$ window | 1.53 1.38-1.68 | 2.33 2.10-2.55 | / | / | / |
| | Measurement value 2013-03-12 | 1.55 | 2.37 | 9.31 | 9.48 | 1.83% |
| | Measurement value 2013-03-13 | 1.52 | 2.33 | 9.31 | 9.32 | 0.11% |
| 835MHz (body) | Recommended result $\pm 10\%$ window | 1.62 1.46-1.78 | 2.46 2.22-2.70 | / | / | / |
| | Measurement value 2013-03-18 | 1.55 | 2.37 | 9.54 | 9.48 | -0.63 % |
| | Measurement value 2013-03-19 | 1.59 | 2.44 | 9.54 | 9.76 | 2.31% |
| 1900MHz (head) | Recommended result $\pm 10\%$ window | 5.09 4.58-5.60 | 9.65 8.75-10.60 | / | / | / |
| | Measurement value 2013-03-06 | 5.23 | 10.3 | 39.3 | 41.2 | 4.83% |
| 1900MHz (body) | Recommended result $\pm 10\%$ window | 5.3 4.77-5.83 | 10 9.00-11.00 | / | / | / |
| | Measurement value 2013-03-07 | 5.54 | 10.7 | 40.2 | 42.8 | 6.47% |
| | Measurement value 2013-03-11 | 5.27 | 10.3 | 40.2 | 41.2 | 2.49% |
| | Measurement value 2013-03-14 | 5.55 | 10.8 | 40.2 | 43.2 | 7.46% |
| | Measurement value 2013-03-15 | 5.36 | 10.4 | 40.2 | 41.6 | 3.48% |
| 2450MHz (head) | Recommended result $\pm 10\%$ window | 6.24 5.61-6.87 | 13.3 12.05-14.73 | / | / | / |
| | Measurement value 2013-03-01 | 6.05 | 13.2 | 53.1 | 52.8 | -0.56 % |
| | Measurement value 2013-03-04 | 6.01 | 13.4 | 53.1 | 53.6 | 0.94% |
| 2450MHz (body) | Recommended result $\pm 10\%$ window | 6.11 5.50-6.72 | 13.1 11.63-14.21 | / | / | / |

| | | | | | | |
|--|---------------------------------|------|------|------|------|-------|
| | Measurement value 2013-03-20 | 6.24 | 13.4 | 51.6 | 53.6 | 3.88% |
|--|---------------------------------|------|------|------|------|-------|

- Note: 1. the graph results see ANNEX B.1.
 2. Recommended Values used derive from the calibration certificate and 250 mW is used as feeding power to the calibrated dipole.

7.2.3 Test Results

7.2.3.1 Summary of Measurement Results (GSM850)

SAR Values (GSM850)

| Test Case | | Measurement Result(W/kg) | Power Drift(dB) | Note |
|--|---------|--------------------------|-----------------|-----------------|
| Different Test Position | Channel | 1 g Average | | |
| Test position of Head | | | | |
| Left head, Touch cheek | middle | 0.089 | -0.07 | |
| Left head, Tilt 15 Degree | middle | 0.062 | 0.11 | |
| Right head, Touch cheek | middle | 0.113 | 0.09 | |
| Right head, Tilt 15 Degree | middle | 0.073 | 0.13 | |
| Right head, Touch cheek | low | 0.154 | -0.08 | max |
| | high | 0.072 | -0.09 | |
| Right head, Touch cheek | low | 0.141 | -0.10 | Additional card |
| Test position of Body with GPRS(4UP) (Distance 10mm) | | | | |
| Towards phantom | middle | 0.183 | 0.03 | |
| Towards Ground | middle | 0.411 | 0.00 | |
| Front | middle | 0.130 | 0.12 | |
| Left side | middle | 0.049 | 0.17 | |
| Right side | middle | 0.079 | 0.12 | |

| | | | | |
|--|------|-------|-------|-----------------|
| Towards Ground | low | 0.444 | 0.13 | max |
| | high | 0.392 | -0.04 | |
| Worst case position of Body with (Distance 10mm) | | | | |
| Towards Ground | low | 0.386 | -0.02 | earphone |
| Towards Ground | low | 0.399 | 0.02 | EDGE(4up) |
| Towards Ground | low | 0.370 | 0.05 | Additional card |

Note: 1. The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is lower than the SAR limit ($< 0.4\text{W/kg}$), testing at the high and low channels is optional.
4. Per KDB 865664 d01v01, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{(W/kg)}$.

7.2.3.2 Summary of Measurement Results (PCS1900)

SAR Values (PCS1900)

| Test Case | | Measurement Result(W/kg) | | Power Drift(dB) | Note |
|----------------------------|---------|--------------------------|---------|------------------------|------|
| Different Test Position | Channel | 1 g | Average | | |
| | | Test position of Head | | | |
| Left head, Touch cheek | middle | 0.198 | -0.10 | | |
| Left head, Tilt 15 Degree | middle | 0.089 | 0.12 | | |
| Right head, Touch cheek | middle | 0.118 | -0.14 | | |
| Right head, Tilt 15 Degree | middle | 0.085 | 0.02 | | |
| Left head, Touch cheek | low | 0.201 | -0.07 | | |
| | high | 0.201 | 0.02 | | |
| Left head, Touch cheek | low | 0.205 | -0.04 | Additional card max | |

| Test position of Body with GPRS(2UP) (Distance 10mm) | | | | |
|--|--------|--------------|-------|--------------------------------|
| Towards phantom | middle | 0.321 | -0.12 | |
| Towards Ground | middle | 0.487 | -0.01 | |
| Front | middle | 0.441 | 0.06 | |
| Left side | middle | 0.407 | 0.09 | |
| Right side | middle | 0.227 | 0.18 | |
| Towards Ground | low | 0.455 | 0.05 | |
| | high | 0.537 | 0.16 | |
| Front | low | 0.412 | 0.06 | |
| | high | 0.478 | 0.12 | |
| Left side | low | 0.385 | 0.12 | |
| | high | 0.436 | 0.12 | |
| Worst case position of Body with (Distance 10mm) | | | | |
| Towards Ground | high | 0.807 | -0.04 | earphone |
| Towards Ground | high | 0.822 | -0.08 | EDGE(2up) |
| Towards Ground | high | 0.755 | 0.05 | Additional card |
| Towards Ground | high | 0.830 | -0.18 | EDGE(2up) repeat max |

Note: 1. The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is lower than the SAR limit ($< 0.4W/kg$), testing at the high and low channels is optional.
4. Per KDB 865664 d01v01, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8(W/kg)$.

7.2.3.3 Summary of Measurement Results (WCDMA BAND II)

SAR Values (WCDMA BANDII)

| Test Case | | Measurement Result(W/kg) | Power Drift(dB) | Note |
|--|---------|--------------------------|-----------------|-----------------|
| Different Test Position | Channel | 1 g | | |
| | | Average | | |
| Test position of Head | | | | |
| Left head, Touch cheek | middle | 0.478 | -0.18 | max |
| Left head, Tilt 15 Degree | middle | 0.145 | 0.16 | |
| Right head, Touch cheek | middle | 0.273 | -0.12 | |
| Right head, Tilt 15 Degree | middle | 0.170 | -0.06 | |
| Left head, Touch cheek | low | 0.464 | -0.16 | |
| | high | 0.449 | 0.05 | |
| Left head, Touch cheek | middle | 0.465 | 0.13 | Additional card |
| Test position of Body (Distance 10mm) | | | | |
| Towards phantom | middle | 0.873 | 0.03 | |
| Towards Ground | middle | 0.790 | -0.00 | |
| Front | middle | 0.547 | 0.09 | |
| Left side | middle | 0.533 | 0.01 | |
| Right side | middle | 0.311 | 0.09 | |
| Towards phantom | low | 0.878 | 0.16 | max |
| | high | 0.614 | -0.12 | |
| Towards Ground | low | 0.699 | 0.07 | |
| | high | 0.810 | -0.17 | |
| Front | low | 0.492 | 0.08 | |
| | high | 0.579 | 0.12 | |
| Left side | low | 0.589 | 0.15 | |
| | high | 0.560 | -0.16 | |
| Worst case position of Body with (Distance 10mm) | | | | |

| | | | | |
|-----------------|-----|-------|-------|-----------------|
| Towards phantom | low | 0.667 | -0.14 | earphone |
| Towards phantom | low | 0.644 | -0.00 | HSDPA |
| Towards phantom | low | 0.523 | -0.07 | HSUPA |
| Towards phantom | low | 0.560 | 0.03 | Additional card |
| Towards phantom | low | 0.842 | -0.17 | Repeat |

Note: 1. The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.

3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is lower than the SAR limit ($< 0.4\text{W/kg}$), testing at the high and low channels is optional.

4. Per KDB 865664 d01v01, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{(W/kg)}$.

7.2.3.4 Summary of Measurement Results (WCDMA BAND V)

SAR Values (WCDMA BAND V)

| Test Case | | Measurement Result(W/kg) | Power Drift(dB) | Note |
|---------------------------------------|---------|--------------------------|-----------------|-----------------|
| Different Test Position | Channel | 1 g | | |
| | | Average | | |
| Test position of Head | | | | |
| Left head, Touch cheek | middle | 0.070 | -0.17 | |
| Left head, Tilt 15 Degree | middle | 0.048 | -0.15 | |
| Right head, Touch cheek | middle | 0.090 | -0.18 | |
| Right head, Tilt 15 Degree | middle | 0.053 | 0.13 | |
| Right head, Touch cheek | low | 0.162 | 0.17 | max |
| | high | 0.068 | 0.10 | |
| Right head, Touch cheek | low | 0.053 | 0.11 | Additional card |
| Test position of Body (Distance 10mm) | | | | |

| | | | | |
|--|--------|--------------|-------|-------------------------------|
| Towards phantom | middle | 0.104 | 0.12 | |
| Towards Ground | middle | 0.249 | -0.19 | |
| Front | middle | 0.068 | -0.01 | |
| Left side | middle | 0.045 | 0.14 | |
| Right side | middle | 0.123 | -0.01 | |
| Towards Ground | low | 0.135 | 0.17 | |
| | high | 0.203 | 0.05 | |
| Worst case position of Body with (Distance 10mm) | | | | |
| Towards Ground | middle | 0.196 | -0.02 | earphone |
| Towards Ground | middle | 0.209 | 0.16 | HSDPA |
| Towards Ground | middle | 0.171 | 0.12 | HSUPA |
| Towards Ground | middle | 0.297 | 0.16 | Additional card max |

Note: 1. The value with blue color is the maximum SAR Value of test case of head and body in each test band.

- Upper and lower frequencies were measured at the worst position.
- The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is lower than the SAR limit ($< 0.4\text{W/kg}$), testing at the high and low channels is optional.
- Per KDB 865664 d01v01, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8\text{(W/kg)}$.

7.2.3.5 Summary of Measurement Results (802.11b/g/n)

SAR Values (802.11b/g/n)

| Test Case | | Measurement Result(W/kg) | Power Drift(dB) | Note |
|---------------------------|---------|--------------------------|-----------------|------|
| Different Test Position | Channel | 1 g | | |
| | | Average | | |
| Test position of Head | | | | |
| Left head, Touch cheek | middle | 0.023 | 0.42 | |
| Left head, Tilt 15 Degree | middle | 0.00975 | 0.23 | |

| | | | | |
|---------------------------------------|--------|--------------|-------|------------|
| Right head, Touch cheek | middle | 0.014 | 0.60 | |
| Right head, Tilt 15 Degree | middle | 0.0055 | 0.50 | |
| Left head, Touch cheek | low | 0.028 | -0.29 | max |
| | high | 0.022 | 0.60 | |
| Left head, Touch cheek | low | 0.011 | -0.03 | 802.11g |
| Left head, Touch cheek | low | 0.00941 | 0.25 | 802.11n |
| Test position of Body (Distance 10mm) | | | | |
| Towards phantom | middle | 0.00332 | 0.10 | |
| Towards Ground | middle | 0.069 | -0.29 | |
| Back | middle | 0.00286 | -0.30 | |
| Right side | middle | 0.015 | 0.01 | |
| Towards Ground | low | 0.056 | 0.59 | |
| | high | 0.074 | 0.47 | max |
| Towards Ground | high | 0.033 | 0.77 | 802.11g |
| Towards Ground | high | 0.038 | 0.78 | 802.11n |

Note: 1. The value with blue color is the maximum SAR Value of test case of head and body in each test band.

2. Upper and lower frequencies were measured at the worst position.
3. The SAR test shall be performed at the high, middle and low frequency channels of each operating mode. If the SAR measured at mid-band channel for each test configuration is lower than the SAR limit ($< 0.4W/kg$), testing at the high and low channels is optional.
4. Per KDB 865664 d01v01, for each frequency band, repeated SAR measurement is required only when the measured SAR is $\geq 0.8(W/kg)$.

7.2.4 Maximum SAR

| Test Case | | | Measurement Result (W/kg) | conducted power (dBm) | maximum power (dBm) | Maximum reported 1g SAR (W/kg) | Limit 1g SAR (W/kg) | |
|---------------|-------------------------|---|---------------------------|-----------------------|---------------------|--------------------------------|---------------------|------------|
| band | Different Test Position | | Ch | | | | | 1g Average |
| GSM 850 | head | Right head, Touch cheek | low | 0.154 | 32.3 | 33 | 0.181 | 1.6 |
| | body | Towards Ground With GPRS(4up) | low | 0.444 | | | 0.523 | 1.6 |
| GSM 1900 | head | Left head, Touch cheek with additional card | low | 0.205 | 29.6 | 30 | 0.225 | 1.6 |
| | body | Towards Ground With EDGE(2up) | high | 0.830 | 29.3 | | 0.975 | 1.6 |
| WCDMA BAND II | head | Left head, Touch cheek | middle | 0.478 | 23.15 | 24 | 0.579 | 1.6 |
| | body | Towards phantom | low | 0.878 | 23.22 | | 1.046 | 1.6 |
| WCDMA BAND V | head | Right head, Touch cheek | low | 0.162 | 23.16 | 24 | 0.196 | 1.6 |
| | body | Towards Ground with additional card | middle | 0.297 | 23.21 | | 0.355 | 1.6 |
| Wi-fi | head | Left head, Touch cheek | low | 0.028 | 14.09 | 18 | 0.069 | 1.6 |
| | body | Towards Ground | high | 0.074 | 13.56 | | 0.206 | 1.6 |

| Evaluation for Simultaneous SAR | | | | | |
|---------------------------------|-------------------|--------------------------------|--------------------------|--|------------------------------------|
| Summation BAND | Exposure Position | Maximum reported 1g SAR (W/kg) | Summation SAR(1g) (W/kg) | SAR -to-peak-location Separation Ratio | Simultaneous Measurement Required? |
| WCDMA BAND II +WiFi | Head | $0.579+0.069=0.648$ | <1.6 | / | No |
| | Body-worn(10mm) | $1.046+0.206=1.252$ | <1.6 | / | No |
| WCDMA BAND II +BT | Head | $0.579+0.209=0.788$ | <1.6 | / | No |
| | Body-worn(10mm) | $1.046+0.105=1.151$ | <1.6 | / | No |

General Judgment: PASS

8. Test Equipments Utilized

| No. | Name | Type | S/N | Calibration Date | Valid Period |
|-----|------------------------|----------------|------------|-----------------------------|--------------|
| 01 | Network analyzer | Agilent E5071E | MY46109425 | Oct 31th, 2012 | One year |
| 02 | Dielectric Probe Kit | Agilent 85070E | MY44300524 | No Calibration Requested | |
| 03 | Power meter | Agilent E4418B | MY50000852 | Oct 31th, 2012 | One year |
| 04 | Power sensor | Agilent E9200B | MY50300011 | Oct 31th, 2012 | One year |
| 05 | Signal Generator | Agilent N5182A | MY49071248 | Oct 31th, 2012 | One year |
| 06 | Amplifier | ZHL-42W | QA1020005 | No Calibration Requested | |
| 07 | BTS | CMU200 | 121464 | Oct 31th, 2012 | One year |
| 08 | E-field Probe | ES3DV3 | 3297 | Apr 10th, 2012 | One year |
| 09 | E-field Probe | ES3DV3 | 3241 | Aug 31 th , 2012 | One year |
| 10 | DAE | DAE4 | 1327 | Apr 11th, 2012 | One year |
| 11 | DAE | DAE4 | 1226 | Sep 03 th , 2012 | One year |
| 12 | Validation Kit 835MHz | D835V2 | 4d100 | Aug 28 th , 2012 | One year |
| 13 | Validation Kit 1900MHz | D1900V2 | 5d155 | April 03th, 2012 | One year |
| 14 | Validation Kit 2450MHz | D2450V2 | 845 | Aug 27 th , 2012 | One year |

9. Measurement Uncertainty

| No | Source of Uncertainty | Type | Uncertainty value ± % | Probability Distribution | Div. | c_i (1 g) | c_i (10 g) | Standard Unc ± %, (1 g) | Standard Unc ± %, (10 g) | ν_i or ν_{eff} |
|----------------------------|---|------|--------------------------|-----------------------------|------------|----------------|-----------------|-------------------------------|--------------------------------|-------------------------------------|
| 1 | System repetivity | A | 2.7 | N | 1 | 1 | 1 | 2.7 | 2.7 | 9 |
| <i>Measurement System</i> | | | | | | | | | | |
| 2 | Probe Calibration | B | 5.9 | N | 1 | 1 | 1 | 5.9 | 5.9 | ∞ |
| 3 | Isotropy | B | 4.7 | R | $\sqrt{3}$ | 0.7 | 0.7 | 1.9 | 1.9 | ∞ |
| 4 | Boundary Effect | B | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| 5 | Linearity | B | 4.7 | R | $\sqrt{3}$ | 1 | 1 | 2.7 | 2.7 | ∞ |
| 6 | Detection Limits | B | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| 7 | Readout Electronics | B | 0.3 | N | 1 | 1 | 1 | 0.3 | 0.3 | ∞ |
| 8 | Response Time | B | 0.8 | R | $\sqrt{3}$ | 1 | 1 | 0.5 | 0.5 | ∞ |
| 9 | Integration Time | B | 2.6 | R | $\sqrt{3}$ | 1 | 1 | 1.5 | 1.5 | ∞ |
| 10 | RF ambient conditions – noise | B | 0 | R | $\sqrt{3}$ | 1 | 1 | 0 | 0 | ∞ |
| 11 | RF ambient conditions – reflections | B | 0 | R | $\sqrt{3}$ | 1 | 1 | 0 | 0 | ∞ |
| 12 | Probe Positioner Mech. Restrictions | B | 0.4 | R | $\sqrt{3}$ | 1 | 1 | 0.2 | 0.2 | ∞ |
| 13 | Probe Positioning with respect to Phantom Shell | B | 2.9 | R | $\sqrt{3}$ | 1 | 1 | 1.7 | 1.7 | ∞ |
| 14 | Post-Processing | B | 1.0 | R | $\sqrt{3}$ | 1 | 1 | 0.6 | 0.6 | ∞ |
| <i>Test Sample Related</i> | | | | | | | | | | |

| | | | | | | | | | | |
|---|-------------------------------|--|------|---|------------|------|------|-------|-------|----------|
| 15 | Test Sample Positioning | A | 3.3 | N | 1 | 1 | 1 | 3.3 | 3.3 | 71 |
| 16 | Device Holder Uncertainty | A | 4.1 | N | 1 | 1 | 1 | 4.1 | 4.1 | 5 |
| 17 | Drift of Output Power | B | 5.0 | R | $\sqrt{3}$ | 1 | 1 | 2.9 | 2.9 | ∞ |
| <i>Phantom and Set-up</i> | | | | | | | | | | |
| 18 | Phantom Uncertainty | B | 4.0 | R | $\sqrt{3}$ | 1 | 1 | 2.3 | 2.3 | ∞ |
| 19 | Liquid Conductivity (target.) | B | 5.0 | R | $\sqrt{3}$ | 0.64 | 0.43 | 1.8 | 1.2 | ∞ |
| 20 | Liquid Conductivity (meas.) | A | 2.06 | N | 1 | 0,64 | 0,43 | 1.7 | 1.4 | 43 |
| 21 | Liquid Permittivity (target.) | B | 5.0 | R | $\sqrt{3}$ | 0,6 | 0,49 | 1.7 | 1.4 | ∞ |
| 22 | Liquid Permittivity (meas.) | A | 1.6 | N | 1 | 0,6 | 0,49 | 1.0 | 0.8 | 521 |
| Combined standard uncertainty | | $u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$ | | | | | | 10.54 | 10.34 | |
| Expanded uncertainty (95 % confidence interval) | | K=2 | | | | | | 21.08 | 20.68 | |

ANNEX A: Detailed Test Results

Annex A.1 System Check Results

System check 835head

Date/Time: 12/3/2013 10:19:30

Communication System: CW; Communication System Band: D835 (835.0 MHz);

Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 42.85$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3297; ConvF(6.36, 6.36, 6.36); Calibrated: 10/4/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 11/4/2012
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

835head/d=15mm, Pin=250 mW/Area Scan (61x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.71 mW/g

835head/d=15mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

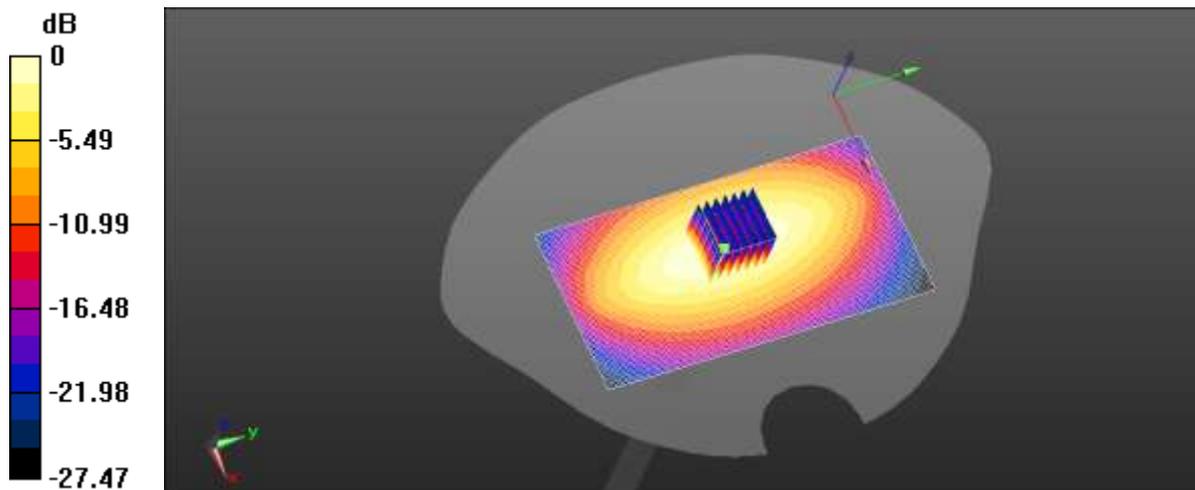
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.470 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 3.530 mW/g

SAR(1 g) = 2.37 mW/g; SAR(10 g) = 1.55 mW/g

Maximum value of SAR (measured) = 2.77 mW/g



0 dB = 2.71 mW/g = 8.65 dB mW/g

System check 835head

Date/Time: 13/3/2013 8:57:30

Communication System: CW; Communication System Band: D835 (835.0 MHz);

Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.90 \text{ mho/m}$; $\epsilon_r = 43.05$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3297; ConvF(6.36, 6.36, 6.36); Calibrated: 10/4/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 11/4/2012
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

835head/d=15mm, Pin=250 mW/Area Scan (61x121x1): Measurement grid:

$dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 2.68 mW/g

835head/d=15mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

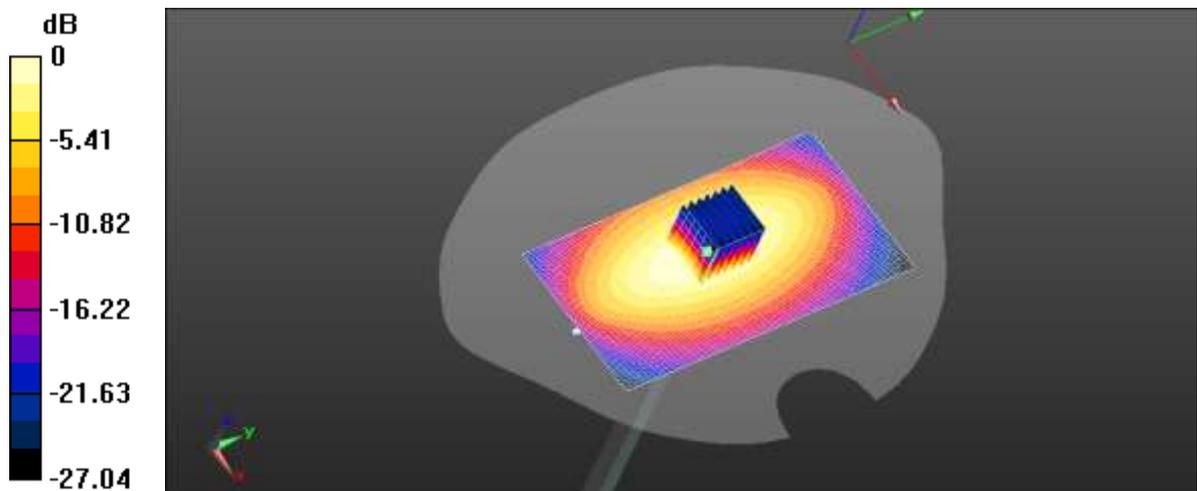
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.462 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 3.483 mW/g

SAR(1 g) = 2.33 mW/g; SAR(10 g) = 1.52 mW/g

Maximum value of SAR (measured) = 2.74 mW/g



0 dB = 2.68 mW/g = 8.55 dB mW/g

System check 835body

Date/Time: 18/03/2013 08:28:41

Communication System: CW; Communication System Band: D835 (835.0 MHz);

Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 835$ MHz; $\sigma = 0.95$ mho/m; $\epsilon_r = 54.26$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

835body/d=15mm, Pin=250 mW/Area Scan (61x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.77 mW/g

835body/d=15mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

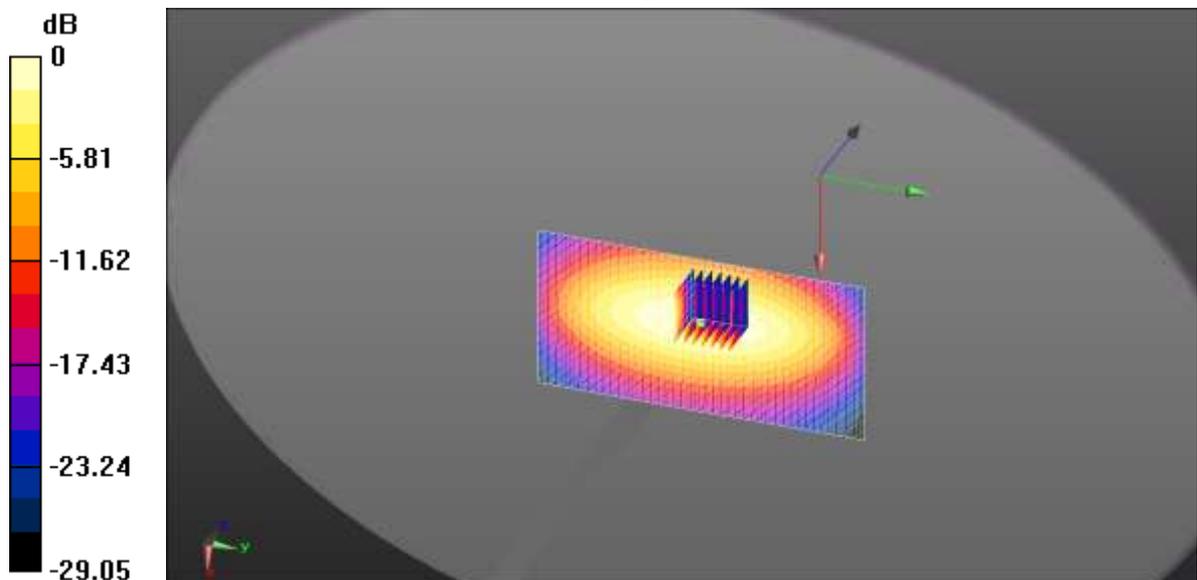
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.214 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.514 mW/g

SAR(1 g) = 2.37 mW/g; SAR(10 g) = 1.55 mW/g

Maximum value of SAR (measured) = 2.78 mW/g



0 dB = 2.77 mW/g = 8.85 dB mW/g

System check 835body

Date/Time: 19/03/2013 07:59:06

Communication System: CW; Communication System Band: D835 (835.0 MHz);

Frequency: 835 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 54.37$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

835body/d=15mm, Pin=250 mW/Area Scan (61x121x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.82 mW/g

835body/d=15mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

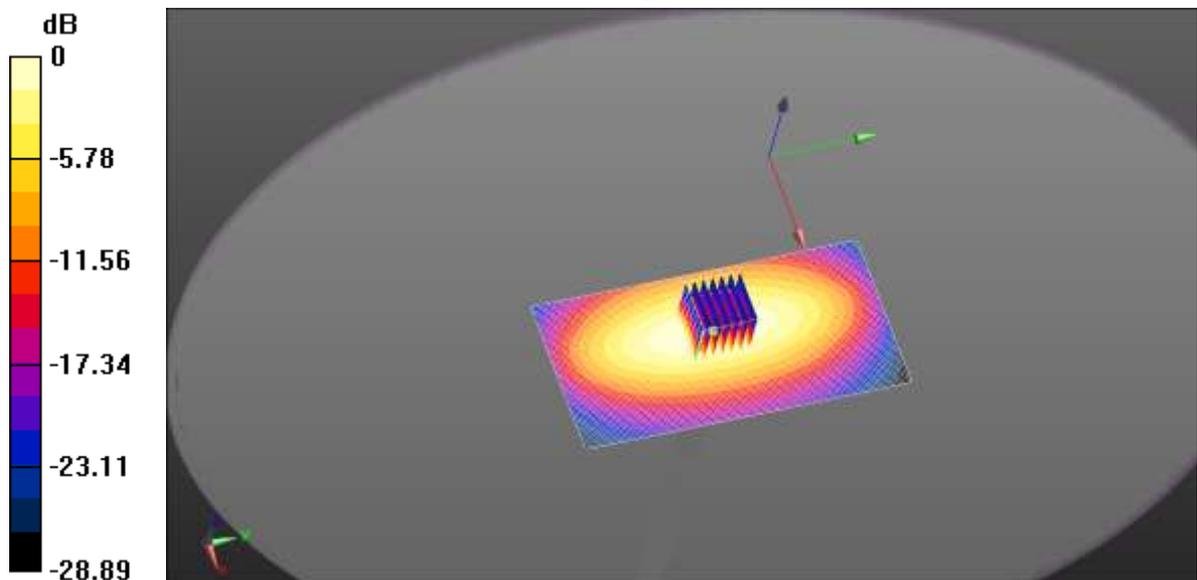
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.150 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.619 mW/g

SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.59 mW/g

Maximum value of SAR (measured) = 2.87 mW/g



0 dB = 2.82 mW/g = 9.02 dB mW/g

System check 1900head

Date/Time: 06/03/2013 08:11:10

Communication System: CW; Communication System Band: D1900 (1900.0 MHz);

Frequency: 1900 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.05$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

1900head/d=10mm, Pin=250 mW/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 14.0 mW/g

1900head/d=10mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

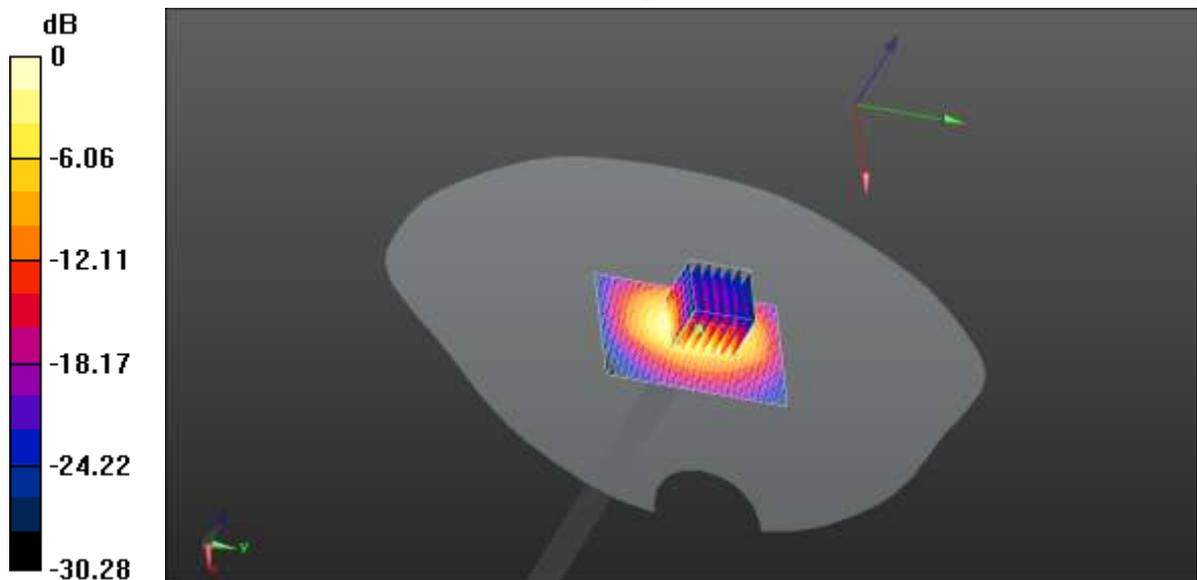
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 86.139 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 19.634 mW/g

SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.23 mW/g

Maximum value of SAR (measured) = 13.2 mW/g



0 dB = 14.0 mW/g = 22.92 dB mW/g

System check 1900body

Date/Time: 07/03/2013 09:49:12

Communication System: CW; Communication System Band: D1900 (1900.0 MHz);

Frequency: 1900 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 52.37$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

1900body/d=10mm, Pin=250 mW/Area Scan (41x61x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 14.2 mW/g

1900body/d=10mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

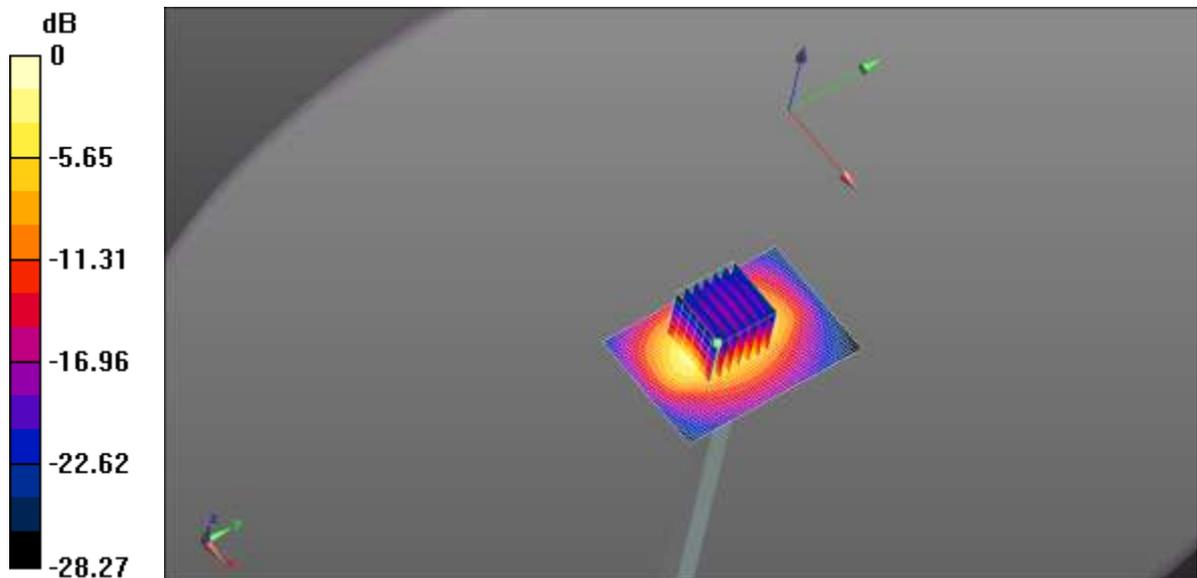
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.597 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 19.203 mW/g

SAR(1 g) = 10.7 mW/g; SAR(10 g) = 5.54 mW/g

Maximum value of SAR (measured) = 13.6 mW/g



0 dB = 14.2 mW/g = 23.06 dB mW/g

System check 1900body

Date/Time: 11/03/2013 09:56:40

Communication System: CW; Communication System Band: D1900 (1900.0 MHz);

Frequency: 1900 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 52.54$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

1900body/d=10mm, Pin=250 mW/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 13.8 mW/g

1900body/d=10mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

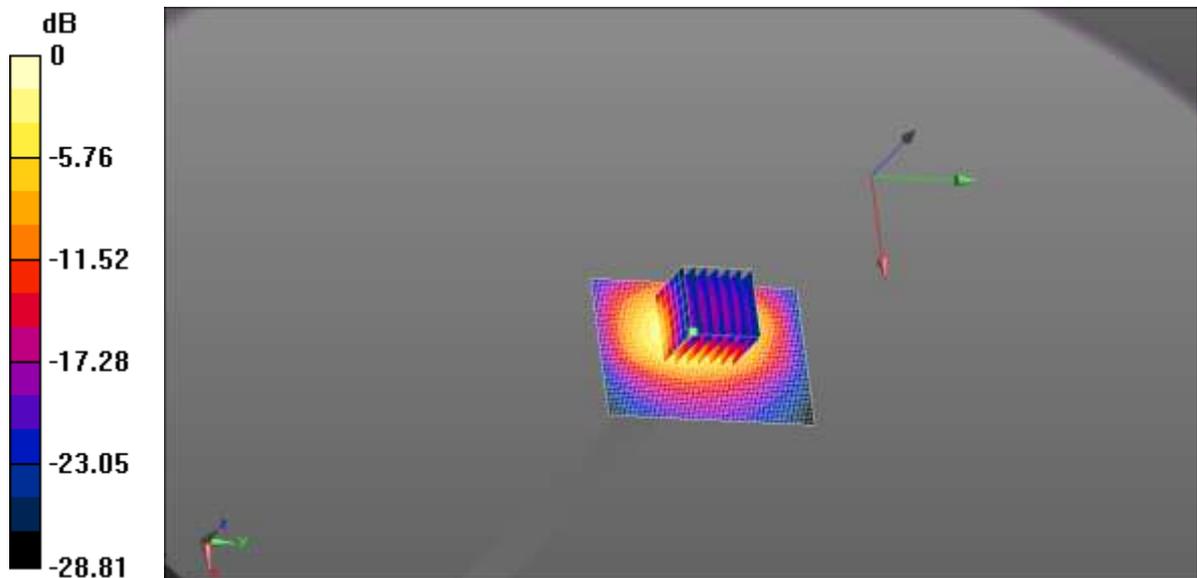
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 74.436 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 18.722 mW/g

SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.27 mW/g

Maximum value of SAR (measured) = 13.2 mW/g



0 dB = 13.8 mW/g = 22.77 dB mW/g

System check 1900body

Date/Time: 14/03/2013 09:50:57

Communication System: CW; Communication System Band: D1900 (1900.0 MHz);

Frequency: 1900 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.50$ mho/m; $\epsilon_r = 52.57$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

1900body/d=10mm, Pin=250 mW/Area Scan (41x61x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 14.3 mW/g

1900body/d=10mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

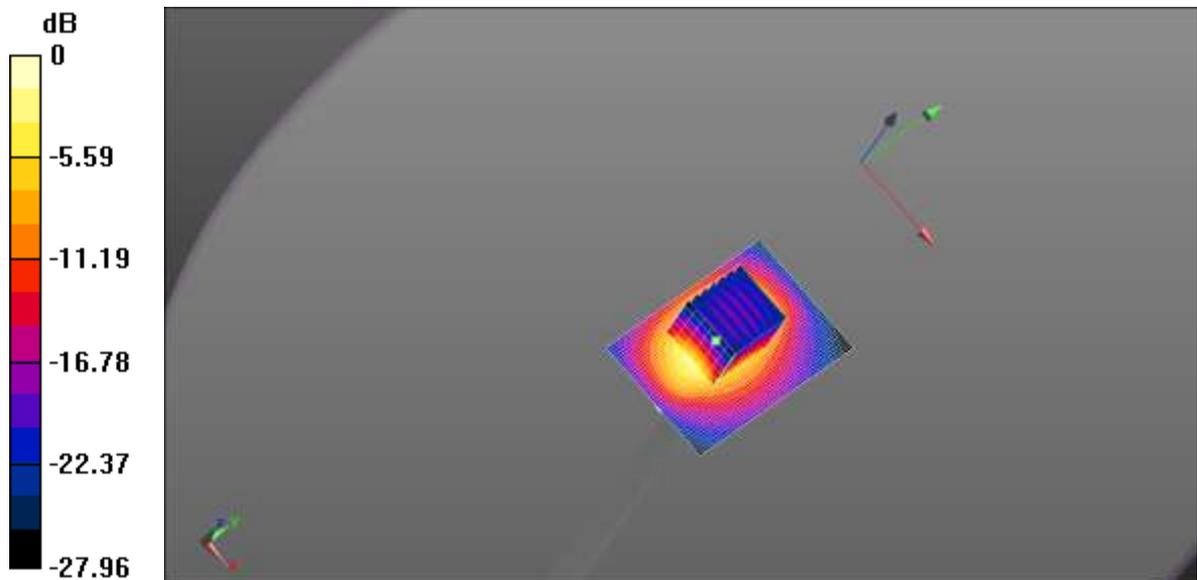
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.510 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 19.245 mW/g

SAR(1 g) = 10.8 mW/g; SAR(10 g) = 5.55 mW/g

Maximum value of SAR (measured) = 13.7 mW/g



0 dB = 14.3 mW/g = 23.08 dB mW/g

System check 1900body

Date/Time: 15/03/2013 08:59:32

Communication System: CW; Communication System Band: D1900 (1900.0 MHz);

Frequency: 1900 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.50$ mho/m; $\epsilon_r = 52.73$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

1900body/d=10mm, Pin=250 mW/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 13.8 mW/g

1900body/d=10mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

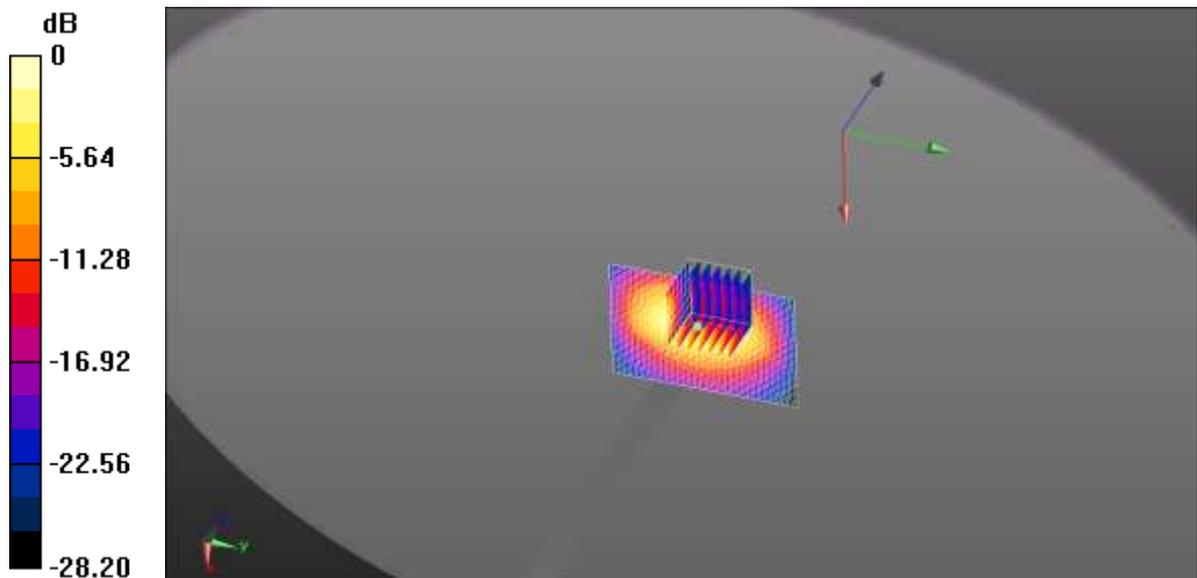
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 90.918 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 18.648 mW/g

SAR(1 g) = 10.4 mW/g; SAR(10 g) = 5.36 mW/g

Maximum value of SAR (measured) = 13.2 mW/g



0 dB = 13.8 mW/g = 22.77 dB mW/g

System check 2450head

Date/Time: 01/03/2013 09:06:36

Communication System: CW; Communication System Band: D2450 (2450.0 MHz);

Frequency: 2450 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.78$ mho/m; $\epsilon_r = 38.26$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

2450head/d=10mm, Pin=250 mW/Area Scan (41x61x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 19.2 mW/g

2450head/d=10mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

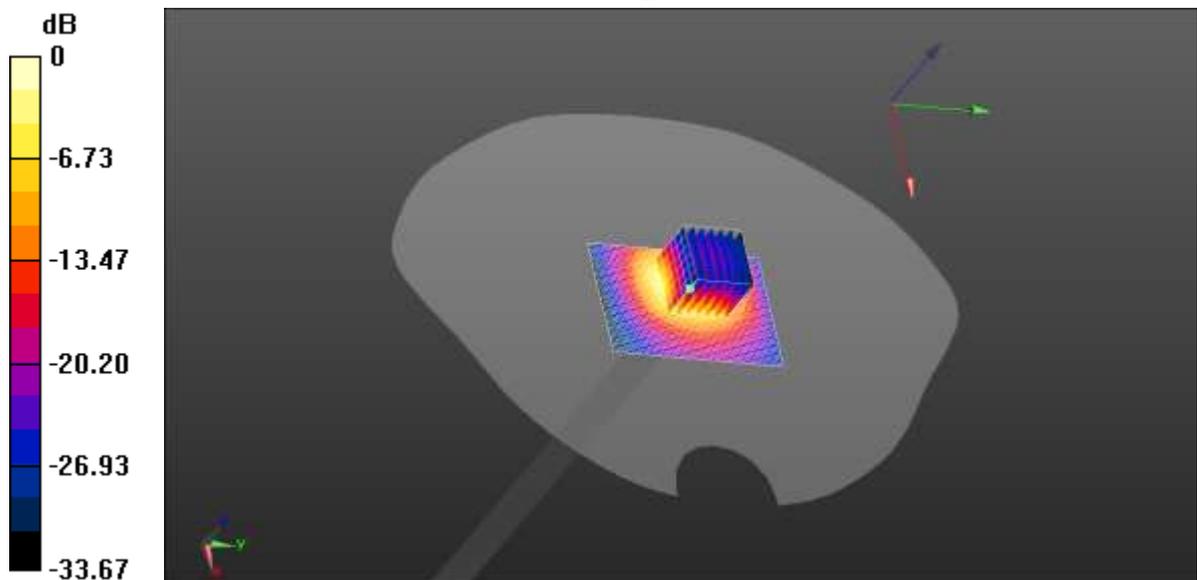
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 71.860 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 27.703 mW/g

SAR(1 g) = 13.2 mW/g; SAR(10 g) = 6.05 mW/g

Maximum value of SAR (measured) = 17.3 mW/g



0 dB = 19.2 mW/g = 25.68 dB mW/g

System check 2450head

Date/Time: 04/03/2013 09:06:31

Communication System: CW; Communication System Band: D2450 (2450.0 MHz);

Frequency: 2450 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.79$ mho/m; $\epsilon_r = 38.61$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.45, 4.45, 4.45); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

2450head/d=10mm, Pin=250 mW/Area Scan (41x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 19.5 mW/g

2450head/d=10mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

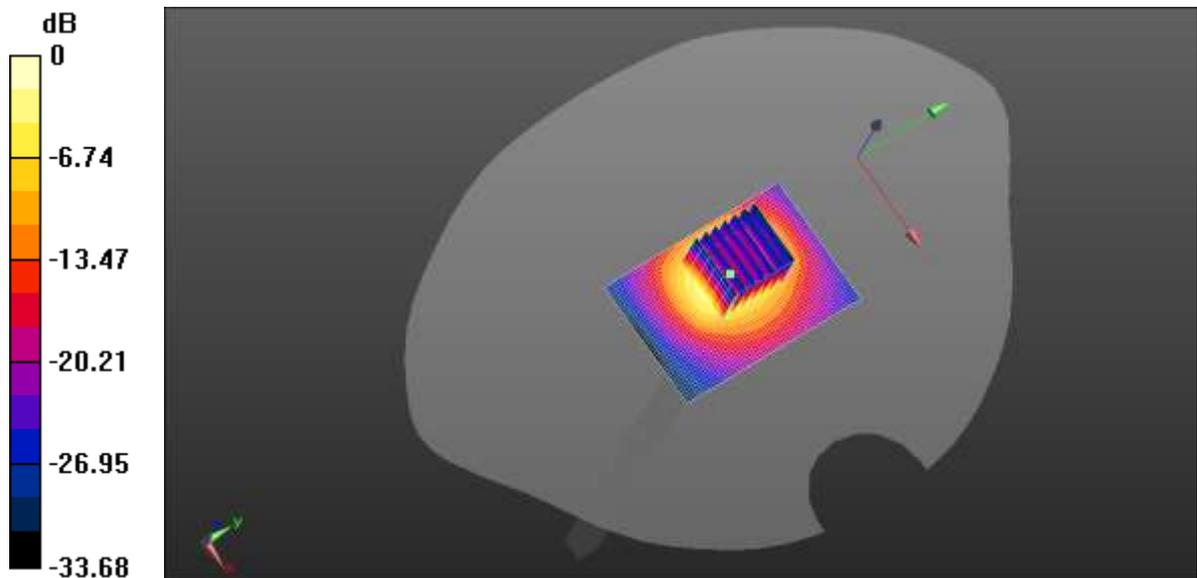
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 85.762 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 29.163 mW/g

SAR(1 g) = 13.4 mW/g; SAR(10 g) = 6.01 mW/g

Maximum value of SAR (measured) = 17.9 mW/g



0 dB = 19.5 mW/g = 25.82 dB mW/g

System check 2450body

Date/Time: 20/03/2013 09:04:28

Communication System: CW; Communication System Band: D2450 (2450.0 MHz);

Frequency: 2450 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.92$ mho/m; $\epsilon_r = 51.93$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.2, 4.2, 4.2); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

2450body/d=10mm, Pin=250 mW/Area Scan (41x61x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 21.0 mW/g

2450body/d=10mm, Pin=250 mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

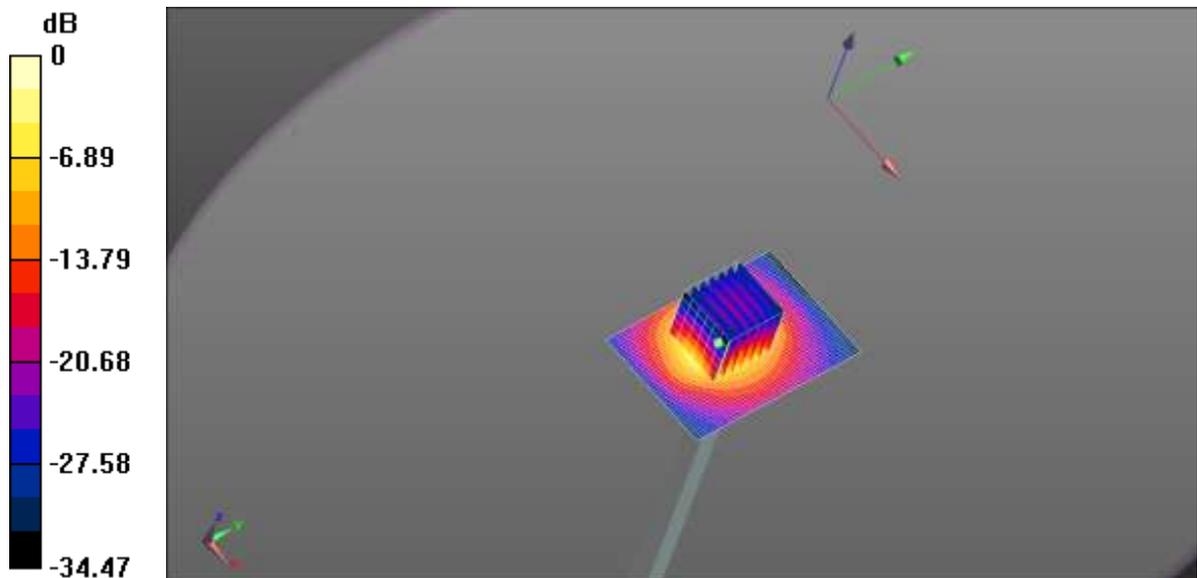
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.622 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 30.561 mW/g

SAR(1 g) = 13.4 mW/g; SAR(10 g) = 6.24 mW/g

Maximum value of SAR (measured) = 18.7 mW/g



0 dB = 21.0 mW/g = 26.43 dB mW/g

Annex A.2 Graph Result

GSM850 left touch mid

Date/Time: 13/3/2013 11:42:56

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 837$ MHz; $\sigma = 0.914$ mho/m; $\epsilon_r = 43.026$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3297; ConvF(6.36, 6.36, 6.36); Calibrated: 10/4/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 11/4/2012
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/touch mid/Area Scan (11x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0973 mW/g

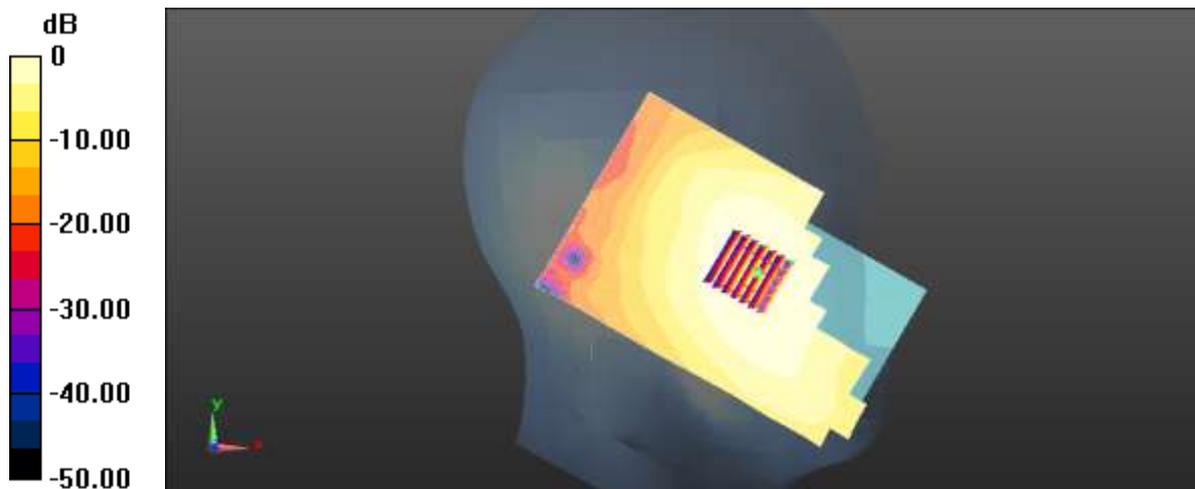
left/touch mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.593 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.109 mW/g

SAR(1 g) = 0.089 mW/g; SAR(10 g) = 0.069 mW/g

Maximum value of SAR (measured) = 0.0968 mW/g



0 dB = 0.0973 mW/g = -20.24 dB mW/g

GSM850 left tilt mid

Date/Time: 13/3/2013 12:31:39

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 837$ MHz; $\sigma = 0.914$ mho/m; $\epsilon_r = 43.026$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3297; ConvF(6.36, 6.36, 6.36); Calibrated: 10/4/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 11/4/2012
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/tilt mid/Area Scan (11x18x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0669 mW/g

left/tilt mid/Zoom Scan (8x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.270 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.076 mW/g

SAR(1 g) = 0.062 mW/g; SAR(10 g) = 0.049 mW/g

Maximum value of SAR (measured) = 0.0668 mW/g

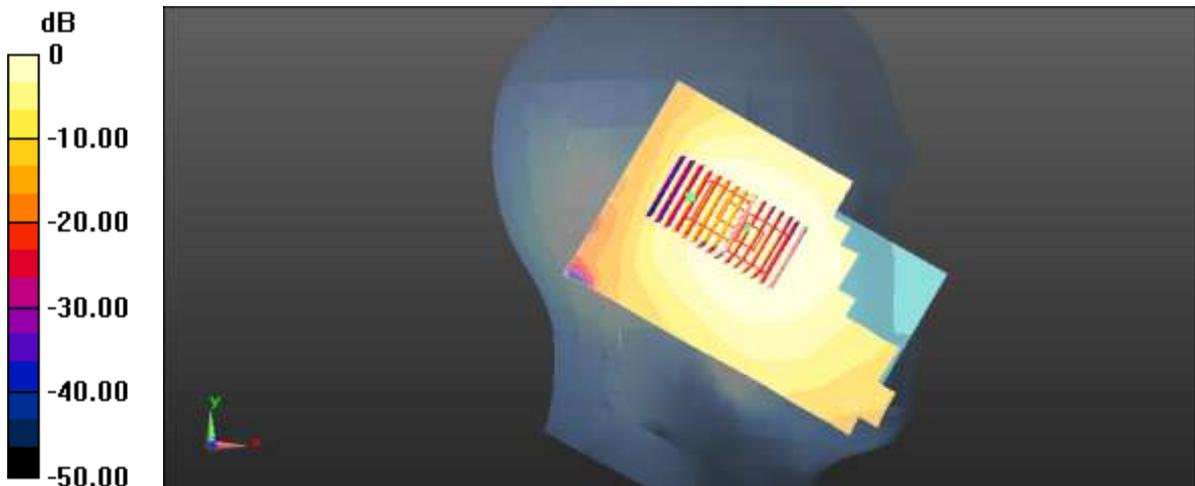
left/tilt mid/Zoom Scan (8x9x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.270 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.073 mW/g

SAR(1 g) = 0.055 mW/g; SAR(10 g) = 0.037 mW/g

Maximum value of SAR (measured) = 0.0635 mW/g



0 dB = 0.0669 mW/g = -23.49 dB mW/g

GSM850 right touch mid

Date/Time: 13/3/2013 11:05:58

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 837$ MHz; $\sigma = 0.914$ mho/m; $\epsilon_r = 43.026$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3297; ConvF(6.36, 6.36, 6.36); Calibrated: 10/4/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 11/4/2012
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

right/touch mid/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.123 mW/g

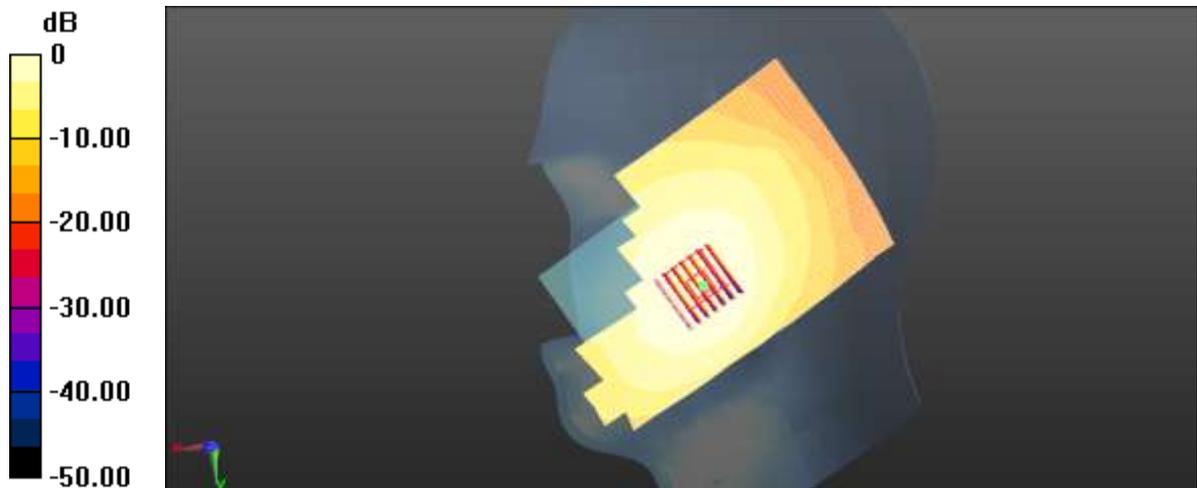
right/touch mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.078 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.142 mW/g

SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.087 mW/g

Maximum value of SAR (measured) = 0.123 mW/g



0 dB = 0.123 mW/g = -18.23 dB mW/g

GSM850 right tilt mid

Date/Time: 13/3/2013 10:28:55

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 836.6 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 837$ MHz; $\sigma = 0.914$ mho/m; $\epsilon_r = 43.026$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3297; ConvF(6.36, 6.36, 6.36); Calibrated: 10/4/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 11/4/2012
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

right/tilt mid/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0792 mW/g

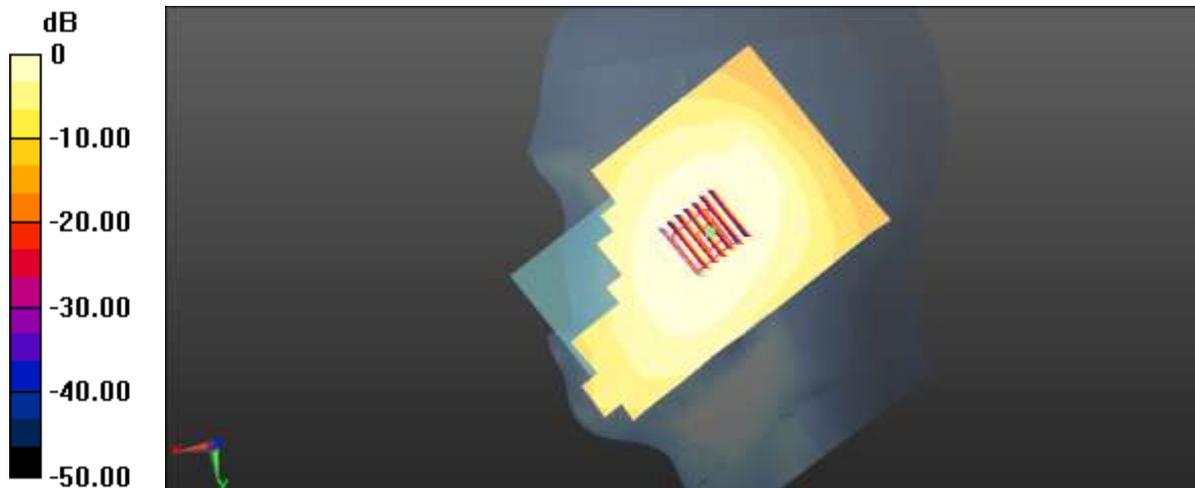
right/tilt mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.781 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.089 mW/g

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.058 mW/g

Maximum value of SAR (measured) = 0.0791 mW/g



0 dB = 0.0792 mW/g = -22.03 dB mW/g

GSM850 right touch low

Date/Time: 13/3/2013 13:39:53

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 43.205$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3297; ConvF(6.36, 6.36, 6.36); Calibrated: 10/4/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 11/4/2012
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

right/touch low/Area Scan (11x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.168 mW/g

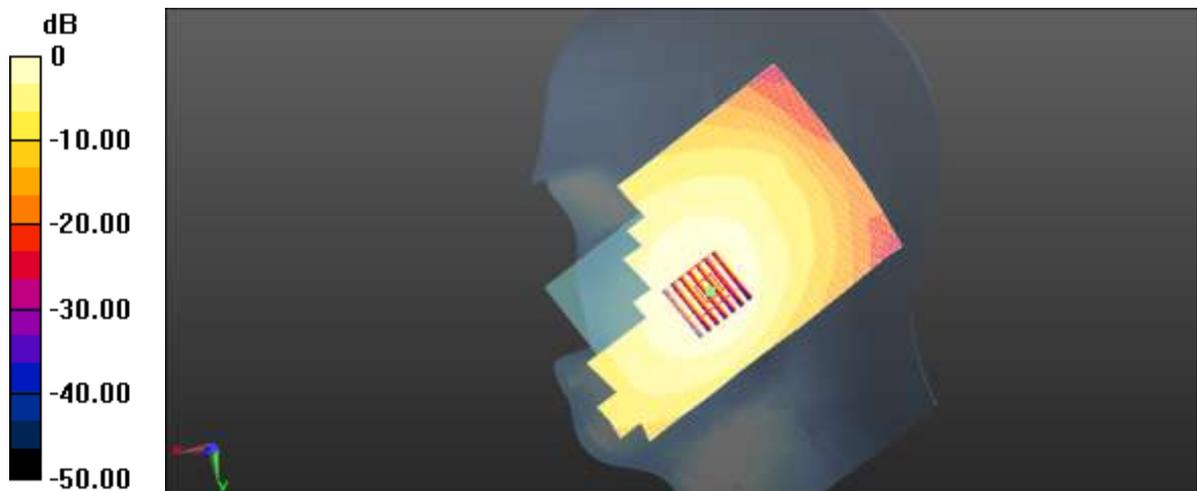
right/touch low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.434 V/m; Power Drift = -0.08 dB

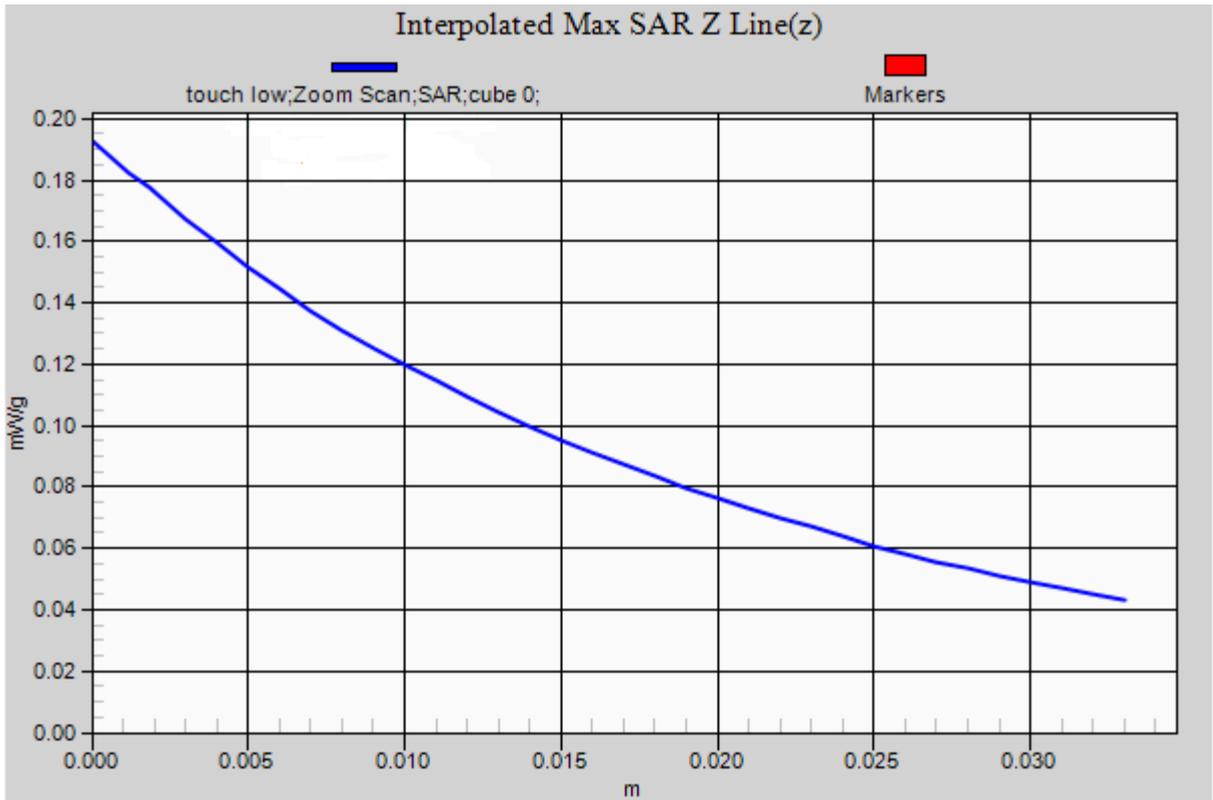
Peak SAR (extrapolated) = 0.193 mW/g

SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.119 mW/g

Maximum value of SAR (measured) = 0.169 mW/g



0 dB = 0.168 mW/g = -15.48 dB mW/g



GSM850 right touch high

Date/Time: 13/3/2013 14:17:41

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 848.8 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 849$ MHz; $\sigma = 0.924$ mho/m; $\epsilon_r = 42.848$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3297; ConvF(6.36, 6.36, 6.36); Calibrated: 10/4/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 11/4/2012
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

right/touch high/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.0793 mW/g

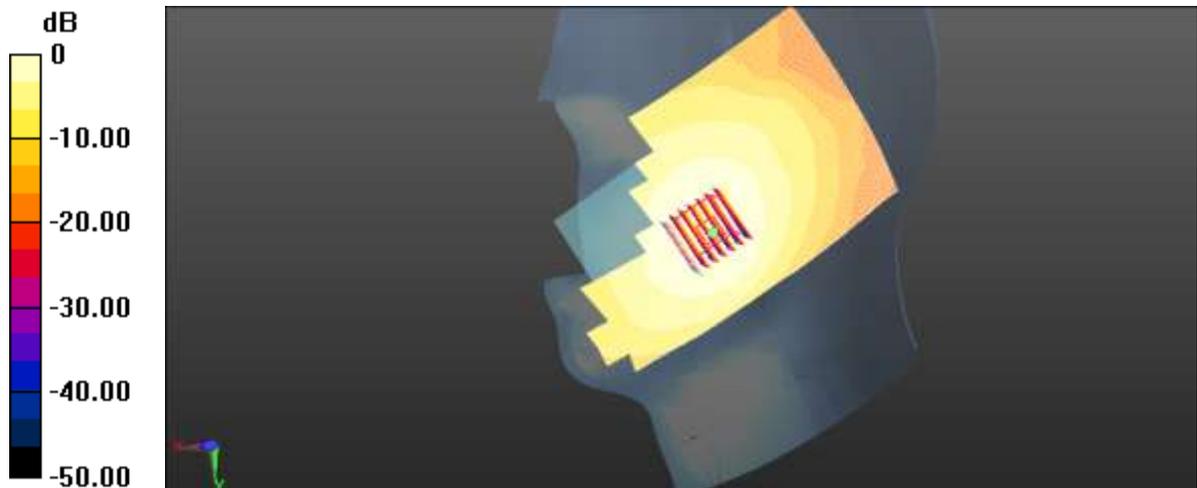
right/touch high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.993 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.089 mW/g

SAR(1 g) = 0.072 mW/g; SAR(10 g) = 0.055 mW/g

Maximum value of SAR (measured) = 0.0786 mW/g



0 dB = 0.0793 mW/g = -22.01 dB mW/g

GSM850 right touch low additional card

Date/Time: 13/3/2013 14:59:05

Communication System: Generic GSM; Communication System Band: GSM 850 (824.0 - 849.0 MHz); Frequency: 824.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.899$ mho/m; $\epsilon_r = 43.205$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3297; ConvF(6.36, 6.36, 6.36); Calibrated: 10/4/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1327; Calibrated: 11/4/2012
- Phantom: SAM1; Type: SAM; Serial: TP1576
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

right/touch low additional card/Area Scan (111x181x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.154 mW/g

right/touch low additional card/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

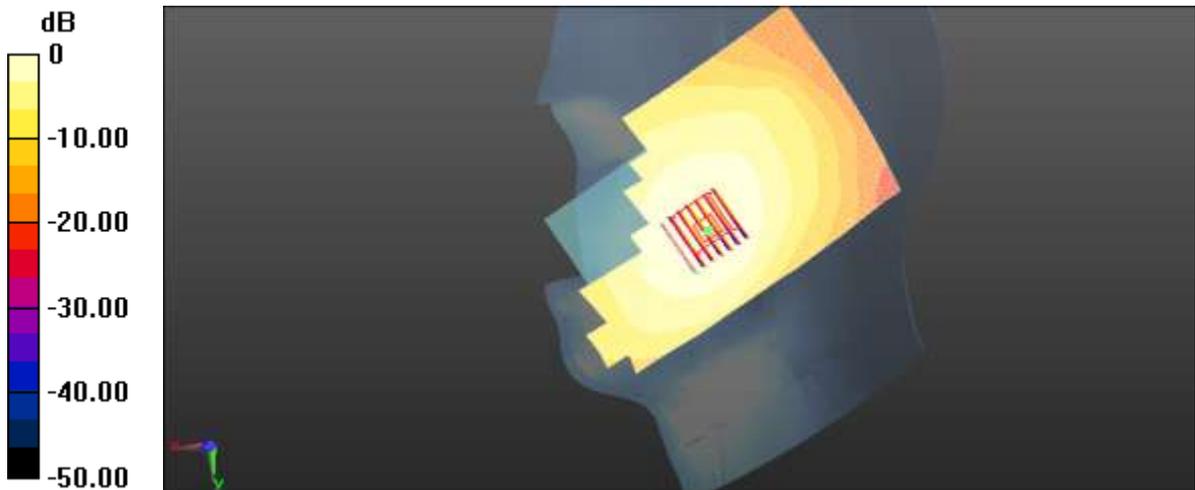
$dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 4.562 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.173 mW/g

SAR(1 g) = 0.141 mW/g; SAR(10 g) = 0.110 mW/g

Maximum value of SAR (measured) = 0.155 mW/g



0 dB = 0.154 mW/g = -16.27 dB mW/g

GSM850 towards phantom mid

Date/Time: 19/03/2013 13:12:09

Communication System: GPRS/EGPRS(4UP); Communication System Band: GSM850;

Frequency: 836.6 MHz; Communication System PAR: 3.18 dB

Medium parameters used: $f = 837$ MHz; $\sigma = 0.951$ mho/m; $\epsilon_r = 54.241$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards phantom mid/Area Scan (111x181x1): Measurement grid:

dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.227 mW/g

body/towards phantom mid/Zoom Scan (8x8x7)/Cube 0: Measurement grid:

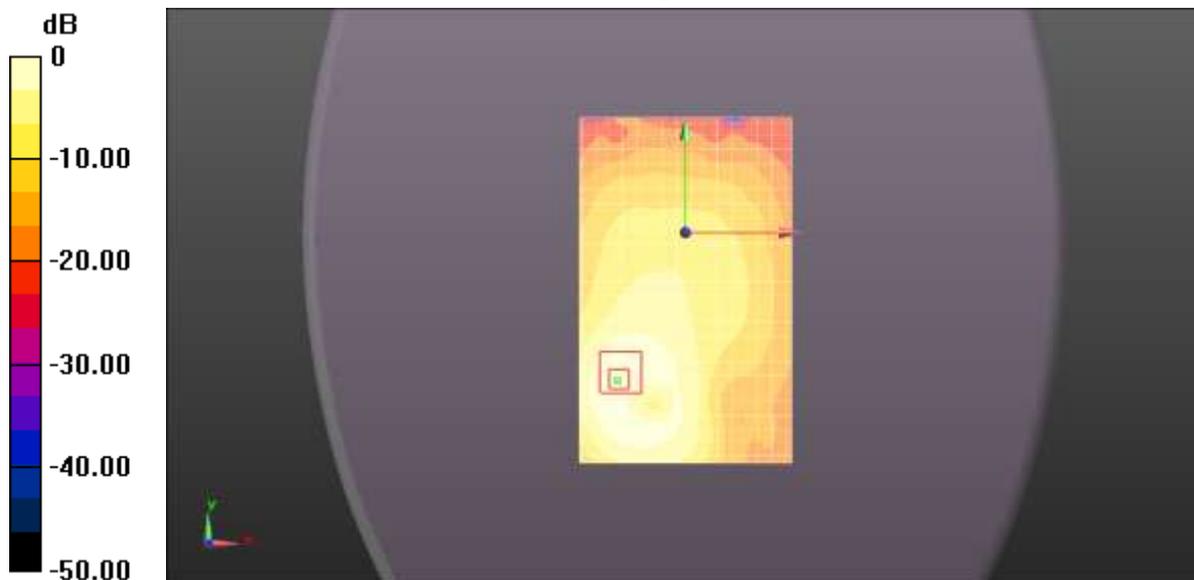
dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.096 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.332 mW/g

SAR(1 g) = 0.183 mW/g; SAR(10 g) = 0.104 mW/g

Maximum value of SAR (measured) = 0.226 mW/g



0 dB = 0.227 mW/g = -12.90 dB mW/g

GSM850 towards ground mid

Date/Time: 19/03/2013 13:59:55

Communication System: GPRS/EGPRS(4UP); Communication System Band: GSM850;

Frequency: 836.6 MHz; Communication System PAR: 3.18 dB

Medium parameters used: $f = 837$ MHz; $\sigma = 0.951$ mho/m; $\epsilon_r = 54.241$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground mid/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.551 mW/g

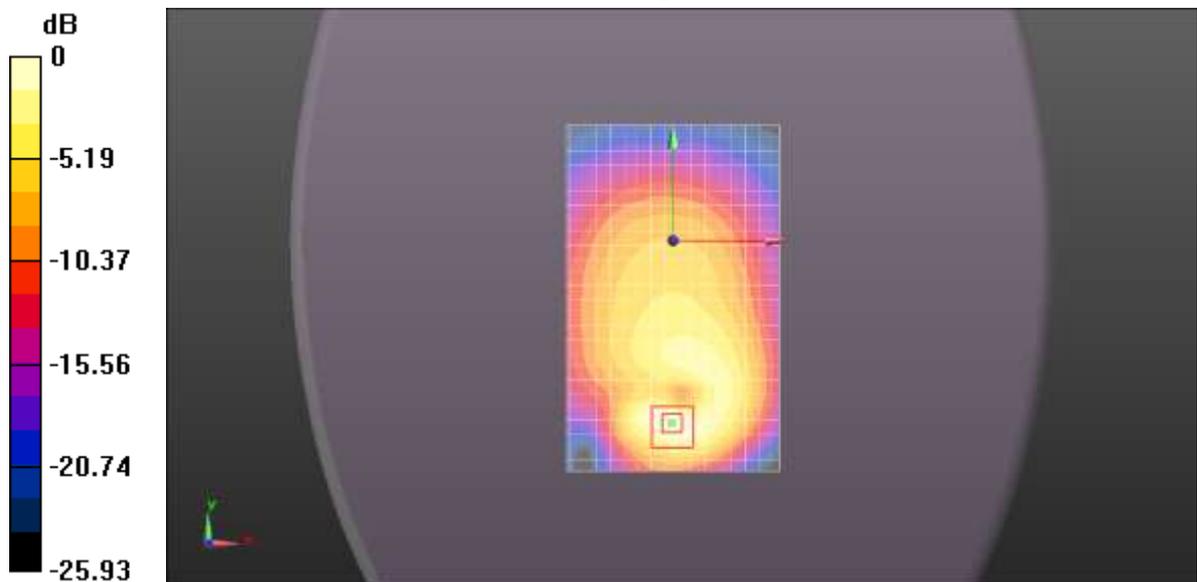
body/towards ground mid/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.302 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.784 mW/g

SAR(1 g) = 0.411 mW/g; SAR(10 g) = 0.211 mW/g

Maximum value of SAR (measured) = 0.520 mW/g



0 dB = 0.551 mW/g = -5.18 dB mW/g

GSM850 front mid

Date/Time: 19/03/2013 18:08:19

Communication System: GPRS/EGPRS(4UP); Communication System Band: GSM850;

Frequency: 836.6 MHz; Communication System PAR: 3.18 dB

Medium parameters used: $f = 837$ MHz; $\sigma = 0.951$ mho/m; $\epsilon_r = 54.241$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/front mid/Area Scan (81x131x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.162 mW/g

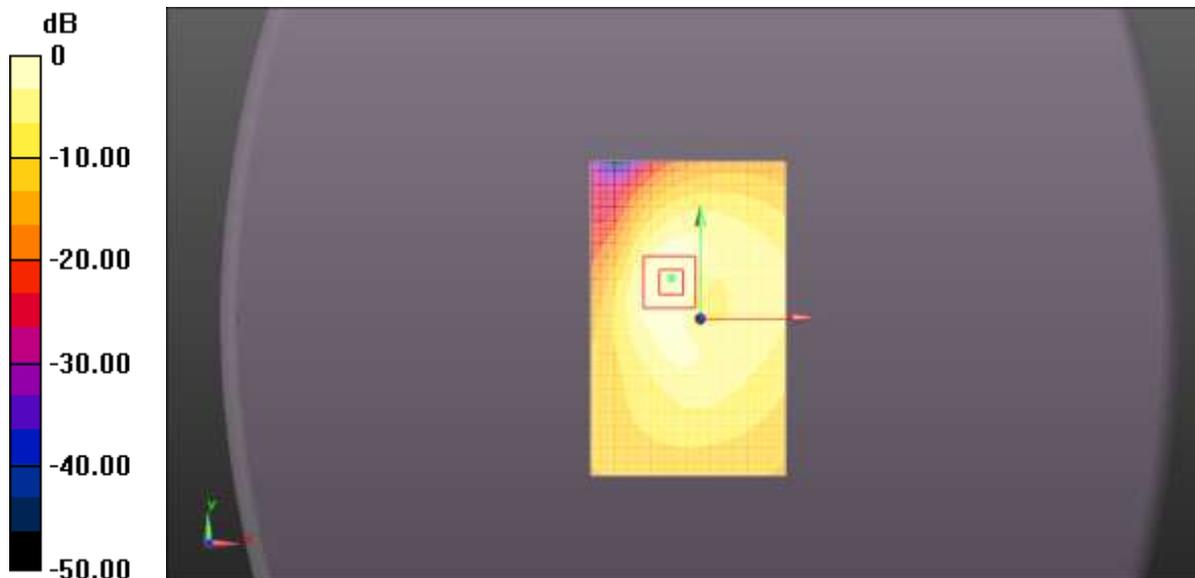
body/front mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.511 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.232 mW/g

SAR(1 g) = 0.130 mW/g; SAR(10 g) = 0.071 mW/g

Maximum value of SAR (measured) = 0.161 mW/g



0 dB = 0.162 mW/g = -15.82 dB mW/g

GSM850 left side mid

Date/Time: 19/03/2013 16:38:57

Communication System: GPRS/EGPRS(4UP); Communication System Band: GSM850;
Frequency: 836.6 MHz; Communication System PAR: 3.18 dBMedium parameters used: $f = 837$ MHz; $\sigma = 0.951$ mho/m; $\epsilon_r = 54.241$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body2/left side mid/Area Scan (71x201x1): Measurement grid: dx=10mm,
dy=10mm

Maximum value of SAR (interpolated) = 0.0555 mW/g

body2/left side mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,
dy=5mm, dz=5mm

Reference Value = 6.670 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.070 mW/g

SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.034 mW/g

Maximum value of SAR (measured) = 0.0570 mW/g

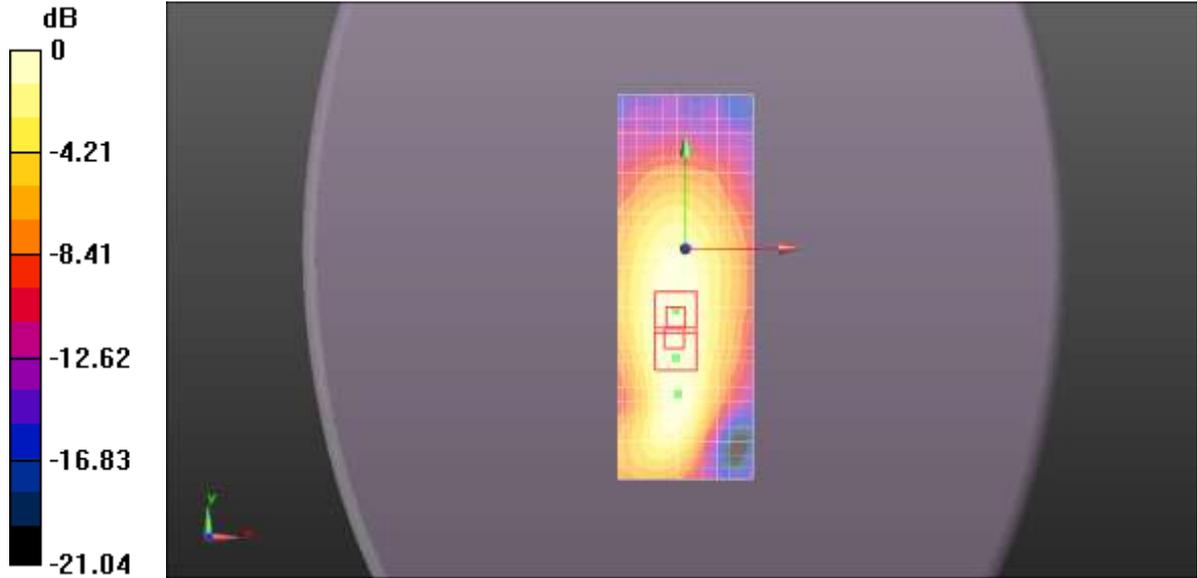
body2/left side mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm,
dy=5mm, dz=5mm

Reference Value = 6.670 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.072 mW/g

SAR(1 g) = 0.049 mW/g; SAR(10 g) = 0.032 mW/g

Maximum value of SAR (measured) = 0.0563 mW/g



0 dB = 0.0555 mW/g = -25.11 dB mW/g

GSM850 right side mid

Date/Time: 19/03/2013 17:32:07

Communication System: GPRS/EGPRS(4UP); Communication System Band: GSM850;

Frequency: 836.6 MHz; Communication System PAR: 3.18 dB

Medium parameters used: $f = 837$ MHz; $\sigma = 0.951$ mho/m; $\epsilon_r = 54.241$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body2/right side mid/Area Scan (71x201x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.0905 mW/g

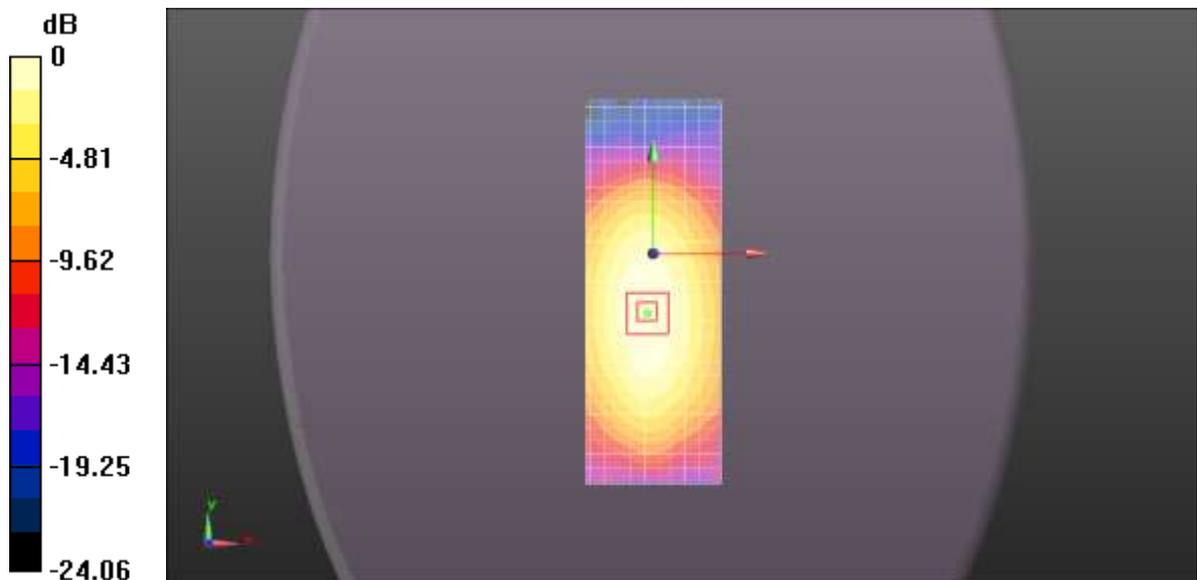
body2/right side mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.341 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.110 mW/g

SAR(1 g) = 0.079 mW/g; SAR(10 g) = 0.055 mW/g

Maximum value of SAR (measured) = 0.0902 mW/g



0 dB = 0.0905 mW/g = -20.87 dB mW/g

GSM850 towards ground low

Date/Time: 19/03/2013 14:44:38

Communication System: GPRS/EGPRS(4UP); Communication System Band: GSM850;
Frequency: 824.2 MHz; Communication System PAR: 3.18 dBMedium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.933$ mho/m; $\epsilon_r = 54.311$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground low/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.563 mW/g

body/towards ground low/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.896 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.855 mW/g

SAR(1 g) = 0.444 mW/g; SAR(10 g) = 0.228 mW/g

Maximum value of SAR (measured) = 0.566 mW/g

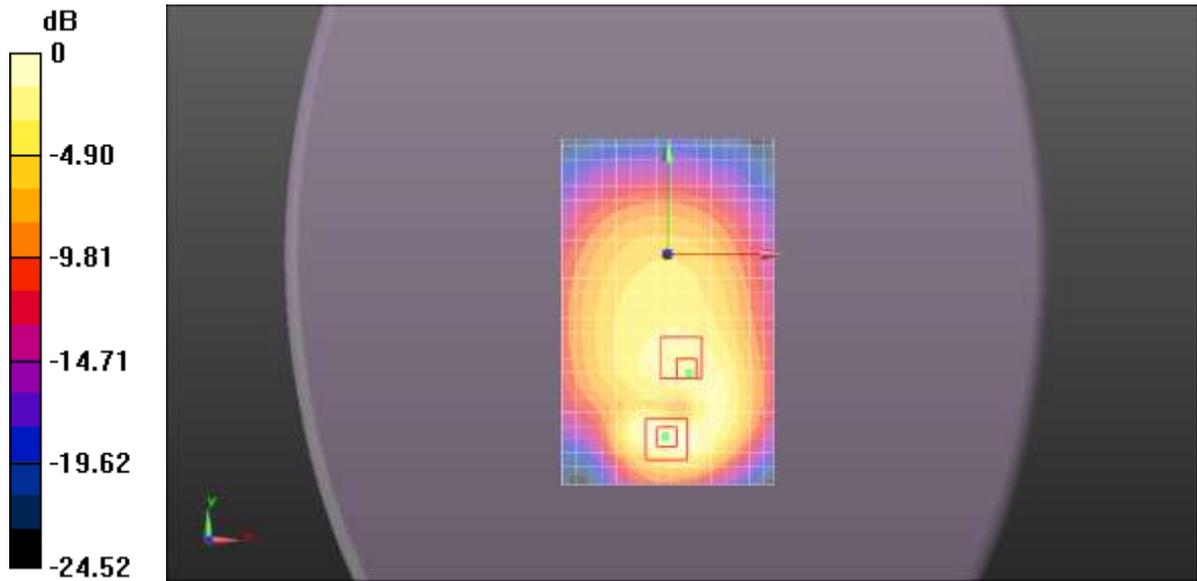
body/towards ground low/Zoom Scan (8x8x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.896 V/m; Power Drift = 0.13 dB

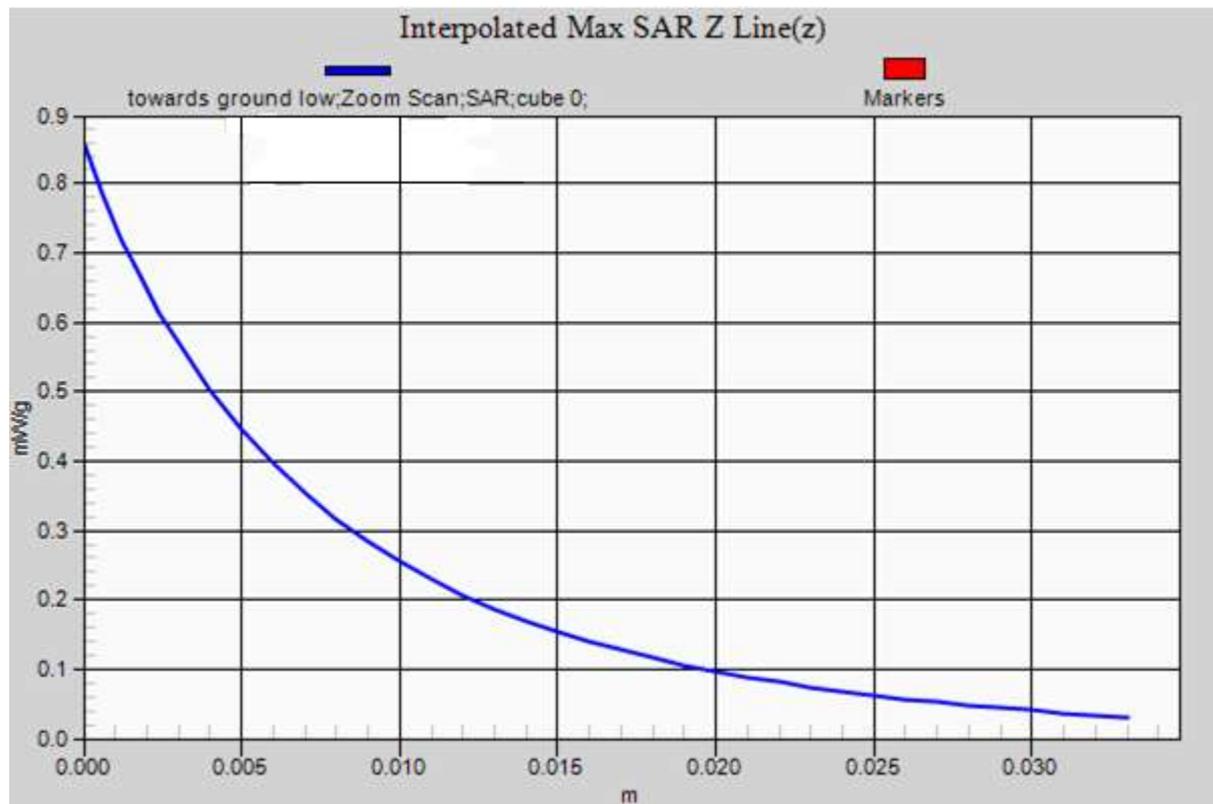
Peak SAR (extrapolated) = 0.487 mW/g

SAR(1 g) = 0.322 mW/g; SAR(10 g) = 0.225 mW/g

Maximum value of SAR (measured) = 0.371 mW/g



0 dB = 0.563 mW/g = -4.98 dB mW/g



GSM850 towards ground high

Date/Time: 19/03/2013 15:52:19

Communication System: GPRS/EGPRS(4UP); Communication System Band: GSM850;

Frequency: 848.8 MHz; Communication System PAR: 3.18 dB

Medium parameters used: $f = 849$ MHz; $\sigma = 0.967$ mho/m; $\epsilon_r = 54.15$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground high/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.522 mW/g

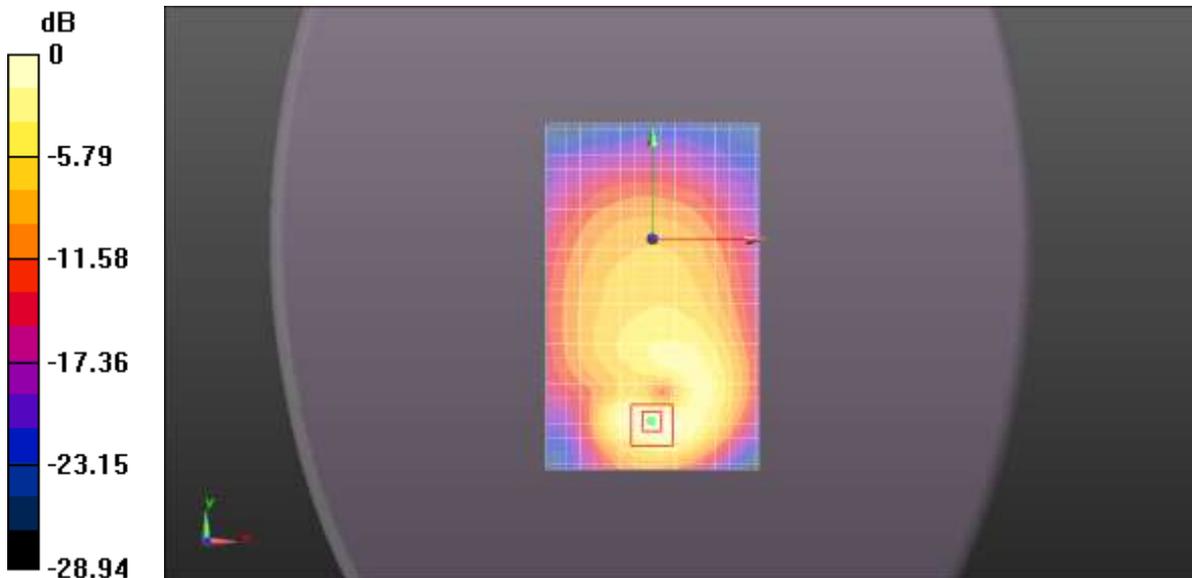
body/towards ground high/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.560 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.758 mW/g

SAR(1 g) = 0.392 mW/g; SAR(10 g) = 0.200 mW/g

Maximum value of SAR (measured) = 0.500 mW/g



0 dB = 0.522 mW/g = -5.65 dB mW/g

GSM850 towards ground low with earphone

Date/Time: 19/03/2013 18:46:42

Communication System: GPRS/EGPRS(4UP); Communication System Band: GSM850;
Frequency: 824.2 MHz; Communication System PAR: 3.18 dBMedium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.933$ mho/m; $\epsilon_r = 54.311$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground low with earphone/Area Scan (111x181x1): Measurement

grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.479 mW/g

body/towards ground low with earphone/Zoom Scan (8x8x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.560 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.742 mW/g

SAR(1 g) = 0.386 mW/g; SAR(10 g) = 0.201 mW/g

Maximum value of SAR (measured) = 0.487 mW/g

body/towards ground low with earphone/Zoom Scan (8x8x7)/Cube 1:

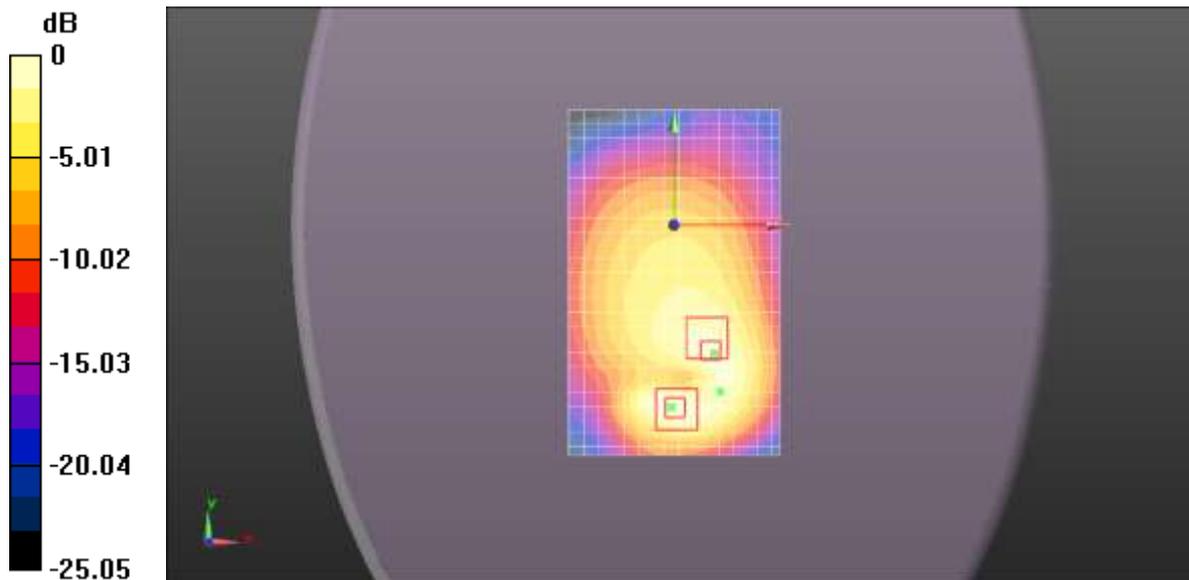
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.560 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.523 mW/g

SAR(1 g) = 0.329 mW/g; SAR(10 g) = 0.218 mW/g

Maximum value of SAR (measured) = 0.386 mW/g



0 dB = 0.479 mW/g = -6.39 dB mW/g

GSM850 towards ground low with EDGE(4UP)

Date/Time: 19/03/2013 19:55:33

Communication System: GPRS/EGPRS(4UP); Communication System Band: GSM850;
Frequency: 824.2 MHz; Communication System PAR: 3.18 dBMedium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.933$ mho/m; $\epsilon_r = 54.311$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground low with EDGE(4UP)/Area Scan (111x181x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.499 mW/g

body/towards ground low with EDGE(4UP)/Zoom Scan (8x8x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.676 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.775 mW/g

SAR(1 g) = 0.399 mW/g; SAR(10 g) = 0.206 mW/g

Maximum value of SAR (measured) = 0.507 mW/g

body/towards ground low with EDGE(4UP)/Zoom Scan (8x8x7)/Cube 1:

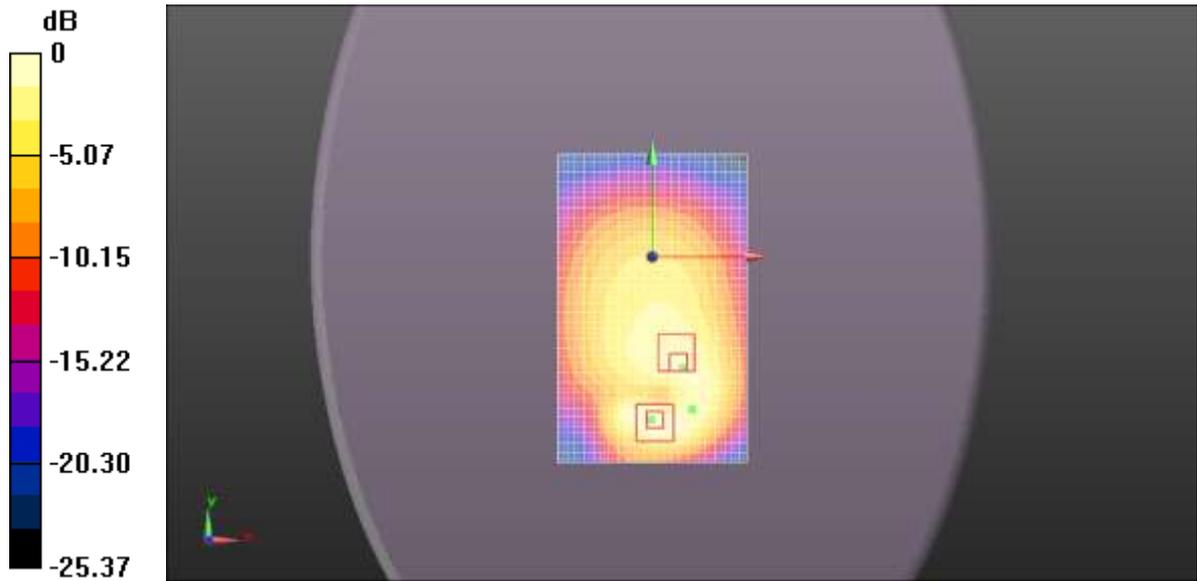
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.676 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.482 mW/g

SAR(1 g) = 0.313 mW/g; SAR(10 g) = 0.214 mW/g

Maximum value of SAR (measured) = 0.365 mW/g



0 dB = 0.499 mW/g = -6.04 dB mW/g

GSM850 towards ground low additional card

Date/Time: 19/03/2013 21:30:15

Communication System: GPRS/EGPRS(4UP); Communication System Band: GSM850;
Frequency: 824.2 MHz; Communication System PAR: 3.18 dBMedium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.933$ mho/m; $\epsilon_r = 54.311$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(6.25, 6.25, 6.25); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground low additional card/Area Scan (111x181x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.468 mW/g

body/towards ground low additional card/Zoom Scan (8x8x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.512 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.708 mW/g

SAR(1 g) = 0.370 mW/g; SAR(10 g) = 0.192 mW/g

Maximum value of SAR (measured) = 0.467 mW/g

body/towards ground low 2card/Zoom Scan (8x8x7)/Cube 1: Measurement grid:

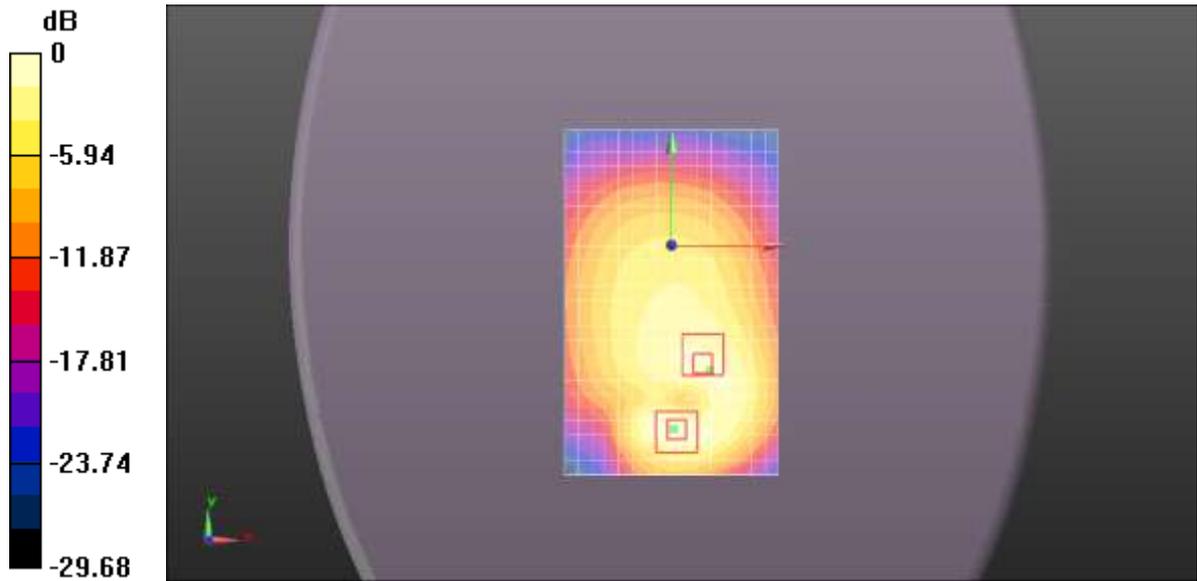
dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.512 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.439 mW/g

SAR(1 g) = 0.289 mW/g; SAR(10 g) = 0.196 mW/g

Maximum value of SAR (measured) = 0.335 mW/g



0 dB = 0.468 mW/g = -6.59 dB mW/g

GSM1900 left touch mid

Date/Time: 06/03/2013 19:42:03

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.364$ mho/m; $\epsilon_r = 39.144$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/touch mid/Area Scan (121x191x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.238 mW/g

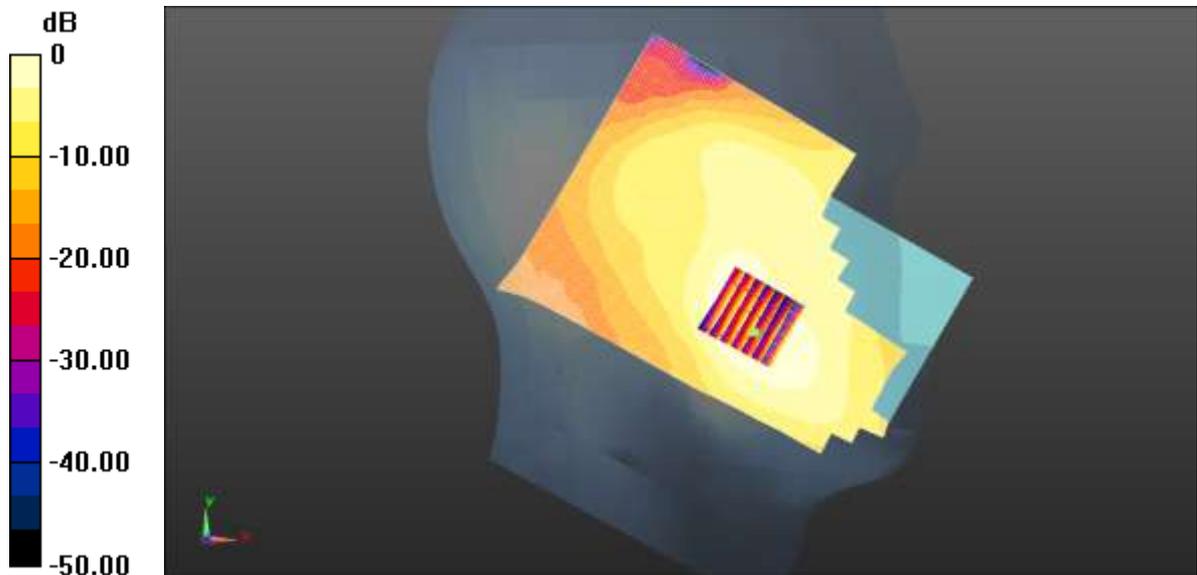
left/touch mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.366 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.312 mW/g

SAR(1 g) = 0.198 mW/g; SAR(10 g) = 0.123 mW/g

Maximum value of SAR (measured) = 0.233 mW/g



0 dB = 0.238 mW/g = -12.48 dB mW/g

GSM1900 left tilt mid

Date/Time: 06/03/2013 20:19:35

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.364$ mho/m; $\epsilon_r = 39.144$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/tilt mid/Area Scan (121x191x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.107 mW/g

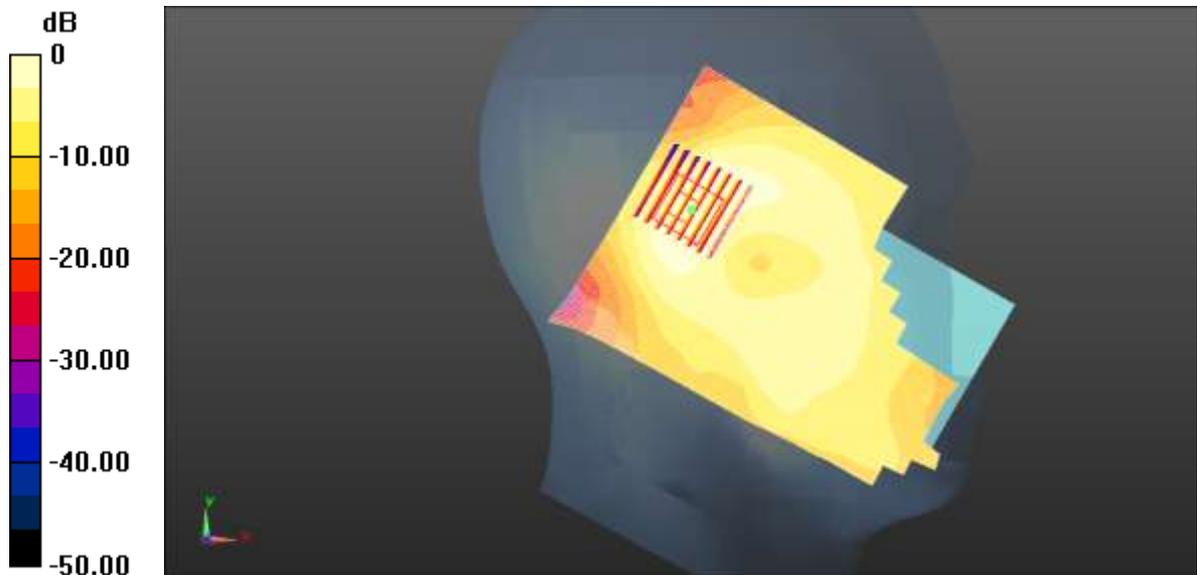
left/tilt mid/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.308 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.143 mW/g

SAR(1 g) = 0.089 mW/g; SAR(10 g) = 0.051 mW/g

Maximum value of SAR (measured) = 0.106 mW/g



0 dB = 0.107 mW/g = -19.38 dB mW/g

GSM1900 right touch mid

Date/Time: 06/03/2013 21:03:54

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.364$ mho/m; $\epsilon_r = 39.144$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

right/touch mid/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.140 mW/g

right/touch mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.218 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.181 mW/g

SAR(1 g) = 0.118 mW/g; SAR(10 g) = 0.072 mW/g

Maximum value of SAR (measured) = 0.138 mW/g

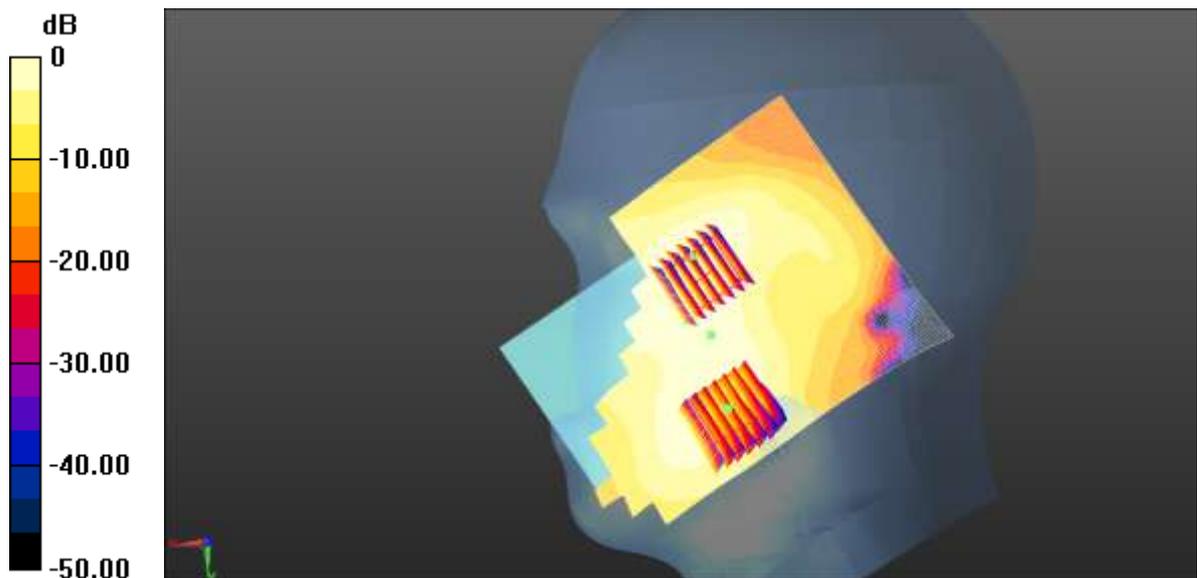
right/touch mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.218 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.174 mW/g

SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.073 mW/g

Maximum value of SAR (measured) = 0.132 mW/g



0 dB = 0.140 mW/g = -17.09 dB mW/g

GSM1900 right tilt mid

Date/Time: 06/03/2013 21:58:01

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1880 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.364$ mho/m; $\epsilon_r = 39.144$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

right/tilt mid/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.101 mW/g

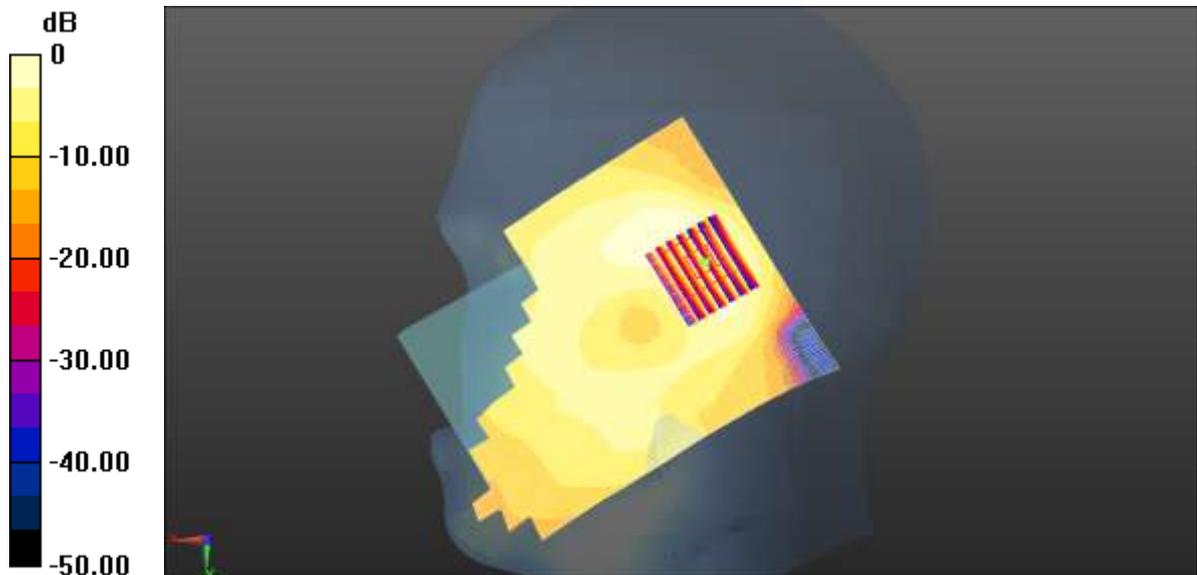
right/tilt mid/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.656 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.134 mW/g

SAR(1 g) = 0.085 mW/g; SAR(10 g) = 0.050 mW/g

Maximum value of SAR (measured) = 0.102 mW/g



0 dB = 0.101 mW/g = -19.91 dB mW/g

GSM1900 left touch low

Date/Time: 06/03/2013 22:38:52

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1850.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.339$ mho/m; $\epsilon_r = 39.255$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/touch low/Area Scan (121x191x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.238 mW/g

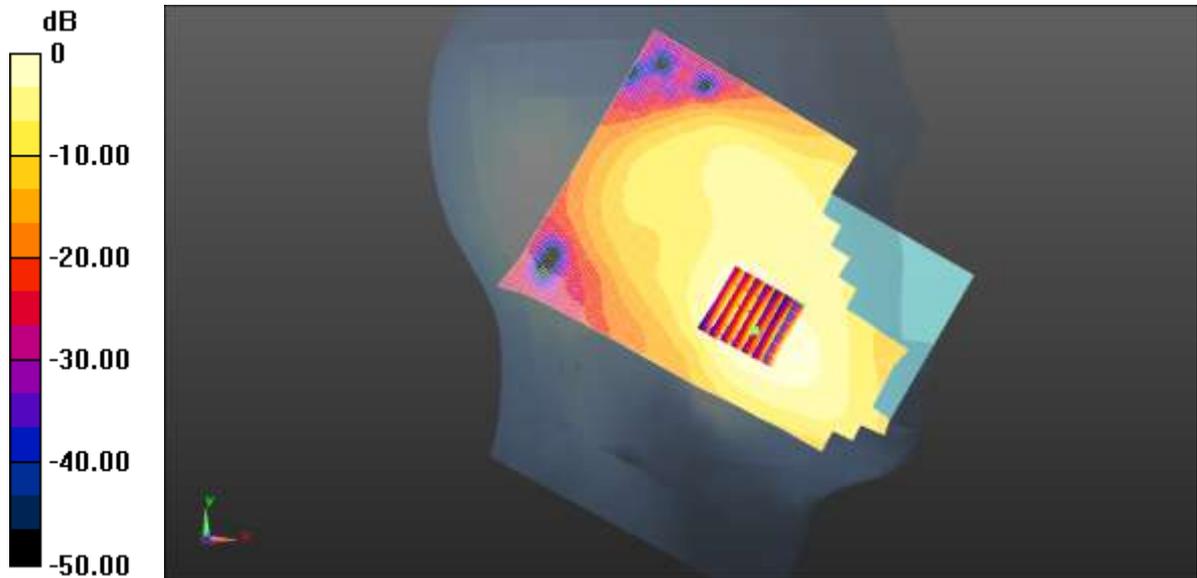
left/touch low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.227 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.321 mW/g

SAR(1 g) = 0.201 mW/g; SAR(10 g) = 0.126 mW/g

Maximum value of SAR (measured) = 0.235 mW/g



0 dB = 0.238 mW/g = -12.48 dB mW/g

GSM1900 left touch high

Date/Time: 06/03/2013 23:16:09

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1909.8 MHz; Communication System PAR: 9.191 dB

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.393$ mho/m; $\epsilon_r = 39.011$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/touch high/Area Scan (121x191x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.239 mW/g

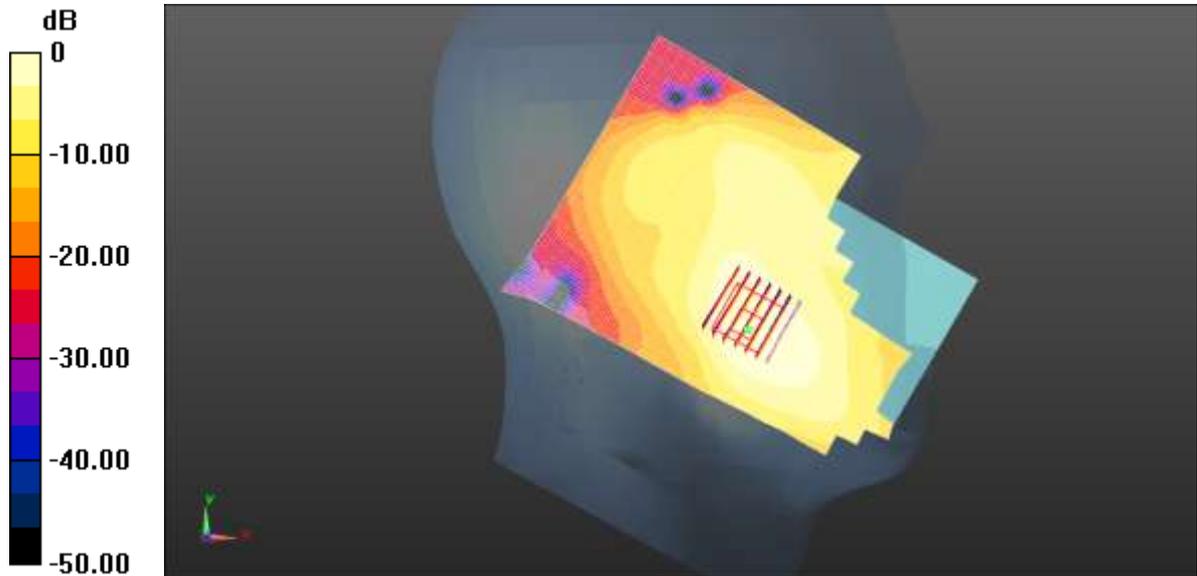
left/touch high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.294 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.321 mW/g

SAR(1 g) = 0.201 mW/g; SAR(10 g) = 0.124 mW/g

Maximum value of SAR (measured) = 0.236 mW/g



0 dB = 0.239 mW/g = -12.44 dB mW/g

GSM1900 left touch low additional card

Date/Time: 06/03/2013 23:54:06

Communication System: Generic GSM; Communication System Band: PCS 1900 (1850.0 - 1910.0 MHz); Frequency: 1850.2 MHz; Communication System PAR: 9.191 dB

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.339$ mho/m; $\epsilon_r = 39.255$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/touch low additional card/Area Scan (121x191x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.242 mW/g

left/touch low additional card/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

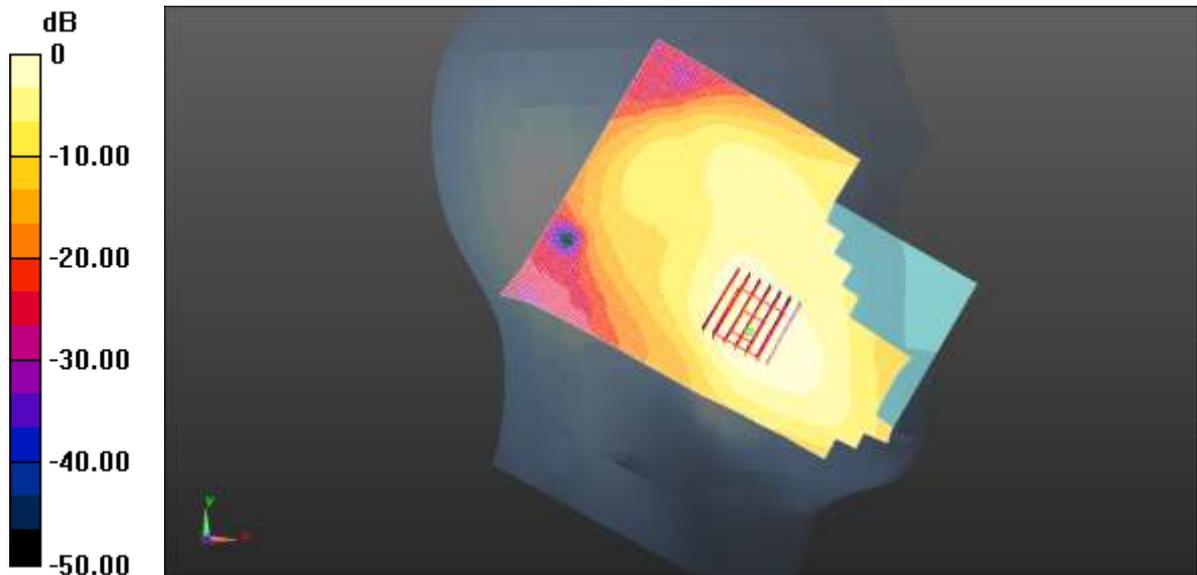
$dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 5.285 V/m; Power Drift = -0.04 dB

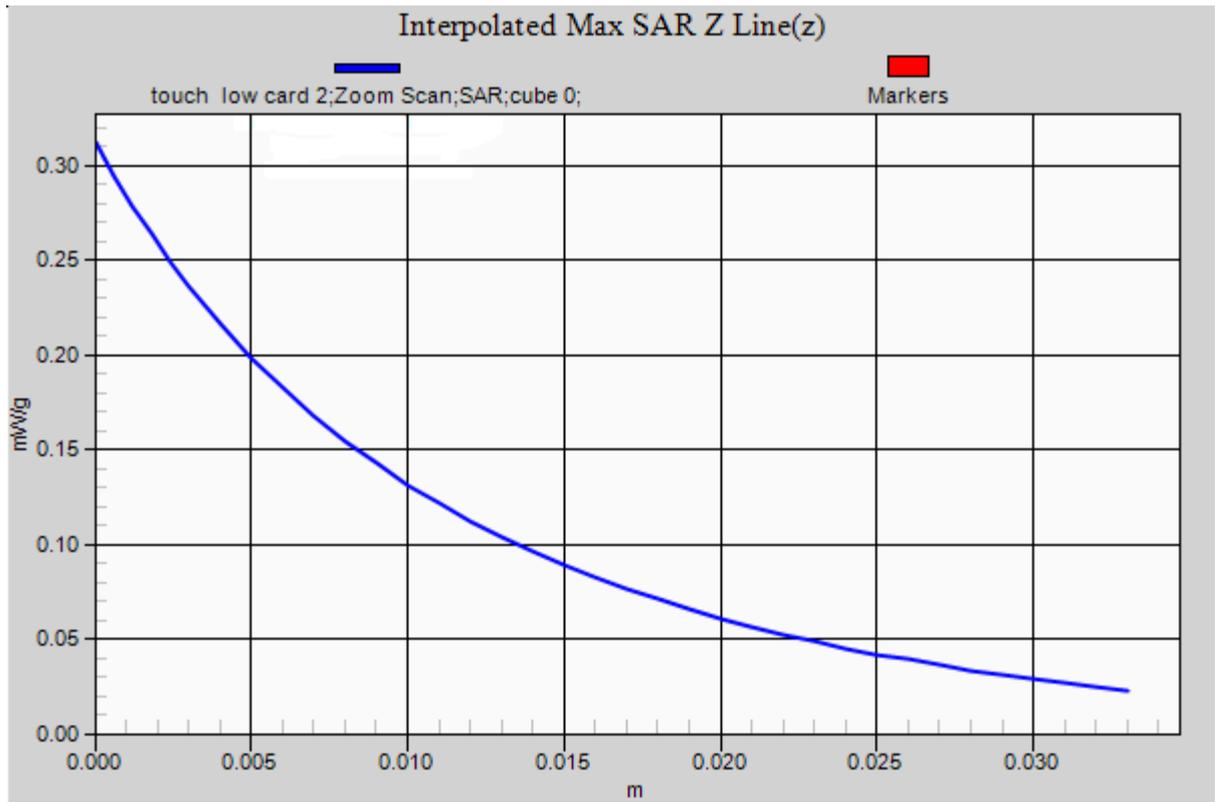
Peak SAR (extrapolated) = 0.312 mW/g

SAR(1 g) = 0.205 mW/g; SAR(10 g) = 0.130 mW/g

Maximum value of SAR (measured) = 0.238 mW/g



0 dB = 0.242 mW/g = -12.34 dB mW/g



GSM1900 towards phantom mid

Date/Time: 07/03/2013 13:54:14

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1880 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 52.425$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards phantom mid/Area Scan (111x181x1): Measurement grid:

$dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.389 mW/g

body/towards phantom mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

$dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 5.995 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.493 mW/g

SAR(1 g) = 0.321 mW/g; SAR(10 g) = 0.206 mW/g

Maximum value of SAR (measured) = 0.378 mW/g

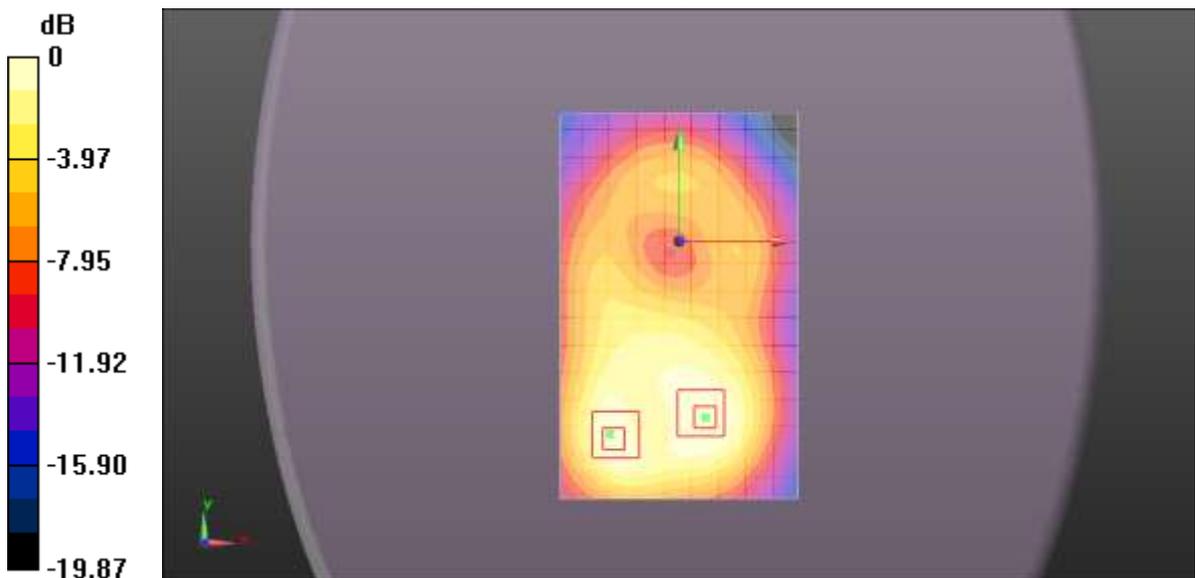
body/towards phantom mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid:

$dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 5.995 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.538 mW/g

SAR(1 g) = 0.307 mW/g; SAR(10 g) = 0.173 mW/g



0 dB = 0.389 mW/g = -8.20 dB mW/g

GSM1900 towards ground mid

Date/Time: 07/03/2013 14:48:52

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1880 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 52.425$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground mid/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.620 mW/g

body/towards ground mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.322 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.866 mW/g

SAR(1 g) = 0.487 mW/g; SAR(10 g) = 0.264 mW/g

Maximum value of SAR (measured) = 0.614 mW/g

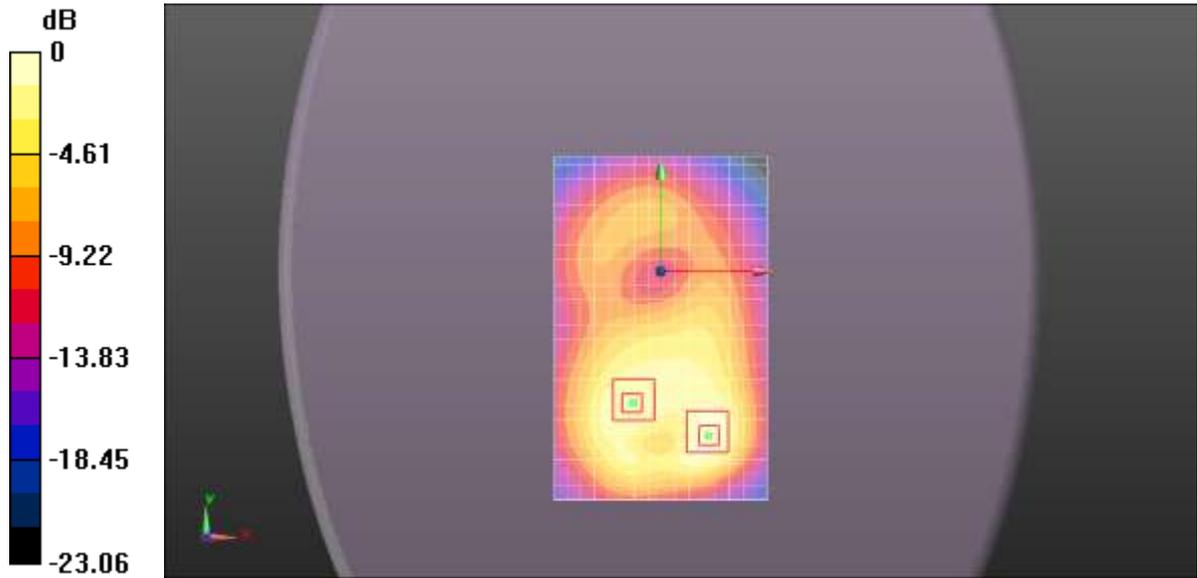
body/towards ground mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.322 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.571 mW/g

SAR(1 g) = 0.374 mW/g; SAR(10 g) = 0.234 mW/g

Maximum value of SAR (measured) = 0.442 mW/g



0 dB = 0.620 mW/g = -4.16 dB mW/g

GSM1900 front mid

Date/Time: 11/03/2013 13:45:24

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1880 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 52.425$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/front mid/Area Scan (81x131x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.546 mW/g

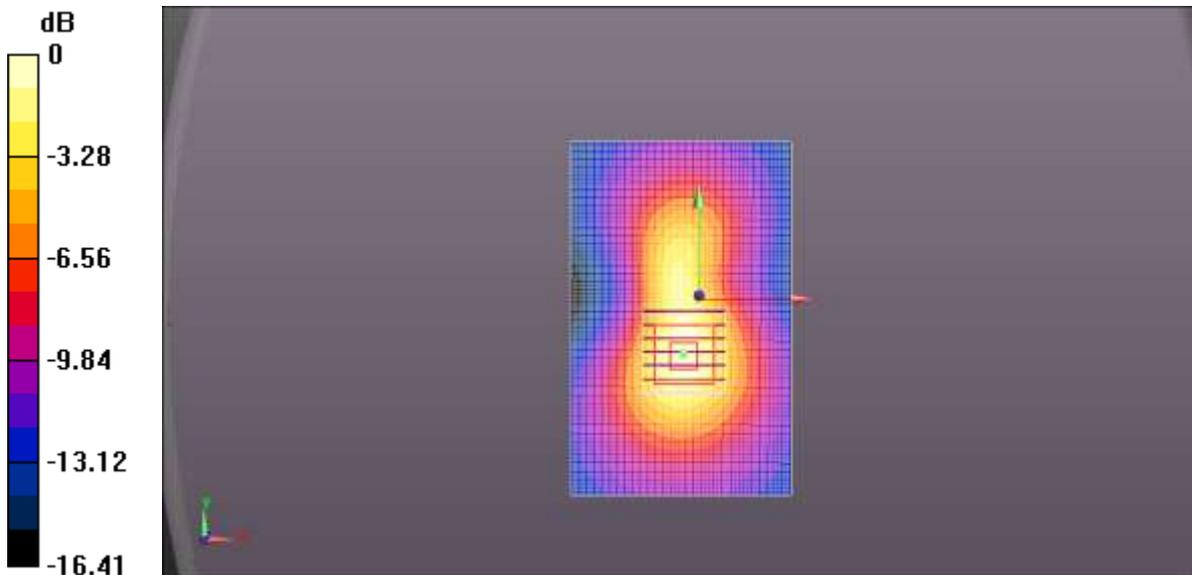
body/front mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.076 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.737 mW/g

SAR(1 g) = 0.441 mW/g; SAR(10 g) = 0.242 mW/g

Maximum value of SAR (measured) = 0.549 mW/g



0 dB = 0.546 mW/g = -5.25 dB mW/g

GSM1900 left side mid

Date/Time: 11/03/2013 10:30:03

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1880 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 52.425$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body2/left side mid/Area Scan (71x201x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.500 mW/g

body2/left side mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.513 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.667 mW/g

SAR(1 g) = 0.407 mW/g; SAR(10 g) = 0.234 mW/g

Maximum value of SAR (measured) = 0.495 mW/g

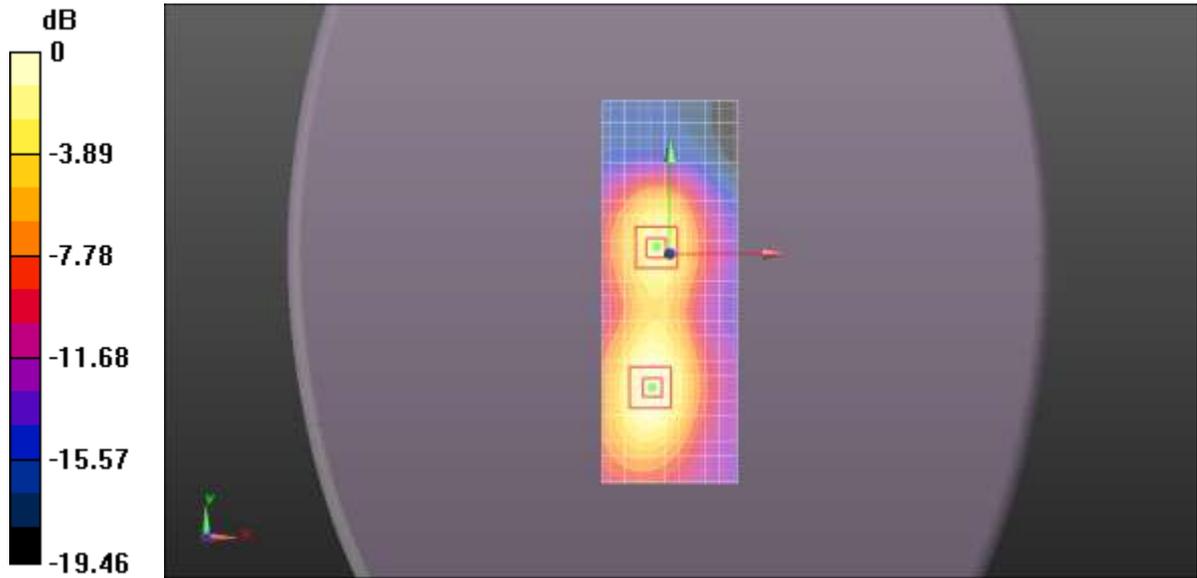
body2/left side mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.513 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.461 mW/g

SAR(1 g) = 0.284 mW/g; SAR(10 g) = 0.167 mW/g

Maximum value of SAR (measured) = 0.346 mW/g



0 dB = 0.500 mW/g = -6.02 dB mW/g

GSM1900 right side mid

Date/Time: 11/03/2013 12:57:29

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1880 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 52.425$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body2/right side mid/Area Scan (71x201x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.271 mW/g

body2/right side mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.087 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.364 mW/g

SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.134 mW/g

Maximum value of SAR (measured) = 0.275 mW/g

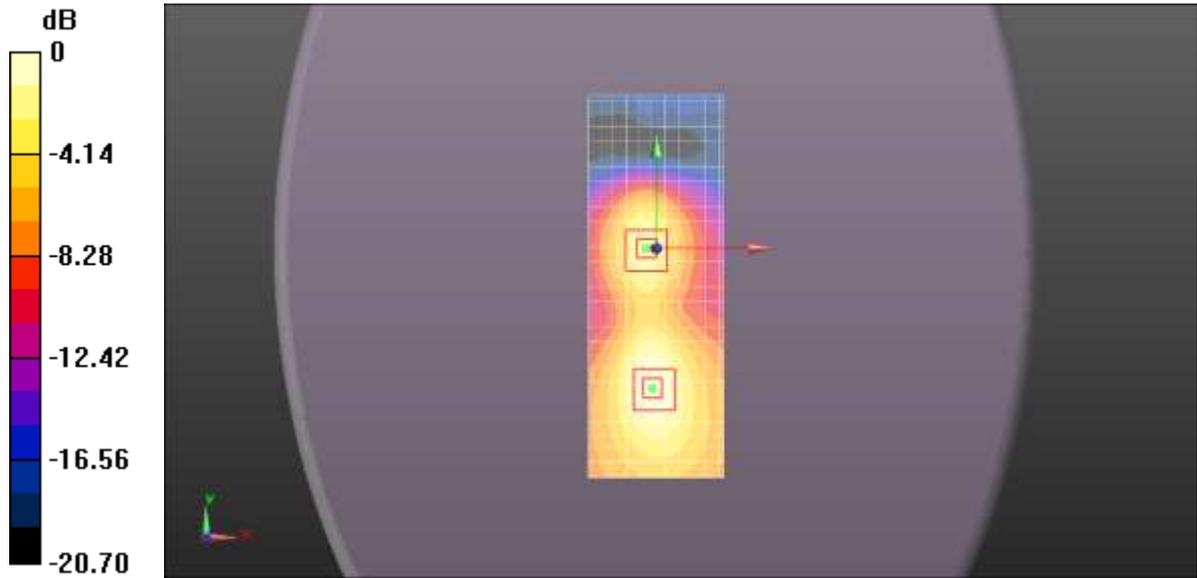
body2/right side mid/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.087 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 0.254 mW/g

SAR(1 g) = 0.156 mW/g; SAR(10 g) = 0.091 mW/g

Maximum value of SAR (measured) = 0.190 mW/g



0 dB = 0.271 mW/g = -11.34 dB mW/g

GSM1900 towards ground low

Date/Time: 07/03/2013 15:44:36

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1850.2 MHz; Communication System PAR: 6.19 dB

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.448$ mho/m; $\epsilon_r = 52.486$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground low/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.574 mW/g

body/towards ground low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.650 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.795 mW/g

SAR(1 g) = 0.455 mW/g; SAR(10 g) = 0.251 mW/g

Maximum value of SAR (measured) = 0.569 mW/g

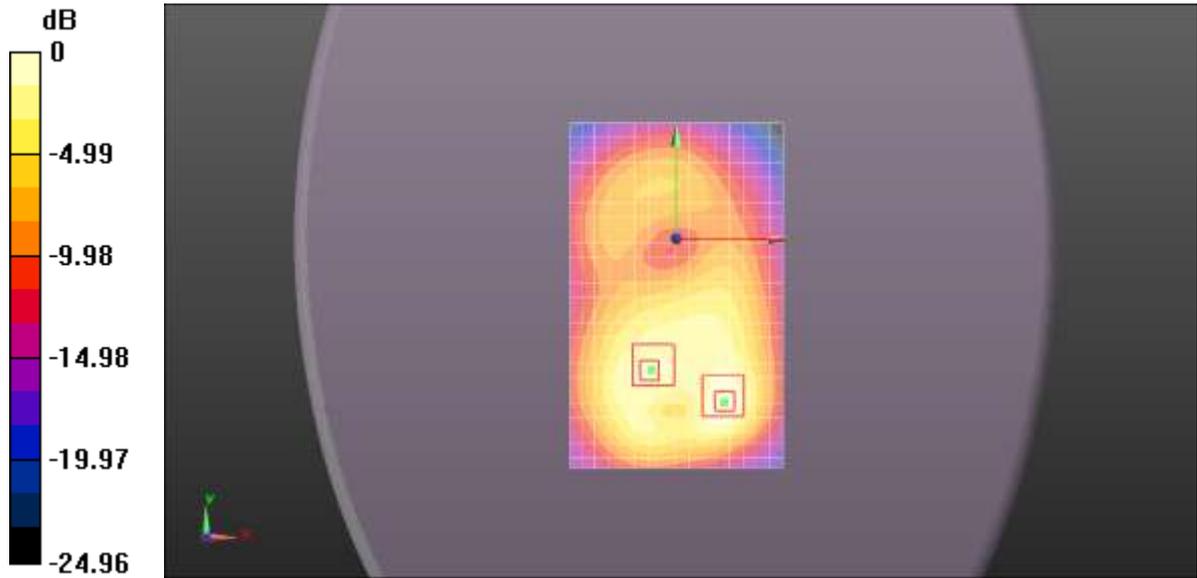
body/towards ground low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.650 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.551 mW/g

SAR(1 g) = 0.366 mW/g; SAR(10 g) = 0.230 mW/g

Maximum value of SAR (measured) = 0.430 mW/g



0 dB = 0.574 mW/g = -4.82 dB mW/g

GSM1900 towards ground high

Date/Time: 07/03/2013 16:46:10

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1909.8 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.503$ mho/m; $\epsilon_r = 52.325$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground high/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.687 mW/g

body/towards ground high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.232 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.962 mW/g

SAR(1 g) = 0.537 mW/g; SAR(10 g) = 0.286 mW/g

Maximum value of SAR (measured) = 0.677 mW/g

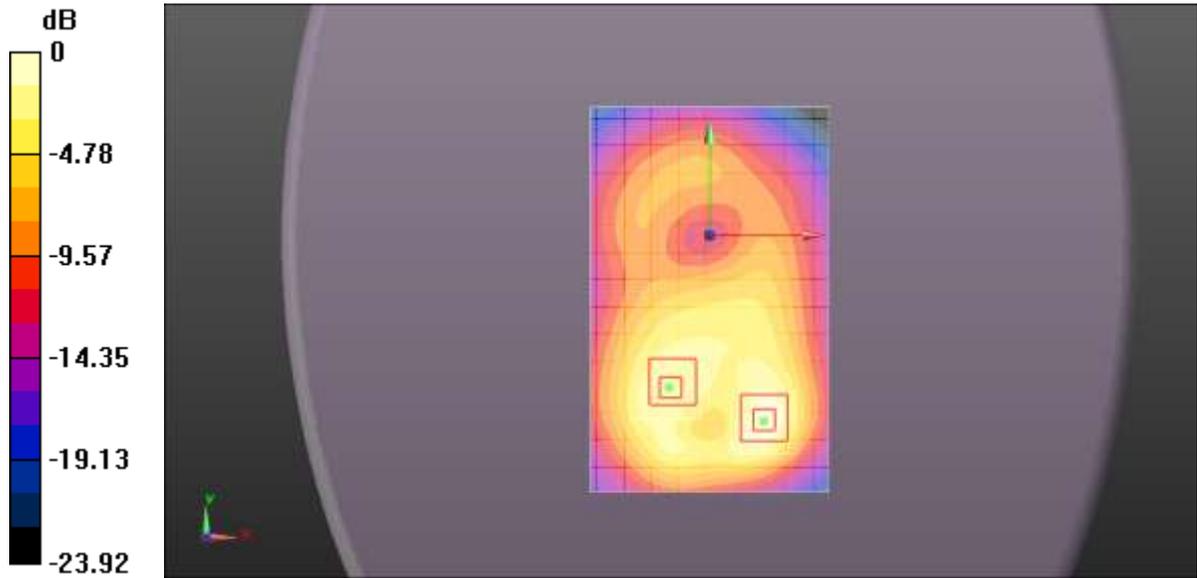
body/towards ground high/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.232 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.622 mW/g

SAR(1 g) = 0.400 mW/g; SAR(10 g) = 0.247 mW/g

Maximum value of SAR (measured) = 0.476 mW/g



0 dB = 0.687 mW/g = -3.26 dB mW/g

GSM1900 front low

Date/Time: 11/03/2013 14:16:12

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;
 Frequency: 1850.2 MHz; Communication System PAR: 6.19 dB

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.448$ mho/m; $\epsilon_r = 52.486$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/front low/Area Scan (81x131x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.515 mW/g

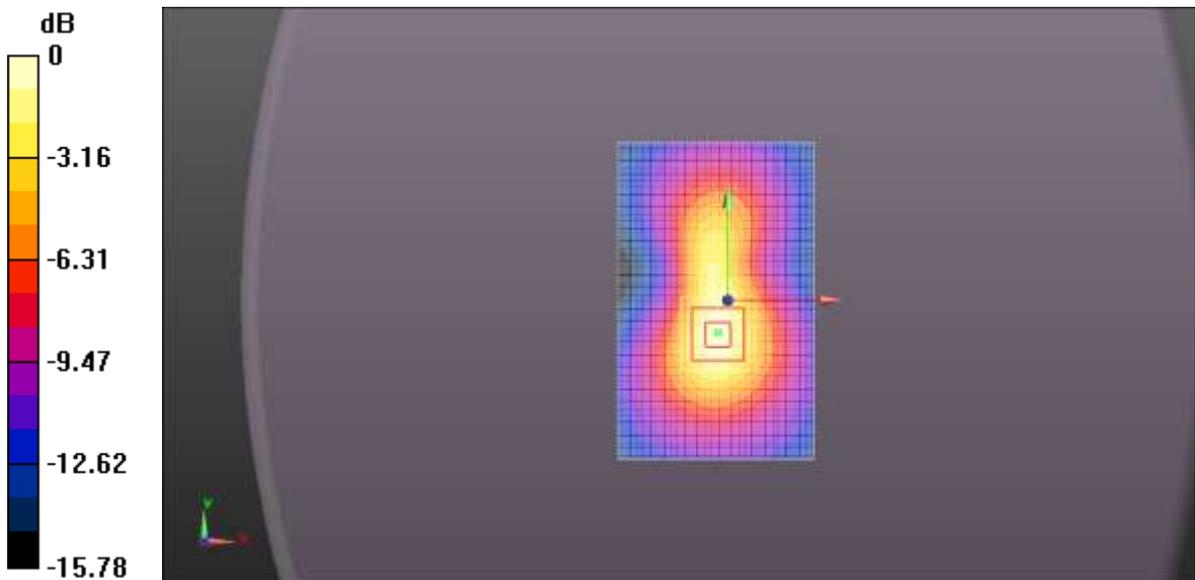
body/front low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.586 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.682 mW/g

SAR(1 g) = 0.412 mW/g; SAR(10 g) = 0.230 mW/g

Maximum value of SAR (measured) = 0.510 mW/g



0 dB = 0.515 mW/g = -5.76 dB mW/g

GSM1900 front high

Date/Time: 11/03/2013 14:45:01

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;
 Frequency: 1909.8 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.503$ mho/m; $\epsilon_r = 52.325$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/front high/Area Scan (81x131x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.601 mW/g

body/front high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.626 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.810 mW/g

SAR(1 g) = 0.478 mW/g; SAR(10 g) = 0.262 mW/g

Maximum value of SAR (measured) = 0.598 mW/g

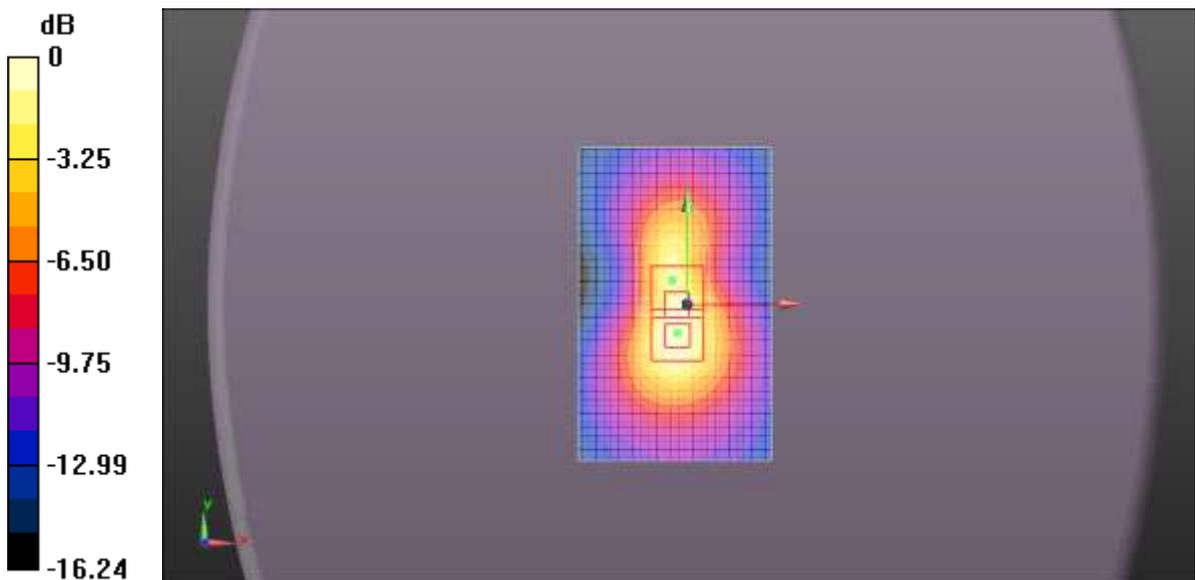
body/front high/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.626 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.740 mW/g

SAR(1 g) = 0.388 mW/g; SAR(10 g) = 0.195 mW/g

Maximum value of SAR (measured) = 0.531 mW/g



0 dB = 0.601 mW/g = -4.43 dB mW/g

GSM1900 left side low

Date/Time: 11/03/2013 11:19:46

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;
Frequency: 1850.2 MHz; Communication System PAR: 6.19 dBMedium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.448$ mho/m; $\epsilon_r = 52.486$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body2/left side low/Area Scan (71x201x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.467 mW/g

body2/left side low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.263 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.630 mW/g

SAR(1 g) = 0.385 mW/g; SAR(10 g) = 0.222 mW/g

Maximum value of SAR (measured) = 0.470 mW/g

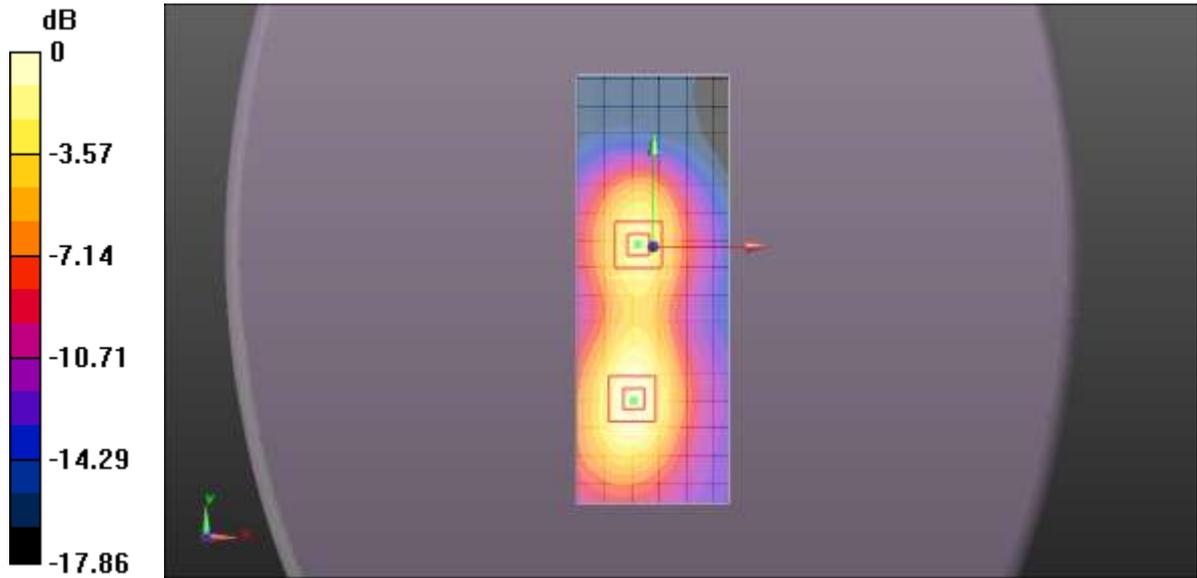
body2/left side low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.263 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.429 mW/g

SAR(1 g) = 0.266 mW/g; SAR(10 g) = 0.156 mW/g

Maximum value of SAR (measured) = 0.324 mW/g



0 dB = 0.467 mW/g = -6.60 dB mW/g

GSM1900 left side high

Date/Time: 11/03/2013 12:08:40

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;
Frequency: 1909.8 MHz; Communication System PAR: 6.19 dBMedium parameters used: $f = 1910$ MHz; $\sigma = 1.503$ mho/m; $\epsilon_r = 52.325$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body2/left side high/Area Scan (71x201x1): Measurement grid: dx=10mm,
dy=10mm

Maximum value of SAR (interpolated) = 0.529 mW/g

body2/left side high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,
dy=5mm, dz=5mm

Reference Value = 14.601 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.724 mW/g

SAR(1 g) = 0.436 mW/g; SAR(10 g) = 0.249 mW/g

Maximum value of SAR (measured) = 0.536 mW/g

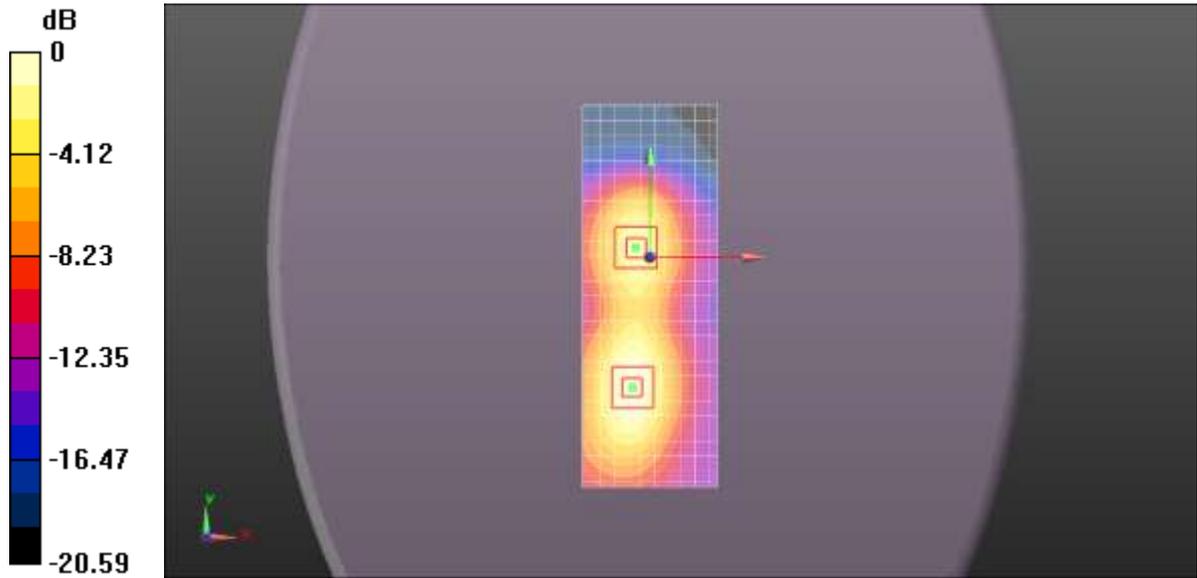
body2/left side high/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm,
dy=5mm, dz=5mm

Reference Value = 14.601 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.495 mW/g

SAR(1 g) = 0.302 mW/g; SAR(10 g) = 0.175 mW/g

Maximum value of SAR (measured) = 0.370 mW/g



0 dB = 0.529 mW/g = -5.53 dB mW/g

GSM1900 towards ground high with earphone

Date/Time: 11/03/2013 15:35:02

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1909.8 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.503$ mho/m; $\epsilon_r = 52.325$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground high with earphone/Area Scan (111x181x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.06 mW/g

body/towards ground high with earphone/Zoom Scan (7x7x7)/Cube 0:

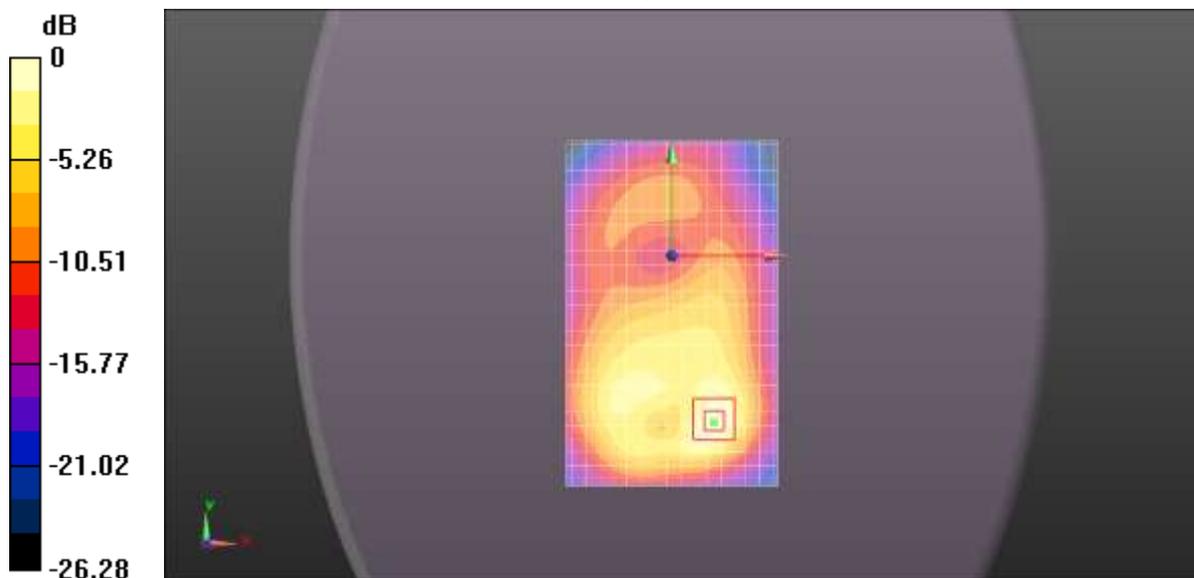
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.031 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.507 mW/g

SAR(1 g) = 0.807 mW/g; SAR(10 g) = 0.415 mW/g

Maximum value of SAR (measured) = 1.04 mW/g



0 dB = 1.06 mW/g = 0.54 dB mW/g

GSM1900 towards ground high EDGE(2up)

Date/Time: 11/03/2013 16:15:40

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1909.8 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.503$ mho/m; $\epsilon_r = 52.325$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground high EDGE(2UP)/Area Scan (111x181x1): Measurement

grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.09 mW/g

body/towards ground high EDGE(2UP)/Zoom Scan (7x7x7)/Cube 0:

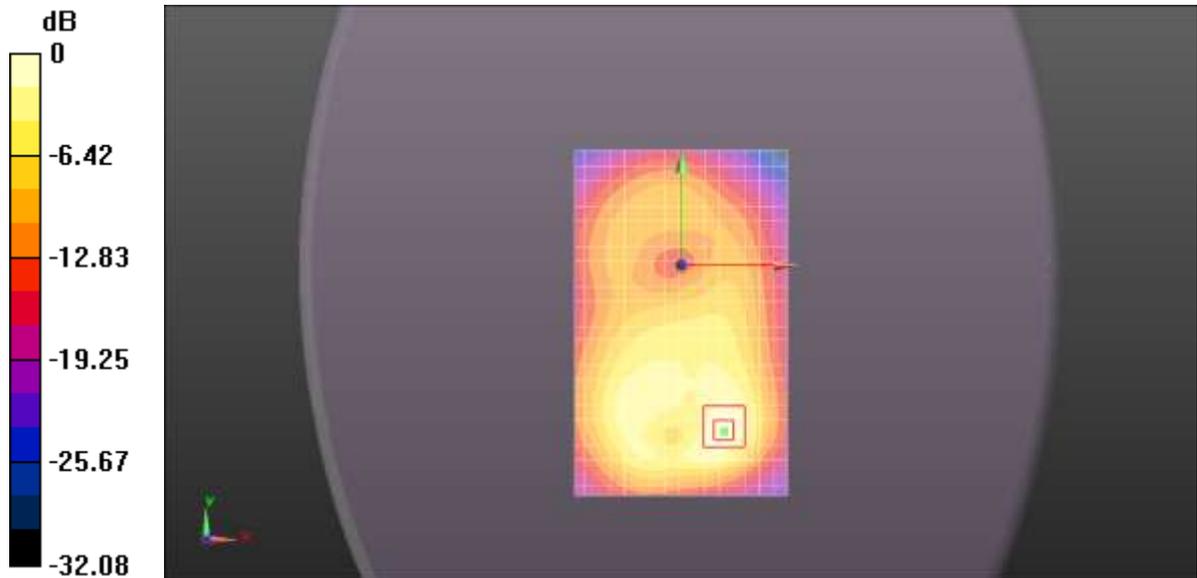
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.736 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.525 mW/g

SAR(1 g) = 0.822 mW/g; SAR(10 g) = 0.423 mW/g

Maximum value of SAR (measured) = 1.05 mW/g



0 dB = 1.09 mW/g = 0.71 dB mW/g

GSM1900 towards ground high EDGE(2up) additional card

Date/Time: 11/03/2013 17:26:28

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1909.8 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.503$ mho/m; $\epsilon_r = 52.325$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground high EDGE(2UP) additional card/Area Scan

(111x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.993 mW/g

body/towards ground high EDGE(2UP) additional card/Zoom Scan

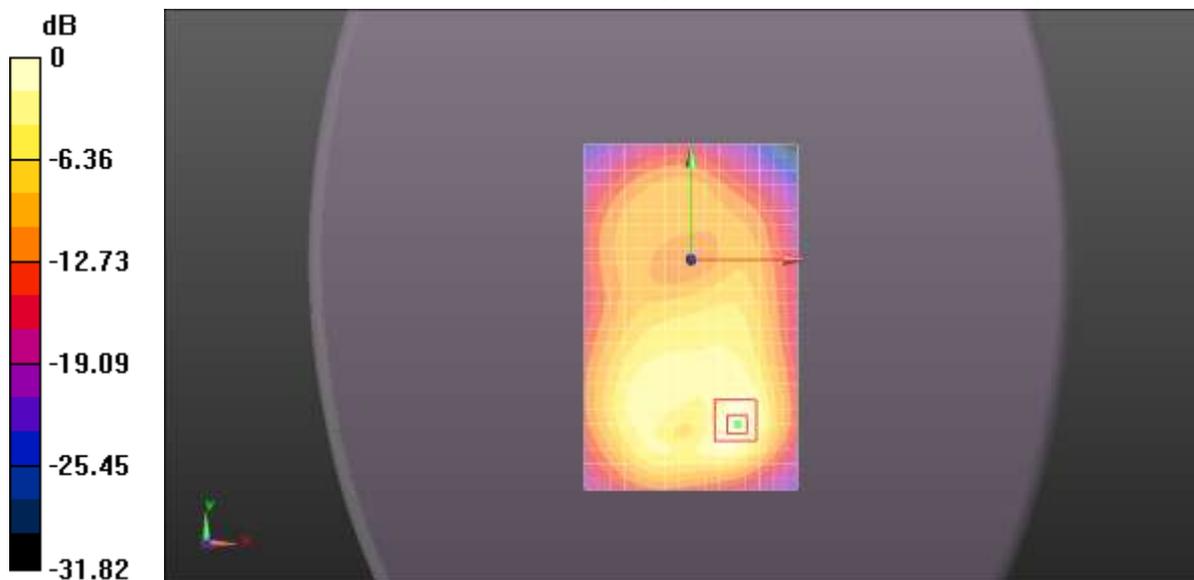
(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.373 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.394 mW/g

SAR(1 g) = 0.755 mW/g; SAR(10 g) = 0.390 mW/g

Maximum value of SAR (measured) = 0.969 mW/g



0 dB = 0.993 mW/g = -0.06 dB mW/g

GSM1900 towards ground high EDGE(2up) repeat

Date/Time: 11/03/2013 19:21:48

Communication System: GPRS/EGPRS(2UP); Communication System Band: PCS1900;

Frequency: 1909.8 MHz; Communication System PAR: 6.19 dB

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.503$ mho/m; $\epsilon_r = 52.325$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards ground high EDGE(2UP) repeat/Area Scan (111x181x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.30 mW/g

body/towards ground high EDGE(2UP) repeat/Zoom Scan (7x7x7)/Cube 0:

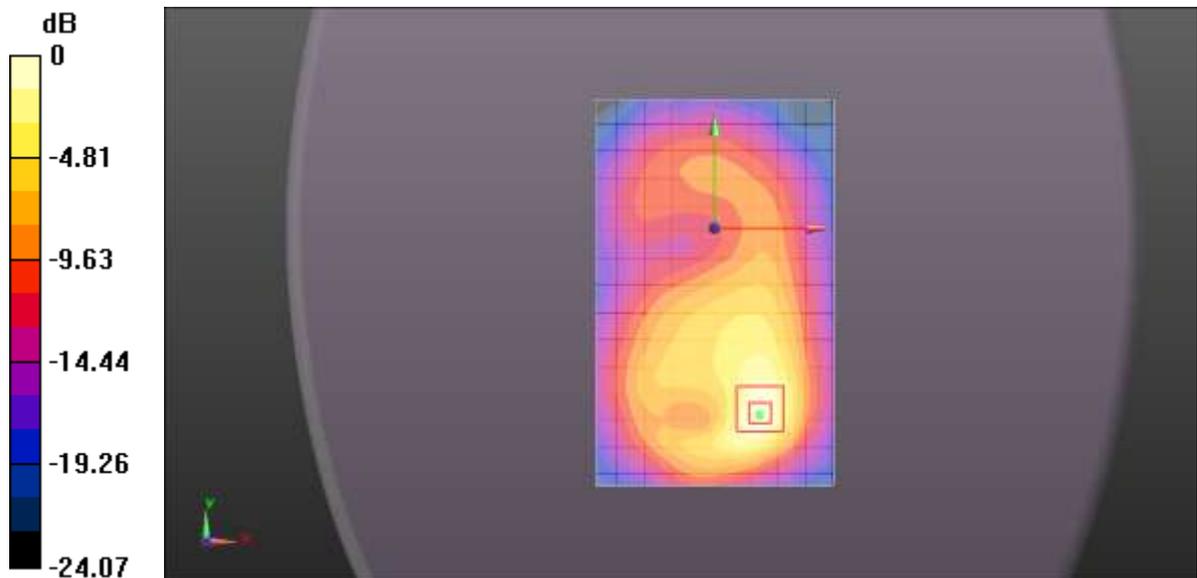
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.960 V/m; Power Drift = -0.18 dB

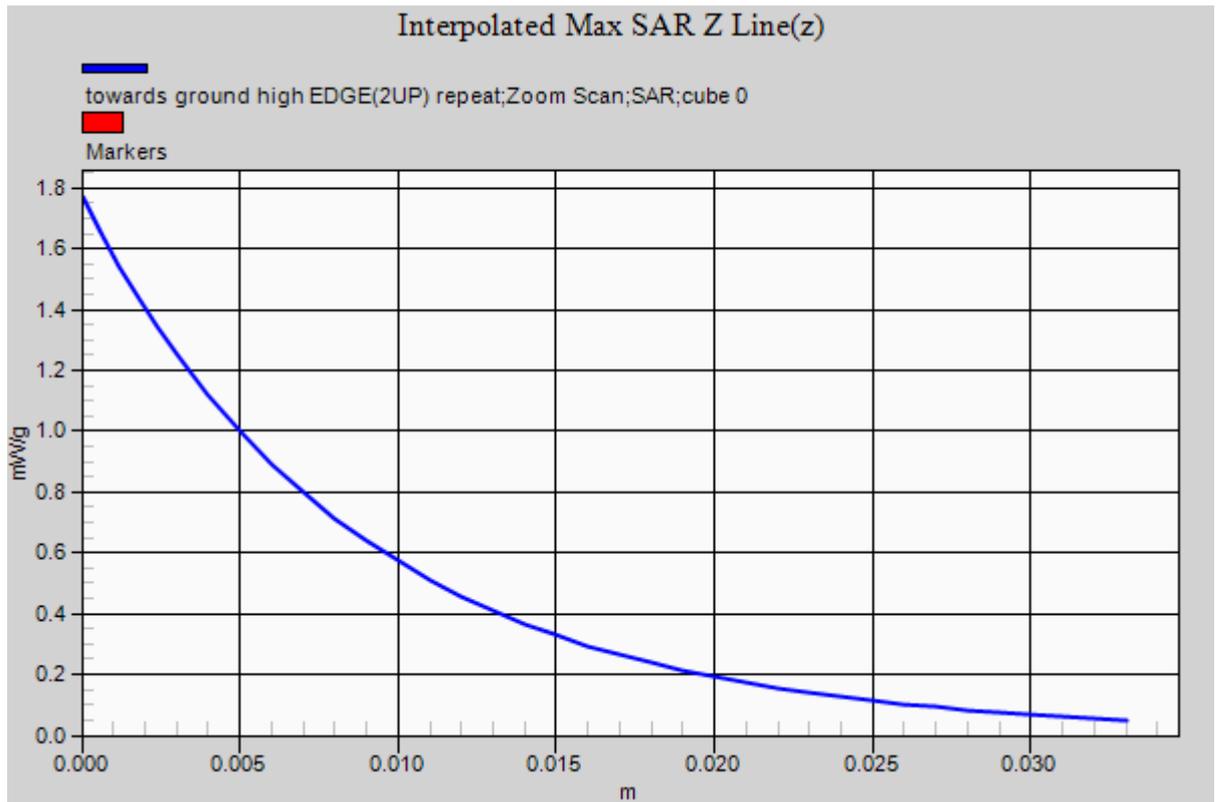
Peak SAR (extrapolated) = 1.772 mW/g

SAR(1 g) = 0.830 mW/g; SAR(10 g) = 0.424 mW/g

Maximum value of SAR (measured) = 1.25 mW/g



0 dB = 1.30 mW/g = 2.26 dB mW/g



WCDMA BAND II left touch mid

Date/Time: 06/03/2013 08:59:48

Communication System: WCDMA; Communication System Band: BAND 2; Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.364$ mho/m; $\epsilon_r = 39.144$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/touch mid/Area Scan (121x191x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.558 mW/g

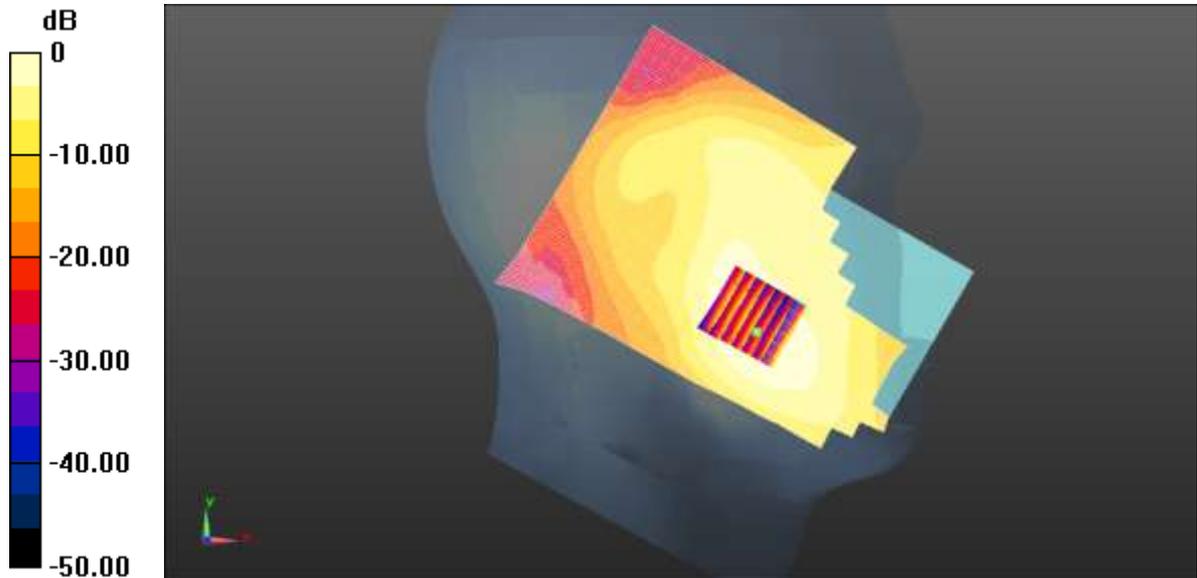
left/touch mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.207 V/m; Power Drift = -0.18 dB

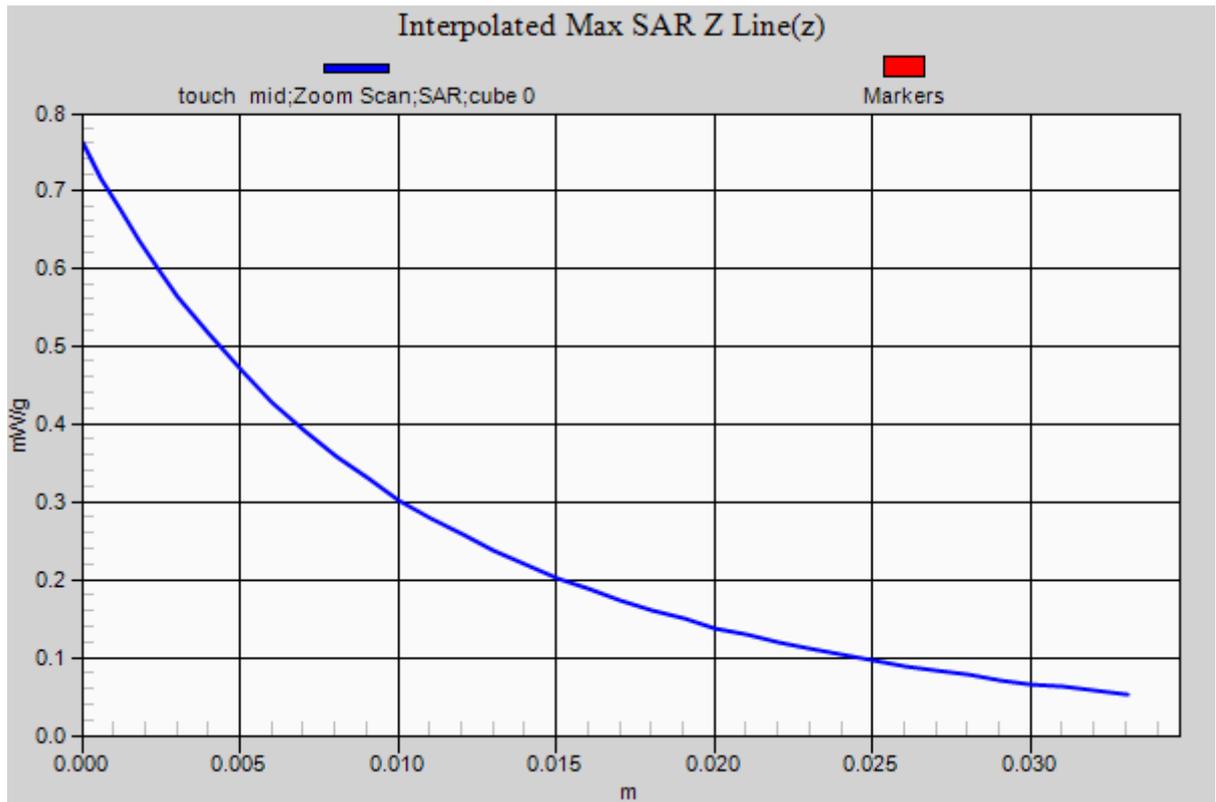
Peak SAR (extrapolated) = 0.760 mW/g

SAR(1 g) = 0.478 mW/g; SAR(10 g) = 0.298 mW/g

Maximum value of SAR (measured) = 0.569 mW/g



0 dB = 0.558 mW/g = -5.07 dB mW/g



WCDMA BAND II left tilt mid

Date/Time: 06/03/2013 10:56:11

Communication System: WCDMA; Communication System Band: BAND 2; Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.364$ mho/m; $\epsilon_r = 39.144$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/tilt mid/Area Scan (121x191x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.176 mW/g

left/tilt mid/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.050 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.235 mW/g

SAR(1 g) = 0.145 mW/g; SAR(10 g) = 0.084 mW/g

Maximum value of SAR (measured) = 0.173 mW/g

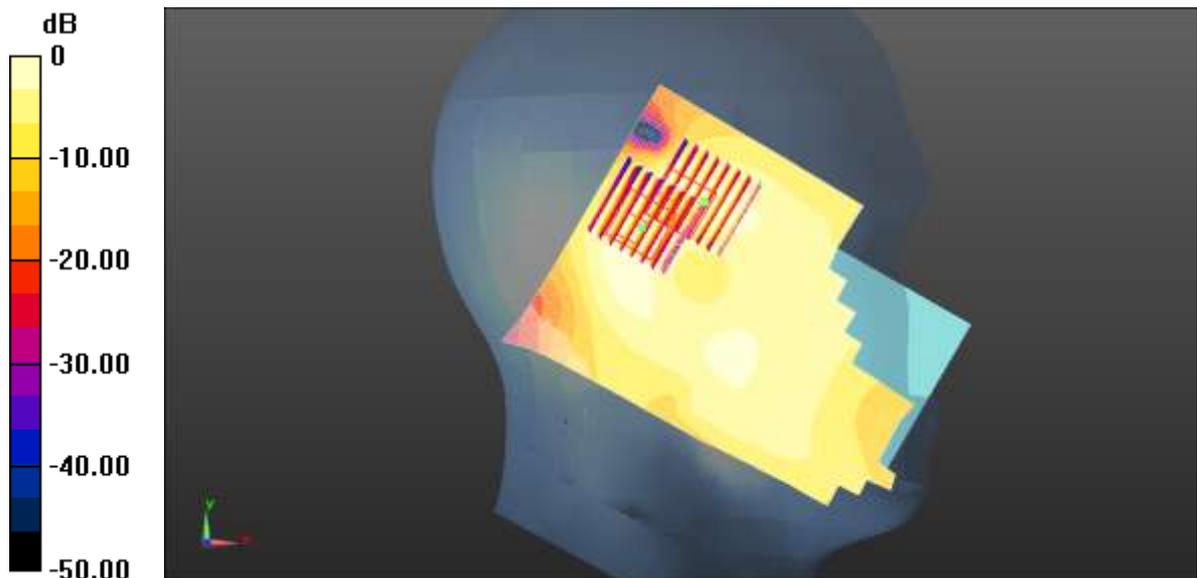
left/tilt mid/Zoom Scan (8x8x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.050 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.228 mW/g

SAR(1 g) = 0.119 mW/g; SAR(10 g) = 0.064 mW/g

Maximum value of SAR (measured) = 0.166 mW/g



0 dB = 0.176 mW/g = -15.10 dB mW/g

WCDMA BAND II right touch mid

Date/Time: 06/03/2013 11:55:29

Communication System: WCDMA; Communication System Band: BAND 2; Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.364$ mho/m; $\epsilon_r = 39.144$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

right/touch mid/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.341 mW/g

right/touch mid/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.818 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.430 mW/g

SAR(1 g) = 0.273 mW/g; SAR(10 g) = 0.169 mW/g

Maximum value of SAR (measured) = 0.326 mW/g

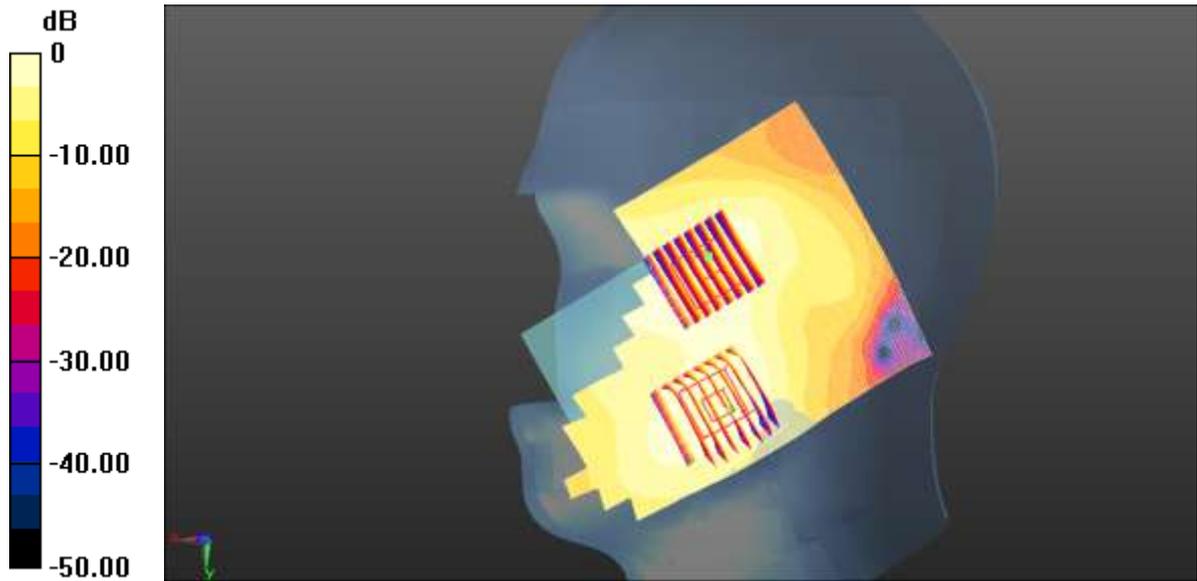
right/touch mid/Zoom Scan (8x8x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.818 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.368 mW/g

SAR(1 g) = 0.239 mW/g; SAR(10 g) = 0.152 mW/g

Maximum value of SAR (measured) = 0.281 mW/g



0 dB = 0.341 mW/g = -9.36 dB mW/g

WCDMA BAND II right tilt mid

Date/Time: 06/03/2013 13:09:52

Communication System: WCDMA; Communication System Band: BAND 2; Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.364$ mho/m; $\epsilon_r = 39.144$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

right/tilt mid/Area Scan (121x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.209 mW/g

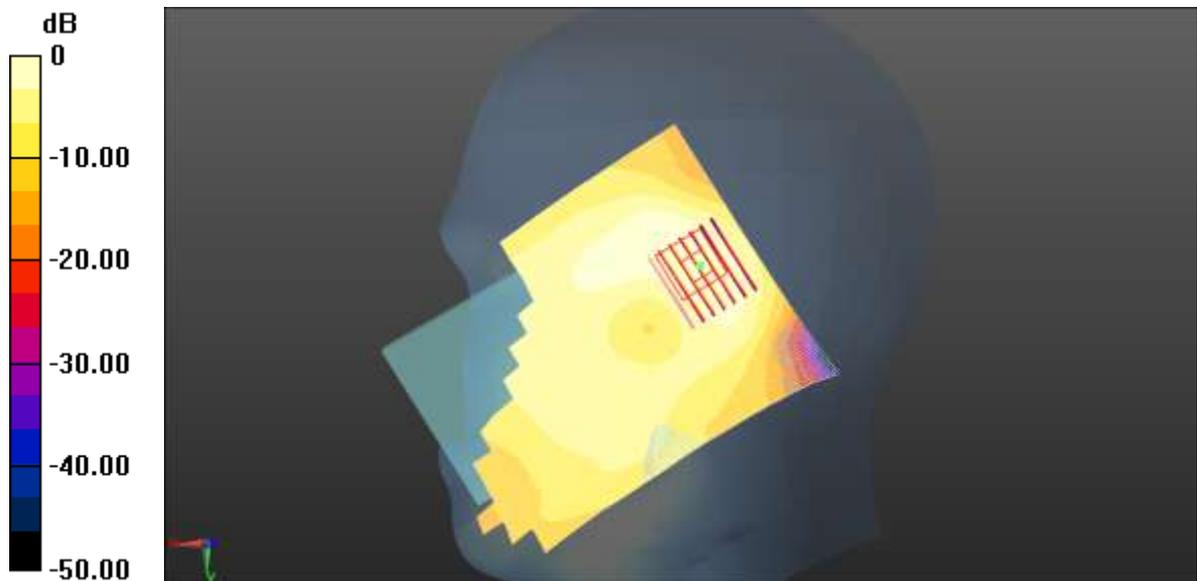
right/tilt mid/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.586 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.273 mW/g

SAR(1 g) = 0.170 mW/g; SAR(10 g) = 0.101 mW/g

Maximum value of SAR (measured) = 0.207 mW/g



0 dB = 0.209 mW/g = -13.58 dB mW/g

WCDMA BAND II left touch low

Date/Time: 06/03/2013 09:42:46

Communication System: WCDMA; Communication System Band: BAND 2; Frequency: 1852.4 MHz; Communication System PAR: 0 dB

Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.341$ mho/m; $\epsilon_r = 39.247$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/touch low/Area Scan (121x191x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.556 mW/g

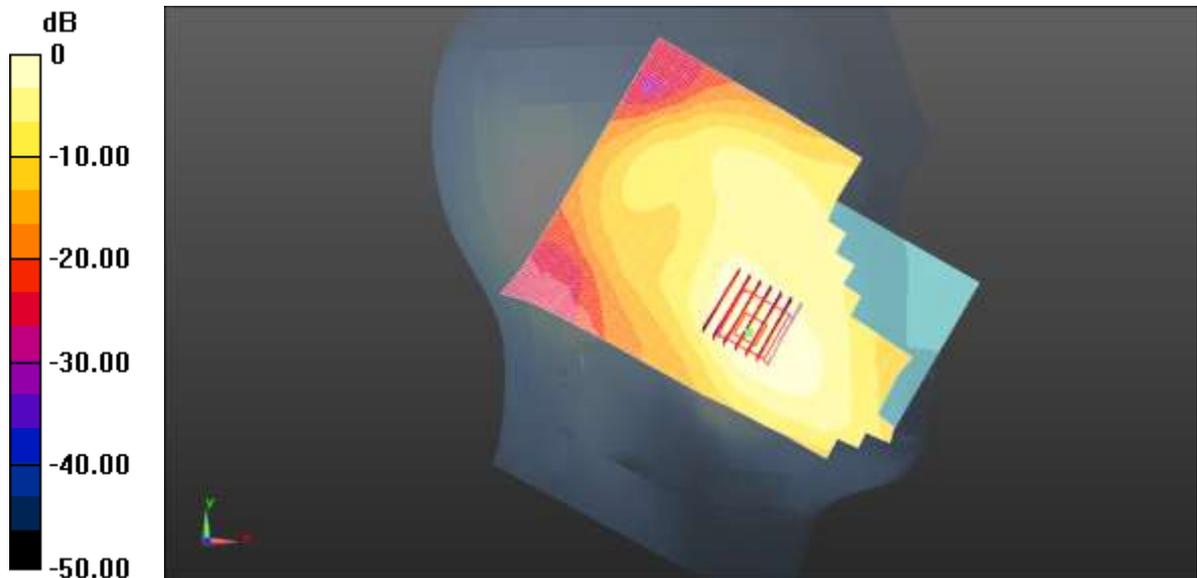
left/touch low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.336 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.722 mW/g

SAR(1 g) = 0.464 mW/g; SAR(10 g) = 0.291 mW/g

Maximum value of SAR (measured) = 0.547 mW/g



0 dB = 0.556 mW/g = -5.10 dB mW/g

WCDMA BAND II left touch high

Date/Time: 06/03/2013 10:18:26

Communication System: WCDMA; Communication System Band: BAND 2; Frequency: 1907.6 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.391$ mho/m; $\epsilon_r = 39.019$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/touch high/Area Scan (121x191x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (interpolated) = 0.529 mW/g

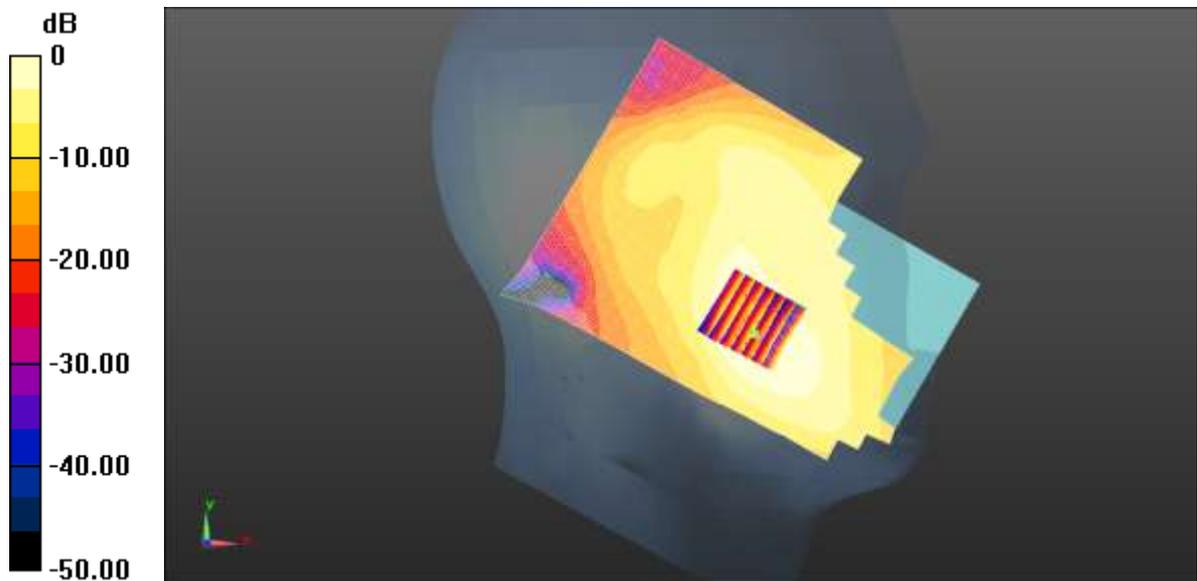
left/touch high/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.674 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.726 mW/g

SAR(1 g) = 0.449 mW/g; SAR(10 g) = 0.276 mW/g

Maximum value of SAR (measured) = 0.535 mW/g



0 dB = 0.529 mW/g = -5.53 dB mW/g

WCDMA BAND II left touch mid additional card

Date/Time: 06/03/2013 18:36:47

Communication System: WCDMA; Communication System Band: BAND 2; Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.364$ mho/m; $\epsilon_r = 39.144$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Measurement Standard: DASYS (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(5.12, 5.12, 5.12); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: SAM 1; Type: SAM; Serial: TP:1702
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

left/touch mid additional card/Area Scan (121x191x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.558 mW/g

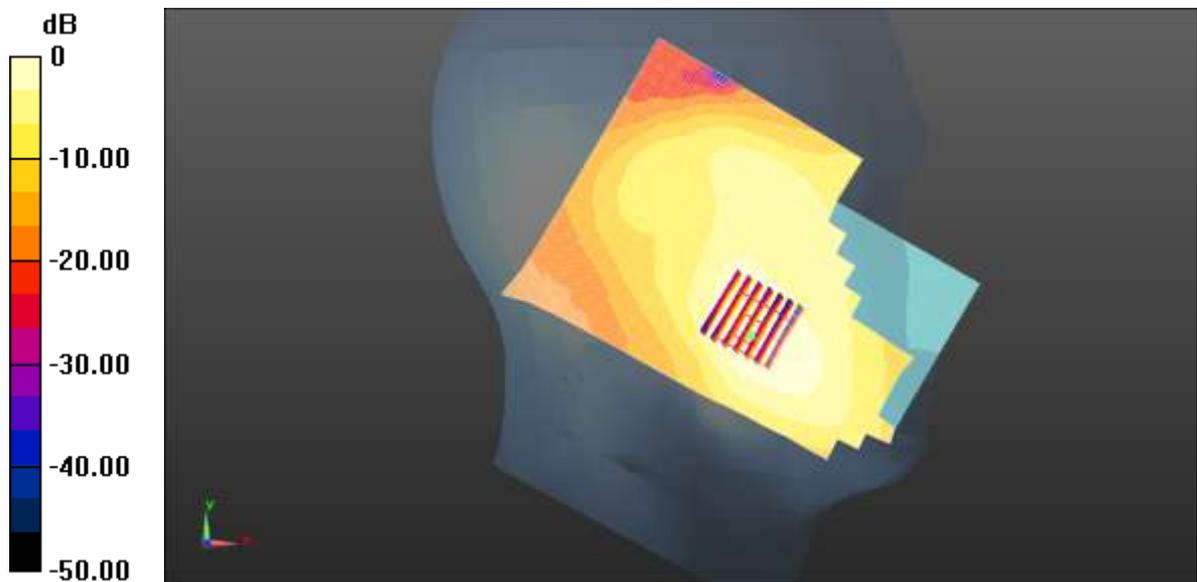
left/touch mid additional card/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.931 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.741 mW/g

SAR(1 g) = 0.465 mW/g; SAR(10 g) = 0.287 mW/g

Maximum value of SAR (measured) = 0.556 mW/g



0 dB = 0.558 mW/g = -5.06 dB mW/g

WCDMA BAND II towards phantom mid

Date/Time: 11/03/2013 18:40:03

Communication System: WCDMA; Communication System Band: BAND 2; Frequency: 1880 MHz; Communication System PAR: 0 dB

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.477$ mho/m; $\epsilon_r = 52.425$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE1528/OET65c)

DASY5 Configuration:

- Probe: ES3DV3 - SN3241; ConvF(4.66, 4.66, 4.66); Calibrated: 31/08/2012;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1226; Calibrated: 03/09/2012
- Phantom: ELI v4.0; Type: ELI4; Serial: TP:1086
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6477)

body/towards phantom mid/Area Scan (111x181x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.10 mW/g

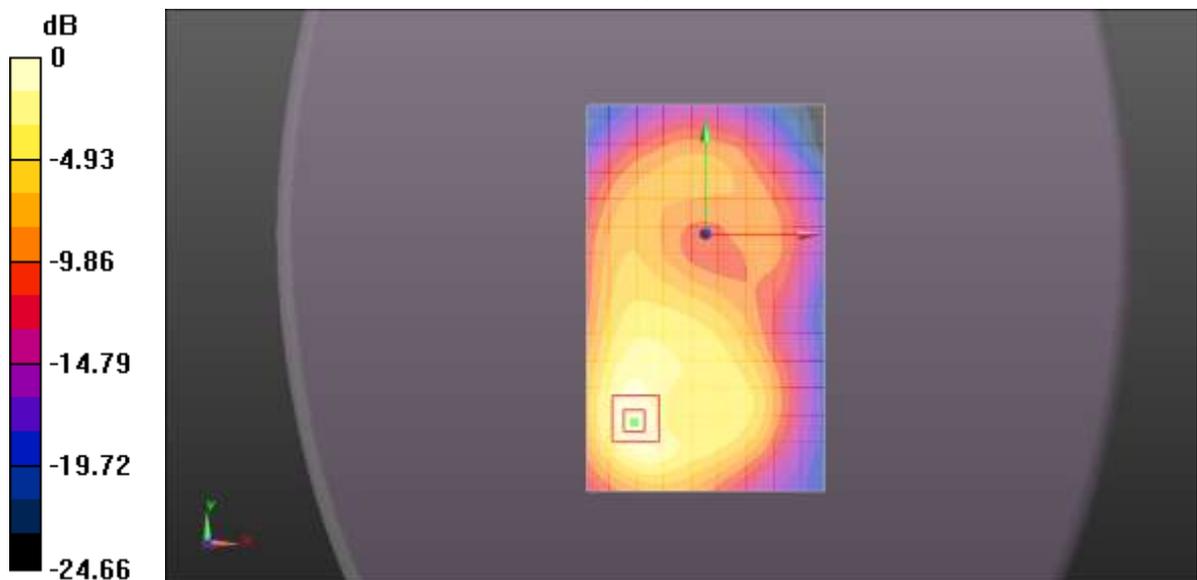
body/towards phantom mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.370 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.517 mW/g

SAR(1 g) = 0.873 mW/g; SAR(10 g) = 0.483 mW/g

Maximum value of SAR (measured) = 1.09 mW/g



0 dB = 1.10 mW/g = 0.82 dB mW/g