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SAR-Laboratory Phone: +49 (0) 681 598-8454 .

Accredited testing laboratory

DAR registration number: DAT-P-176/94-D1

Test report no. : 1-0726-01-10/08
Type identification : FAD-3232023-BV (MD400g)
Test specification : IEEE 1528-2003
FCC-ID : PY7F3232023
IC-ID : 4170B-F3232023

Table of Contents

1 General Information

1.1 Notes

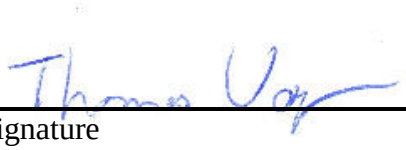
The test results of this test report relate exclusively to the test item specified in 1.5. The CETECOM ICT Services GmbH does not assume responsibility for any conclusions and generalisations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of the CETECOM ICT Services GmbH.

1.1.1 Statement of Compliance

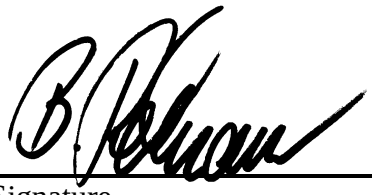
The SAR values found for the FAD-3232023-BV (MD400g) GPRS/UMTS USB Dongle are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1 g tissue according to the FCC rule §2.1093, the ANSI/IEEE C 95.1:1999, the NCRP Report Number 86 for uncontrolled environment, according to the Health Canada's Safety Code 6 and the Industry Canada Radio Standards Specification RSS-102 for General Population/Uncontrolled exposure.
For body worn operation, this device has been tested and meets FCC RF exposure guidelines when used under the following conditions :

- Connected to notebooks with horizontal slot at 5 mm distance to the body
- Connected to notebooks with vertical slot at 3 mm distance from left side of the device to the body
- Using a USB-extension cable with at least 11 mm distance to the right side of the device

Test engineer:

2008-09-08	**Thomas Vogler**	
Date	Name	Signature

Technical responsibility for area of testing:

2008-09-08	**Bernd Rebmann**	
Date	Name	Signature

1.2 Testing laboratory

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Telephone: + 49 681 598 - 0
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e-mail: info@ict.cetecom.de
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State of accreditation: The Test laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025. DAR registration number: DAT-P-176/94-D1

Test location, if different from CETECOM ICT Services GmbH

Name: ---
Street: ---
Town: ---
Country: ---
Phone: ---
Fax: ---

1.3 Details of applicant

Name: Sony Ericsson Mobile Computing

Street: 7001 Development Drive
Town: Research Triangle Park, NC 27709
Country: USA

Contact: Mr. Louis Le
Telephone: +1-919-472-1431

1.4 Application details

Date of receipt of application: 2008-08-04
Date of receipt of test item: 2008-09-02
Start/Date of test: 2008-09-03
End of test: 2008-09-05

Person(s) present during the test: ---

1.5 Test item

Description of the test item: GPRS/UMTS USB Dongle
Type identification: FAD-3232023-BV (MD400g)
FCC-ID : PY7F3232023
IC-ID : 4170B-F3232023
Serial number: BDX0002T59

Manufacturer:
Name: Sony Ericsson Mobile Communications AB
Street: Nya Vattentornet
Town: 22188 Lund
Country: Sweden

additional information on the DUT:		
device type :	portable device	
IMEI No :	00440107-457362-3	
exposure category:	uncontrolled environment / general population	
test device production information	identical prototype	
device operating configurations :		
operating mode(s)	GSM, DCS, PCS, UMTS/WCDMA	
modulation	GMSK, 8-PSK, QPSK(dl), 2*BPSK/HPSK(ul)	
GPRS mobile station class :	B	
GPRS multislot class :	10	voice mode : ---
EGPRS multislot class	10	voice mode : ---
maximum no. of timeslots in uplink:	2	
operating frequency range(s)	transmitter frequency range	receiver frequency range
PCS 1900 (tested):	1850.2 MHz ~ 1909.8 MHz	1930.2 MHz ~ 1989.8 MHz
Cellular 850 (tested):	824.2 MHz ~ 848.8 MHz	869.2 MHz ~ 893.8 MHz
DCS 1800	1710 MHz ~ 1785 MHz	1805 MHz ~ 1880 MHz
GSM 900	880 MHz ~ 915 MHz	925 MHz ~ 960 MHz
FDD I	1922.4 MHz ~ 1977.6 MHz	2112.4 MHz ~ 2167.6 MHz
FDD II (tested)	1852.4 MHz ~ 1907.6 MHz	1932.4 MHz ~ 1987.6 MHz
FDD V (tested)	826.4 MHz ~ 846.6 MHz	871.4 MHz ~ 891.6 MHz
Power class :	1, tested with power level 0 (1900 MHz band) 4, tested with power level 5 (850 MHz band) 3; (FDD II band); (FDD V band)	
measured max. output power (conducted):	850 MHz band: 32.1 dBm (GMSK); 27.2 dBm (8-PSK) 1900 MHz band: 29.8 dBm (GMSK); 25.6 dBm (8-PSK) FDD II band: 22.50 dBm; FDD V: 23.11 dBm (avg. max.)	
test channels (low-mid-high) :	128-190-251 (850 MHz band) 512-661-810 (1900 MHz band) 9262-9400-9538 (FDD II band) 4132-4182-4233 (FDD V band)	
hardware version :	EP2.5	
software version :	n.a.	
antenna type :	External antenna (inside swivel handle)	
accessories/body-worn onfigurations:	HP Compaq 6710b with horizontal USB slots Sony Vaio PCG-982M with vertical USB slots	

1.6 Test specification(s)

Supplement C (Edition 01-01) to OET Bulletin 65 (Edition 97-01)

IEEE P1528/D1.2 (April 21, 2003)

RSS-102: Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands (Issue 2 of November 2005)

Canada's Safety Code 6: Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz (99-EHD-237)

IEEE Std C95.3 – 1991, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave.

IEEE Std C95.1 – 1999, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz – 300 GHz.

1.6.1 RF exposure limits

Human Exposure	Uncontrolled Environment General Population	Controlled Environment Occupational
Spatial Peak SAR* (Brain)	**1.60 mW/g**	8.00 mW/g
Spatial Average SAR** (Whole Body)	0.08 mW/g	0.40 mW/g
Spatial Peak SAR*** (Hands/Feet/Ankle/Wrist)	4.00 mW/g	20.00 mW/g

Table 1: RF exposure limits

The limit applied in this test report is shown in **bold** letters

Notes:

* The Spatial Peak value of the SAR averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time

** The Spatial Average value of the SAR averaged over the whole body.

*** The Spatial Peak value of the SAR averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation).

2 Technical test

2.1 Summary of test results

No deviations from the technical specification(s) were ascertained in the course of the tests performed.	☒
The deviations as specified in 2.5 were ascertained in the course of the tests performed.	☐

2.2 Test environment

General Environment conditions in the test area are as follows:

Ambient temperature: 20°C – 24°C
Tissue simulating liquid: 20°C – 24°C
Humidity: 40% – 50%

Exact temperature values for each test are shown in the table(s) under 2.5. and/or on the measurement plots.

2.3 Measurement and test set-up

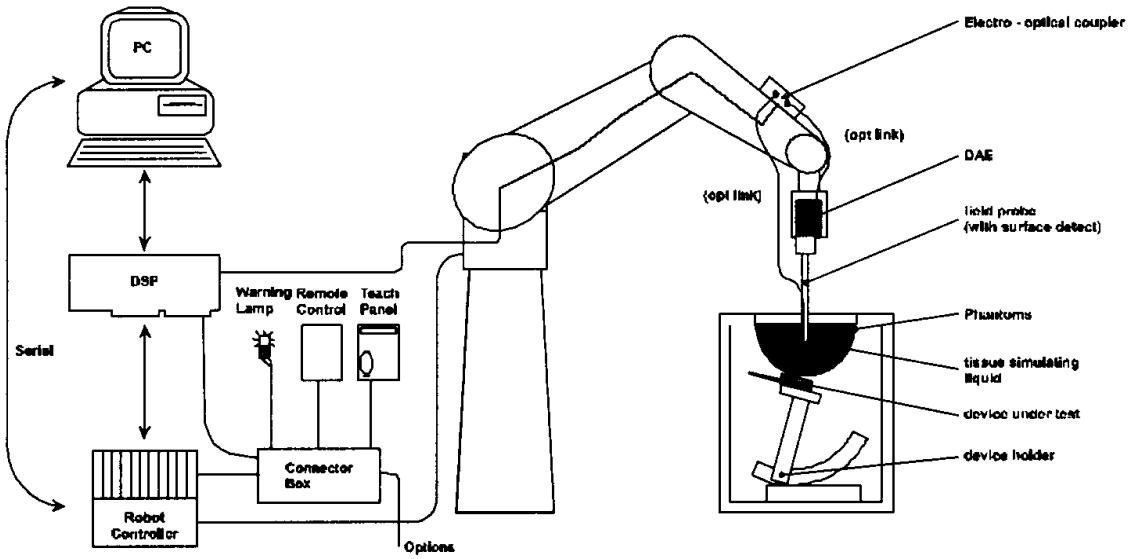
The measurement system is described in chapter 2.4.

The test setup for the system validation can be found in chapter 2.4.14.

A description of positioning and test signal control can be found in chapter 2.5 together with the test results.

2.4 Measurement system

2.4.1 System Description



The DASY4 system for performing compliance tests consists of the following items:

- A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).

- A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.

- A data acquisition electronic (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.
- A unit to operate the optical surface detector which is connected to the EOC.
- The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY4 measurement server.
- The DASY4 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 2000
- DASY4 software and SEMCAD data evaluation software.
- Remote control with teach panel and 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.

2.4.2 Test environment

The DASY4 measurement system is placed at the head end of a room with dimensions:
5 x 2.5 x 3 m³, the SAM phantom is placed in a distance of 75 cm from the side walls and 1.1m from the rear wall. Above the test system a 1.5 x 1.5 m² array of pyramid absorbers is installed to reduce reflections from the ceiling.
Picture 1 of the photo documentation shows a complete view of the test environment.
The system allows the measurement of SAR values larger than 0.005 mW/g.

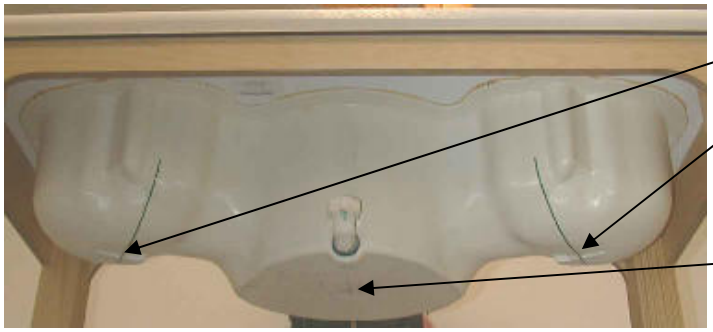
2.4.3 Probe description

Isotropic E-Field Probe ET3DV6 for Dosimetric Measurements

Technical data according to manufacturer information	
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	In air from 10 MHz to 2.5 GHz In head tissue simulating liquid (HSL) at 900 (800-1000) MHz and 1.8 GHz (1700-1910 MHz) (accuracy ± 9.5%; k=2) Calibration for other liquids and frequencies upon request
Frequency	10 MHz to 3 GHz (dosimetry); Linearity: ± 0.2 dB (30 MHz to 3 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic range	5 µW/g to > 100 mW/g; Linearity: ± 0.2 dB
Optical Surface Detection	± 0.2 mm repeatability in air and clear liquids over diffuse reflecting surfaces (ET3DV6 only)
Dimensions	Overall length: 330 mm Tip length: 16 mm Body diameter: 12 mm Tip diameter: 6.8 mm Distance from probe tip to dipole centers: 2.7 mm
Application	General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms (ET3DV6)

2.4.4 Phantom description

The used SAM Phantom meets the requirements specified in Edition 01-01 of Supplement C to OET Bulletin 65 for Specific Absorption Rate (SAR) measurements.
The phantom consists of a fibreglass shell integrated in a wooden table. It allows left-hand and right-hand head as well as body-worn measurements with a maximum liquid depth of 18 cm in head position and 22 cm in planar position (body measurements). The thickness of the Phantom shell is 2 mm +/- 0.1 mm.



2.4.5 Device holder description

The DASY4 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65°. The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. This device holder is used for standard mobile phones or PDA's only. If necessary an additional support of polystyrene material is used.

Larger DUT's (e.g. notebooks) cannot be tested using this device holder. Instead a support of bigger polystyrene cubes and thin polystyrene plates is used to position the DUT in all relevant positions to find and measure spots with maximum SAR values.
Therefore those devices are normally only tested at the flat part of the SAM.

2.4.6 Scanning procedure

The DASY4 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. +/- 5 %.

- The „surface check“ measurement tests the optical surface detection system of the DASY4 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 ± 0.1mm). 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 ± 30°.)

- The „area scan“ measures the SAR above the DUT or verification dipole on a parallel plane to the surface. It is used to locate the approximate location of the peak SAR with 2D spline interpolation. The robot performs a stepped movement along one grid axis while the local electrical field strenth is measured by the probe. The probe is touching the surface of the SAM during acquisition of measurement values. The standard scan uses large grid spacing for faster measurement. Standard grid spacing for head measurements is 15 mm in x- and y- dimension. If a finer resolution is needed, the grid spacing can be reduced. Grid spacing and orientation have no influence on the SAR result. For special applications where the standard scan method does not find the peak SAR within the grid, e.g. mobile phones with flip cover, the grid can be adapted in orientation.
  Results of this coarse scan are shown in annex 2.

- A „7x7x7 zoom scan” measures the field in a volume around the 2D peak SAR value acquired in the previous „coarse“ scan. This is a fine 7x7 grid where the robot additionally moves the probe in 7 steps along the z-axis away from the bottom of the Phantom. Grid spacing for the cube measurement is 5 mm in x and y-direction and 5 mm in z-direction. DASY4 is also able to perform repeated zoom scans if more than 1 peak is found during area scan. In this document, the evaluated peak 1g and 10g averaged SAR values are shown in the 2D-graphics in annex 2. Test results relevant for the specified standard (see chapter 1.6.) are shown in table form in chapter 2.5.

- 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 2mm steps. This measurement shows the continuity of the liquid and can - depending in the field strength – also show the liquid depth. A z-axis scan of the measurement with maximum SAR value is shown in annex 2.

2.4.7 Spatial Peak SAR Evaluation

The spatial peak SAR - value for 1 and 10 g is evaluated after the Cube measurements have been done. The basis of the evaluation are the SAR values measured at the points of the fine cube grid consisting of 7 x 7 x 7 points. The algorithm that finds the maximal averaged volume is separated into three different stages.

- The data between the dipole center of the probe and the surface of the phantom are extrapolated. This data cannot be measured since the center of the dipole is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is about 1 mm (see probe calibration sheet). The extrapolated data from a cube measurement can be visualized by selecting 'Graph Evaluated'.

- The maximum interpolated value is searched with a straight-forward algorithm. Around this maximum the SAR - values averaged over the spatial volumes (1g or 10 g) are computed using the 3d-spline interpolation algorithm. If the volume cannot be evaluated (i.e., if a part of the grid was cut off by the boundary of the measurement area) the evaluation will be started on the corners of the bottom plane of the cube.

- All neighboring volumes are evaluated until no neighboring volume with a higher average value is found.

Extrapolation

The extrapolation is based on a least square algorithm [W. Gander, Computermathematik, p.168-180]. Through the points in the first 3 cm along the z-axis, polynomials of order four are calculated. These polynomials are then used to evaluate the points between the surface and the probe tip. The points, calculated from the surface, have a distance of 1 mm from each other.

Interpolation

The interpolation of the points is done with a 3d-Spline. The 3d-Spline is composed of three one-dimensional splines with the "Not a knot"-condition [W. Gander, Computermathematik, p.141-150] (x, y and z -direction) [Numerical Recipes in C, Second Edition, p.123ff].

Volume Averaging

At First the size of the cube is calculated. Then the volume is integrated with the trapezoidal algorithm. 8000 points (20x20x20) are interpolated to calculate the average.

Advanced Extrapolation

DASY4 uses the advanced extrapolation option which is able to compansate boundary effects on E-field probes.

2.4.8 Data Storage and Evaluation

Data Storage

The DASY4 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.

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	Dcpi
Device parameters:	- Frequency	f
	- Crest factor	cf
Media parameters:	- Conductivity	σ
	- Density	ρ

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY4 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:

$$V_i = U_i + U_i^2 \cdot cf/dcp_i$$

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

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

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 [mV/(V/m)^2] for E-field Probes (i = x, y, z)
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.

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

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

Note that the density is 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.

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

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

2.4.9 Test equipment utilized

This table gives a complete overview of the SAR measurement equipment

Devices used during the test described in chapter 2.5. are marked ☒

	Manufacturer	Device	Type	Serial number	Date of last calibration)*
☒	Schmid & Partner Engineering AG	Dosimetric E-Field Probe	ET3DV6	1558	August 15, 2008
☐	Schmid & Partner Engineering AG	Dosimetric E-Field Probe	ET3DV6	1559	January 23, 2008
☒	Schmid & Partner Engineering AG	900 MHz System Validation Dipole	D900V2	102	August 18, 2008
☐	Schmid & Partner Engineering AG	1800 MHz System Validation Dipole	D1800V2	287	August 19, 2008
☒	Schmid & Partner Engineering AG	1900 MHz System Validation Dipole	D1900V2	5d009	August 19, 2008
☐	Schmid & Partner Engineering AG	2450 MHz System Validation Dipole	D2450V2	710	August 20, 2008
☒	Schmid & Partner Engineering AG	Data acquisition electronics	DAE3V1	413	January 18, 2008
☒	Schmid & Partner Engineering AG	Software	DASY 4 V4.5/4.7	---	N/A
☒	Schmid & Partner Engineering AG	Phantom	SAM	---	N/A
☒	Rohde & Schwarz	Universal Radio Communication Tester	CMU 200	832221/055	March 20, 2008
☒	Hewlett Packard)*	Network Analyser 300 kHz to 6 GHz	8753C	2937U00269	March 13, 2007
☒	Hewlett Packard)*	Network Analyser 300 kHz to 6 GHz	85047A	2936A00872	March 13, 2007
☒	Hewlett Packard	Dielectric Probe Kit	85070C	US99360146	N/A
☒	Hewlett Packard	Signal Generator	8665A	2833A00112	November 12, 2007
☒	Amplifier Reasearch	Amplifier	25S1G4 (25 Watt)	20452	N/A
☒	Rohde & Schwarz	Power Meter	NRP	101367	January 9, 2008
☒	Rohde & Schwarz	Power Meter Sensor	NRP Z22	100227	January 9, 2008
☒	Rohde & Schwarz	Power Meter Sensor	NRP Z22	100234	January 9, 2008

)* : Network analyzer probe calibration against air, distilled water and a shorting block performed before measuring liquid parameters.

2.4.10 Tissue simulating liquids: dielectric properties

The following materials are used for producing the tissue-equivalent materials.
(liquids used for tests described in chapter 2.5. are marked with ☒) :

Ingredients (% of weight)	**Frequency (MHz)**					
frequency band	☐ 450	☒ 835	☐ 900	☐ 1800	☒ 1900	☐ 2450
Tissue Type	Body	Body	Body	Body	Body	Body
Water	51.16	52.4	56.0	69.91	69.91	73.2
Salt (NaCl)	1.49	1.40	0.76	0.13	0.13	0.04
Sugar	46.78	45.0	41.76	0.0	0.0	0.0
HEC	0.52	1.0	1.21	0.0	0.0	0.0
Bactericide	0.05	0.1	0.27	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0
DGBE	0.0	0.0	0.0	29.96	29.96	26.7

Table 2: Body tissue dielectric properties

Salt: 99+% Pure Sodium Chloride Sugar: 98+% Pure Sucrose
Water: De-ionized, 16MΩ+ resistivity HEC: Hydroxyethyl Cellulose
DGBE: 99+% Di(ethylene glycol) butyl ether, [2-(2-butoxyethoxy)ethanol]
Triton X-100(ultra pure): Polyethylene glycol mono [4-(1,1,3,3-tetramethylbutyl)phenyl]ether

Note : Due to their availability body tissue simulating liquids as defined by FCC OET Bulletin 65 Supplement C are generally used for body worn SAR testing according to European standards.

2.4.11 Tissue simulating liquids: parameters

Used Target Frequency	**Target Body Tissue**		**Measured Body Tissue**		**Measured Date**
[MHz]	Permittivity	Conductivity [S/m]	Permittivity	Conductivity [S/m]	
835	55.2	0.97	54.4	0.98	2008-09-04
900	55.0	1.05	53.8	1.04	2008-09-04
835	55.2	0.97	54.4	0.98	2008-09-05
900	55.0	1.05	53.8	1.04	2008-09-05
1900	53.3	1.52	52.6	1.53	2008-09-03
1900	53.3	1.52	52.6	1.53	2008-09-04

Table 3: Parameter of the body tissue simulating liquid

Note: The dielectric properties have been measured using the contact probe method at 22.1°C.

2.4.12 Measurement uncertainty evaluation for SAR test

The overall combined measurement uncertainty of the measurement system is ± 10,3% (K=1).
The expanded uncertainty (k=2) is assessed to be ± 20.6%
This measurement uncertainty budget is suggested by IEEE P1528 and determined by Schmid & Partner Engineering AG. The breakdown of the individual uncertainties is as follows:

Error Sources	Uncertainty Value	Probability Distribution	Divi-sor	c_i 1g	c_i 10g	Standard Uncertainty 1g	Standard Uncertainty 10g	v_i^2 or v_{eff}
Measurement System								
Probe calibration	± 4.8%	Normal	1	1	1	± 4.8%	± 4.8%	∞
Axial isotropy	± 4.7%	Rectangular	√3	0.7	0.7	± 1.9%	± 1.9%	∞
Hemispherical isotropy	± 9.6%	Rectangular	√3	0.7	0.7	± 3.9%	± 3.9%	∞
Spatial resolution	± 0.0%	Rectangular	√3	1	1	± 0.0%	± 0.0%	∞
Boundary effects	± 1.0%	Rectangular	√3	1	1	± 0.6%	± 0.6%	∞
Probe linearity	± 4.7%	Rectangular	√3	1	1	± 2.7%	± 2.7%	∞
System detection limits	± 1.0%	Rectangular	√3	1	1	± 0.6%	± 0.6%	∞
Readout electronics	± 1.0%	Normal	1	1	1	± 1.0%	± 1.0%	∞
Response time	± 0.8%	Rectangular	√3	1	1	± 0.5%	± 0.5%	∞
Integration time	± 2.6%	Rectangular	√3	1	1	± 1.5%	± 1.5%	∞
RF ambient conditions	± 3.0%	Rectangular	√3	1	1	± 1.7%	± 1.7%	∞
Probe positioner	± 0.4%	Rectangular	√3	1	1	± 0.2%	± 0.2%	∞
Probe positioning	± 2.9%	Rectangular	√3	1	1	± 1.7%	± 1.7%	∞
Max. SAR evaluation	± 1.0%	Rectangular	√3	1	1	± 0.6%	± 0.6%	∞
Test Sample Related								
Device positioning	± 2.9%	Normal	1	1	1	± 2.9%	± 2.9%	145
Device holder uncertainty	± 3.6%	Normal	1	1	1	± 3.6%	± 3.6%	5
Power drift	± 5.0%	Rectangular	√3	1	1	± 2.9%	± 2.9%	∞
Phantom and Set-up								
Phantom uncertainty	± 4.0%	Rectangular	√3	1	1	± 2.3%	± 2.3%	∞
Liquid conductivity (target)	± 5.0%	Rectangular	√3	0.64	0.43	± 1.8%	± 1.2%	∞
Liquid conductivity (meas.)	± 2.5%	Normal	1	0.64	0.43	± 1.6%	± 1.1%	∞
Liquid permittivity (target)	± 5.0%	Rectangular	√3	0.6	0.49	± 1.7%	± 1.4%	∞
Liquid permittivity (meas.)	± 2.5%	Normal	1	0.6	0.49	± 1.5%	± 1.2%	∞
Combined Uncertainty						± 10.3%	± 10.0%	330
Expanded Std. Uncertainty						**± 20.6%**	**± 20.1%**	

Table 4: Measurement uncertainties

2.4.13 Measurement uncertainty evaluation for system validation

The overall combined measurement uncertainty of the measurement system is ± 8.4% (K=1).
The expanded uncertainty (k=2) is assessed to be ± 16.8%
This measurement uncertainty budget is suggested by IEEE P1528 and determined by Schmid & Partner Engineering AG. The breakdown of the individual uncertainties is as follows:

Error Sources	Uncertainty Value	Probability Distribution	Divi-sor	c_i 1g	c_i 10g	Standard Uncertainty 1g	Standard Uncertainty 10g	v_i^2 or v_{eff}
Measurement System								
Probe calibration	± 4.8%	Normal	1	1	1	± 4.8%	± 4.8%	∞
Axial isotropy	± 4.7%	Rectangular	√3	0.7	0.7	± 1.9%	± 1.9%	∞
Hemispherical isotropy	± 0.0%	Rectangular	√3	0.7	0.7	± 0.0%	± 3.9%	∞
Boundary effects	± 1.0%	Rectangular	√3	1	1	± 0.6%	± 0.6%	∞
Probe linearity	± 4.7%	Rectangular	√3	1	1	± 2.7%	± 2.7%	∞
System detection limits	± 1.0%	Rectangular	√3	1	1	± 0.6%	± 0.6%	∞
Readout electronics	± 1.0%	Normal	1	1	1	± 1.0%	± 1.0%	∞
Response time	± 0.0%	Rectangular	√3	1	1	± 0.0%	± 0.0%	∞
Integration time	± 0.0%	Rectangular	√3	1	1	± 0.0%	± 0.0%	∞
RF ambient conditions	± 3.0%	Rectangular	√3	1	1	± 1.7%	± 1.7%	∞
Probe positioner	± 0.4%	Rectangular	√3	1	1	± 0.2%	± 0.2%	∞
Probe positioning	± 2.9%	Rectangular	√3	1	1	± 1.7%	± 1.7%	∞
Max. SAR evaluation	± 1.0%	Rectangular	√3	1	1	± 0.6%	± 0.6%	∞
Test Sample Related								
Dipole axis to liquid distance	± 2.0%	Normal	1	1	1	± 1.2%	± 1.2%	∞
Power drift	± 4.7%	Rectangular	√3	1	1	± 2.7%	± 2.7%	∞
Phantom and Set-up								
Phantom uncertainty	± 4.0%	Rectangular	√3	1	1	± 2.3%	± 2.3%	∞
Liquid conductivity (target)	± 5.0%	Rectangular	√3	0.64	0.43	± 1.8%	± 1.2%	∞
Liquid conductivity (meas.)	± 2.5%	Normal	1	0.64	0.43	± 1.6%	± 1.1%	∞
Liquid permittivity (target)	± 5.0%	Rectangular	√3	0.6	0.49	± 1.7%	± 1.4%	∞
Liquid permittivity (meas.)	± 2.5%	Normal	1	0.6	0.49	± 1.5%	± 1.2%	∞
Combined Uncertainty						**± 8.4%**	**± 8.1%**	
Expanded Std. Uncertainty						**± 16.8%**	**± 16.2%**	

Table 5: Measurement uncertainties

2.4.14 System validation

The system validation is performed for verifying the accuracy of the complete measurement system and performance of the software. The system validation is performed with tissue equivalent material according to IEEE P1528 (described above). The following table shows validation results for all frequency bands and tissue liquids used during the tests of the test item described in chapter 1.5.
(graphic plot(s) see annex 1).

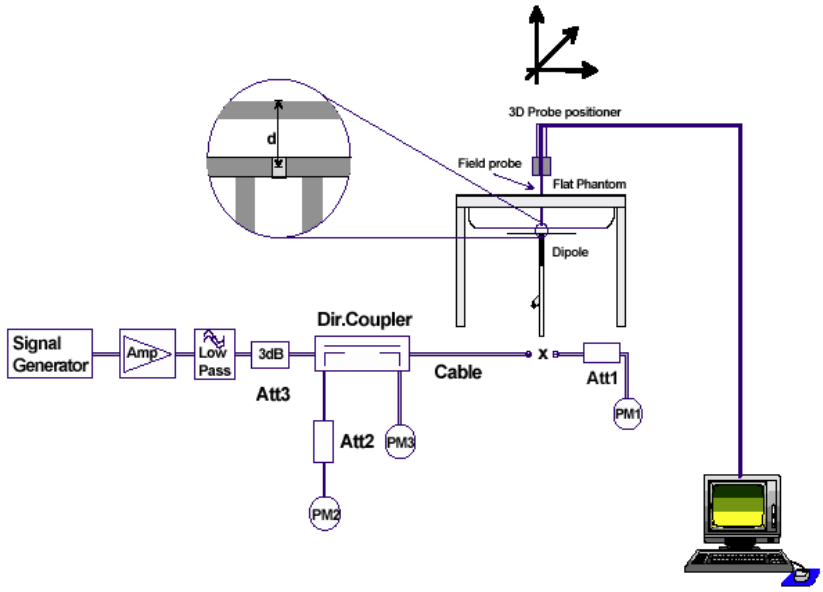
Validation Kit	Frequency	Target Peak SAR (1000 mW) (+/- 10%)	Target SAR_{1g} (1000 mW) (+/- 10%)	Measured Peak SAR (1000 mW)	Measured SAR_{1g} (1000 mW)	Measured date
D900V2 S/N: 102	900 MHz body	16.5 mW/g	10.8 mW/g	16.2 mW/g	11.1 mW/g	2008-09-04
D900V2 S/N: 102	900 MHz body	16.5 mW/g	10.8 mW/g	15.8 mW/g	10.7 mW/g	2008-09-05
D1900V2 S/N: 5d009	1900 MHz body	69.2 mW/g	38.7 mW/g	73.8 mW/g	39.9 mW/g	2008-09-03
D1900V2 S/N: 5d009	1900 MHz body	69.2 mW/g	38.7 mW/g	74.0 mW/g	40.8 mW/g	2007-09-04

Table 6: Results system validation

Note : 900 MHz probe/dipole calibration is valid +/-100 MHz and fully covers the 850 MHz band.

2.4.15 Validation procedure

The validation is performed by using a validation dipole which is positioned parallel to the planar part of the SAM phantom at the reference point. The distance of the dipole to the SAM phantom is determined by a plexiglass spacer. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. It is fed with a power of 1000 mW. To adjust this power a power meter is used. The power sensor is connected to the cable before the validation to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the validation to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test (result on plot).
Validation results have to be equal or near the values determined during dipole calibration (target SAR in table above) with the relevant liquids and test system.



2.5 Test Results

2.5.1 Conducted power GSM (general information)

For the measurements a Rohde & Schwarz Radio Communication Tester CMU 200 was used.
The output power was measured using an integrated RF connector and attached RF cable.
The conducted output power was also checked before and after each SAR measurement. The resulting power values were within a 0.2 dB tolerance of the values shown below.

Note : CMU200 measures peak and average output power for active timeslots.
For SAR the timebased average power is relevant. The difference inbetween depends on the duty cycle of the TDMA signal :

No. of timeslots	**1**	**2**	**3**	**4**
Duty Cycle	1 : 8	1: 4	1 : 2.66	1 : 2
timebased avg. power compared to slotted avg. power	- 9 dB	- 6 dB	- 4.25 dB	- 3 dB

The signalling modes differ as follows :

mode	**coding scheme**	**modulation**
GPRS	CS1 to CS4	GMSK
EGPRS (EDGE)	MCS1 to MCS4	GMSK
EGPRS (EDGE)	MCS5 to MCS9	8PSK

Apart from modulation change (GMSK/8PSK) coding schemes differ in code rate without influence on the RF signal. Therefore one coding scheme per mode was selected for conducted power measurements.

2.5.2 Conducted power measurements GSM 850 MHz

Channel / frequency	mode	timeslots	slotted avg. power	timebased avg. power (calculated)
128 / 824.2 MHz	GPRS CS1	2	29.0dBm	23.0dBm
190 / 836.6 MHz	GPRS CS1	2	28.9dBm	22.9dBm
251 / 848.0 MHz	GPRS CS1	2	28.5dBm	22.5dBm
128 / 824.2 MHz	GPRS CS1	1	32.1dBm	23.1dBm
190 / 836.6 MHz	GPRS CS1	1	31.9dBm	22.9dBm
251 / 848.0 MHz	GPRS CS1	1	31.7dBm	22.7dBm
128 / 824.2 MHz	EDGE MCS4	2	29.0dBm	23.0dBm
190 / 836.6 MHz	EDGE MCS4	2	28.9dBm	22.9dBm
251 / 848.0 MHz	EDGE MCS4	2	28.5dBm	22.5dBm
128 / 824.2 MHz	EDGE MCS8	2	27.2dBm	21.2dBm
190 / 836.6 MHz	EDGE MCS8	2	27.0dBm	21.0dBm
251 / 848.0 MHz	EDGE MCS8	2	26.8dBm	20.8dBm

Table 7: Test results conducted peak power measurement GSM 850 MHz

2.5.3 Conducted power measurements GSM 1900 MHz

Channel / frequency	mode	timeslots	slotted avg. power	timebased avg. power (calculated)
512 / 1850.2 MHz	GPRS CS1	2	25.4dBm	19.4dBm
661 / 1880.0 MHz	GPRS CS1	2	25.5dBm	19.5dBm
810 / 1909.8 MHz	GPRS CS1	2	26.0dBm	20.0dBm
512 / 1850.2 MHz	GPRS CS1	1	29.1dBm	20.1dBm
661 / 1880.0 MHz	GPRS CS1	1	29.4dBm	20.4dBm
810 / 1909.8 MHz	GPRS CS1	1	29.8dBm	20.8dBm
512 / 1850.2 MHz	EDGE MCS4	2	25.2dBm	19.2dBm
661 / 1880.0 MHz	EDGE MCS4	2	25.5dBm	19.5dBm
810 / 1909.8 MHz	EDGE MCS4	2	26.0dBm	20.0dBm
512 / 1850.2 MHz	EDGE MCS8	2	24.8dBm	18.8dBm
661 / 1880.0 MHz	EDGE MCS8	2	25.2dBm	19.2dBm
810 / 1909.8 MHz	EDGE MCS8	2	25.6dBm	19.6dBm

Table 8: Test results conducted peak power measurement GSM 1900 MHz

2.5.4 Justification of SAR measurements in GSM mode

SAR measurements were performed in GPRS mode with 2 active timeslots.
Power measurements above show a reduction of 3 dB compared to a configuration with 1 active timeslot so that timebased average power is kept on the same level.
Therefore an additional delta measurement was performed with 1 timeslot to clarify this circumstance. In EDGE mode a delta measurement was performed with MCS4 (GMSK modulation) to show that SAR value of GPRS is not exceeded.

2.5.5 Conducted power measurements WCDMA FDD V (850 MHz)

Max. RMS output power 850 MHz (FDD V) / dBm			
	Channel / frequency		
mode	4132 / 826.4 MHz	4182 / 836.6 MHz	4233 / 846.6 MHz
RMC 12.2 kbit/s	**23.04**	**22.90**	**22.90**
RMC 64 kbit/s	23.05	22.95	22.86
RMC 144 kbit/s	23.06	22.92	22.92
RMC 384 kbit/s	23.05	22.92	22.89
HSDPA Sub test 1	**23.11**	**22.90**	**22.90**
HSDPA Sub test 2	21.38	21.73	21.67
HSDPA Sub test 3	20.36	20.30	20.31
HSDPA Sub test 4	20.40	19.82	19.86
HSUPA Sub test 1	21.06	20.75	20.40
HSUPA Sub test 2	20.98	20.76	20.70
HSUPA Sub test 3	19.70	20.07	20.01
HSUPA Sub test 4	20.49	20.42	20.62
HSUPA Sub test 5	**21.07**	**21.40**	**21.46**

Table 9: Test results conducted peak power measurement WCDMA 850

2.5.6 Conducted power measurements WCDMA FDD V (1900 MHz)

Max. RMS output power 1900 MHz (FDD II) / dBm			
	Channel / frequency		
mode	9262 / 1852.4 MHz	9400 / 1880.0 MHz	9538 / 1907.6 MHz
RMC 12.2 kbit/s	**22.12**	**22.50**	**22.48**
RMC 64 kbit/s	22.07	22.53	22.50
RMC 144 kbit/s	22.08	22.47	22.52
RMC 384 kbit/s	22.03	22.45	22.48
HSDPA Sub test 1	**22.05**	**22.43**	**22.50**
HSDPA Sub test 2	20.68	21.13	21.35
HSDPA Sub test 3	19.44	19.71	20.12
HSDPA Sub test 4	19.39	19.83	19.93
HSUPA Sub test 1	21.10	21.48	21.51
HSUPA Sub test 2	19.90	20.33	20.44
HSUPA Sub test 3	20.04	19.92	19.72
HSUPA Sub test 4	19.90	20.28	20.38
HSUPA Sub test 5	**21.05**	**21.32**	**21.38**

Table 10: Test results conducted peak power measurement WCDMA 1900

Remark : None of the HSDPA/HSUPA settings leads to conducted power values exceeding the conducted power in RMC mode by more than 0.25 dB.
But due to the requirement to test in HSPDA and HSUPA modes when SAR in RMC mode exceeds 1.2 W/kg delta tests were performed in HSPDA sub test mode 1 and HSUPA sub test mode 5 as required by FCC rules.

2.5.7 Test-set-up information for WCDMA / HSPDA / HSUPA

a) RMC

In RMC (reference measurement channel) mode the conducted power at 4 different bit rates was measured. They correspond with the used spreading factors as follows :

Bit rate	12.2 kbit/s	64 kbit/s	144 kbit/s	384 kbit/s
Spreading factor (SF)	64	16	8	4

In RMC mode only DPCCH and DPDCH are active. As bit rate changes do not influence the relative power of any code channel the measured RMS output power remains on the same level which is set to maximum by TPC (Transmit power control) pattern type 'All 1'.

b) HSDPA

HSDPA adds the HS-DPCCH in uplink as a control channel for high speed data transfer in downlink.
In HSDPA mode 4 sub-tests are defined by 3GPP 34.121 according to the following table:

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

Note 1: Δ_{ACK}, Δ_{NACK}, Δ_{CQI} = 8 $\Leftrightarrow$ A_{hs} = β_{hs}/β_c = 30/15 $\Leftrightarrow$ β_{hs} = 30/15 * β_c
Note 2 : CM = 1 for β_c/β_d = 12/15, β_{hs}/β_c = 24/15
Note 3 : For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to β_c = 11/15 and β_d = 15/15

Table 11: Sub-tests for UMTS Release 5 HSDPA

The β_c and β_d gain factors for DPCCH and DPDCH were set according to the values in the above table, β_{hs} for HS-DPCCH is set automatically to the correct value when Δ_{ACK}, Δ_{NACK}, Δ_{CQI} = 8. The variation of the β_c/β_d ratio causes a power reduction at sub-tests 2 - 4.

The measurements were performed with a Fixed Reference Channel(FRC) and H-Set 1 QPSK.

Parameter	**Value**
Nominal average inf. bit rate	534 kbit/s
Inter-TTI Distance	3 TTI's
Number of HARQ Processes	2 Processes
Information Bit Payload	3202 Bits
MAC-d PDU size	336 Bits
Number Code Blocks	1 Block
Binary Channel Bits Per TTI	4800 Bits
Total Available SMLs in UE	19200 SMLs
Number of SMLs per HARQ Process	9600 SMLs
Coding Rate	0.67
Number of Physical Channel Codes	5

Table 12: settings of required H-Set 1 QPSK acc. to 3GPP 34.121

c) HSUPA

In HSUPA mode additional code channels (E-DPCCH, E-DPDCHn) are added for data transfer in uplink at higher bit rates.

5 sub-tests are defined by 3GPP 34.121 according to the following table :

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

Note 1: Δ_{ACK}, Δ_{NACK}, $\Delta_{CQI} = 8 \Leftarrow\Rightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftarrow\Rightarrow \beta_{hs} = 30/15 * \beta_c$
Note 2 : CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference
Note 3 : For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$
Note 4 : For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1,TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$
Note 5 : 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

Table 13: Subtests for UMTS Release 6 HSUPA

To achieve the settings above some additional procedures were defined by 3GPP 34.121. Those have been included in an application note for the CMU200 and were exactly followed :

- Test mode connection (BS signal tab) :
  RMC 12.2 kbit/s + HSPA 34.108 with loop mode 1
- HS-DSCH settings (BS signal tab):
  - FRC with H-set 1 QPSK
  - ACK-NACK repetition factor = 3
  - CQI feedback cycle = 4ms
  - CQI repetition factor = 2
- HSUPA-specific signalling settings (UE signal tab) :
  - E-TFCI table index = 0
  - E-DCH minimum set E-TFCI = 9
  - Puncturing limit non-max = 0.84
  - max. number of channelisation codes = 2x SF4
  - Initial Serving Grant Value = Off
- HSDPA and HSUPA Gain factors (UE signal tab)

Sub-test	β_c	β_d	Δ_{ACK}, Δ_{NACK}, Δ_{CQI}	ΔE–DPCCH)*
1	10	15	8	6
2	6	15	8	8
3	15	9	8	8
4	2	15	8	5
5	14	15	8	7

)* : β_{ec} and β_{ed} ratios (relative to β_c and β_d) are set by ΔE–DPCCH

- HSUPA Reference E-TFCIs (UE signal tab > HSUPA gain factors) :

Sub-test	1, 2, 4, 5				
Number of E-TFCIs	5				
Reference E-TFCI	11	67	71	75	81
Reference E-TFCI power offset	4	18	23	26	27

Sub-test	3	
Number of E-TFCIs	2	
Reference E-TFCI	11	92
Reference E-TFCI power offset	4	18

- HSUPA-specific generator parameters (BS Signal tab > HSUPA > E-AGCH > AG Pattern)

Sub-test	**Absolute Grant Value (AG Index)**
1	20
2	12
3	15
4	17
5	21

- Power Level settings (BS Signal tab > Node B-settings):
  - Level reference : Output Channel Power (lor)
  - Output Channel Power (lor) : -86 dBm

- Downlink Physical Channel Settings (BS signal tab)
  - P-CPICH : -10 dB
  - S-CPICH : Off
  - P-SCH : -15 dB
  - S-SCH : -15 dB
  - P-CCPCH : -12 dB
  - S-CCPCH : -12 dB
  - PICH : -15 dB
  - AICH : -12 dB
  - DPDCH : -10 dB
  - HS-SCCH : -8 dB
  - HS-PDSCH : -3 dB
  - E-AGCH : -20 dB
  - E-RGCH/E-HICH - 20 dB
  - E-RGCH Active : Off

The settings above were stored once for each sub-test and recalled before the measurement.

2.5.8 HSUPA test procedure :

To reach maximum output power in HSUPA mode the following procedures were followed:

3 different TPC patterns were defined :
Set 1 : Closed loop with target power 10 dBm
Set 2 : Single Pattern+Alternating with binary pattern '11111' for 1 dB steps 'up'
Set 3 : Single Pattern+Alternating with binary pattern '00000' for 1 dB steps 'down'

After recalling a certain HSUPA sub-test the HSUPA E-AGCH graph with E-TFCI event counter is displayed. After starting with the closed loop command the power is increased in 1 dB steps by activating pattern set 2 until the UE decreases the transmitted E-TFCI.
At this point set 3 is activated once to reduce the output power to the value at which the original E-TFCI, which is required for the sub-test, appears again.

For conducted power measurements the same steps are repeated in the power menu to read out the corresponding maximum RMS output power with the target E-TFCI.
For SAR measurements it is useful to switch to Code Domain Power vs. Time display.
Here the CMU200 shows relative power values (max. and min.) of each code channel which should roughly correspond to the numerators of the gain factors e.g. :

Sub-test	β_c	β_d	β_{hs}	β_{ec}	β_{ed}
5	15	15	30	24	134

By this way a surveillance of signalling conditions is possible to make sure that HSUPA code channels are active during the complete SAR measurement.

2.5.9 Information on maximum power reduction

According to the subtest settings shown in Table 13 a Maximum Power Reduction (MPR) of up to 2 dB can be expected in HSUPA subtest 2 – 4. The WCDMA measurement results only show a maximum reduction of 1 dB in HSUPA subtests 2 and 4.

The following statement submitted by the manufacturer confirms that maximum power reduction in HSUPA subtests 2 – 4 is not exhausted :

The MD400(g) platform implements the MPR allowance to reduce power in order to maintain ACLR and other parametric performance margin in high peak to average signal conditions. The values predicted by the cubic metric allow the designers to back-off the maximum power by up to the maximum power reduction value. The power amplifier solution used in the MD400(g) HSPA platform is optimized to require up to the MPR value for all physical channel combinations. Generally the power reduction actually implemented is less than the MPR allowed. This implementation is on the order of a 1 dB reduction.

2.6 Test results (Body SAR)

The table contains the measured SAR values averaged over a mass of 1 g					
Channel / frequency	Position	Distance / Num. of TS	Body worn	Limit	Liquid temperature
GPRS CS1					
190 / 836.6 MHz	underside	3mm / 2	0.670W/kg	1.6W/kg	22.1°C
190 / 836.6 MHz	underside	3mm / 1	0.625W/kg	1.6W/kg	22.1°C
190 / 836.6 MHz	right	11mm / 2	0.305W/kg	1.6W/kg	22.1°C
190 / 836.6 MHz	left	5mm / 2	0.358W/kg	1.6W/kg	22.0°C
190 / 836.6 MHz	top	0mm / 2	**0.722W/kg**	1.6W/kg	22.1°C
128 / 824.2 MHz	top	0mm	notnecessary	1.6W/kg	----
251 / 848.8 MHz	top	0mm	notnecessary	1.6W/kg	----
EGPRS MCS4 (GMSK)					
190 / 836.6 MHz	underside	3mm / 2	0.446W/kg	1.6W/kg	22.1°C
GPRS CS1 with flash memory card					
190 / 836.6 MHz	underside	3mm / 2	0.592W/kg	1.6W/kg	22.1°C

Table 14: Test results (Body SAR GSM 850 MHz Band)

The table contains the measured SAR values averaged over a mass of 1 g					
Channel / frequency	Position	Distance / Num. of TS	Body worn	Limit	Liquid temperature
GPRS CS1					
661 / 1880.0 MHz	underside	3mm / 2	0.267W/kg	1.6W/kg	22.1°C
661 / 1880.0 MHz	right	11mm / 2	0.609W/kg	1.6W/kg	22.1°C
661 / 1880.0 MHz	top	0mm / 2	0.457W/kg	1.6W/kg	22.1°C
661 / 1880.0 MHz	left	5mm / 2	0.784W/kg	1.6W/kg	22.1°C
661 / 1880.0 MHz	left	5mm / 1	**0.794W/kg**	1.6W/kg	22.0°C
512 / 1850.2 MHz	left	5mm	notnecessary	1.6W/kg	----
810 / 1909.8 MHz	left	5mm	notnecessary	1.6W/kg	----
EGPRS MCS4 (GMSK)					
661 / 1880.0 MHz	left	5mm / 2	0.669W/kg	1.6W/kg	21.9°C

Table 15: Test results (Body SAR PCS 1900 MHz)

Note: 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 at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.

The table contains the measured SAR values averaged over a mass of 1 g					
Channel / frequency	Position	Distance	Body worn	Limit	Liquid temperature
RMC at 12.2 kbit/s					
4182 / 836.6 MHz	underside	3mm	**0.667W/kg**	1.6W/kg	22.1°C
4182 / 836.6 MHz	right	11mm	0.323W/kg	1.6W/kg	22.1°C
4182 / 836.6 MHz	top	0mm	0.638W/kg	1.6W/kg	22.1°C
4182 / 836.6 MHz	left	5mm	0.319W/kg	1.6W/kg	22.0°C
4133 / 824.2 MHz	underside	3mm	notnecessary	1.6W/kg	----
4233 / 848.8 MHz	underside	3mm	notnecessary	1.6W/kg	----
RMC at 12.2 kbit/s with flash memory card					
4182 / 836.6 MHz	underside	3mm	0.547W/kg	1.6W/kg	22.1°C

Table 16: Test results (Body SAR FDD V 850 MHz)

The table contains the measured SAR values averaged over a mass of 1 g					
Channel / frequency	Position	Distance	Body worn	Limit	Liquid temperature
RMC at 12.2 kbit/s					
9400 / 1880.0 MHz	underside	3mm	0.656W/kg	1.6W/kg	21.7°C
9400 / 1880.0 MHz	underside*(	3mm	0.433W/kg	1.6W/kg	21.7°C
9262 / 1850.2 MHz	right	11mm	0.916W/kg	1.6W/kg	21.7°C
9400 / 1880.0 MHz	right	11mm	1.290W/kg	1.6W/kg	21.7°C
9538 / 1850.2 MHz	right	11mm	1.150W/kg	1.6W/kg	21.6°C
9262 / 1850.2 MHz	top	0mm	0.817W/kg	1.6W/kg	21.6°C
9400 / 1880.0 MHz	top	0mm	0.780W/kg	1.6W/kg	21.6°C
9538 / 1850.2 MHz	top	0mm	0.754W/kg	1.6W/kg	21.7°C
9262 / 1850.2 MHz	left	5mm	1.120W/kg	1.6W/kg	21.7°C
9400 / 1880.0 MHz	left	5mm	1.320W/kg	1.6W/kg	21.7°C
9538 / 1850.2 MHz	left	5mm	1.190W/kg	1.6W/kg	21.7°C
HSDPA sub-test 1					
9400 / 1880.0 MHz	right	11mm	1.300W/kg	1.6W/kg	21.7°C
9400 / 1880.0 MHz	left	5mm	1.280W/kg	1.6W/kg	21.7°C
HSUPA sub-test 5					
9400 / 1880.0 MHz	right	11mm	0.962W/kg	1.6W/kg	21.7°C
9400 / 1880.0 MHz	left	5mm	1.060W/kg	1.6W/kg	21.7°C
RMC at 12.2 kbit/s with flash memory card					
9400 / 1880.0 MHz	right	11mm	**1.330W/kg**	1.6W/kg	21.7°C

Table 17: Test results (Body SAR FDD II 1900 MHz)

Note: 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 at least 3.0 dB lower than the SAR limit (< 0.8 W/kg), testing at the high and low channels is optional.
Delta tests with HSPA modes were performed at positions with SAR levels > 1.2 W/kg.

2.6.1 General description of test procedures

The DUT is tested using a CMU 200 communications tester as controller unit to set test channels and maximum output power to the DUT, as well as for measuring the conducted peak power.
Test positions as described in the tables above are in accordance with the specified test standard.
Conducted output power was measured using an integrated RF connector and attached RF cable.

The tests with the USB modem were performed as follows :

- underside was tested with the modem inserted into the horizontal slot of the HP notebook offering smallest distance to the phantom (3mm)
- left side was tested with the modem inserted into the vertical slot of the Sony Vaio notebook offering a distance of 5 mm.
- top side was tested using a USB extension cable to place the USB-modem with the swivel handle in direct contact with the SAM phantom. Adding additional spacing did not lead to higher results.
- right side (with GPRS/UMTS antenna on this side of the swivel handle) was tested using a USB extension cable to place the USB-modem at a distance of 11 mm to the SAM phantom.

Top and right side position was tested with a 33 cm USB extension cable. It was fixed by using polystyrol foam attached to the standard hand-set holder, so that the distance between antenna and handset holder is bigger than 10 cm to prevent any influence.
Additionally the USB stick was fixed with tape to the phantom to keep the distances described above with the notebooks in upside down orientation.

The standard operating position of the swivel handle is at an angle of 135° which has been used during the test. A delta measurement was performed with an angle of 120° (due to play in the mechanic construction) marked with *(.

Additional delta checks were performed with flash memory card inserted at worse case positions with WCDMA in both 850 and 1900 MHz band.
The memory card is completely hidden inside the stick when it is inserted.
At first the delta measurement was performed in 1900 MHz FDD II band on worst case position (right side). Here the memory card has a rather small influence at this position.
The slightly increased SAR value is rather caused by positioning uncertainty due to play in the USB jack.
In 850 MHz band the delta check was performed with UMTS FDD V at worst case position (underside). Results show a slight reduction with memory card inserted. This reduction could also be confirmed with 850 MHz GSM.

Annex 1 System performance verification

Date/Time: 2008-09-04 16:07:06Date/Time: 2008-09-04 16:12:17

SystemPerformanceCheck-D900 body 2008-09-04

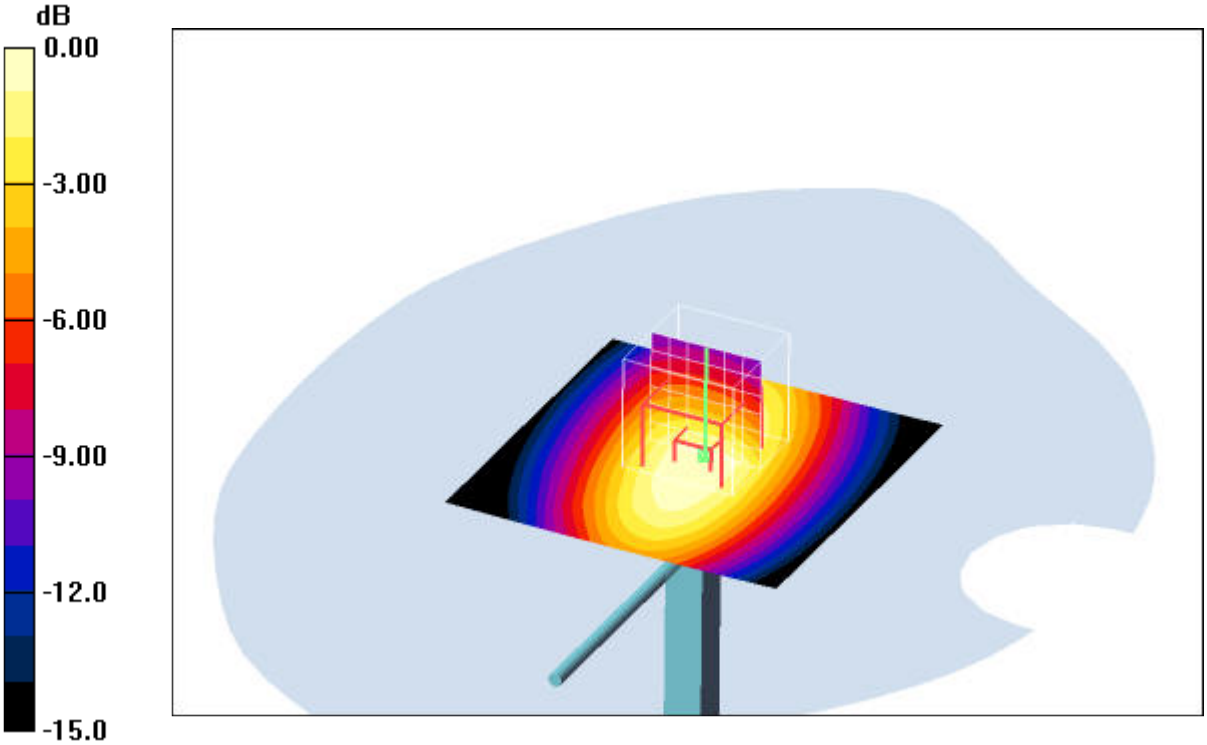
DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN: 099
Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: M850 Medium parameters used: f = 900 MHz; σ = 1.04 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.8, 5.8, 5.8); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

d=15mm, Pin=1000mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.2 mW/g

d=15mm, Pin=1000mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 111.3 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 16.2 W/kg
SAR(1 g) = 11.1 mW/g; SAR(10 g) = 7.21 mW/g
Maximum value of SAR (measured) = 12.0 mW/g



0 dB = 12.0mW/g

Additional information:
position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 23.0°C; liquid temperature: 22.1°C

Date/Time: 2008-09-05 12:39:04Date/Time: 2008-09-05 12:43:43

SystemPerformanceCheck-D900 body 2008-09-05

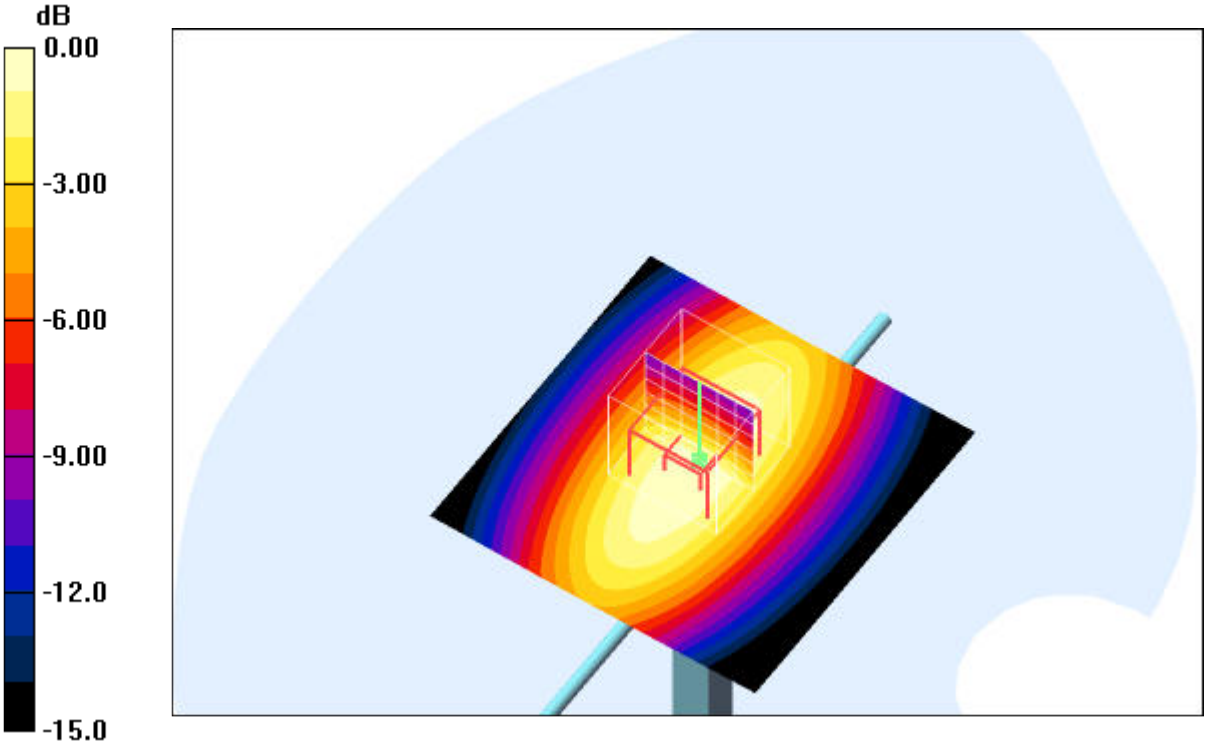
DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN: 099
Communication System: CW; Frequency: 900 MHz;Duty Cycle: 1:1
Medium: M850 Medium parameters used: f = 900 MHz; σ = 1.04 mho/m; ε_r = 53.8; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.8, 5.8, 5.8); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

d=15mm, Pin=1000mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 11.8 mW/g

d=15mm, Pin=1000mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 108.1 V/m; Power Drift = 0.011 dB
Peak SAR (extrapolated) = 15.8 W/kg
SAR(1 g) = 10.7 mW/g; SAR(10 g) = 6.95 mW/g
Maximum value of SAR (measured) = 11.8 mW/g



0 dB = 11.8mW/g

Additional information:
position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 23.0°C; liquid temperature: 22.2°C

Date/Time: 2008-09-03 15:47:18Date/Time: 2008-09-01 10:51:19

SystemPerformanceCheck-D1900 body 2008-09-03

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d009

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used (interpolated): f = 1900 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

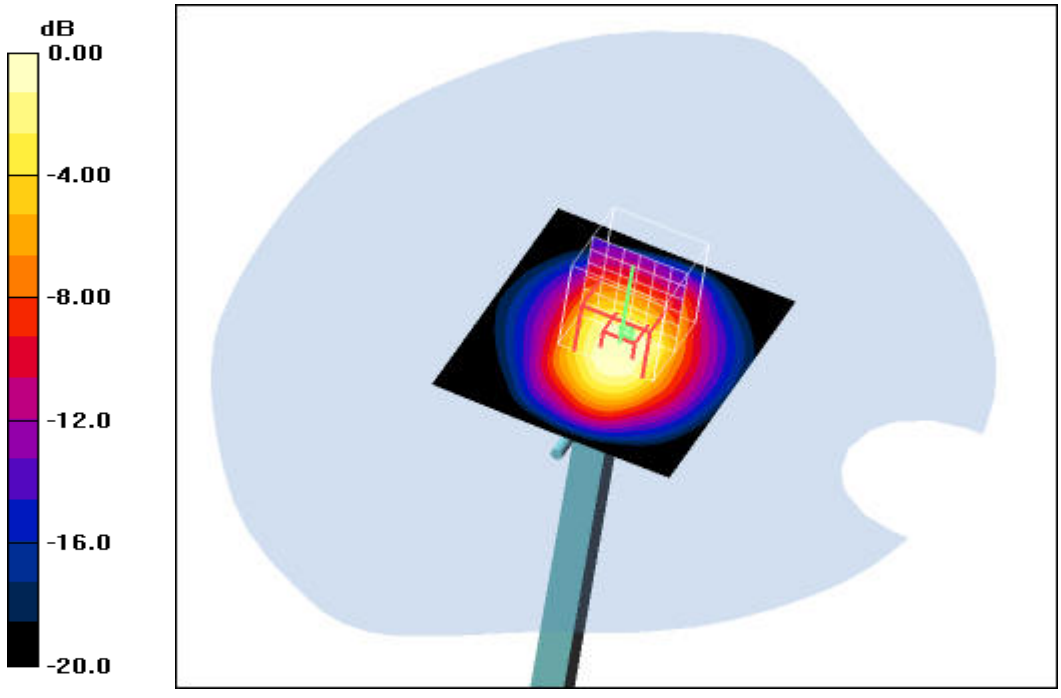
d=10mm, Pin=1000mW/Area Scan (51x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 52.5 mW/g

d=10mm, Pin=1000mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 173.8 V/m; Power Drift = -0.087 dB
Peak SAR (extrapolated) = 73.8 W/kg
SAR(1 g) = 39.9 mW/g; SAR(10 g) = 21.2 mW/g

Maximum value of SAR (measured) = 44.6 mW/g



0 dB = 44.6mW/g

Additional information:
position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 23.8°C; liquid temperature: 21.8°C

Date/Time: 2008-09-04 14:20:25Date/Time: 2008-09-04 14:24:33

SystemPerformanceCheck-D1900 body 2008-09-04

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d009

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used (interpolated): f = 1900 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

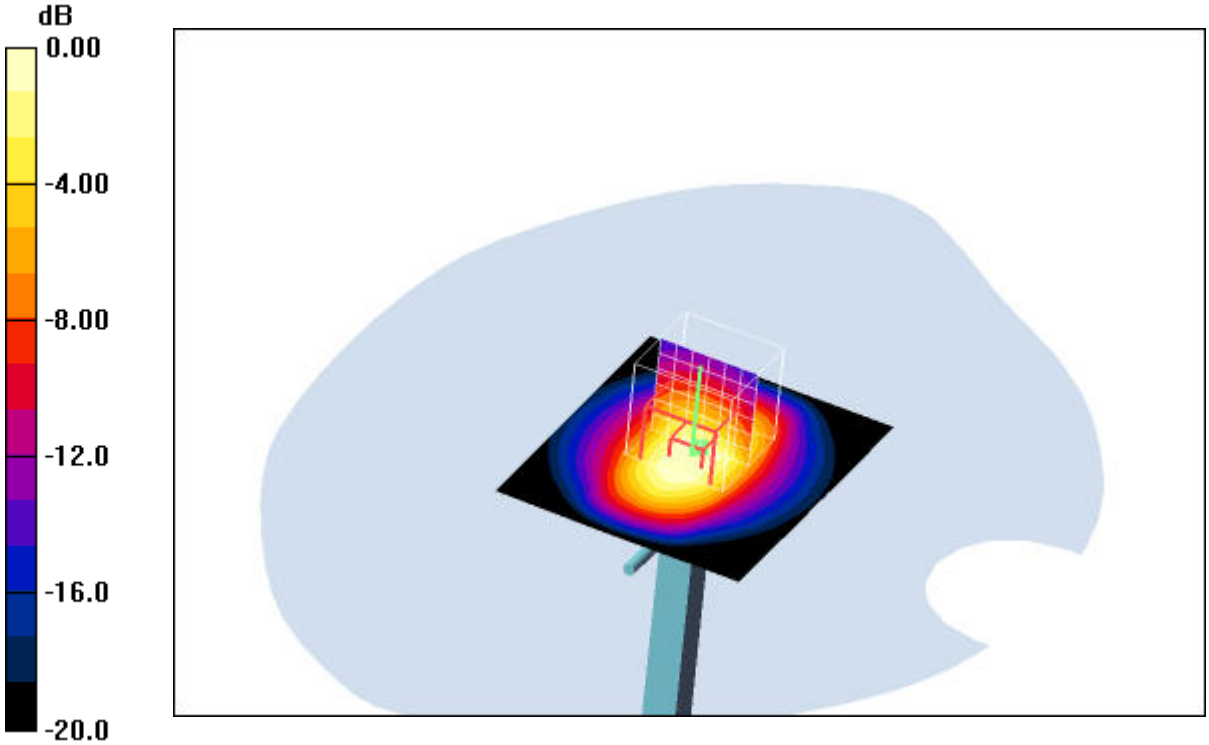
d=10mm, Pin=1000mW/Area Scan (51x61x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 52.7 mW/g

d=10mm, Pin=1000mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 179.5 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 74.0 W/kg
SAR(1 g) = 40.8 mW/g; SAR(10 g) = 21.4 mW/g

Maximum value of SAR (measured) = 45.6 mW/g



0 dB = 45.6mW/g

Additional information:
position or distance of DUT to SAM (if not standard head positions) :
ambient temperature: 23.0°C; liquid temperature: 21.9°C

Annex 2 Measurement results (printout from DASY TM)

Remark: results of conducted power measurements: see chapter 2.5/2.6 (if applicable)

Annex 2.1 Cellular 850 MHz body

Date/Time: 2008-09-04 17:36:25Date/Time: 2008-09-04 17:46:05

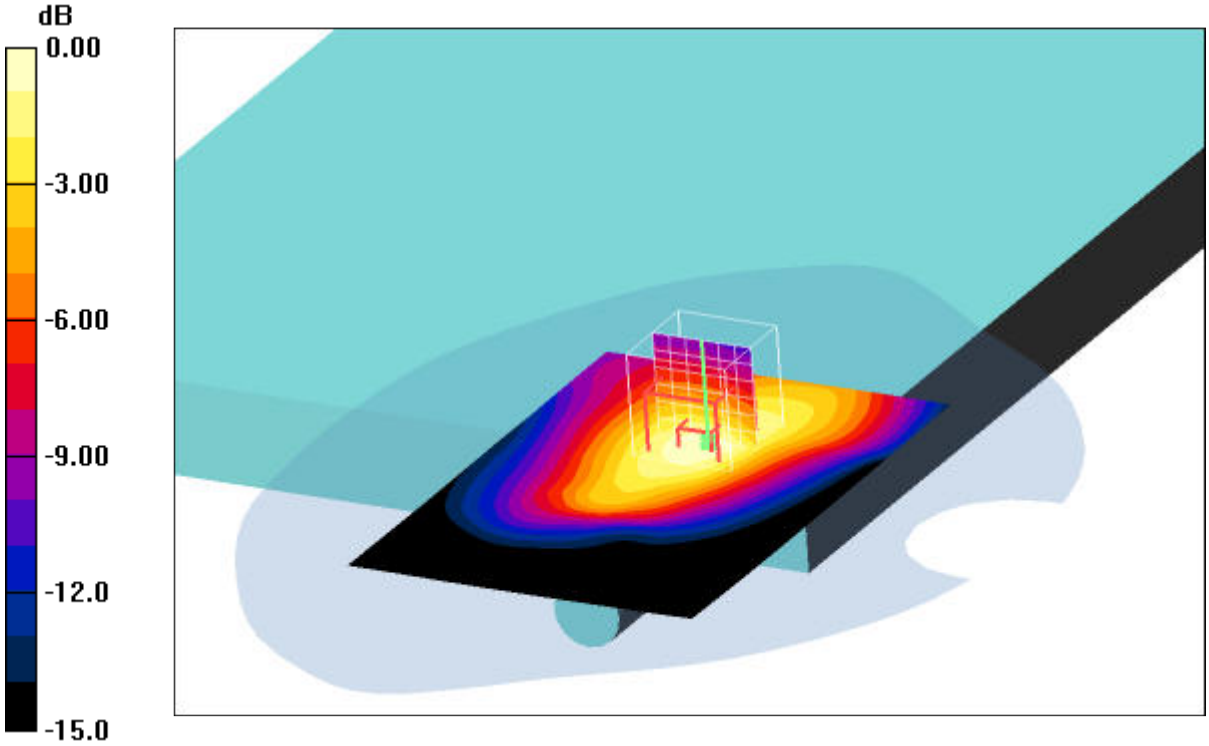
P1528_OET65-Body-Cellular 850_GPRS 2 timeslots

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3

Communication System: GSM 850 GPRS 2 timeslots 2 timeslots; Frequency: 836.6 MHz;Duty Cycle: 1:4
Medium: M850 Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Underside position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.718 mW/g

Underside position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.6 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.670 mW/g; SAR(10 g) = 0.418 mW/g
Maximum value of SAR (measured) = 0.733 mW/g



0 dB = 0.733mW/g

Additional information:
position or distance of DUT to SAM : 3 mm
ambient temperature: 23.0°C; liquid temperature: 22.1°C

Date/Time: 2008-09-04 18:03:09Date/Time: 2008-09-04 18:12:11

P1528_OET65-Body-Cellular 850_GPRS 1 timeslot

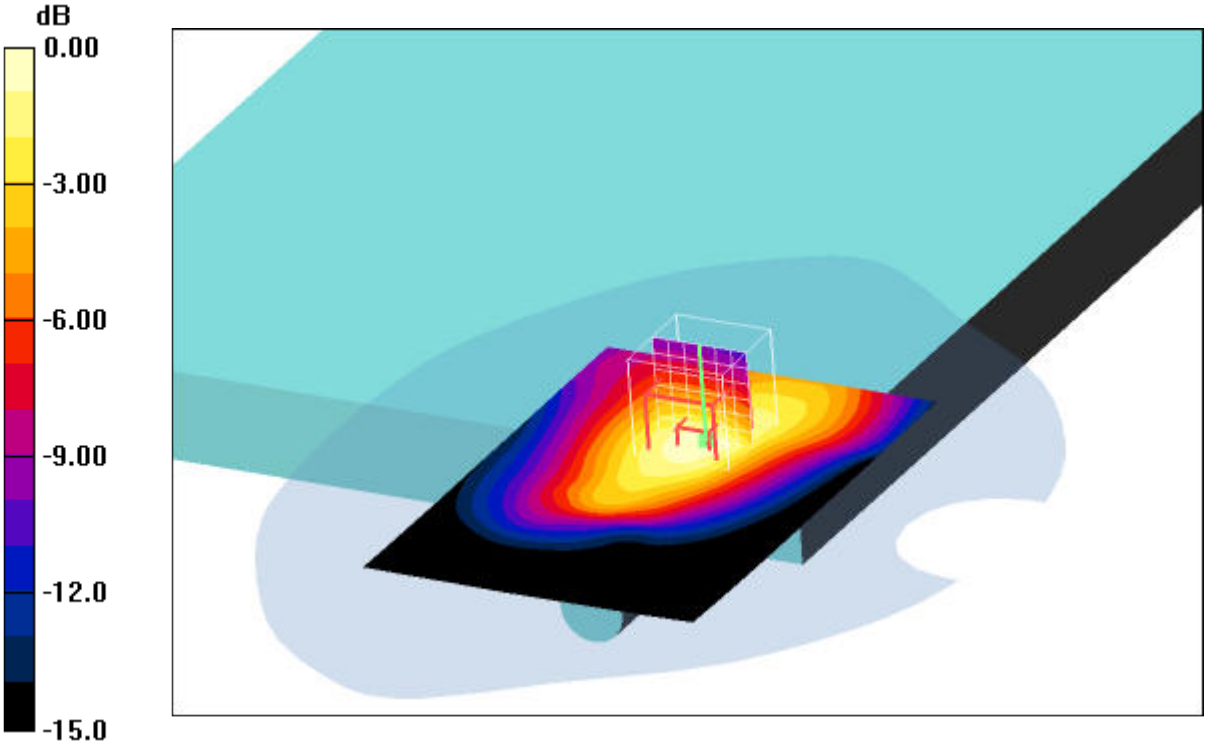
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: GSM 850 GPRS 1 timeslot; Frequency: 836.6 MHz;Duty Cycle: 1:8
Medium: M850 Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Underside position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.656 mW/g

Underside position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 25.5 V/m; Power Drift = 0.037 dB
Peak SAR (extrapolated) = 1.03 W/kg
SAR(1 g) = 0.625 mW/g; SAR(10 g) = 0.390 mW/g
Maximum value of SAR (measured) = 0.678 mW/g



0 dB = 0.678mW/g

Additional information:
position or distance of DUT to SAM : 3 mm
ambient temperature: 23.0°C; liquid temperature: 22.1°C

Date/Time: 2008-09-04 20:54:16Date/Time: 2008-09-04 21:03:20

P1528_OET65-Body-Cellular 850_GPRS 2 timeslots

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3

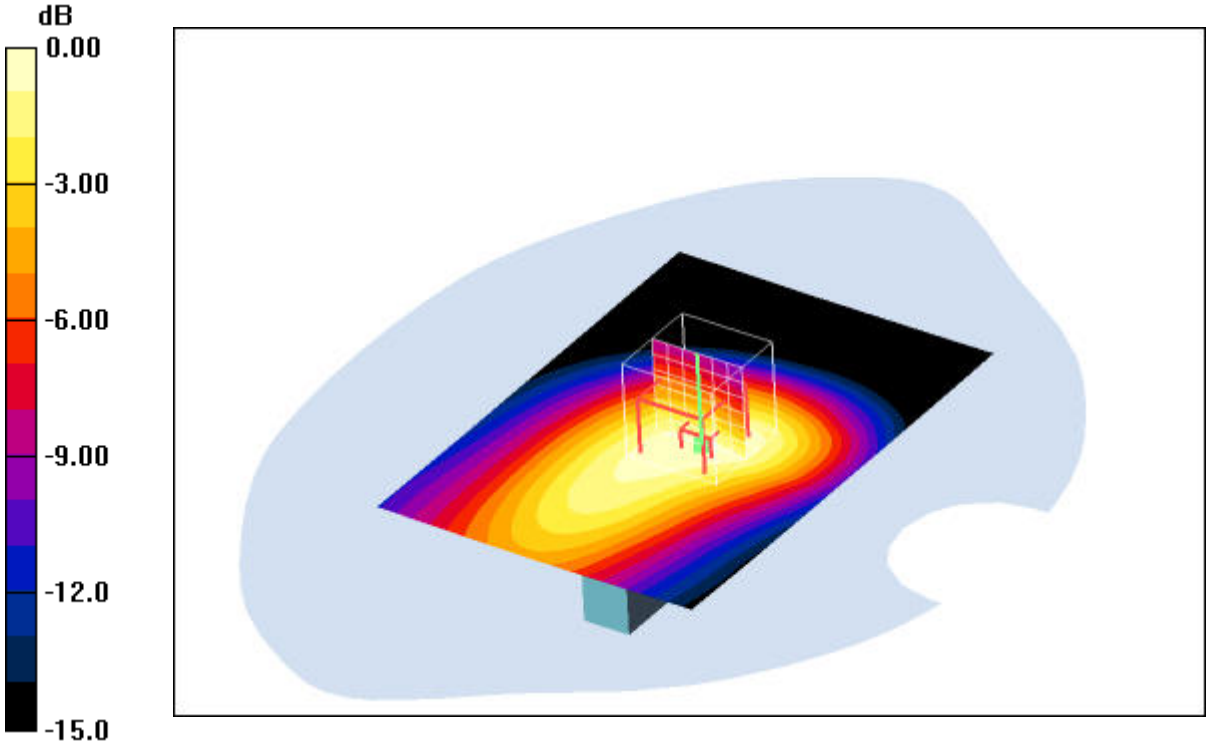
Communication System: GSM 850 GPRS 2 timeslots; Frequency: 836.6 MHz;Duty Cycle: 1:4
Medium: M850 Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Right side position - Middle USB-cable/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.329 mW/g

Right side position - Middle USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.0 V/m; Power Drift = -0.018 dB
Peak SAR (extrapolated) = 0.468 W/kg
SAR(1 g) = 0.305 mW/g; SAR(10 g) = 0.202 mW/g
Maximum value of SAR (measured) = 0.328 mW/g



0 dB = 0.328mW/g

Additional information:
position or distance of DUT to SAM : 11 mm
ambient temperature: 22.8°C; liquid temperature: 22.1°C

Date/Time: 2008-09-04 21:39:01Date/Time: 2008-09-04 21:48:16Date/Time: 2008-09-04 22:00:03

P1528_OET65-Body-Cellular 850_GPRS 2 timeslots

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3

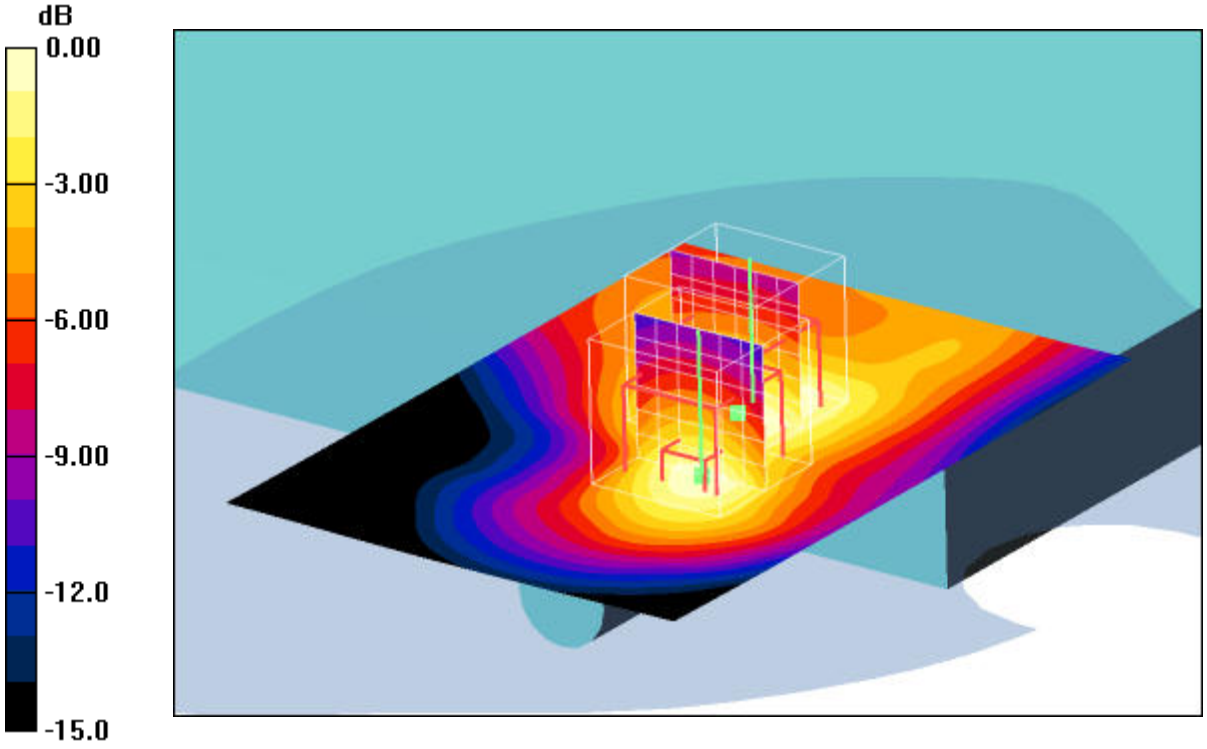
Communication System: GSM 850 GPRS 2 timeslots; Frequency: 836.6 MHz;Duty Cycle: 1:4
Medium: M850 Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left side position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.384 mW/g

Left side position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.4 V/m; Power Drift = -0.076 dB
Peak SAR (extrapolated) = 0.547 W/kg
SAR(1 g) = 0.358 mW/g; SAR(10 g) = 0.230 mW/g
Maximum value of SAR (measured) = 0.386 mW/g

Left side position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.4 V/m; Power Drift = -0.076 dB
Peak SAR (extrapolated) = 0.631 W/kg
SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.200 mW/g

Maximum value of SAR (measured) = 0.356 mW/g



0 dB = 0.356mW/g

Additional information:
position or distance of DUT to SAM : 5 mm
ambient temperature: 22.7°C; liquid temperature: 22.0°C

Date/Time: 2008-09-04 19:08:38Date/Time: 2008-09-04 19:19:16

P1528_OET65-Body-Cellular 850_GPRS 2 timeslots

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: GSM 850 GPRS 2 timeslots; Frequency: 836.6 MHz;Duty Cycle: 1:4
Medium: M850 Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

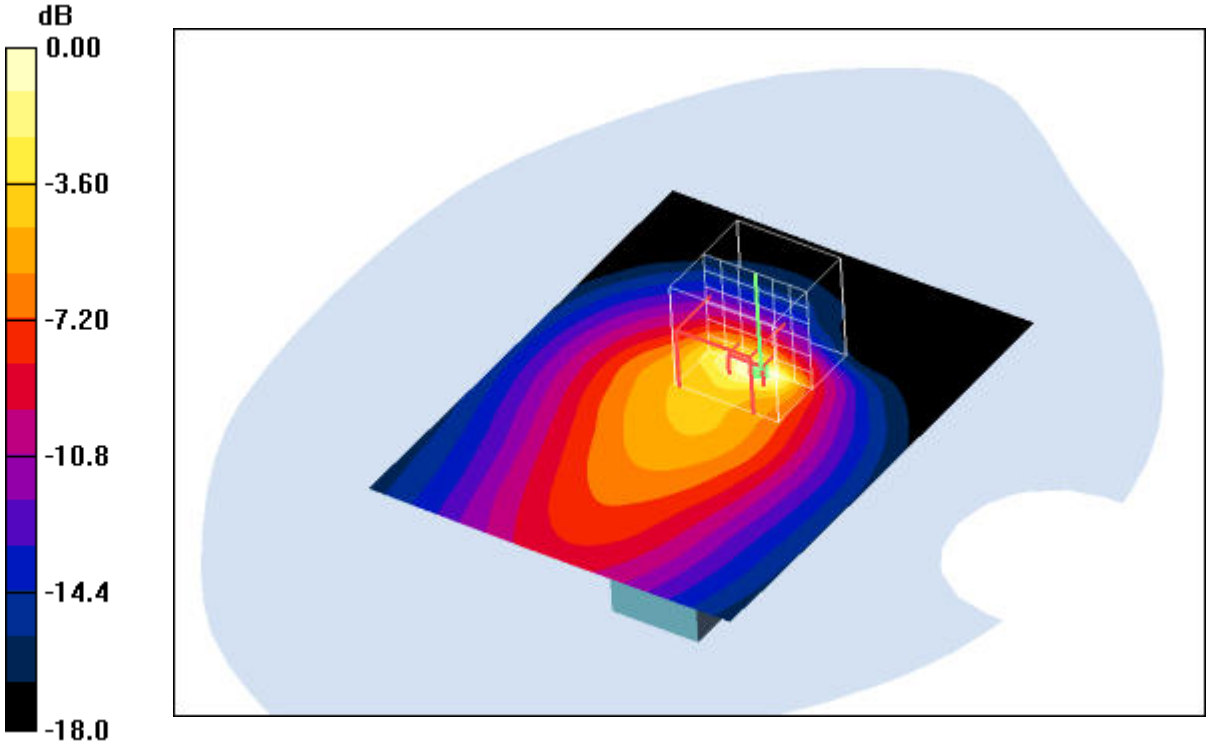
Top side position - Middle USB-cable/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.724 mW/g

Top side position - Middle USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.3 V/m; Power Drift = -0.102 dB
Peak SAR (extrapolated) = 4.02 W/kg
SAR(1 g) = 0.722 mW/g; SAR(10 g) = 0.251 mW/g

Maximum value of SAR (measured) = 0.820 mW/g



0 dB = 0.724mW/g

Additional information:
position or distance of DUT to SAM : 0 mm
ambient temperature: 22.8°C; liquid temperature: 22.1°C

Date/Time: 2008-09-04 18:26:32Date/Time: 2008-09-04 18:35:40

P1528_OET65-Body-Cellular 850_EGPRS 2 timeslots

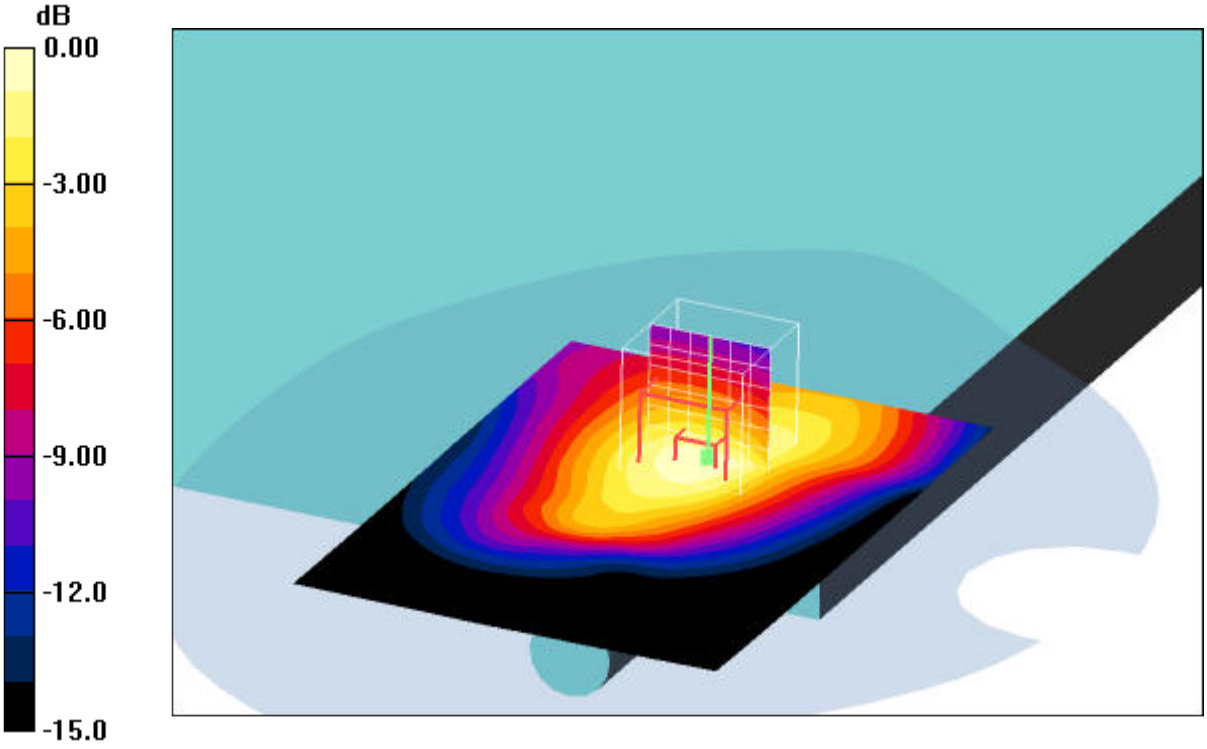
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: GSM 850 EGPRS 2 timeslots; Frequency: 836.6 MHz;Duty Cycle: 1:4
Medium: M850 Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Underside position - Middle EDGE/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.472 mW/g

Underside position - Middle EDGE/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.6 V/m; Power Drift = 0.038 dB
Peak SAR (extrapolated) = 0.719 W/kg
SAR(1 g) = 0.446 mW/g; SAR(10 g) = 0.280 mW/g
Maximum value of SAR (measured) = 0.486 mW/g



0 dB = 0.486mW/g

Additional information:
position or distance of DUT to SAM : 3 mm
ambient temperature: 23.0°C; liquid temperature: 22.1°C

Date/Time: 2008-09-05 11:07:31Date/Time: 2008-09-05 11:16:13

P1528_OET65-Body-Cellular 850_GPRS 2 timeslots

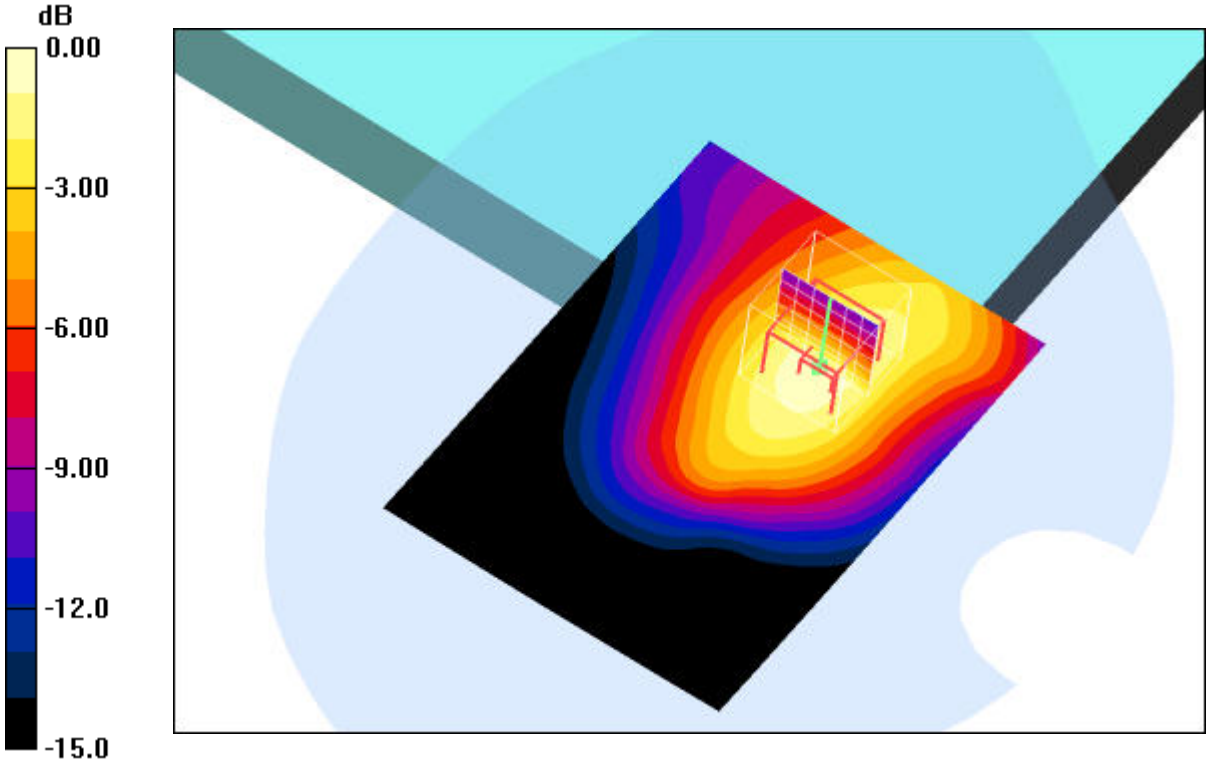
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: GSM 850 GPRS 2 timeslots; Frequency: 836.6 MHz;Duty Cycle: 1:4
Medium: M850 Medium parameters used: f = 836.6 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Underside position - Middle with flash card/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.609 mW/g

Underside position - Middle with flash card/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.8 V/m; Power Drift = 0.020 dB
Peak SAR (extrapolated) = 0.948 W/kg
SAR(1 g) = 0.592 mW/g; SAR(10 g) = 0.370 mW/g
Maximum value of SAR (measured) = 0.641 mW/g



0 dB = 0.641mW/g

Additional information:
position or distance of DUT to SAM : 3 mm
ambient temperature: 23.0°C; liquid temperature: 22.1°C

Annex 2.2 PCS 1900 MHz body

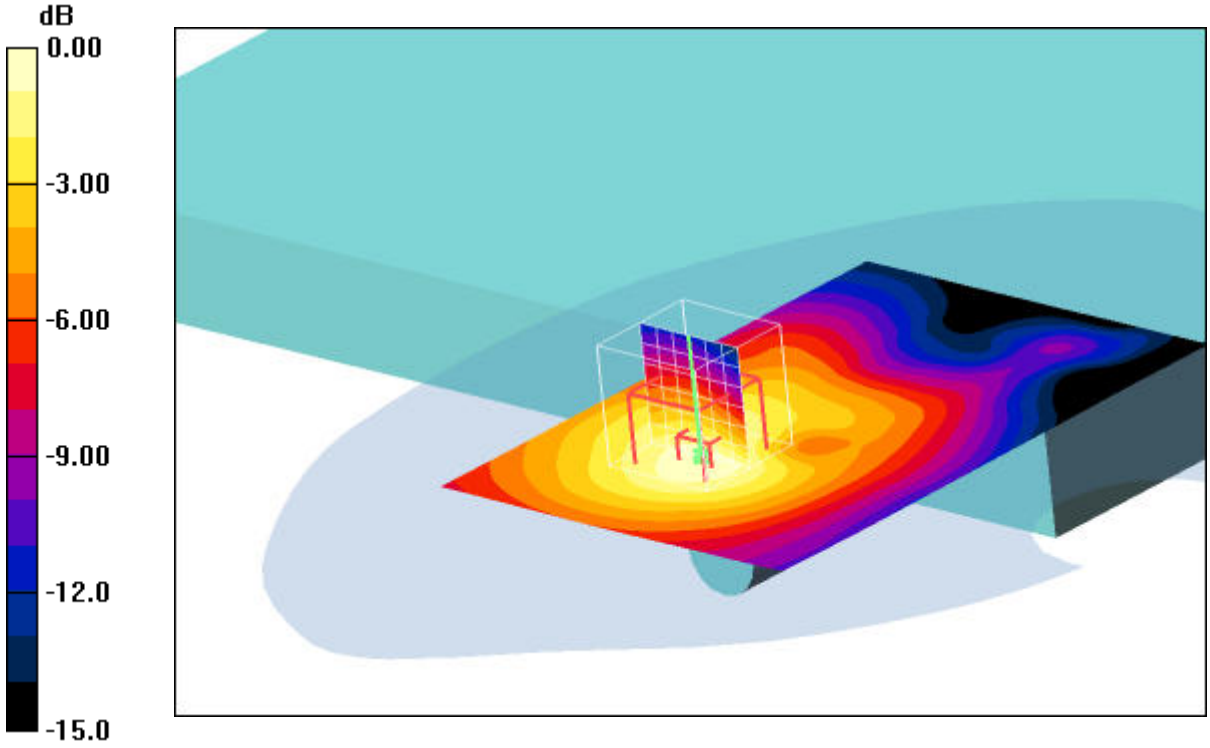
Date/Time: 2008-09-04 13:20:58Date/Time: 2008-09-04 13:29:51

P1528_OET65-Body-PCS1900_GPRS 2 timeslots

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: PCS 1900 GPRS 2 timeslots; Frequency: 1880 MHz;Duty Cycle: 1:4
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Underside position - Middle/Area Scan (71x101x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.291 mW/g

Underside position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.4 V/m; Power Drift = -0.037 dB
Peak SAR (extrapolated) = 0.473 W/kg
SAR(1 g) = 0.267 mW/g; SAR(10 g) = 0.164 mW/g
Maximum value of SAR (measured) = 0.286 mW/g



0 dB = 0.286mW/g

Additional information:
position or distance of DUT to SAM : 3 mm
ambient temperature: 23.1°C; liquid temperature: 22.1°C

Date/Time: 2008-09-03 10:42:59Date/Time: 2008-09-03 10:51:16

P1528_OET65-Body-PCS1900_GPRS 2 timeslots

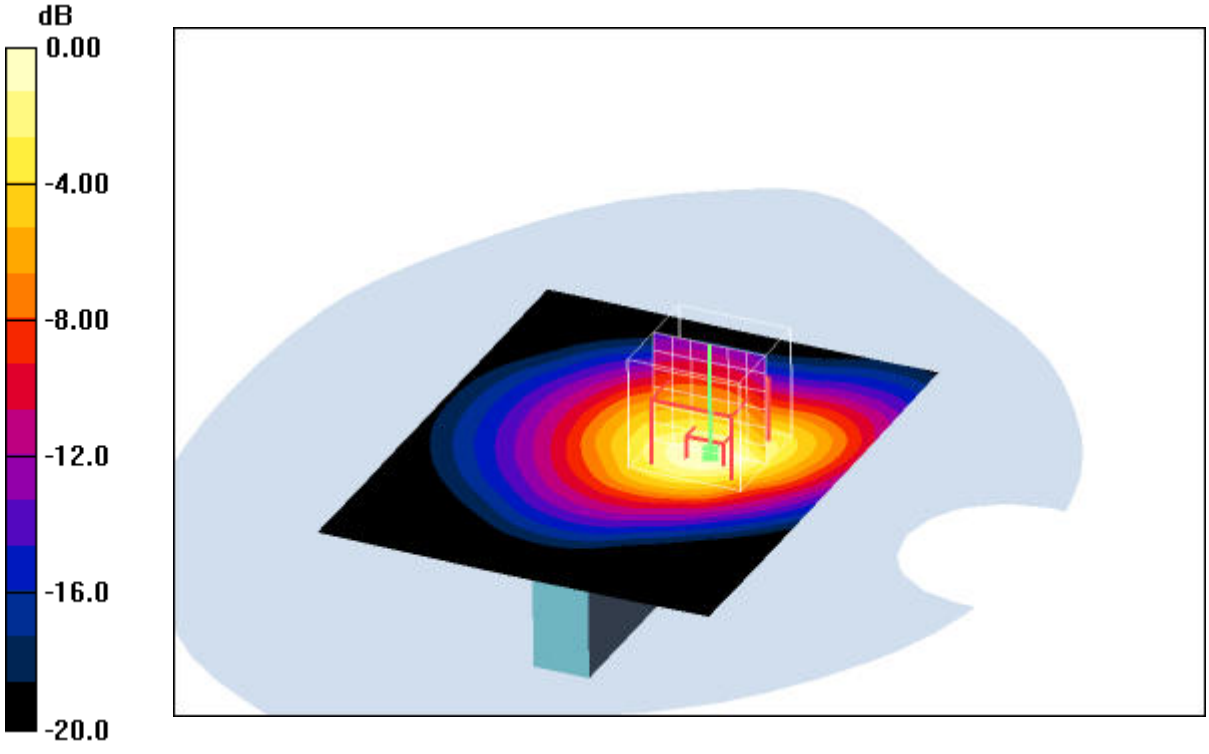
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: PCS 1900 GPRS 2 timeslots; Frequency: 1880 MHz;Duty Cycle: 1:4
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Right side position - Middle USB-cable/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.702 mW/g

Right side position - Middle USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.2 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.609 mW/g; SAR(10 g) = 0.332 mW/g
Maximum value of SAR (measured) = 0.671 mW/g



0 dB = 0.671mW/g

Additional information:
position or distance of DUT to SAM : 11 mm
ambient temperature: 23.0°C; liquid temperature: 22.1°C

Date/Time: 2008-09-03 11:23:13Date/Time: 2008-09-03 11:31:38

P1528_OET65-Body-PCS1900_GPRS 2 timeslots

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3

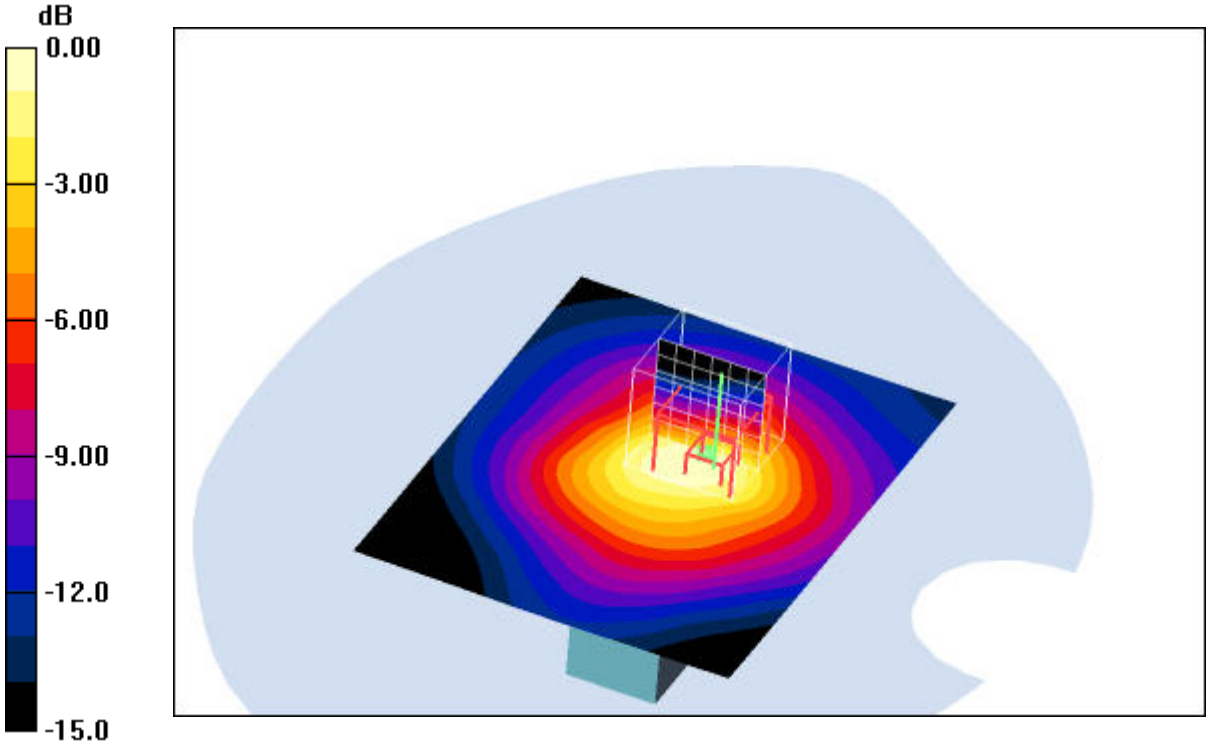
Communication System: PCS 1900 GPRS 2 timeslots; Frequency: 1880 MHz;Duty Cycle: 1:4
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Top side position - Middle USB-cable/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.533 mW/g

Top side position - Middle USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.8 V/m; Power Drift = -0.101 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.457 mW/g; SAR(10 g) = 0.223 mW/g
Maximum value of SAR (measured) = 0.525 mW/g



0 dB = 0.525mW/g

Additional information:
position or distance of DUT to SAM : 0 mm
ambient temperature: 22.8°C; liquid temperature: 22.1°C

Date/Time: 2008-09-03 12:34:52Date/Time: 2008-09-03 12:43:48

P1528_OET65-Body-PCS1900_GPRS 2 timeslots

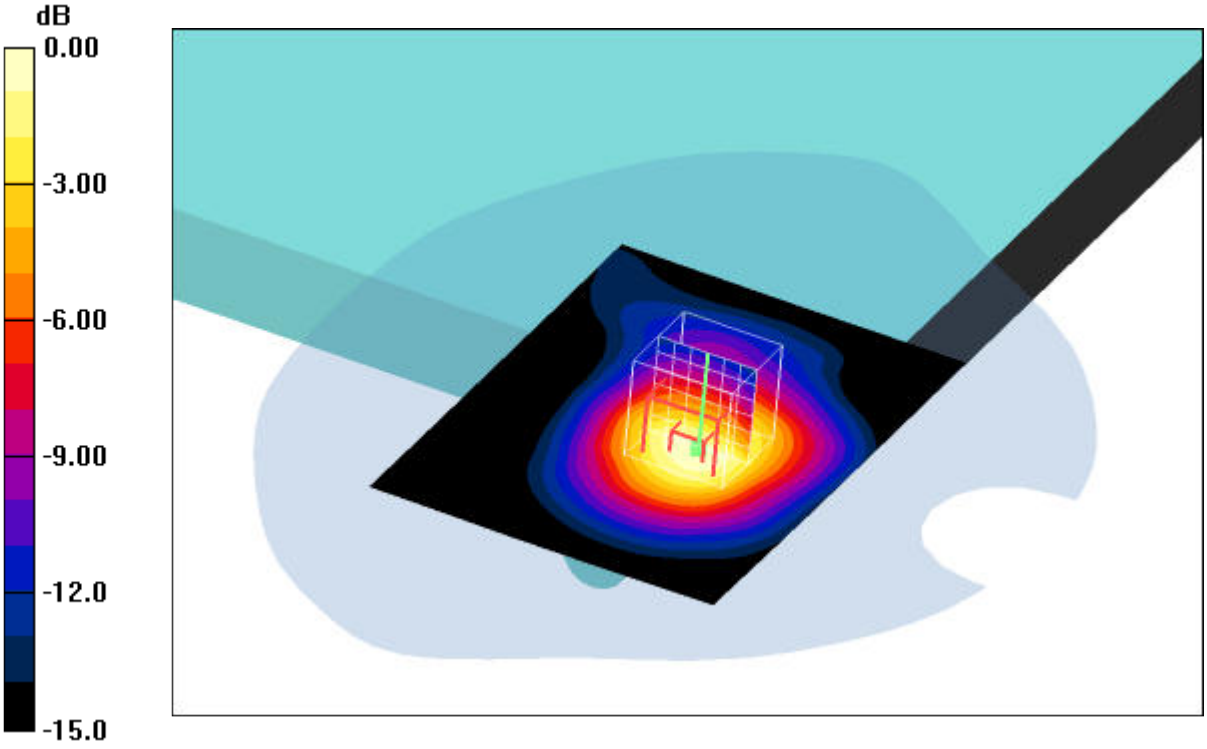
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: PCS 1900 GPRS 2 timeslots; Frequency: 1880 MHz;Duty Cycle: 1:4
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left side position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.876 mW/g

Left side position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.8 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.784 mW/g; SAR(10 g) = 0.462 mW/g
Maximum value of SAR (measured) = 0.847 mW/g



0 dB = 0.847mW/g

Additional information:
position or distance of DUT to SAM : 5 mm
ambient temperature: 22.7°C; liquid temperature: 22.1°C

Date/Time: 2008-09-03 13:17:48Date/Time: 2008-09-03 13:26:51

P1528_OET65-Body-PCS1900_GPRS 1 timeslot

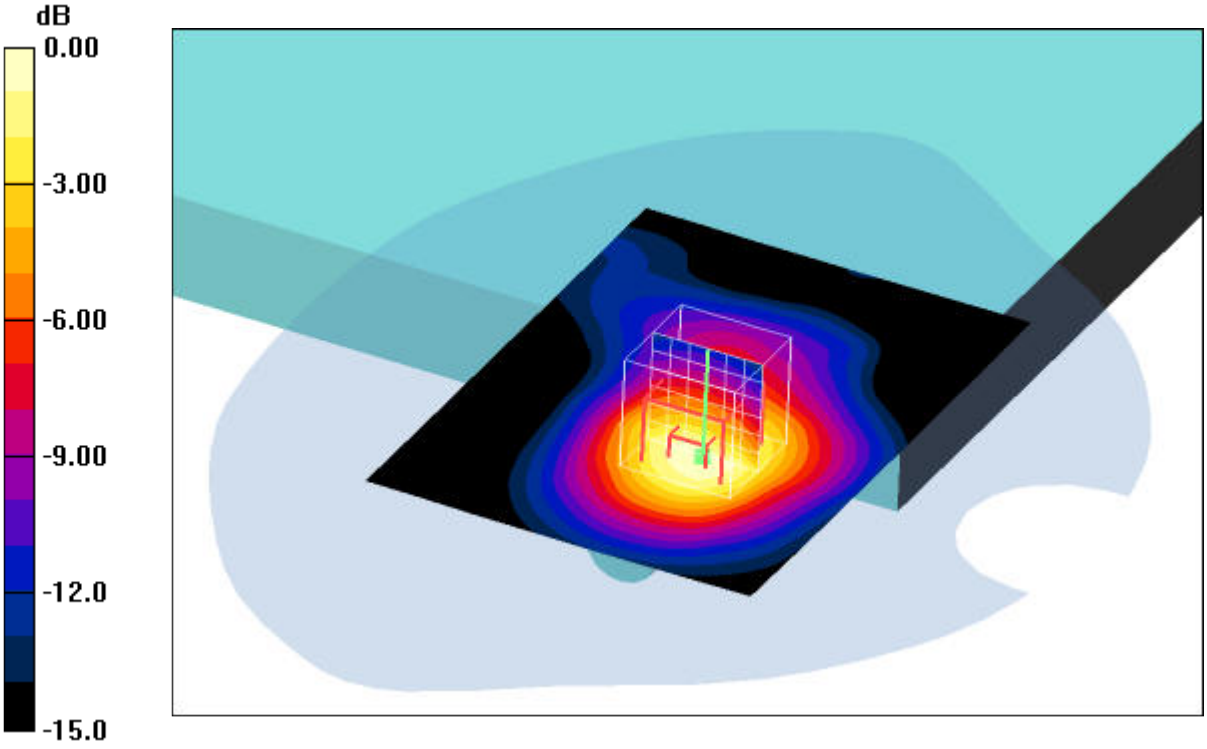
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: PCS 1900 GPRS 1 timeslot; Frequency: 1880 MHz;Duty Cycle: 1:8
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left side position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.884 mW/g

Left side position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.0 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.794 mW/g; SAR(10 g) = 0.468 mW/g
Maximum value of SAR (measured) = 0.868 mW/g



0 dB = 0.868mW/g

Additional information:
position or distance of DUT to SAM : 5 mm
ambient temperature: 22.7°C; liquid temperature: 22.0°C

Date/Time: 2008-09-03 13:43:25Date/Time: 2008-09-03 13:52:32

P1528_OET65-Body-PCS1900_EGPRS 2 timeslots

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3

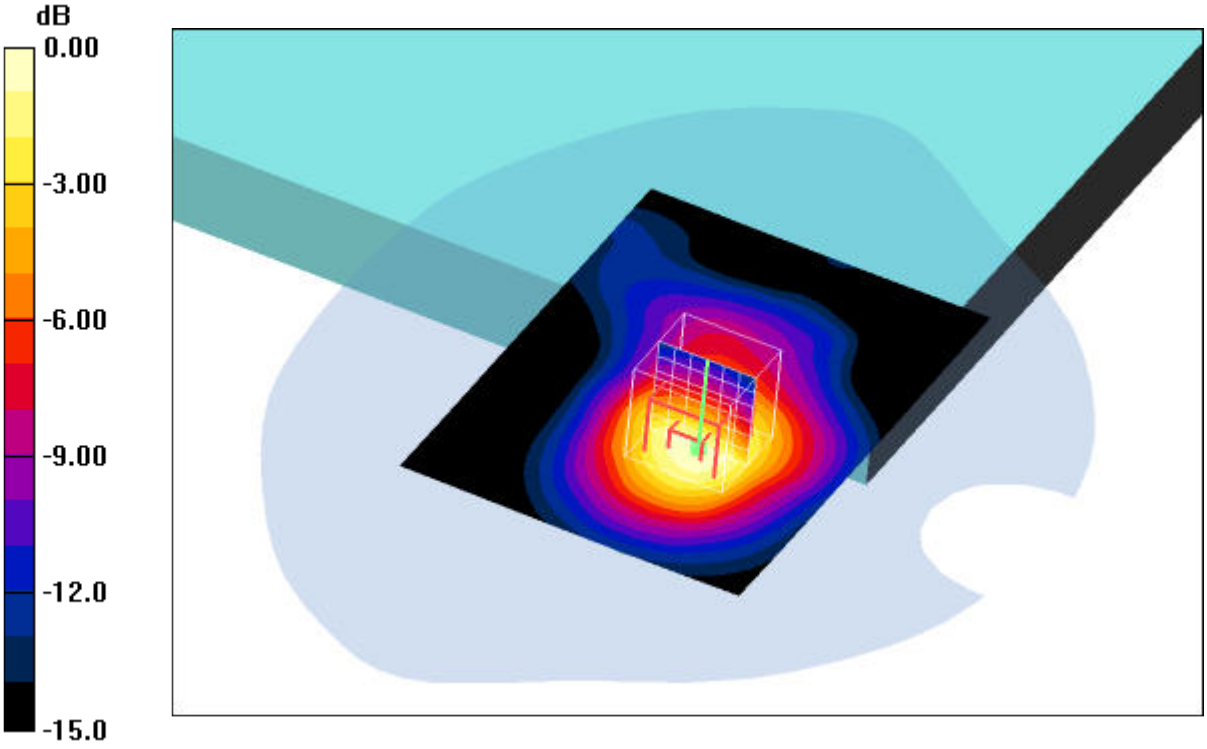
Communication System: PCS 1900 EGPRS 2 timeslots; Frequency: 1880 MHz;Duty Cycle: 1:4
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left side position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.729 mW/g

Left side position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.9 V/m; Power Drift = -0.023 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.669 mW/g; SAR(10 g) = 0.391 mW/g
Maximum value of SAR (measured) = 0.723 mW/g



0 dB = 0.723mW/g

Additional information:
position or distance of DUT to SAM : 5 mm
ambient temperature: 22.7°C; liquid temperature: 21.9°C

Annex 2.3 FDD V 850 MHz body

Date/Time: 2008-09-04 17:06:20Date/Time: 2008-09-04 17:16:09

P1528_OET65-Body-FDD V

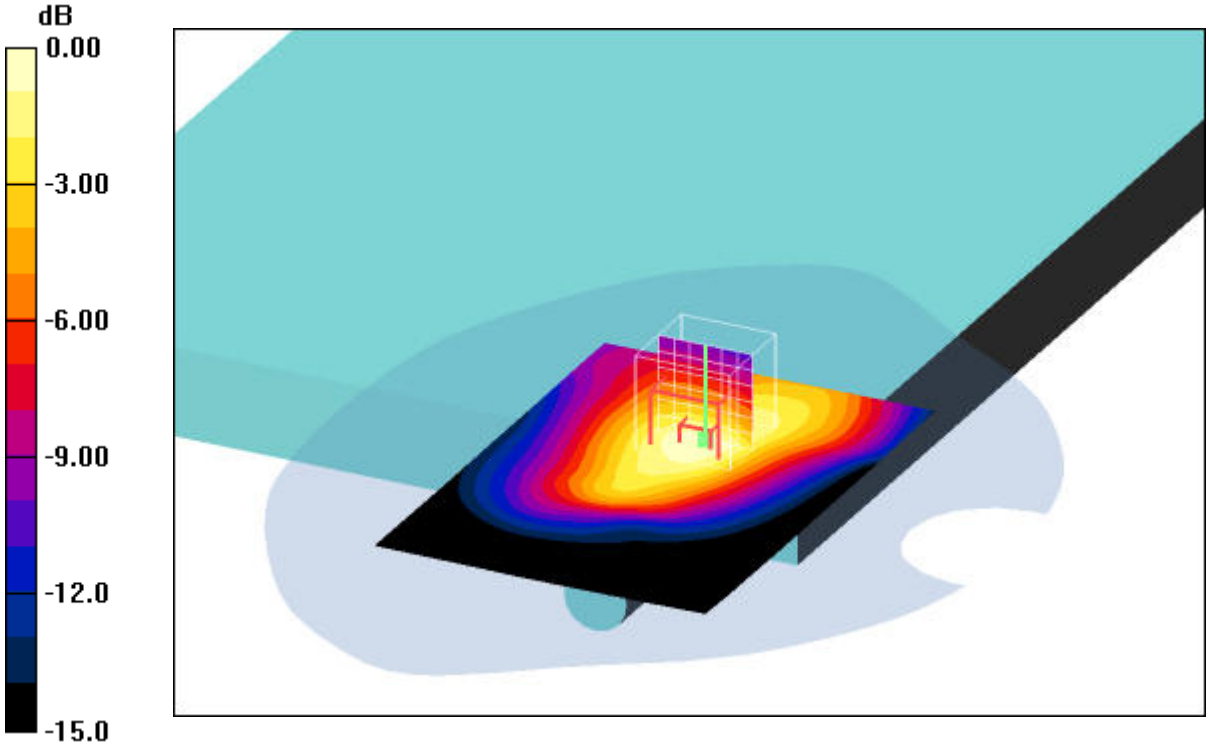
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: UMTS band V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: M850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Underside position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.734 mW/g

Underside position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 26.6 V/m; Power Drift = -0.036 dB
Peak SAR (extrapolated) = 1.10 W/kg
SAR(1 g) = 0.667 mW/g; SAR(10 g) = 0.415 mW/g
Maximum value of SAR (measured) = 0.726 mW/g



0 dB = 0.726mW/g

Additional information:
position or distance of DUT to SAM : 3 mm
ambient temperature: 23.0°C; liquid temperature: 22.1°C

Date/Time: 2008-09-04 20:30:59Date/Time: 2008-09-04 20:39:30

P1528_OET65-Body-FDD V

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: UMTS band V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: M850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

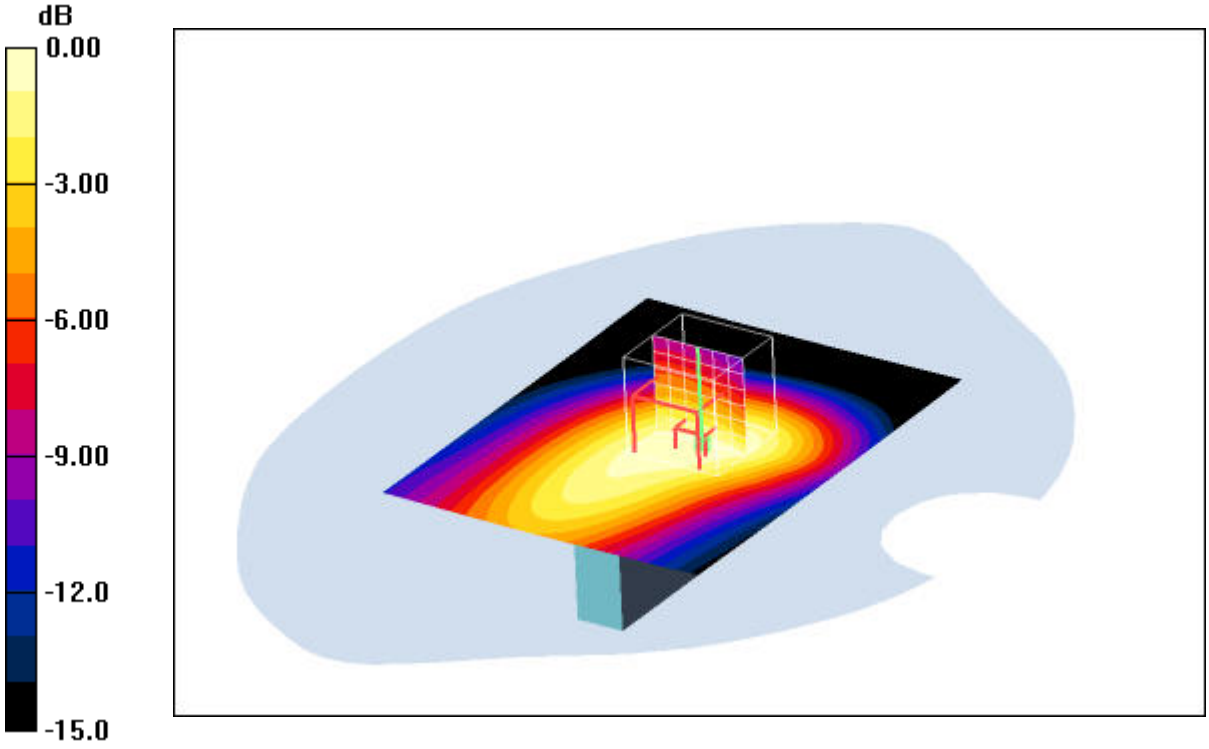
Right side position - Middle USB-cable/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.357 mW/g

Right side position - Middle USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.0 V/m; Power Drift = -0.077 dB
Peak SAR (extrapolated) = 0.487 W/kg
SAR(1 g) = 0.323 mW/g; SAR(10 g) = 0.214 mW/g

Maximum value of SAR (measured) = 0.349 mW/g



0 dB = 0.349mW/g

Additional information:
position or distance of DUT to SAM : 11 mm
ambient temperature: 22.8°C; liquid temperature: 22.1°C

Date/Time: 2008-09-04 19:35:02Date/Time: 2008-09-04 20:14:16

P1528_OET65-Body-FDD V

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: UMTS band V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: M850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

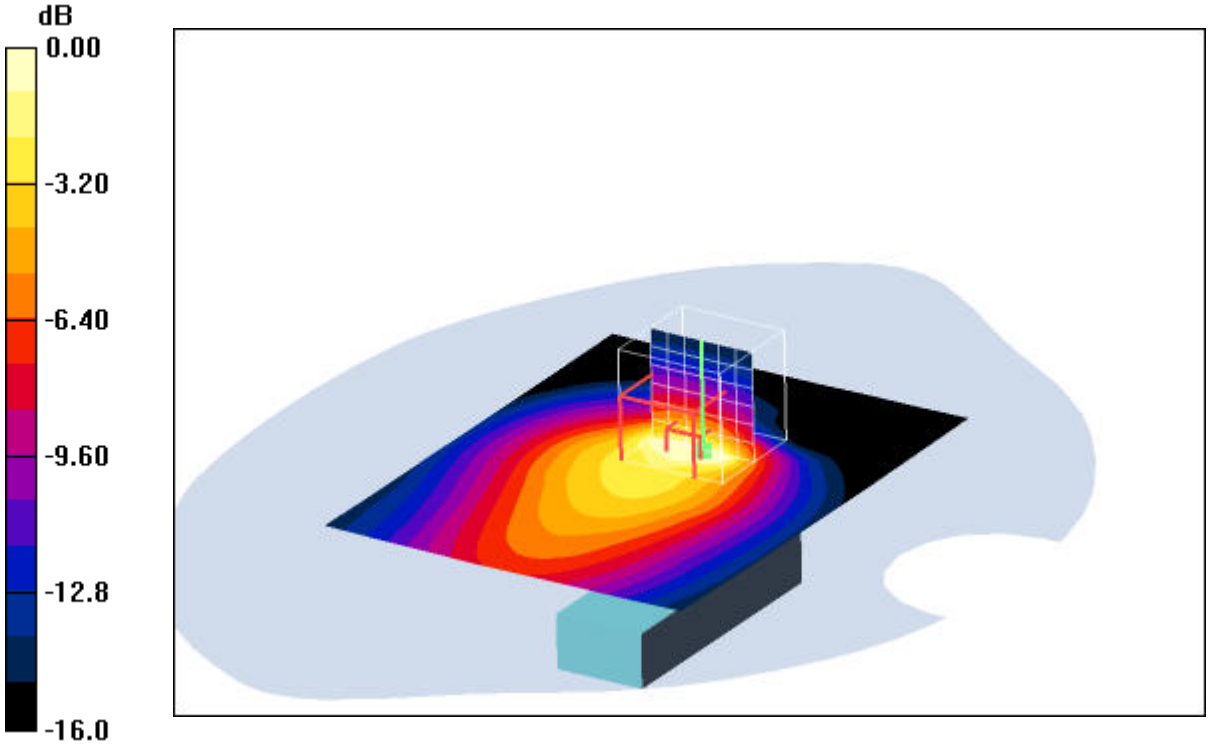
Top side position - Middle USB-cable/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.17 mW/g

Top side position - Middle USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.6 V/m; Power Drift = -0.125 dB
Peak SAR (extrapolated) = 2.43 W/kg
SAR(1 g) = 0.638 mW/g; SAR(10 g) = 0.274 mW/g

Maximum value of SAR (measured) = 0.701 mW/g



0 dB = 0.701mW/g

Additional information:
position or distance of DUT to SAM : 0 mm
ambient temperature: 22.8°C; liquid temperature: 22.1°C

Date/Time: 2008-09-04 22:21:11Date/Time: 2008-09-04 22:30:44Date/Time: 2008-09-04 22:42:17

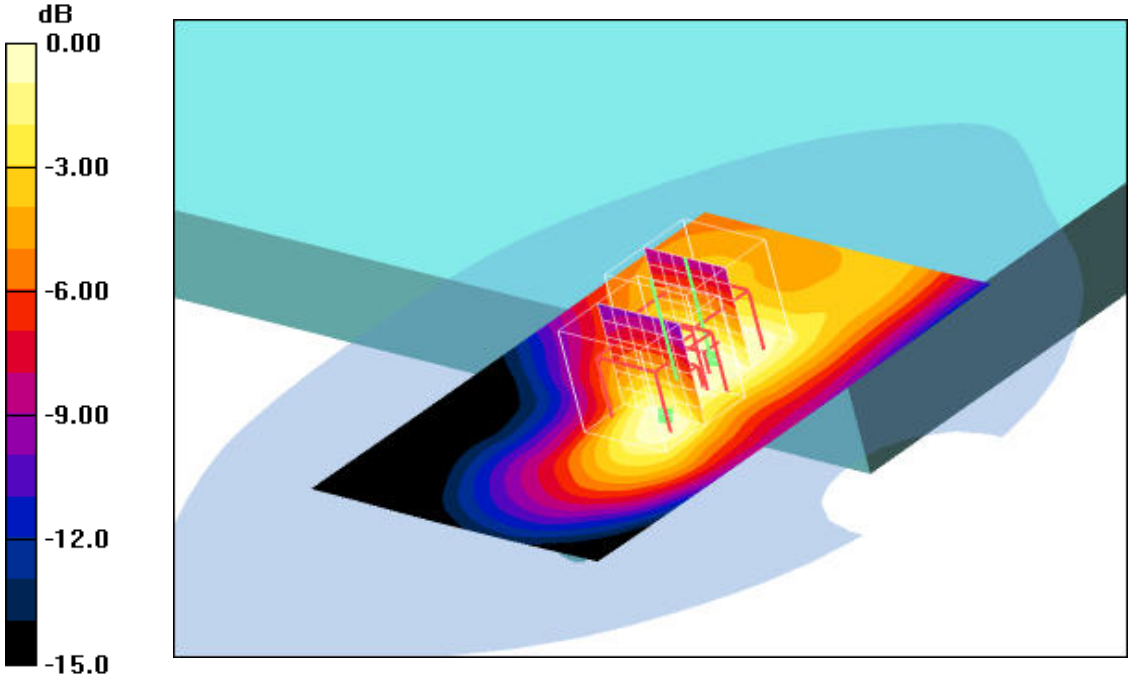
P1528_OET65-Body-FDD V

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: UMTS band V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: M850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left side position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.364 mW/g

Left side position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.4 V/m; Power Drift = -0.119 dB
Peak SAR (extrapolated) = 0.491 W/kg
SAR(1 g) = 0.319 mW/g; SAR(10 g) = 0.204 mW/g
Maximum value of SAR (measured) = 0.349 mW/g

Left side position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.4 V/m; Power Drift = -0.119 dB
Peak SAR (extrapolated) = 0.472 W/kg
SAR(1 g) = 0.273 mW/g; SAR(10 g) = 0.176 mW/g
Maximum value of SAR (measured) = 0.302 mW/g



0 dB = 0.302mW/g

Additional information:
position or distance of DUT to SAM : 5 mm
ambient temperature: 22.7°C; liquid temperature: 22.0°C

Date/Time: 2008-09-05 10:15:09Date/Time: 2008-09-05 10:23:52

P1528_OET65-Body-FDD V

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: UMTS band V; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: M850 Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.98 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(5.96, 5.96, 5.96); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

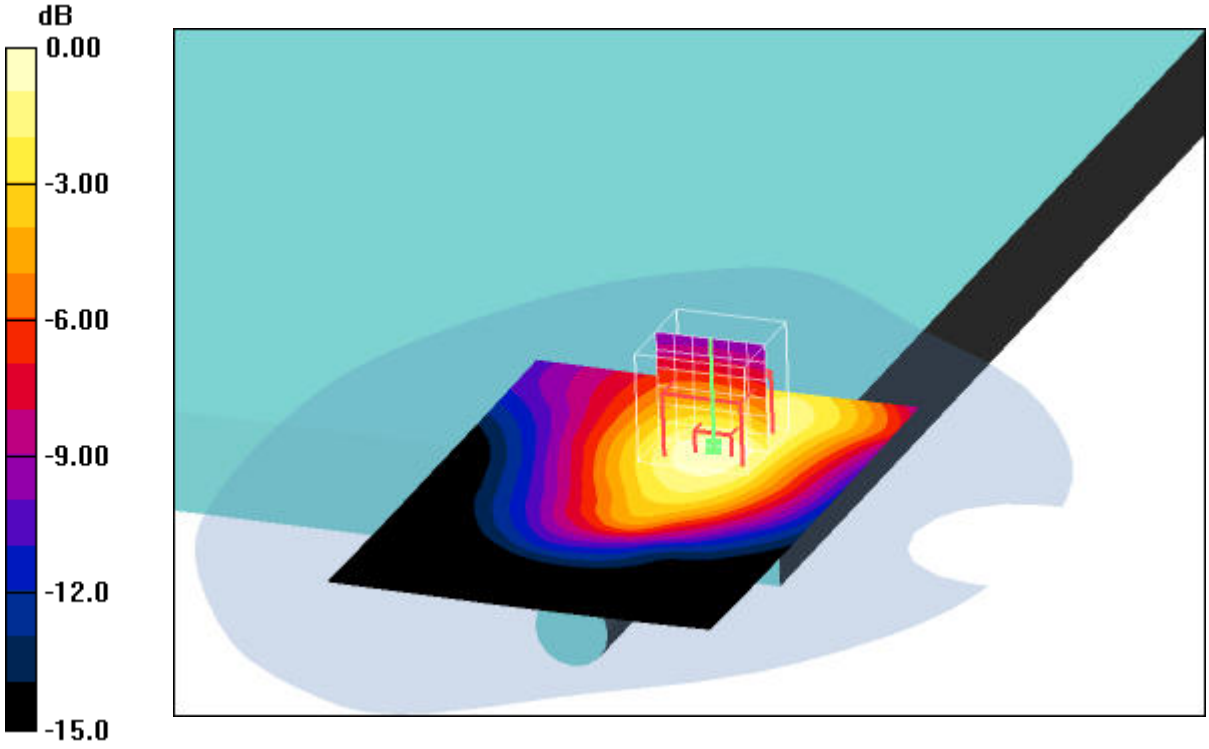
Underside position - Middle with flash card/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.583 mW/g

Underside position - Middle with flash card/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.5 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.863 W/kg
SAR(1 g) = 0.547 mW/g; SAR(10 g) = 0.349 mW/g

Maximum value of SAR (measured) = 0.585 mW/g



0 dB = 0.585mW/g

Additional information:
position or distance of DUT to SAM : 3 mm
ambient temperature: 23.0°C; liquid temperature: 22.1°C

Annex 2.4 FDD II 1900 MHz body

Date/Time: 2008-09-04 12:21:56Date/Time: 2008-09-04 12:31:25

P1528_OET65-Body-FDD II

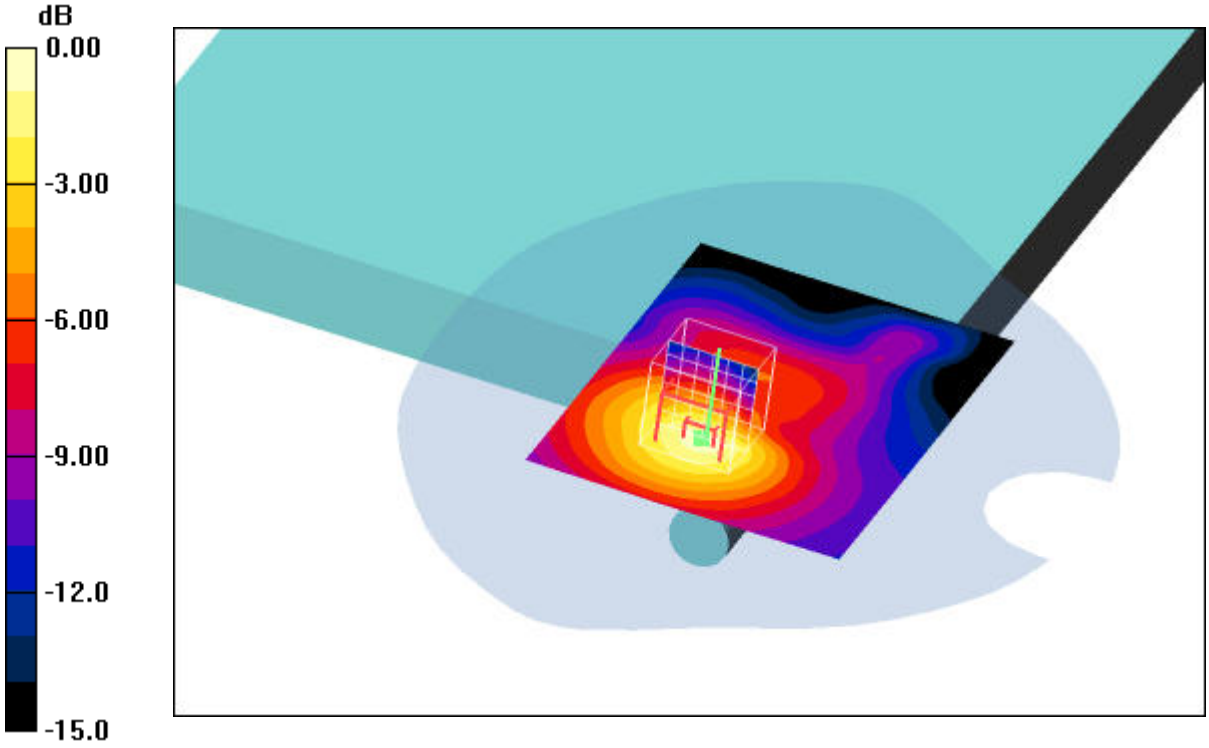
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Underside position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.679 mW/g

Underside position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.3 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.656 mW/g; SAR(10 g) = 0.388 mW/g
Maximum value of SAR (measured) = 0.717 mW/g



0 dB = 0.717mW/g

Additional information:
position or distance of DUT to SAM : 3 mm
ambient temperature: 22.4°C; liquid temperature: 21.7°C

Date/Time: 2008-09-04 12:46:57Date/Time: 2008-09-04 12:56:31

P1528_OET65-Body-FDD II

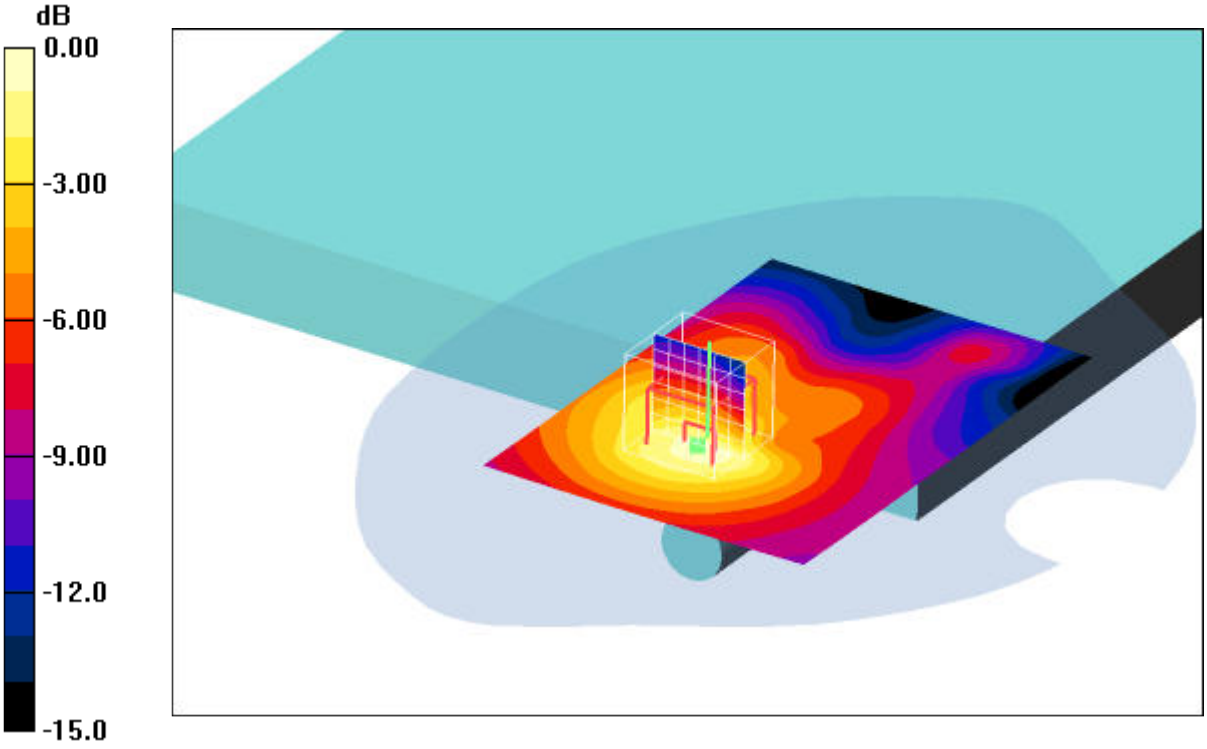
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Underside position - Middle 2/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.457 mW/g

Underside position - Middle 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.9 V/m; Power Drift = -0.010 dB
Peak SAR (extrapolated) = 0.745 W/kg
SAR(1 g) = 0.433 mW/g; SAR(10 g) = 0.262 mW/g
Maximum value of SAR (measured) = 0.469 mW/g



0 dB = 0.469mW/g

Additional information:
position or distance of DUT to SAM : 3 mm
ambient temperature: 22.4°C; liquid temperature: 21.7°C

Date/Time: 2008-09-03 19:01:21Date/Time: 2008-09-03 19:10:51

P1528_OET65-Body-FDD II

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1852.5 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used (interpolated): f = 1852.5 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

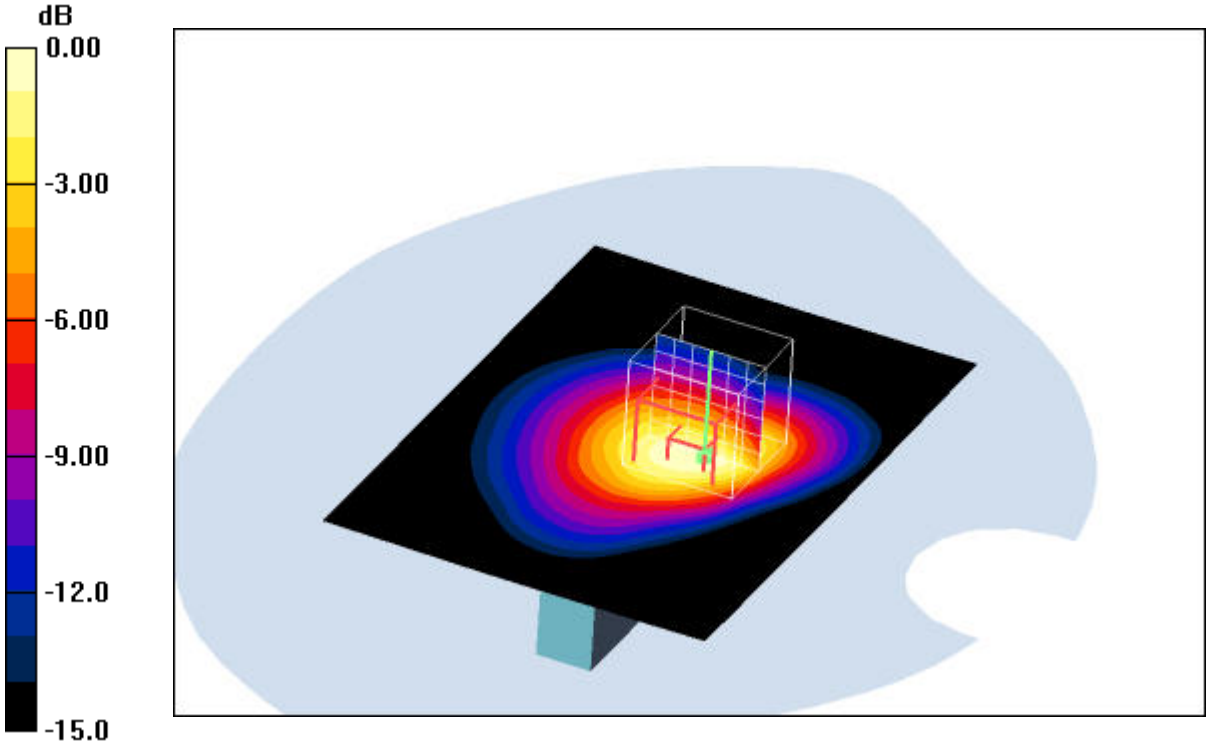
Right side position - Low USB-cable/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.979 mW/g

Right side position - Low USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 26.3 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 1.71 W/kg
SAR(1 g) = 0.916 mW/g; SAR(10 g) = 0.507 mW/g

Maximum value of SAR (measured) = 1.00 mW/g



0 dB = 1.00mW/g

Additional information:
position or distance of DUT to SAM : 11 mm
ambient temperature: 22.4°C; liquid temperature: 21.7°C

Date/Time: 2008-09-03 18:31:27Date/Time: 2008-09-03 18:46:44

P1528_OET65-Body-FDD II

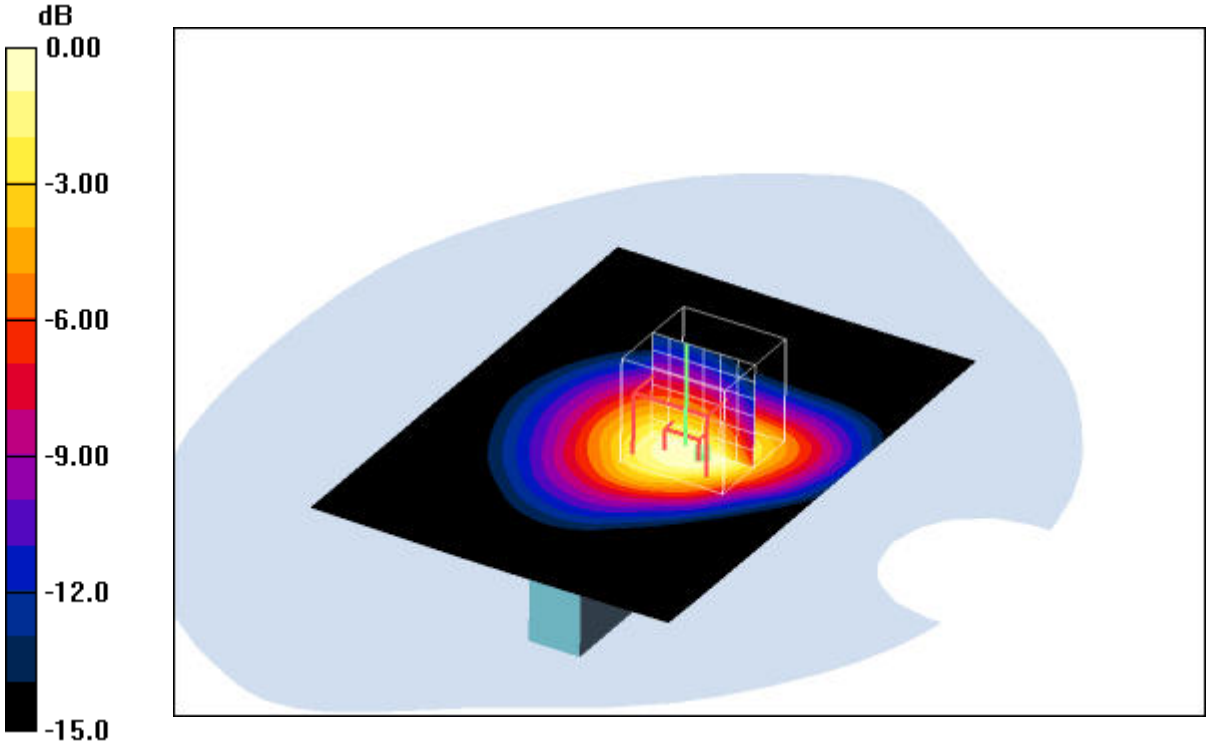
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Right side position - Middle USB-cable/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.47 mW/g

Right side position - Middle USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 30.8 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 2.42 W/kg
SAR(1 g) = 1.29 mW/g; SAR(10 g) = 0.698 mW/g
Maximum value of SAR (measured) = 1.42 mW/g



0 dB = 1.42mW/g

Additional information:
position or distance of DUT to SAM : 11 mm
ambient temperature: 22.4°C; liquid temperature: 21.7°C

Date/Time: 2008-09-03 19:27:51Date/Time: 2008-09-03 19:37:08

P1528_OET65-Body-FDD II

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

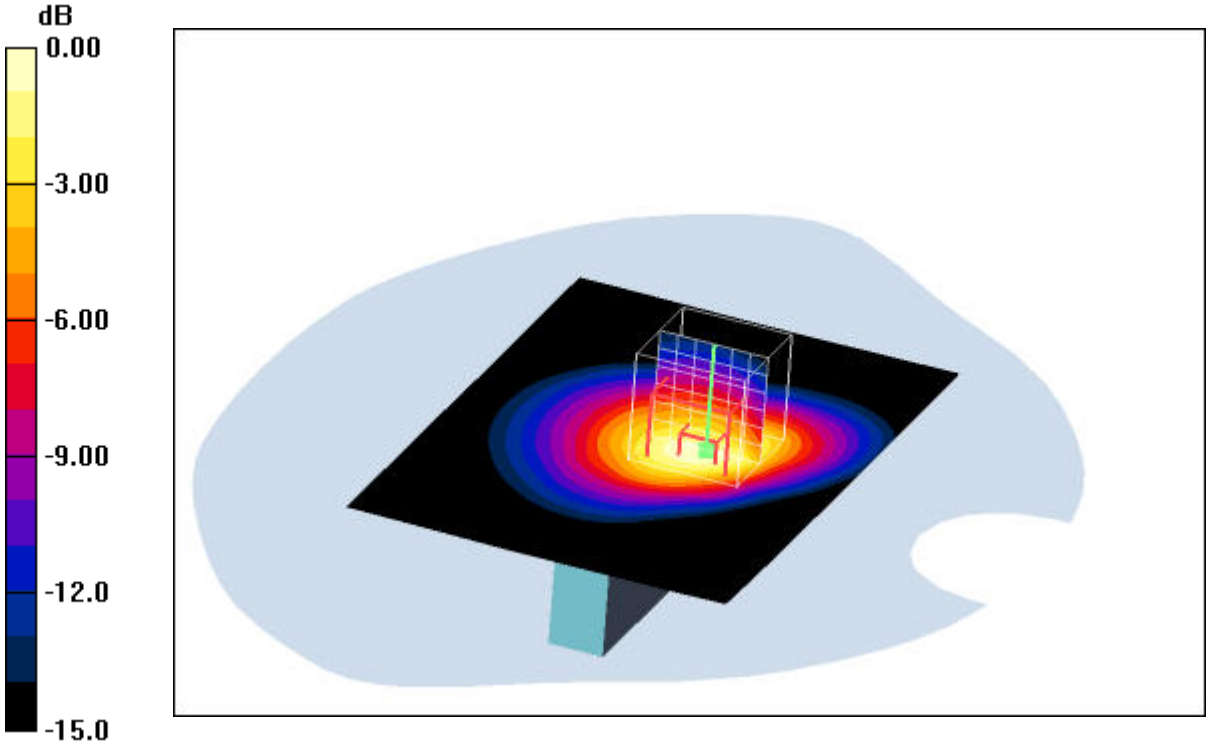
Right side position - High USB-cable/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.23 mW/g

Right side position - High USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 28.8 V/m; Power Drift = -0.031 dB
Peak SAR (extrapolated) = 2.20 W/kg
SAR(1 g) = 1.15 mW/g; SAR(10 g) = 0.616 mW/g

Maximum value of SAR (measured) = 1.27 mW/g



0 dB = 1.27mW/g

Additional information:
position or distance of DUT to SAM : 11 mm
ambient temperature: 22.4°C; liquid temperature: 21.7°C

Date/Time: 2008-09-03 21:14:47Date/Time: 2008-09-03 21:23:37

P1528_OET65-Body-FDD II

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1852.5 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used (interpolated): f = 1852.5 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

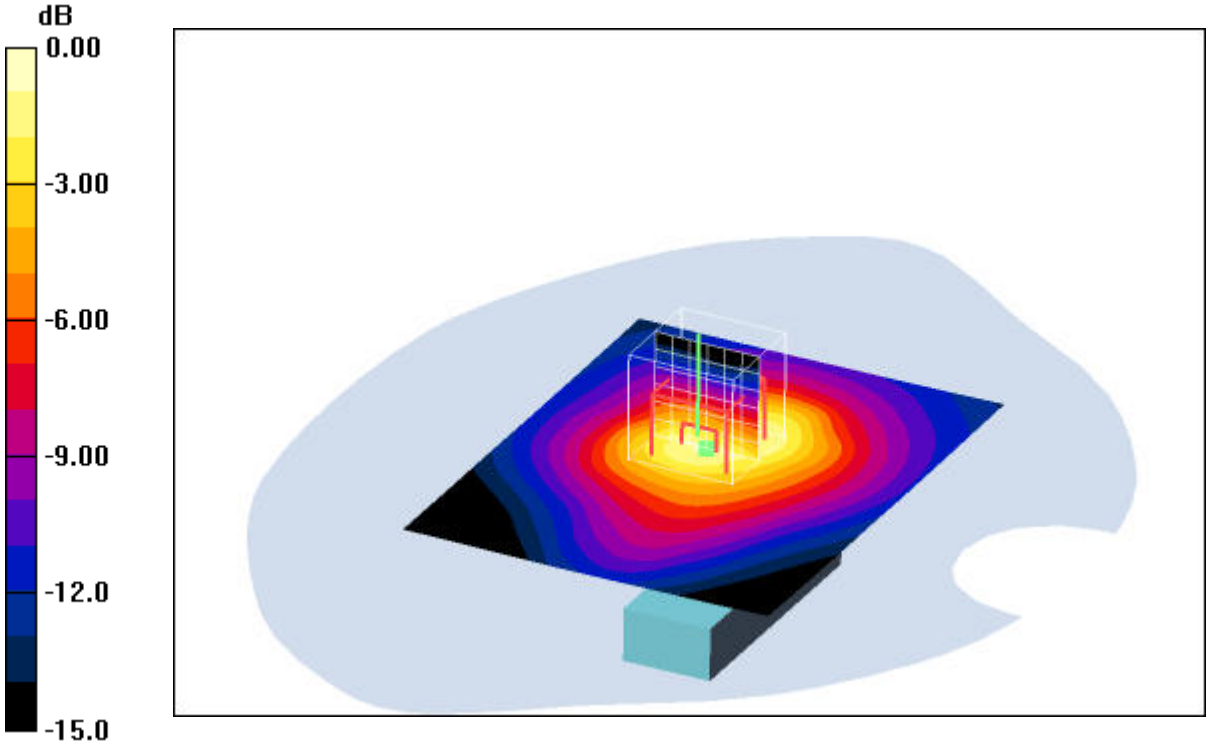
Top side position - Low USB-cable/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.730 mW/g

Top side position - Low USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.2 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.77 W/kg
SAR(1 g) = 0.817 mW/g; SAR(10 g) = 0.402 mW/g

Maximum value of SAR (measured) = 0.883 mW/g



0 dB = 0.883mW/g

Additional information:
position or distance of DUT to SAM : 0 mm
ambient temperature: 22.2°C; liquid temperature: 21.6°C

Date/Time: 2008-09-03 21:37:32Date/Time: 2008-09-03 21:46:35

P1528_OET65-Body-FDD II

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

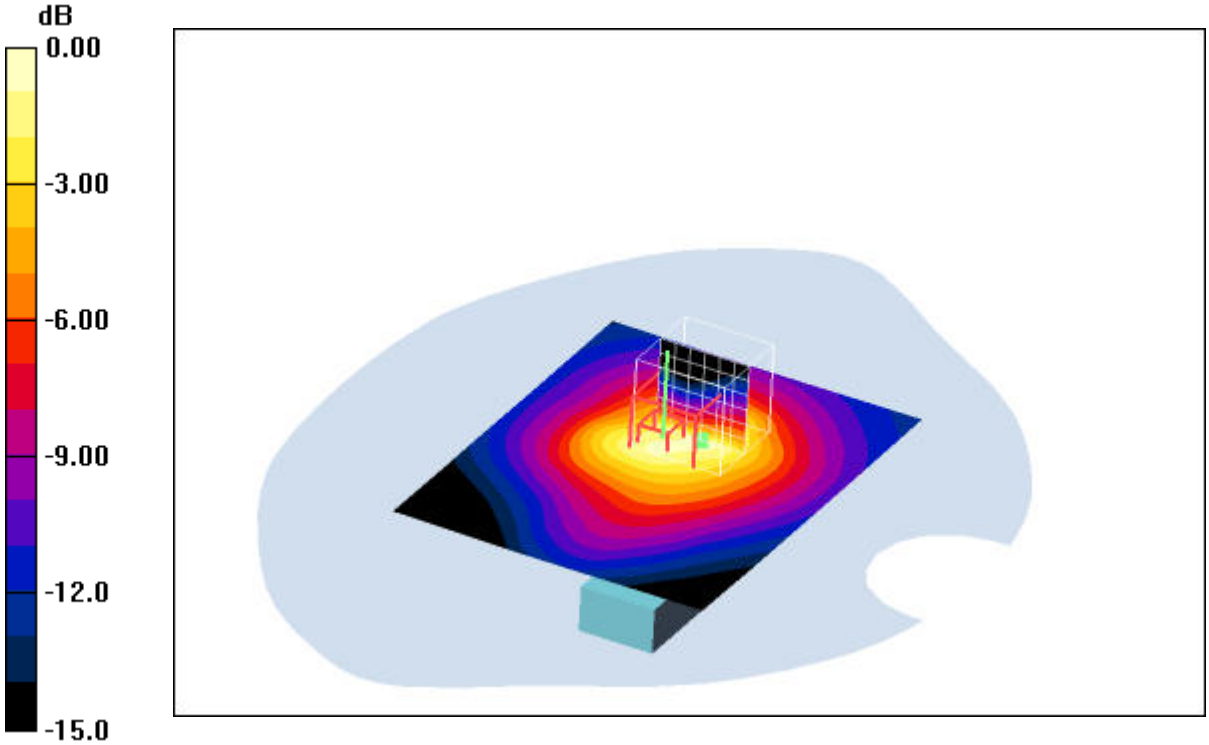
Top side position - Middle USB-cable/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.739 mW/g

Top side position - Middle USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.1 V/m; Power Drift = -0.020 dB
Peak SAR (extrapolated) = 2.57 W/kg
SAR(1 g) = 0.780 mW/g; SAR(10 g) = 0.378 mW/g

Maximum value of SAR (measured) = 0.854 mW/g



0 dB = 0.854mW/g

Additional information:
position or distance of DUT to SAM (if not standard head positions) : 0 mm
ambient temperature: 22.2°C; liquid temperature: 21.6°C

Date/Time: 2008-09-03 22:03:18Date/Time: 2008-09-03 22:12:20

P1528_OET65-Body-FDD II

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

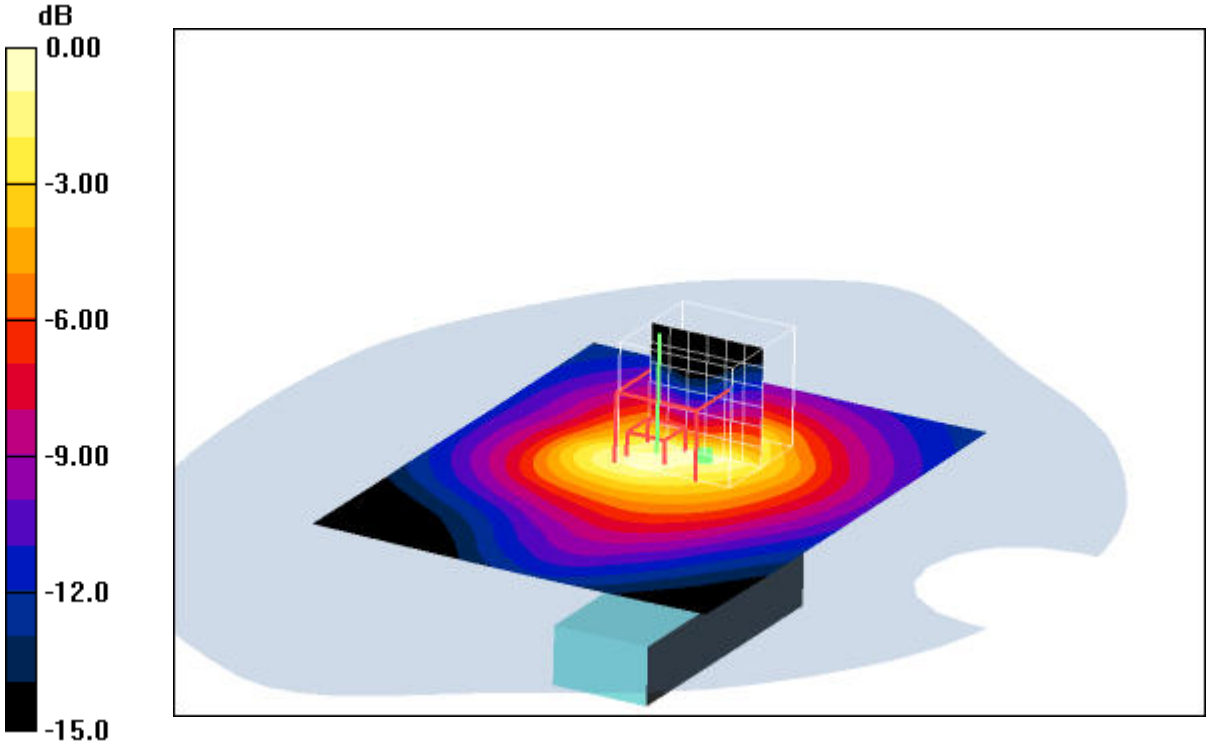
Top side position - High USB-cable/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.728 mW/g

Top side position - High USB-cable/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 21.8 V/m; Power Drift = -0.011 dB
Peak SAR (extrapolated) = 2.33 W/kg
SAR(1 g) = 0.754 mW/g; SAR(10 g) = 0.365 mW/g

Maximum value of SAR (measured) = 0.824 mW/g



0 dB = 0.824mW/g

Additional information:
position or distance of DUT to SAM (if not standard head positions) : 0 mm
ambient temperature: 22.2°C; liquid temperature: 21.6°C

Date/Time: 2008-09-03 15:43:06Date/Time: 2008-09-03 15:52:03

P1528_OET65-Body-FDD II

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1852.5 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used (interpolated): f = 1852.5 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

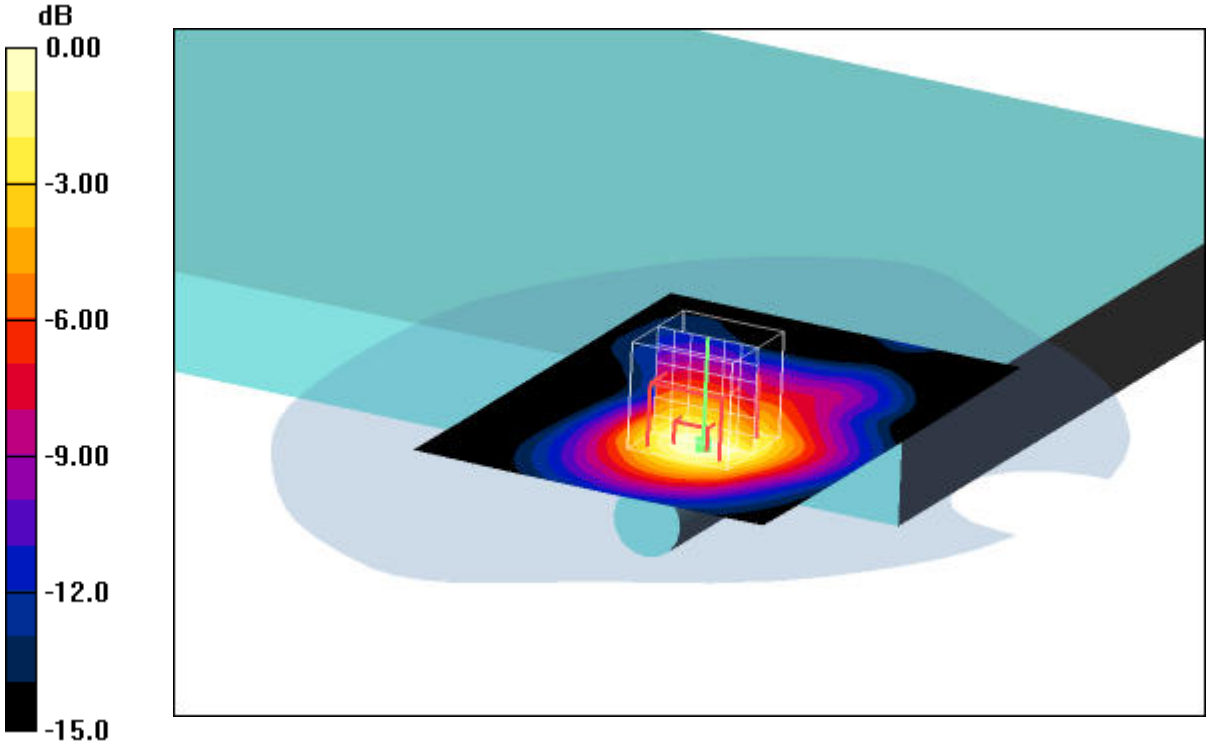
Left side position - Low/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.26 mW/g

Left side position - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 28.8 V/m; Power Drift = -0.017 dB
Peak SAR (extrapolated) = 1.99 W/kg
SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.655 mW/g

Maximum value of SAR (measured) = 1.22 mW/g



0 dB = 1.22mW/g

Additional information:
position or distance of DUT to SAM : 5 mm
ambient temperature: 22.6°C; liquid temperature: 21.7°C

Date/Time: 2008-09-03 15:20:22Date/Time: 2008-09-03 15:29:17

P1528_OET65-Body-FDD II

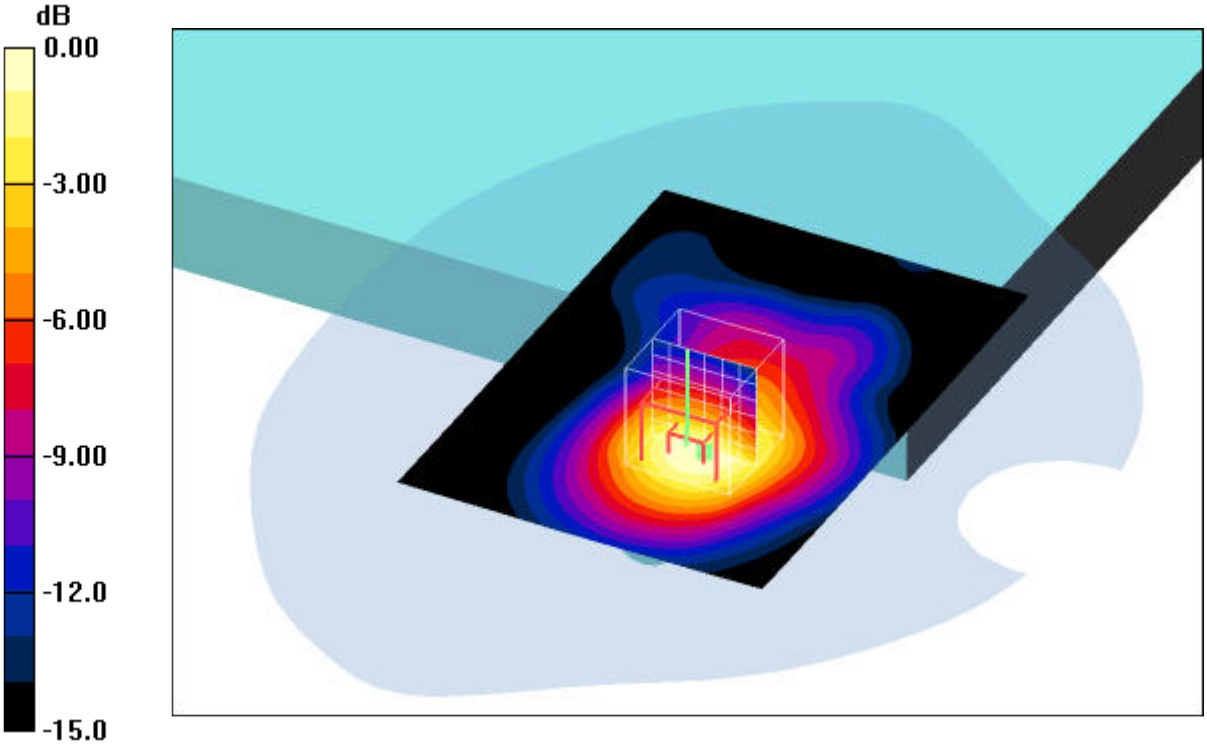
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left side position - Middle/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.49 mW/g

Left side position - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 31.4 V/m; Power Drift = -0.014 dB
Peak SAR (extrapolated) = 2.36 W/kg
SAR(1 g) = 1.32 mW/g; SAR(10 g) = 0.766 mW/g
Maximum value of SAR (measured) = 1.43 mW/g



0 dB = 1.43mW/g

Additional information:
position or distance of DUT to SAM : 5 mm
ambient temperature: 22.6°C; liquid temperature: 21.7°C

Date/Time: 2008-09-03 16:05:42Date/Time: 2008-09-03 16:14:47

P1528_OET65-Body-FDD II

DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

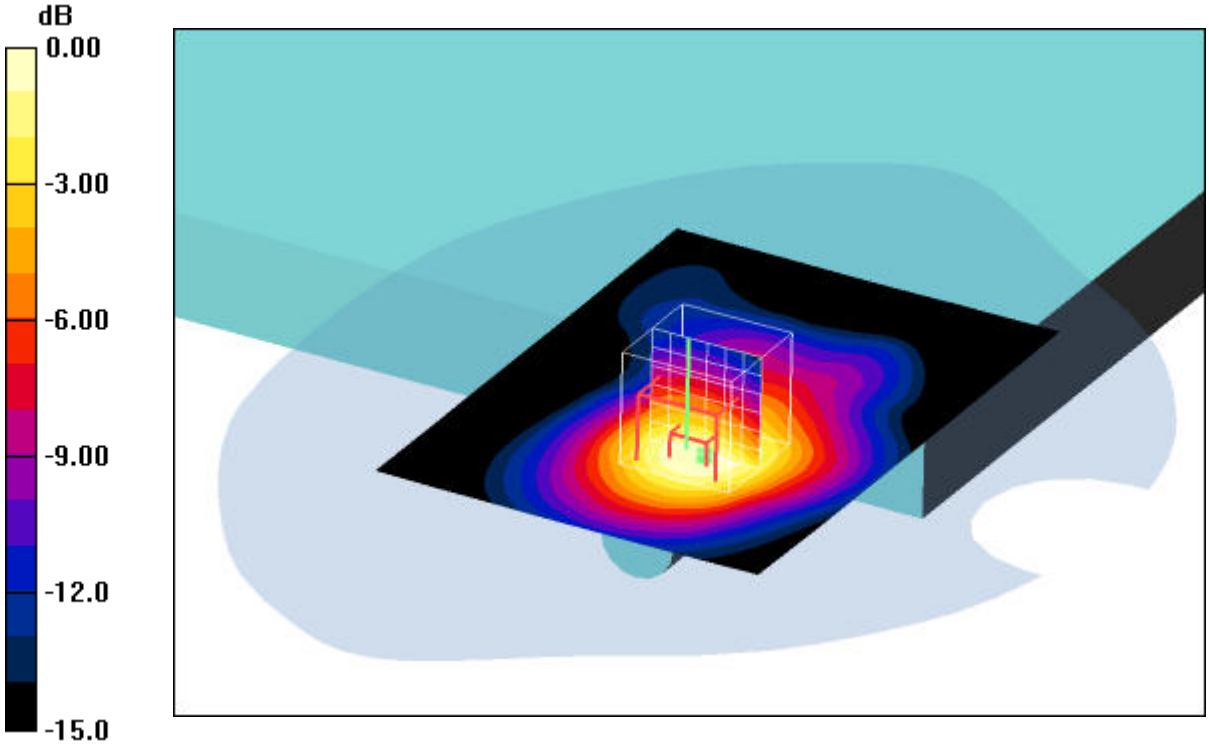
Left side position - High/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.35 mW/g

Left side position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 29.7 V/m; Power Drift = 0.028 dB
Peak SAR (extrapolated) = 2.12 W/kg
SAR(1 g) = 1.19 mW/g; SAR(10 g) = 0.690 mW/g

Maximum value of SAR (measured) = 1.28 mW/g



0 dB = 1.28mW/g

Additional information:
position or distance of DUT to SAM : 5 mm
ambient temperature: 22.6°C; liquid temperature: 21.7°C

Date/Time: 2008-09-04 09:39:12Date/Time: 2008-09-04 09:47:54

P1528_OET65-Body-FDD II

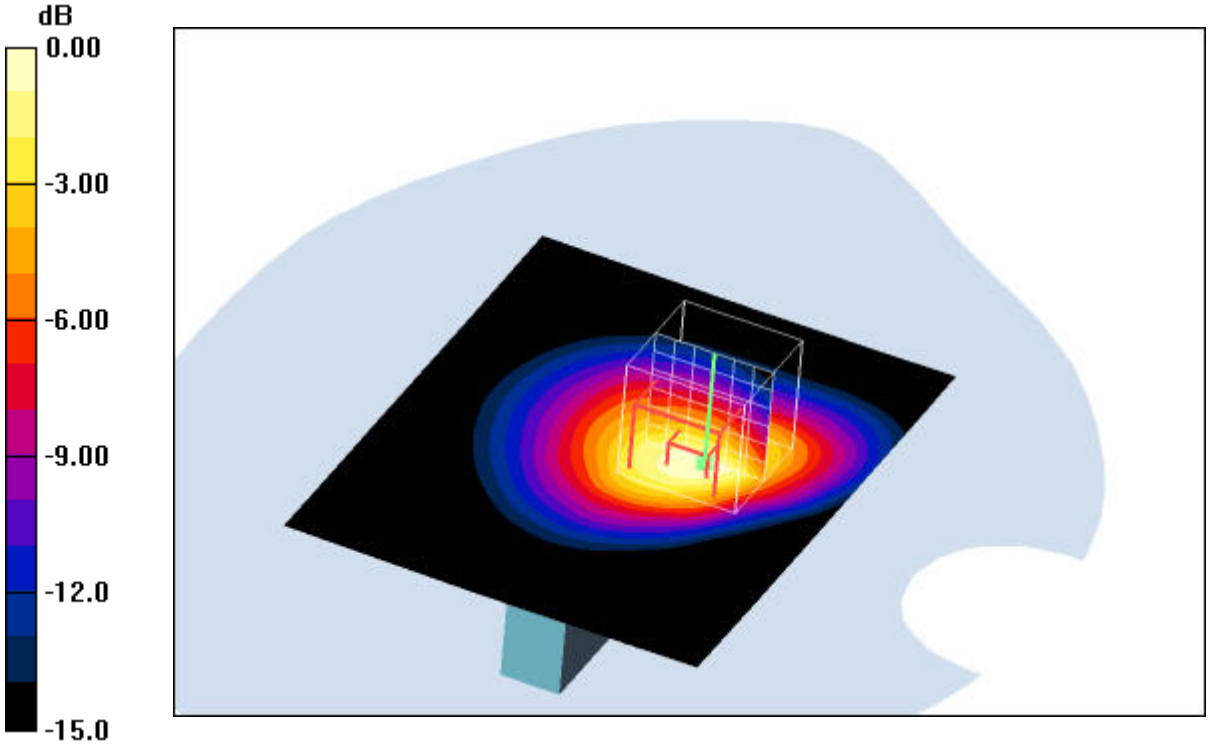
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Right side position - Middle USB-cable HSDPA2/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.51 mW/g

Right side position - Middle USB-cable HSDPA2/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.2 V/m; Power Drift = -0.071 dB
Peak SAR (extrapolated) = 2.50 W/kg
SAR(1 g) = 1.3 mW/g; SAR(10 g) = 0.695 mW/g
Maximum value of SAR (measured) = 1.45 mW/g



0 dB = 1.45mW/g

Additional information:
position or distance of DUT to SAM : 11 mm
ambient temperature: 22.4°C; liquid temperature: 21.7°C

Date/Time: 2008-09-03 17:00:01Date/Time: 2008-09-03 17:09:19

P1528_OET65-Body-FDD II

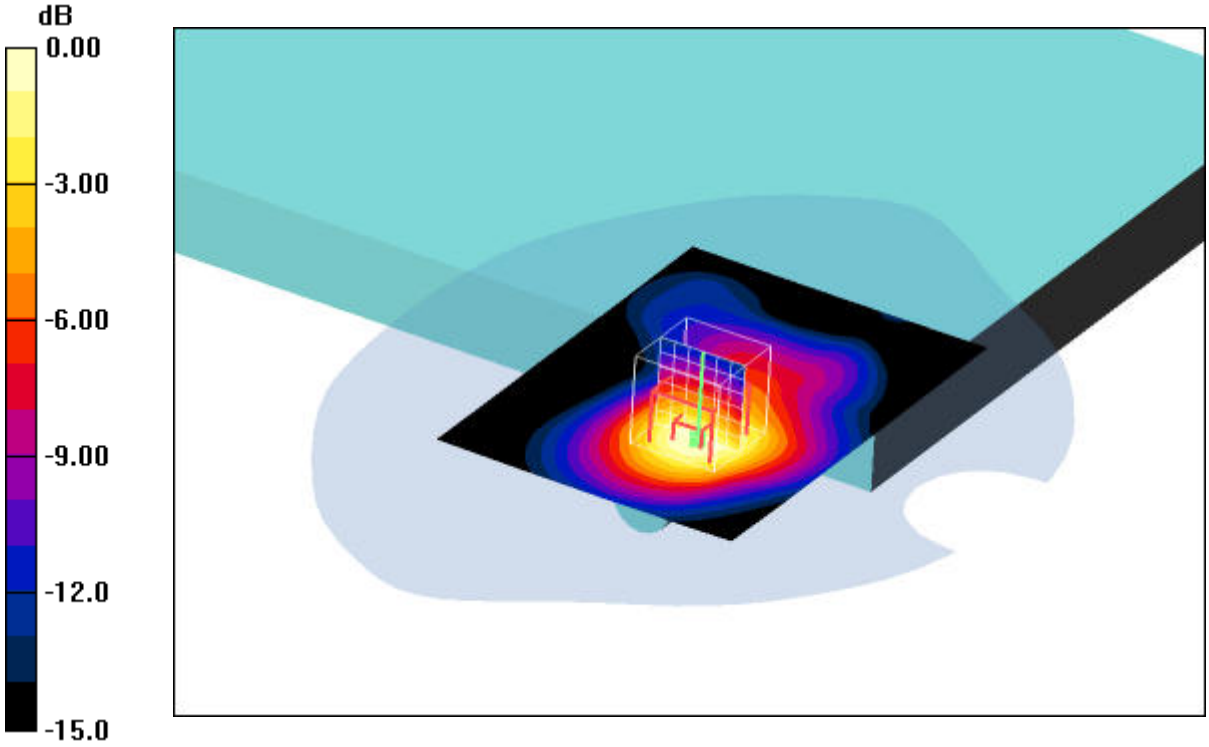
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left side position - Middle HSDPA/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.47 mW/g

Left side position - Middle HSDPA/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.6 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 2.26 W/kg
SAR(1 g) = 1.28 mW/g; SAR(10 g) = 0.746 mW/g
Maximum value of SAR (measured) = 1.40 mW/g



0 dB = 1.40mW/g

Additional information:
position or distance of DUT to SAM : 5 mm
ambient temperature: 22.6°C; liquid temperature: 21.7°C

Date/Time: 2008-09-03 19:57:25Date/Time: 2008-09-03 20:05:54

P1528_OET65-Body-FDD II

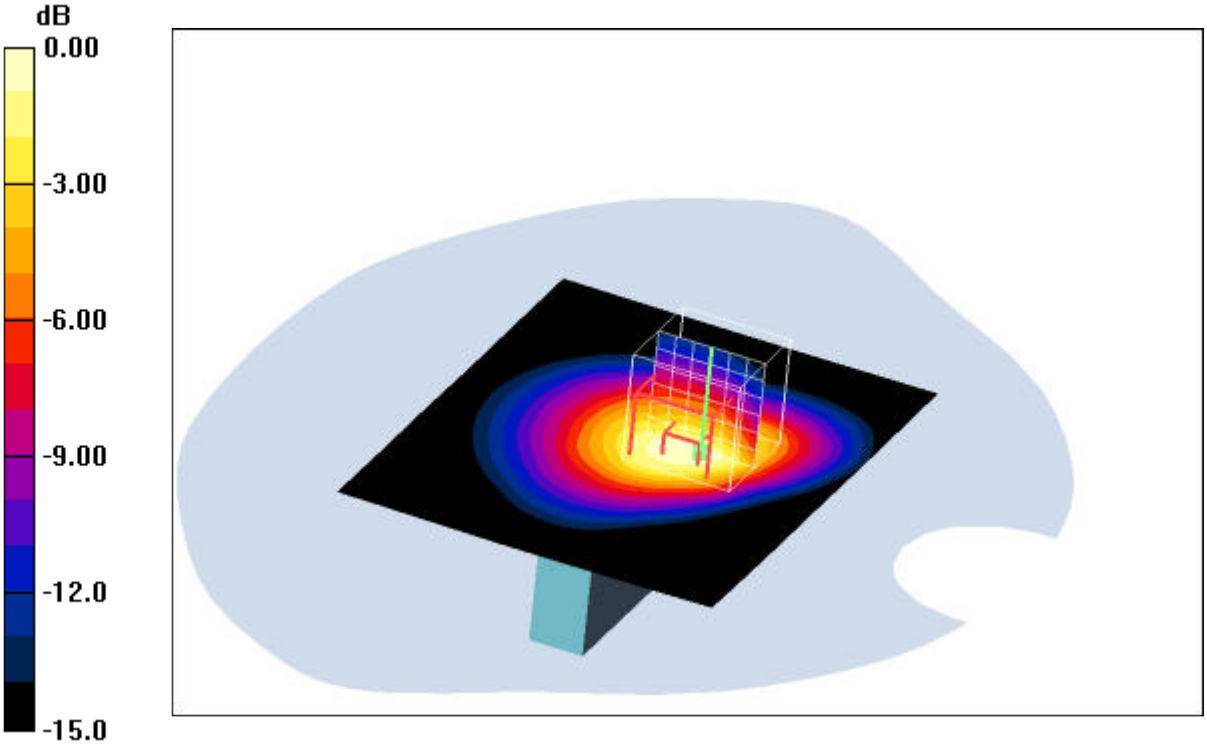
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Right side position - Middle USB-cable HSUPA/Area Scan (71x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.02 mW/g

Right side position - Middle USB-cable HSUPA/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.5 V/m; Power Drift = 0.016 dB
Peak SAR (extrapolated) = 1.81 W/kg
SAR(1 g) = 0.962 mW/g; SAR(10 g) = 0.524 mW/g
Maximum value of SAR (measured) = 1.04 mW/g



0 dB = 1.04mW/g

Additional information:
position or distance of DUT to SAM : 11 mm
ambient temperature: 22.4°C; liquid temperature: 21.7°C

Date/Time: 2008-09-03 17:53:05Date/Time: 2008-09-03 18:02:11

P1528_OET65-Body-FDD II

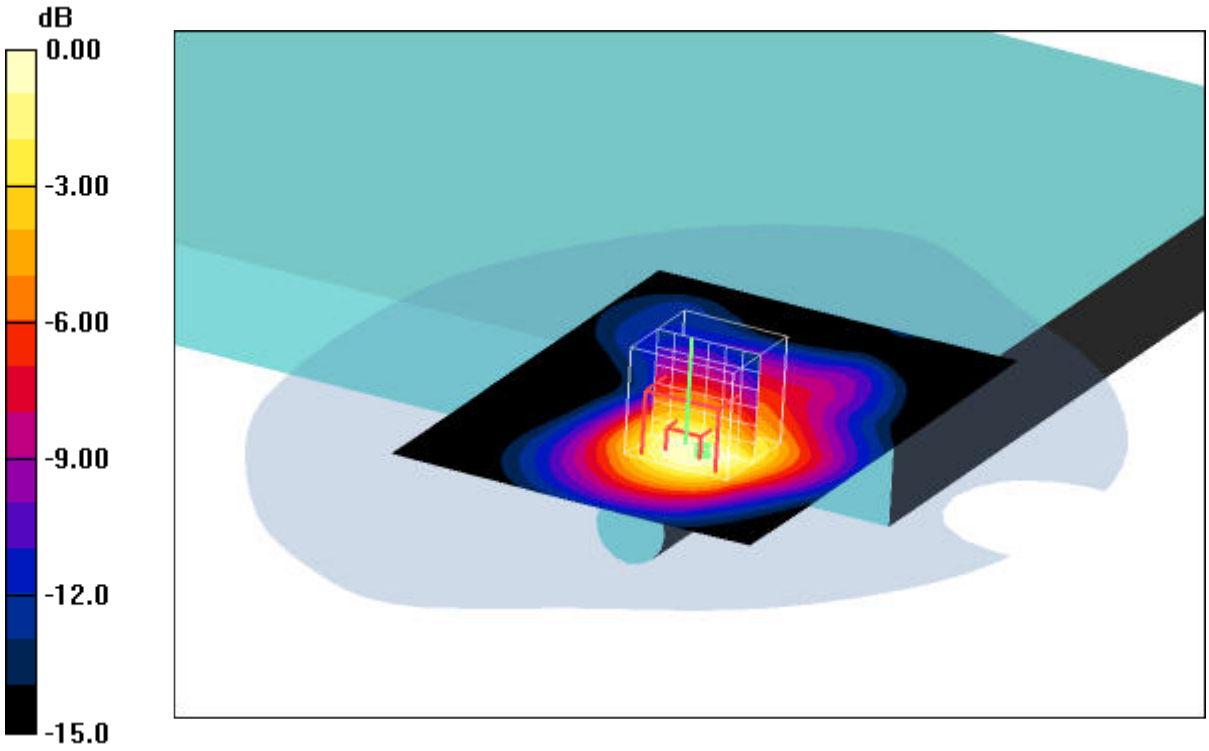
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Left side position - Middle HSUPA/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 1.21 mW/g

Left side position - Middle HSUPA/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid:

dx=5mm, dy=5mm, dz=5mm
Reference Value = 27.6 V/m; Power Drift = 0.029 dB
Peak SAR (extrapolated) = 1.86 W/kg
SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.610 mW/g
Maximum value of SAR (measured) = 1.13 mW/g



0 dB = 1.13mW/g

Additional information:
position or distance of DUT to SAM : 5 mm
ambient temperature: 22.6°C; liquid temperature: 21.7°C

Date/Time: 2008-09-04 10:04:52Date/Time: 2008-09-04 10:13:40

P1528_OET65-Body-FDD II

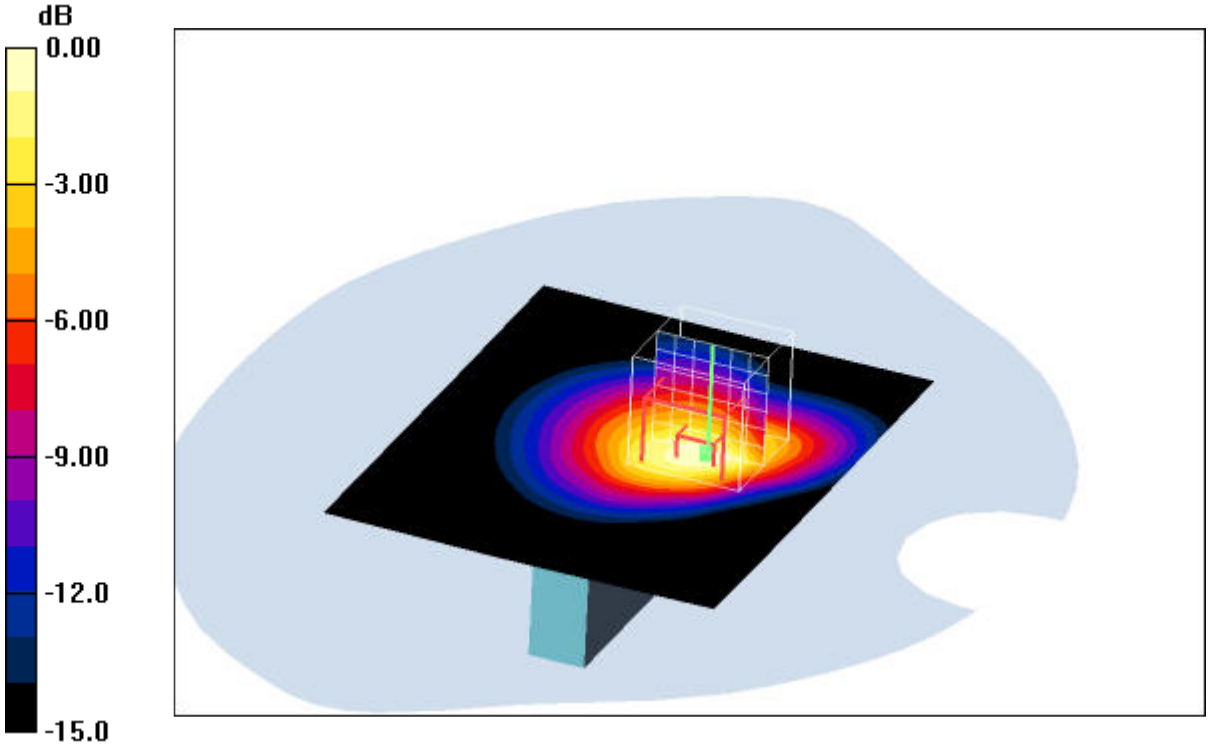
DUT: Sony Ericsson; Type: MD400g; Serial: 00440107457362-3
Communication System: WCDMA US; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: M1900 Medium parameters used: f = 1880 MHz; σ = 1.53 mho/m; ε_r = 52.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1558; ConvF(4.39, 4.39, 4.39); Calibrated: 2008-08-15
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn413; Calibrated: 2008-01-18
- Phantom: SAM 12; Type: SAM; Serial: 1043
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

Right side position - Middle USB-cable HSDPA2 + Flash card/Area Scan (71x91x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.58 mW/g

Right side position - Middle USB-cable HSDPA2 + Flash card/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

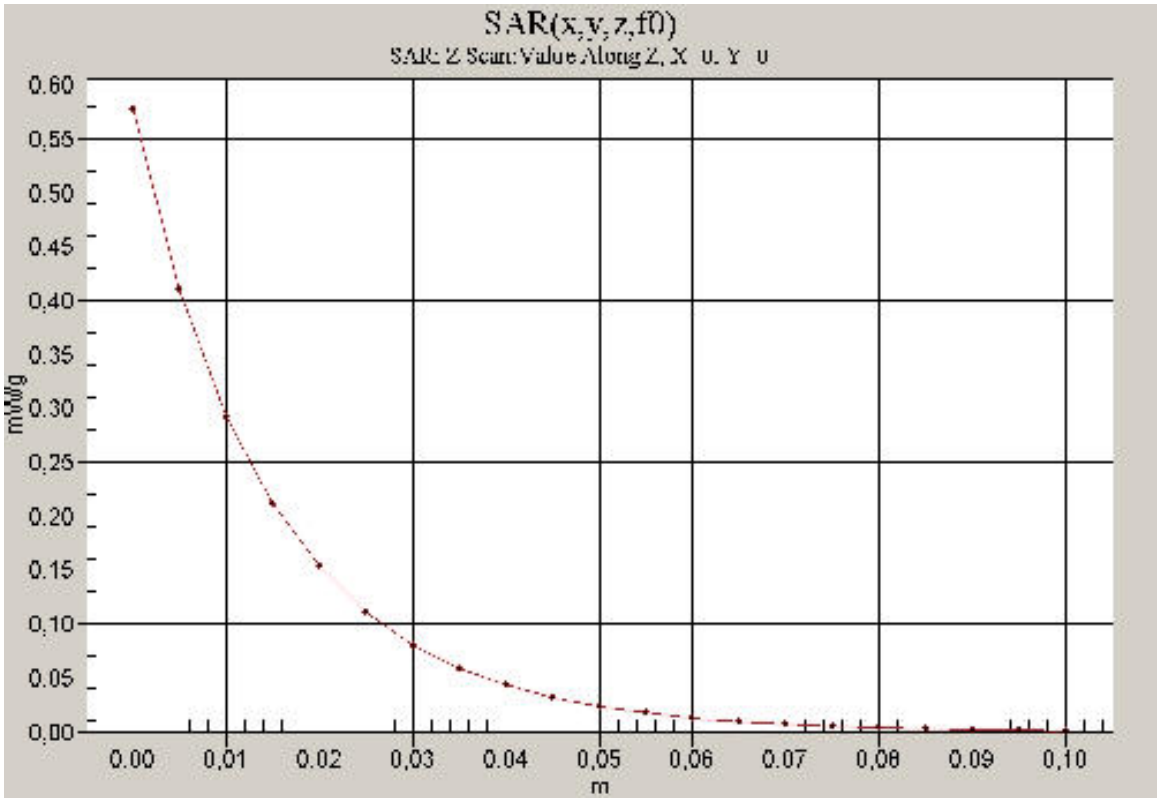
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 31.1 V/m; Power Drift = -0.034 dB
Peak SAR (extrapolated) = 2.66 W/kg
SAR(1 g) = 1.33 mW/g; SAR(10 g) = 0.711 mW/g
Maximum value of SAR (measured) = 1.52 mW/g



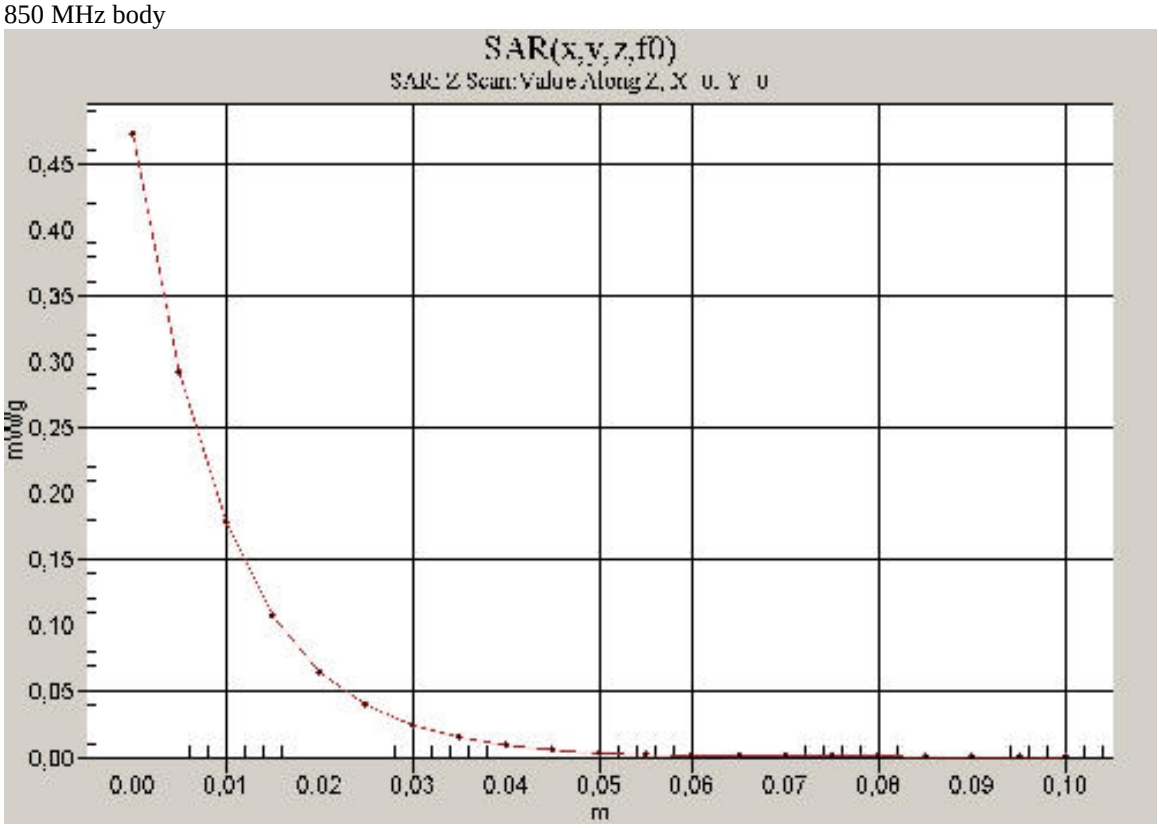
0 dB = 1.52mW/g

Additional information:
position or distance of DUT to SAM : 11 mm
ambient temperature: 22.4°C; liquid temperature: 21.7°C

Annex 2.5 Z-axis scans



850 MHz body



1900 MHz body

Annex 4 RF Technical Brief Cover Sheet acc. to RSS-102

1. COMPANY NUMBER:

2. MODEL NUMBER:

3. MANUFACTURER: Sony Ericsson Mobile Communications AB

4. TYPE OF EVALUATION:

(b) SAR Evaluation: Body-worn Device

- **Multiple transmitters: Yes ☐ No ☒**
- **Evaluated against exposure limits: General Public Use ☒ Controlled Use ☐**
- **Duty cycle used in evaluation: _ %**
- **Standard used for evaluation: RSS-102 Issue 2 (2005-11)**
- **SAR value: 1.33 W/kg. Measured ☒ Computed ☐ Calculated ☐**

Annex 4.1 Declaration of RF Exposure Compliance

ATTESTATION: I attest that the information provided in Annex 4 is correct; that a Technical Brief was prepared and the information it contains is correct; that the device evaluation was performed or supervised by me; that applicable measurement methods and evaluation methodologies have been followed and that the device meets the SAR and/or RF exposure limits of RSS-102.

Signature:  **Date: 2008-09-08**

NAME : Bernd Rebmann

TITLE : Dipl.-Ing. (FH)

COMPANY : CETECOM ICT Services GmbH

Annex 5 Calibration parameters

Calibration parameters are described in the additional document :

Appendix to test report no. 1-0726-01-10/08‘
Calibration data, Phantom certificate
and detail information of the DASY4 System