

13. Dosimetric E-Field Probe Calibration (EX3DV3,S/N: 3507)

Calibration Laboratory of
Schmid & Partner
Engineering AG
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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client **UL Apex (MTT)**

Certificate No: **EX3-3507_Apr05**

CALIBRATION CERTIFICATE

Object: **EX3DV3 - SN:3507**

Calibration procedure(s): **QA CAL-01.v5 and QA CAL-14.v2**
Calibration procedure for dosimetric E-field probes

Calibration date: **April 12, 2005**

Condition of the calibrated item: **In Tolerance**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature $(22 \pm 3)^{\circ}\text{C}$ and humidity $< 70\%$.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	5-May-04 (METAS, No. 251-00388)	May-05
Power sensor E4412A	MY41495277	5-May-04 (METAS, No. 251-00388)	May-05
Reference 3 dB Attenuator	SN: S5054 (3c)	10-Aug-04 (METAS, No. 251-00403)	Aug-05
Reference 20 dB Attenuator	SN: S5086 (20b)	3-May-04 (METAS, No. 251-00388)	May-05
Reference 30 dB Attenuator	SN: S5129 (30b)	10-Aug-04 (METAS, No. 251-00404)	Aug-05
Reference Probe ES3DV2	SN: 3013	7-Jan-05 (SPEAG, No. ES3-3013_Jan05)	Jan-06
DAE4	SN: 617	19-Jan-05 (SPEAG, No. DAE4-617_Jan05)	Jan-06
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092180	18-Sep-02 (SPEAG, in house check Oct-03)	In house check: Oct-05
RF generator HP 8648C	US3642U01700	4-Aug-99 (SPEAG, in house check Dec-03)	In house check: Dec-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-04)	In house check: Nov-05

Calibrated by: **Nico Volpert** Laboratory Technician **D. Volpert**

Approved by: **Kolja Pirovic** Technical Manager **Kolja Pirovic**

Issued: April 12, 2005

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: EX3-3507_Apr05

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Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
Polarization ϕ	ϕ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz), July 2001

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\theta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not effect the E²-field uncertainty inside TSL (see below *ConvF*).
- NORM(f)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

EX3DV3 SN:3507

April 12, 2005

Probe EX3DV3

SN:3507

Manufactured:	December 15, 2003
Last calibrated:	February 20, 2004
Recalibrated:	April 12, 2005

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

EX3DV3 SN:3507

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DASY - Parameters of Probe: EX3DV3 SN:3507

Sensitivity in Free Space^A

Diode Compression^B

NormX	0.71 ± 10.1%	μV/(V/m) ²	DCP X	96 mV
NormY	0.74 ± 10.1%	μV/(V/m) ²	DCP Y	96 mV
NormZ	0.73 ± 10.1%	μV/(V/m) ²	DCP Z	96 mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL 900 MHz Typical SAR gradient: 5 % per mm

Sensor Center to Phantom Surface Distance		2.0 mm	3.0 mm
SAR _{ba} [%]	Without Correction Algorithm	3.4	1.2
SAR _{ba} [%]	With Correction Algorithm	0.2	0.4

TSL 1810 MHz Typical SAR gradient: 10 % per mm

Sensor Center to Phantom Surface Distance		2.0 mm	3.0 mm
SAR _{ba} [%]	Without Correction Algorithm	3.3	1.8
SAR _{ba} [%]	With Correction Algorithm	0.6	0.7

Sensor Offset

Probe Tip to Sensor Center **1.0 mm**

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of NormX,Y,Z do not affect the E²-field uncertainty inside TSL (see Page 8).

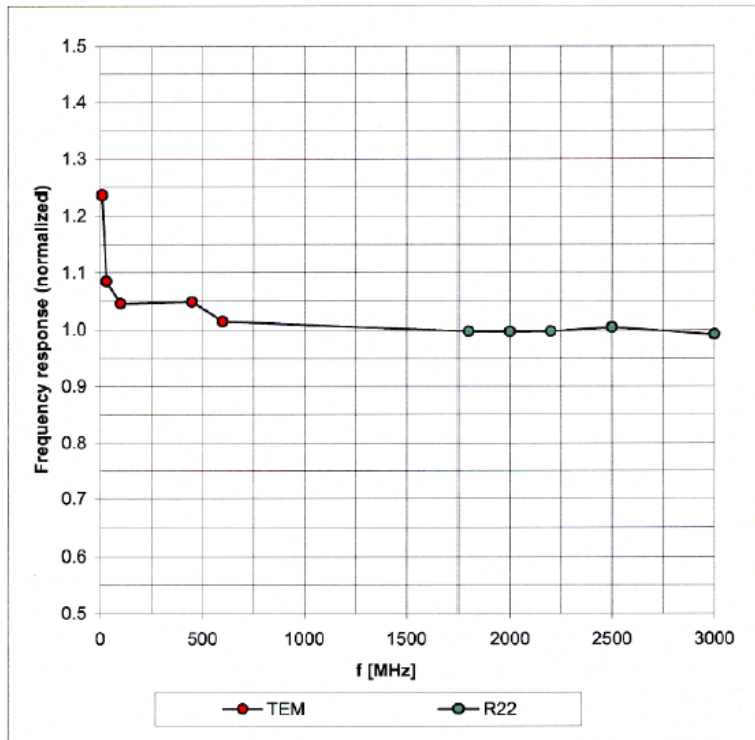
^B Numerical linearization parameter: uncertainty not required.

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Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide: R22)

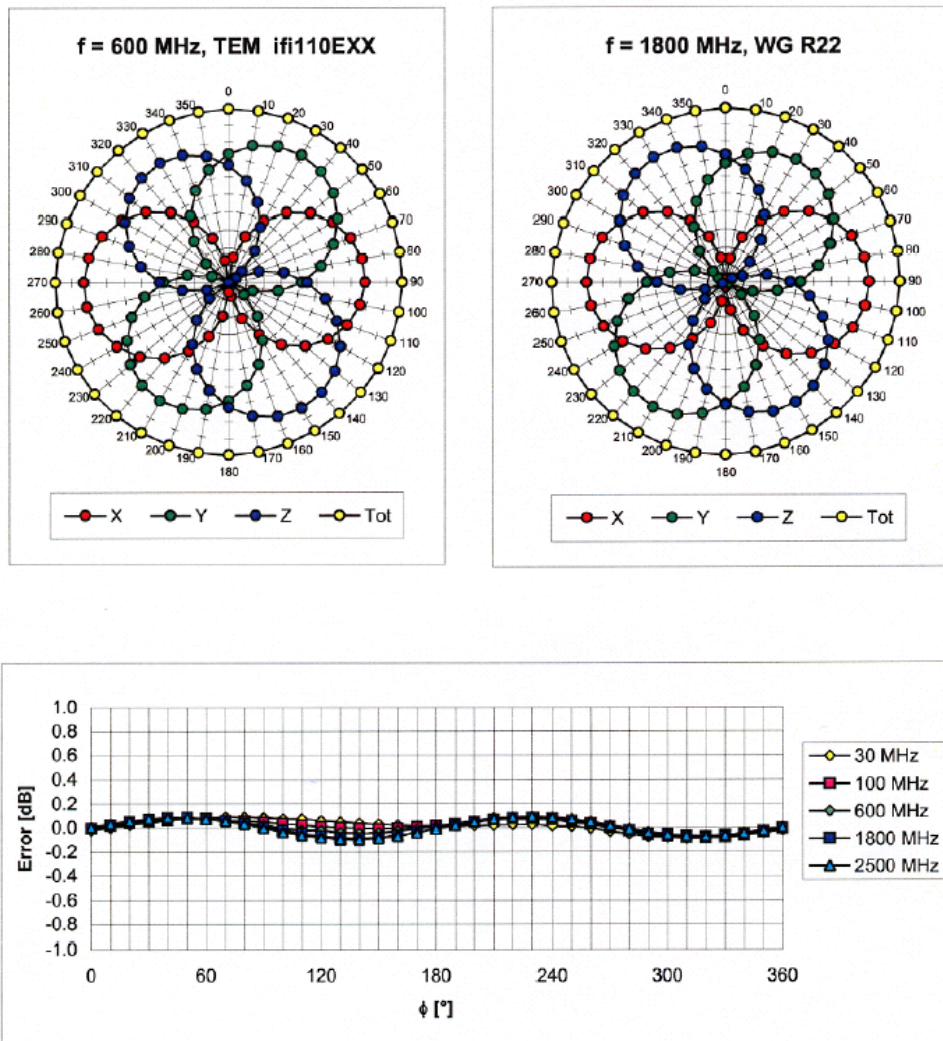


Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

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Receiving Pattern (ϕ), $\vartheta = 0^\circ$

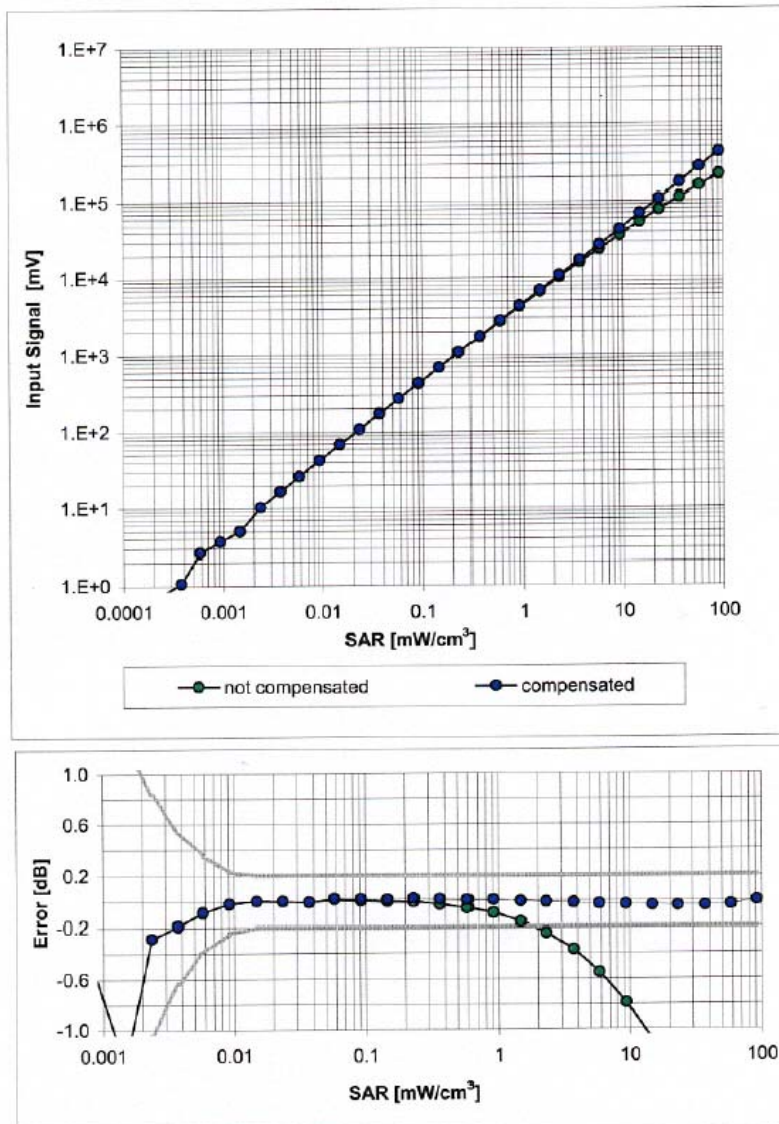


Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

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Dynamic Range f(SAR_{head}) (Waveguide R22, f = 1800 MHz)

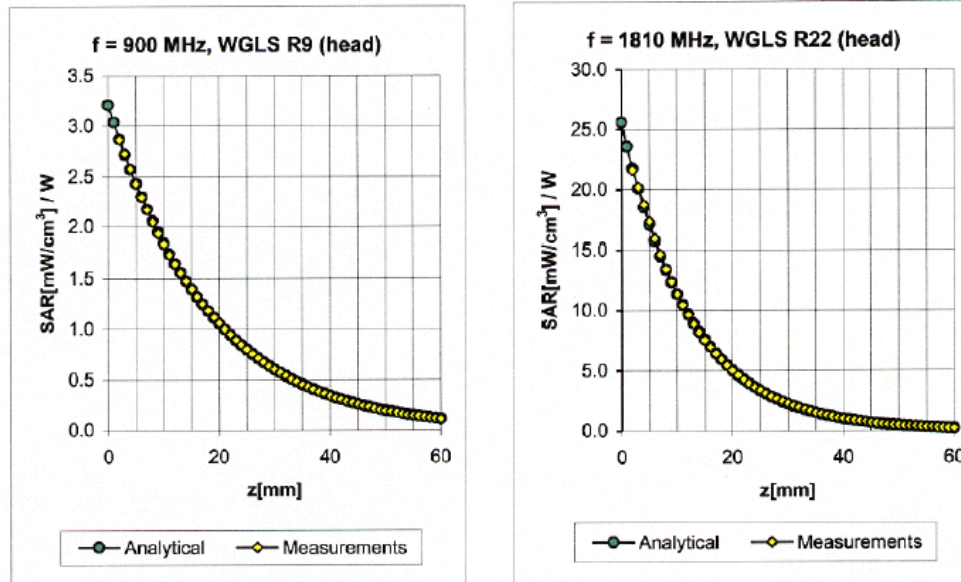


Uncertainty of Linearity Assessment: $\pm 0.6\%$ (k=2)

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Conversion Factor Assessment



f [MHz]	Validity [MHz] ^c	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.74	0.66	10.48 ± 11.0% (k=2)
1810	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.51	0.77	9.10 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.46	0.81	8.25 ± 11.8% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.79	0.62	10.42 ± 11.0% (k=2)
1810	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.30	1.78	8.70 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.33	1.59	7.72 ± 11.8% (k=2)

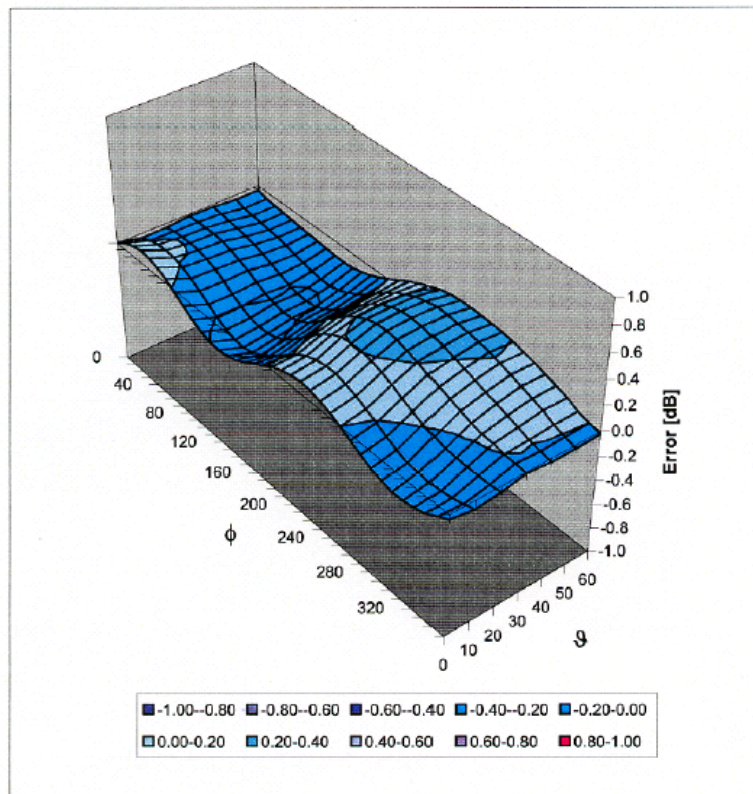
^c The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

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Deviation from Isotropy in HSL

Error (ϕ , θ), $f = 900$ MHz

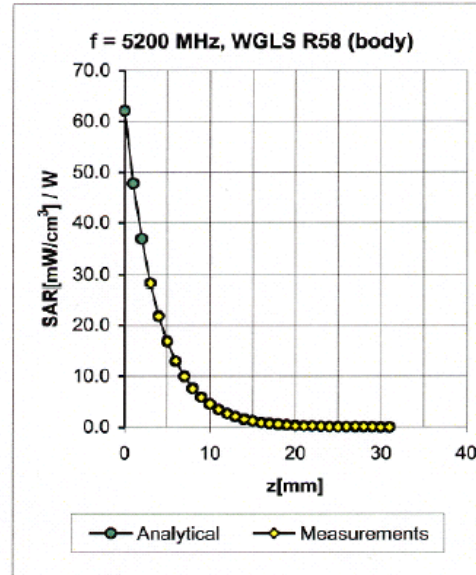
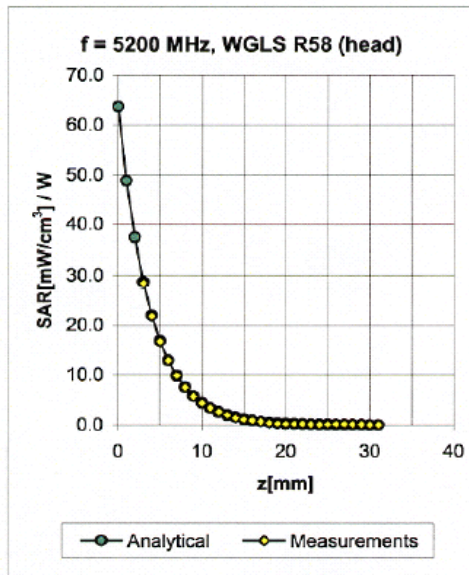


Uncertainty of Spherical Isotropy Assessment: $\pm 2.6\%$ ($k=2$)

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Appendix^D



f [MHz] ^D	Validity [MHz]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
5200	± 50	Head	36.0 ± 5%	4.76 ± 5%	0.41	1.80	5.37 ± 13.6% (k=2)
5800	± 50	Head	35.3 ± 5%	5.27 ± 5%	0.45	1.80	4.67 ± 13.6% (k=2)
5200	± 50	Body	49.0 ± 5%	5.30 ± 5%	0.45	1.90	4.86 ± 13.6% (k=2)
5800	± 50	Body	48.2 ± 5%	6.00 ± 5%	0.45	1.90	4.32 ± 13.6% (k=2)

^D Accreditation for ConvF assessment above 3000 MHz is currently applied for. Accreditation is expected in spring 2005.

14. References

- [1] ANSI, ANSI/IEEE C95.1-1992: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz, The Institute of Electrical and Electronics Engineers, Inc., New York, NY 10017, 1992.
- [2] Katja Pokovic, Thomas Schmid, and Niels Kuster, "Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequencies", in ICECOM '97, Dubrovnik, October 15-17, 1997, pp. 120-124.
- [3] Katja Pokovic, Thomas Schmid, and Niels Kuster, "E-field probe with improved isotropy in brain simulating liquids", in Proceedings of the ELMAR, Zadar, Croatia, 23-25 June, 1996, pp.172-175.
- [4] W. Gander, Computermathematik, Birkhaeuser, Basel, 1992.
- [5] W. H. Press, S. A. Teukolsky, W. T. Vetterling, and B. P. Flannery, Numerical Recipes in C, The Art of Scientific Computing, Second Edition, Cambridge University Press, 1992.
- [6] SPEAG uncertainty document for DASY 4 System from SPEAG (Shimid & Partner Engineering AG).
- [7] SPEAG uncertainty document for "the 5-6GHz Extension" from SPEAG (Shimid & Partner Engineering AG).

APPENDIX 3 : SAR Measurement data

1. Evaluation procedure

The evaluation was performed with the following procedure:

Step 1: Measurement of the E-field at a fixed location above the ear point or central position of flat phantom was used as a reference value for assessing the power drop.

Step 2: The SAR distribution at the exposed side of head or body position was measured at a distance of each device from the inner surface of the shell. The area covered the entire dimension of the antenna of EUT and the horizontal grid spacing was [20 mm x 20 mm] or [10mm x 10mm]. Based on these data, the area of the maximum absorption was determined by spline interpolation.

Step 3: Around this point found in the Step 2 (area scan) , a volume of 25.8 mm x 25.8 mm x 21 mm was assessed by measuring 7 x 7 x 7 points.

And for any secondary peaks found in the Step2 which are within 2dB of maximum peak and not with this Step3 (Zoom scan) is repeated. On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:

(1). The data at the surface were extrapolated, since the center of the dipoles is 1mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm. The extrapolation was based on a least square algorithm [4]. A polynomial of the fourth order was calculated through the points in z-axes.

This polynomial was then used to evaluate the points between the surface and the probe tip.

(2). The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one-dimensional splines with the "Not a knot"-condition (in x, y and z-directions) [4], [5]. The volume was integrated with the trapezoidal-algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.

(3). All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement of the E-field at the same location as in Step 1.

2. Measurement data (IEEE802.11a Low band)

PCG-4H2L / Right Back of LCD / Main Ant / 5240MHz / 11a Low band (6Mbps) / Spaced 15mm

Crest factor: 1

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.53$ mho/m; $\epsilon_r = 46.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x121x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.175 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3$ mm, $dy=4.3$ mm, $dz=3$ mm

Reference Value = 1.61 V/m; Power Drift = -0.184 dB

Peak SAR (extrapolated) = 0.303 W/kg

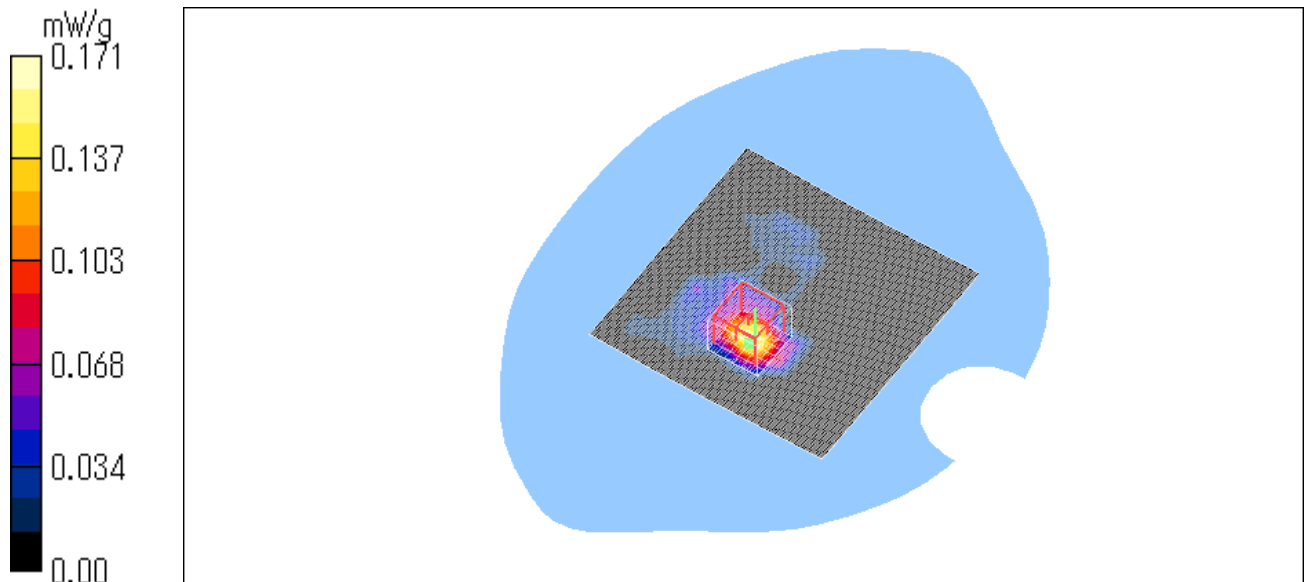
SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.033 mW/g

Maximum value of SAR (measured) = 0.171 mW/g

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



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PCG-4H2L / Right Back of LCD / Main Ant / 5240MHz / 11a Low band (18Mbps) / Spaced 15mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.53 \text{ mho/m}$; $\epsilon_r = 46.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (71x71x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

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

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 2.81 V/m; Power Drift = 0.110 dB

Peak SAR (extrapolated) = 0.399 W/kg

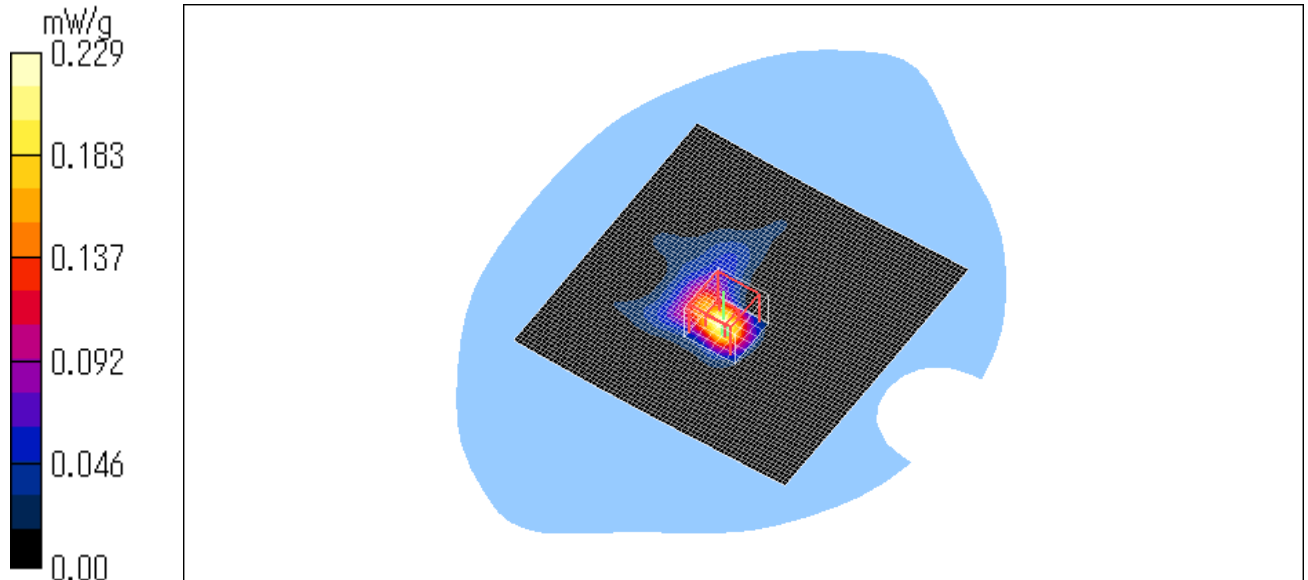
SAR(1 g) = 0.124 mW/g; SAR(10 g) = 0.043 mW/g

Maximum value of SAR (measured) = 0.229 mW/g

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



PCG-4H2L / Right Back of LCD / Main Ant / 5240MHz / 11a Low band (24Mbps) / Spaced 15mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.53 \text{ mho/m}$; $\epsilon_r = 46.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (71x71x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

Maximum value of SAR (interpolated) = 0.254 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 1.40 V/m ; Power Drift = -0.210 dB

Peak SAR (extrapolated) = 0.280 W/kg

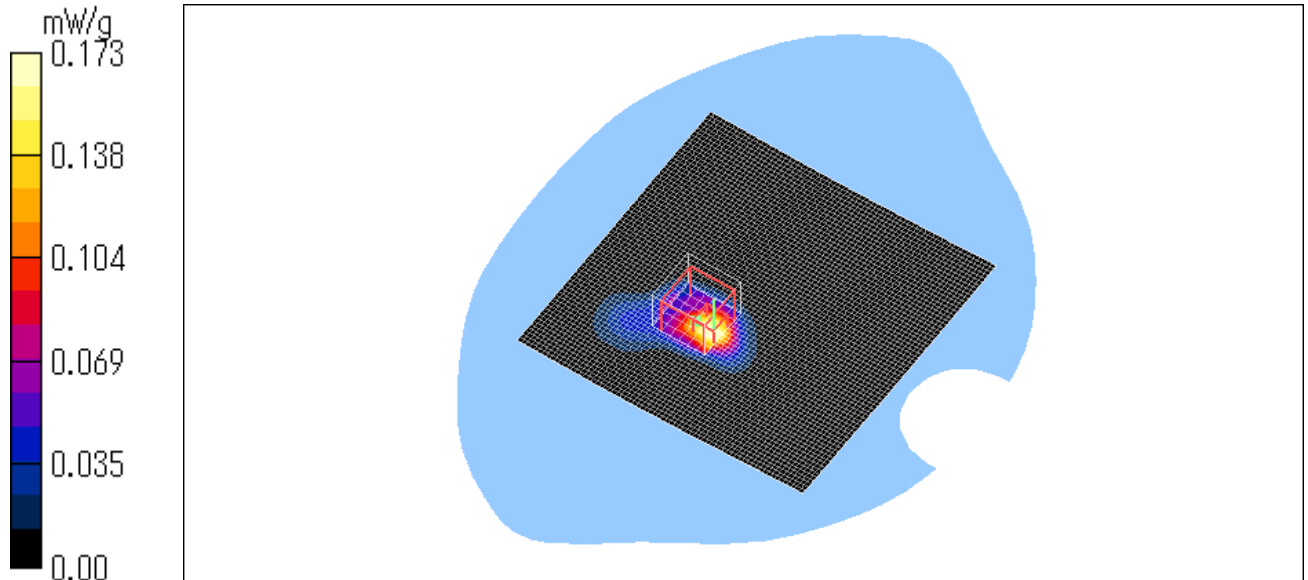
SAR(1 g) = 0.091 mW/g ; SAR(10 g) = 0.029 mW/g

Maximum value of SAR (measured) = 0.173 mW/g

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.0 degree C. , After 24.40 degree C.



PCG-4H2L / Right Back of LCD / Main Ant / 5240MHz / 11a Low band (54Mbps) / Spaced 15mm

Crest factor: 2

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.53 \text{ mho/m}$; $\epsilon_r = 46.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.124 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 1.79 V/m ; Power Drift = -0.221 dB

Peak SAR (extrapolated) = 0.238 W/kg

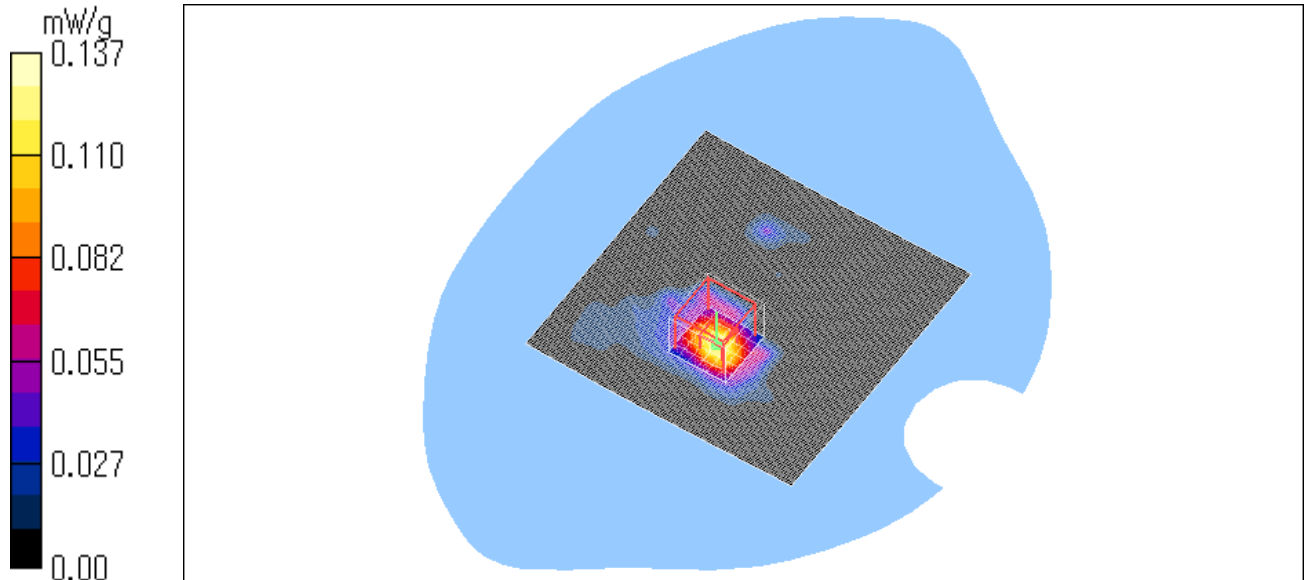
SAR(1 g) = 0.071 mW/g ; SAR(10 g) = 0.025 mW/g

Maximum value of SAR (measured) = 0.137 mW/g

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C .

Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



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PCG-4H2L / Right Bottom / Main Ant / 5240MHz / 11a Low band (18Mbps)

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.53 \text{ mho/m}$; $\epsilon_r = 46.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.073 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 1.46 V/m ; Power Drift = -0.213 dB

Peak SAR (extrapolated) = 0.129 W/kg

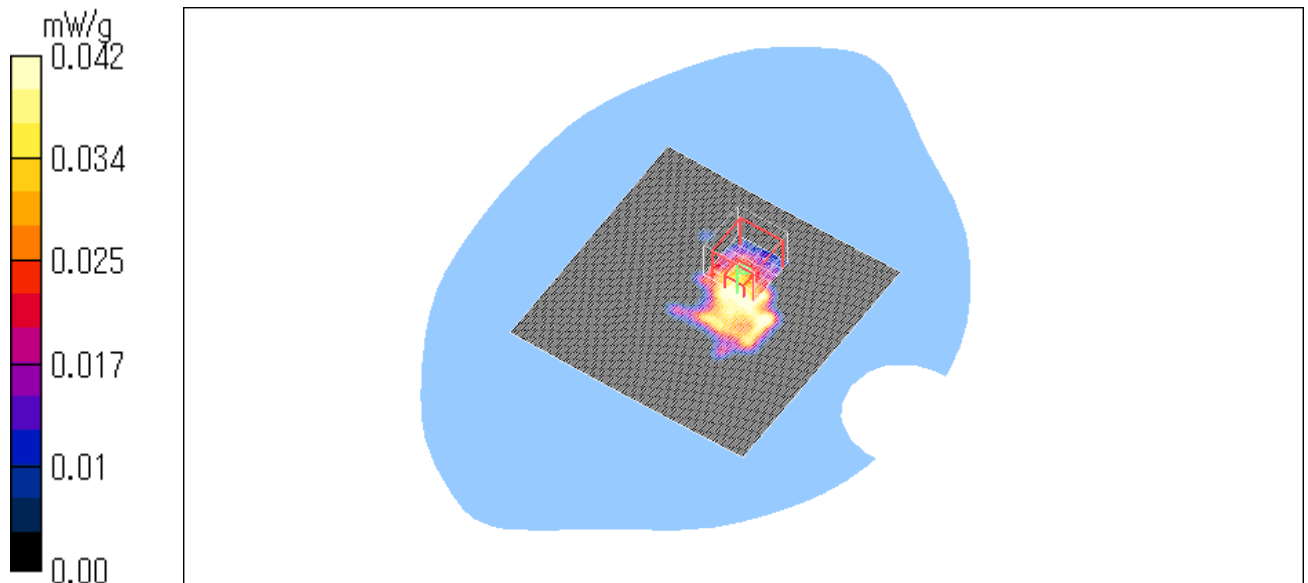
SAR(1 g) = 0.018 mW/g ; SAR(10 g) = 0.00533 mW/g

Maximum value of SAR (measured) = 0.042 mW/g

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.7 degree C. , After 23.7 degree C.



PCG-4H2L / Right Top / Main Ant / 5240MHz / 11a Low band (18Mbps)

Crest factor : 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.53 \text{ mho/m}$; $\epsilon_r = 46.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.124 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 1.98 V/m ; Power Drift = -0.223 dB

Peak SAR (extrapolated) = 0.229 W/kg

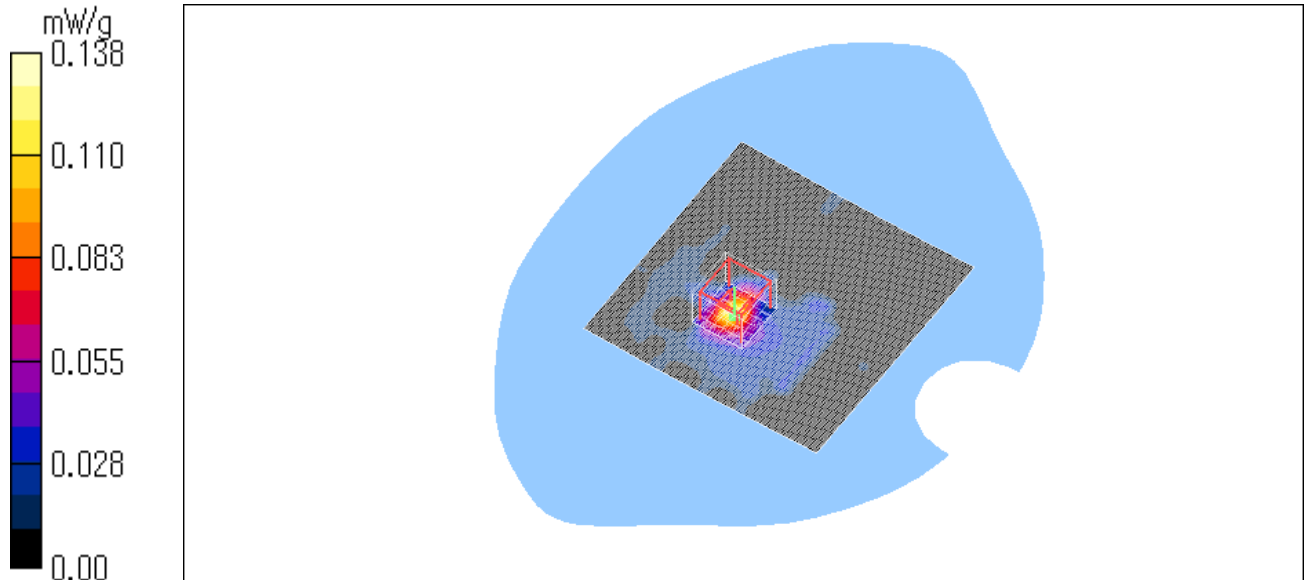
SAR(1 g) = 0.066 mW/g ; SAR(10 g) = 0.022 mW/g

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

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.7 degree C. , After 23.7 degree C.



PCG-4H2L / Right Side / Main Ant / 5240MHz / 11a Low band (18Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.53$ mho/m; $\epsilon_r = 46.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.806 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 5.18 V/m; Power Drift = -0.227 dB

Peak SAR (extrapolated) = 1.50 W/kg

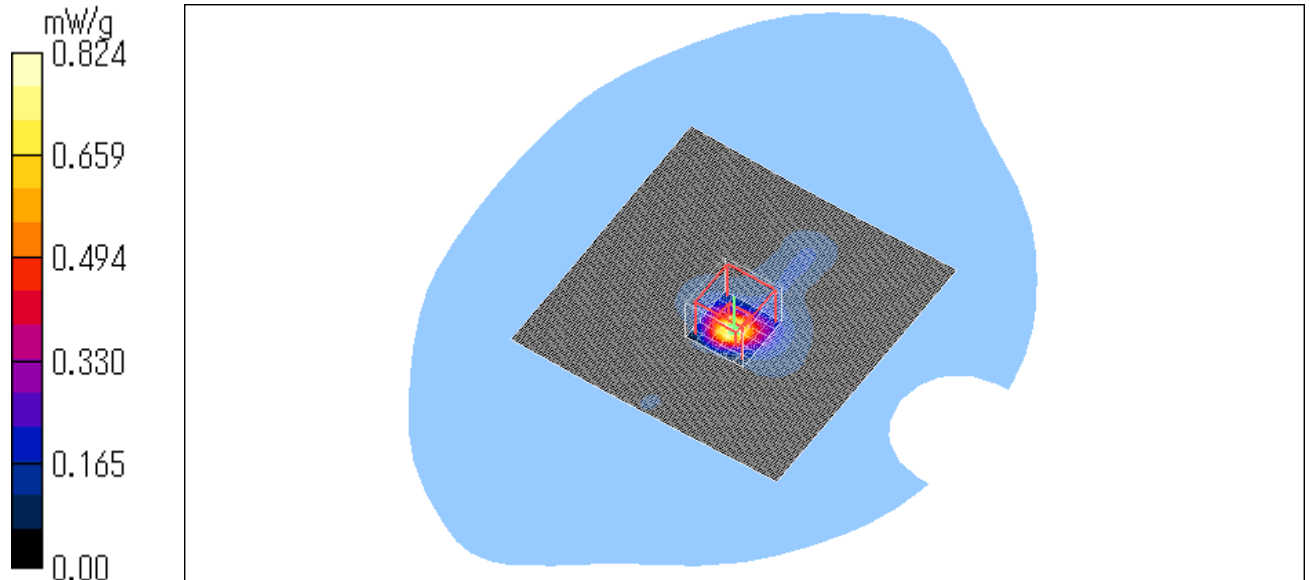
SAR(1 g) = 0.410 mW/g; SAR(10 g) = 0.121 mW/g

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

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



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PCG-4H2L / Right Side / Main Ant / 5180MHz / 11a Low band (18Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.53 \text{ mho/m}$; $\epsilon_r = 46.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.661 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 3.30 V/m; Power Drift = 0.068 dB

Peak SAR (extrapolated) = 1.22 W/kg

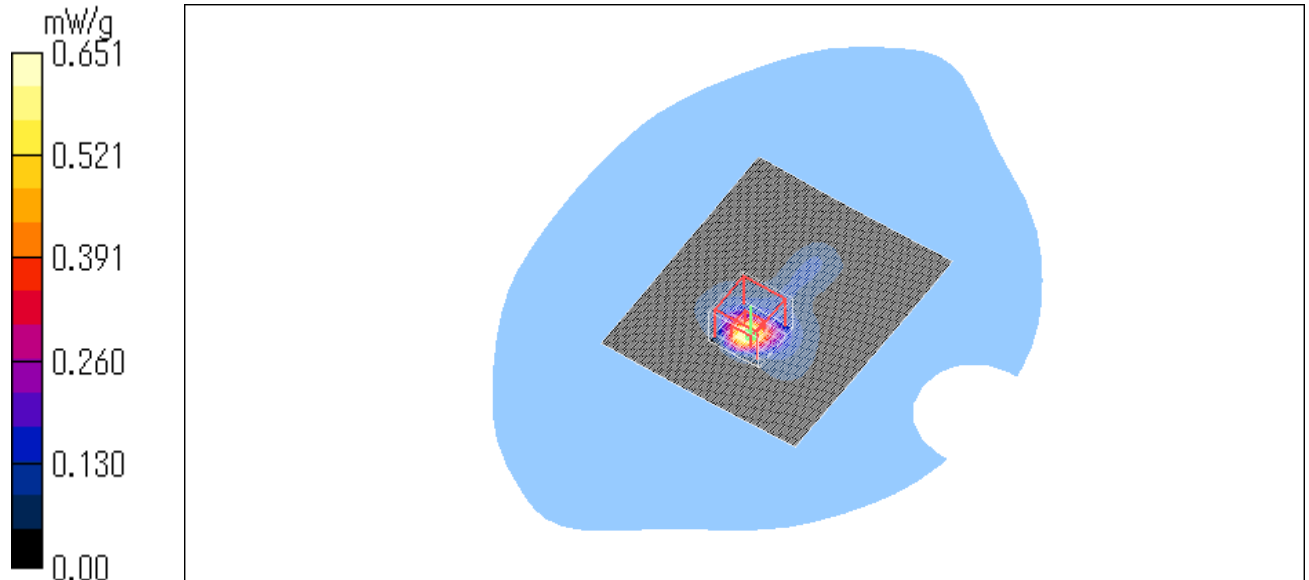
SAR(1 g) = 0.339 mW/g; SAR(10 g) = 0.099 mW/g

Maximum value of SAR (measured) = 0.651 mW/g

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



PCG-4H2L / Right Side / Main Ant / 5320MHz / 11a Low band (18Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.53 \text{ mho/m}$; $\epsilon_r = 46.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.819 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 3.32 V/m ; Power Drift = -0.081 dB

Peak SAR (extrapolated) = 1.53 W/kg

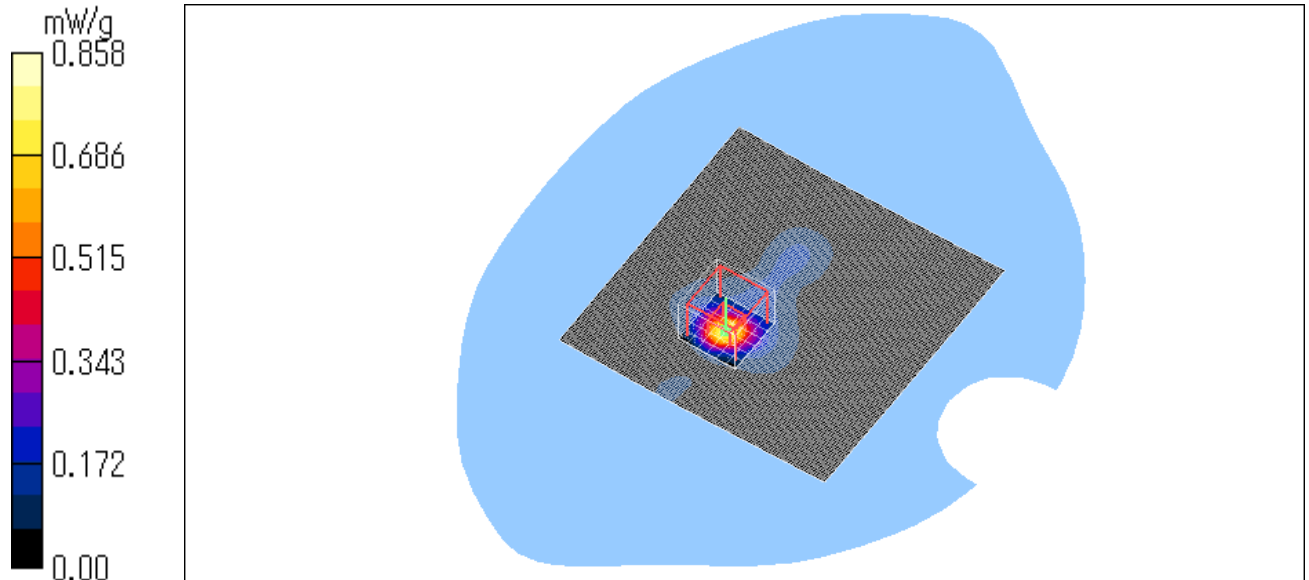
SAR(1 g) = 0.419 mW/g ; SAR(10 g) = 0.121 mW/g

Maximum value of SAR (measured) = 0.858 mW/g

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



Z-axis scan at max SAR location

PCG-4H2L / Right Side / Main Ant / 5320MHz / 11a Low band (18Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.53 \text{ mho/m}$; $\epsilon_r = 46.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

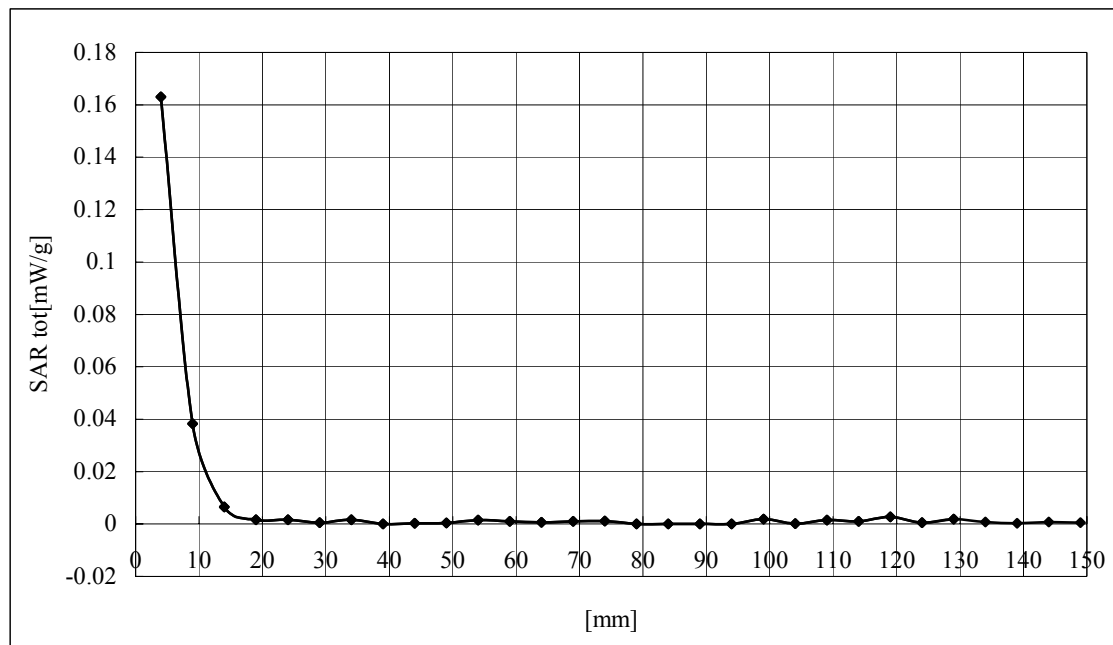
Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145



PCG-4H2L / Right Side / Main Ant / 5320MHz / 11a Low band (18Mbps) / Spaced 10mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.53 \text{ mho/m}$; $\epsilon_r = 46.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (141x141x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.423 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 3.12 V/m ; Power Drift = 0.242 dB

Peak SAR (extrapolated) = 0.707 W/kg

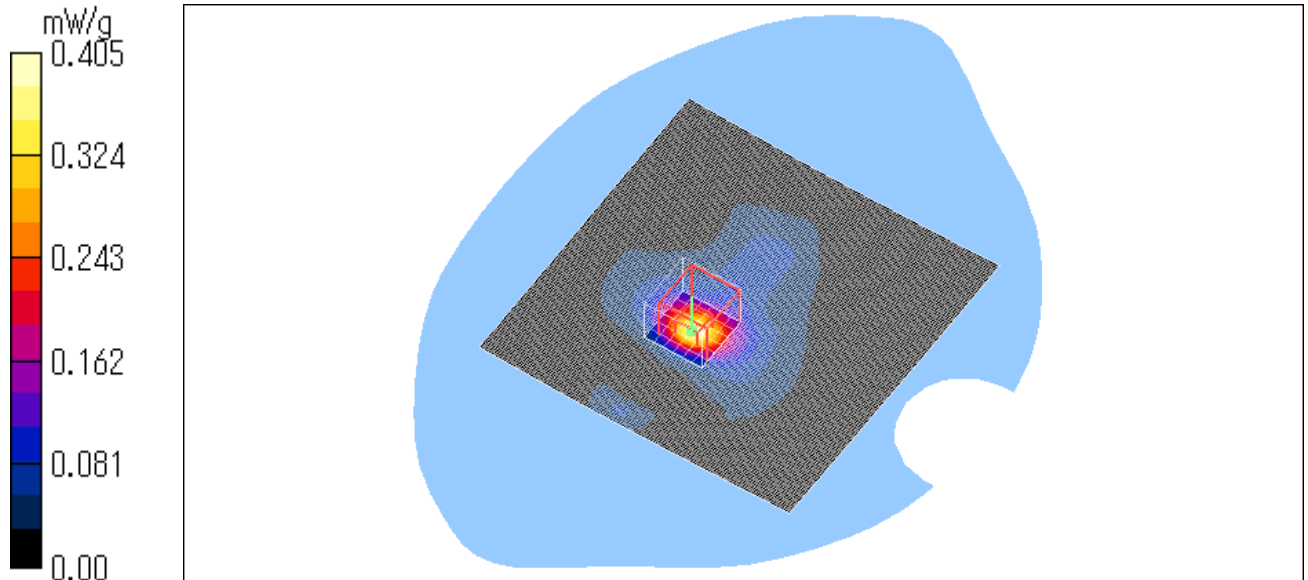
SAR(1 g) = 0.217 mW/g ; SAR(10 g) = 0.077 mW/g

Maximum value of SAR (measured) = 0.405 mW/g

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



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PCG-4H2L / Left Side / Aux Ant / 5240MHz / 11a Low band (9Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.44 \text{ mho/m}$; $\epsilon_r = 47$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (141x141x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.644 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 3.15 V/m ; Power Drift = -0.223 dB

Peak SAR (extrapolated) = 1.22 W/kg

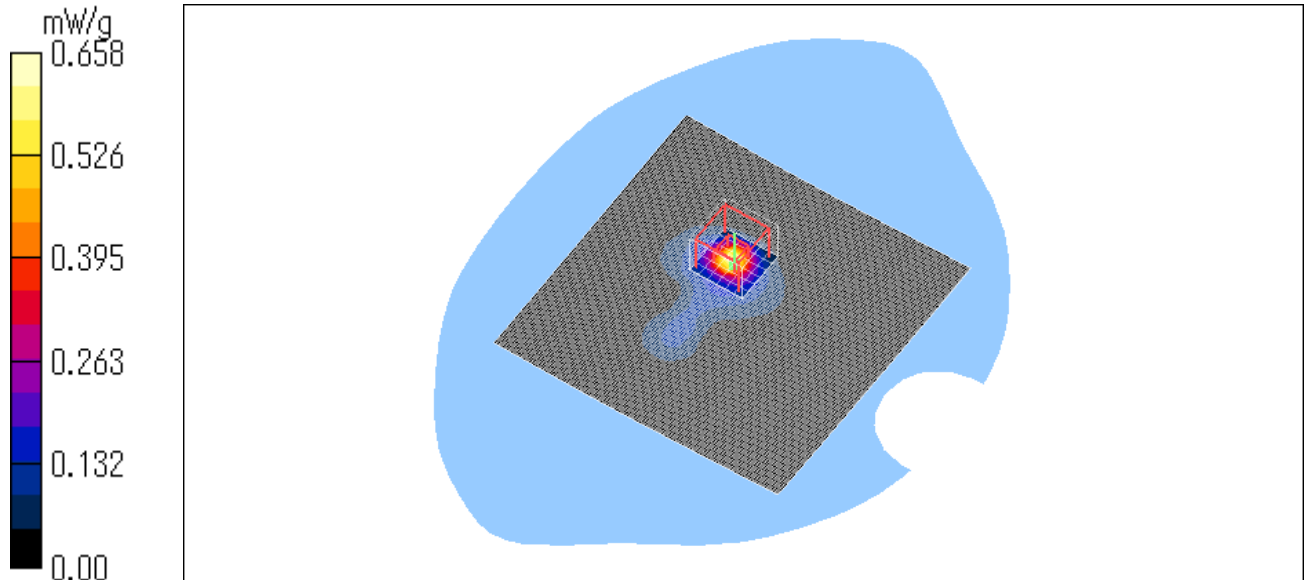
SAR(1 g) = 0.331 mW/g ; SAR(10 g) = 0.095 mW/g

Maximum value of SAR (measured) = 0.658 mW/g

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



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PCG-4H2L / Left Side / Aux Ant / 5240MHz / 11a Low band (18Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.44 \text{ mho/m}$; $\epsilon_r = 47$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.693 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 4.14 V/m ; Power Drift = -0.078 dB

Peak SAR (extrapolated) = 1.76 W/kg

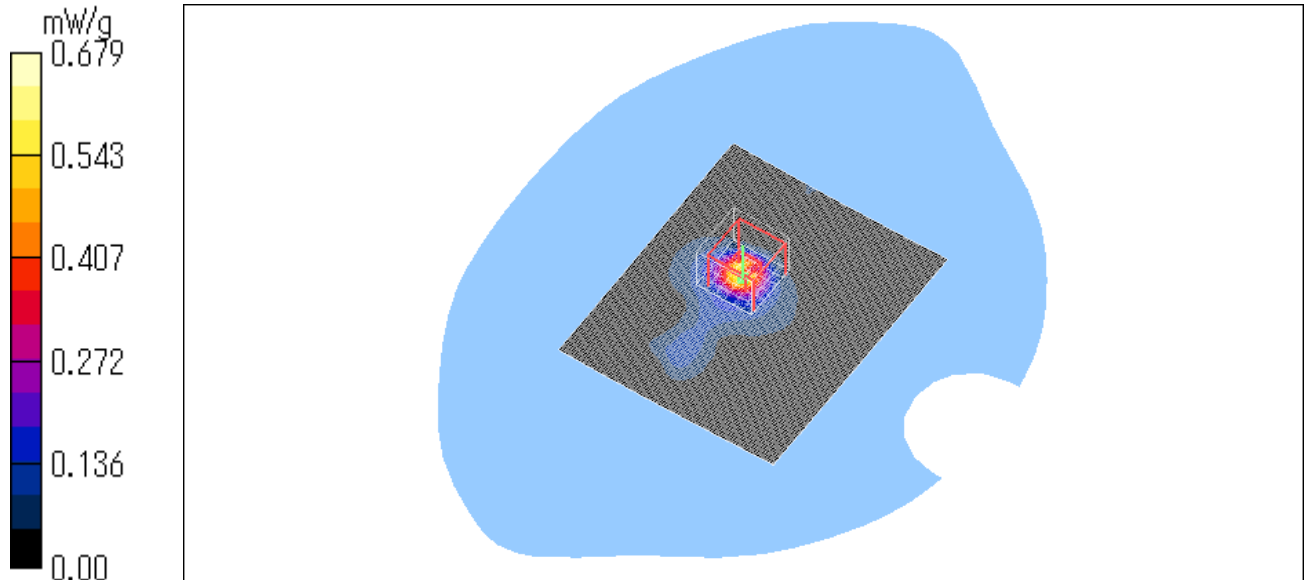
SAR(1 g) = 0.300 mW/g ; SAR(10 g) = 0.073 mW/g

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

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



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PCG-4H2L / Left Side / Aux Ant / 5240MHz / 11a Low band (24Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.44 \text{ mho/m}$; $\epsilon_r = 47$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.784 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 4.29 V/m ; Power Drift = -0.088 dB

Peak SAR (extrapolated) = 2.03 W/kg

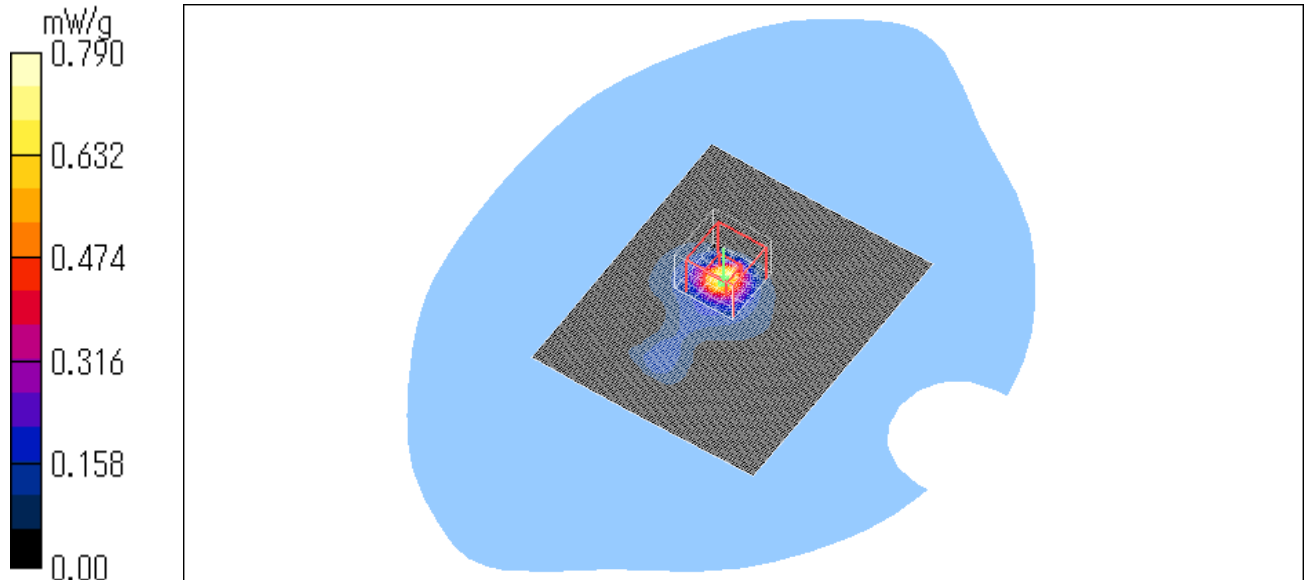
SAR(1 g) = 0.360 mW/g ; SAR(10 g) = 0.086 mW/g

Maximum value of SAR (measured) = 0.790 mW/g

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



PCG-4H2L / Left Side / Aux Ant / 5240MHz / 11a Low band (54Mbps) / Spaced 5mm

Crest factor: 2

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.44$ mho/m; $\epsilon_r = 47$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.605 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 3.83 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 2.60 W/kg

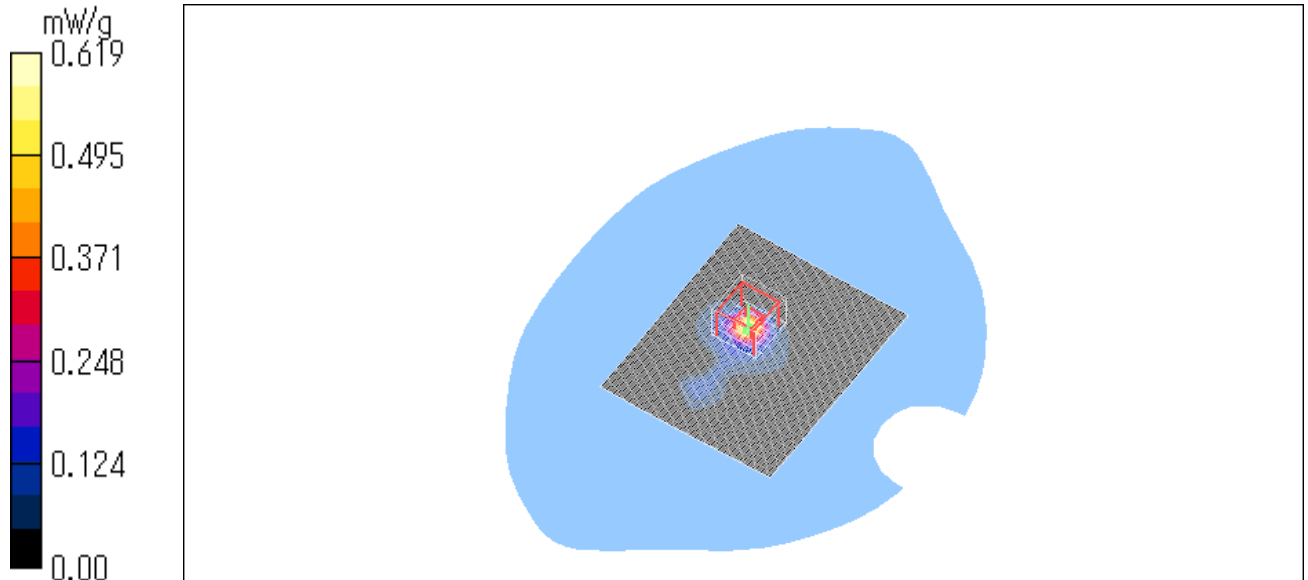
SAR(1 g) = 0.293 mW/g; SAR(10 g) = 0.078 mW/g

Maximum value of SAR (measured) = 0.619 mW/g

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



PCG-4H2L / Left Bottom / Aux Ant / 5240MHz / 11a Low band (24Mbps)

Crest factor: 1

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.44$ mho/m; $\epsilon_r = 47$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (141x141x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.070 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 0.962 V/m; Power Drift = -0.199 dB

Peak SAR (extrapolated) = 0.180 W/kg

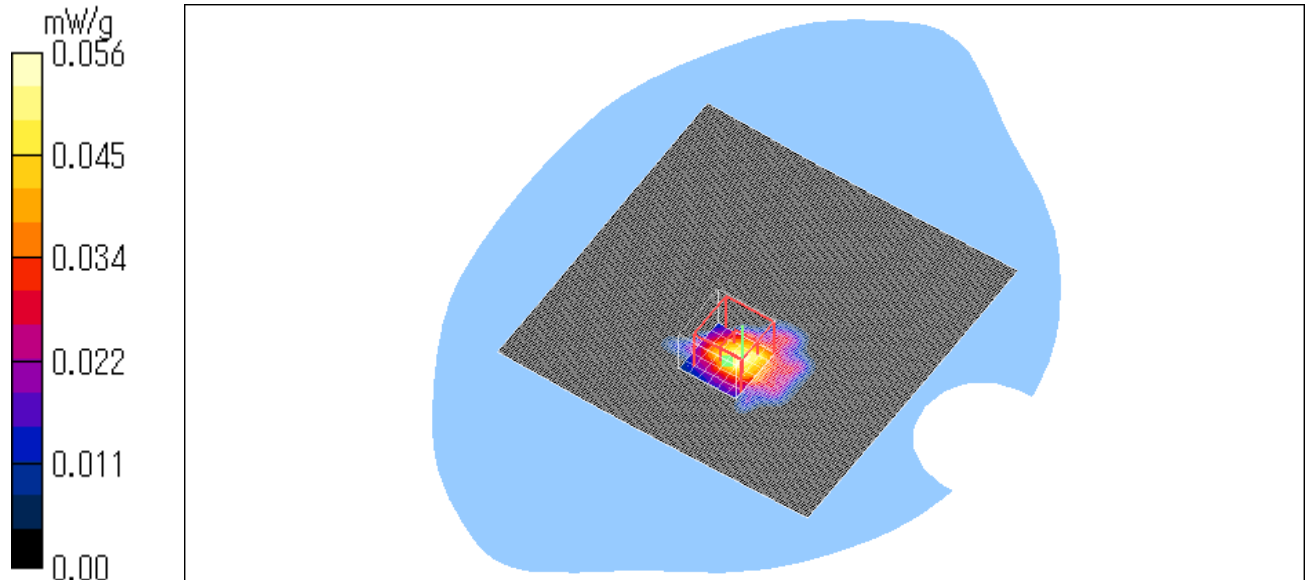
SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.010 mW/g

Maximum value of SAR (measured) = 0.056 mW/g

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



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PCG-4H2L / Left Top / Aux Ant / 5240MHz / 11a Low band (24Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.44 \text{ mho/m}$; $\epsilon_r = 47$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (141x141x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.117 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 1.93 V/m ; Power Drift = 0.192 dB

Peak SAR (extrapolated) = 0.150 W/kg

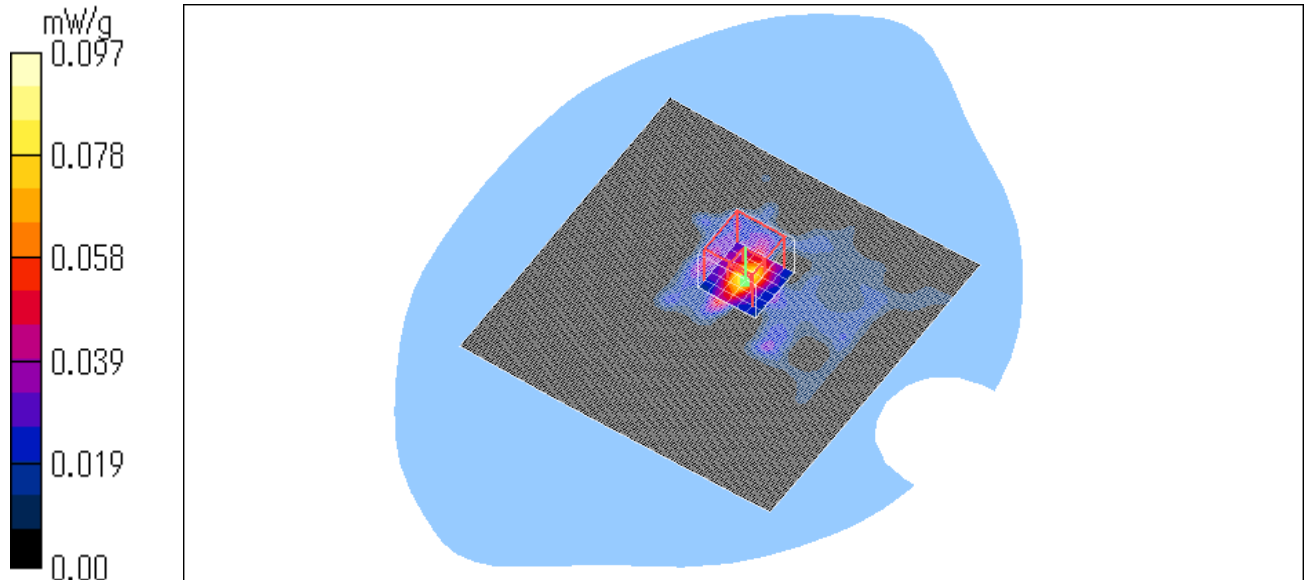
SAR(1 g) = 0.041 mW/g ; SAR(10 g) = 0.013 mW/g

Maximum value of SAR (measured) = 0.097 mW/g

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C .

Liquid Temperature = Before 23.7 degree C. , After 23.7 degree C.



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PCG-4H2L / Left Back / Aux Ant / 5240MHz / 11a Low band (24Mbps) / Spaced 15mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.44 \text{ mho/m}$; $\epsilon_r = 47$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (141x141x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.193 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 1.42 V/m; Power Drift = 0.164 dB

Peak SAR (extrapolated) = 0.367 W/kg

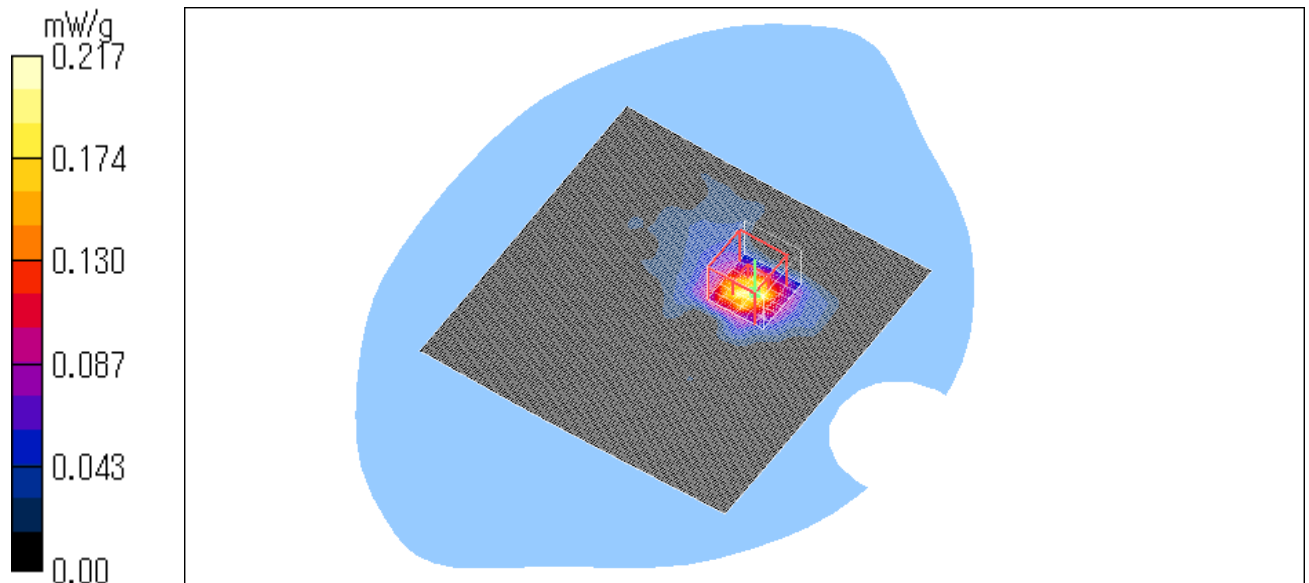
SAR(1 g) = 0.109 mW/g; SAR(10 g) = 0.040 mW/g

Maximum value of SAR (measured) = 0.217 mW/g

Test Date = 04/06/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.7 degree C. , After 23.7 degree C.



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PCG-4H2L / Left Side / Aux Ant / 5180MHz / 11a Low band (24Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.44 \text{ mho/m}$; $\epsilon_r = 47$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.708 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 3.22 V/m ; Power Drift = 0.184 dB

Peak SAR (extrapolated) = 1.22 W/kg

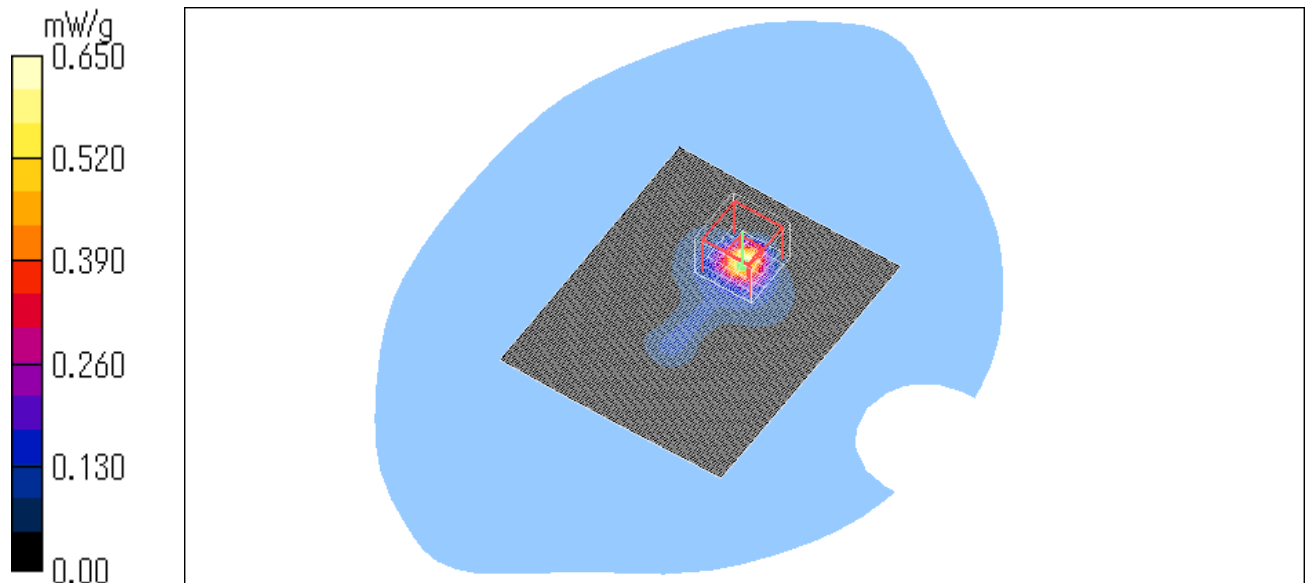
SAR(1 g) = 0.322 mW/g ; SAR(10 g) = 0.091 mW/g

Maximum value of SAR (measured) = 0.650 mW/g

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



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PCG-4H2L / Left Side / Aux Ant / 5320MHz / 11a Low band (24Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.44 \text{ mho/m}$; $\epsilon_r = 47$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.660 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 3.24 V/m ; Power Drift = 0.111 dB

Peak SAR (extrapolated) = 1.07 W/kg

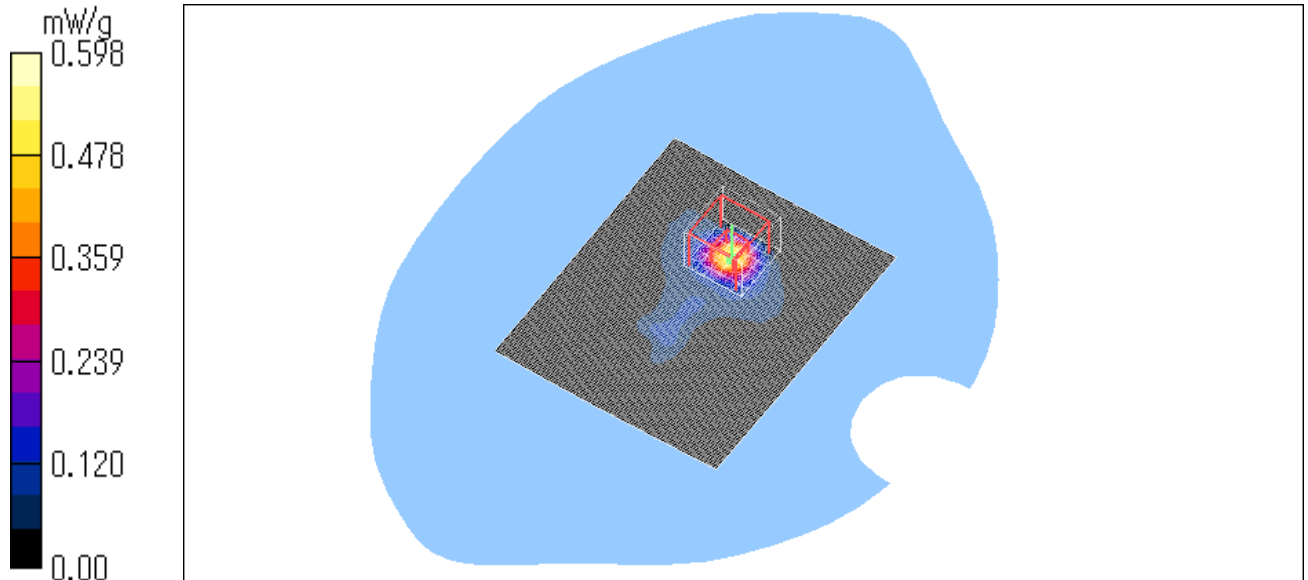
SAR(1 g) = 0.289 mW/g ; SAR(10 g) = 0.083 mW/g

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

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



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PCG-4H2L / Left Side / Aux Ant / 5240MHz / 11a Low band (24Mbps) / Spaced 10mm

Crest factor: 1

Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.44 \text{ mho/m}$; $\epsilon_r = 47$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.86, 4.86, 4.86); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.439 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 2.85 V/m ; Power Drift = 0.210 dB

Peak SAR (extrapolated) = 0.664 W/kg

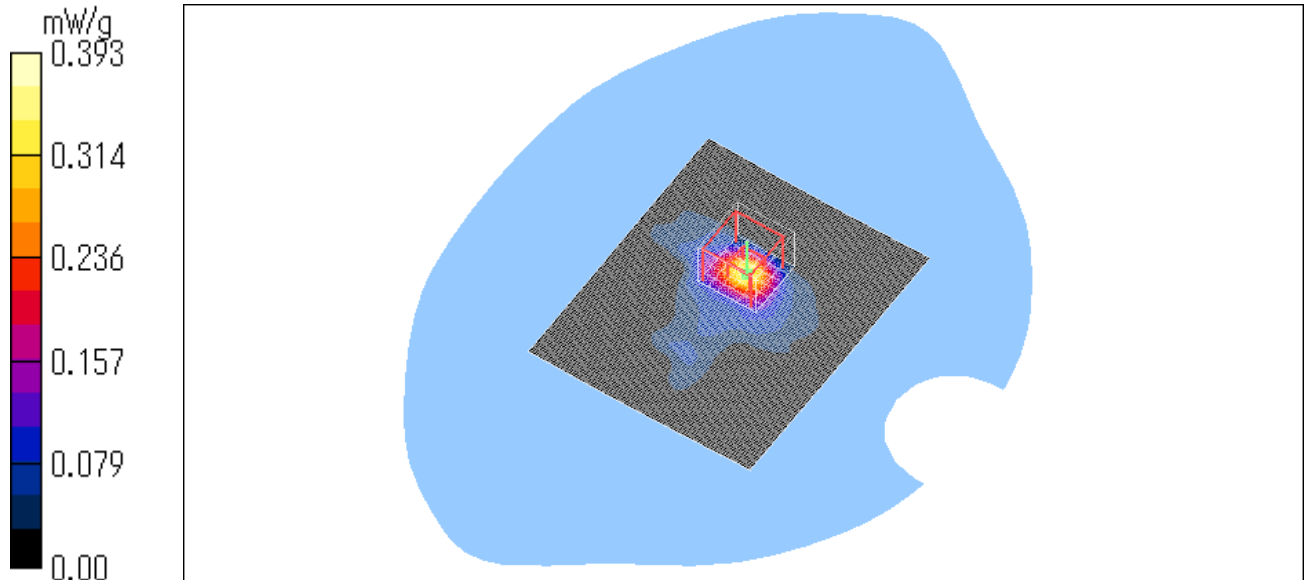
SAR(1 g) = 0.199 mW/g ; SAR(10 g) = 0.065 mW/g

Maximum value of SAR (measured) = 0.393 mW/g

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



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3. Measurement data (IEEE802.11a High band)

PCG-4H2L / Right Side / Main Ant / 5765MHz / 11a High band (6Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.28 \text{ mho/m}$; $\epsilon_r = 45.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.38 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 7.30 V/m; Power Drift = 0.155 dB

Peak SAR (extrapolated) = 3.23 W/kg

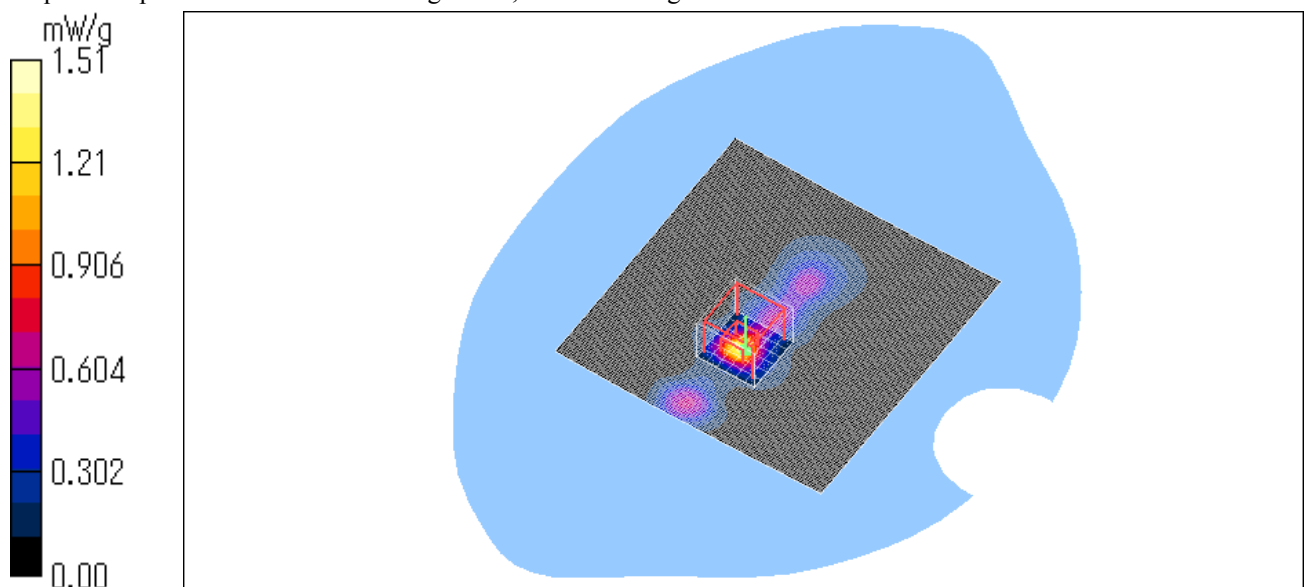
SAR(1 g) = 0.695 mW/g; SAR(10 g) = 0.186 mW/g

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

Test Date = 04/09/06

Ambient Temperature = 25.0 degree.C.

Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



PCG-4H2L / Right Side / Main Ant / 5765MHz / 11a High band (12Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.28 \text{ mho/m}$; $\epsilon_r = 45.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.41 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 5.55 V/m; Power Drift = 0.175 dB

Peak SAR (extrapolated) = 3.62 W/kg

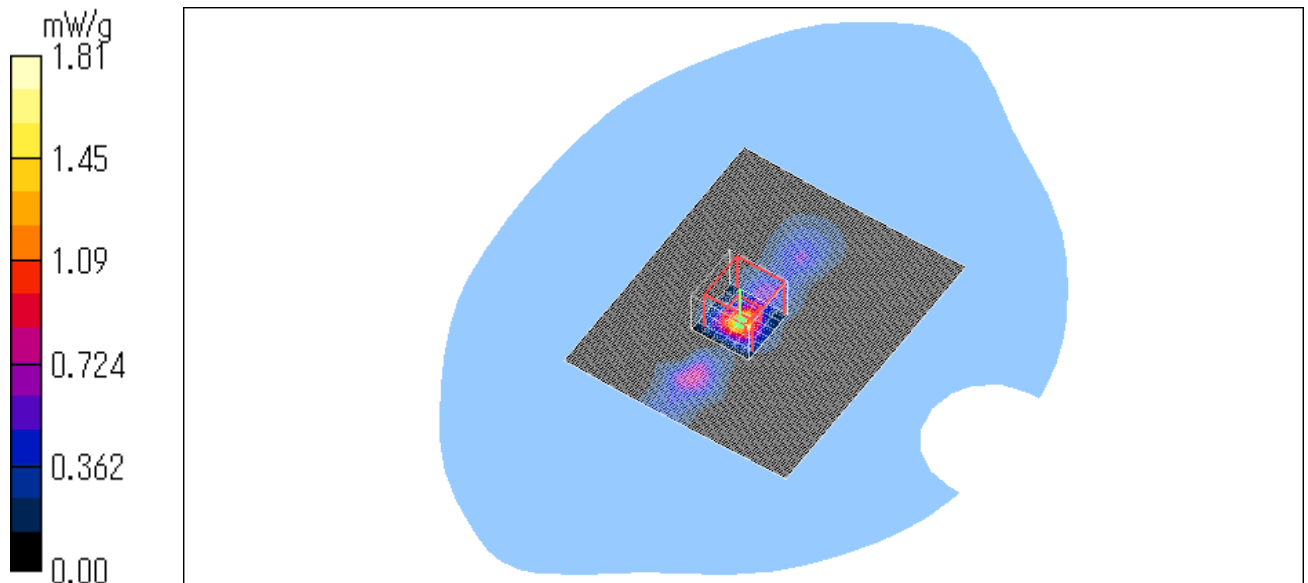
SAR(1 g) = 0.764 mW/g; SAR(10 g) = 0.189 mW/g

Maximum value of SAR (measured) = 1.81 mW/g

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



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PCG-4H2L / Right Side / Main Ant / 5765MHz / 11a High band (24Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.28 \text{ mho/m}$; $\epsilon_r = 45.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.24 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 5.37 V/m; Power Drift = -0.142 dB

Peak SAR (extrapolated) = 3.28 W/kg

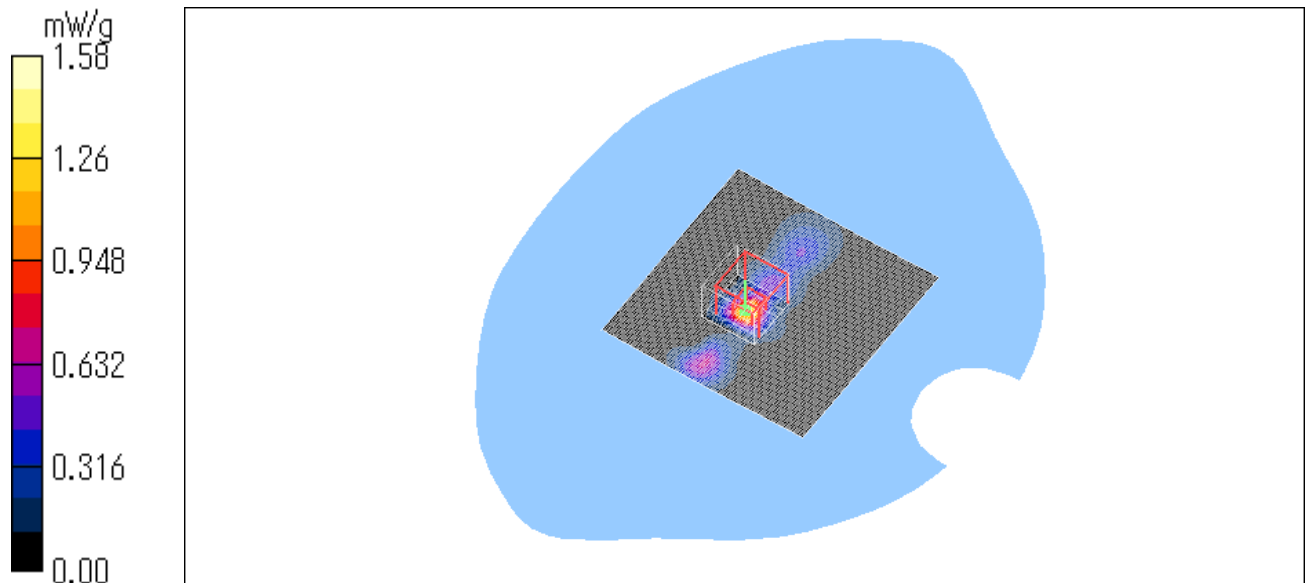
SAR(1 g) = 0.675 mW/g; SAR(10 g) = 0.165 mW/g

Maximum value of SAR (measured) = 1.58 mW/g

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



PCG-4H2L / Right Side / Main Ant / 5765MHz / 11a High band (54Mbps) / Spaced 5mm

Crest factor: 2

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.28 \text{ mho/m}$; $\epsilon_r = 45.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.827 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 4.15 V/m ; Power Drift = 0.176 dB

Peak SAR (extrapolated) = 2.15 W/kg

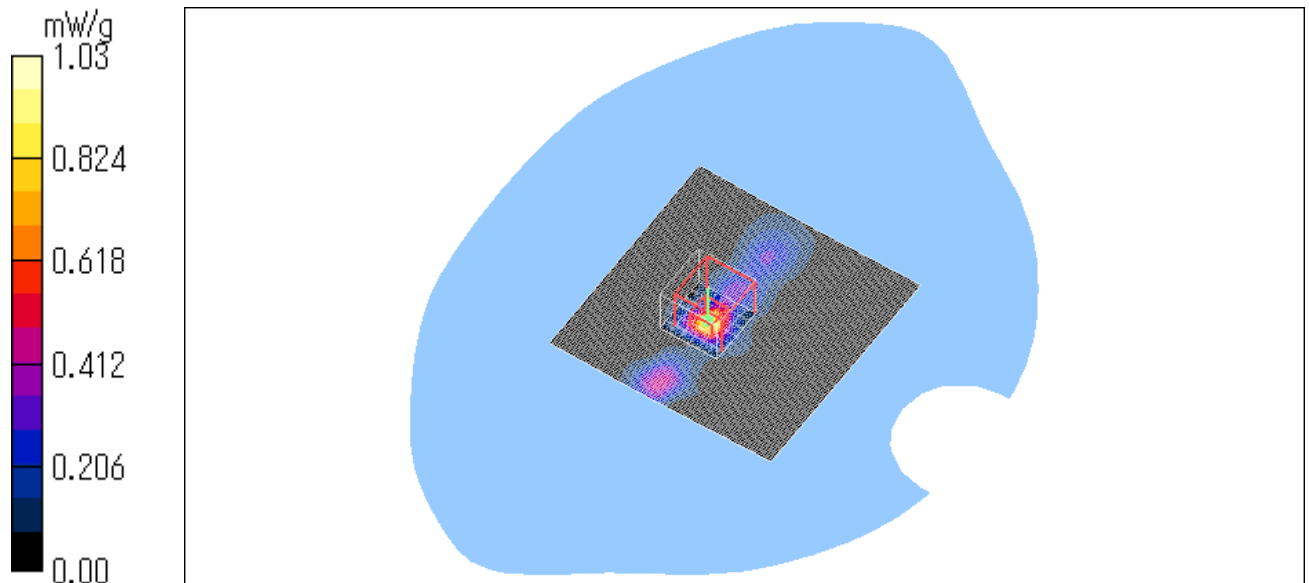
SAR(1 g) = 0.449 mW/g ; SAR(10 g) = 0.108 mW/g

Maximum value of SAR (measured) = 1.03 mW/g

Test Date = 04/07/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



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PCG-4H2L / Right Bottom / Main Ant / 5765MHz / 11a High band (12Mbps)

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.28 \text{ mho/m}$; $\epsilon_r = 45.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x141x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 1.79 V/m; Power Drift = -0.187 dB

Peak SAR (extrapolated) = 0.117 W/kg

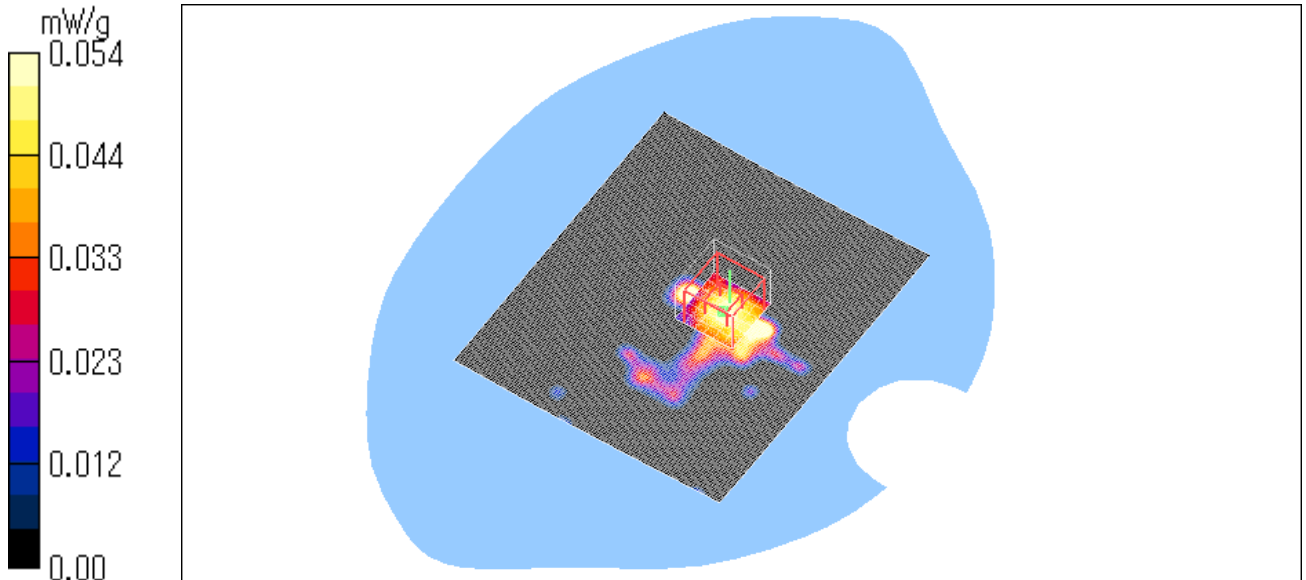
SAR(1 g) = 0.034 mW/g; SAR(10 g) = 0.017 mW/g

Maximum value of SAR (measured) = 0.054 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



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PCG-4H2L / Right Back of LCD / Main Ant / 5765MHz / 11a High band (12Mbps) / Spaced 15mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.28 \text{ mho/m}$; $\epsilon_r = 45.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.334 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 1.89 V/m ; Power Drift = -0.177 dB

Peak SAR (extrapolated) = 0.555 W/kg

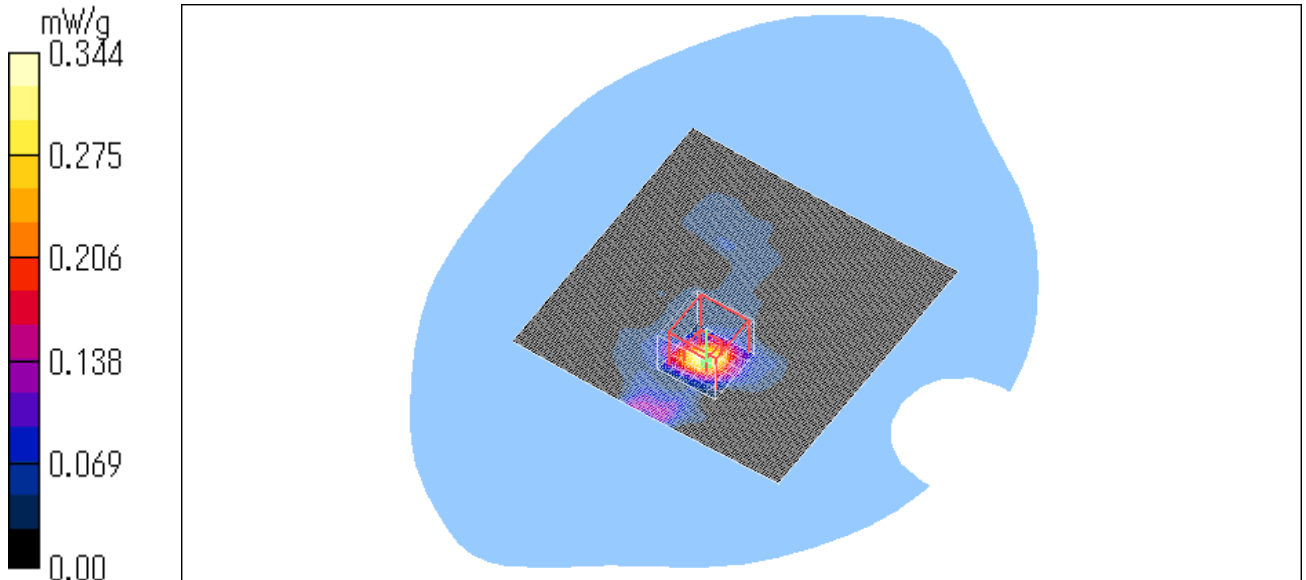
SAR(1 g) = 0.159 mW/g ; SAR(10 g) = 0.049 mW/g

Maximum value of SAR (measured) = 0.344 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C .

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



PCG-4H2L / Right Top / Main Ant / 5765MHz / 11a High band (12Mbps)

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.28 \text{ mho/m}$; $\epsilon_r = 45.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x141x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 2.07 V/m ; Power Drift = -0.223 dB

Peak SAR (extrapolated) = 1.00 W/kg

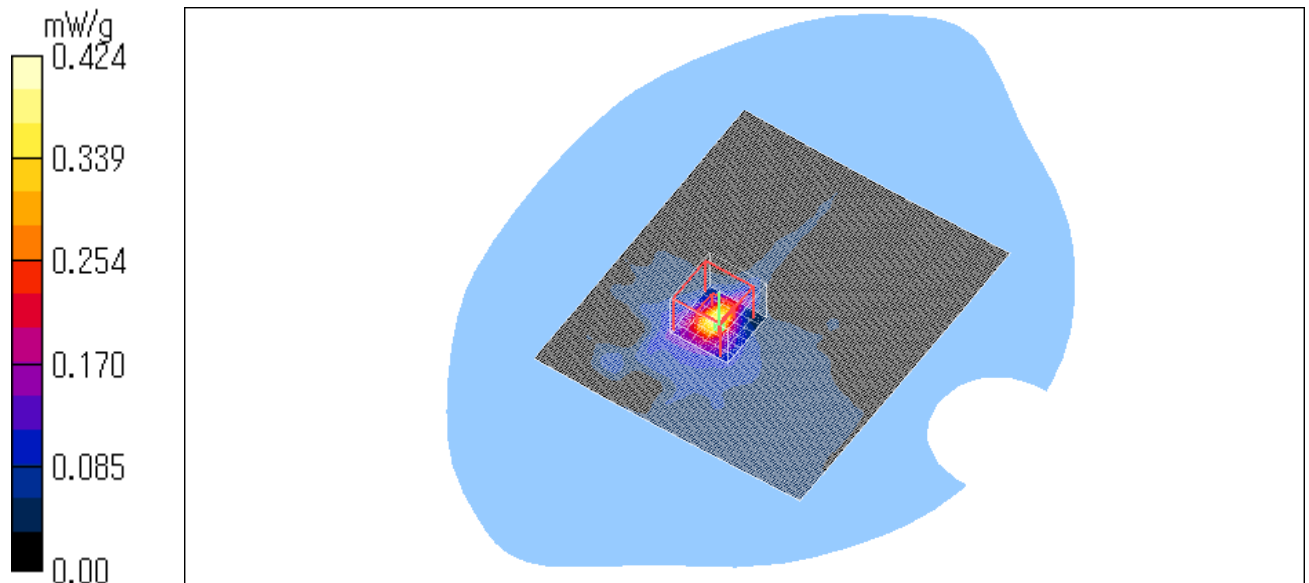
SAR(1 g) = 0.197 mW/g ; SAR(10 g) = 0.058 mW/g

Maximum value of SAR (measured) = 0.424 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C .

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



PCG-4H2L / Right side / Main Ant / 5745MHz / 11a High band (12Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.28 \text{ mho/m}$; $\epsilon_r = 45.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.12 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 5.81 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 2.95 W/kg

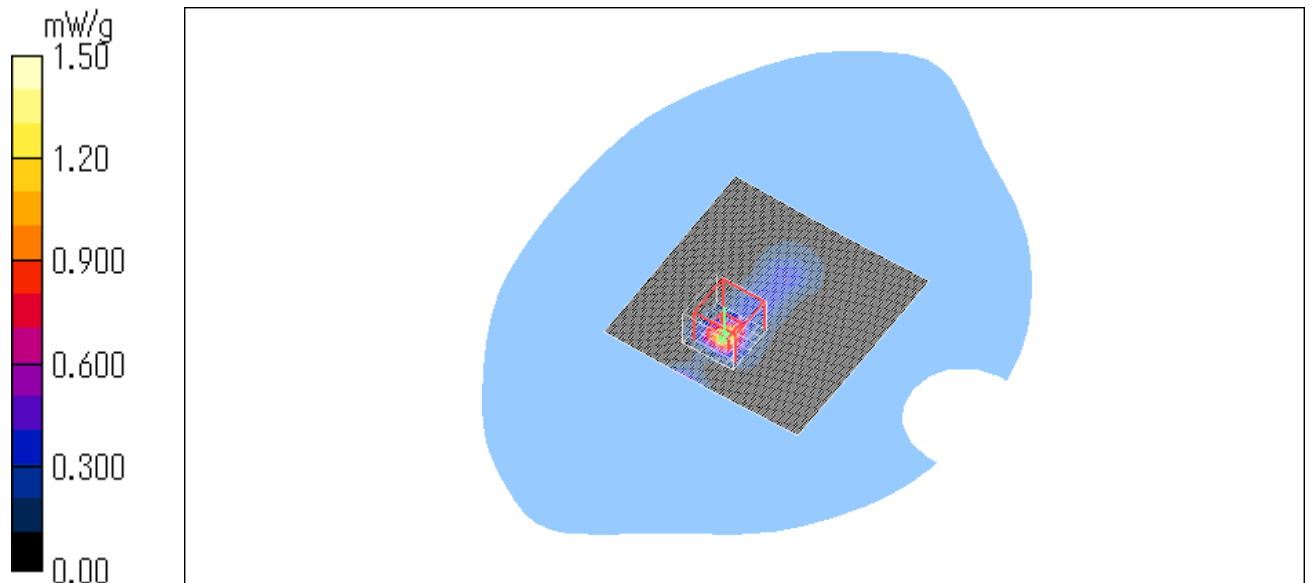
SAR(1 g) = 0.652 mW/g; SAR(10 g) = 0.166 mW/g

Maximum value of SAR (measured) = 1.50 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



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PCG-4H2L / Right side / Main Ant / 5825MHz / 11a High band (12Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.28 \text{ mho/m}$; $\epsilon_r = 45.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.646 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 4.60 V/m; Power Drift = -0.154 dB

Peak SAR (extrapolated) = 1.44 W/kg

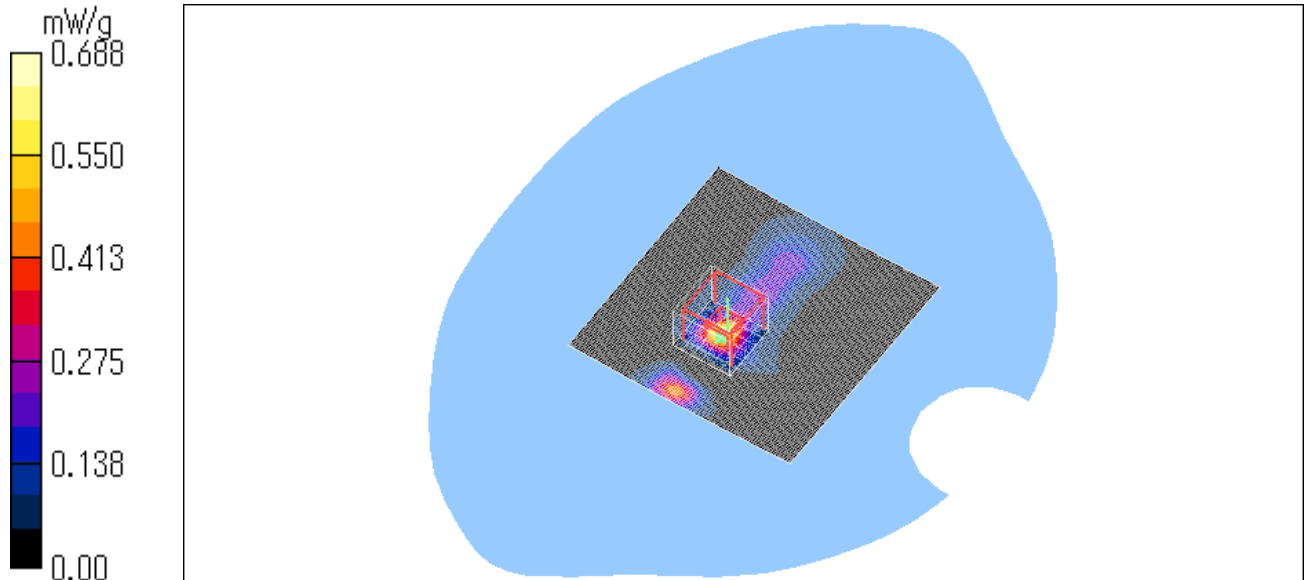
SAR(1 g) = 0.324 mW/g; SAR(10 g) = 0.085 mW/g

Maximum value of SAR (measured) = 0.688 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.6 degree C. , After 23.6 degree C.



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PCG-4H2L / Right side / Main Ant / 5765MHz / 11a High band (12Mbps) / Spaced 10mm

Crest factor : 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.28 \text{ mho/m}$; $\epsilon_r = 45.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.831 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 2.60 V/m ; Power Drift = 0.111 dB

Peak SAR (extrapolated) = 1.29 W/kg

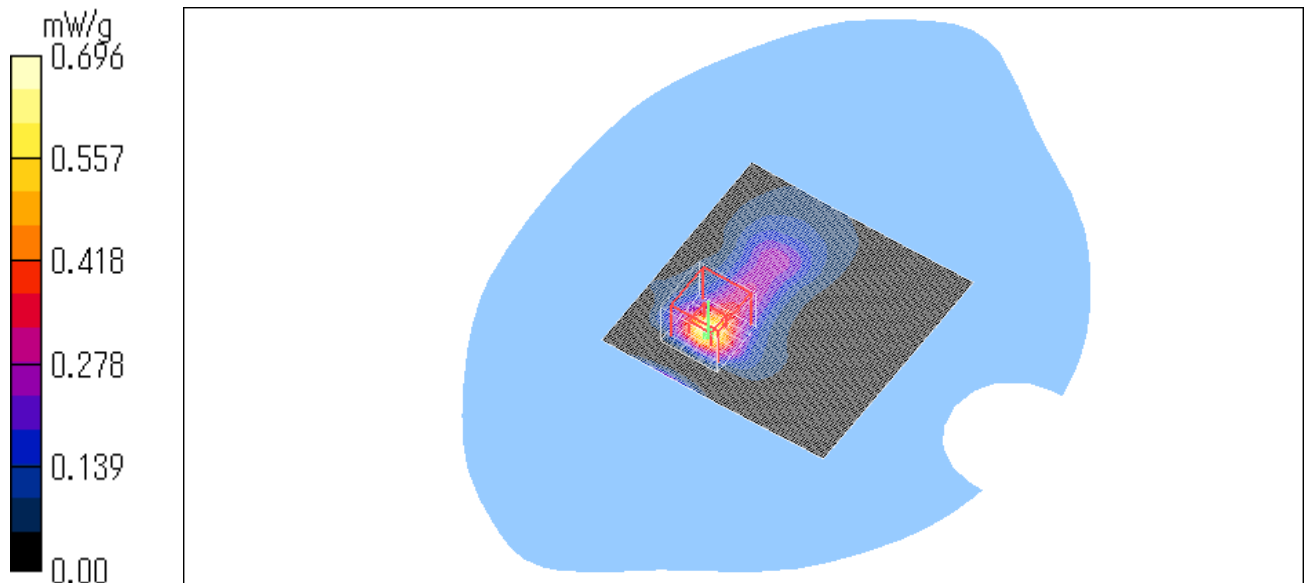
SAR(1 g) = 0.345 mW/g ; SAR(10 g) = 0.114 mW/g

Maximum value of SAR (measured) = 0.696 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.6 degree.C. , After 23.6 degree.C.



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PCG-4H2L / Left side / Aux Ant / 5765MHz / 11a High band (6Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.34 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 9.41 V/m; Power Drift = 0.077 dB

Peak SAR (extrapolated) = 3.80 W/kg

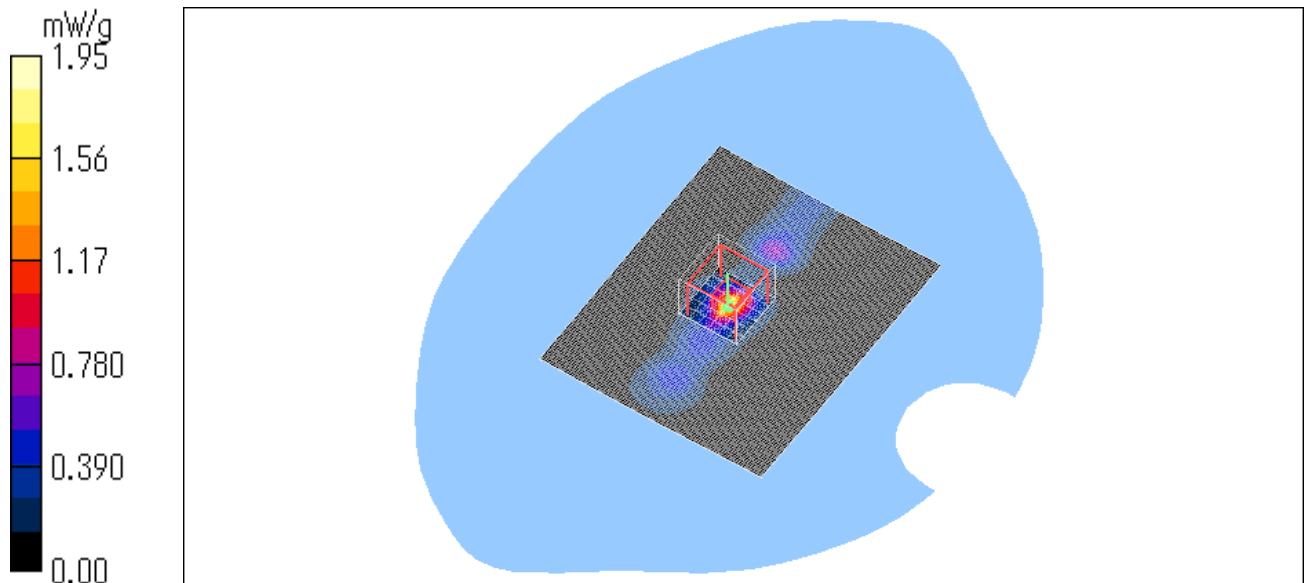
SAR(1 g) = 0.817 mW/g; SAR(10 g) = 0.201 mW/g

Maximum value of SAR (measured) = 1.95 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



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/ Left side / Aux Ant / 5765MHz / 11a High band (12Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 8.89 V/m ; Power Drift = -0.119 dB

Peak SAR (extrapolated) = 3.82 W/kg

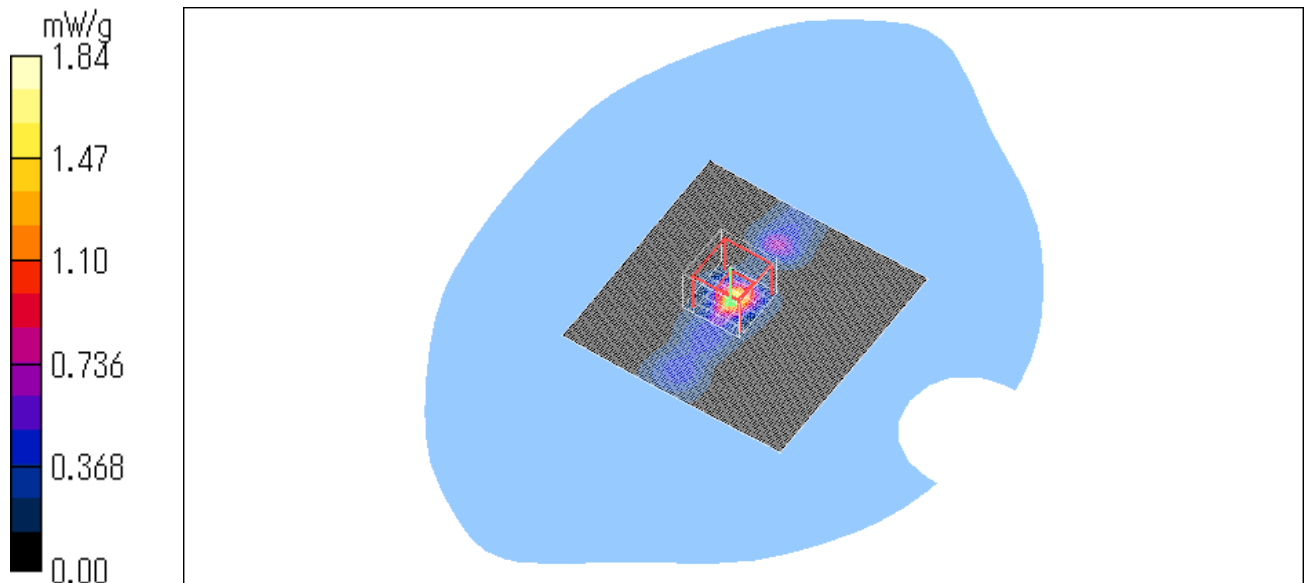
SAR(1 g) = 0.806 mW/g ; SAR(10 g) = 0.198 mW/g

Maximum value of SAR (measured) = 1.84 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C .

Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



PCG-4H2L / Left side / Aux Ant / 5765MHz / 11a High band (24Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 8.22 V/m ; Power Drift = -0.098 dB

Peak SAR (extrapolated) = 3.52 W/kg

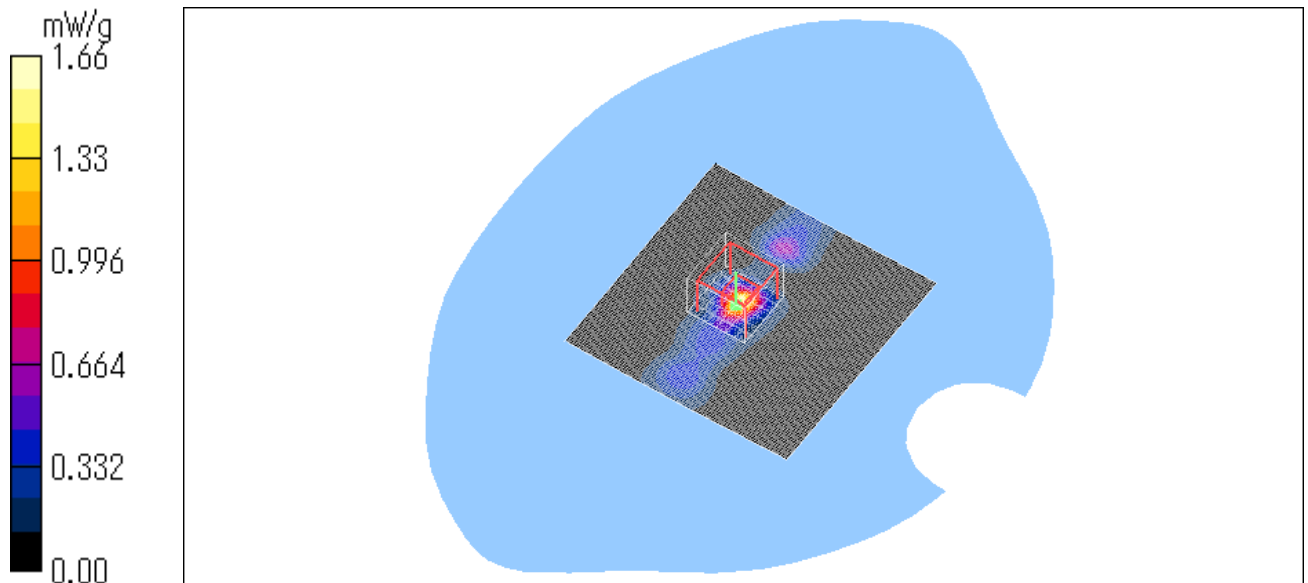
SAR(1 g) = 0.736 mW/g ; SAR(10 g) = 0.181 mW/g

Maximum value of SAR (measured) = 1.66 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



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PCG-4H2L / Left side / Aux Ant / 5765MHz / 11a High band (54Mbps) / Spaced 5mm

Crest factor: 2

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.862 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 6.57 V/m; Power Drift = 0.150 dB

Peak SAR (extrapolated) = 2.43 W/kg

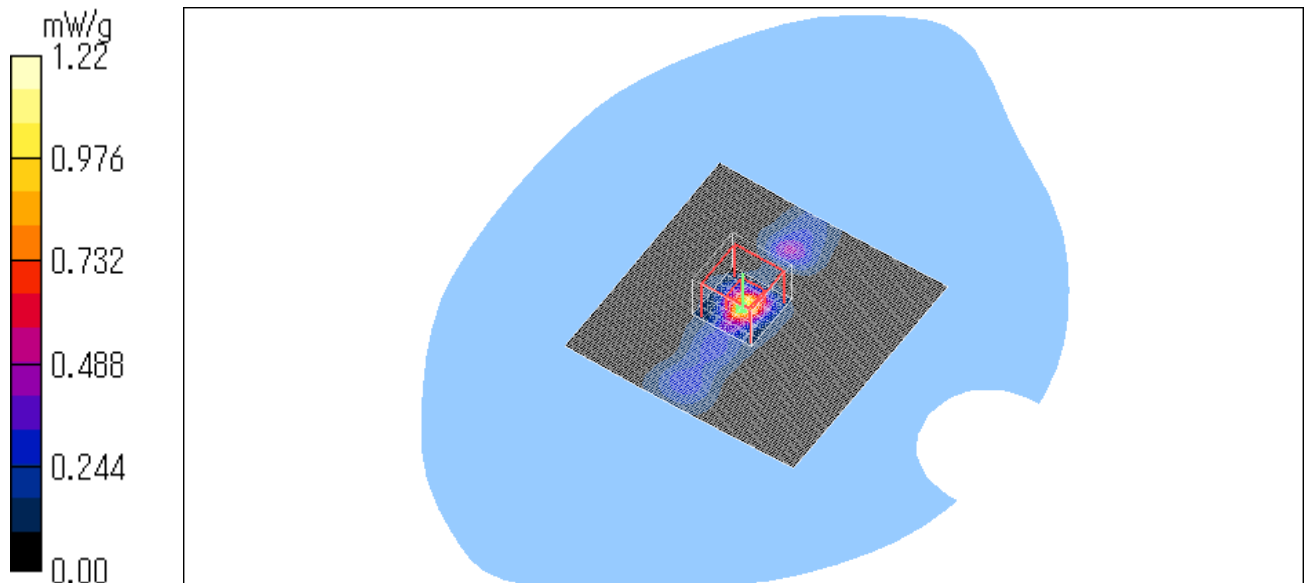
SAR(1 g) = 0.521 mW/g; SAR(10 g) = 0.127 mW/g

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

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



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PCG-4H2L / Left Bottom / Aux Ant / 5765MHz / 11a High band (6Mbps)

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (141x141x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.090 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 1.96 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 0.247 W/kg

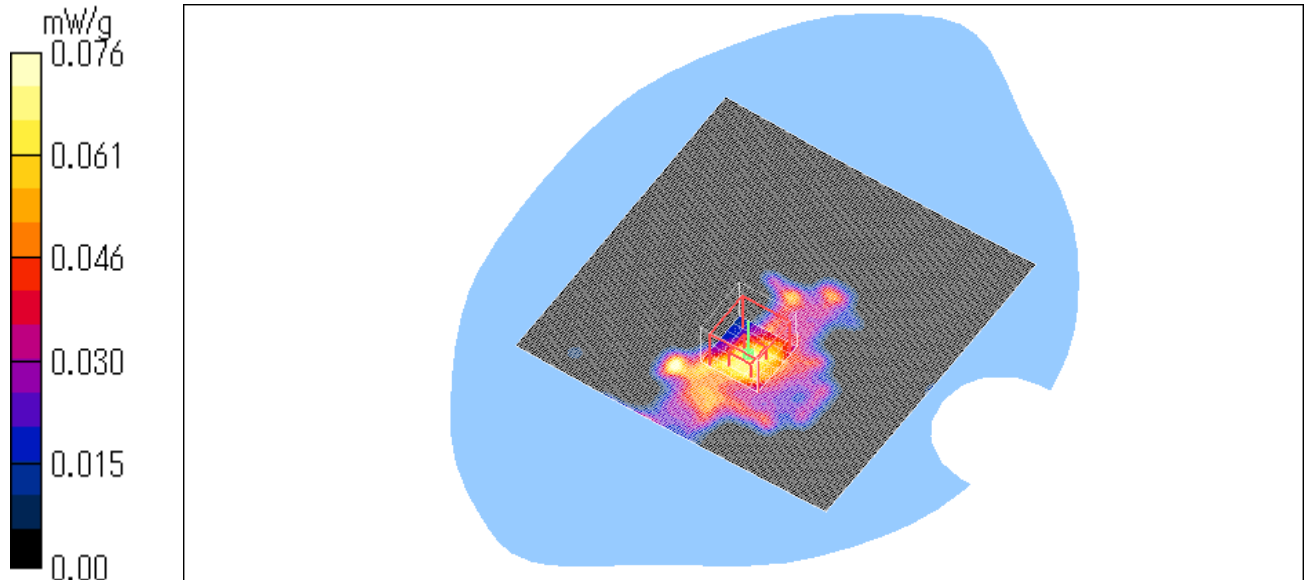
SAR(1 g) = 0.042 mW/g; SAR(10 g) = 0.020 mW/g

Maximum value of SAR (measured) = 0.076 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



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PCG-4H2L / Left Top / Aux Ant / 5765MHz / 11a High band (6Mbps)

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (141x141x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.366 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 4.14 V/m ; Power Drift = 0.222 dB

Peak SAR (extrapolated) = 0.604 W/kg

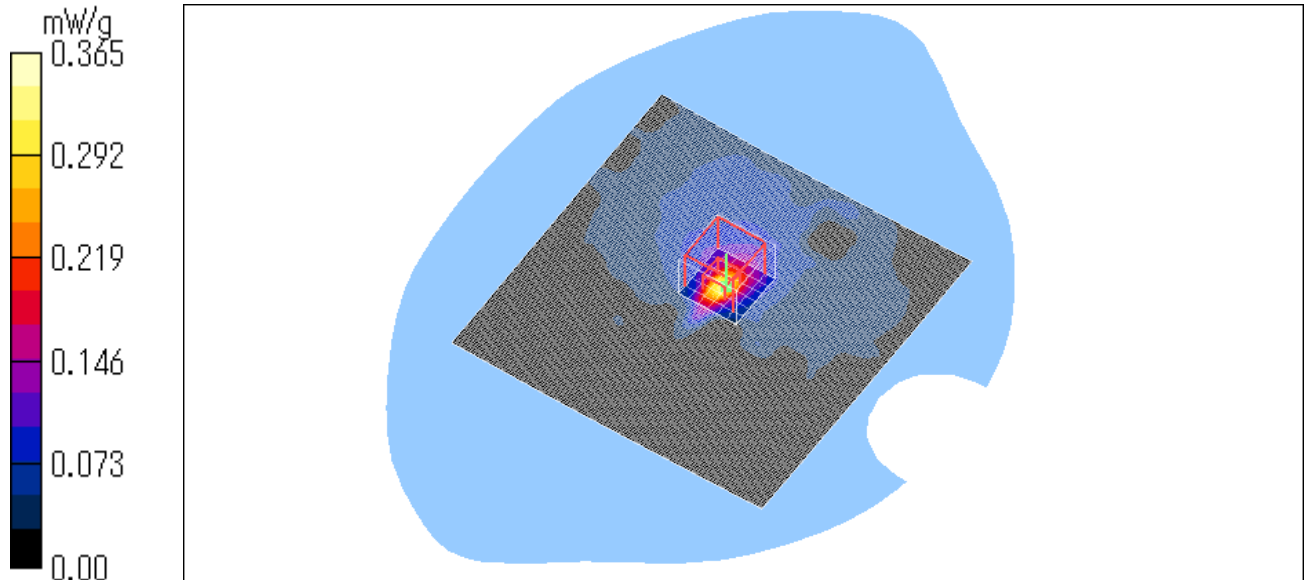
SAR(1 g) = 0.136 mW/g ; SAR(10 g) = 0.043 mW/g

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

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C .

Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



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PCG-4H2L / Left Back of LCD / Aux Ant / 5765MHz / 11a High band (6Mbps) / Spaced 15mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.548 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 1.47 V/m ; Power Drift = 0.190 dB

Peak SAR (extrapolated) = 0.912 W/kg

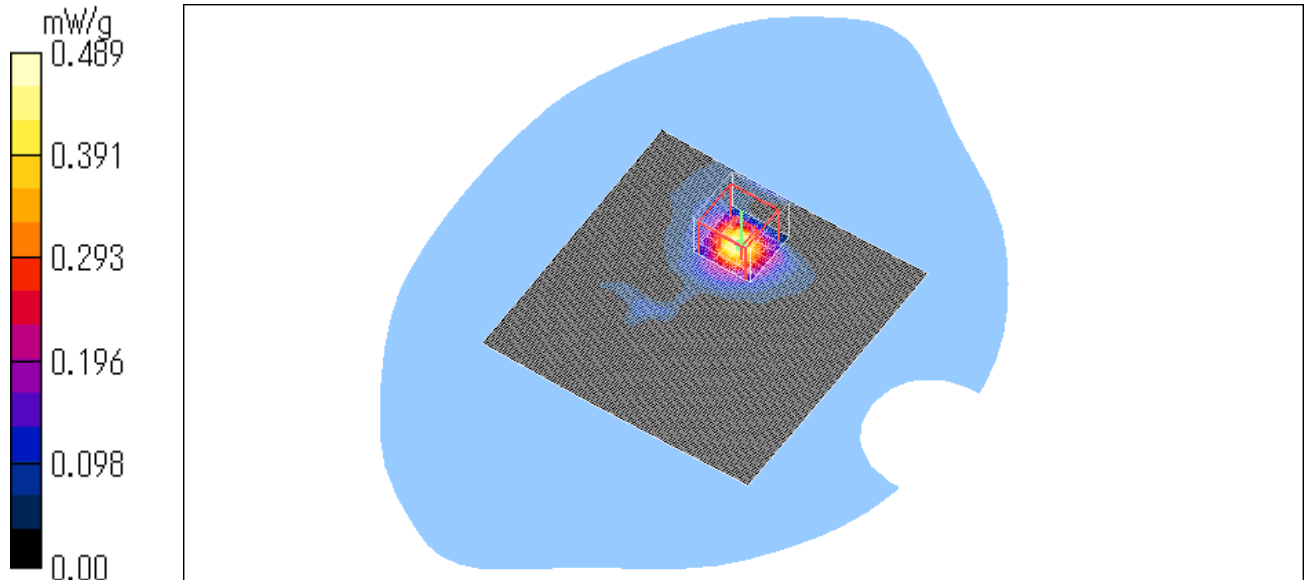
SAR(1 g) = 0.252 mW/g ; SAR(10 g) = 0.085 mW/g

Maximum value of SAR (measured) = 0.489 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



PCG-4H2L / Left Side / Aux Ant / 5745MHz / 11a High band (6Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.89 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 9.65 V/m; Power Drift = -0.118 dB

Peak SAR (extrapolated) = 5.15 W/kg

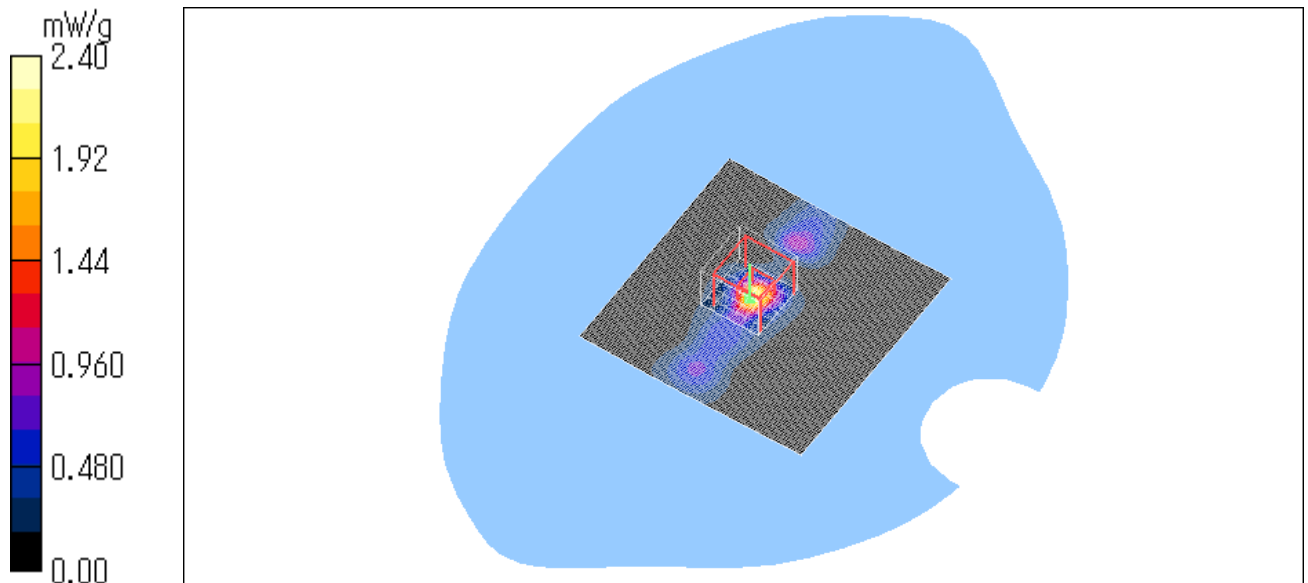
SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.275 mW/g.

Maximum value of SAR (measured) = 2.40 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



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PCG-4H2L / Left Side / Aux Ant / 5745MHz / 11a High band (6Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DAS4 (High Precision Assessment)

DAS4 Configuration:

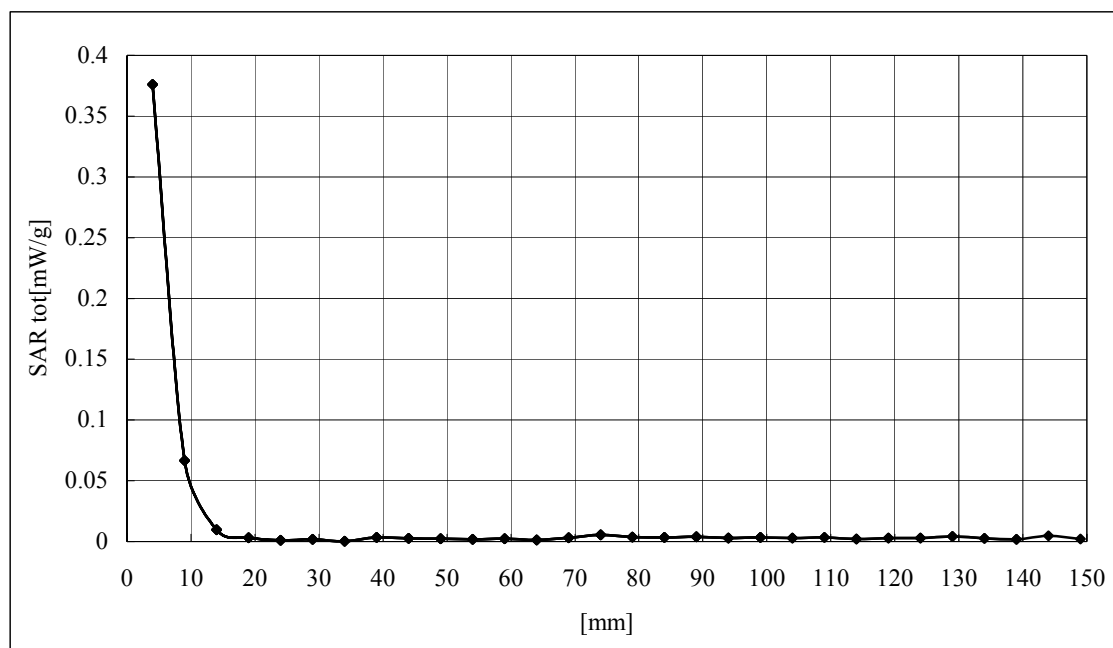
Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DAS4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145



PCG-4H2L / Left Side / Aux Ant / 5825MHz / 11a High band (6Mbps) / Spaced 5mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (101x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.61 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 8.61 V/m; Power Drift = -0.231 dB

Peak SAR (extrapolated) = 4.44 W/kg

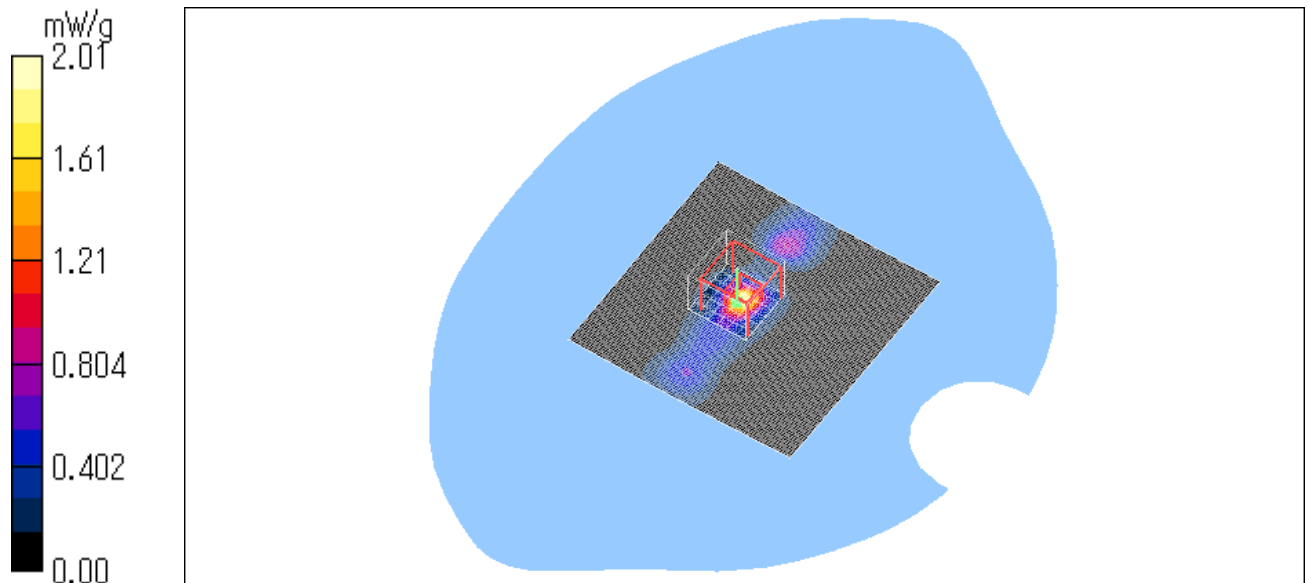
SAR(1 g) = 0.923 mW/g; SAR(10 g) = 0.221 mW/g

Maximum value of SAR (measured) = 2.01 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.8 degree C. , After 23.8 degree C.



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PCG-4H2L / Left Side / Aux Ant / 5745MHz / 11a High band (6Mbps) / Spaced 10mm

Crest factor: 1

Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.29 \text{ mho/m}$; $\epsilon_r = 45.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(4.32, 4.32, 4.32); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (121x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 1.34 mW/g

Zoom Scan (7x7x8)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 5.31 V/m; Power Drift = 0.088 dB

Peak SAR (extrapolated) = 2.52 W/kg

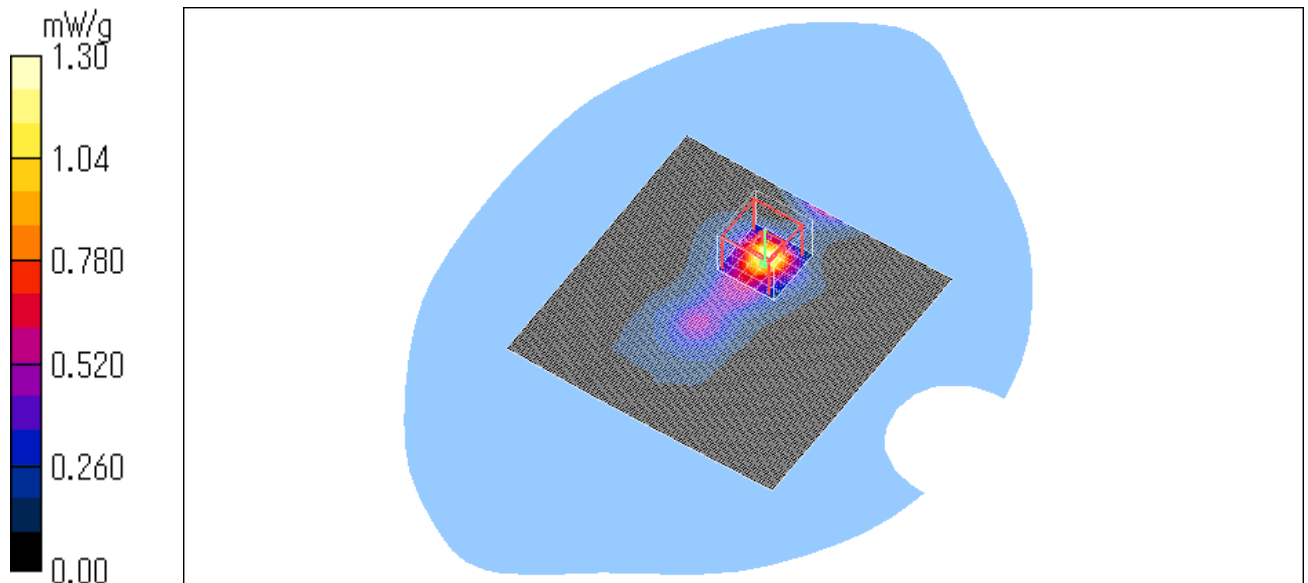
SAR(1 g) = 0.663 mW/g; SAR(10 g) = 0.210 mW/g

Maximum value of SAR (measured) = 1.30 mW/g

Test Date = 04/09/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 23.5 degree C. , After 23.5 degree C.



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4. Measurement data (Bluetooth)

PCG-4H2L / Right Back / 2441MHz / BT

Crest factor: 1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(7.72, 7.72, 7.72); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (91x101x1): Measurement grid: $dx=20$ mm, $dy=20$ mm

Maximum value of SAR (interpolated) = 0.00 mW/g

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

Reference Value = 0.373 V/m; Power Drift = -0.221 dB

Peak SAR (extrapolated) = 0.00 W/kg

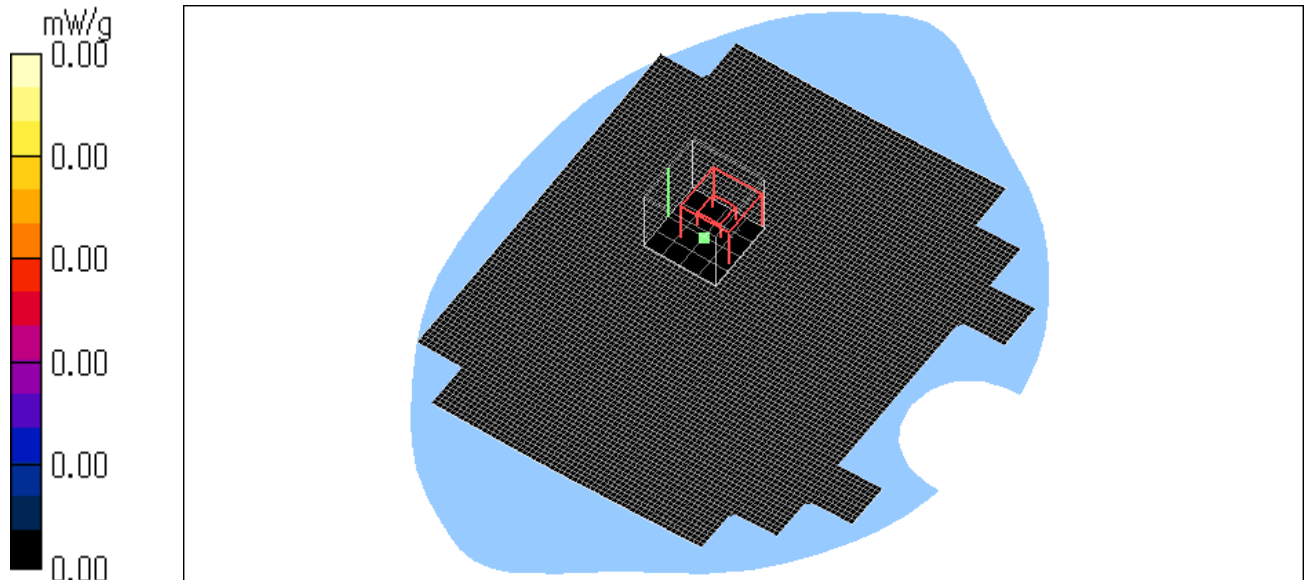
SAR(1 g) = 7.48e-005 mW/g; SAR(10 g) = 8.72e-006 mW/g

Maximum value of SAR (measured) = 0.00 mW/g

Test Date = 04/05/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



PCG-4H2L / Right Side / 2441MHz / BT

Crest factor: 1

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.96 \text{ mho/m}$; $\epsilon_r = 50.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(7.72, 7.72, 7.72); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (71x81x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

Maximum value of SAR (interpolated) = 0.00 mW/g

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

Reference Value = 0.577 V/m ; Power Drift = -0.233 dB

Peak SAR (extrapolated) = 0.00 W/kg

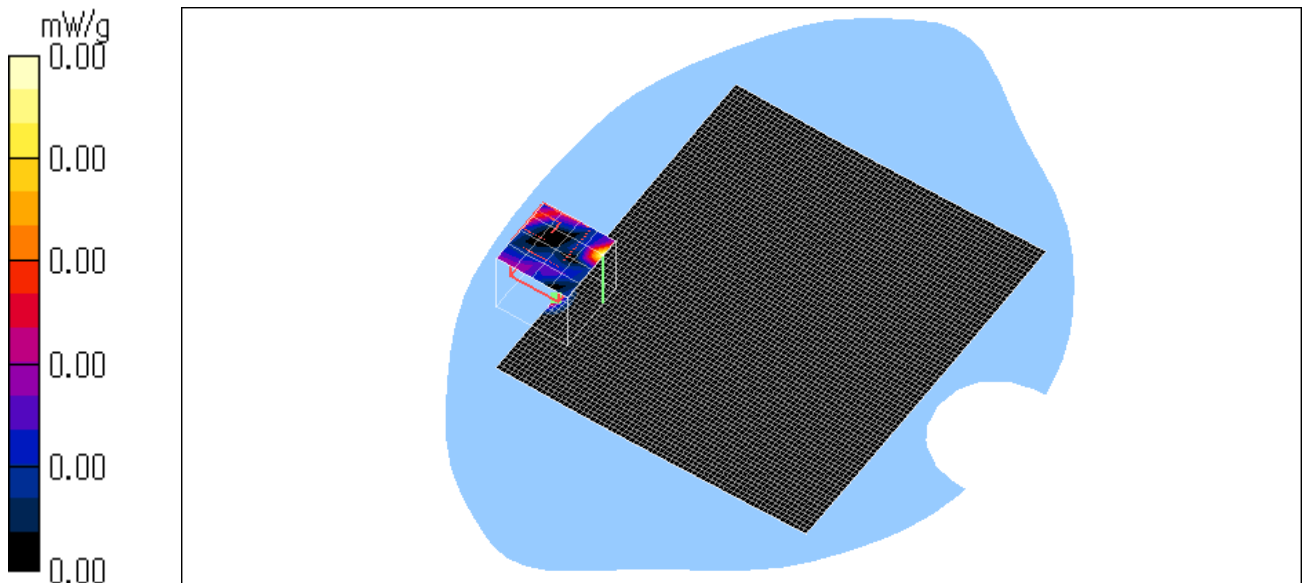
SAR(1 g) = $6.29\text{e-}005 \text{ mW/g}$; SAR(10 g) = $1.17\text{e-}005 \text{ mW/g}$

Maximum value of SAR (measured) = 0.00 mW/g

Test Date = 04/05/06

Ambient Temperature = 24.5 degree.C .

Liquid Temperature = Before 24.0 degree C. , After 24.0 degree C.



PCG-4H2L / Right Bottom / 2441MHz / BT

Crest factor: 1

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.96 \text{ mho/m}$; $\epsilon_r = 50.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(7.72, 7.72, 7.72); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (71x91x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

Maximum value of SAR (interpolated) = 0.00 mW/g

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

Reference Value = 0.821 V/m ; Power Drift = -0.192 dB

Peak SAR (extrapolated) = 0.00 W/kg

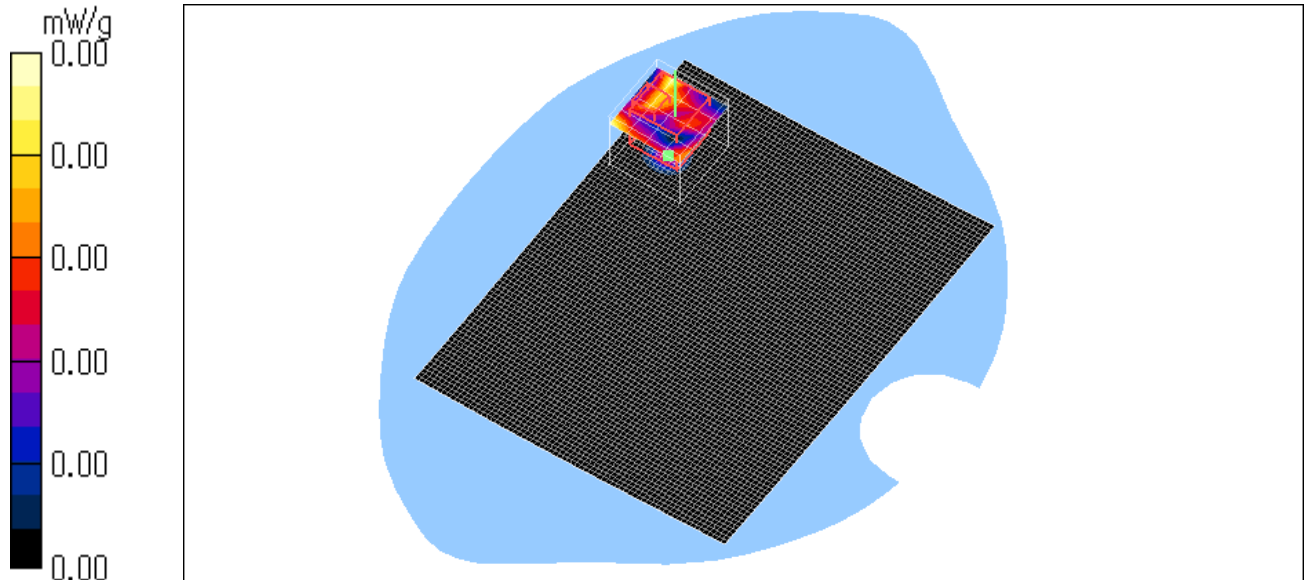
SAR(1 g) = $3.08\text{e-}005 \text{ mW/g}$; SAR(10 g) = $3.83\text{e-}006 \text{ mW/g}$

Maximum value of SAR (measured) = 0.00 mW/g

Test Date = 04/05/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.1 degree C. , After 24.1 degree C.



PCG-4H2L / Surface of key board / 2441MHz / BT

Crest factor: 1

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.96 \text{ mho/m}$; $\epsilon_r = 50.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(7.72, 7.72, 7.72); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (91x101x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

Maximum value of SAR (interpolated) = 0.048 mW/g

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

Reference Value = 1.01 V/m ; Power Drift = 0.152 dB

Peak SAR (extrapolated) = 0.106 W/kg

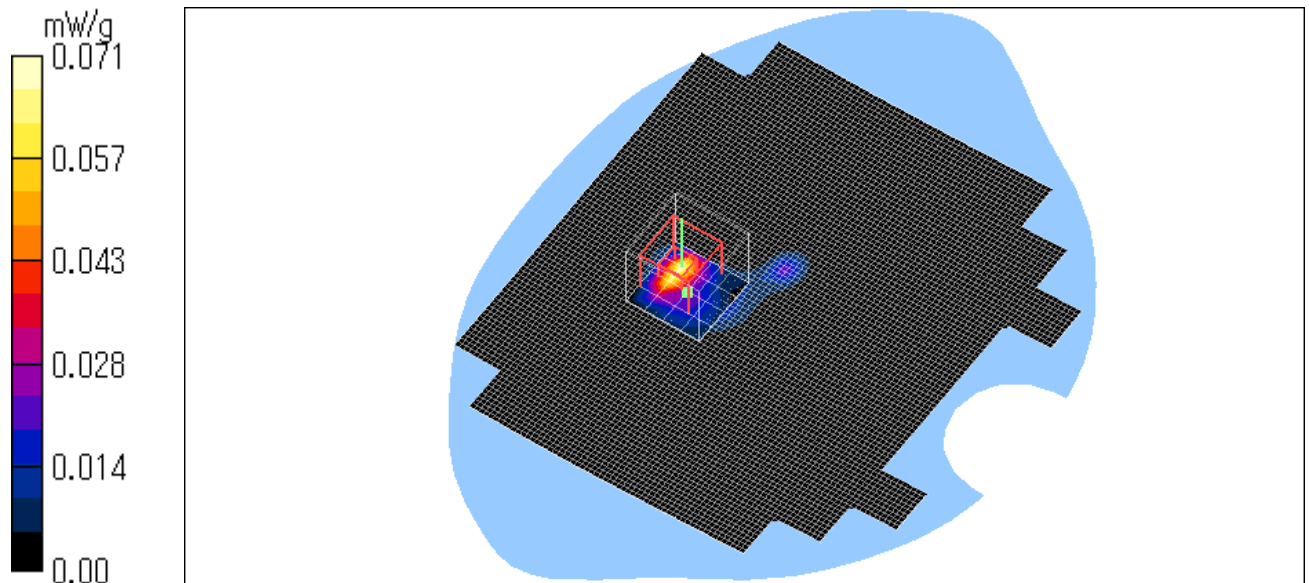
SAR(1 g) = 0.037 mW/g ; SAR(10 g) = 0.014 mW/g

Maximum value of SAR (measured) = 0.071 mW/g

Test Date = 04/05/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.1 degree C. , After 24.1 degree C.



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PCG-4H2L / Surface of key board / 2402MHz / BT

Crest factor: 1

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.96 \text{ mho/m}$; $\epsilon_r = 50.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(7.72, 7.72, 7.72); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (71x81x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

Maximum value of SAR (interpolated) = 0.041 mW/g

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

Reference Value = 2.61 V/m; Power Drift = 0.165 dB

Peak SAR (extrapolated) = 0.063 W/kg

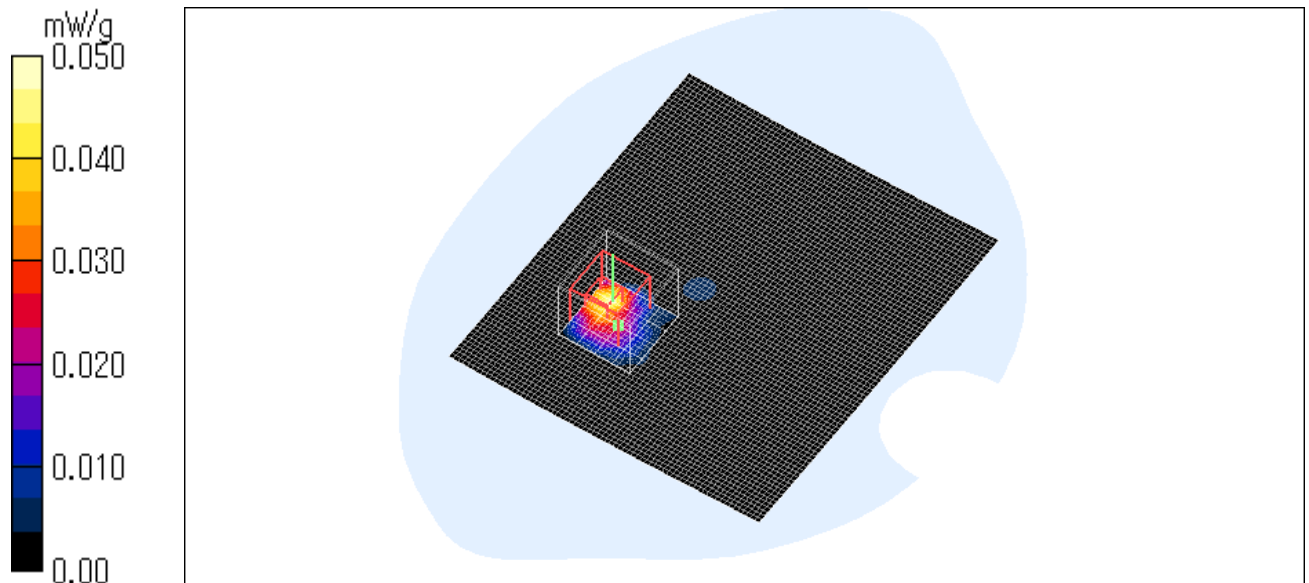
SAR(1 g) = 0.032 mW/g; SAR(10 g) = 0.013 mW/g

Maximum value of SAR (measured) = 0.050 mW/g

Test Date = 04/05/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.2 degree C. , After 24.2 degree C.



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PCG-4H2L / Surface of key board / 2480MHz / BT

Crest factor: 1

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.96 \text{ mho/m}$; $\epsilon_r = 50.3$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

Probe: EX3DV3 - SN3507; ConvF(7.72, 7.72, 7.72); Calibrated: 2005/04/12

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn509; Calibrated: 2005/05/26

Phantom: SAM 1196

Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 145

Area Scan (71x81x1): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$

Maximum value of SAR (interpolated) = 0.081 mW/g

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

Reference Value = 1.70 V/m ; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.073 W/kg

SAR(1 g) = 0.030 mW/g ; SAR(10 g) = 0.011 mW/g

Maximum value of SAR (measured) = 0.046 mW/g

Test Date = 04/05/06

Ambient Temperature = 24.5 degree.C.

Liquid Temperature = Before 24.2 degree C. , After 24.2 degree C.

