
Appendix for the Report

Dosimetric Assessment of the Bang & Olufson BeoCom4 Base (FCC ID: BV5BEOCOM4BS)

According to the FCC Requirements

SAR Distribution Plots

June 28, 2006
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The test results only relate to the items tested.
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1 SAR Distribution Plots, Body Measurements, Antenna 1

Test Laboratory: Imst GmbH; File Name: [Beoydhm 1 Ant1.da4](#)

DUT: B&O; Type: Beocom 4 UPCS;

Program Name: Body Worn

Communication System: DECT US; Frequency: 1924.99 MHz; Duty Cycle: 1:24

Medium parameters used (extrapolated): $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.67, 7.67, 7.67); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (13x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.130 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.94 V/m; Power Drift = 0.117 dB

Peak SAR (extrapolated) = 0.208 W/kg

SAR(1 g) = 0.125 mW/g; SAR(10 g) = 0.064 mW/g

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

Body Worn/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.94 V/m; Power Drift = 0.117 dB

Peak SAR (extrapolated) = 0.182 W/kg

SAR(1 g) = 0.101 mW/g; SAR(10 g) = 0.044 mW/g

Maximum value of SAR (measured) = 0.135 mW/g

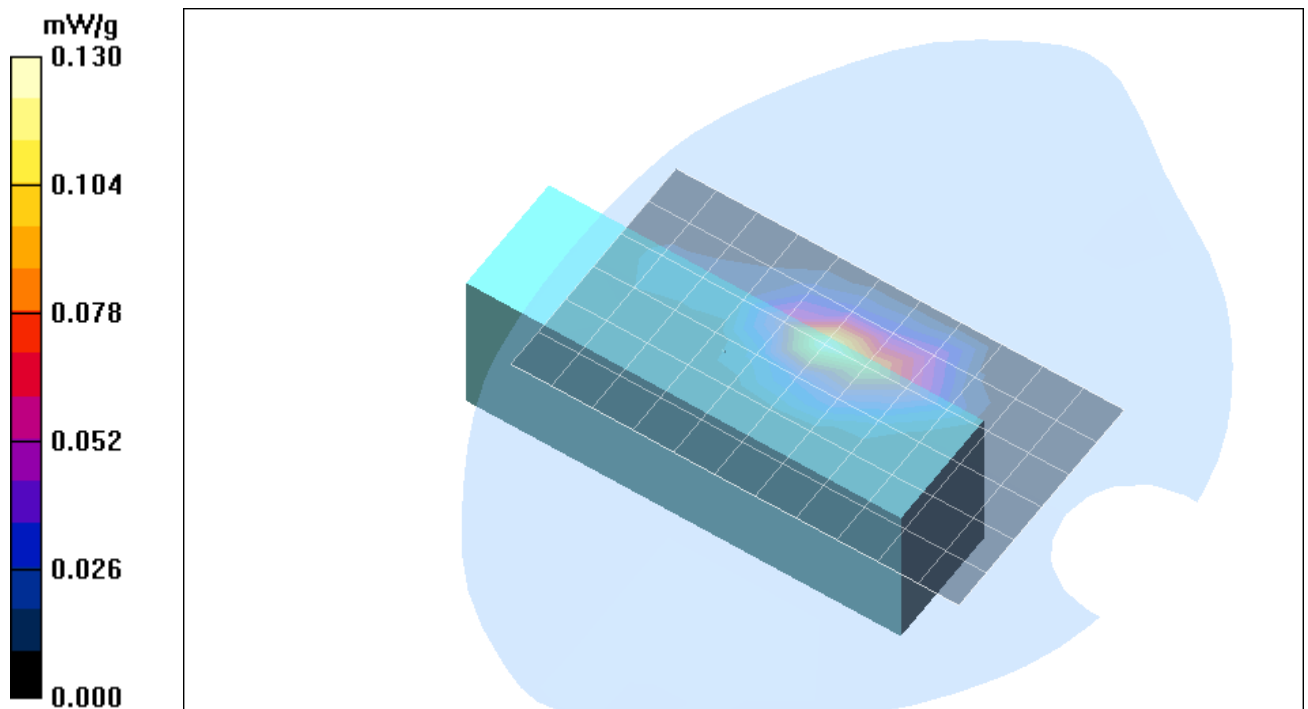


Fig. 1: SAR distribution for DECT US, channel 2, Position 1 (June 26, 2006; Ambient Temperature: 22.0°C; Liquid Temperature: 21.4°C).

Test Laboratory: Imst GmbH; **File Name:** [Beoydhm 2 Ant1.da4](#)

DUT: B&O; Type: Beocom 4 UPCS;

Program Name: Body Worn

Communication System: DECT US; Frequency: 1924.99 MHz; Duty Cycle: 1:24

Medium parameters used (extrapolated): $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.67, 7.67, 7.67); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (13x7x1): Measurement grid: dx=15mm, dy=15mm

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

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.83 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.099 W/kg

SAR(1 g) = 0.057 mW/g; SAR(10 g) = 0.030 mW/g

Maximum value of SAR (measured) = 0.063 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.83 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.095 W/kg

SAR(1 g) = 0.043 mW/g; SAR(10 g) = 0.018 mW/g

Maximum value of SAR (measured) = 0.057 mW/g

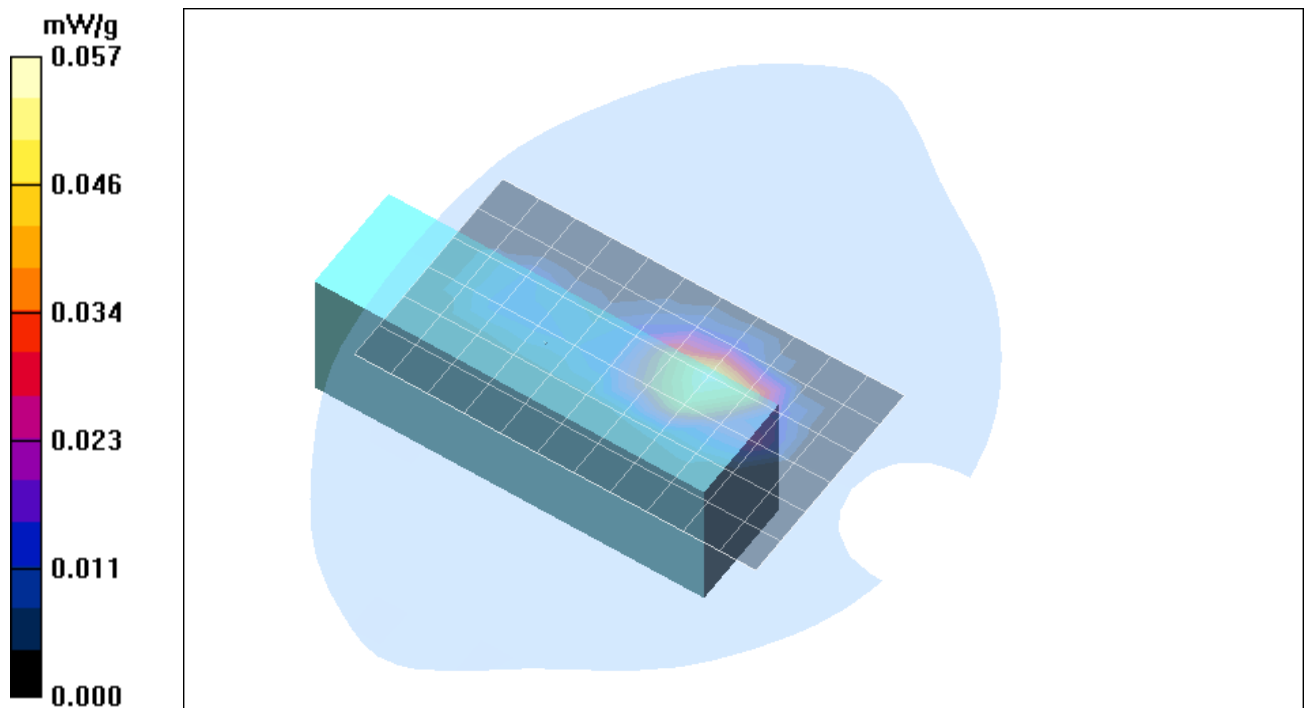


Fig. 2: SAR distribution for DECT US, channel 2, Position 2 (June 26, 2006; Ambient Temperature: 22.0°C; Liquid Temperature: 21.5°C).

Test Laboratory: Imst GmbH; **File Name:** [Beoydhm 3 Ant1.da4](#)

DUT: B&O; **Type:** Beocom 4 UPCS;

Program Name: Body Worn

Communication System: DECT US; Frequency: 1924.99 MHz; Duty Cycle: 1:24

Medium parameters used (extrapolated): $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.67, 7.67, 7.67); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (13x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.003 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0.619 V/m; Power Drift = 0.191 dB

Peak SAR (extrapolated) = 0.012 W/kg

SAR(1 g) = 0.0032 mW/g; SAR(10 g) = 0.0009 mW/g

Maximum value of SAR (measured) = 0.004 mW/g

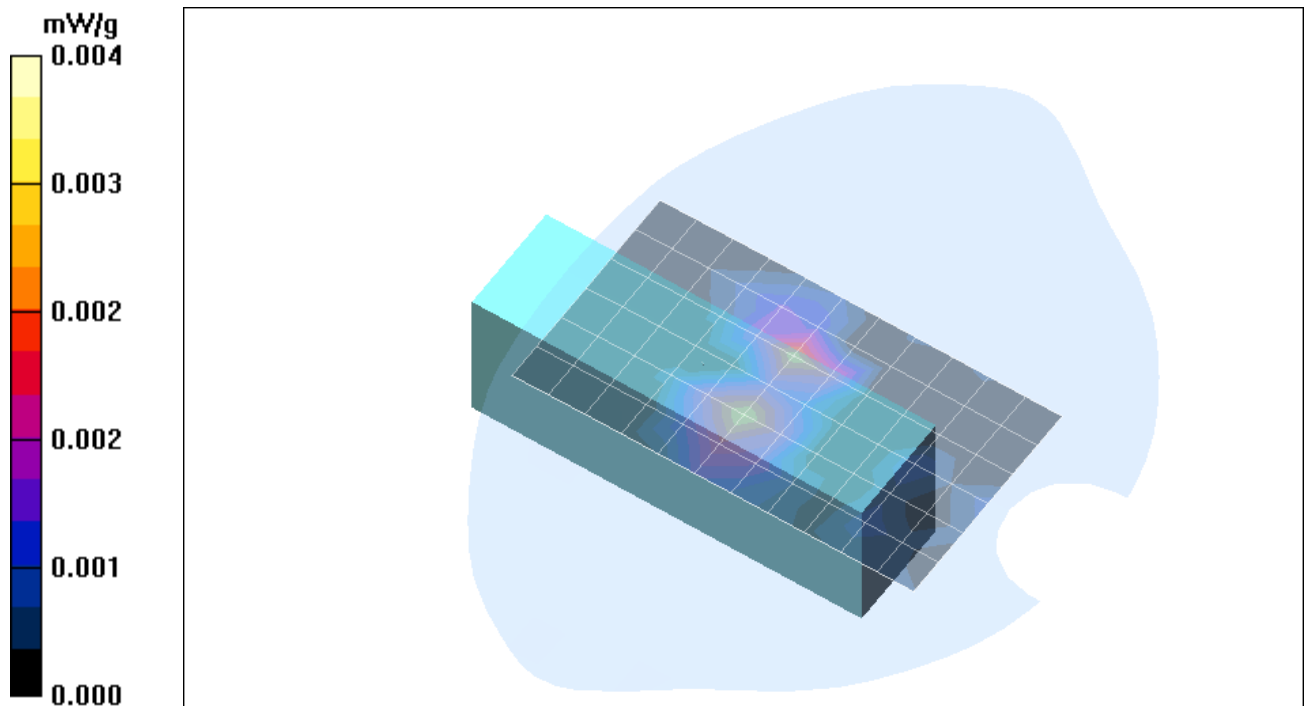


Fig. 3: SAR distribution for DECT US, channel 2, Position 3 (June 26, 2006; Ambient Temperature: 22.1° C; Liquid Temperature : 21.5° C).

Test Laboratory: Imst GmbH; **File Name:** [Beoydhm 4 Ant1.da4](#)

DUT: B&O; Type: Beocom 4 UPCS;

Program Name: Body Worn

Communication System: DECT US; Frequency: 1924.99 MHz; Duty Cycle: 1:24

Medium parameters used (extrapolated): $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.67, 7.67, 7.67); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (13x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.055 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.93 V/m; Power Drift = 0.157 dB

Peak SAR (extrapolated) = 0.097 W/kg

SAR(1 g) = 0.0543 mW/g; SAR(10 g) = 0.027 mW/g

Maximum value of SAR (measured) = 0.061 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.93 V/m; Power Drift = 0.157 dB

Peak SAR (extrapolated) = 0.062 W/kg

SAR(1 g) = 0.037 mW/g; SAR(10 g) = 0.019 mW/g

Maximum value of SAR (measured) = 0.040 mW/g

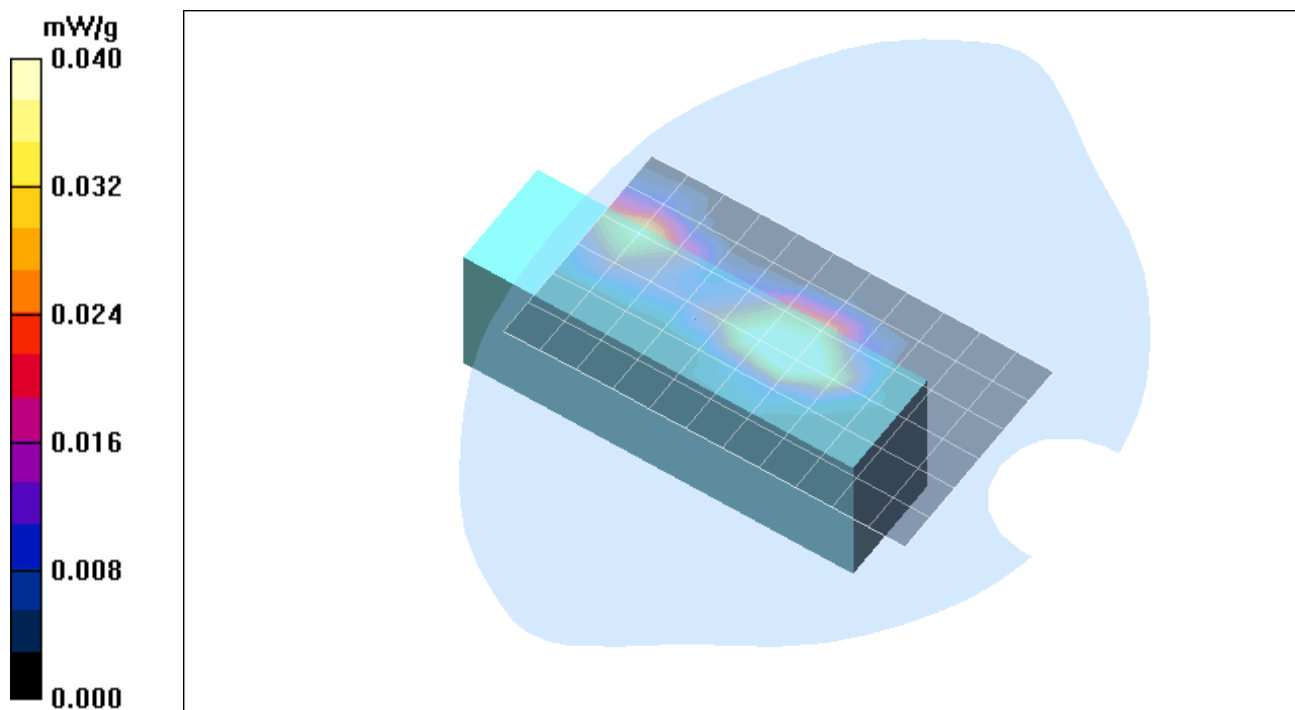


Fig. 4: SAR distribution for DECT US, channel 2, Position 4 (June 26, 2006; Ambient Temperature: 22.1 °C; Liquid Temperature : 21.5° C)

Test Laboratory: Imst GmbH; **File Name:** [Beoydhm 5 Ant1.da4](#)

DUT: B&O; Type: Beocom 4 UPCS; Program Name: Body Worn

Communication System: DECT US; Frequency: 1924.99 MHz; Duty Cycle: 1:24

Medium parameters used (extrapolated): $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.67, 7.67, 7.67); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.016 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.36 V/m; Power Drift = -0.097 dB

Peak SAR (extrapolated) = 0.028 W/kg

SAR(1 g) = 0.016 mW/g; SAR(10 g) = 0.00599 mW/g

Maximum value of SAR (measured) = 0.020 mW/g

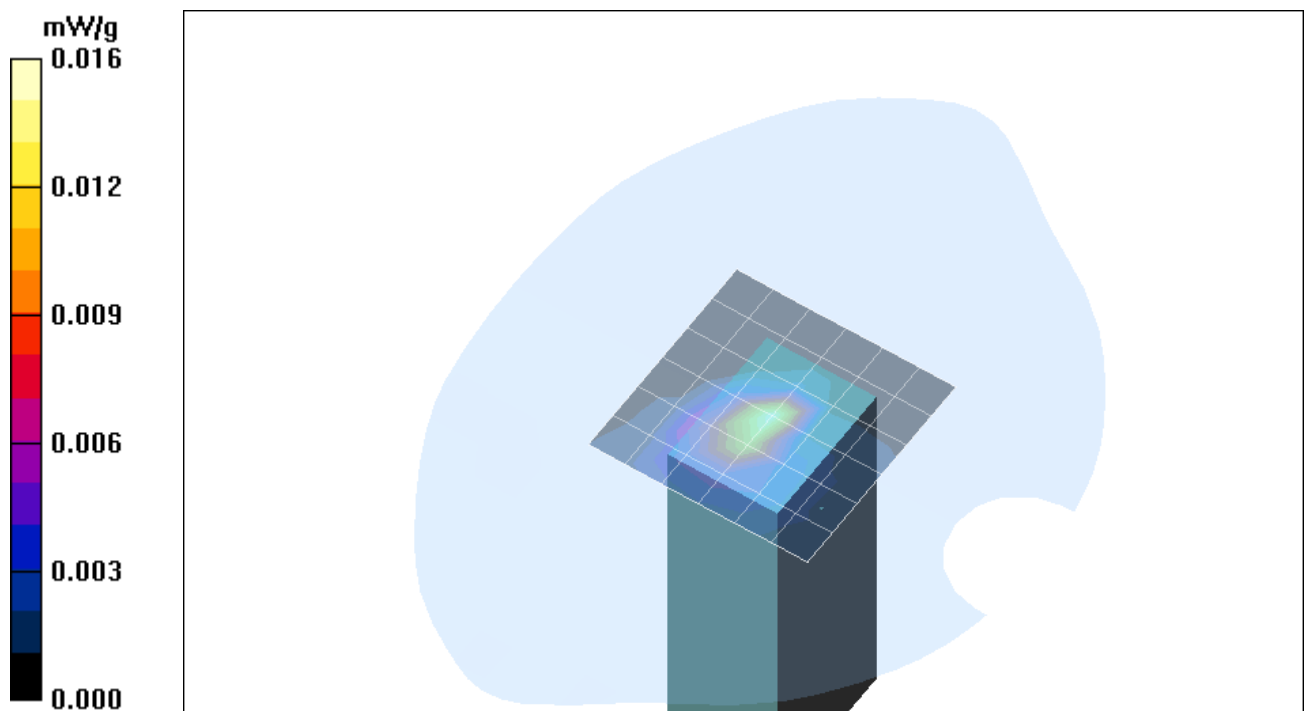


Fig. 5: SAR distribution for DECT US, channel 2, Position 5 (June 26, 2006; Ambient Temperature: 22.1 °C; Liquid Temperature : 21.4° C)

2 SAR Distribution Plots, Body Measurements, Antenna 2

Test Laboratory: Imst GmbH; File Name: [Beoydhm_1_Ant2.da4](#)

DUT: B&O; Type: Beocom 4 UPCS;

Program Name: Body Worn

Communication System: DECT US; Frequency: 1924.99 MHz; Duty Cycle: 1:24

Medium parameters used (extrapolated): $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.67, 7.67, 7.67); Calibrated: 23.09.2005

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn335; Calibrated: 09.03.2006

- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340

- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (13x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.165 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.99 V/m; Power Drift = 0.164 dB

Peak SAR (extrapolated) = 0.321 W/kg

SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.076 mW/g

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

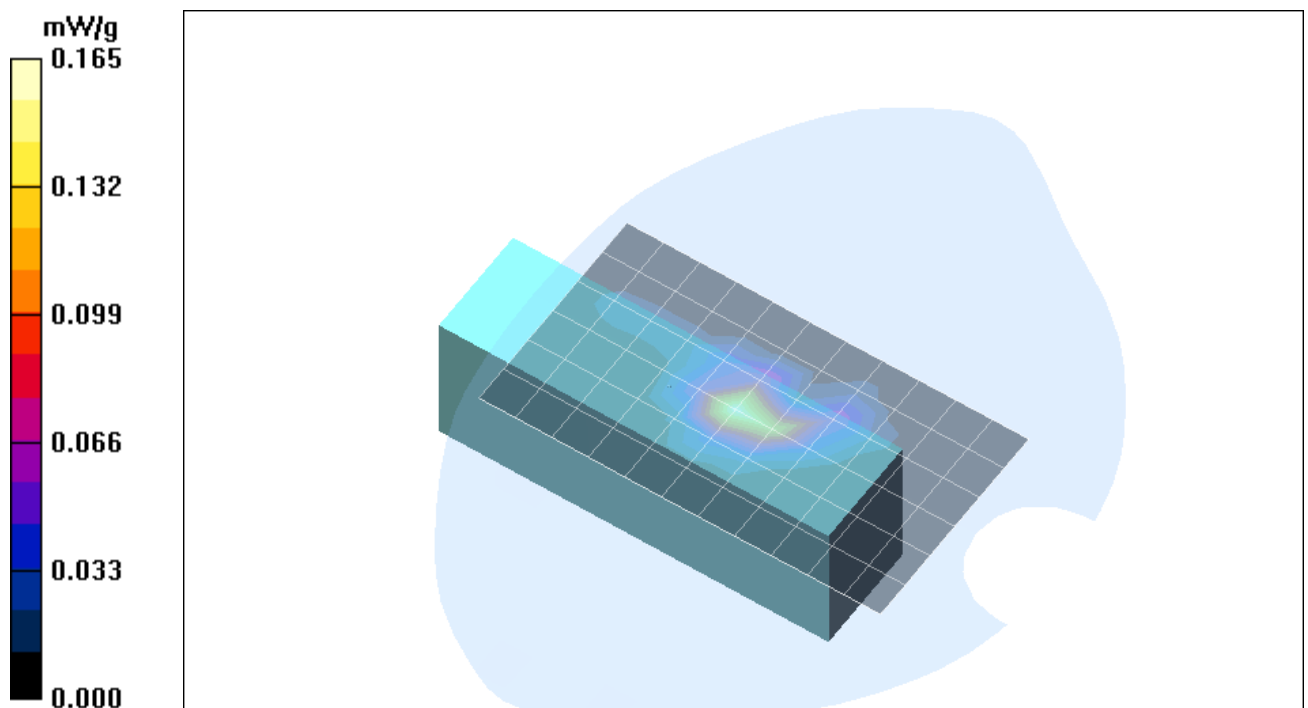


Fig. 6: SAR distribution for DECT US, channel 2, Position 1 (June 26, 2006; Ambient Temperature: 22.0°C; Liquid Temperature: 21.4°C).

Test Laboratory: Imst GmbH; File Name: [Beoydhm 2 Ant2.da4](#)

DUT: B&O; Type: Beocom 4 UPCS;

Program Name: Body Worn

Communication System: DECT US; Frequency: 1924.99 MHz; Duty Cycle: 1:24

Medium parameters used (extrapolated): $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.67, 7.67, 7.67); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (13x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.055 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.22 V/m; Power Drift = -0.156 dB

Peak SAR (extrapolated) = 0.128 W/kg

SAR(1 g) = 0.0539 mW/g; SAR(10 g) = 0.029 mW/g

Maximum value of SAR (measured) = 0.060 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.22 V/m; Power Drift = -0.156 dB

Peak SAR (extrapolated) = 0.247 W/kg

SAR(1 g) = 0.050 mW/g; SAR(10 g) = 0.021 mW/g

Maximum value of SAR (measured) = 0.059 mW/g

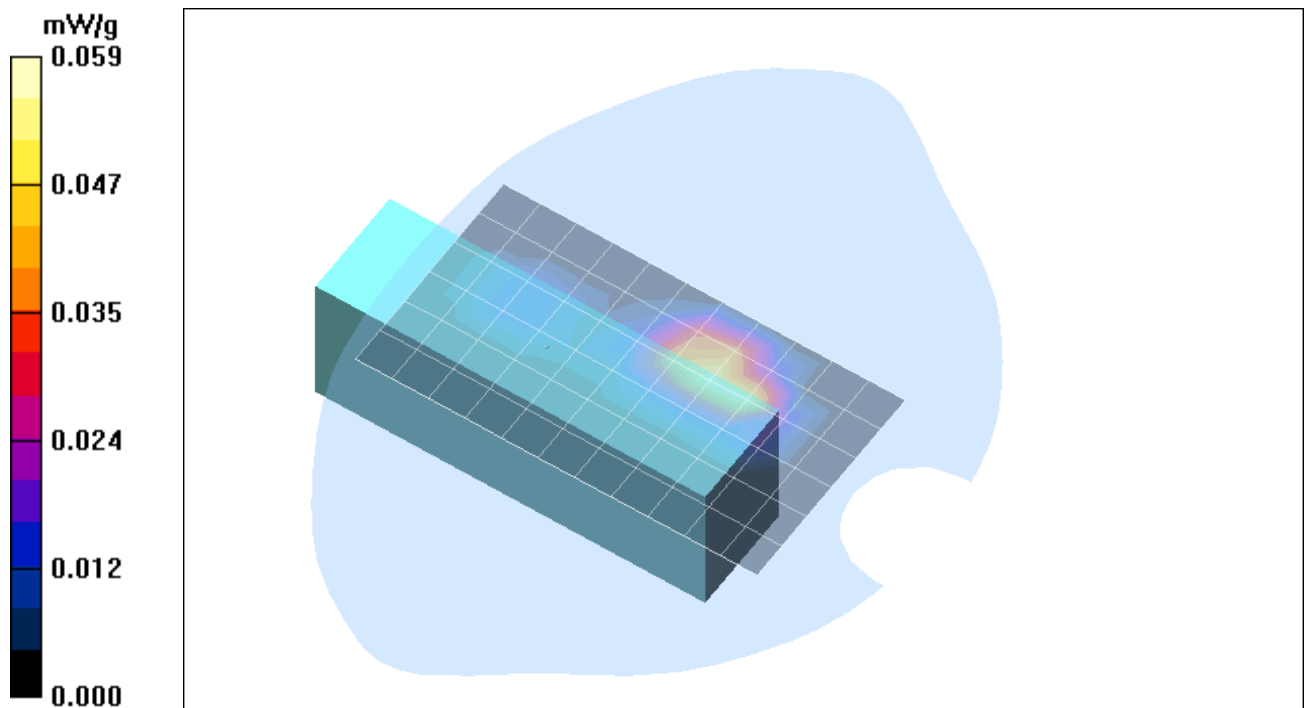


Fig. 7: SAR distribution for DECT US, channel 2, Position 2 (June 26, 2006; Ambient Temperature: 22.0°C; Liquid Temperature: 21.5°C).

Test Laboratory: Imst GmbH; **File Name:** [Beoydhm 3 Ant2.da4](#)

DUT: B&O; Type: Beocom 4 UPCS;

Program Name: Body Worn

Communication System: DECT US; Frequency: 1924.99 MHz; Duty Cycle: 1:24

Medium parameters used (extrapolated): $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.67, 7.67, 7.67); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (13x7x1): Measurement grid: dx=15mm, dy=15mm

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

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.20 V/m; Power Drift = 0.154 dB

Peak SAR (extrapolated) = 0.105 W/kg

SAR(1 g) = 0.0522 mW/g; SAR(10 g) = 0.022 mW/g

Maximum value of SAR (measured) = 0.062 mW/g

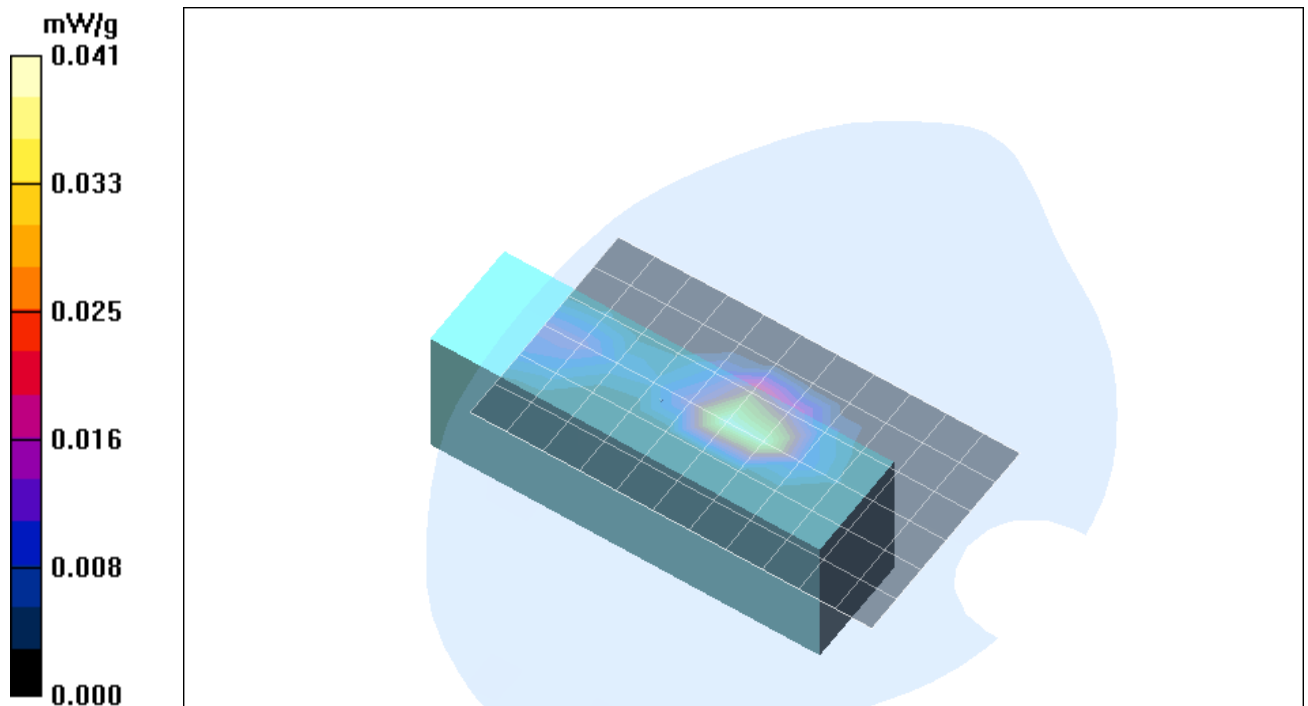


Fig. 8: SAR distribution for DECT US, channel 2, Position 3 (June 26, 2006; Ambient Temperature: 22.1° C; Liquid Temperature : 21.5° C).

Test Laboratory: Imst GmbH; File Name: [Beoydhm 4 Ant2.da4](#)

DUT: B&O; Type: Beocom 4 UPCS;

Program Name: Body Worn

Communication System: DECT US; Frequency: 1924.99 MHz; Duty Cycle: 1:24

Medium parameters used (extrapolated): $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.67, 7.67, 7.67); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.03.2006
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (13x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.014 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.67 V/m; Power Drift = 0.098 dB

Peak SAR (extrapolated) = 0.031 W/kg

SAR(1 g) = 0.0127 mW/g; SAR(10 g) = 0.00496 mW/g

Maximum value of SAR (measured) = 0.016 mW/g

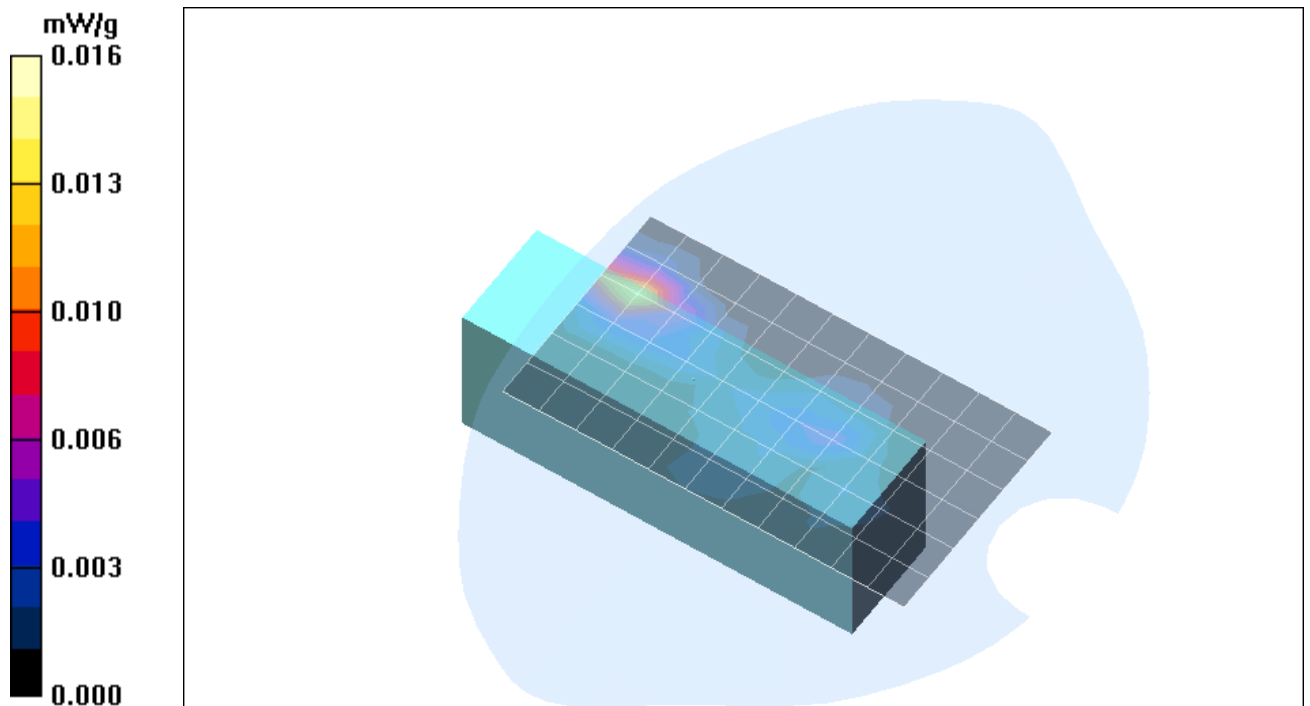


Fig. 9: SAR distribution for DECT US, channel 2, Position 4 (June 26, 2006; Ambient Temperature: 22.1 °C; Liquid Temperature : 21.5° C)

Test Laboratory: Imst GmbH; File Name: [Beoydhm 5 Ant2.da4](#)

DUT: B&O; Type: Beocom 4 UPCS;

Program Name: Body Worn

Communication System: DECT US; Frequency: 1924.99 MHz; Duty Cycle: 1:24

Medium parameters used (extrapolated): $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.67, 7.67, 7.67); Calibrated: 23.09.2005

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE3 Sn335; Calibrated: 09.03.2006

- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340

- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.010 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

Peak SAR (extrapolated) = 0.031 W/kg

SAR(1 g) = 0.011 mW/g; SAR(10 g) = 0.00463 mW/g

Maximum value of SAR (measured) = 0.014 mW/g

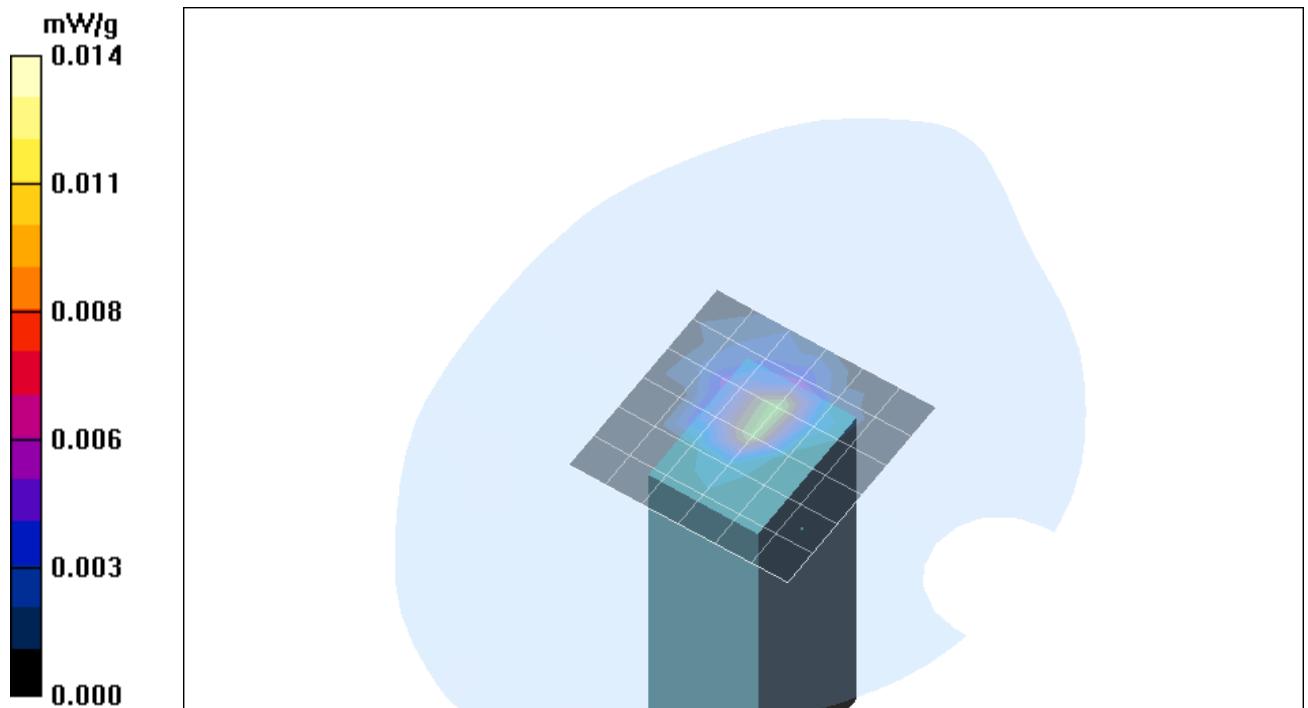


Fig. 10: SAR distribution for DECT US, channel 2, Position 5 (June 26, 2006; Ambient Temperature: 22.0° C; Liquid Temperature : 21.4° C)

3 SAR z-axis scans (Validation)

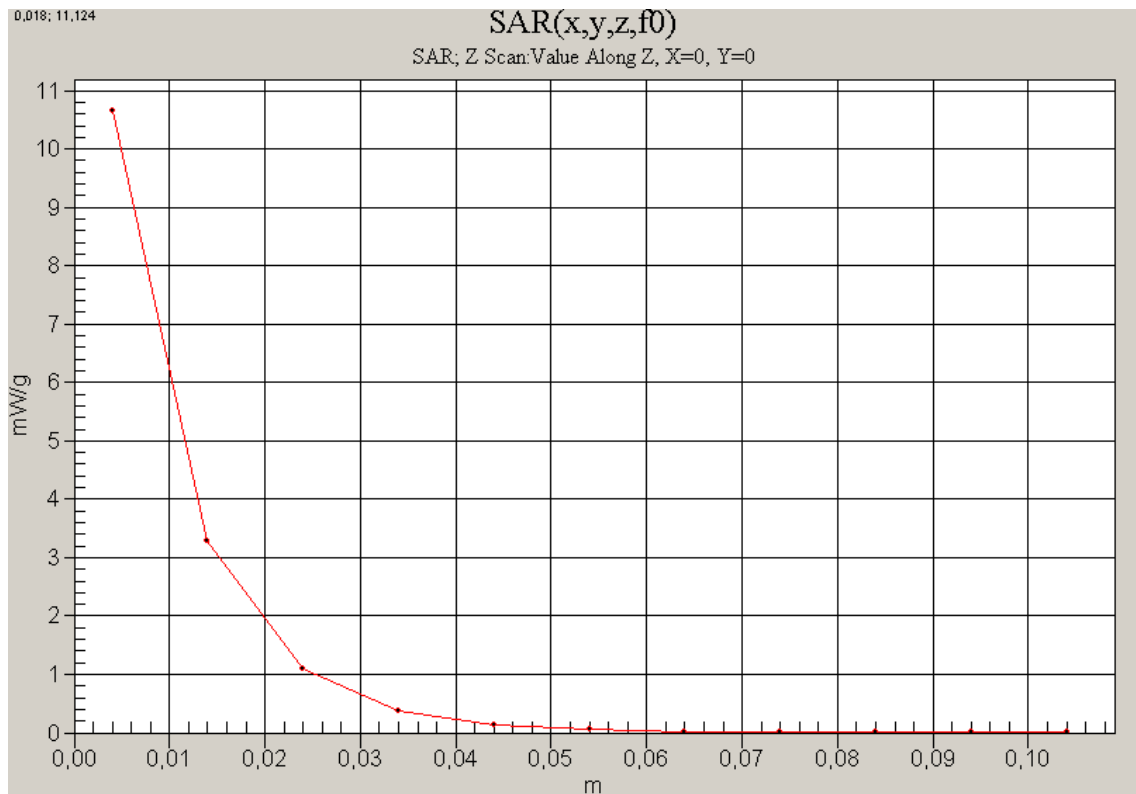


Fig. 11: SAR versus liquid depth, 1900 MHz, body (June 26, 2006; Ambient Temperature: 22.0° C; Liquid Temperature : 21.1° C).

4 SAR z-axis scans (Measurements)

The following pictures show the plots of SAR versus liquid depth for the worst case values.

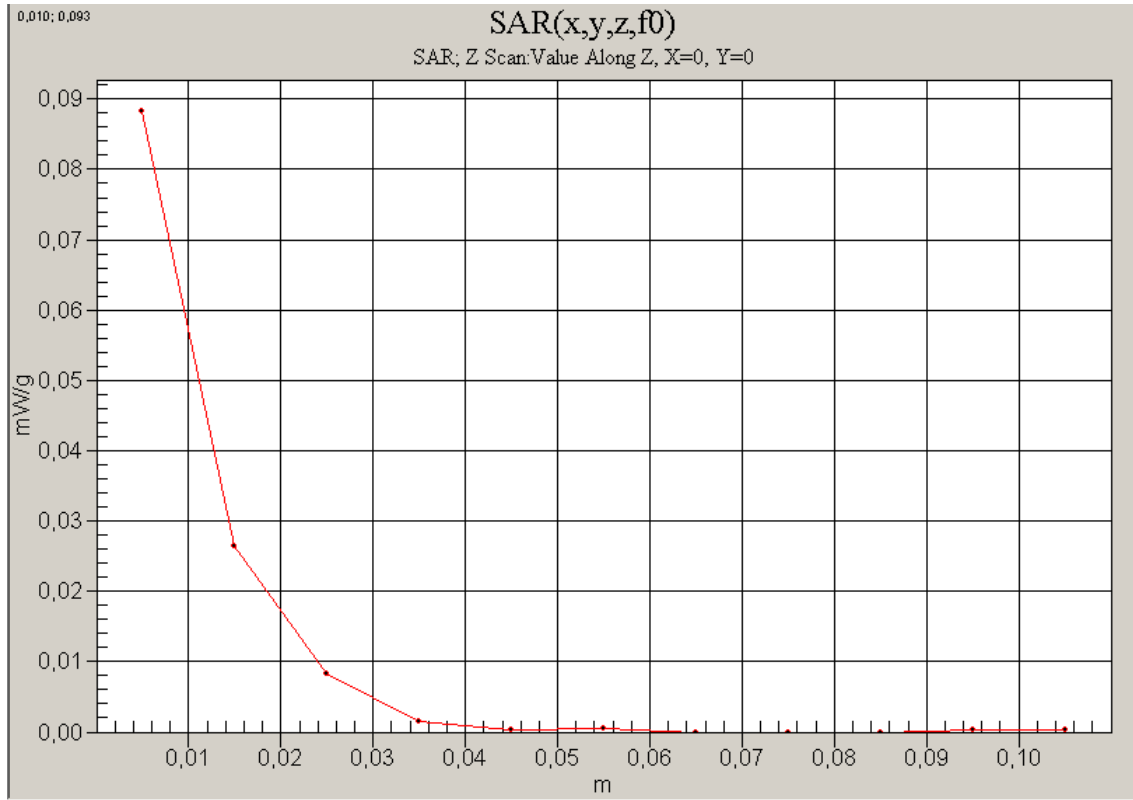


Fig. 12: SAR versus liquid depth, body: DECT US 1900, channel 2, position 1, antenna 2 (June 26, 2006; Ambient Temperature: 22.0° C; Liquid Temperature: 21.4° C).