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# Appendix for the Report

## Dosimetric Assessment of the Panasonic KX-TGA101S (FCC ID: ACJ96NKX-TGA101)

### According to the FCC Requirements

### SAR Distribution Plots

December 05, 2006  
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The test results only relate to the items tested.  
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approval of the testing laboratory.

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## 1 SAR Distribution Plots, Head Measurements

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [101yplm\\_1.da4](#)

DUT: Panasonic; Type: KX-TGA 101S;

Program Name: Cheek Left

Communication System: DECT US2TX; Frequency: 1924.99 MHz; Duty Cycle: 1:12

Medium parameters used (extrapolated):  $f = 1924.99$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.87, 4.87, 4.87); Calibrated: 15.02.2006

- 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

**Cheek Left/Area Scan (7x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.044 mW/g

**Cheek Left/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.04 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 0.069 W/kg

**SAR(1 g) = 0.041 mW/g; SAR(10 g) = 0.022 mW/g**

Maximum value of SAR (measured) = 0.045 mW/g

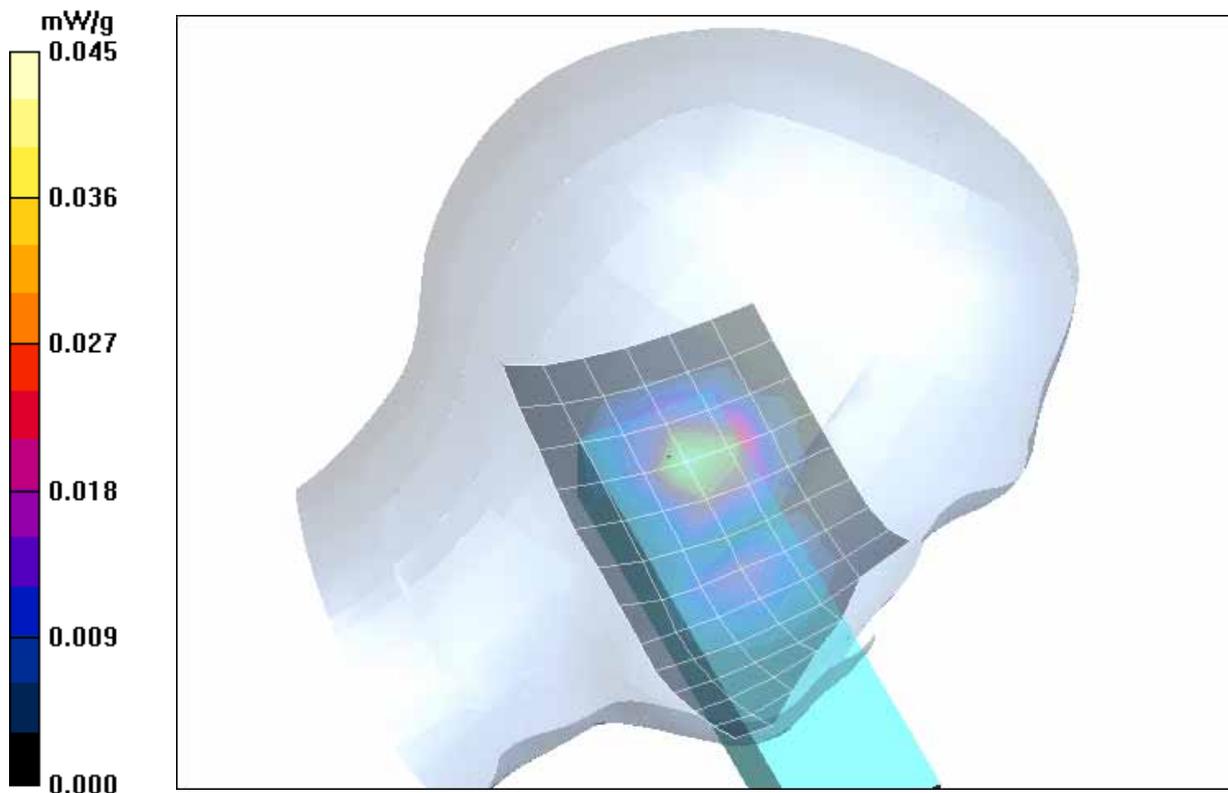


Fig. 1: SAR distribution for DECT US, channel 2, cheek position, left side of head (November 28, 2006; Ambient Temperature: 21.7°C; Liquid Temperature: 20.5°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [101yplm 2.da4](#)

DUT: Panasonic; Type: KX-TGA 101S;

Program Name: Tilted Left

Communication System: DECT US2TX; Frequency: 1924.99 MHz; Duty Cycle: 1:12

Medium parameters used (extrapolated):  $f = 1924.99$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.87, 4.87, 4.87); Calibrated: 15.02.2006
- 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

**Tilted Left/Area Scan (6x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.025 mW/g

**Tilted Left/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.31 V/m; Power Drift = -0.130 dB

Peak SAR (extrapolated) = 0.042 W/kg

**SAR(1 g) = 0.025 mW/g; SAR(10 g) = 0.014 mW/g**

Maximum value of SAR (measured) = 0.028 mW/g

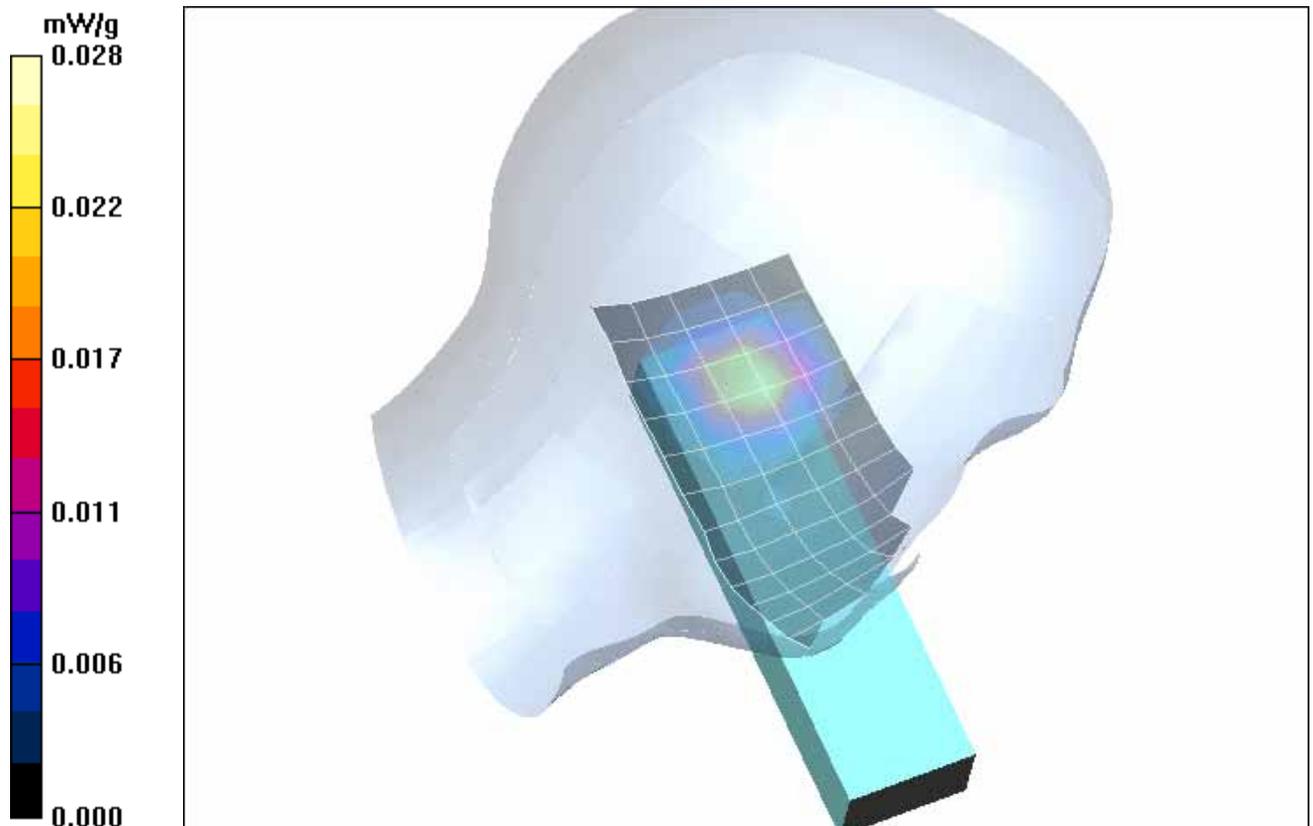


Fig. 2: SAR distribution for DECT US, channel 2, tilted position, left side of head (November 28, 2006; Ambient Temperature: 21.7°C; Liquid Temperature: 20.5°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [101yprm\\_1.da4](#)

DUT: Panasonic; Type: KX-TGA 101S;

Program Name: Cheek Right

Communication System: DECT US2TX; Frequency: 1924.99 MHz; Duty Cycle: 1:12

Medium parameters used (extrapolated):  $f = 1924.99$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.87, 4.87, 4.87); Calibrated: 15.02.2006
- 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

**Cheek Right/Area Scan (7x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.034 mW/g

**Cheek Right/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.11 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 0.055 W/kg

**SAR(1 g) = 0.034 mW/g; SAR(10 g) = 0.018 mW/g**

Maximum value of SAR (measured) = 0.037 mW/g

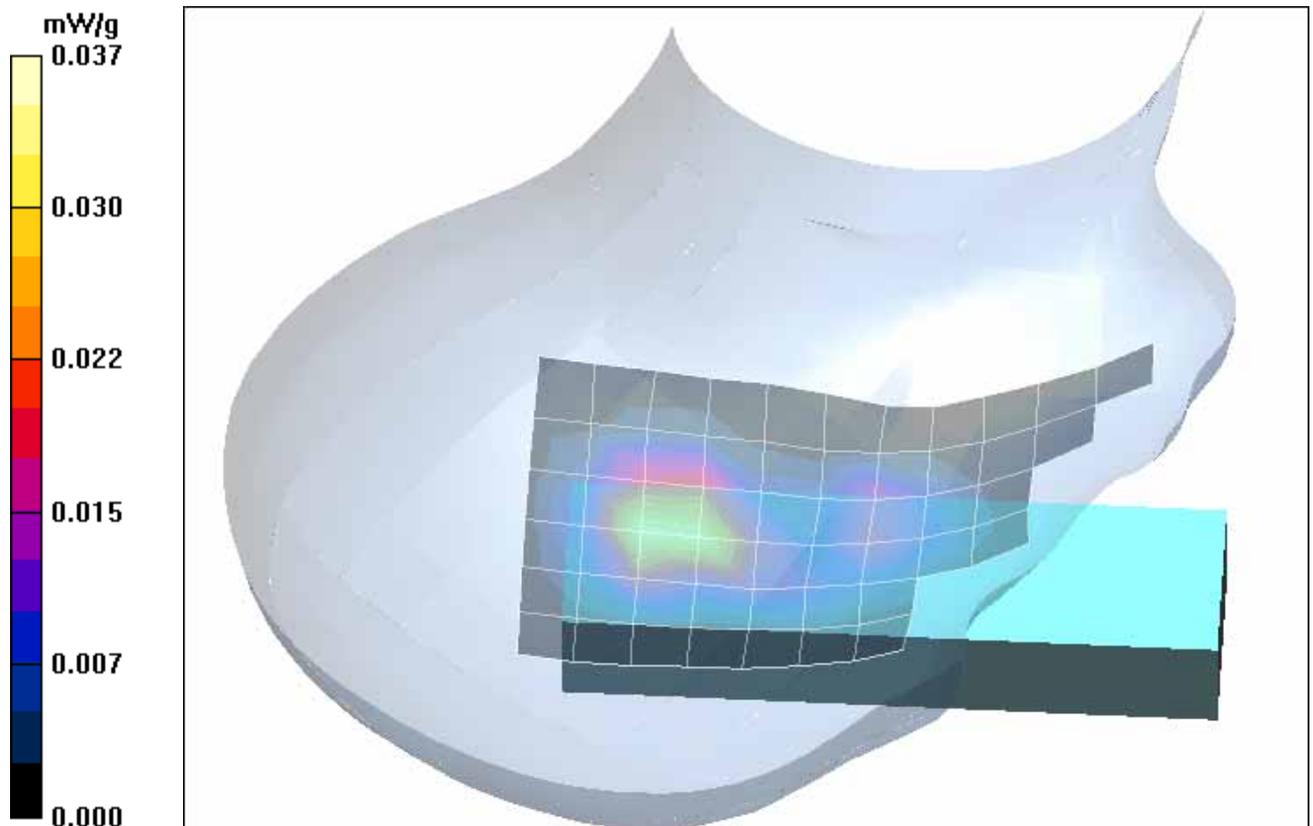


Fig. 3: SAR distribution for DECT US, channel 2, cheek position, right side of head (November 28, 2006; Ambient Temperature: 21.7° C; Liquid Temperature : 20.5° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [101yprm\\_2.da4](#)

DUT: Panasonic; Type: KX-TGA 101S;

Program Name: Tilted Right

Communication System: DECT US2TX; Frequency: 1924.99 MHz; Duty Cycle: 1:12

Medium parameters used (extrapolated):  $f = 1924.99$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.87, 4.87, 4.87); Calibrated: 15.02.2006
- 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

**Tilted Right/Area Scan (6x14x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.021 mW/g

**Tilted Right/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.29 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.037 W/kg

**SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.012 mW/g**

Maximum value of SAR (measured) = 0.025 mW/g

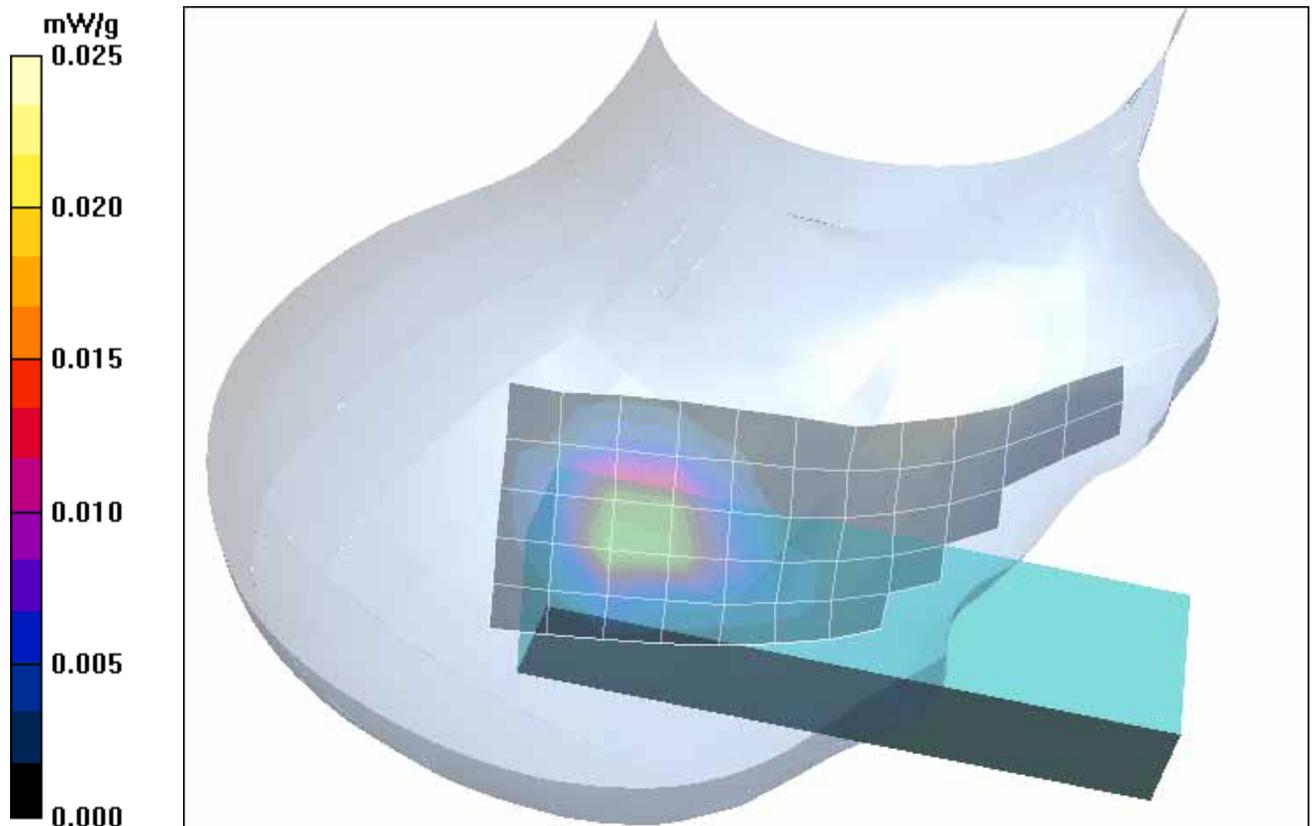


Fig. 4: SAR distribution for DECT US, channel 2, tilted position, right side of head (November 28, 2006; Ambient Temperature: 21.7 °C; Liquid Temperature : 20.5° C)

## 2 SAR Distribution Plots, Body Measurements

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [101bphm\\_1\\_ohne.da4](#)

DUT: Panasonic; Type: KX-TGA 101S;

Program Name: Body Worn

Communication System: DECT US2TX; Frequency: 1924.99 MHz; Duty Cycle: 1:12

Medium parameters used (extrapolated):  $f = 1924.99$  MHz;  $\sigma = 1.58$  mho/m;  $\epsilon_r = 52$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.55, 4.55, 4.55); Calibrated: 18.01.2006

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

- Electronics: DAE3 Sn335; Calibrated: 09.03.2006

- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176

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

**Body Worn/Area Scan (7x15x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.013 mW/g

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

Reference Value = 1.51 V/m; Power Drift = 0.188 dB

Peak SAR (extrapolated) = 0.021 W/kg

**SAR(1 g) = 0.012 mW/g; SAR(10 g) = 0.0068 mW/g**

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

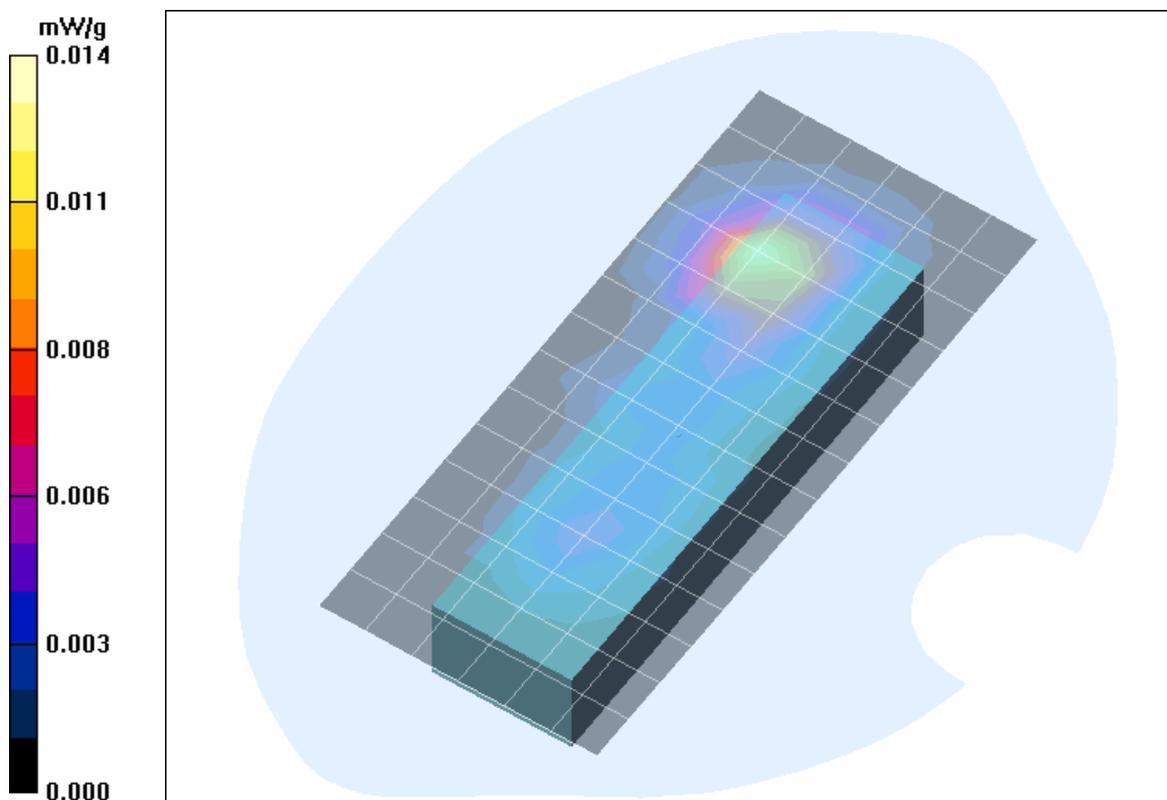


Fig. 5: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, without accessory and 0 mm distance (December 04, 2006; Ambient Temperature: 21.5° C; Liquid Temperature: 20.4° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [101bphm 2 headset.da4](#)

DUT: Panasonic; Type: KX-TGA 101S;

Program Name: Body Worn

Communication System: DECT US2TX; Frequency: 1924.99 MHz; Duty Cycle: 1:12

Medium parameters used (extrapolated):  $f = 1924.99$  MHz;  $\sigma = 1.58$  mho/m;  $\epsilon_r = 52$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.55, 4.55, 4.55); Calibrated: 18.01.2006

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

- Electronics: DAE3 Sn335; Calibrated: 09.03.2006

- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176

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

**Body Worn/Area Scan (7x15x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.013 mW/g

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

Reference Value = 1.45 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.021 W/kg

**SAR(1 g) = 0.012 mW/g; SAR(10 g) = 0.0070 mW/g**

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

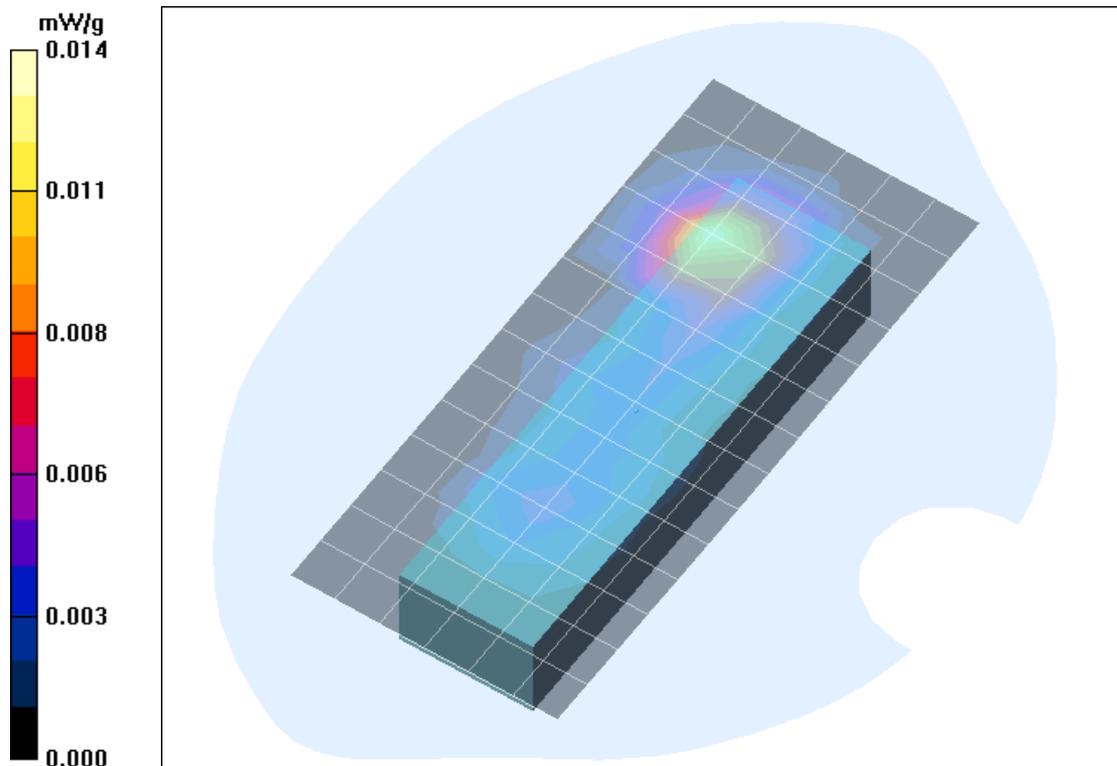


Fig. 6: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, with headset and 0 mm distance (December 04, 2006; Ambient Temperature: 21.5° C; Liquid Temperature: 20.4° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [101bphm 3 clip.da4](#)

DUT: Panasonic; Type: KX-TGA 101S;

Program Name: Body Worn

Communication System: DECT US2TX; Frequency: 1924.99 MHz; Duty Cycle: 1:12

Medium parameters used (extrapolated):  $f = 1924.99$  MHz;  $\sigma = 1.58$  mho/m;  $\epsilon_r = 52$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.55, 4.55, 4.55); Calibrated: 18.01.2006

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

- Electronics: DAE3 Sn335; Calibrated: 09.03.2006

- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176

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

**Body Worn/Area Scan (7x15x1):** 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 = 1.09 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.015 W/kg

**SAR(1 g) = 0.0093 mW/g; SAR(10 g) = 0.0053 mW/g**

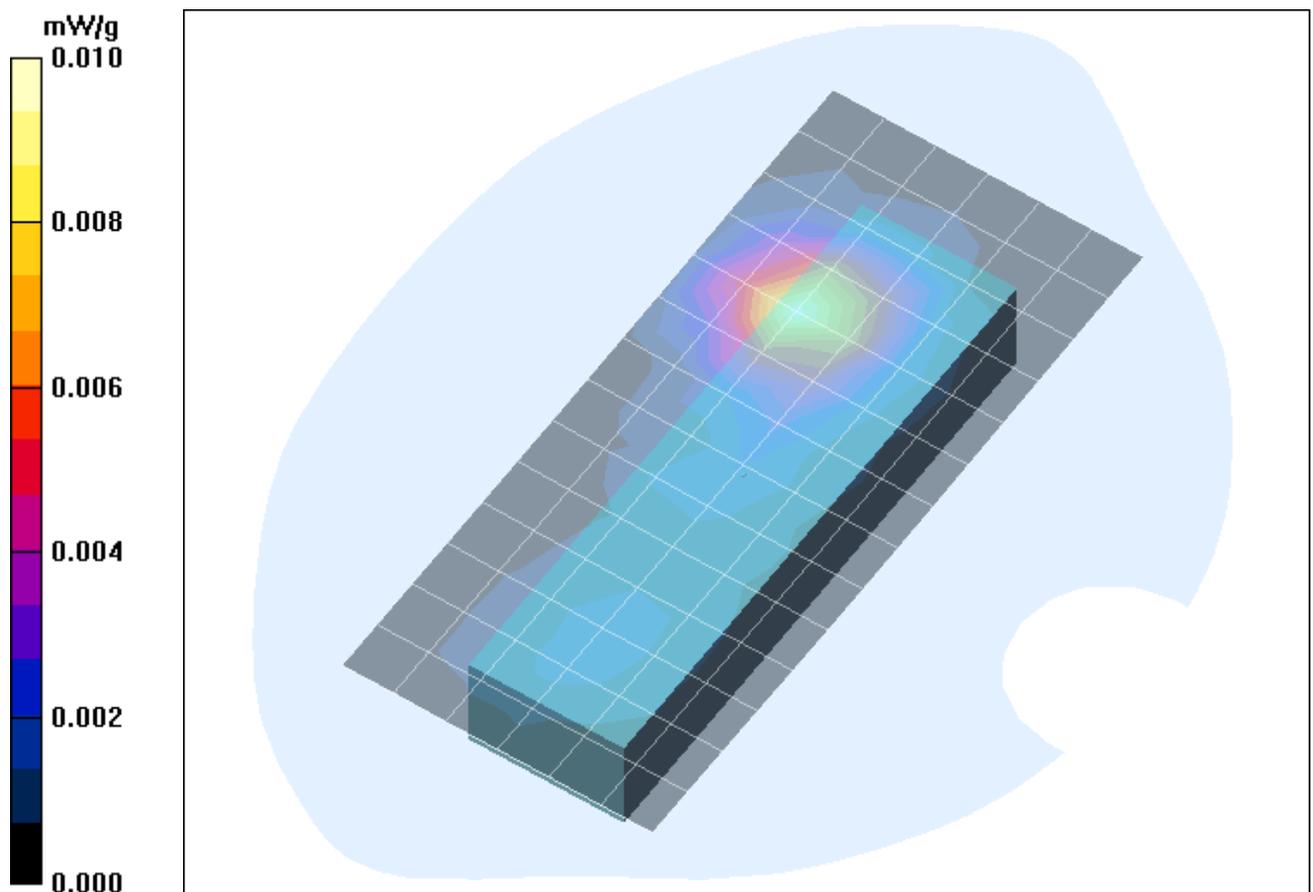


Fig. 7: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, with beltclip and 0 mm distance (December 04, 2006; Ambient Temperature: 21.5° C; Liquid Temperature: 20.4° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [101bphm 4 clip headset.da4](#)

DUT: Panasonic; Type: KX-TGA 101S;

Program Name: Body Worn

Communication System: DECT US2TX; Frequency: 1924.99 MHz; Duty Cycle: 1:12

Medium parameters used (extrapolated):  $f = 1924.99$  MHz;  $\sigma = 1.58$  mho/m;  $\epsilon_r = 52$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.55, 4.55, 4.55); Calibrated: 18.01.2006

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

- Electronics: DAE3 Sn335; Calibrated: 09.03.2006

- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176

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

**Body Worn/Area Scan (7x15x1):** 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 = 1.02 V/m; Power Drift = -0.131 dB

Peak SAR (extrapolated) = 0.015 W/kg

**SAR(1 g) = 0.0090 mW/g; SAR(10 g) = 0.0052 mW/g**

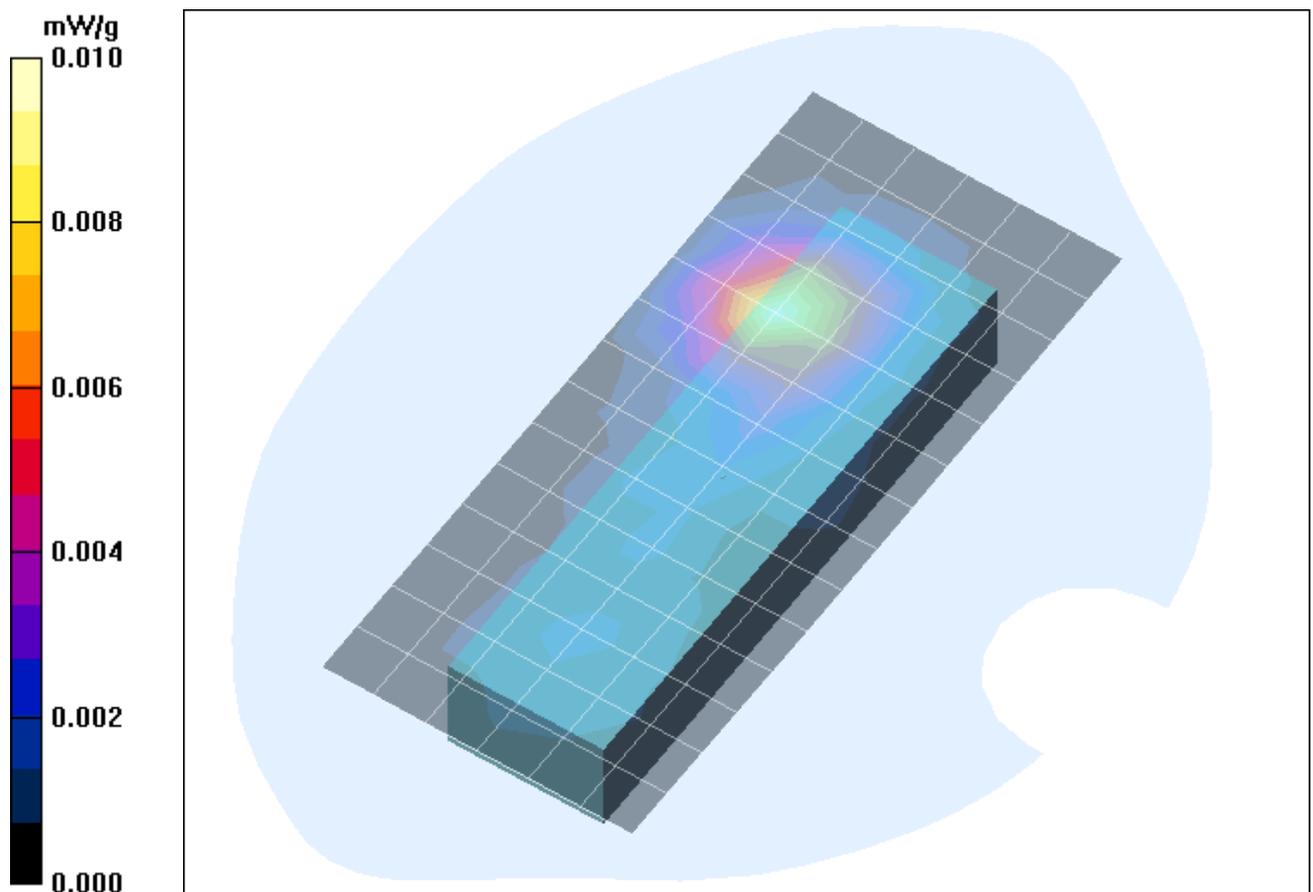


Fig. 8: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, with beltclip and headset and 0 mm distance (December 04, 2006; Ambient Temperature: 21.5° C; Liquid Temperature: 20.4° C).

### 3 SAR z-axis scans (Validation)

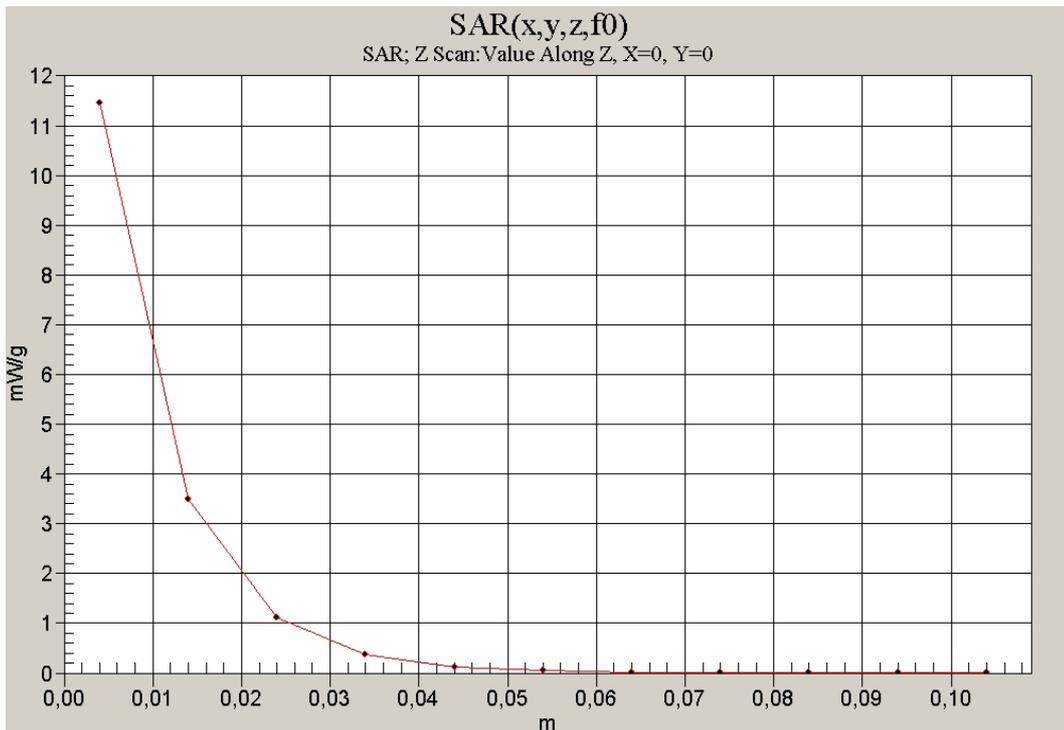


Fig. 9: SAR versus liquid depth, 1900 MHz, head (November 28, 2006; Ambient Temperature: 21.8° C; Liquid Temperature : 20.5° C).

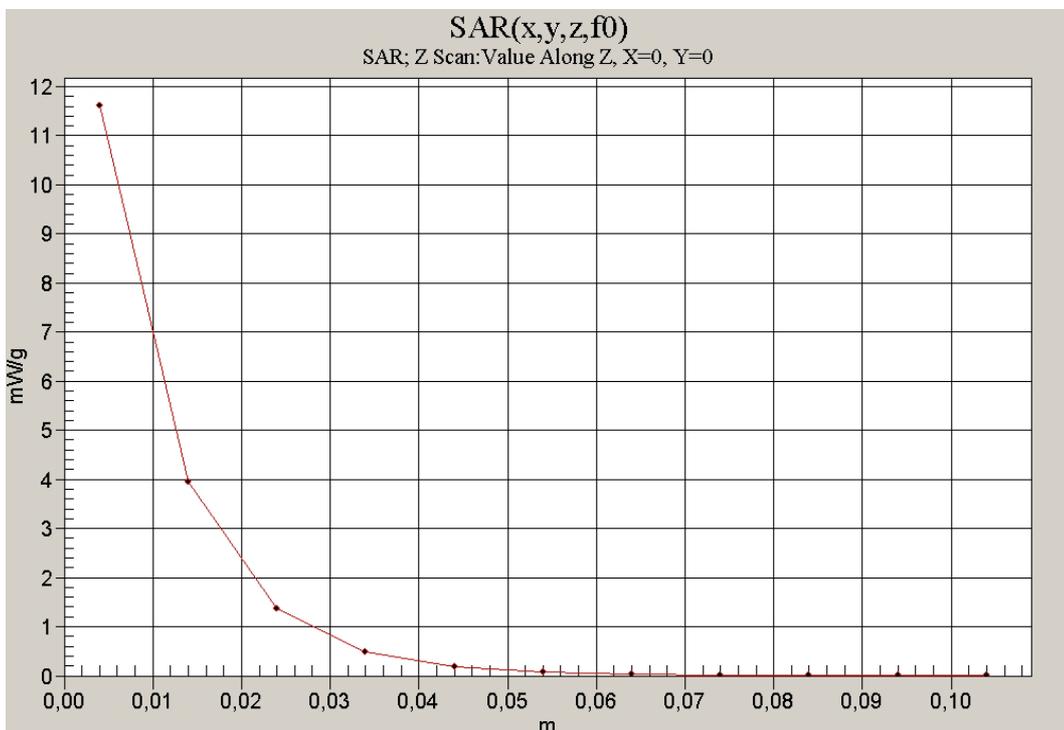


Fig. 10: SAR versus liquid depth, 1900 MHz, body (December 04, 2006; Ambient Temperature: 21.5° C; Liquid Temperature : 20.3° C).

#### 4 SAR z-axis scans (Measurements)

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

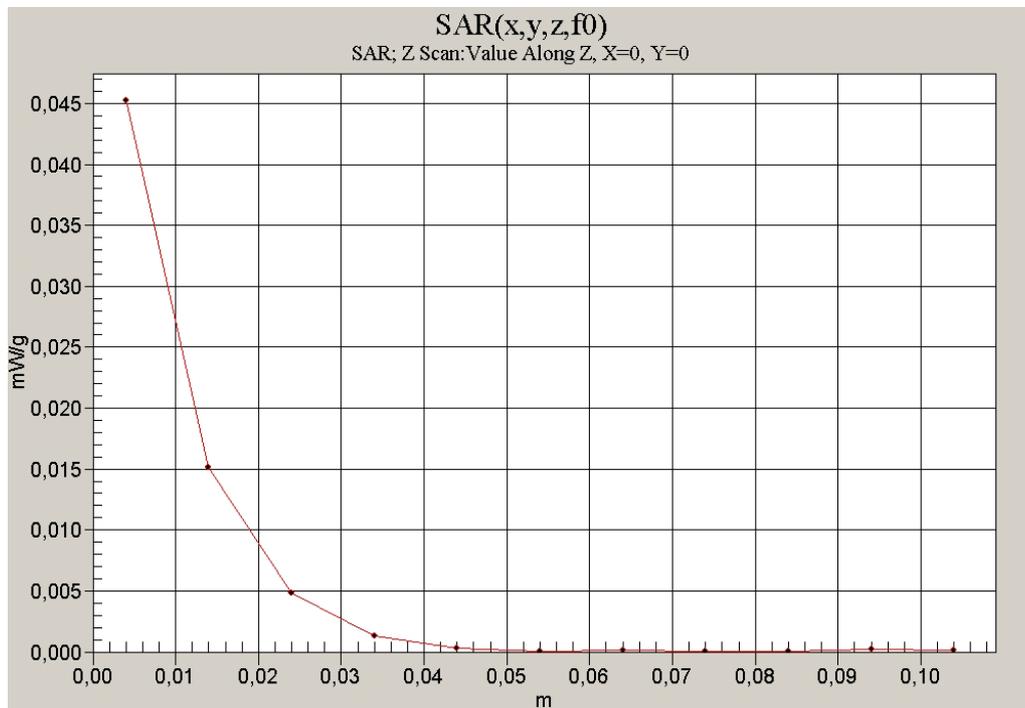


Fig. 11: SAR versus liquid depth, head: DECT US, channel 2, cheek position, left side of head, (November 28, 2006; Ambient Temperature: 21.7° C; Liquid Temperature : 20.5° C).

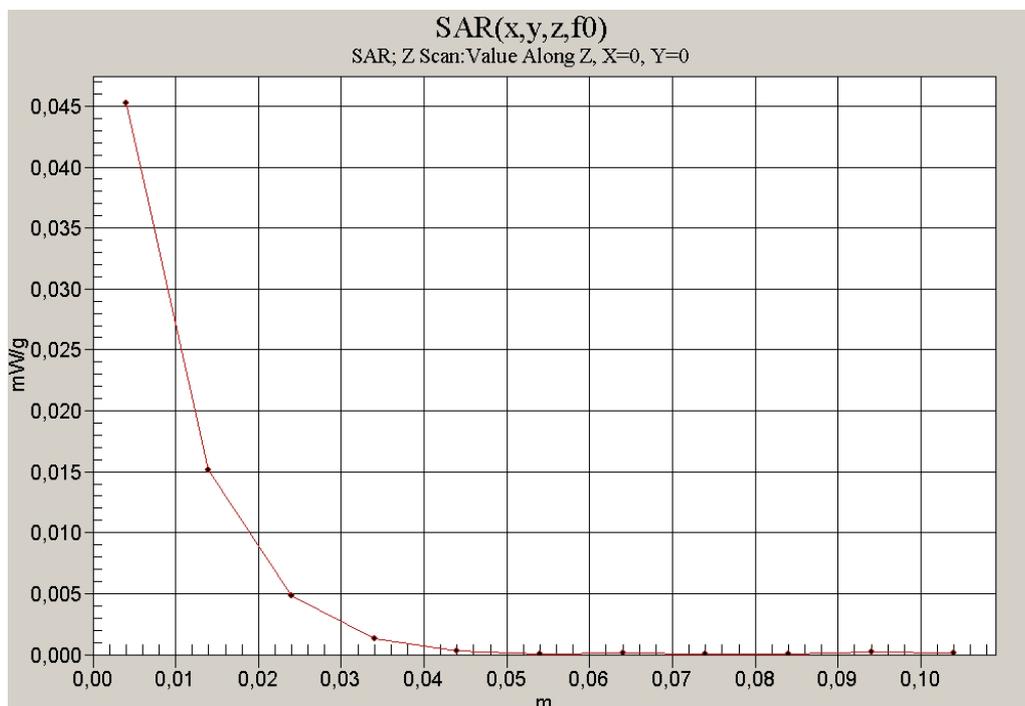


Fig. 12: SAR versus liquid depth, body: DECT US 1900, channel 2, Position 2 with headset (December 04, 2006; Ambient Temperature: 21.5° C; Liquid Temperature: 20.4° C).