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# Appendix for the Report

## Dosimetric Assessment of the Panasonic KX-TGA820 (FCC ID: ACJ96NXK-TGA820)

### According to the FCC Requirements

### SAR Distribution Plots

May 31, 2007  
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The test results only relate to the items tested.  
This report shall not be reproduced except in full without the written  
approval of the testing laboratory.

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# 1 SAR Distribution Plots, Head Measurements

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [TGA820B\\_bplm\\_1.da4](#)

DUT: Panasonic; Type: KX-TGA820B;

Program Name: Cheek Left

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

Medium parameters used:  $f = 1924.99$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.93, 4.93, 4.93); Calibrated: 15.02.2007

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

- Electronics: DAE3 Sn335; Calibrated: 09.02.2007

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

- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

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

Maximum value of SAR (measured) = 0.009 mW/g

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

Reference Value = 2.22 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.017 W/kg

**SAR(1 g) = 0.010 mW/g; SAR(10 g) = 0.00541 mW/g**

Maximum value of SAR (measured) = 0.011 mW/g

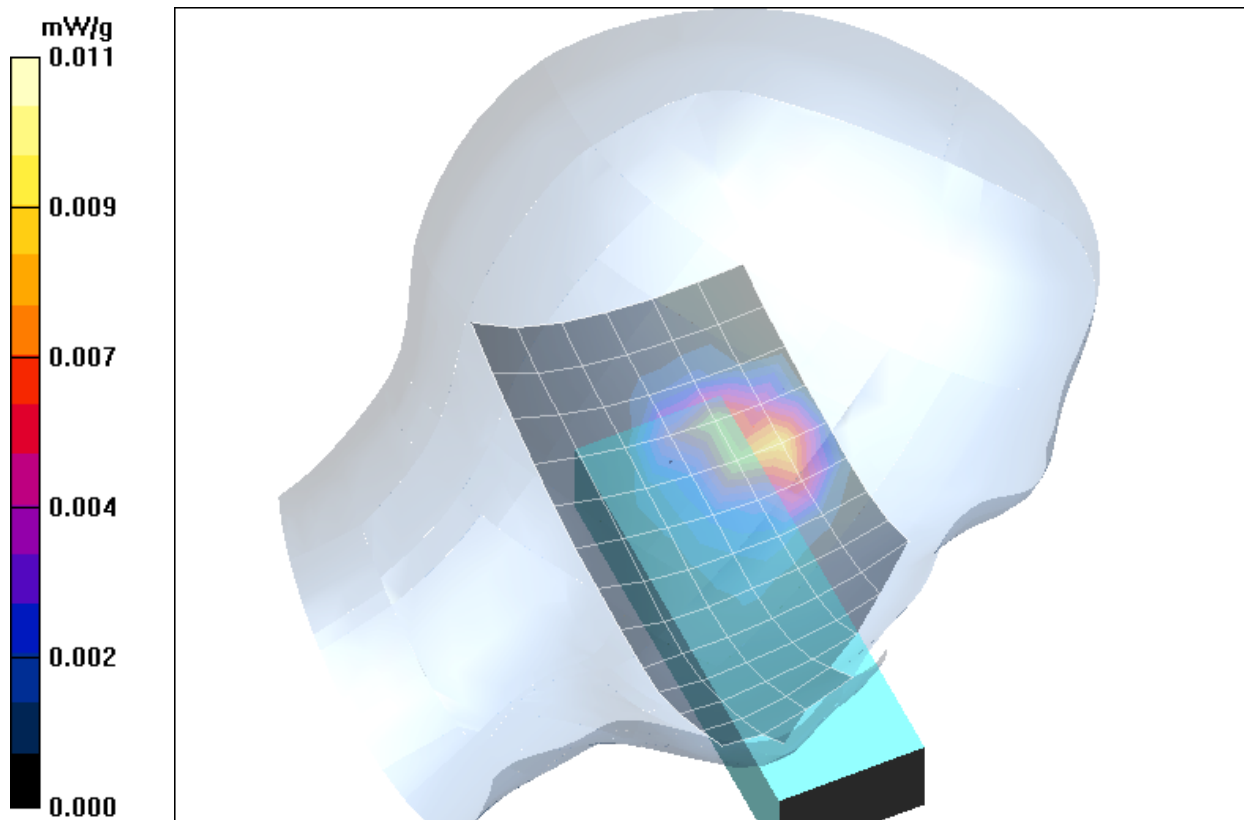


Fig. 1: SAR distribution for DECT US, channel 2, cheek position, left side of head (May 30, 2007; Ambient Temperature: 22.4°C; Liquid Temperature: 21.3°C).

**Test Laboratory:** IMST GmbH, DASY Blue (I); **File Name:** [TGA820B\\_bplm\\_2.da4](#)

**DUT:** Panasonic; **Type:** KX-TGA820B;

**Program Name:** Tilted Left

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

Medium parameters used:  $f = 1924.99$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.93, 4.93, 4.93); Calibrated: 15.02.2007

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

- Electronics: DAE3 Sn335; Calibrated: 09.02.2007

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

- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**Tilted Left/Area Scan (7x13x1):** Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 1.41 V/m; Power Drift = 0.181 dB

Peak SAR (extrapolated) = 0.007 W/kg

**SAR(1 g) = 0.00372 mW/g; SAR(10 g) = 0.00192 mW/g**

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

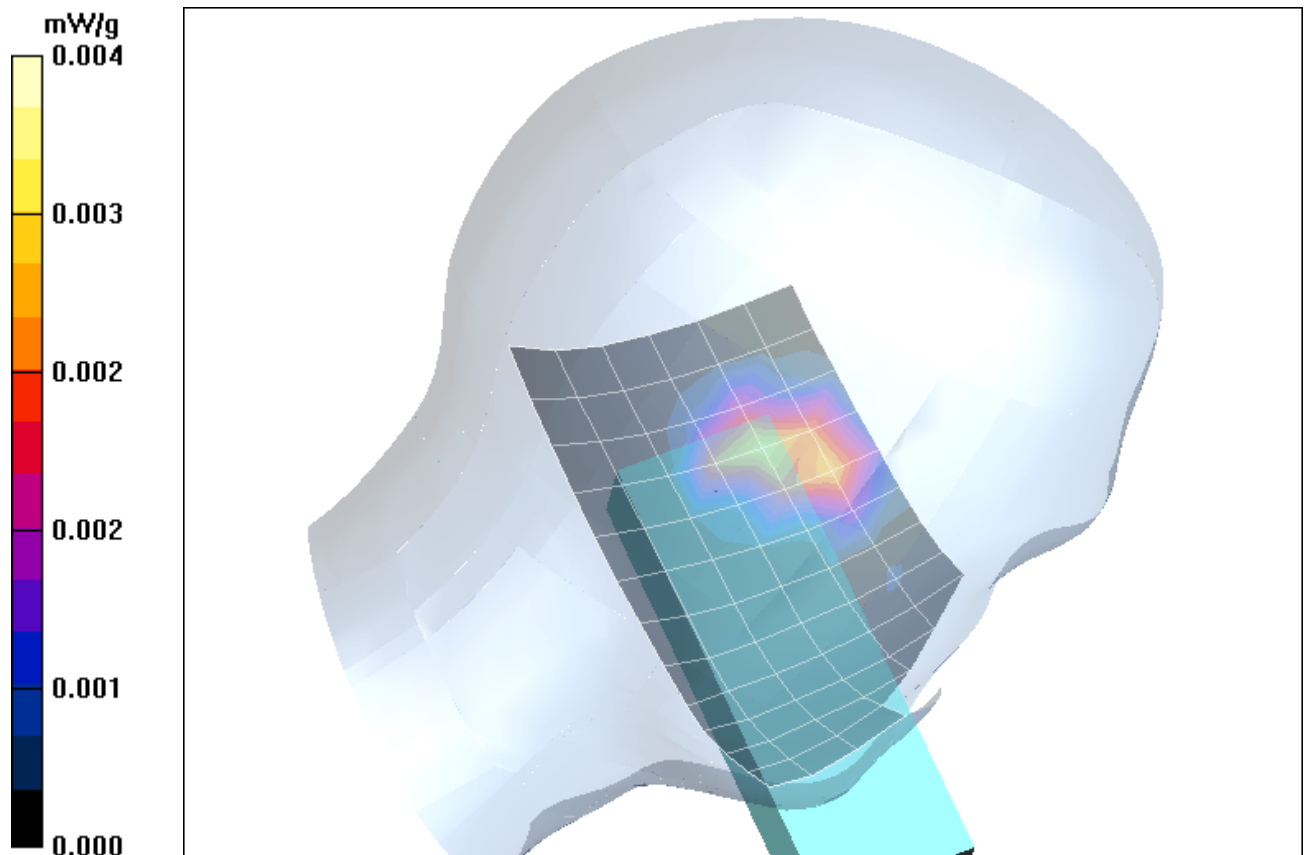


Fig. 2: SAR distribution for DECT US, channel 2, tilted position, left side of head (May 30, 2007; Ambient Temperature: 22.4°C; Liquid Temperature: 21.3°C).

**Test Laboratory:** IMST GmbH, DASY Blue (I); **File Name:** [TGA820B\\_bprm\\_1.da4](#)

**DUT:** Panasonic; **Type:** KX-TGA820B;

**Program Name:** Cheek Right

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

Medium parameters used:  $f = 1924.99$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.93, 4.93, 4.93); Calibrated: 15.02.2007

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

- Electronics: DAE3 Sn335; Calibrated: 09.02.2007

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

- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**Cheek Right/Area Scan (7x13x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.006 mW/g

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

Reference Value = 1.90 V/m; Power Drift = -0.101 dB

Peak SAR (extrapolated) = 0.011 W/kg

**SAR(1 g) = 0.00638 mW/g; SAR(10 g) = 0.00347 mW/g**

Maximum value of SAR (measured) = 0.007 mW/g

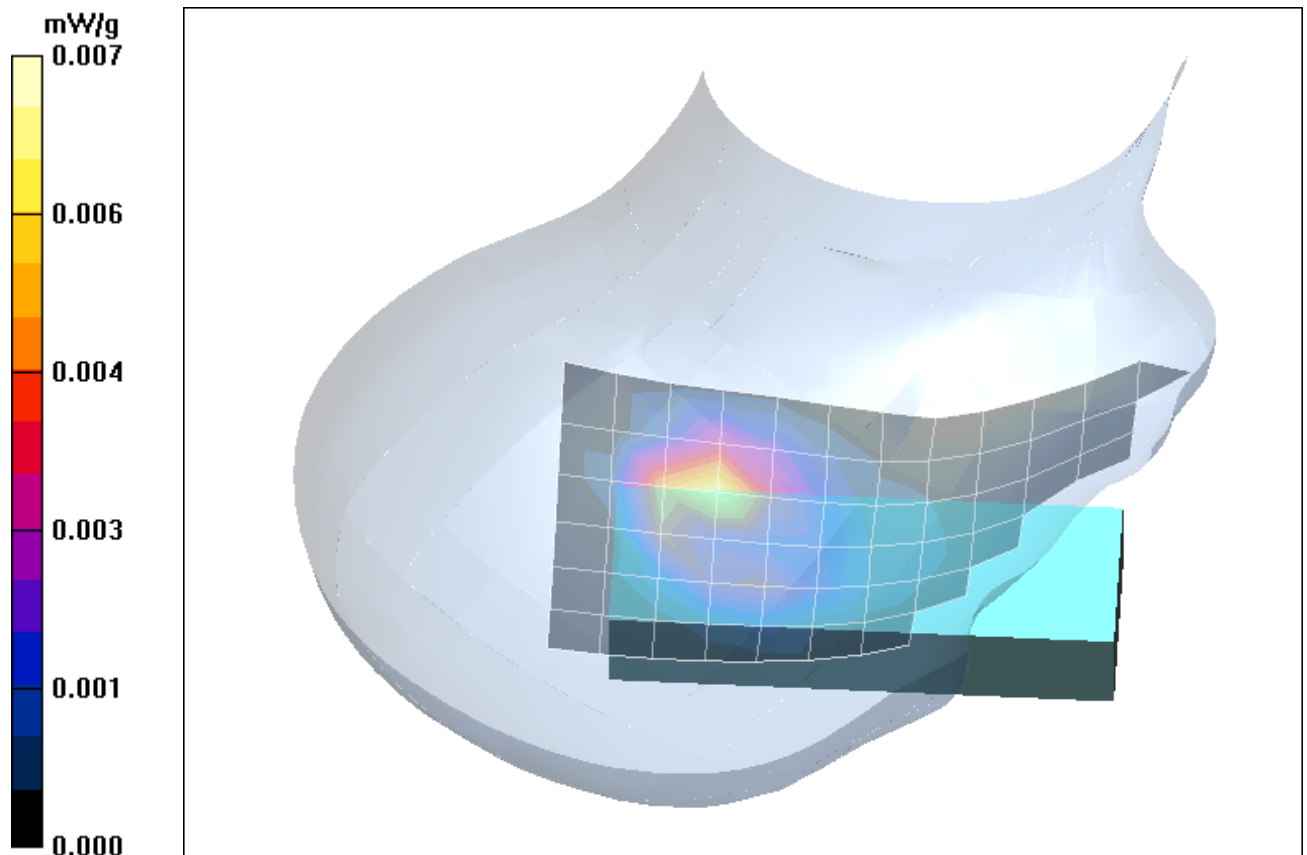


Fig. 3: SAR distribution for DECT US, channel 2, cheek position, right side of head (May 30, 2007; Ambient Temperature: 22.4°C; Liquid Temperature: 21.3°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [TGA820B\\_bprm\\_2.da4](#)

DUT: Panasonic; Type: KX-TGA820B;

Program Name: Tilted Right

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

Medium parameters used:  $f = 1924.99$  MHz;  $\sigma = 1.42$  mho/m;  $\epsilon_r = 39.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.93, 4.93, 4.93); Calibrated: 15.02.2007

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

- Electronics: DAE3 Sn335; Calibrated: 09.02.2007

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

- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**Tilted Right/Area Scan (7x13x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.002 mW/g

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

Reference Value = 1.28 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 0.004 W/kg

**SAR(1 g) = 0.00232 mW/g; SAR(10 g) = 0.00104 mW/g**

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

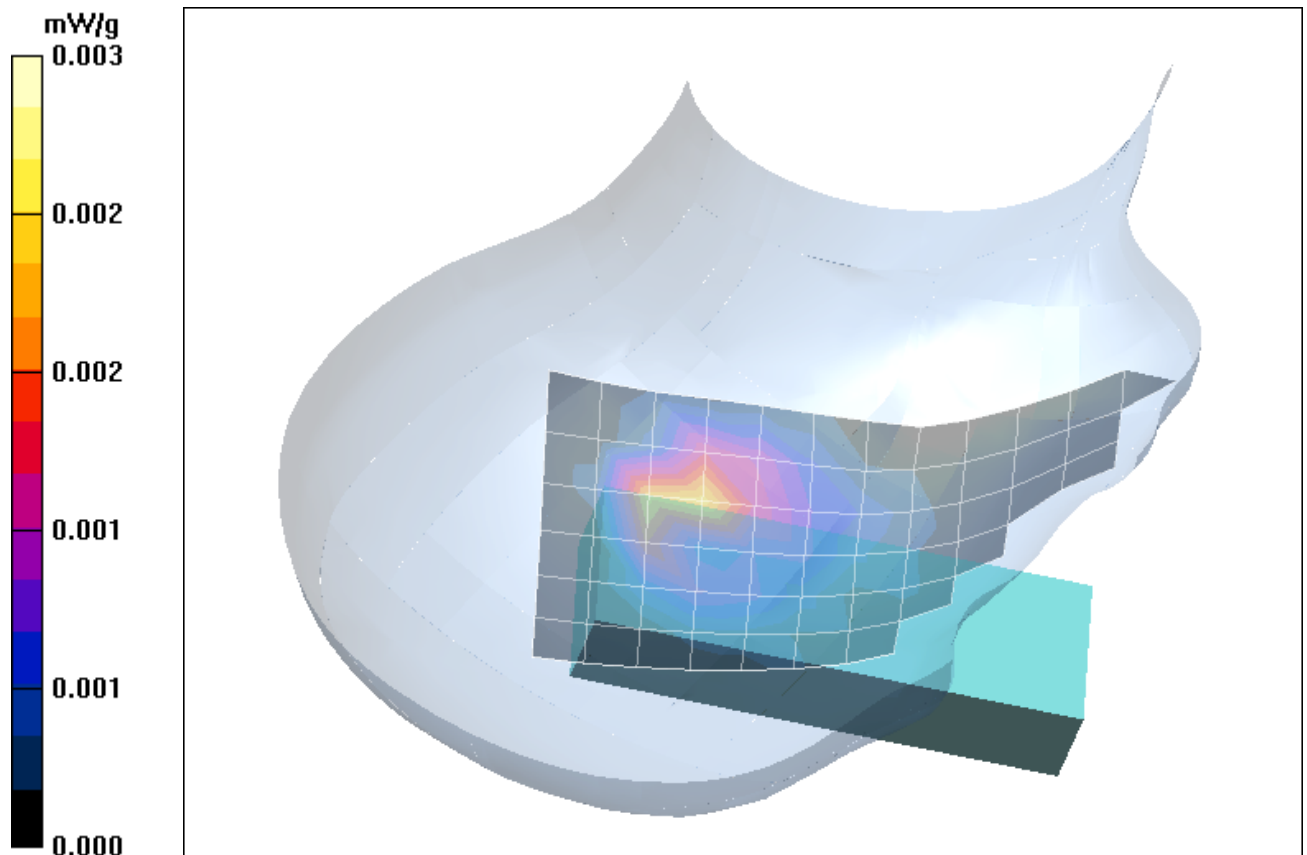


Fig. 4: SAR distribution for DECT US, channel 2, tilted position, right side of head (May 30, 2007; Ambient Temperature: 22.4°C; Liquid Temperature: 21.3°C)

## 2 SAR Distribution Plots, Body Measurements

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [TGA820B\\_yphm\\_1\\_clip.da4](#)

DUT: Panasonic; Type: KX-TGA820B;

Program Name: Body Worn

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

Medium parameters used:  $f = 1924.99$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 54.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.94, 7.94, 7.94); Calibrated: 27.09.2006

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

- Electronics: DAE4 Sn631; Calibrated: 11.07.2006

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

- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**Body Worn/Area Scan (8x13x1):** Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 1.21 V/m; Power Drift = 0.097 dB

Peak SAR (extrapolated) = 0.007 W/kg

**SAR(1 g) = 0.0014 mW/g; SAR(10 g) = 0.00021 mW/g**

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

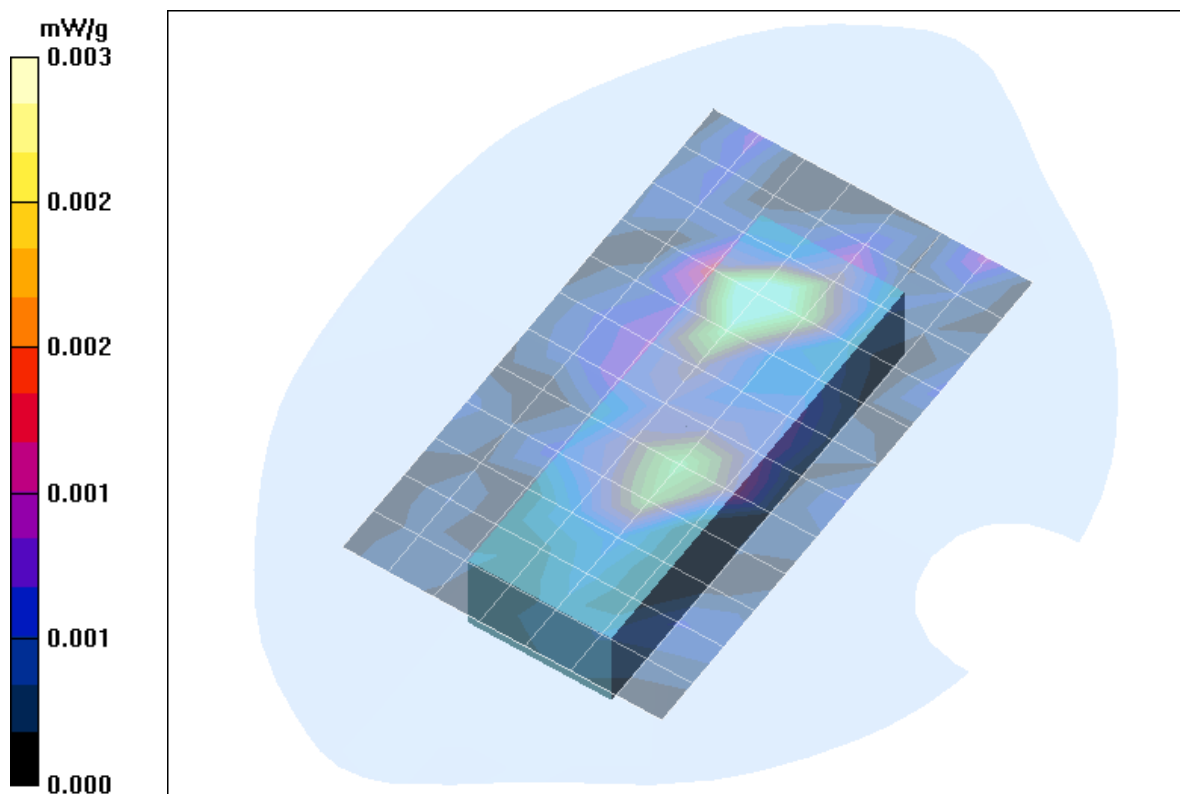


Fig. 5: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, with belt clip and 0 mm distance (May 29, 2007; Ambient Temperature: 22.5° C; Liquid Temperature: 21.5° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [TGA820B\\_yphm\\_1\\_clip\\_headset.da4](#)

DUT: Panasonic; Type: KX-TGA820B;

Program Name: Body Worn

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

Medium parameters used:  $f = 1924.99$  MHz;  $\sigma = 1.55$  mho/m;  $\epsilon_r = 54.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.94, 7.94, 7.94); Calibrated: 27.09.2006

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

- Electronics: DAE4 Sn631; Calibrated: 11.07.2006

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

- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**Body Worn/Area Scan (8x13x1):** Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 0.990 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 0.019 W/kg

**SAR(1 g) = 0.00228 mW/g; SAR(10 g) = 0.00044 mW/g**

Maximum value of SAR (measured) = 0.005 mW/g

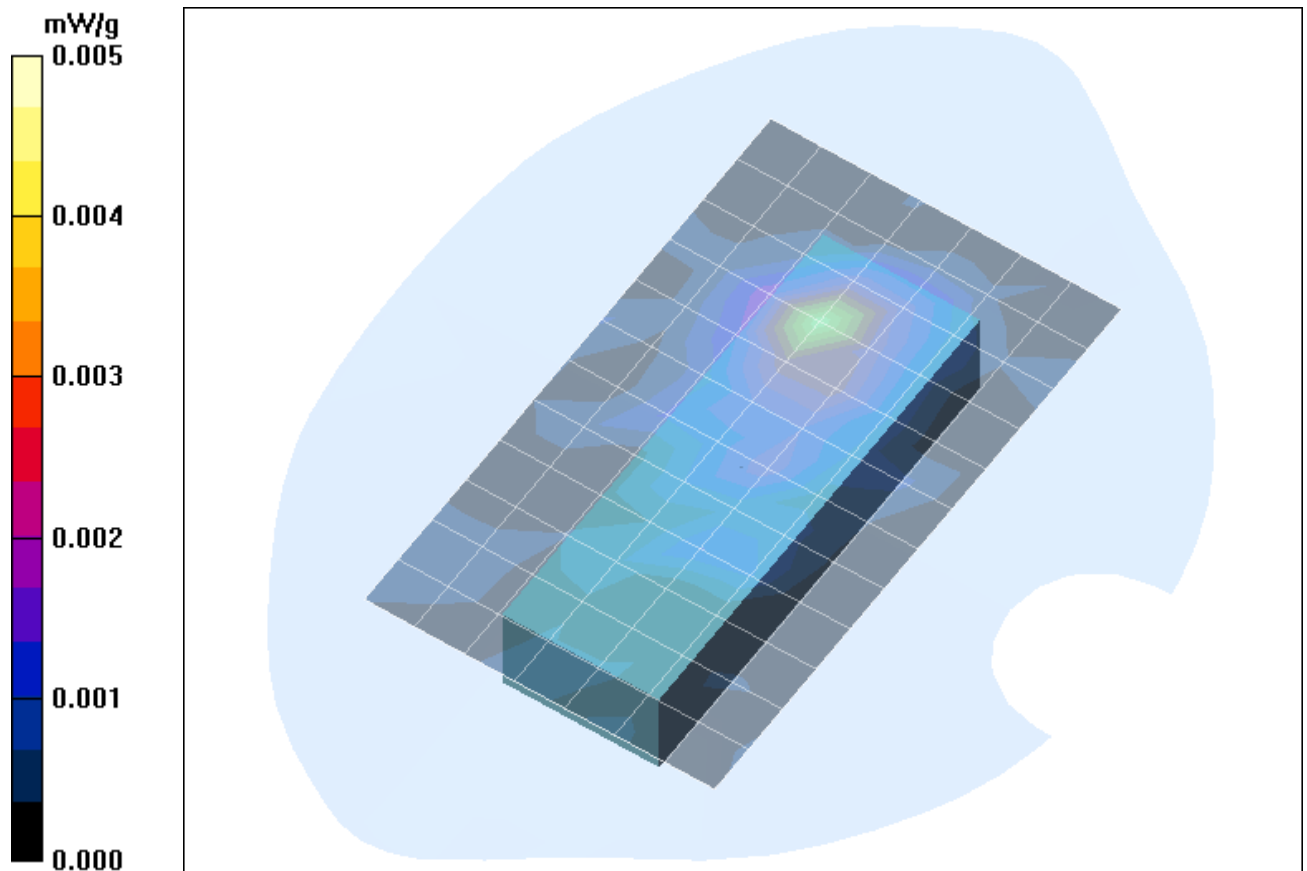


Fig. 6: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, with belt clip and headset, 0 mm distance (May 29, 2007; Ambient Temperature: 22.5° C; Liquid Temperature: 21.5° C).

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

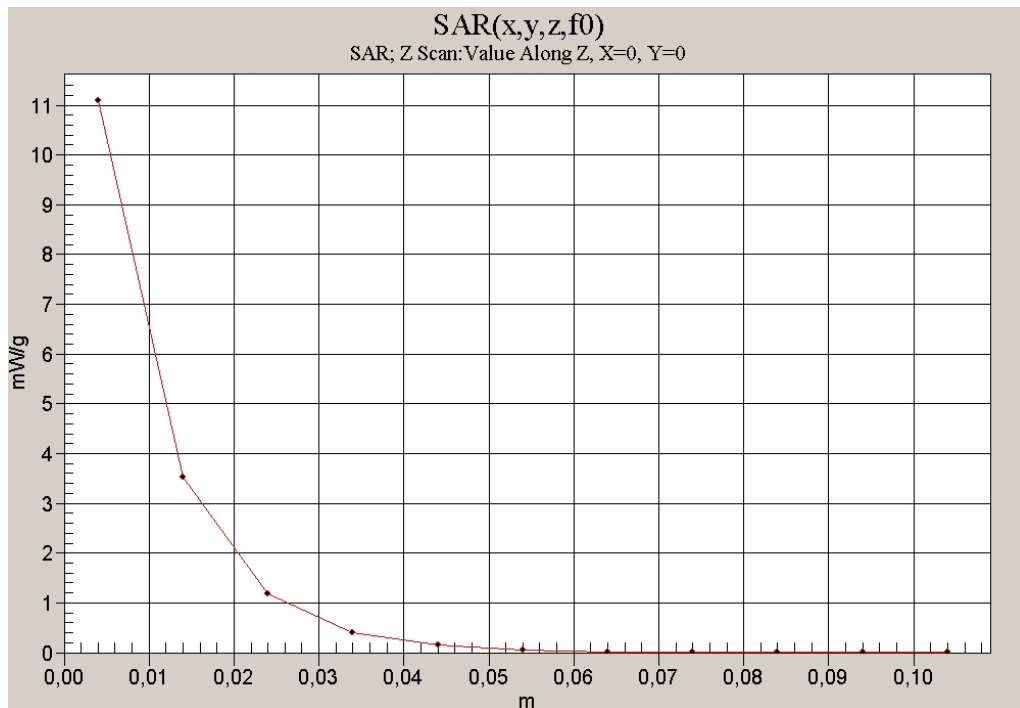


Fig. 7: SAR versus liquid depth, 1900 MHz, head (May 30, 2007; Ambient Temperature: 22.4° C; Liquid Temperature : 21.3° C).

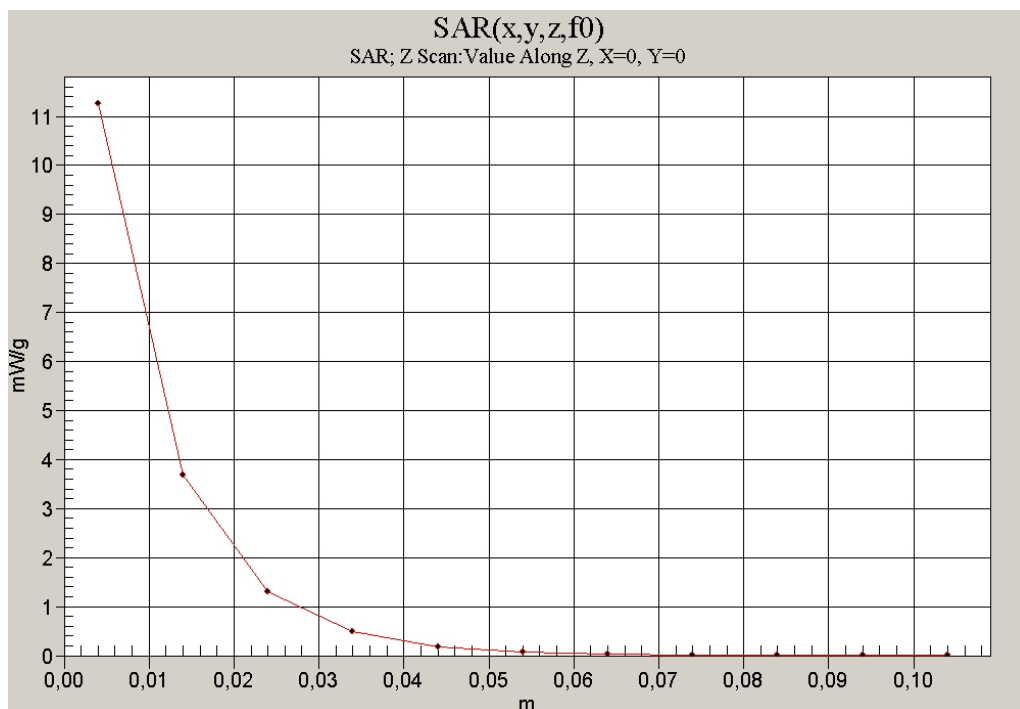


Fig. 8: SAR versus liquid depth, 1900 MHz, body (May 29, 2007; Ambient Temperature: 22.7° C; Liquid Temperature : 21.6° C).

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

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

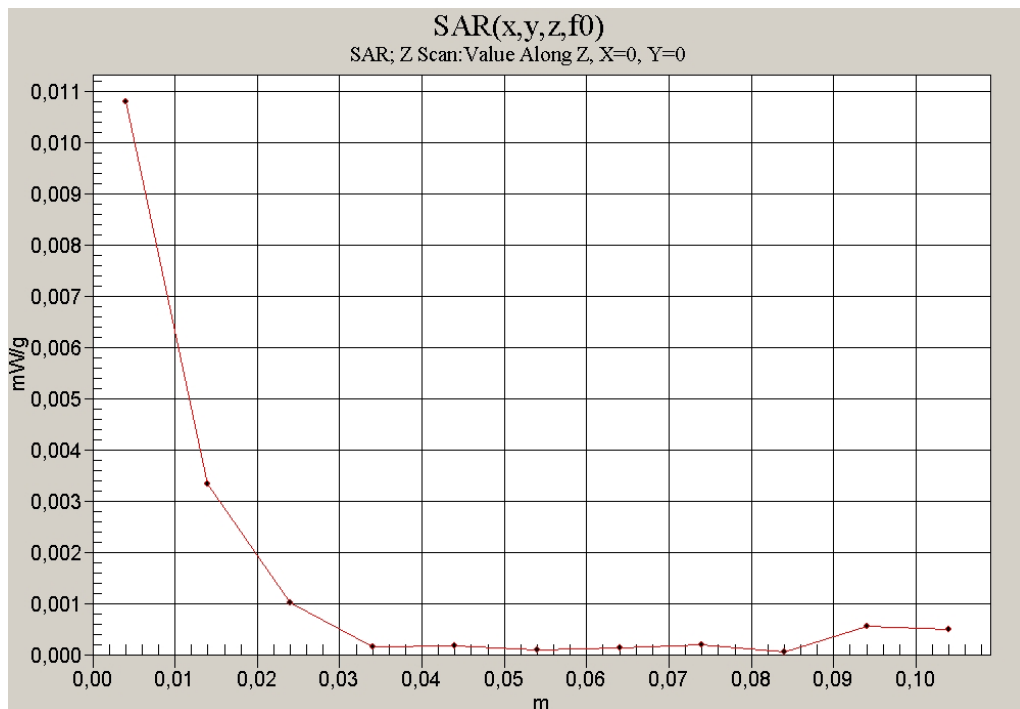


Fig. 9: SAR versus liquid depth, head: DECT US, channel 2, cheek position, left side of head, (May 30, 2007; Ambient Temperature: 22.4° C; Liquid Temperature: 21.3° C).

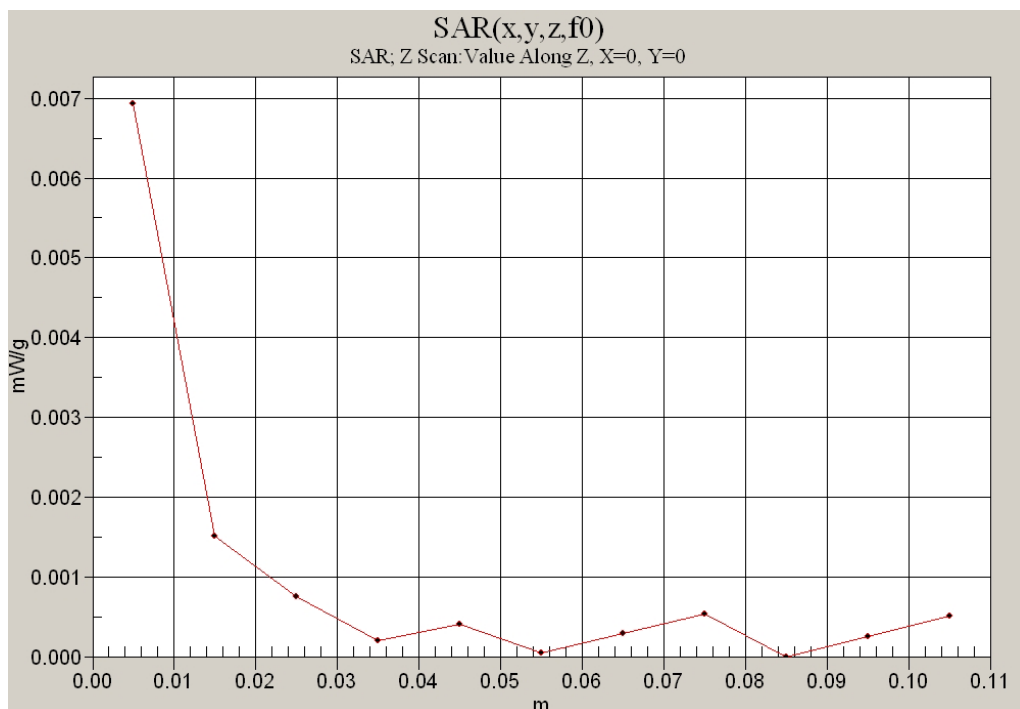


Fig. 10: SAR versus liquid depth, body: DECT US 1900, channel 2, Position 2 display towards the phantom, with belt clip and headset (May 29, 2007; Ambient Temperature: 22.5° C; Liquid Temperature: 21.5° C).