
Appendix for the Report

Dosimetric Assessment of the Panasonic KX-TGA651 (FCC ID: ACJ96NKX-TGA651)

According to the FCC Requirements

SAR Distribution Plots

November 17, 2009
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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: [TGA651_bplm_1.da4](#)

DUT: Panasonic; Type: KX-TGA651;

Program Name: Cheek Left

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.95, 7.95, 7.95); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 14.09.2009
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Maximum value of SAR (measured) = 0.012 mW/g

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

Reference Value = 0.758 V/m; Power Drift = -0.108 dB

Peak SAR (extrapolated) = 0.053 W/kg

SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00671 mW/g

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

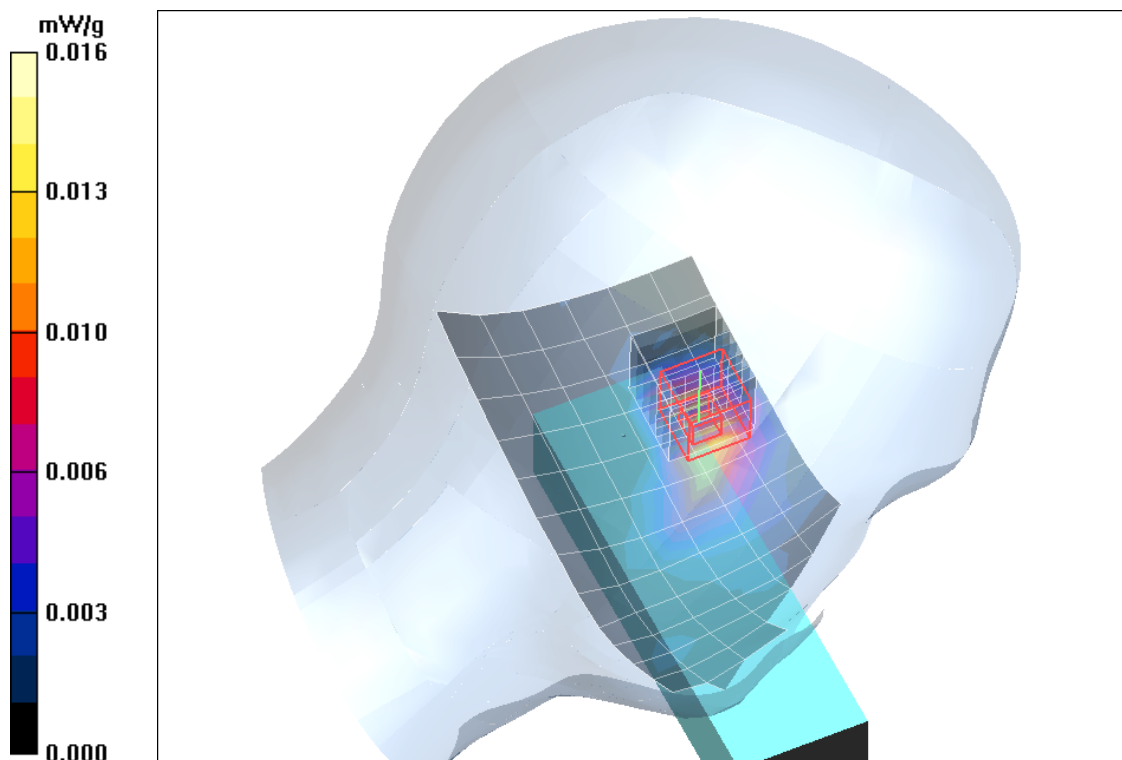


Fig. 1: SAR distribution for DECT US, channel 2, cheek position, left side of head (November 13, 2009; Ambient Temperature: 22.0°C; Liquid Temperature: 21.6°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [TGA651_bplm_2.da4](#)

DUT: Panasonic; Type: KX-TGA651;

Program Name: Tilted Left

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.95, 7.95, 7.95); Calibrated: 18.09.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 14.09.2009
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

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

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

Reference Value = 0.958 V/m; Power Drift = -0.083 dB

Peak SAR (extrapolated) = 0.013 W/kg

SAR(1 g) = 0.0069 mW/g; SAR(10 g) = 0.00367 mW/g

Maximum value of SAR (measured) = 0.008 mW/g

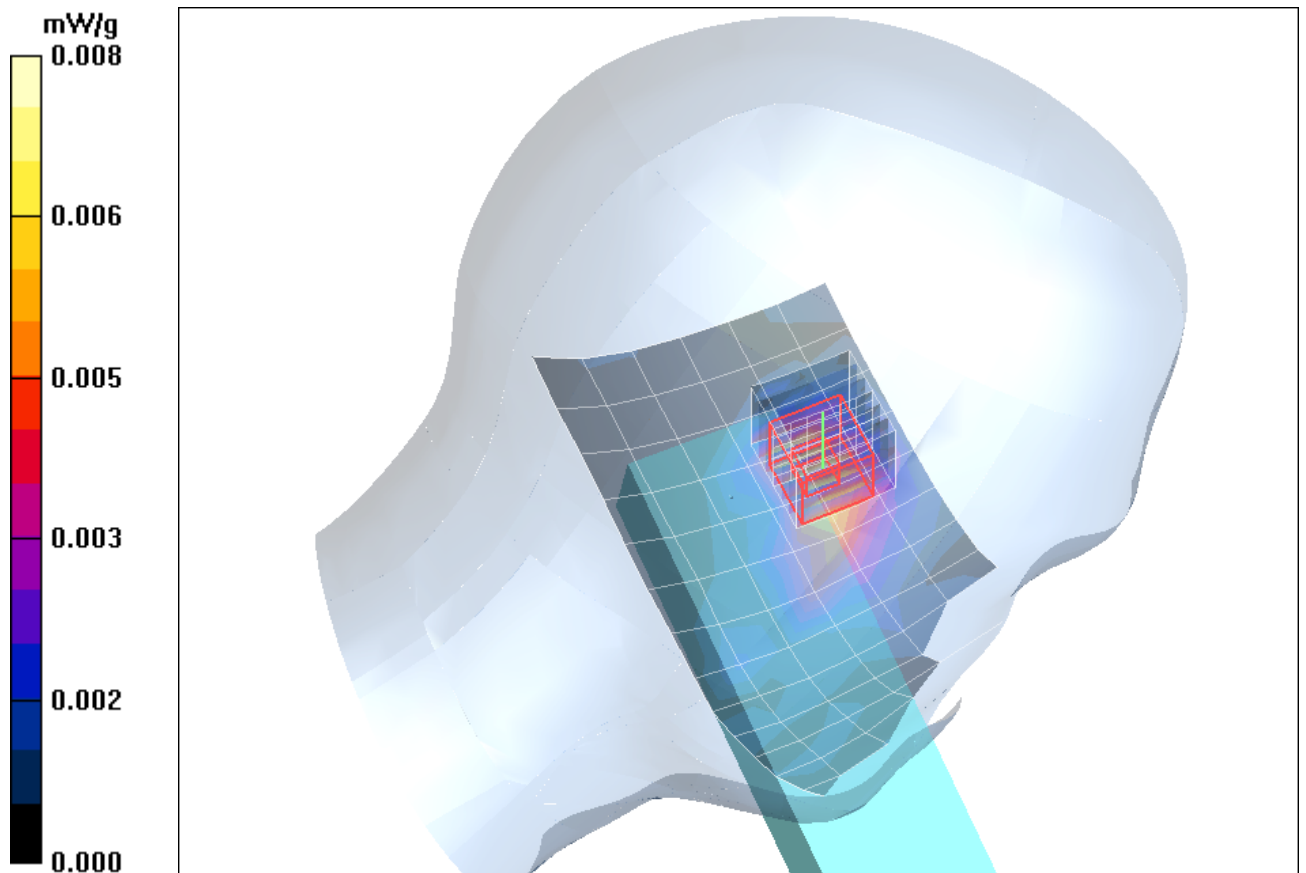


Fig. 2: SAR distribution for DECT US, channel 2, tilted position, left side of head (November 13, 2009; Ambient Temperature: 22.0°C; Liquid Temperature: 21.6°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [TGA651_bprm_1.da4](#)

DUT: Panasonic; Type: KX-TGA651;

Program Name: Cheek Right

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.95, 7.95, 7.95); Calibrated: 18.09.2009

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

- Electronics: DAE4 Sn631; Calibrated: 14.09.2009

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

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

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

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

Reference Value = 1.21 V/m; Power Drift = -0.040 dB

Peak SAR (extrapolated) = 0.017 W/kg

SAR(1 g) = 0.0094 mW/g; SAR(10 g) = 0.00522 mW/g

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

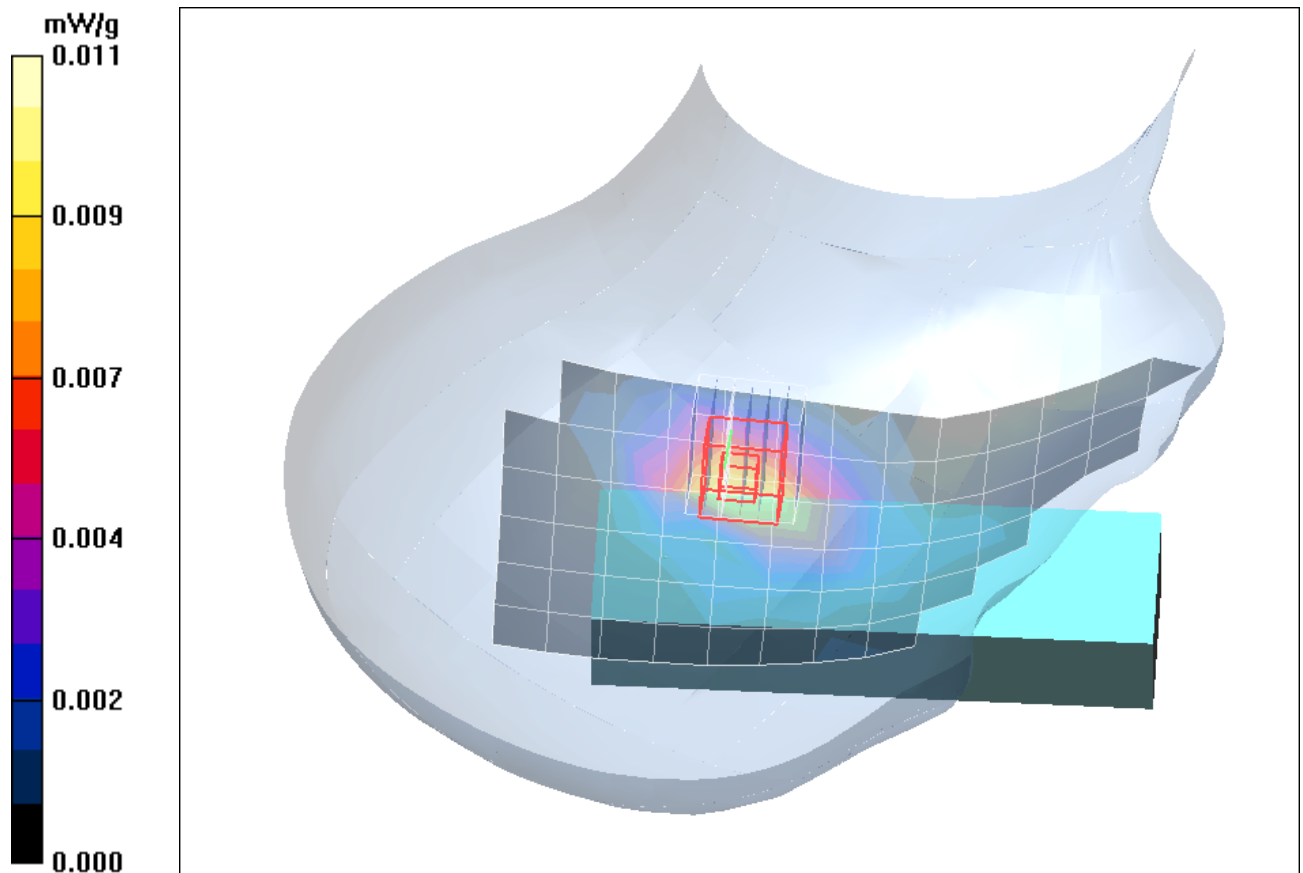


Fig. 3: SAR distribution for DECT US, channel 2, cheek position, right side of head (November 13, 2009; Ambient Temperature: 22.0°C; Liquid Temperature: 21.6°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [TGA651_bprm_2.da4](#)

DUT: Panasonic; Type: KX-TGA651;

Program Name: Tilted Right

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.44$ mho/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.95, 7.95, 7.95); Calibrated: 18.09.2009

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

- Electronics: DAE4 Sn631; Calibrated: 14.09.2009

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

- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

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

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

Reference Value = 1.10 V/m; Power Drift = -0.077 dB

Peak SAR (extrapolated) = 0.012 W/kg

SAR(1 g) = 0.00524 mW/g; SAR(10 g) = 0.00229 mW/g

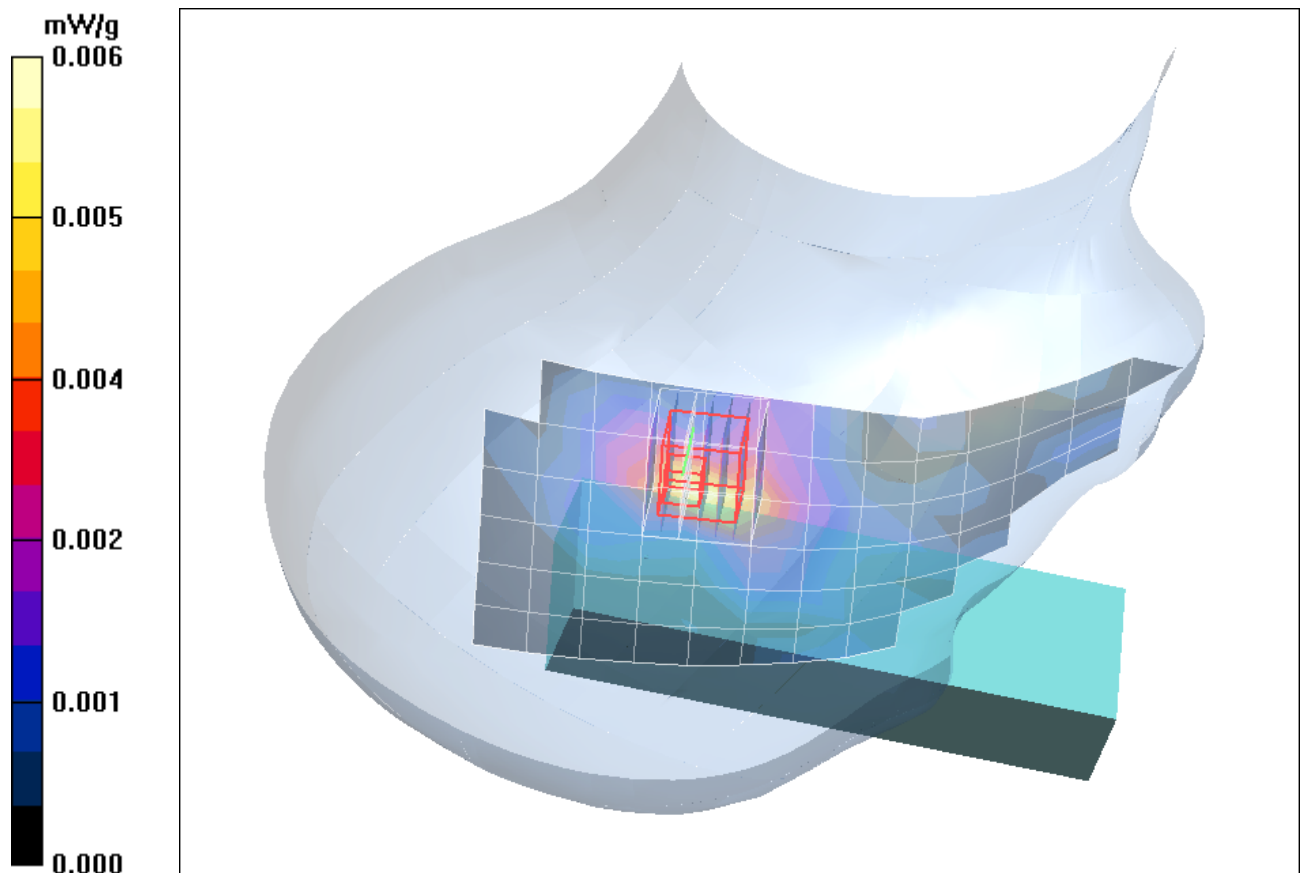


Fig. 4: SAR distribution for DECT US, channel 2, tilted position, right side of head (November 13, 2009; Ambient Temperature: 22.0°C; Liquid Temperature: 21.6°C)

2 SAR Distribution Plots, Body Measurements

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [TGA651_bphm_1_dspl_up_clip_hs.da4](#)

DUT: Panasonic; Type: KX-TGA651;

Program Name: Body

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.66, 4.66, 4.66); Calibrated: 10.02.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.02.2009
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.008 mW/g

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

Reference Value = 1.02 V/m; Power Drift = -0.156 dB

Peak SAR (extrapolated) = 0.017 W/kg

SAR(1 g) = 0.00897 mW/g; SAR(10 g) = 0.00501 mW/g

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

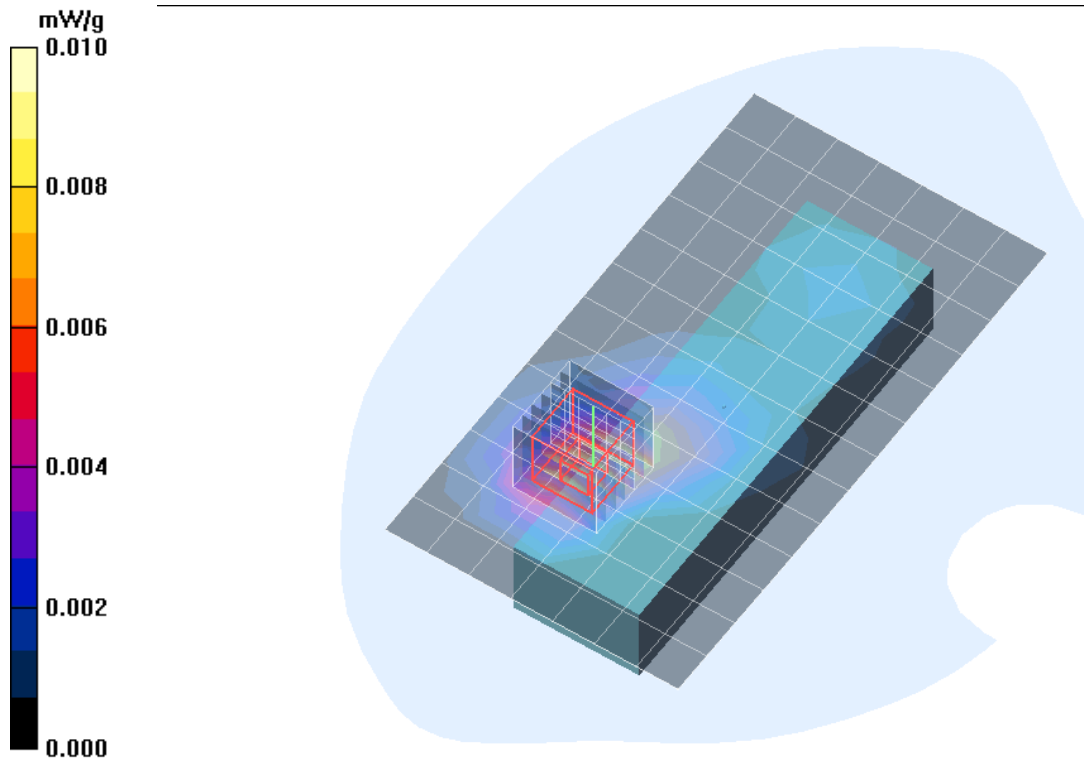


Fig. 5: SAR distribution for DECT US, channel 2, body worn configuration, display towards the phantom, with headset and belt clip, 0 mm distance (November 16, 2009; Ambient Temperature: 21.8° C; Liquid Temperature: 21.4° C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [TGA651_bphm_2_dspl_down_clip_hs.da4](#)

DUT: Panasonic; Type: KX-TGA651;

Program Name: Body

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.55$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.66, 4.66, 4.66); Calibrated: 10.02.2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 09.02.2009
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.008 mW/g

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

Reference Value = 1.52 V/m; Power Drift = 0.008 dB

Peak SAR (extrapolated) = 0.015 W/kg

SAR(1 g) = 0.00796 mW/g; SAR(10 g) = 0.00432 mW/g

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

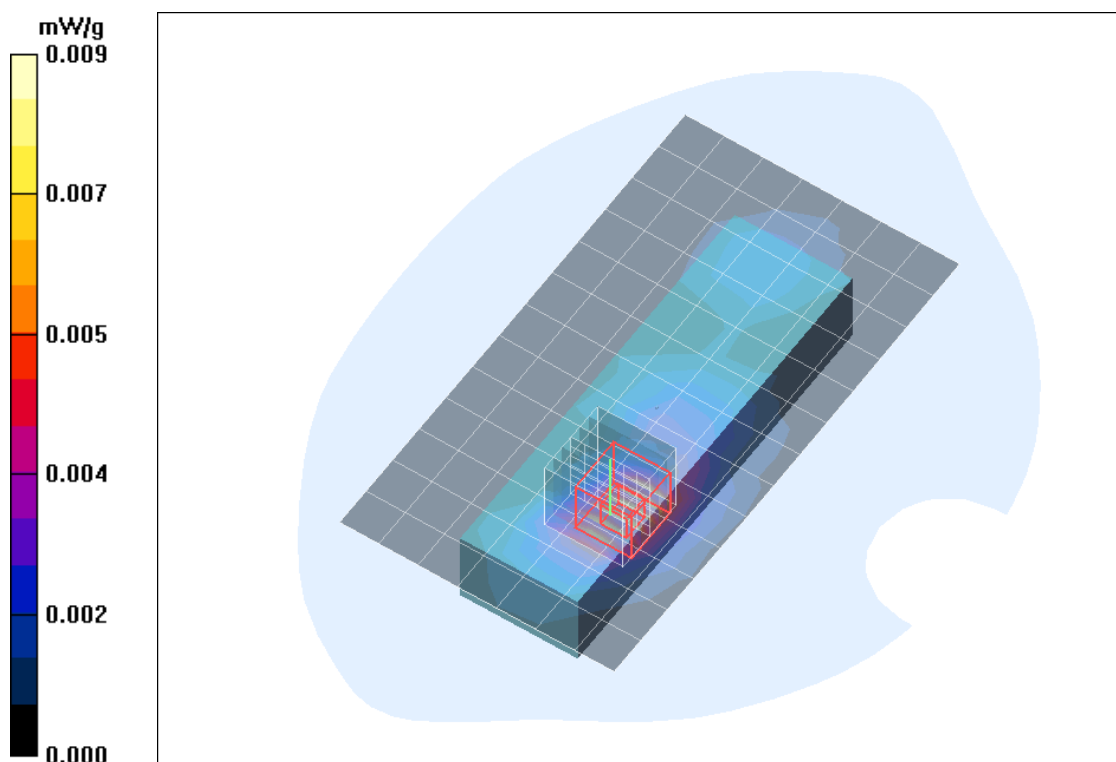


Fig. 6: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, with headset and belt clip, 0 mm distance (November 16, 2009; Ambient Temperature: 21.8° C; Liquid Temperature: 21.4° C).

3 SAR z-axis scans (Validation)

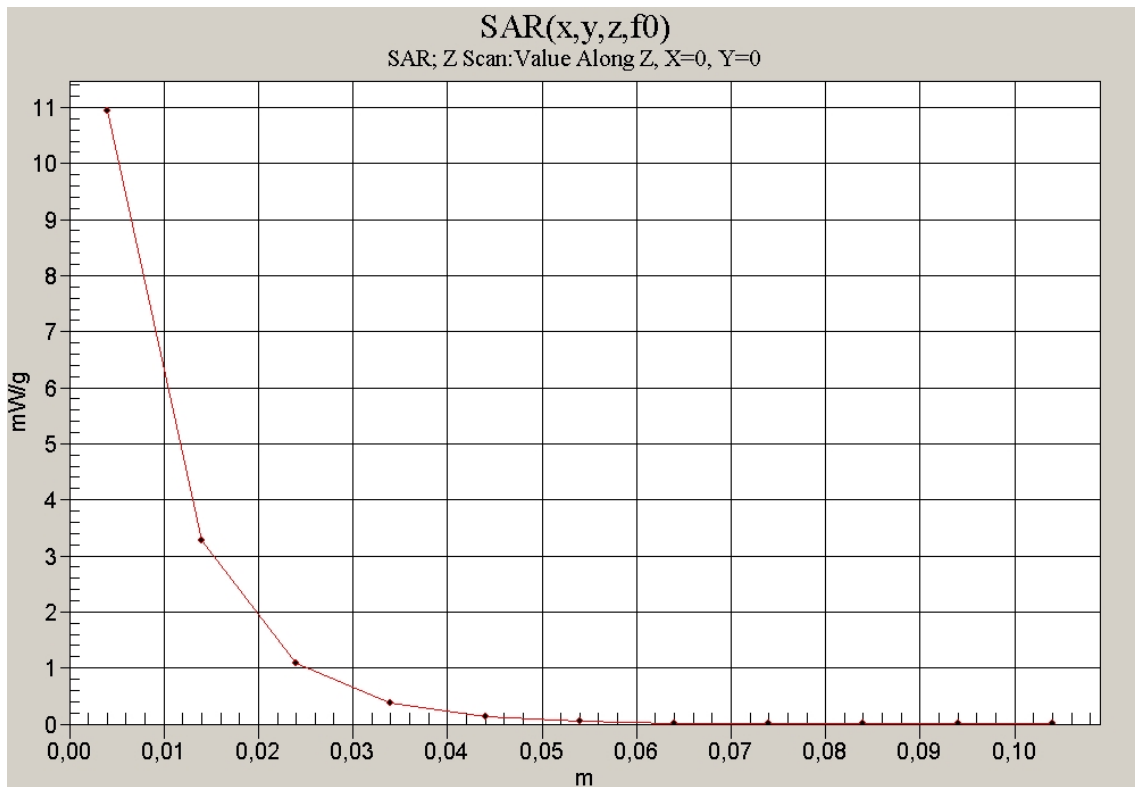


Fig. 7: SAR versus liquid depth, 1900 MHz, head (November 13, 2009; Ambient Temperature: 22.1° C; Liquid Temperature : 21.6° C).

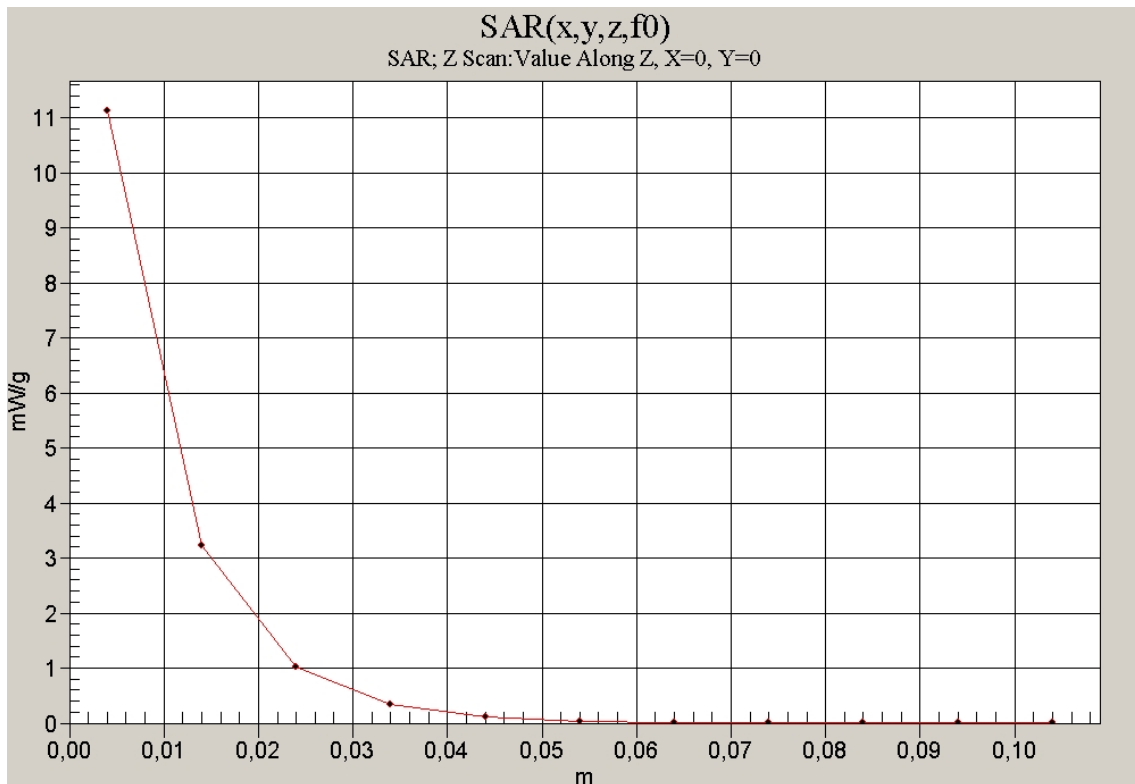


Fig. 8: SAR versus liquid depth, 1900 MHz, body (November 16, 2009; Ambient Temperature: 21.8° C; Liquid Temperature : 21.4° C).

4 SAR z-axis scans (Measurements)

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

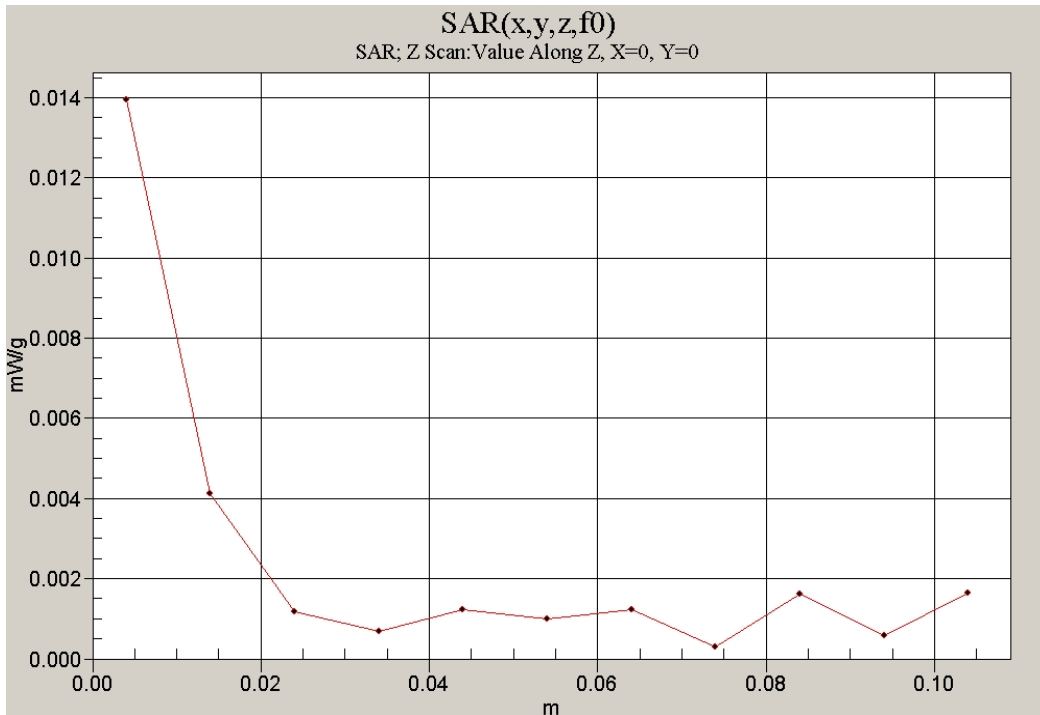


Fig. 9: SAR versus liquid depth, head: DECT US, channel 2, cheek position, left side of head (November 13, 2009; Ambient Temperature: 22.0° C; Liquid Temperature : 21.6° C).

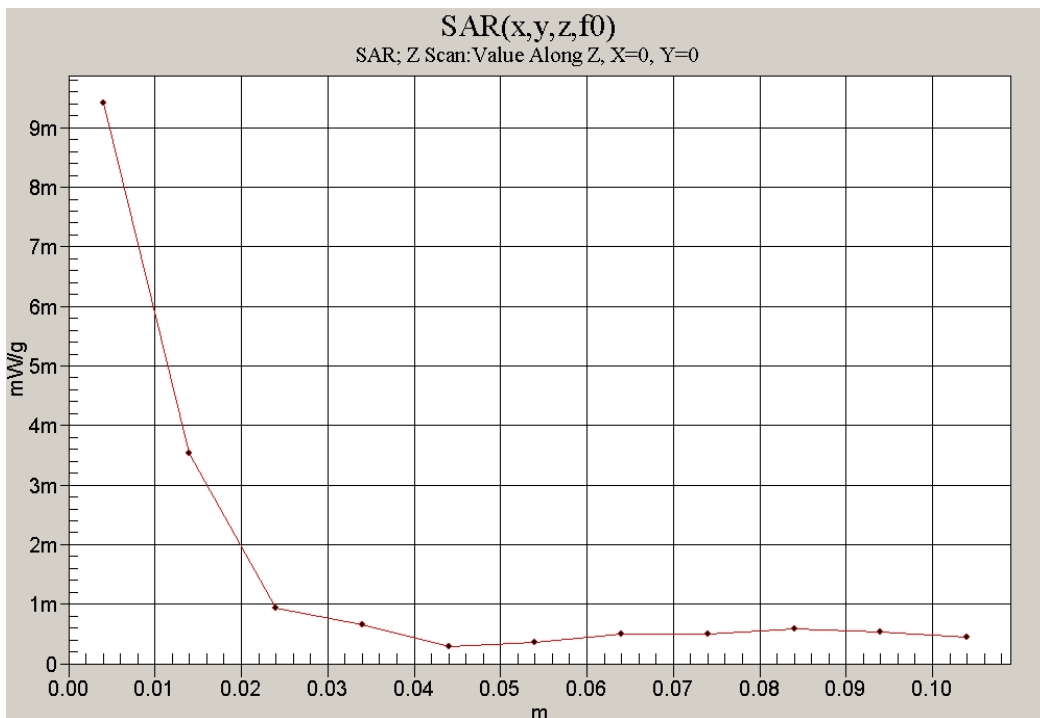


Fig. 10: SAR versus liquid depth, body: DECT US 1900, channel 2, with belt clip and headset, display towards the phantom (November 16, 2009; Ambient Temperature: Temperature: 21.8° C; Liquid Temperature: 21.4° C).