
Appendix for the Report

Dosimetric Assessment of the Portable Device Panasonic KX-TGA660 (FCC ID: ACJ96NKX-TGA660)

According to the FCC Requirements

SAR Distribution Plots

November 30, 2010

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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 Yellow (II); File Name: [TGA660_yplm_1.da4](#)

DUT: Panasonic; Type: KX-TGA660;

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.77, 7.77, 7.77); Calibrated: 16.09.2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

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

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

Reference Value = 3.28 V/m; Power Drift = 0.104 dB

Peak SAR (extrapolated) = 0.037 W/kg

SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.010 mW/g

Maximum value of SAR (measured) = 0.023 mW/g

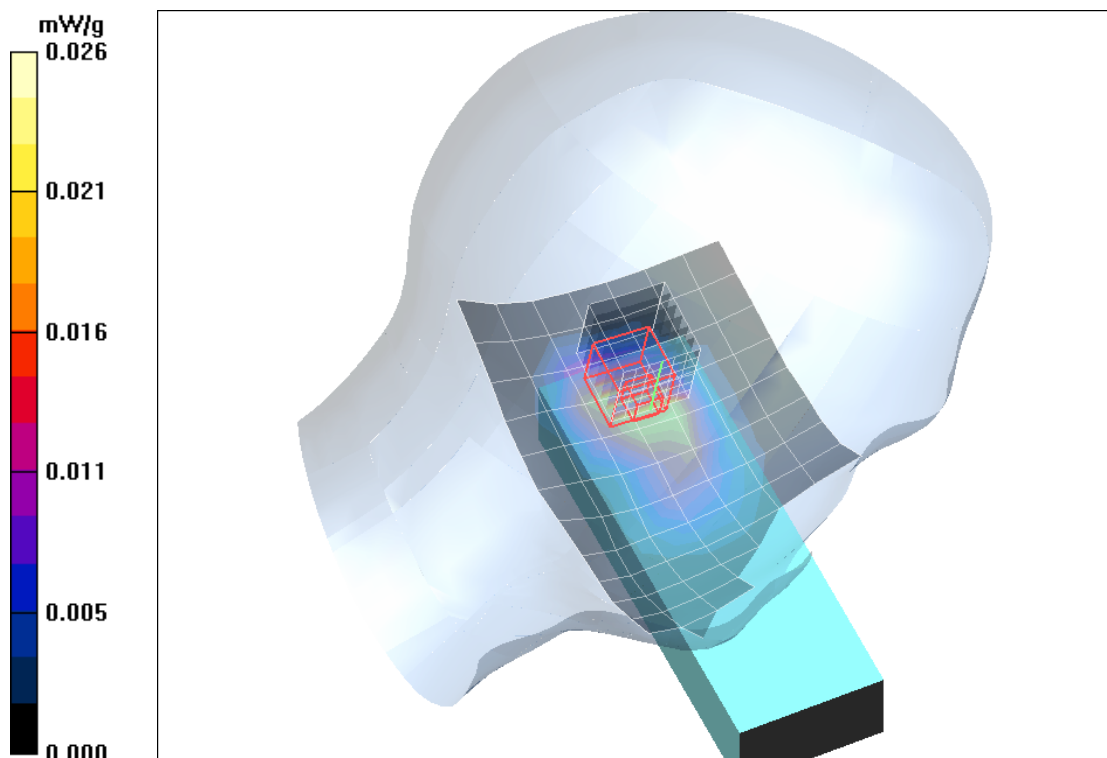


Fig. 1: SAR distribution for DECT US, channel 2, cheek position, left side of head (November 24, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.7°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [TGA660_vplm_2.da4](#)

DUT: Panasonic; Type: KX-TGA660;

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.77, 7.77, 7.77); Calibrated: 16.09.2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

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

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

Reference Value = 3.49 V/m; Power Drift = 0.172 dB

Peak SAR (extrapolated) = 0.031 W/kg

SAR(1 g) = 0.019 mW/g; SAR(10 g) = 0.00976 mW/g

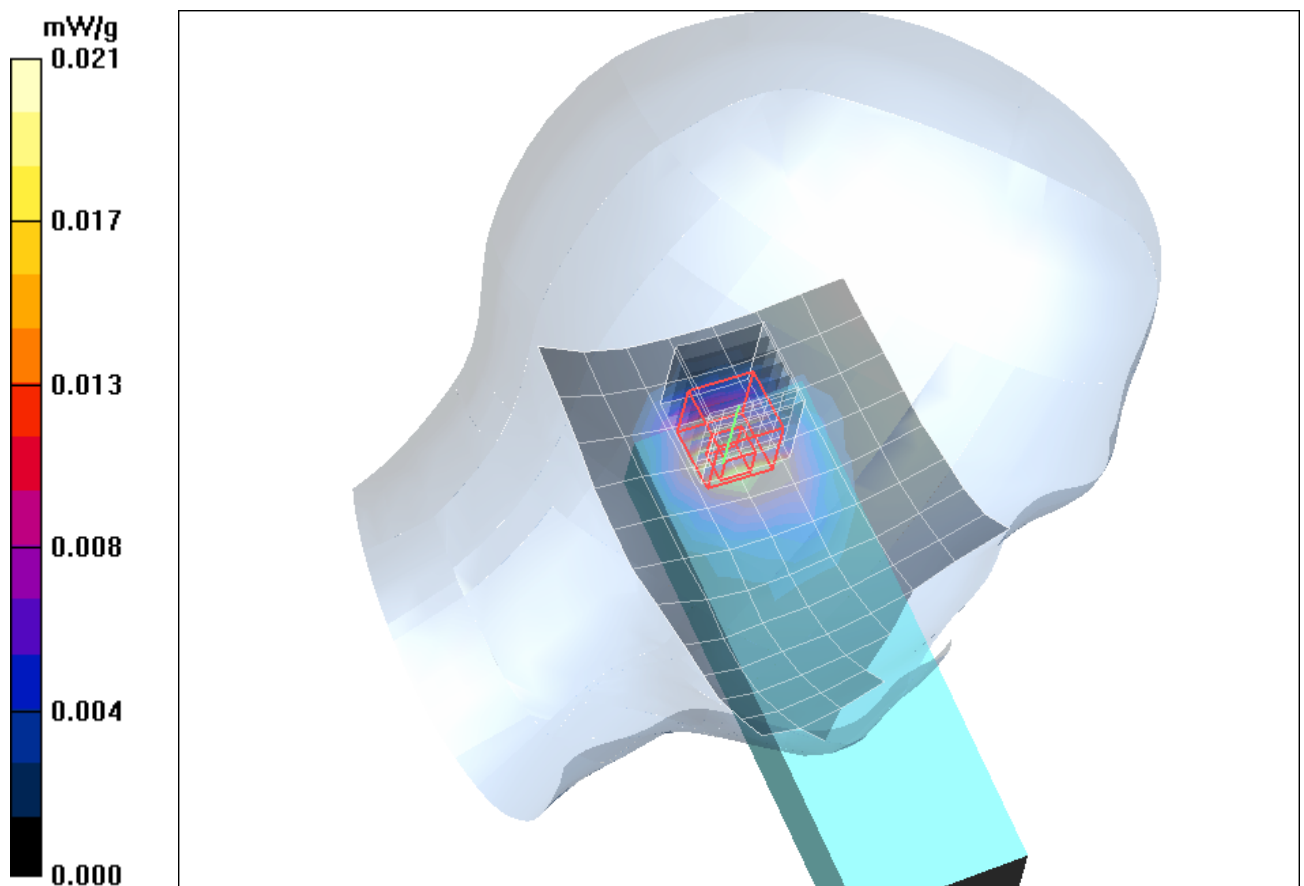


Fig. 2: SAR distribution for DECT US, channel 2, tilted position, left side of head (November 24, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.7°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); **File Name:** [TGA660_vprm_1.da4](#)

DUT: Panasonic; **Type:** KX-TGA660;

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.77, 7.77, 7.77); Calibrated: 16.09.2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Maximum value of SAR (measured) = 0.023 mW/g

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

Reference Value = 3.40 V/m; Power Drift = 0.038 dB

Peak SAR (extrapolated) = 0.042 W/kg

SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.011 mW/g

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

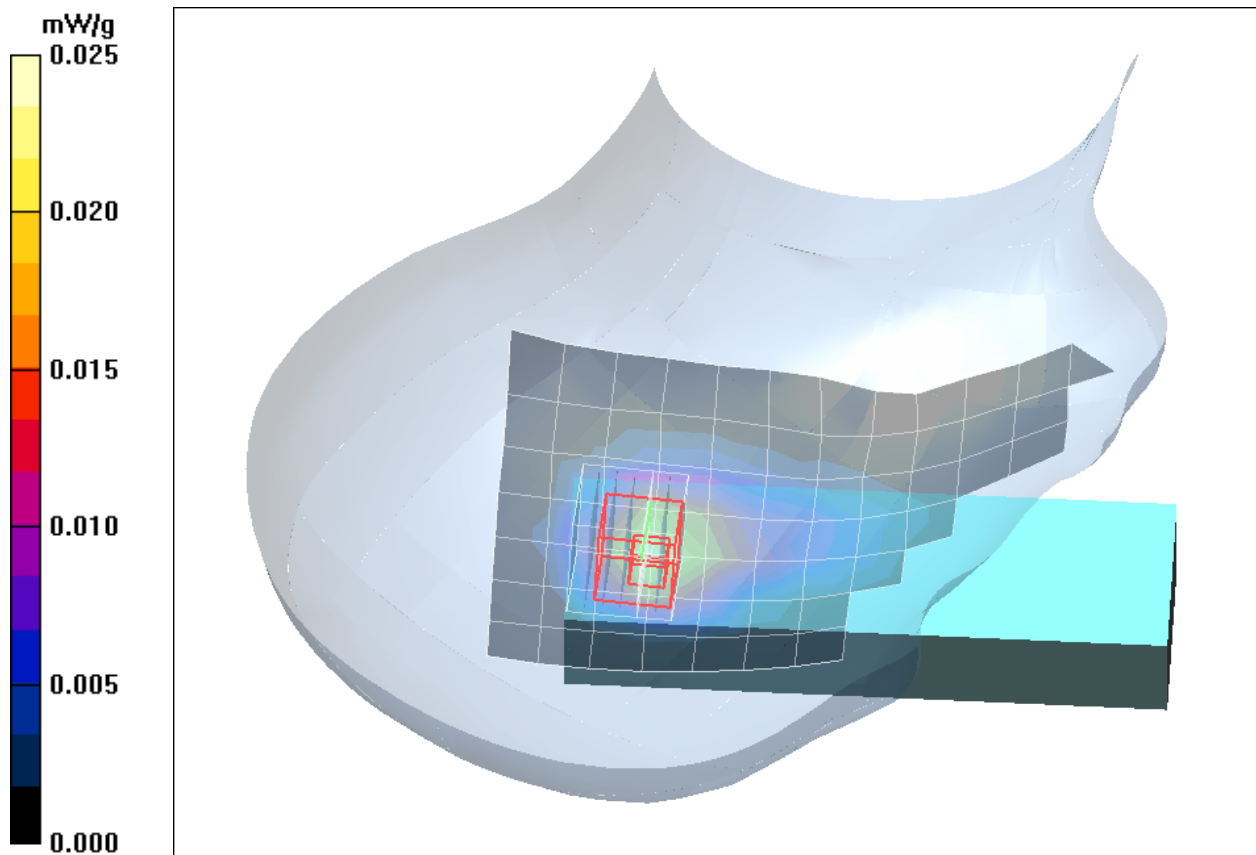


Fig. 3: SAR distribution for DECT US, channel 2, cheek position, right side of head (November 24, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.7°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); **File Name:** [TGA660_vprm_2.da4](#)

DUT: Panasonic; **Type:** KX-TGA660;

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.42$ mho/m; $\epsilon_r = 41.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.77, 7.77, 7.77); Calibrated: 16.09.2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Maximum value of SAR (measured) = 0.019 mW/g

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

Reference Value = 3.38 V/m; Power Drift = 0.166 dB

Peak SAR (extrapolated) = 0.036 W/kg

SAR(1 g) = 0.019 mW/g; SAR(10 g) = 0.010 mW/g

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

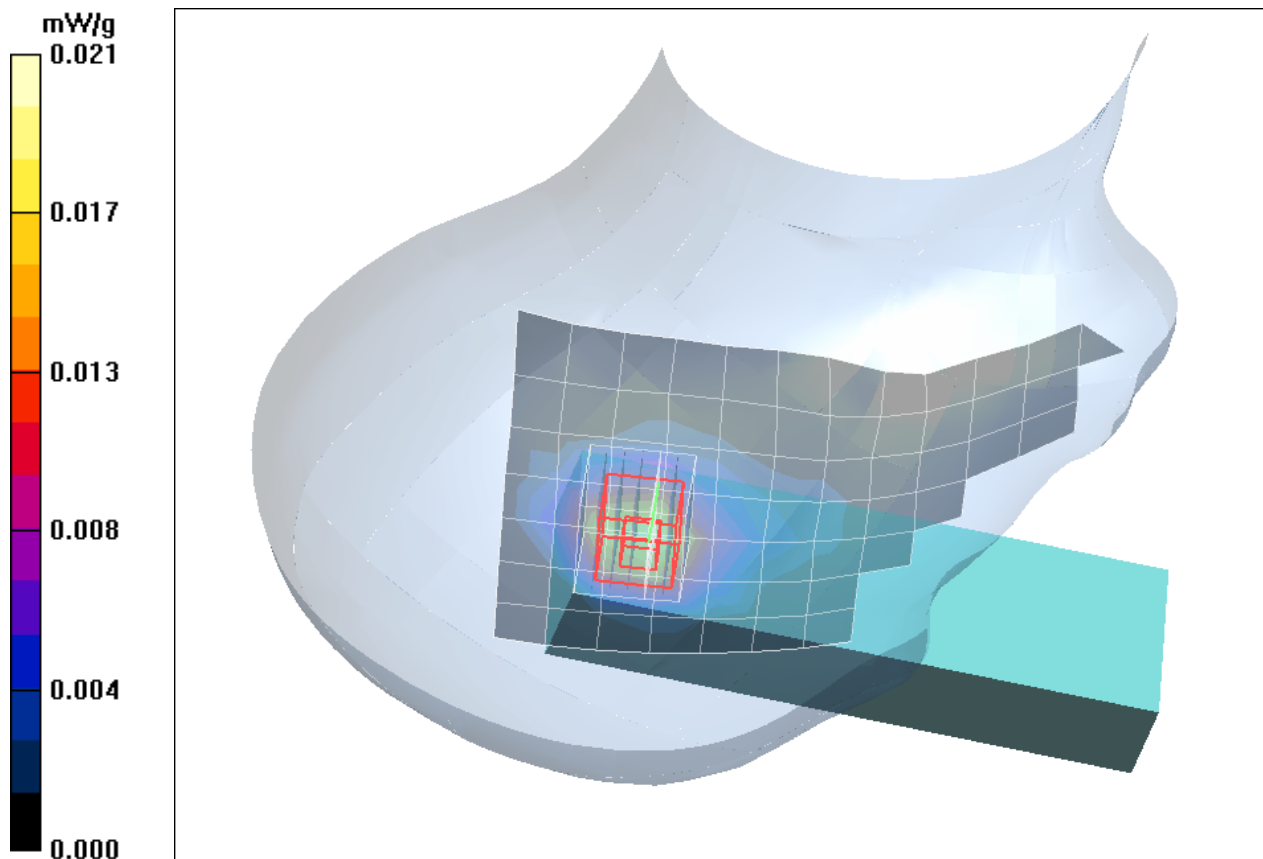


Fig. 4: SAR distribution for DECT US, channel 2, tilted position, right side of head (November 24, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.7°C)

2 SAR Distribution Plots, Body Measurements

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [TGA660_yphm_1_hs_up.da4](#)

DUT: Panasonic; Type: KX-TGA660;

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.89, 7.89, 7.89); Calibrated: 16.09.2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (8x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.024 mW/g

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

Reference Value = 1.81 V/m; Power Drift = 0.120 dB

Peak SAR (extrapolated) = 0.038 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

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

Reference Value = 1.81 V/m; Power Drift = 0.120 dB

Peak SAR (extrapolated) = 0.036 W/kg

SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.010 mW/g

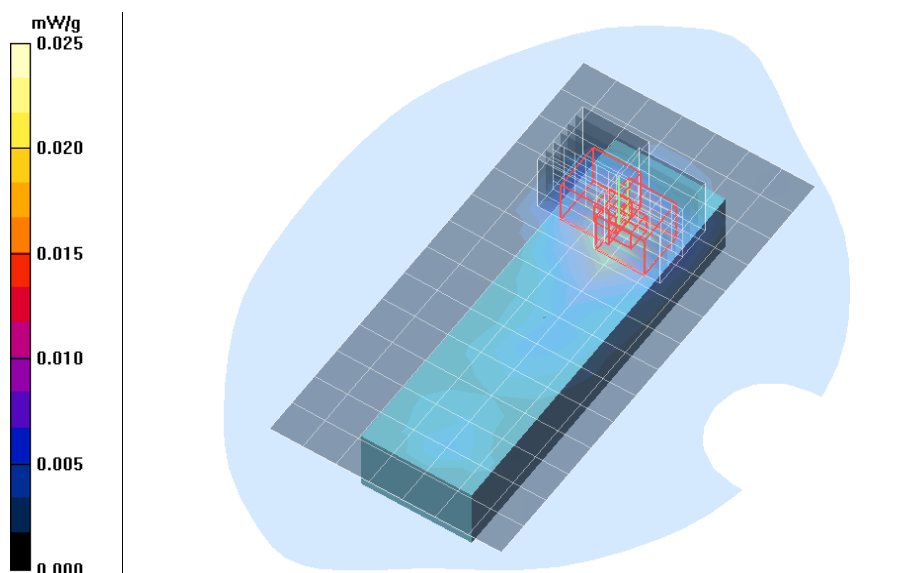


Fig. 5: SAR distribution for DECT US, channel 2, body worn configuration, display towards the phantom, belt clip and headset attached, 0 mm distance (November 29, 2010; Ambient Temperature: 21.4° C; Liquid Temperature: 21.1° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [TGA660_vphm_2_hs_down.da4](#)

DUT: Panasonic; Type: KX-TGA660;

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.89, 7.89, 7.89); Calibrated: 16.09.2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 10.02.2010
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body Worn/Area Scan (8x15x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 1.38 V/m; Power Drift = 0.087 dB

Peak SAR (extrapolated) = 0.014 W/kg

SAR(1 g) = 0.00475 mW/g; SAR(10 g) = 0.00231 mW/g

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

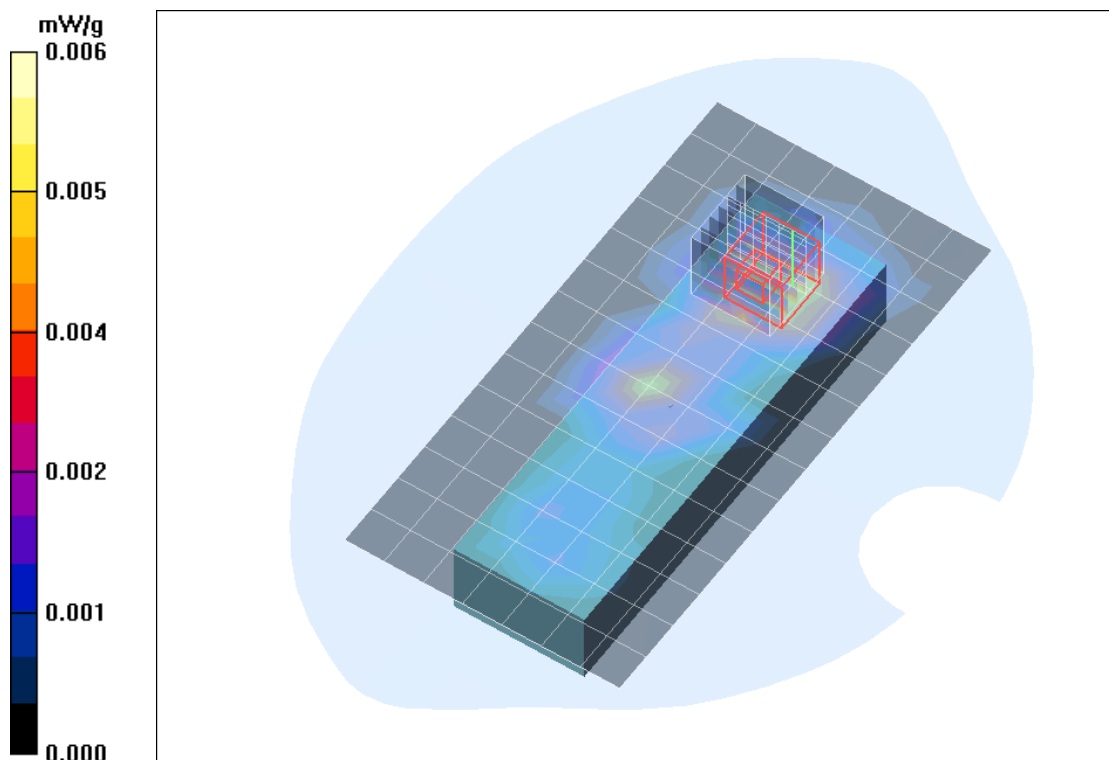


Fig. 6: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, belt clip and headset attached, 0 mm distance (November 29, 2010; Ambient Temperature: 21.4° C; Liquid Temperature: 21.1° C).

3 SAR z-axis scans (Validation)

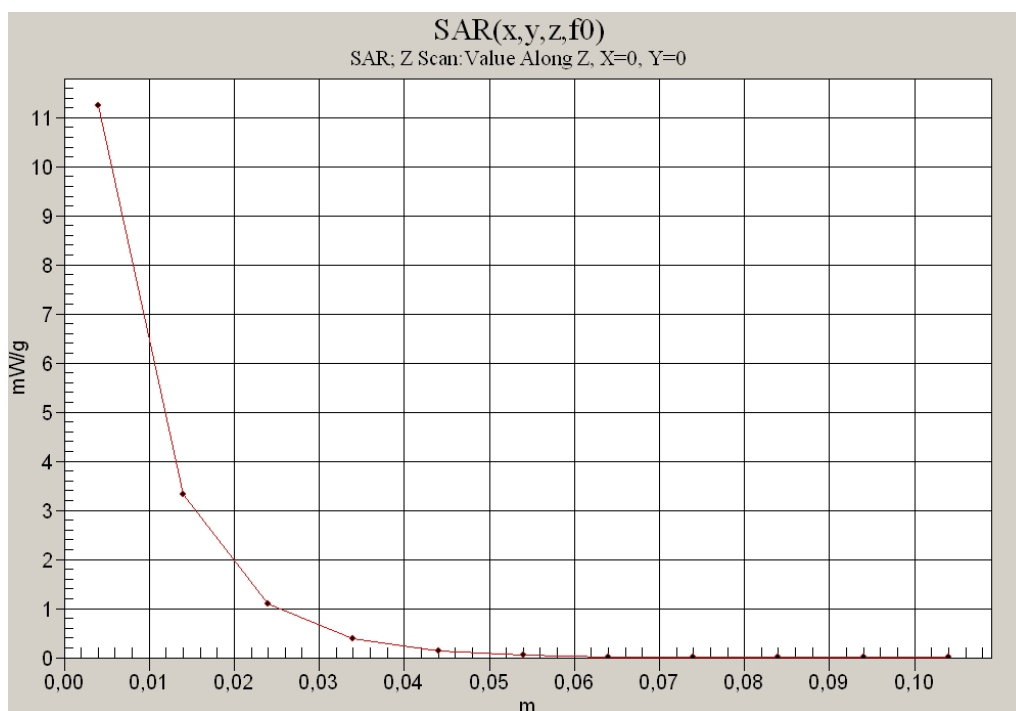


Fig. 7: SAR versus liquid depth, 1900 MHz, head (November 24, 2010; Ambient Temperature: 20.9° C; Liquid Temperature : 20.6° C).

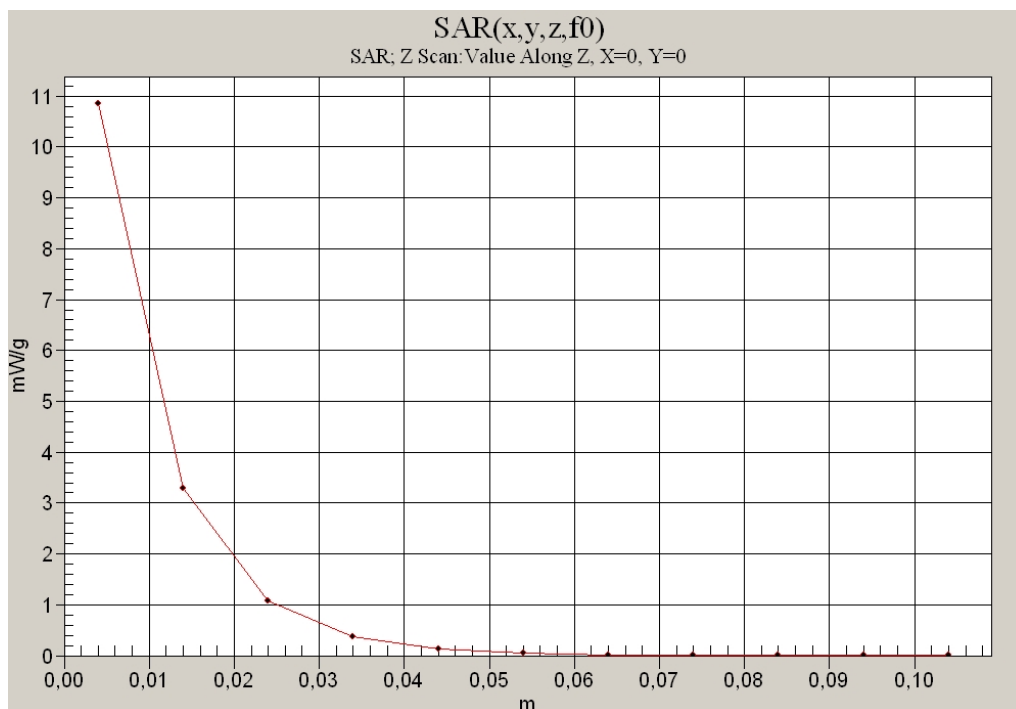


Fig. 8: SAR versus liquid depth, 1900 MHz, body (November 29, 2010; Ambient Temperature: 21.4° C; Liquid Temperature : 21.2° C).

4 SAR z-axis scans (Measurements)

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

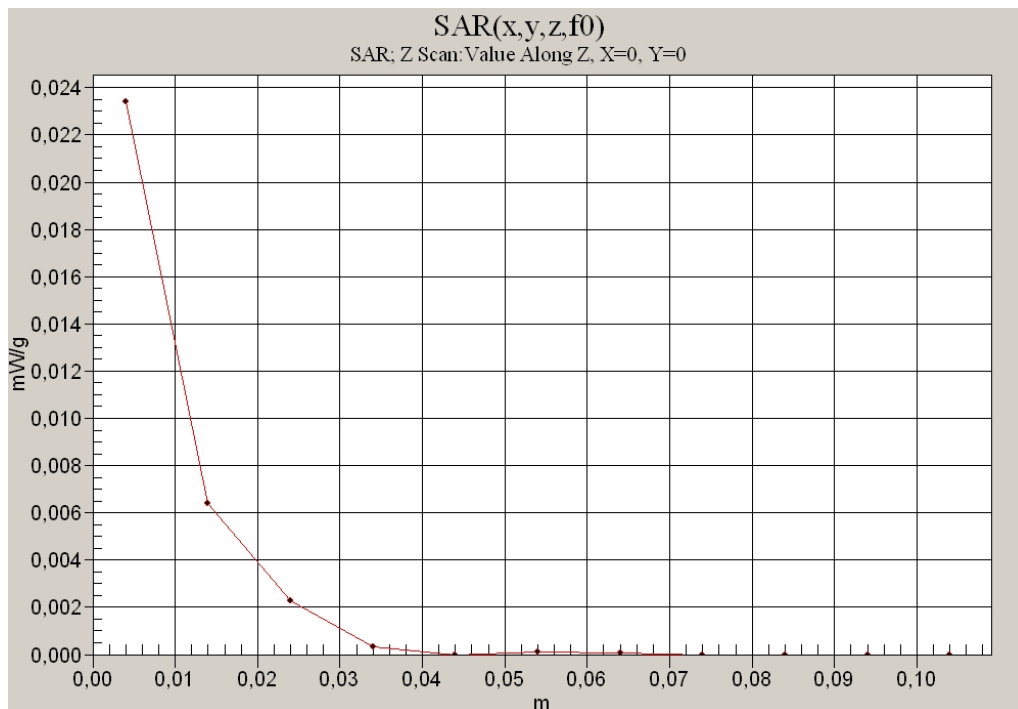


Fig. 9: SAR versus liquid depth, head: DECT US, channel 2, cheek position, right side of head (November 24, 2010; Ambient Temperature: 20.9° C; Liquid Temperature: 20.7° C).

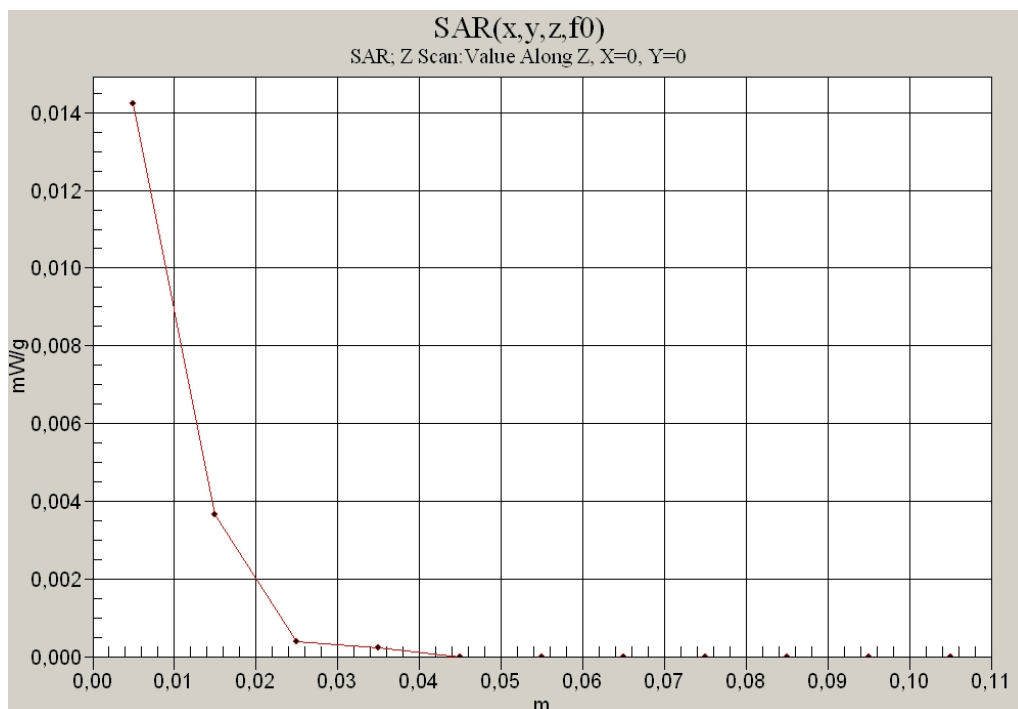


Fig. 10: SAR versus liquid depth, body: DECT US, channel 2, belt clip and headset attached, display towards the phantom (November 29, 2010; Ambient Temperature: 21.4° C; Liquid Temperature: 21.1° C).