
Appendix for the Report

Dosimetric Assessment of the Westell A90-WMTAV3030-01 (FCC ID: T7HWMTAV30-01)

According to the FCC Requirements

SAR Distribution Plots

August 14, 2007
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The test results only relate to the items tested.
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1 SAR Distribution Plots, Head Measurements

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [Winona_yplm_1.da4](#)

DUT: Winona; Type: Westell;

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; $\sigma = 1.46$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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 1340; Type: QD 000 P40 CB; Serial: TP-1340

- 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) = 0.019 mW/g

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

Reference Value = 2.53 V/m; Power Drift = 0.132 dB

Peak SAR (extrapolated) = 0.028 W/kg

SAR(1 g) = 0.018 mW/g; SAR(10 g) = 0.010 mW/g

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

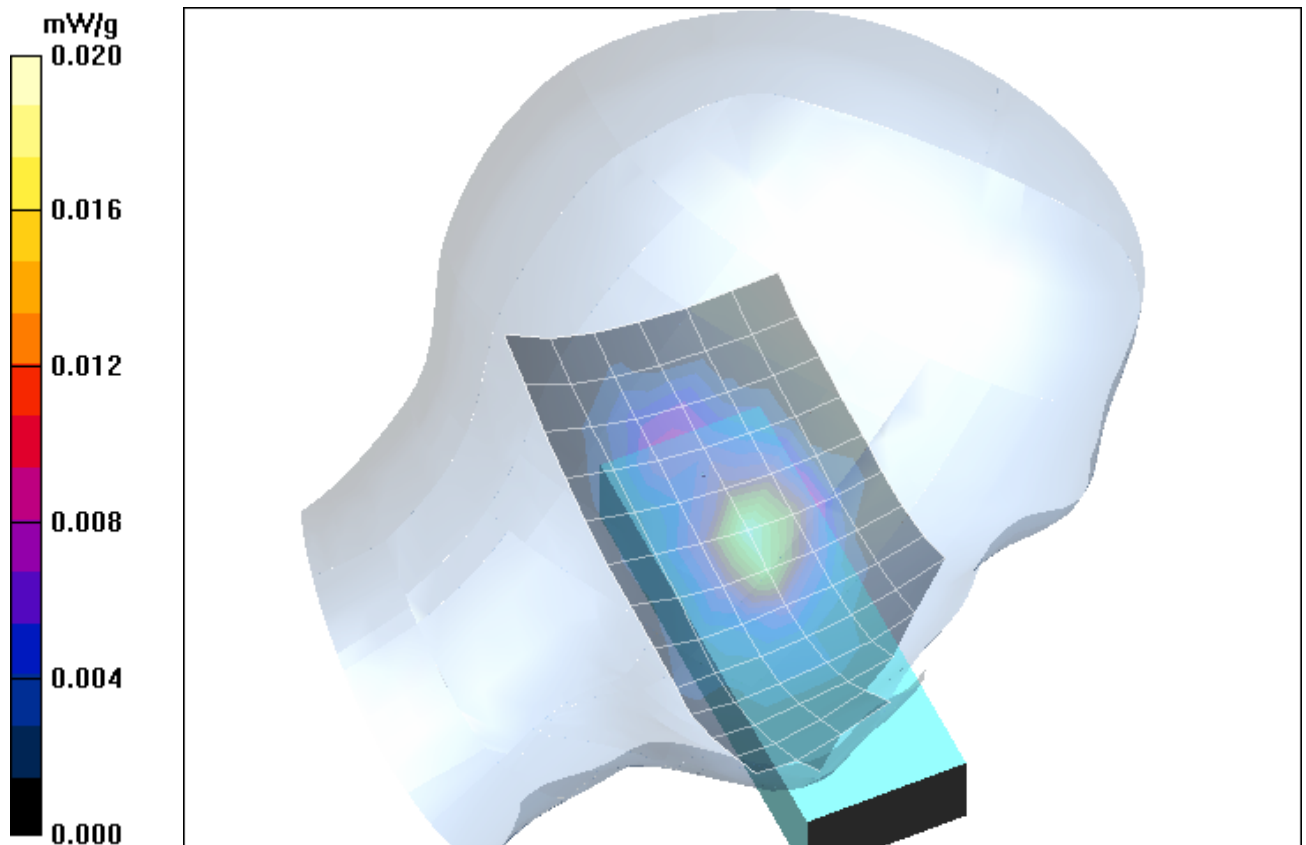


Fig. 1: SAR distribution for DECT US, channel 2, cheek position, left side of head (June 22, 2007; Ambient Temperature: 22.2°C; Liquid Temperature: 21.1°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [Winona_yplm_2.da4](#)

DUT: Winona; Type: Westell;

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; $\sigma = 1.46$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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 1340; Type: QD 000 P40 CB; Serial: TP-1340

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

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

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

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

Reference Value = 2.44 V/m; Power Drift = 0.059 dB

Peak SAR (extrapolated) = 0.013 W/kg

SAR(1 g) = 0.0081 mW/g; SAR(10 g) = 0.0046 mW/g

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

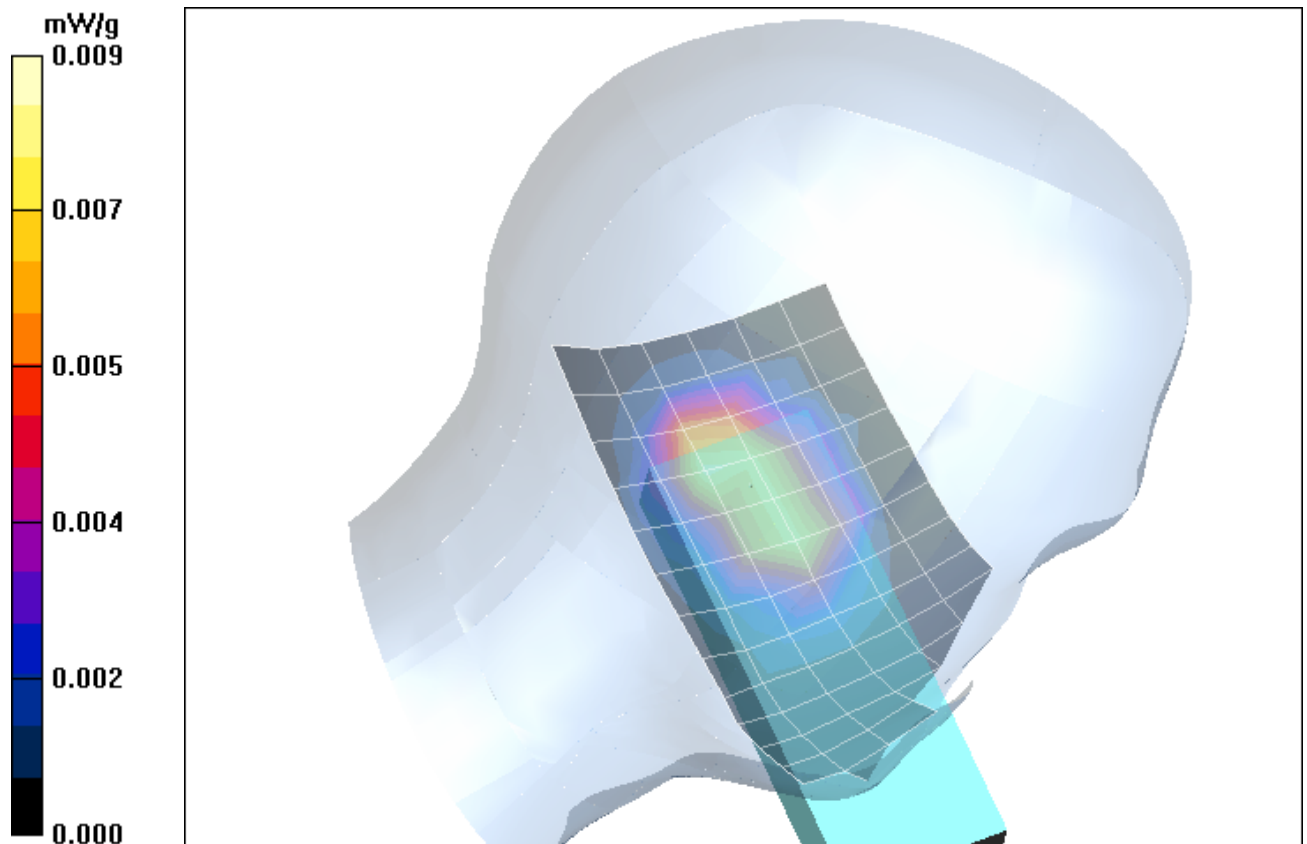


Fig. 2: SAR distribution for DECT US, channel 2, tilted position, left side of head (June 22, 2007; Ambient Temperature: 22.2°C; Liquid Temperature: 21.1°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [Winona_yprm_1.da4](#)

DUT: Winona; Type: Westell;

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; $\sigma = 1.46$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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 1340; Type: QD 000 P40 CB; Serial: TP-1340

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

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

Maximum value of SAR (measured) = 0.015 mW/g

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

Reference Value = 2.19 V/m; Power Drift = 0.162 dB

Peak SAR (extrapolated) = 0.023 W/kg

SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.0083 mW/g

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

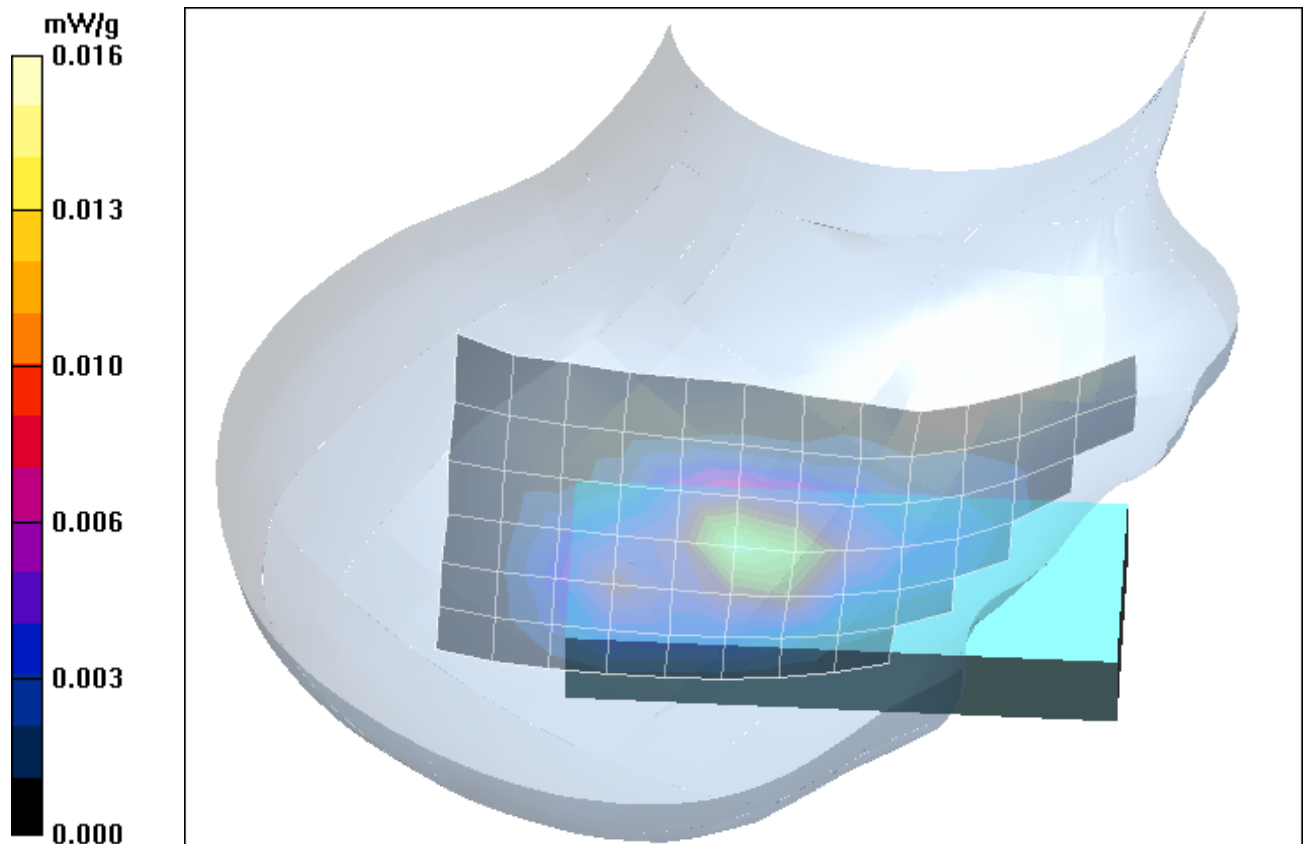


Fig. 3: SAR distribution for DECT US, channel 2, cheek position, right side of head (June 22, 2007; Ambient Temperature: 22.2°C; Liquid Temperature: 21.1°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); **File Name:** [Winona_yprm_2.da4](#)

DUT: Winona; **Type:** Westell;

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; $\sigma = 1.46$ mho/m; $\epsilon_r = 41$; $\rho = 1000$ kg/m³

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 1340; Type: QD 000 P40 CB; Serial: TP-1340

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

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

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

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

Reference Value = 2.28 V/m; Power Drift = 0.132 dB

Peak SAR (extrapolated) = 0.014 W/kg

SAR(1 g) = 0.0087 mW/g; SAR(10 g) = 0.0045 mW/g

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

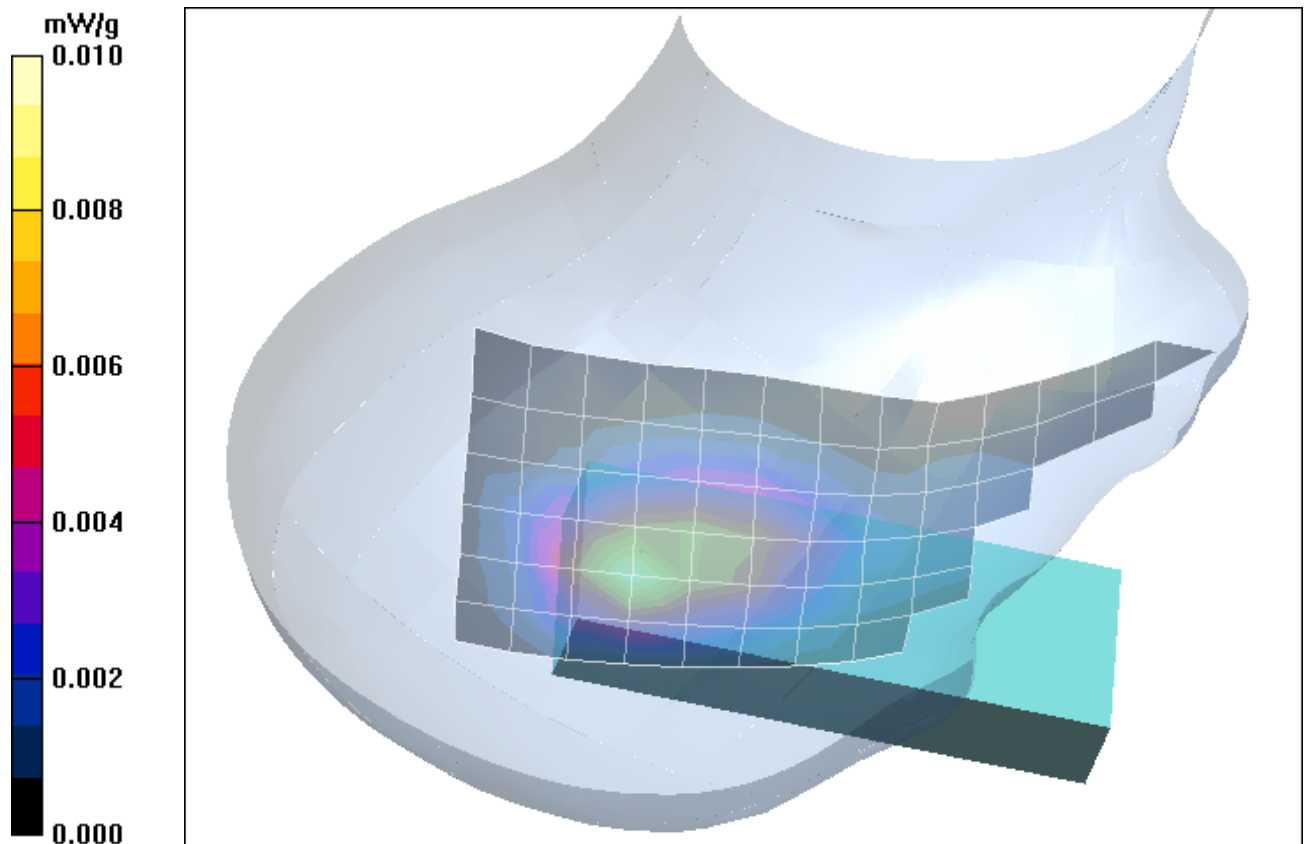


Fig. 4: SAR distribution for DECT US, channel 2, tilted position, right side of head (June 22, 2007; Ambient Temperature: 22.2°C; Liquid Temperature: 21.1°C)

2 SAR Distribution Plots, Body Measurements

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [Winona bphm 1.da4](#)

DUT: Winona; Type: Westell;

Program Name: Body Worn

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.49, 4.49, 4.49); 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

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

Maximum value of SAR (measured) = 0.018 mW/g

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

Reference Value = 2.38 V/m; Power Drift = 0.101 dB

Peak SAR (extrapolated) = 0.024 W/kg

SAR(1 g) = 0.016 mW/g; SAR(10 g) = 0.0098 mW/g

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

Reference Value = 2.38 V/m; Power Drift = 0.101 dB

Peak SAR (extrapolated) = 0.020 W/kg

SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.0088 mW/g

Maximum value of SAR (measured) = 0.015 mW/g

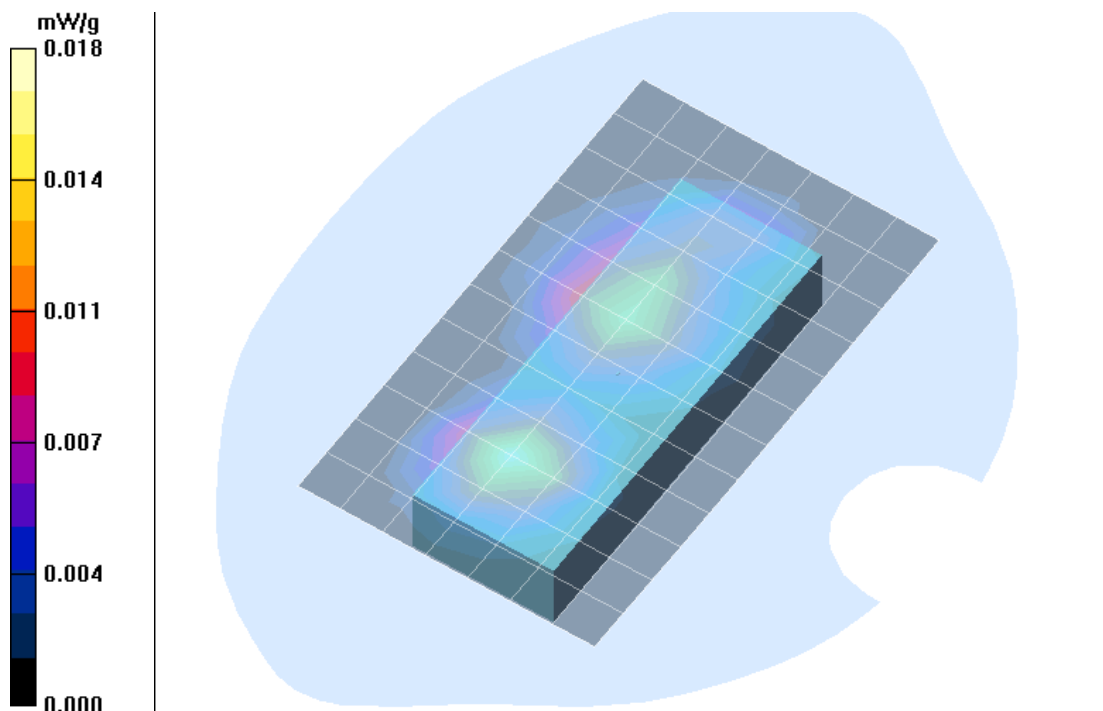


Fig. 5: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, with belt clip and 0 mm distance (June 22, 2007; Ambient Temperature: 22.5° C; Liquid Temperature: 21.4° C).

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

DUT: Winona; Type: Westell;

Program Name: Body Worn

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.56$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.49, 4.49, 4.49); 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

Body Worn/Area Scan (8x13x1): 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 = 2.26 V/m; Power Drift = -0.073 dB

Peak SAR (extrapolated) = 0.022 W/kg

SAR(1 g) = 0.015 mW/g; SAR(10 g) = 0.0086 mW/g

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

Reference Value = 2.26 V/m; Power Drift = -0.073 dB

Peak SAR (extrapolated) = 0.020 W/kg

SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.0084 mW/g

Maximum value of SAR (measured) = 0.015 mW/g

Body Worn/Zoom Scan (7x7x7)/Cube 2: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.26 V/m; Power Drift = -0.073 dB

Peak SAR (extrapolated) = 0.016 W/kg

SAR(1 g) = 0.0092 mW/g; SAR(10 g) = 0.0049 mW/g

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

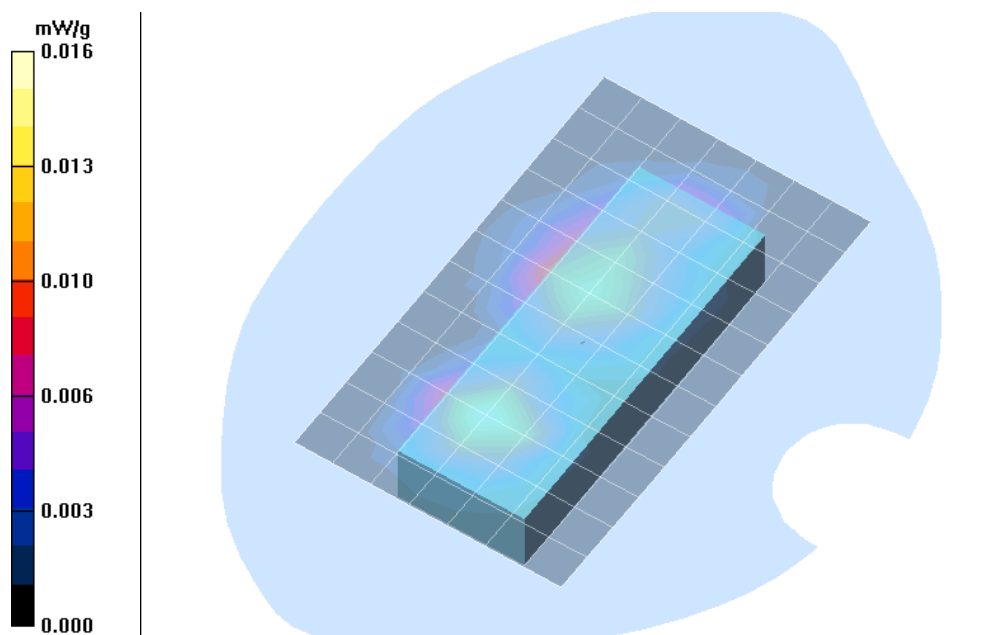


Fig. 6: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, with belt clip and headset, 0 mm distance (June 22, 2007; Ambient Temperature: 22.5° C; Liquid Temperature: 21.4° C).

3 SAR z-axis scans (Validation)

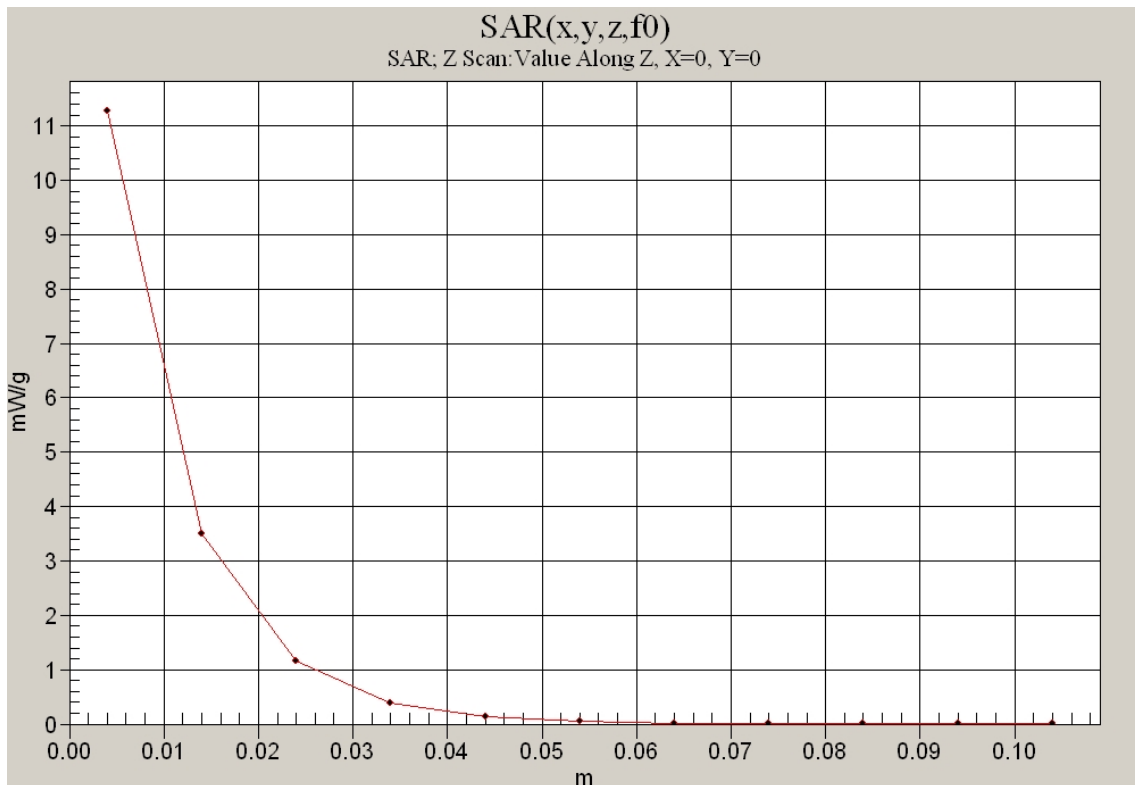


Fig. 7: SAR versus liquid depth, 1900 MHz, head (June 22, 2007; Ambient Temperature: 22.0° C; Liquid Temperature : 21.1° C).

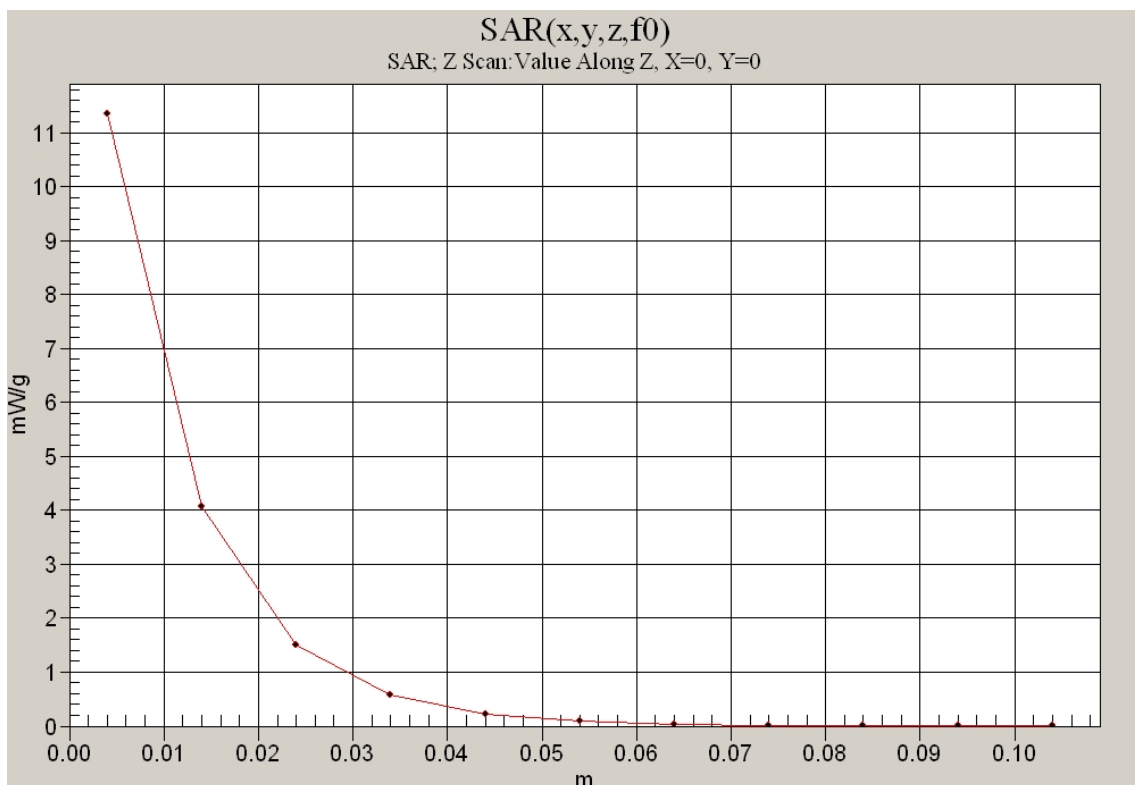


Fig. 8: SAR versus liquid depth, 1900 MHz, body (June 22, 2007; Ambient Temperature: 22.1° C; Liquid Temperature : 21.3° C).

4 SAR z-axis scans (Measurements)

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

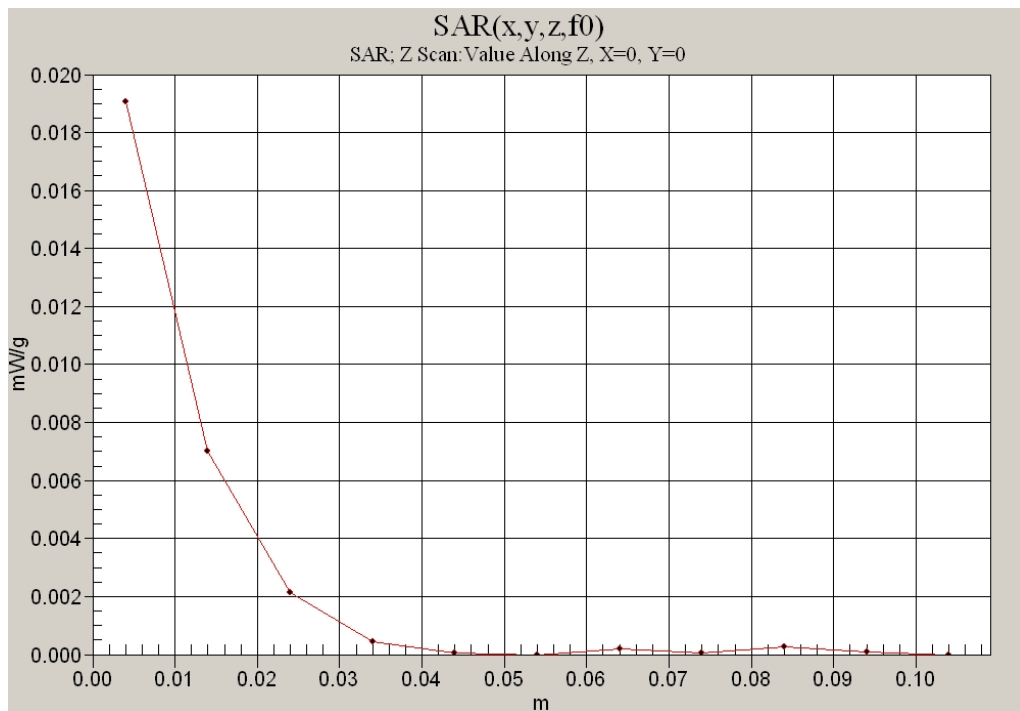


Fig. 9: SAR versus liquid depth, head: DECT US, channel 2, cheek position, left side of head, (June 22, 2007; Ambient Temperature: 22.2° C; Liquid Temperature: 21.1° C).

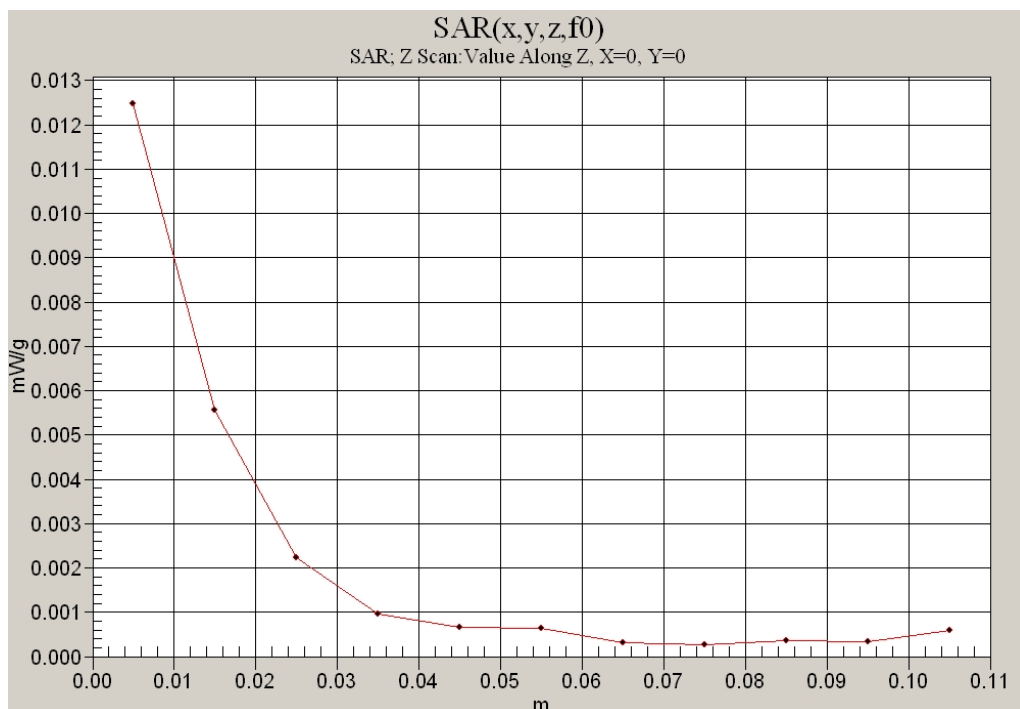


Fig. 10: SAR versus liquid depth, body: DECT US 1900, channel 2, Position 1 display towards the ground, with belt clip and 0 mm distance (June 22, 2007; Ambient Temperature: 22.5° C; Liquid Temperature: 21.4° C).