
Appendix for the Report
Dosimetric Assessment of the
Portable Device Ascom DH5
(FCC ID: BXZDH5)
According to the FCC Requirements
SAR Distribution Plots

September 16, 2010
IMST GmbH
Carl-Friedrich-Gauß-Str. 2
D-47475 Kamp-Lintfort

Customer
Ascom Sweden AB
Wireless Solution P.O. Box 8783
SE-40276 Göteborg

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, Antenna 1

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_yplm_1_ant1.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(5.09, 5.09, 5.09); Calibrated: 20.01.2010
- 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 (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 1.56 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 0.010 W/kg

SAR(1 g) = 0.00595 mW/g; SAR(10 g) = 0.00295 mW/g

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

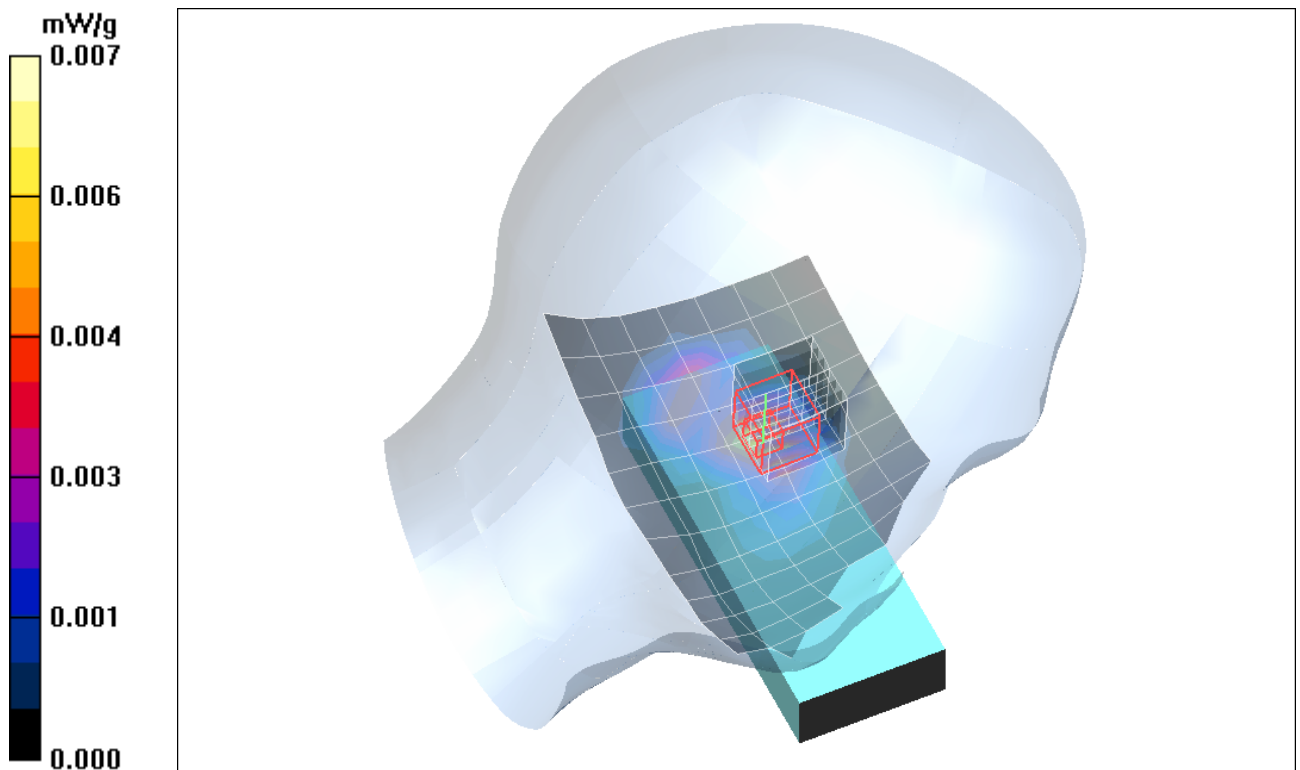


Fig. 1: SAR distribution for DECT US, channel 2, cheek position, left side of head (September 13, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.5°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_yplm_2_ant1.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(5.09, 5.09, 5.09); Calibrated: 20.01.2010
- 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 (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 1.28 V/m; Power Drift = -0.073 dB

Peak SAR (extrapolated) = 0.006 W/kg

SAR(1 g) = 0.00322 mW/g; SAR(10 g) = 0.00147 mW/g

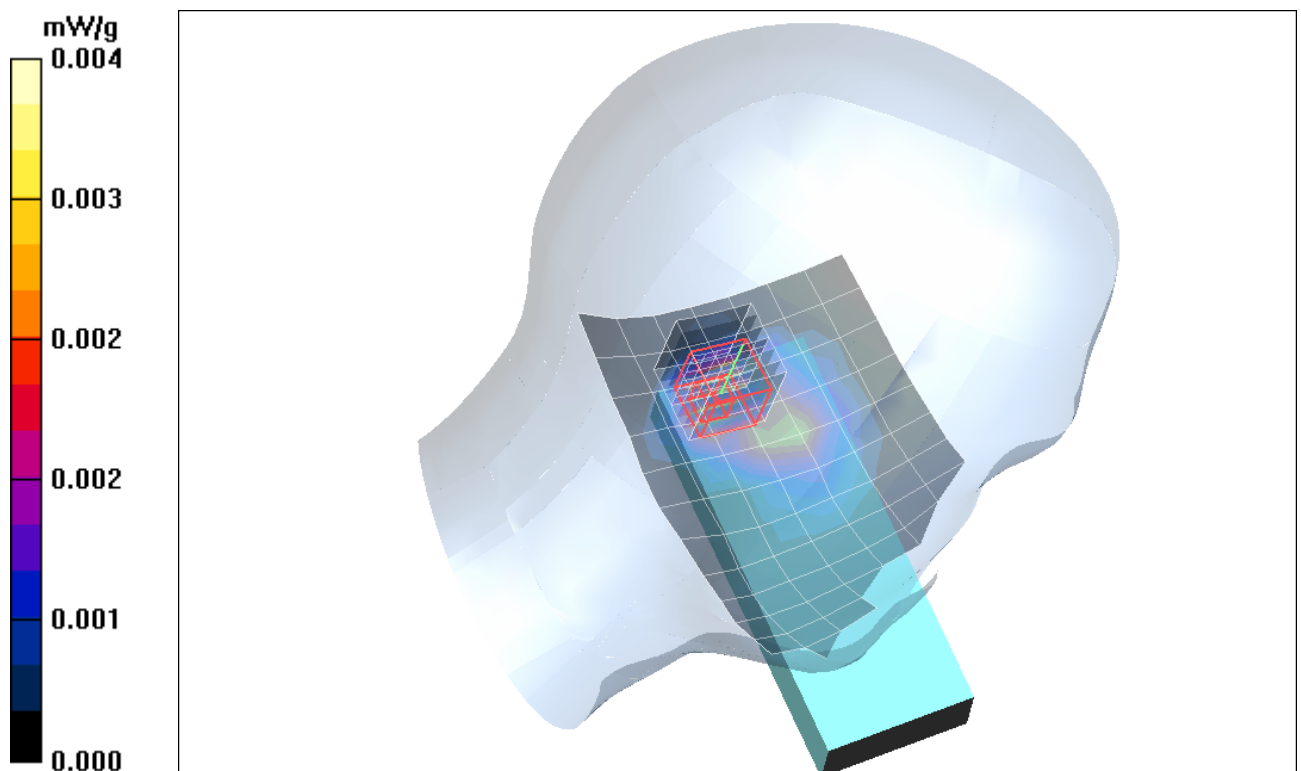


Fig. 2: SAR distribution for DECT US, channel 2, tilted position, left side of head (September 13, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.5°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_yprm_1_ant1.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(5.09, 5.09, 5.09); Calibrated: 20.01.2010

- 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 (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 1.30 V/m; Power Drift = 0.078 dB

Peak SAR (extrapolated) = 0.008 W/kg

SAR(1 g) = 0.0042 mW/g; SAR(10 g) = 0.00179 mW/g

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

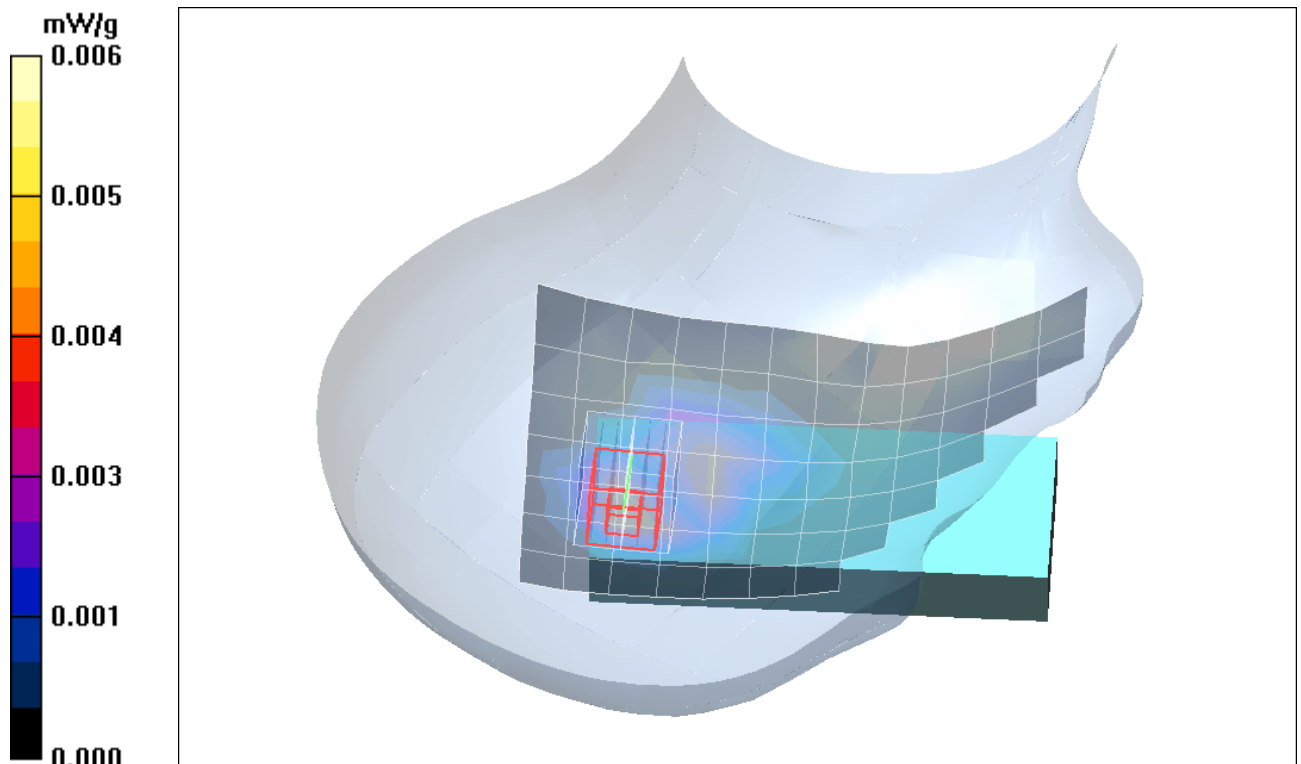


Fig. 3: SAR distribution for DECT US, channel 2, cheek position, right side of head (September 13, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.5°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_yprm_2_ant1.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(5.09, 5.09, 5.09); Calibrated: 20.01.2010
- 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 (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 1.14 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.010 W/kg

SAR(1 g) = 0.00483 mW/g; SAR(10 g) = 0.00203 mW/g

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

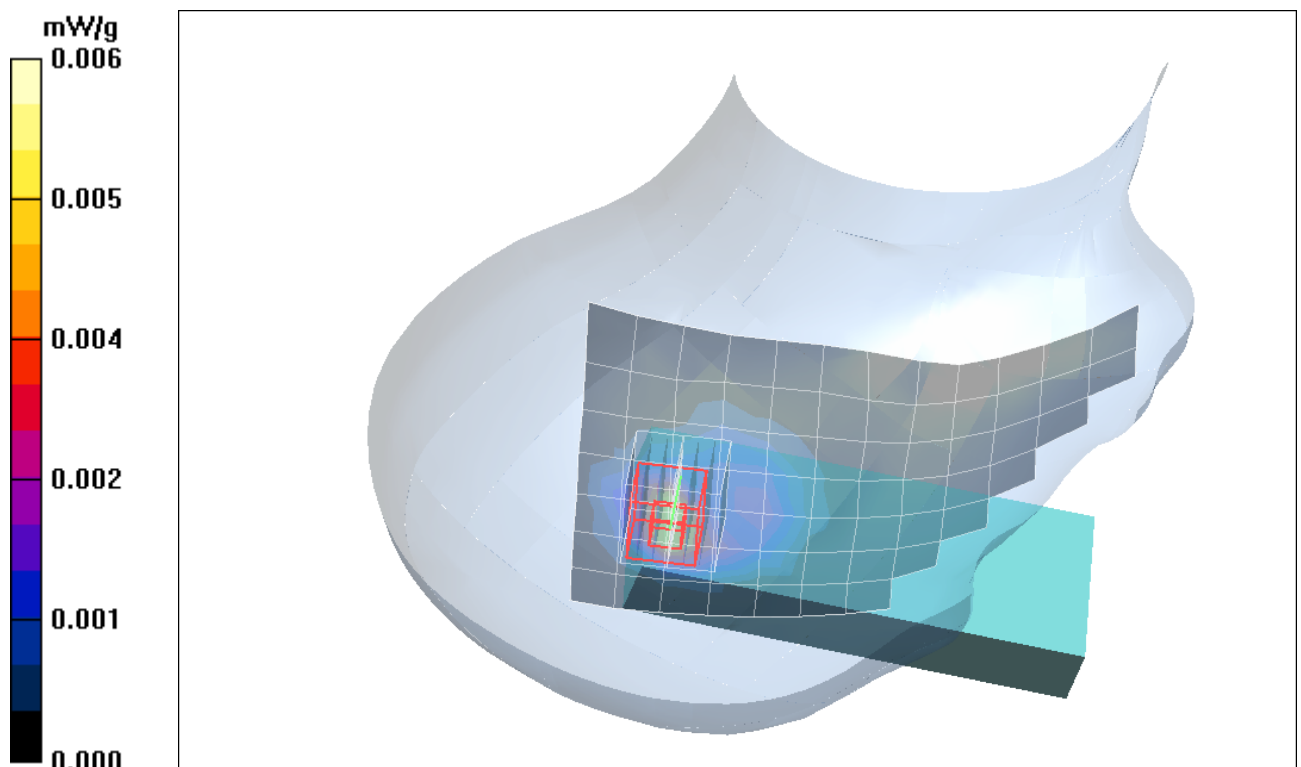


Fig. 4: SAR distribution for DECT US, channel 2, tilted position, right side of head (September 13, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.5°C)

2 SAR Distribution Plots, Head Measurements, Antenna 2

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_yplm_1_ant2.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(5.09, 5.09, 5.09); Calibrated: 20.01.2010
- 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 (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 1.65 V/m; Power Drift = -0.194 dB

Peak SAR (extrapolated) = 0.016 W/kg

SAR(1 g) = 0.00634 mW/g; SAR(10 g) = 0.00356 mW/g

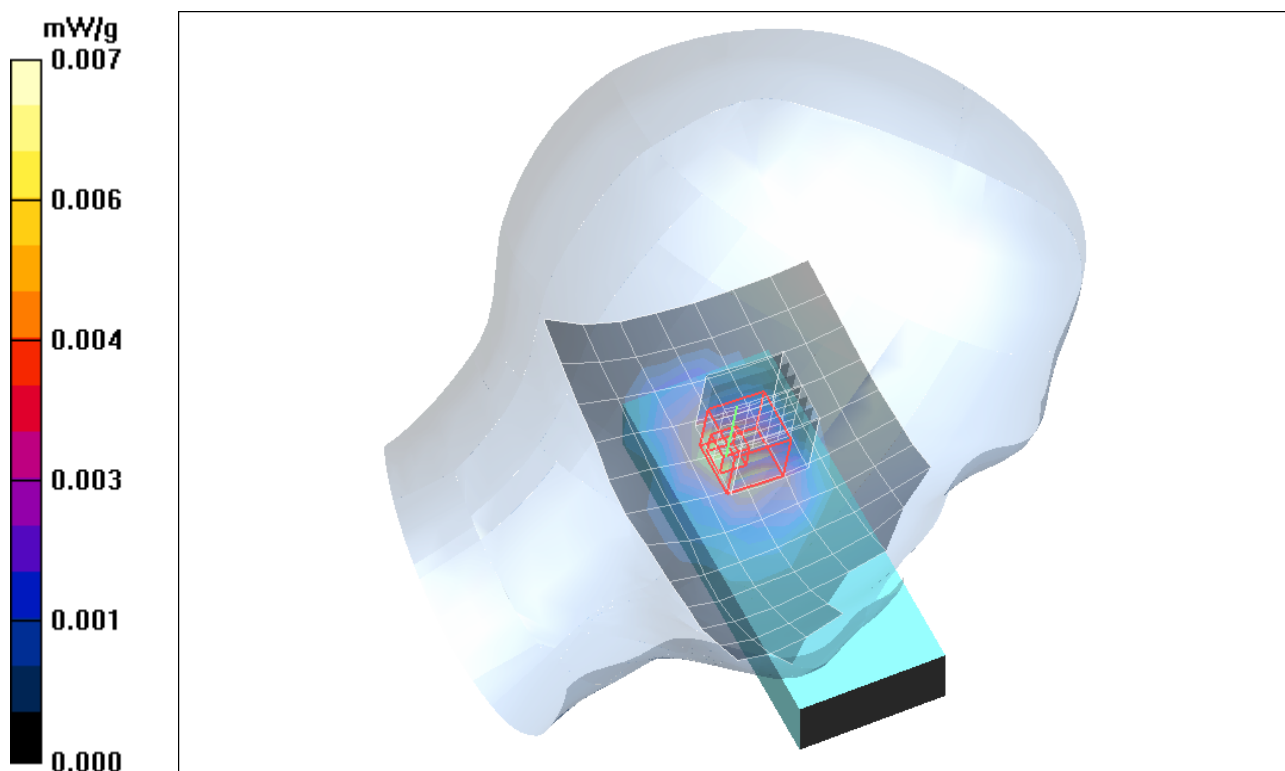


Fig. 5: SAR distribution for DECT US, channel 2, cheek position, left side of head (September 13, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.5°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_yplm_2_ant2.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(5.09, 5.09, 5.09); Calibrated: 20.01.2010
- 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 (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.004 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 = 0.069 dB

Peak SAR (extrapolated) = 0.008 W/kg

SAR(1 g) = 0.00405 mW/g; SAR(10 g) = 0.00216 mW/g

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

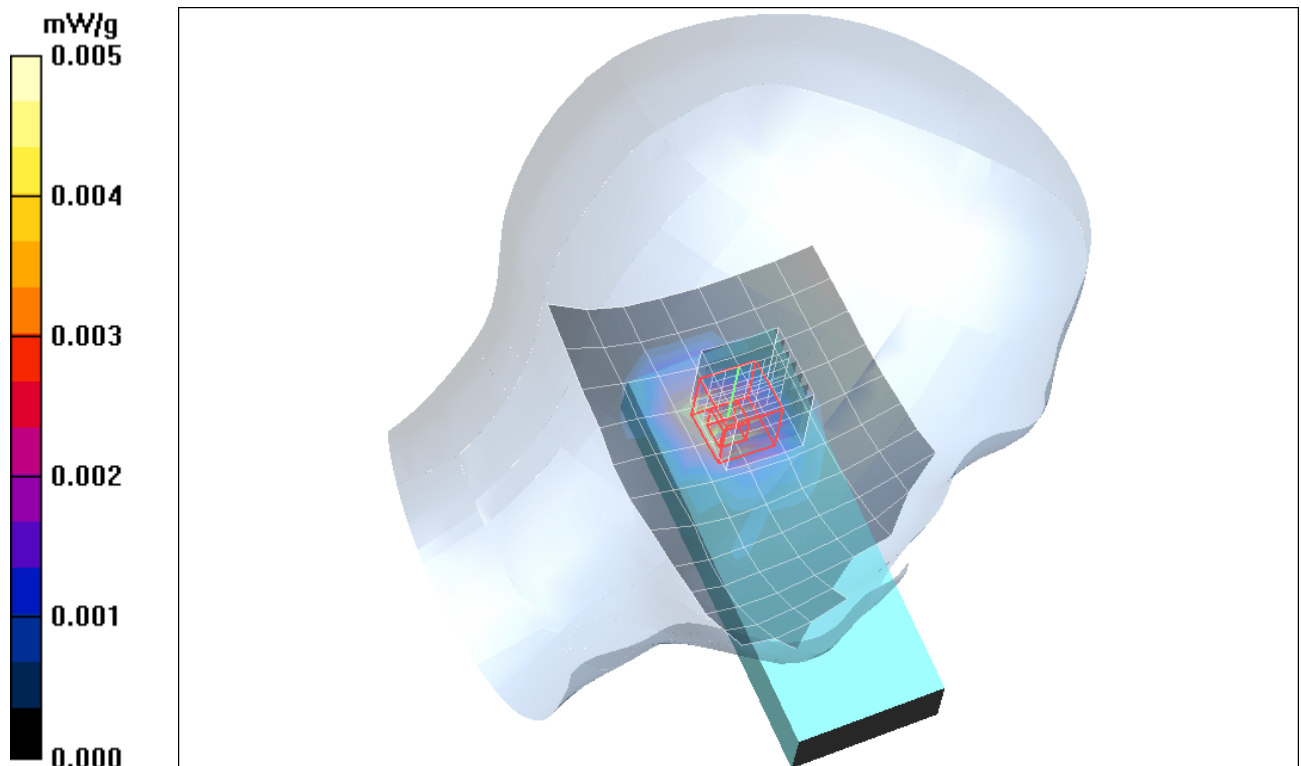


Fig. 6: SAR distribution for DECT US, channel 2, tilted position, left side of head (September 13, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.5°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_yprm_1_ant2.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(5.09, 5.09, 5.09); Calibrated: 20.01.2010
- 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 (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 2.22 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 0.012 W/kg

SAR(1 g) = 0.00795 mW/g; SAR(10 g) = 0.00446 mW/g

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

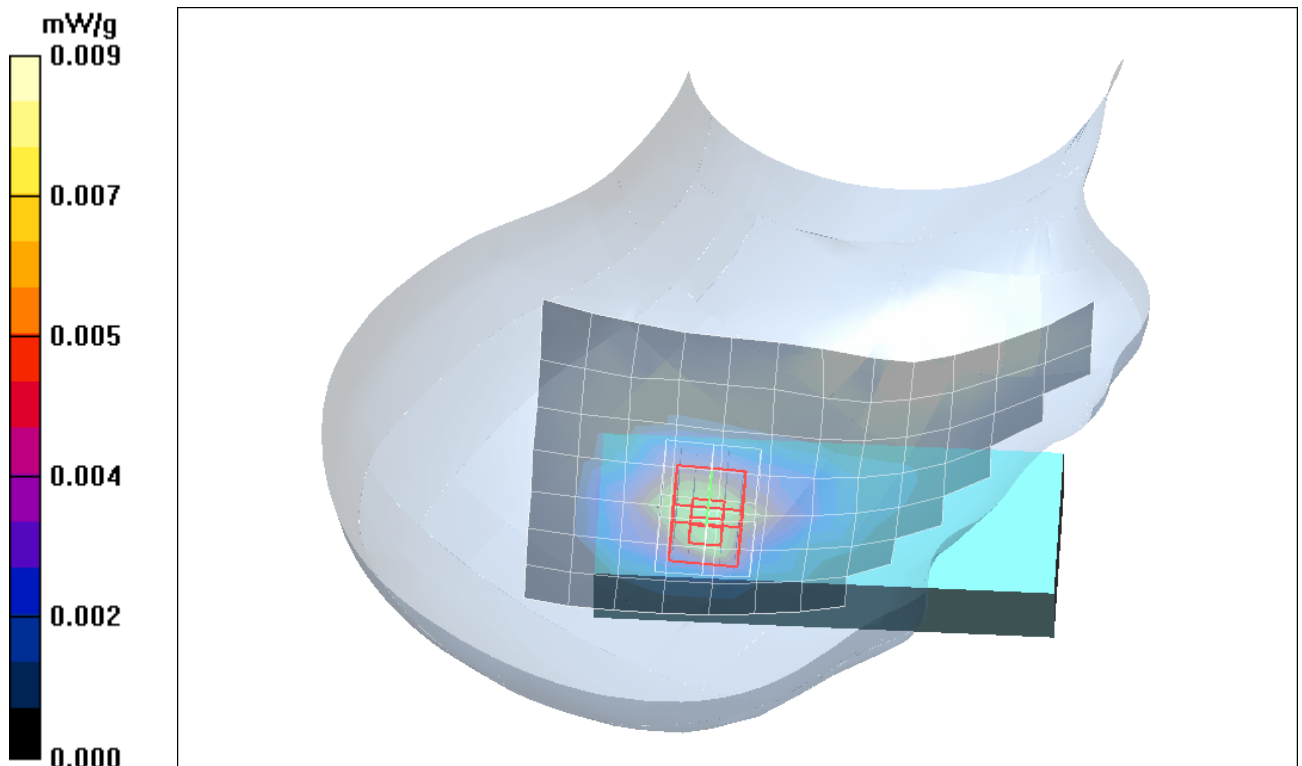


Fig. 7: SAR distribution for DECT US, channel 2, cheek position, right side of head (September 13, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.5°C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_yprm_2_ant2.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: DECT

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.39$ mho/m; $\epsilon_r = 41.6$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(5.09, 5.09, 5.09); Calibrated: 20.01.2010

- 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 (8x13x1): 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 = 1.97 V/m; Power Drift = 0.087 dB

Peak SAR (extrapolated) = 0.009 W/kg

SAR(1 g) = 0.00542 mW/g; SAR(10 g) = 0.00275 mW/g

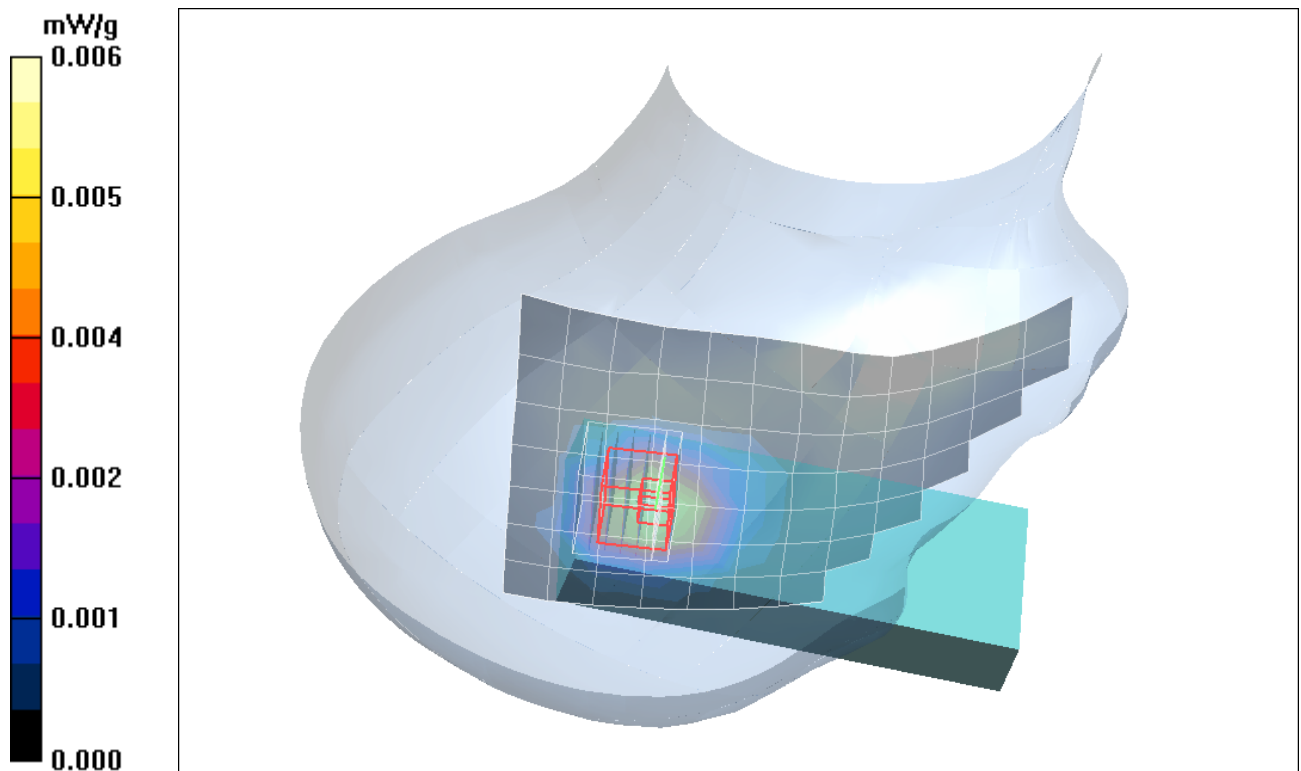


Fig. 8: SAR distribution for DECT US, channel 2, tilted position, right side of head (September 13, 2010; Ambient Temperature: 20.9°C; Liquid Temperature: 20.5°C)

3 SAR Distribution Plots, Body Measurements, Antenna 1

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_bphm_1_ant1_hs_up.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: Body Worn

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2010
- 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 (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 0.889 V/m; Power Drift = -0.042 dB

Peak SAR (extrapolated) = 0.025 W/kg

SAR(1 g) = 0.011 mW/g; SAR(10 g) = 0.00492 mW/g

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

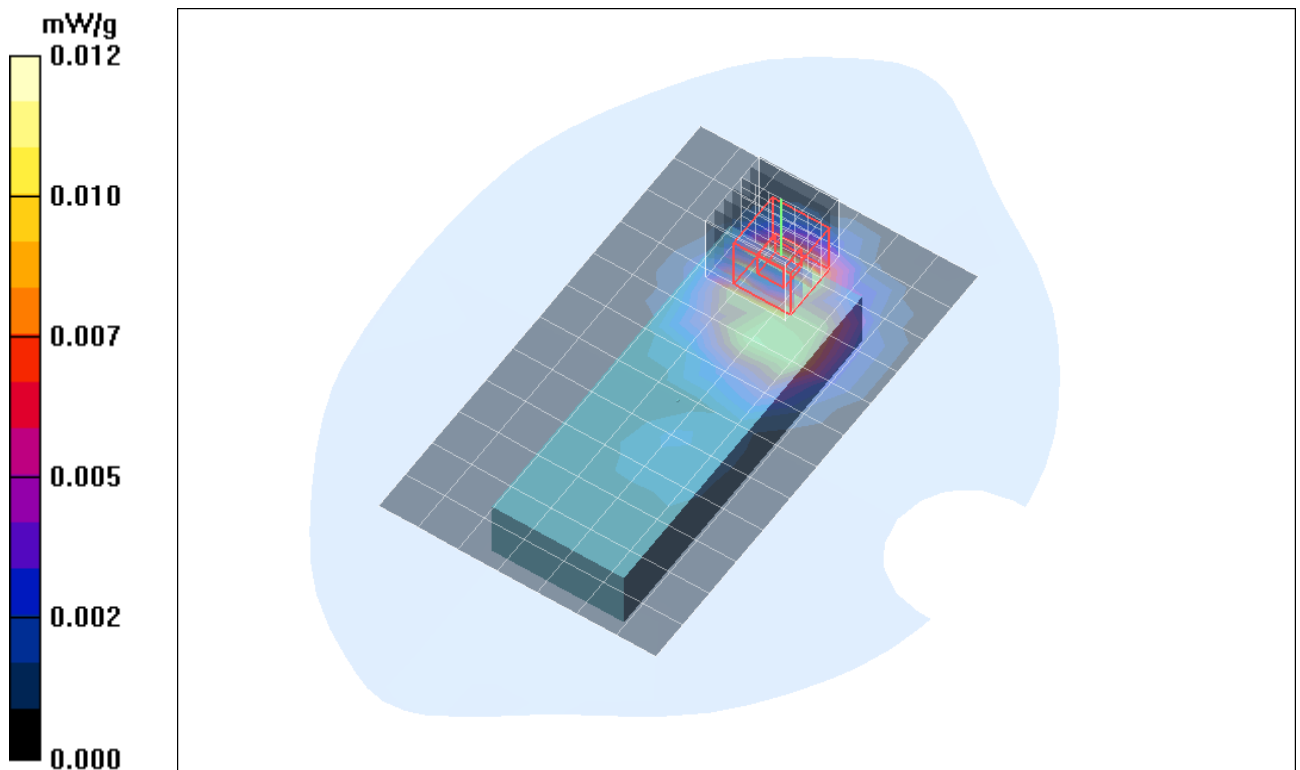


Fig. 9: SAR distribution for DECT US, channel 2, body worn configuration, display towards the phantom, with headset and 0 mm distance (September 15, 2010; Ambient Temperature: 21.0° C; Liquid Temperature: 20.6° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_bphm_2_ant1_hs_down.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: Body Worn

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2010
- 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 (8x13x1): 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 = 0.976 V/m; Power Drift = 0.158 dB

Peak SAR (extrapolated) = 0.011 W/kg

SAR(1 g) = 0.00421 mW/g; SAR(10 g) = 0.00198 mW/g

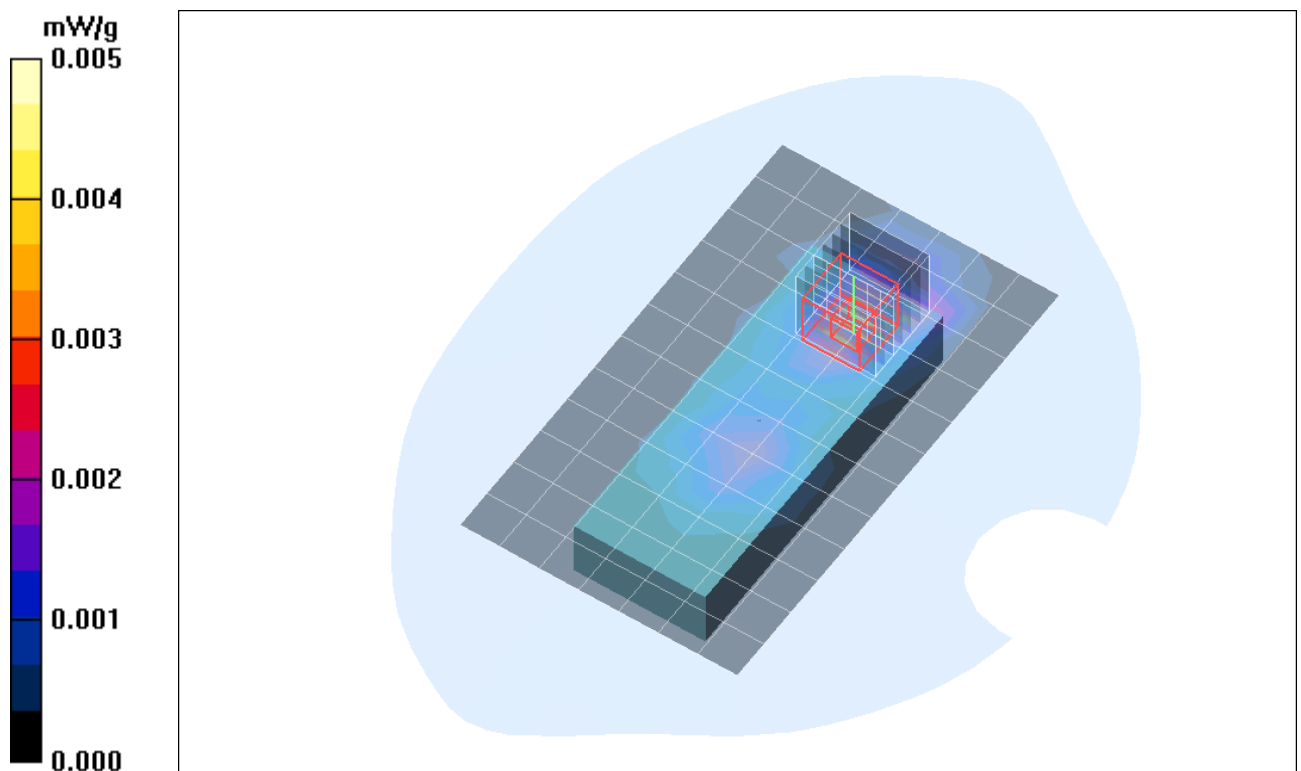


Fig. 10: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, with headset and 0 mm distance (September 15, 2010; Ambient Temperature: 21.0° C; Liquid Temperature: 20.6° C).

4 SAR Distribution Plots, Body Measurements, Antenna 2

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_bphm_1_ant2_hs_up.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: Body Worn

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2010
- 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 (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

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

Reference Value = 0.699 V/m; Power Drift = -0.174 dB

Peak SAR (extrapolated) = 0.027 W/kg

SAR(1 g) = 0.011 mW/g; SAR(10 g) = 0.00484 mW/g

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

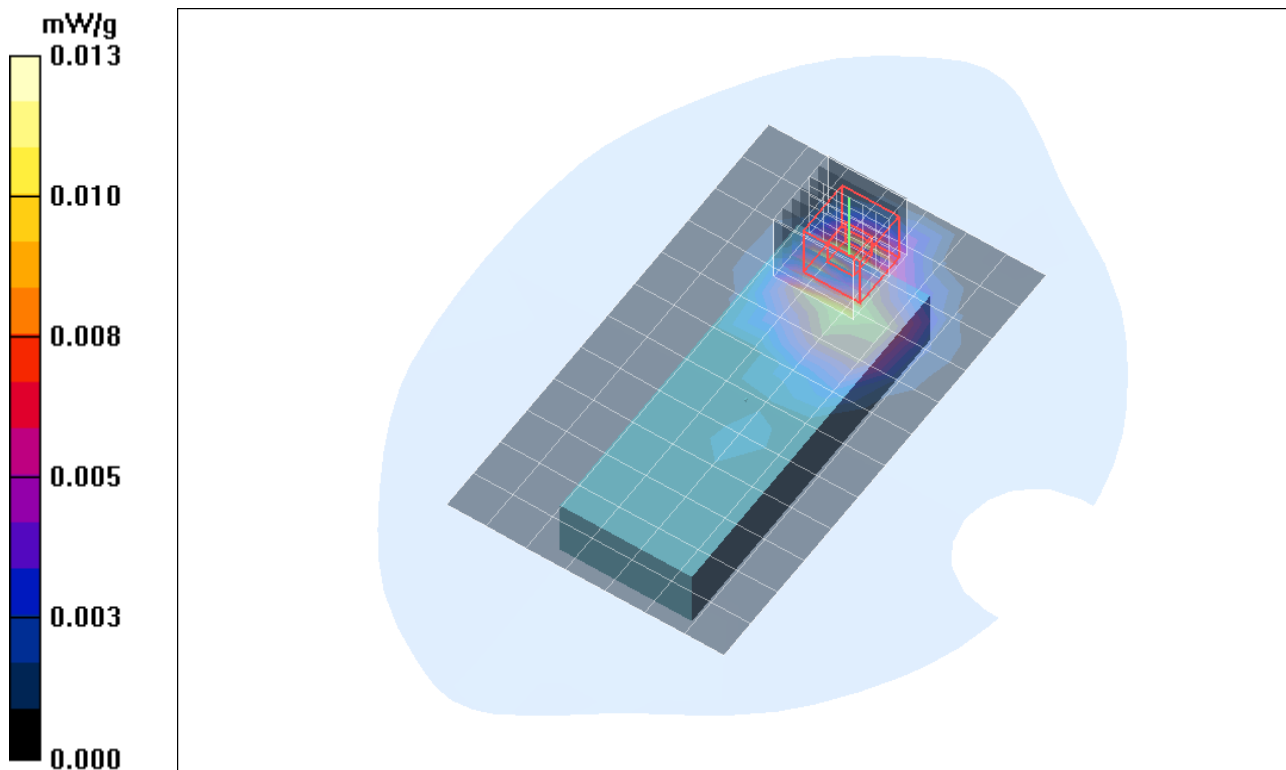


Fig. 11: SAR distribution for DECT US, channel 2, body worn configuration, display towards the phantom, with headset and 0 mm distance (September 15, 2010; Ambient Temperature: 21.0° C; Liquid Temperature: 20.6° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [DH5_508_bphm_2_ant2_hs_down.da4](#)

DUT: ASCOM; Type: DH5; Serial: 10AD30200002

Program Name: Body Worn

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

Medium parameters used: $f = 1924.99$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1579; ConvF(4.59, 4.59, 4.59); Calibrated: 20.01.2010
- 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 (8x13x1): 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 = 1.08 V/m; Power Drift = -0.120 dB

Peak SAR (extrapolated) = 0.010 W/kg

SAR(1 g) = 0.00431 mW/g; SAR(10 g) = 0.00198 mW/g

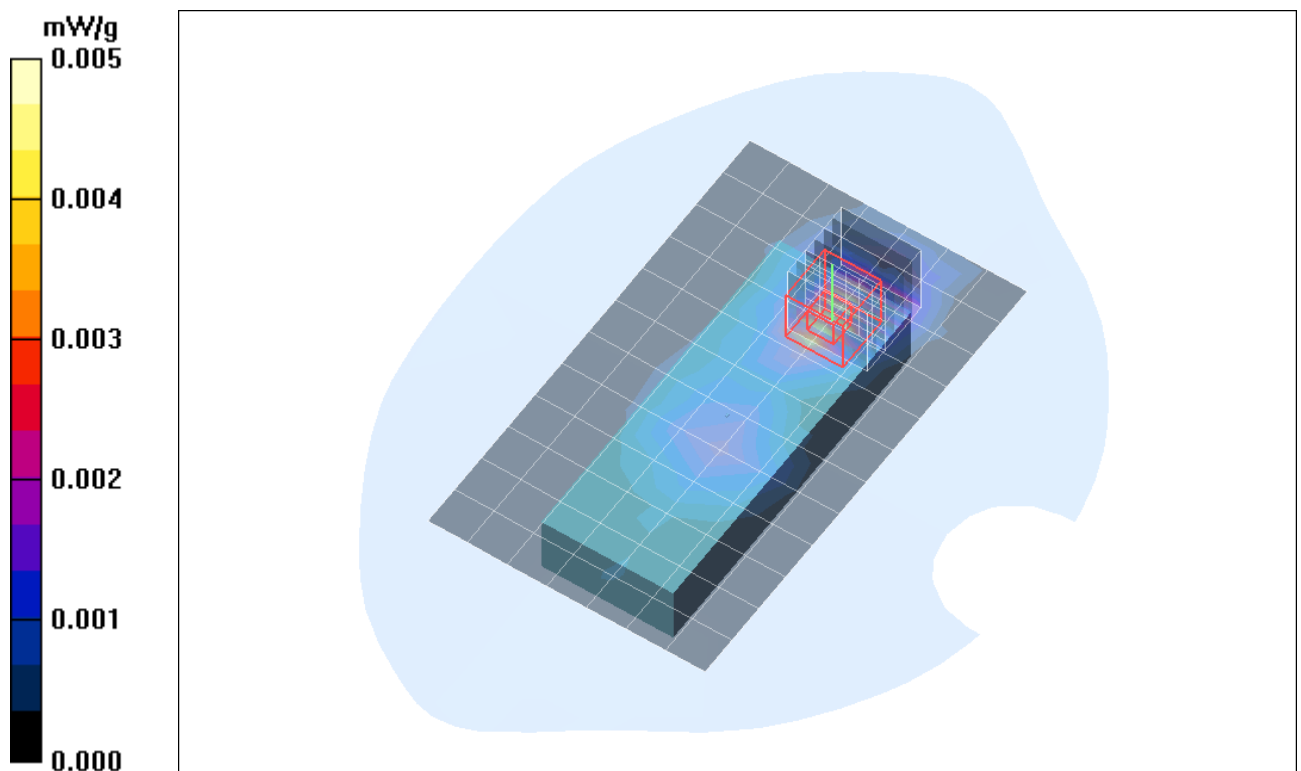


Fig. 12: SAR distribution for DECT US, channel 2, body worn configuration, display towards the ground, with headset and 0 mm distance (September 15, 2010; Ambient Temperature: 21.0° C; Liquid Temperature: 20.6° C).

5 SAR Z-Axis Scans (Validation)

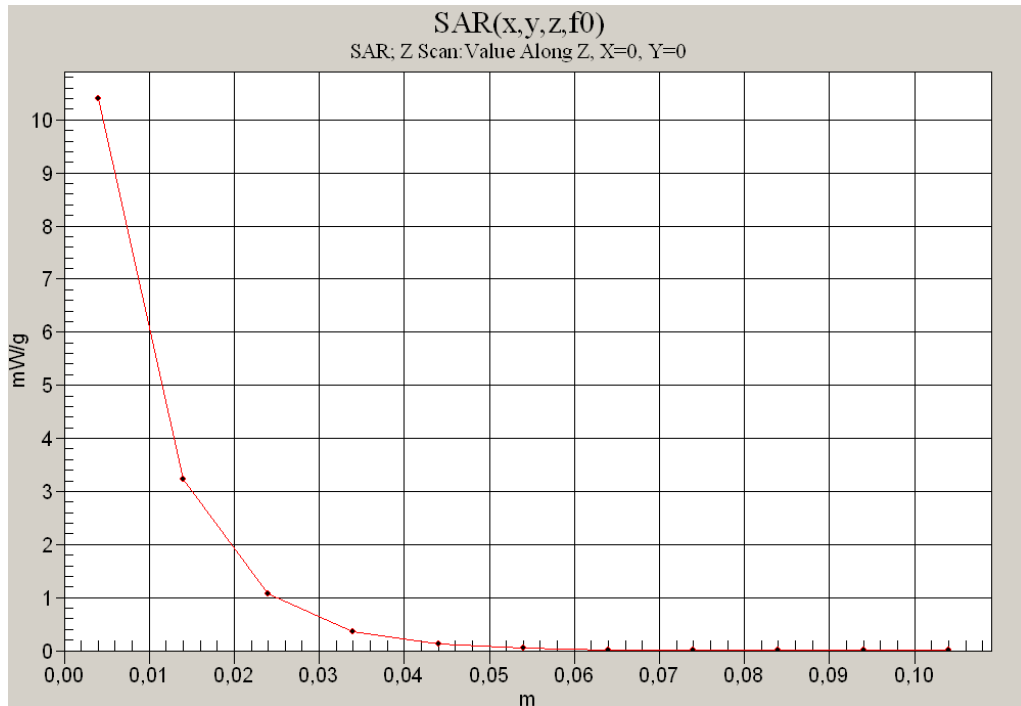


Fig. 13: SAR versus liquid depth, 1900 MHz, head (September 13, 2010; Ambient Temperature: 20.9° C; Liquid Temperature : 20.5° C).

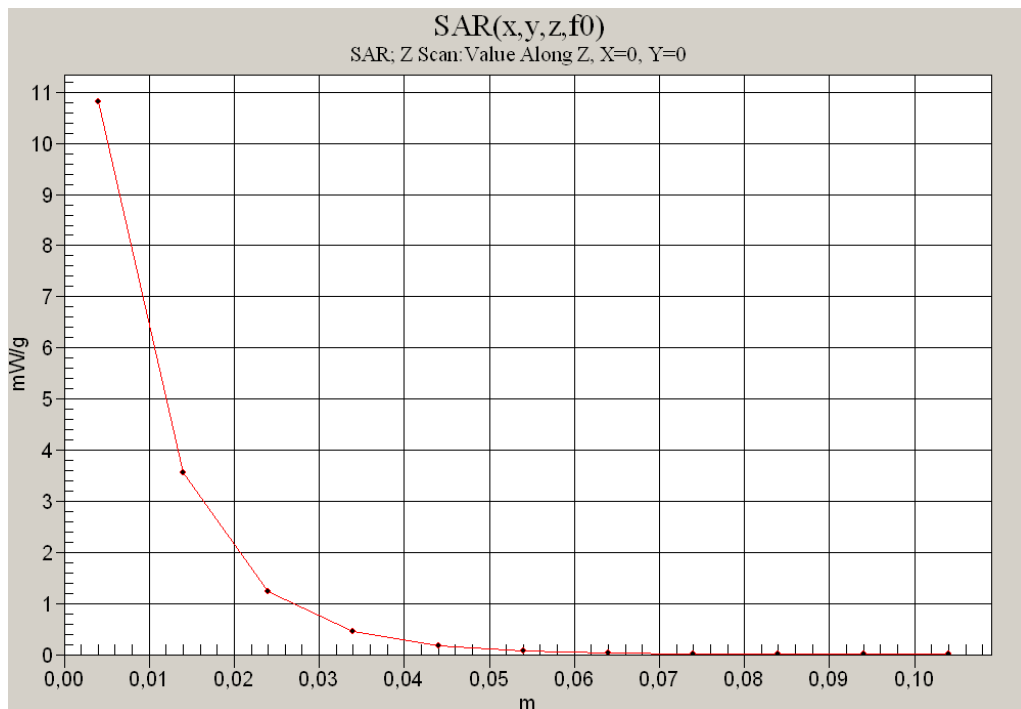


Fig. 14: SAR versus liquid depth, 1900 MHz, body (September 15, 2010; Ambient Temperature: 20.9° C; Liquid Temperature : 20.6° C).

6 SAR Z-Axis Scans (Measurements)

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

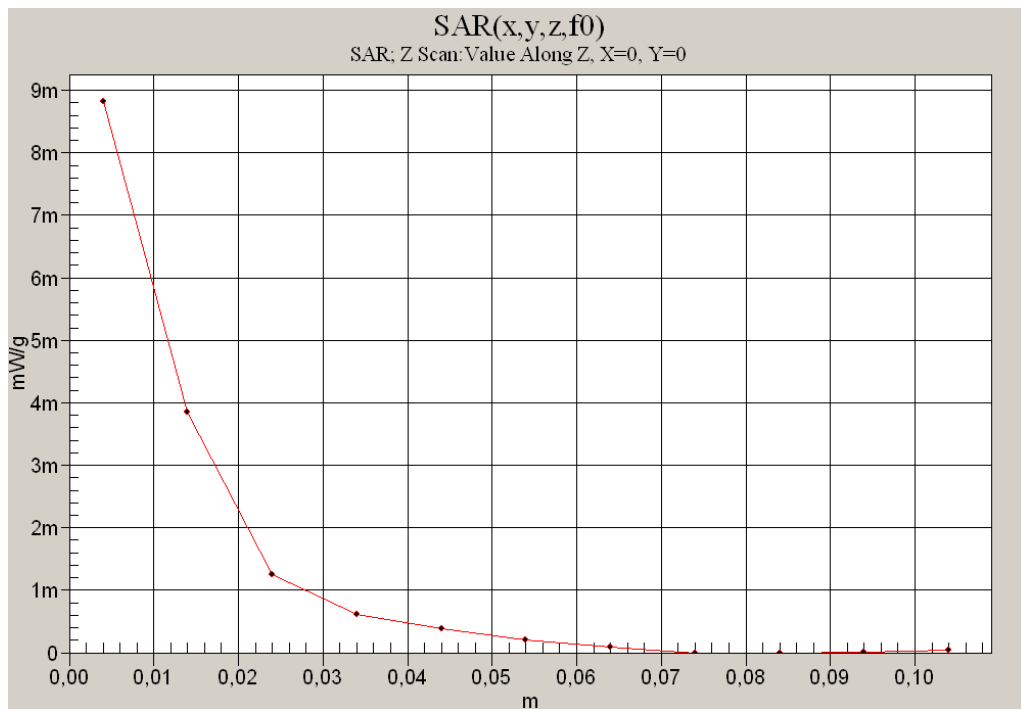


Fig. 15: SAR versus liquid depth, head: DECT US, channel 2, cheek position, right side of head, antenna 2 (September 13, 2010; Ambient Temperature: 20.9° C; Liquid Temperature : 20.5° C).

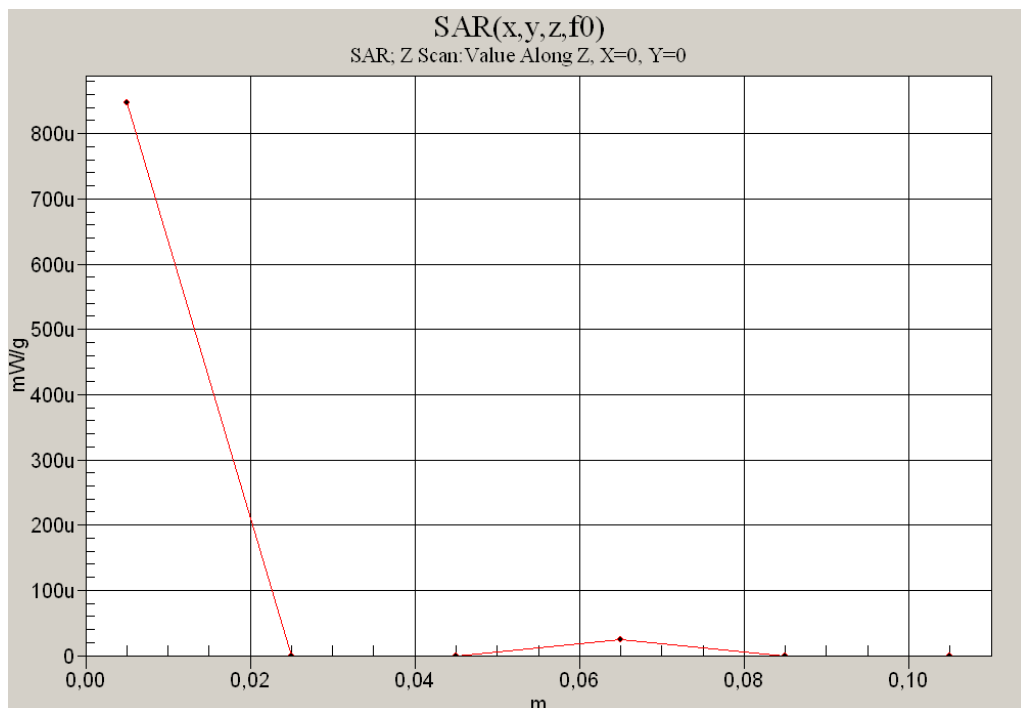


Fig. 16: SAR versus liquid depth, body: DECT US, channel 2, headset and 0 mm distance, antenna 2, display towards the phantom (September 15, 2010; Ambient Temperature: 20.9° C; Liquid Temperature: 20.6° C).