
Appendix for the Report

Dosimetric Assessment of the BenQ Siemens S68 (FCC ID: PWX-S68)

According to the FCC Requirements

SAR Distribution Plots

July 28, 2006
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The test results only relate to the items tested.
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1 SAR Distribution Plots, PCS 1900 Head

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [390yplm_1.da4](#)

DUT: BenQ; Type: S68 Ceramic; Serial: 358439002262390

Program Name: Cheek Left

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.99, 4.99, 4.99); Calibrated: 15.02.2006
- 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 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek Left/Area Scan (6x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.170 mW/g

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

Reference Value = 10.4 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 0.251 W/kg

SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.085 mW/g

Maximum value of SAR (measured) = 0.172 mW/g

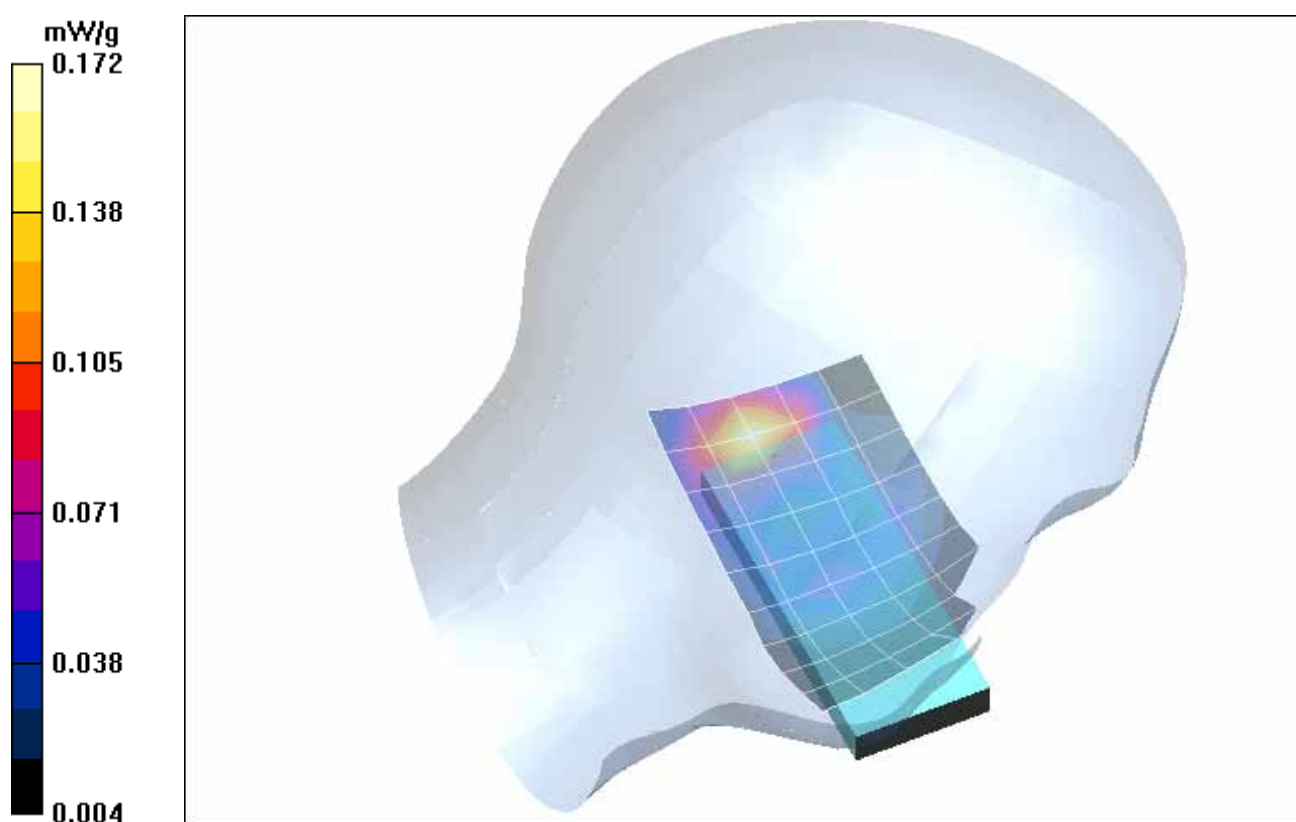


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head (July 26, 2006; Ambient Temperature: 22.1° C; Liquid Temperature : 21.2° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); **File Name:** [390yplm 2.da4](#)

DUT: BenQ; **Type:** S68 Ceramic; **Serial:** 358439002262390

Program Name: Tilted Left

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.99, 4.99, 4.99); Calibrated: 15.02.2006
- 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 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Tilted Left/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.203 mW/g

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

Reference Value = 11.7 V/m; Power Drift = -0.049 dB

Peak SAR (extrapolated) = 0.283 W/kg

SAR(1 g) = 0.180 mW/g; SAR(10 g) = 0.102 mW/g

Maximum value of SAR (measured) = 0.202 mW/g

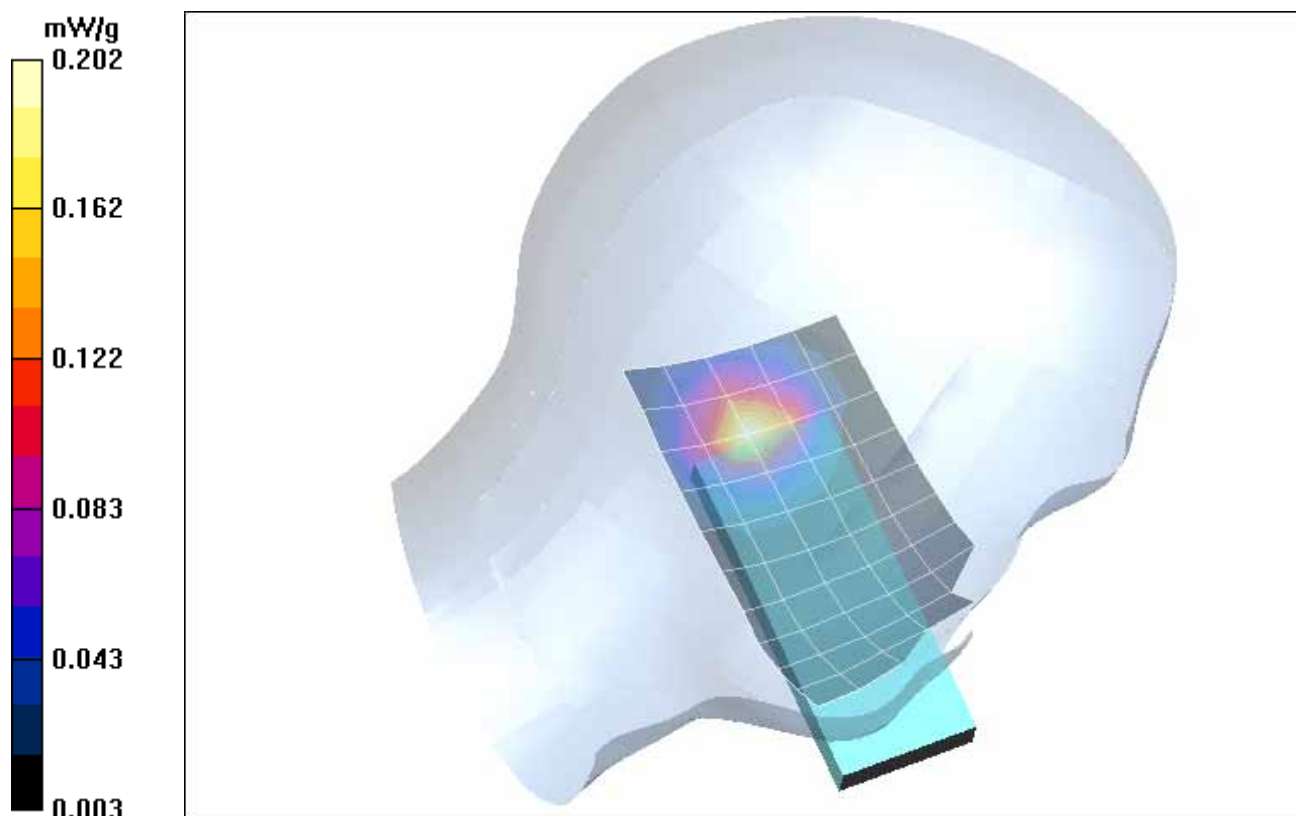


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head (July 26, 2006; Ambient Temperature: 22.1° C; Liquid Temperature : 21.2° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); File Name: [390yprm_1.da4](#)

DUT: BenQ; Type: S68 Ceramic; Serial: 358439002262390

Program Name: Cheek Right

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.99, 4.99, 4.99); Calibrated: 15.02.2006
- 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 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Cheek Right/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.250 mW/g

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

Reference Value = 8.61 V/m; Power Drift = -0.153 dB

Peak SAR (extrapolated) = 0.400 W/kg

SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.117 mW/g

Maximum value of SAR (measured) = 0.257 mW/g

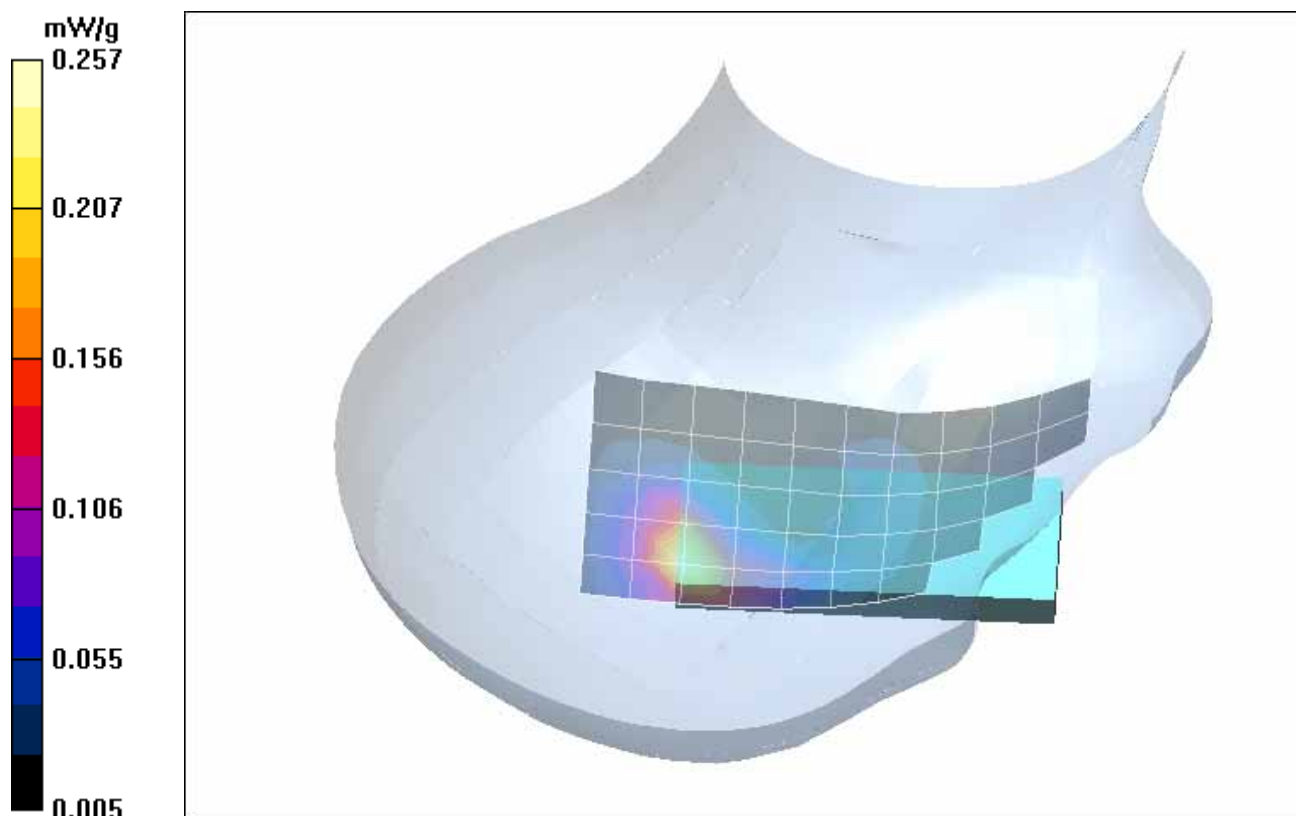


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head (July 26, 2006; Ambient Temperature: 22.1° C; Liquid Temperature : 21.2° C).

Test Laboratory: Imst GmbH, DASY Yellow (II); **File Name:** [390yprm 2.da4](#)

DUT: BenQ; **Type:** S68 Ceramic; **Serial:** 358439002262390

Program Name: Tilted Right

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.99, 4.99, 4.99); Calibrated: 15.02.2006
- 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 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Tilted Right/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.241 mW/g

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

Reference Value = 9.93 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 0.402 W/kg

SAR(1 g) = 0.230 mW/g; SAR(10 g) = 0.119 mW/g

Maximum value of SAR (measured) = 0.262 mW/g

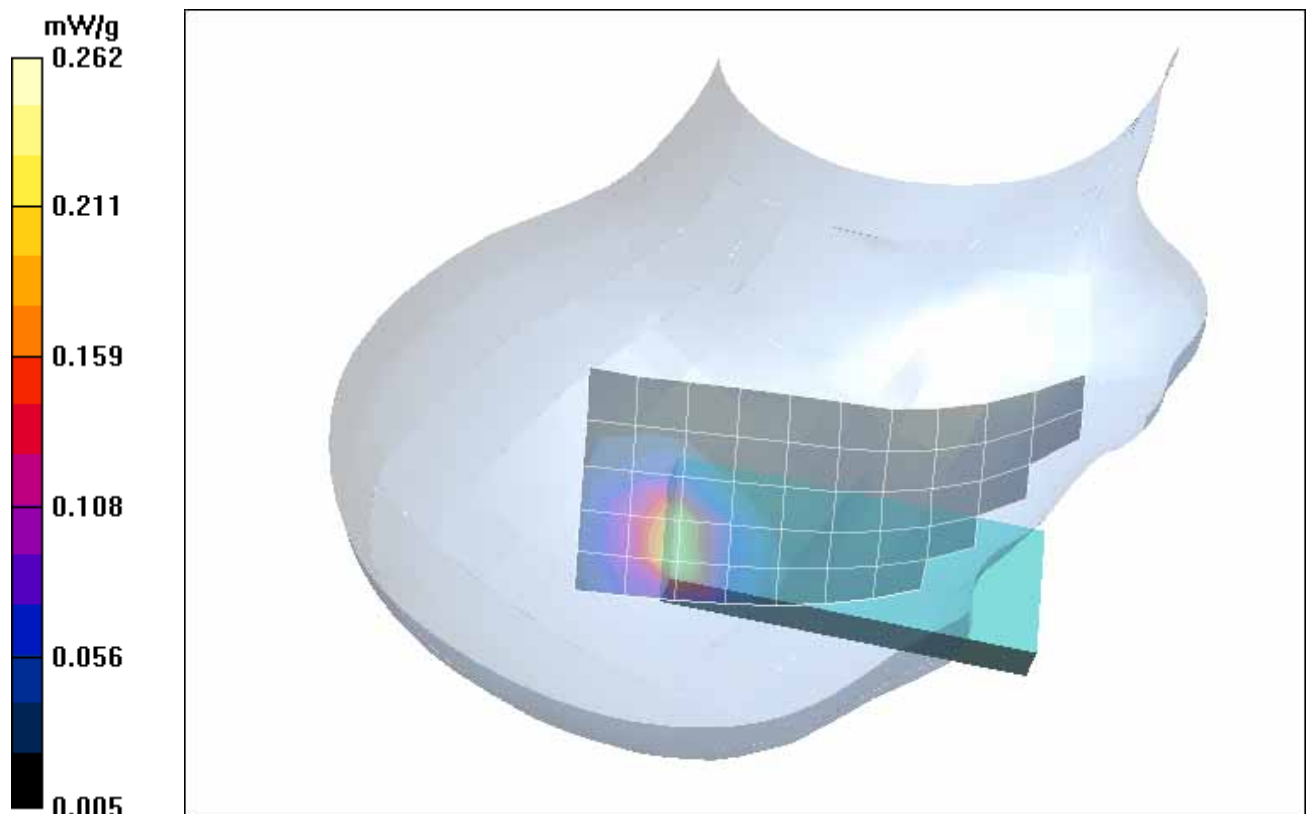


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head (July 26, 2006; Ambient Temperature: 22.1 °C; Liquid Temperature : 21.2° C)

Test Laboratory: Imst GmbH, DASY Yellow (II); **File Name:** [390yprm 2 BT.da4](#)

DUT: BenQ; **Type:** S68 Ceramic; **Serial:** 358439002262390

Program Name: Tilted Right

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.99, 4.99, 4.99); Calibrated: 15.02.2006
- 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 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Tilted Right/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.223 mW/g

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

Reference Value = 10.5 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 0.388 W/kg

SAR(1 g) = 0.226 mW/g; SAR(10 g) = 0.119 mW/g

Maximum value of SAR (measured) = 0.257 mW/g

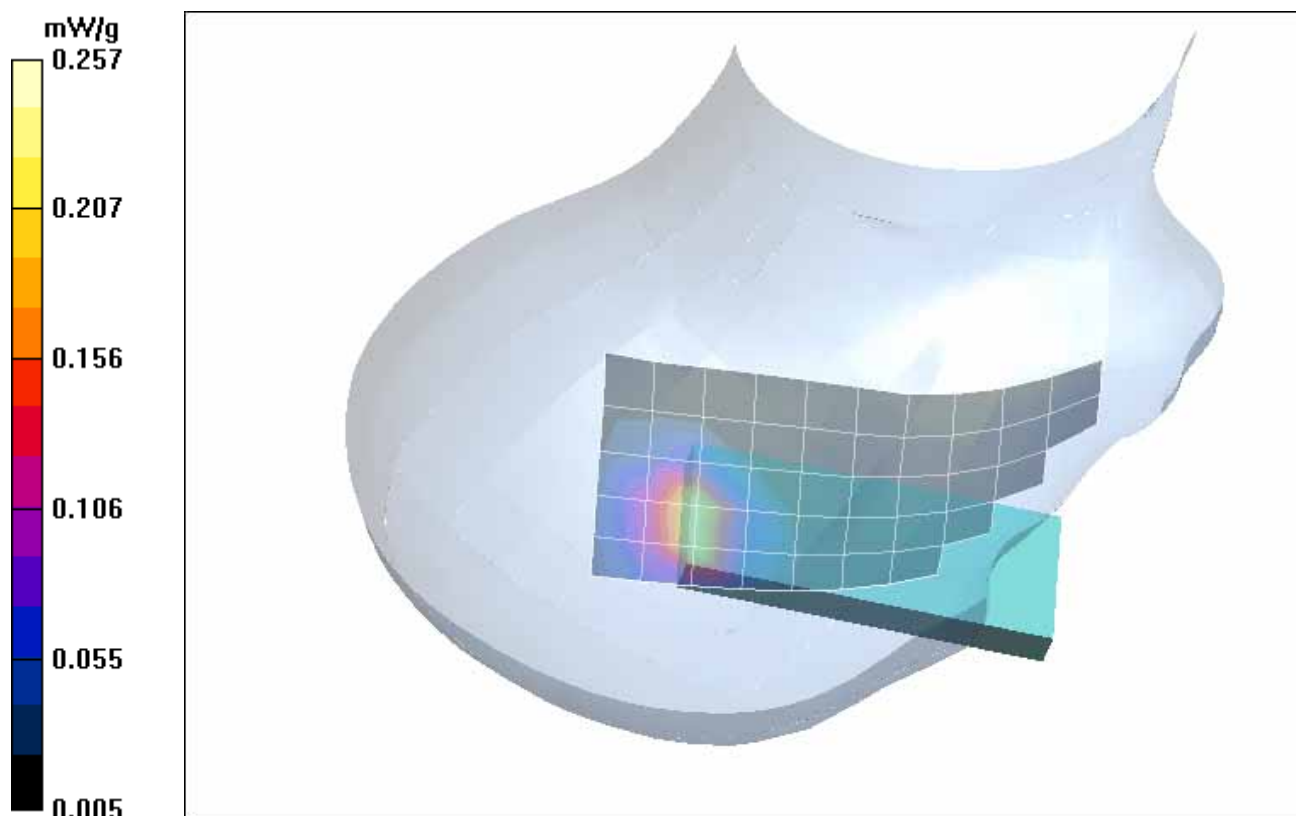


Fig. 5: SAR distribution for PCS 1900 at worst case position with Bluetooth activated, channel 661, tilted position, right side of head (July 26, 2006; Ambient Temperature: 22.1 °C; Liquid Temperature : 21.2° C)

2 SAR Distribution Plots, PCS 1900 Body worn configuration

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [390bphm_1_ohne_20mm.da4](#)

DUT: BenQ; Type: S68 Ceramic; Serial: 358439002262390

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.47, 4.47, 4.47); Calibrated: 15.02.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 11.07.2006
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.204 mW/g

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

Reference Value = 6.75 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 0.291 W/kg

SAR(1 g) = 0.188 mW/g; SAR(10 g) = 0.108 mW/g

Maximum value of SAR (measured) = 0.208 mW/g

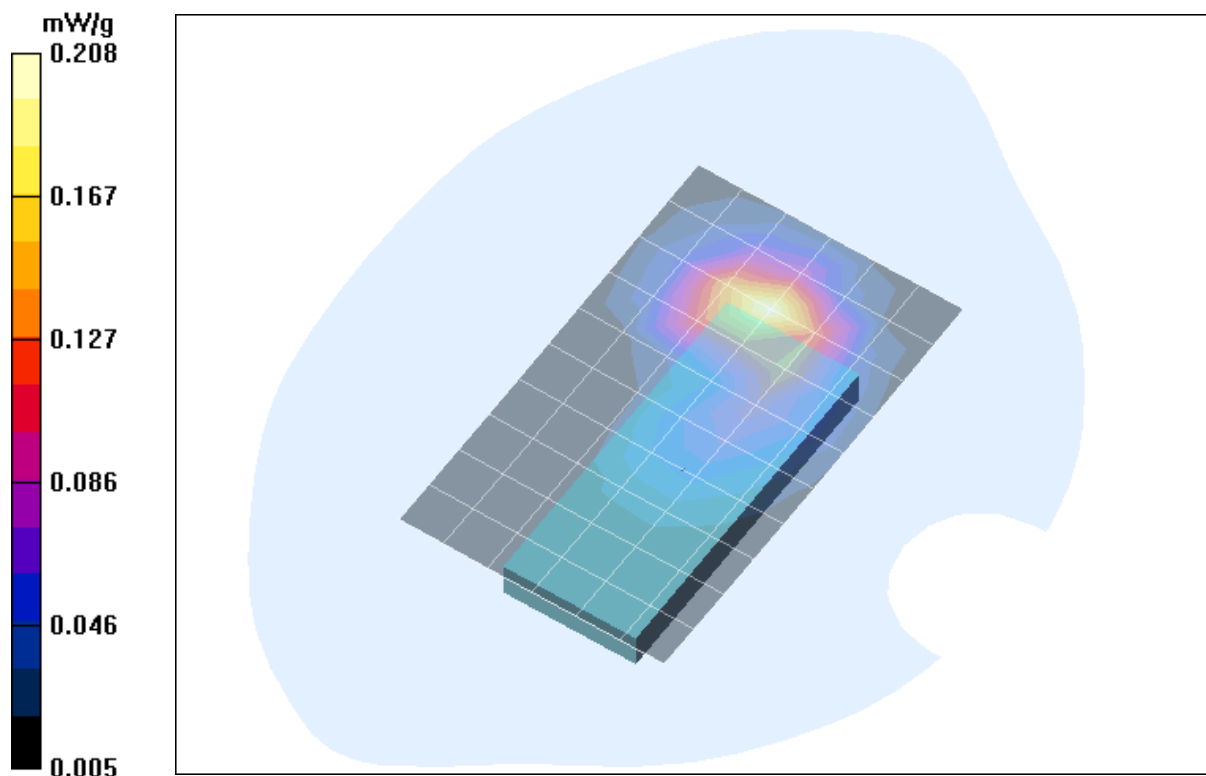


Fig. 6: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, without accessory, with 20 mm distance (July 28, 2006; Ambient Temperature: 22.4° C; Liquid Temperature: 21.3° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [390bphm 2 headset 20mm.da4](#)

DUT: BenQ; **Type:** S68 Ceramic; **Serial:** 358439002262390

Program Name: Body Worn

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.47, 4.47, 4.47); Calibrated: 15.02.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 11.07.2006
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.201 mW/g

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

Reference Value = 6.57 V/m; Power Drift = -0.135 dB

Peak SAR (extrapolated) = 0.313 W/kg

SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.107 mW/g

Maximum value of SAR (measured) = 0.208 mW/g

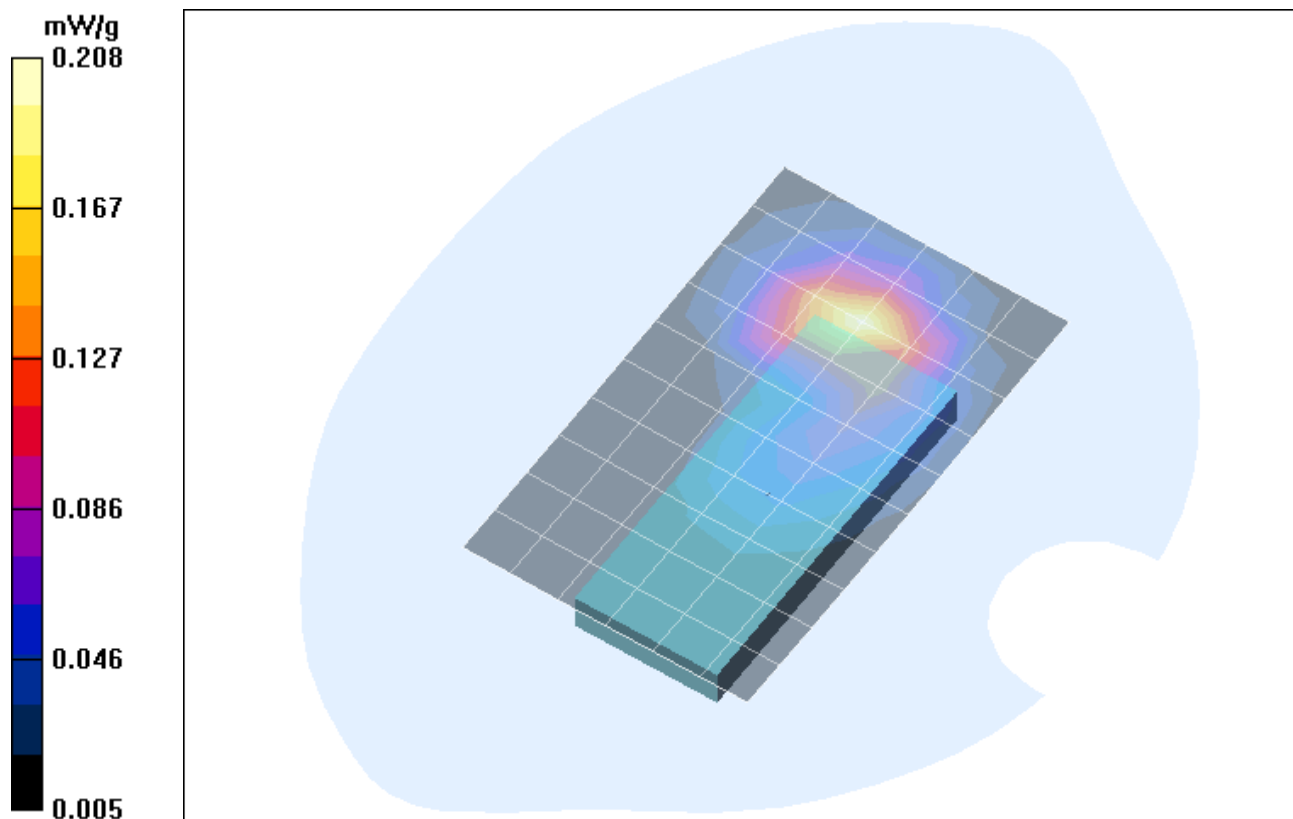


Fig. 7: SAR distribution for PCS 1900, channel 661, body worn configuration, antenna towards the phantom, with headset, with 20 mm distance (July 28, 2006; Ambient Temperature: 22.4° C; Liquid Temperature: 21.3° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [390bphm 4 data 22mm.da4](#)

DUT: BenQ; **Type:** S68 Ceramic; **Serial:** 358439002262390

Program Name: Body Worn

Communication System: GPRS 1900; Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.47, 4.47, 4.47); Calibrated: 15.02.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 11.07.2006
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.297 mW/g

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

Reference Value = 8.53 V/m; Power Drift = -0.104 dB

Peak SAR (extrapolated) = 0.447 W/kg

SAR(1 g) = 0.277 mW/g; SAR(10 g) = 0.163 mW/g

Maximum value of SAR (measured) = 0.303 mW/g

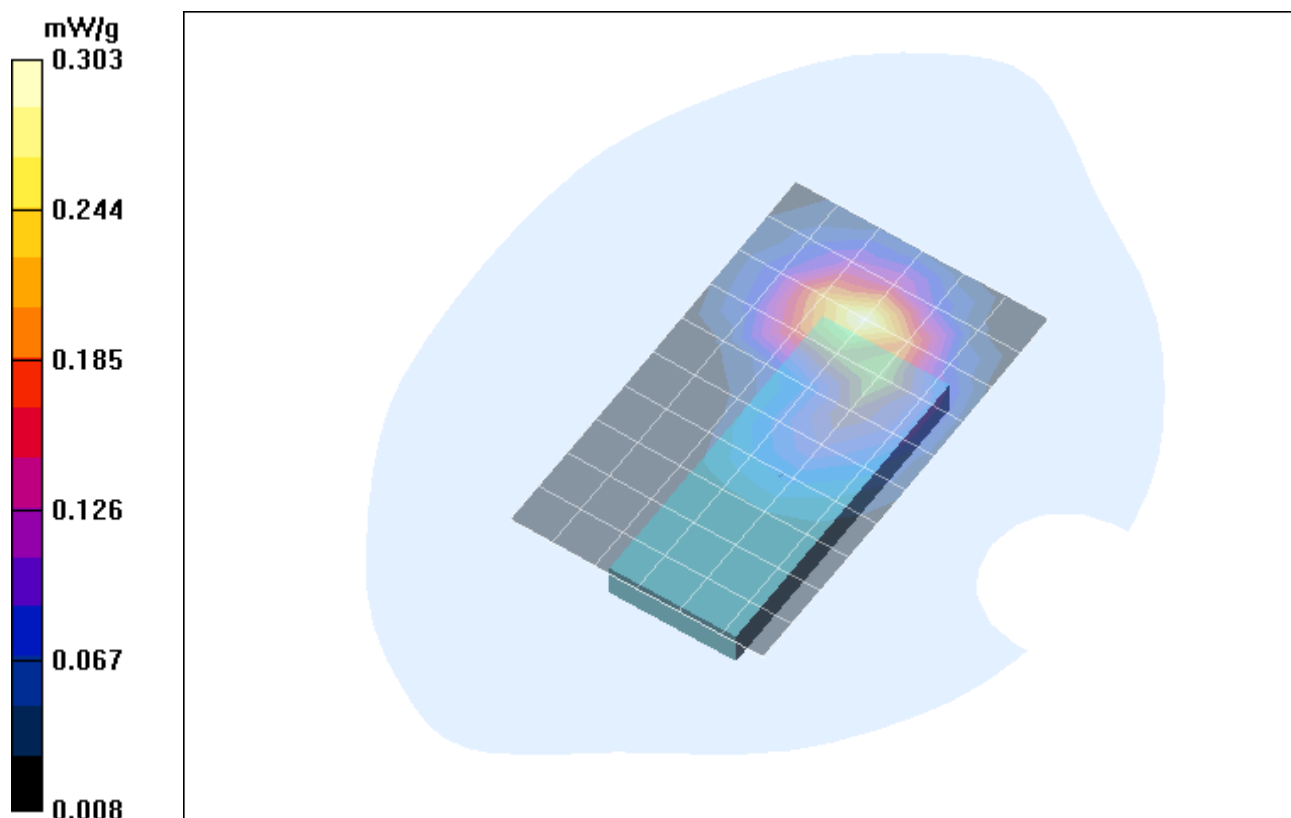


Fig. 8: SAR distribution for GPRS 1900 (Class 10), channel 661, body worn configuration, antenna towards the phantom, with data cable, with 22 mm distance (July 28, 2006; Ambient Temperature: 22.4° C; Liquid Temperature: 21.3° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [390bphm 5 BT 22mm.da4](#)

DUT: BenQ; **Type:** S68 Ceramic; **Serial:** 358439002262390

Program Name: Body Worn

Communication System: GPRS 1900; Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.47, 4.47, 4.47); Calibrated: 15.02.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 11.07.2006
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.319 mW/g

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

Reference Value = 7.99 V/m; Power Drift = -0.187 dB

Peak SAR (extrapolated) = 0.429 W/kg

SAR(1 g) = 0.279 mW/g; SAR(10 g) = 0.165 mW/g

Maximum value of SAR (measured) = 0.305 mW/g

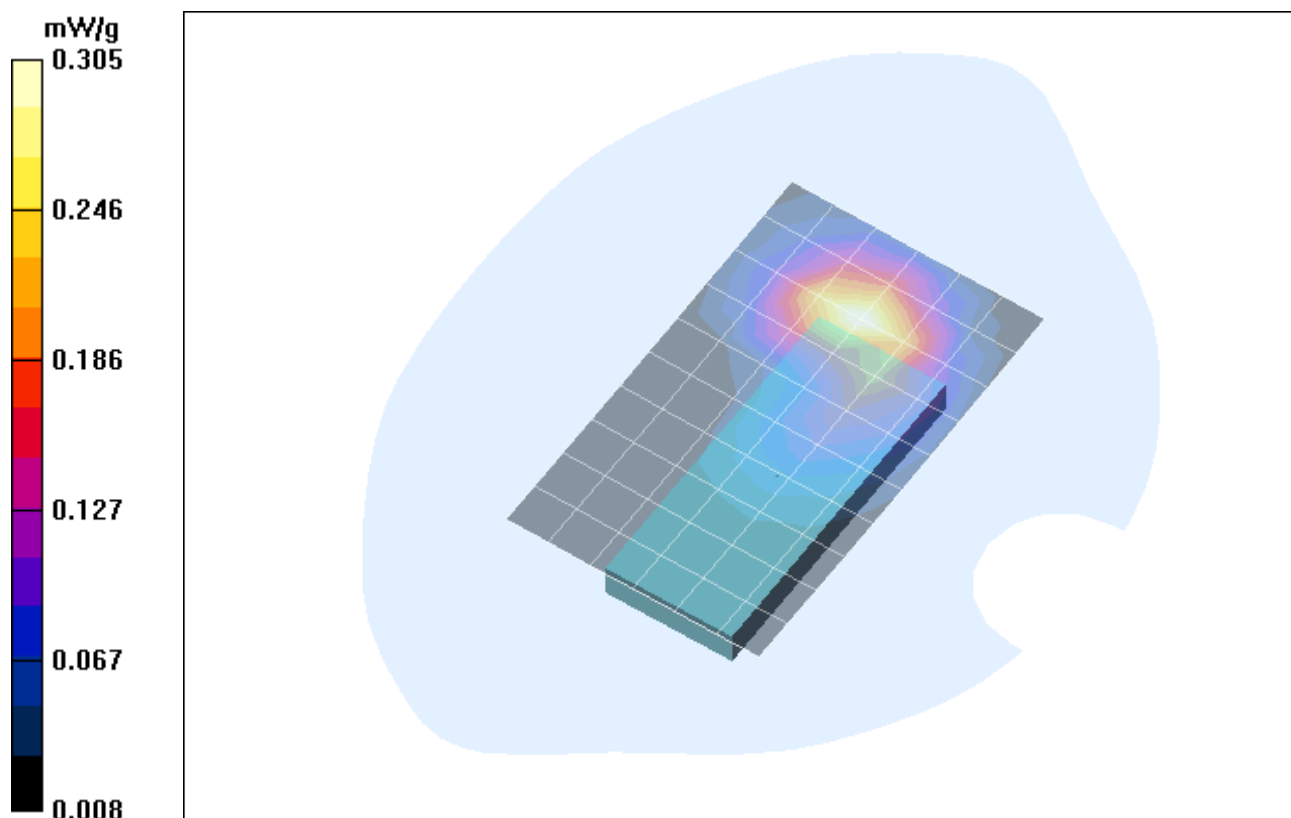


Fig. 9: SAR distribution for GPRS 1900, channel 661, body worn configuration, antenna towards the phantom, without accessory, with BT activated, with 22 mm distance (July 28, 2006; Ambient Temperature: 22.4° C; Liquid Temperature: 21.3° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [390bphm 6 PTT 25mm.da4](#)

DUT: BenQ; **Type:** S68 Ceramic; **Serial:** 358439002262390

Program Name: Body Worn

Communication System: GPRS 1900; Frequency: 1880 MHz; Duty Cycle: 1:4

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 53.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.47, 4.47, 4.47); Calibrated: 15.02.2006
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 11.07.2006
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Body Worn/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.058 mW/g

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

Reference Value = 3.43 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 0.082 W/kg

SAR(1 g) = 0.056 mW/g; SAR(10 g) = 0.036 mW/g

Maximum value of SAR (measured) = 0.059 mW/g

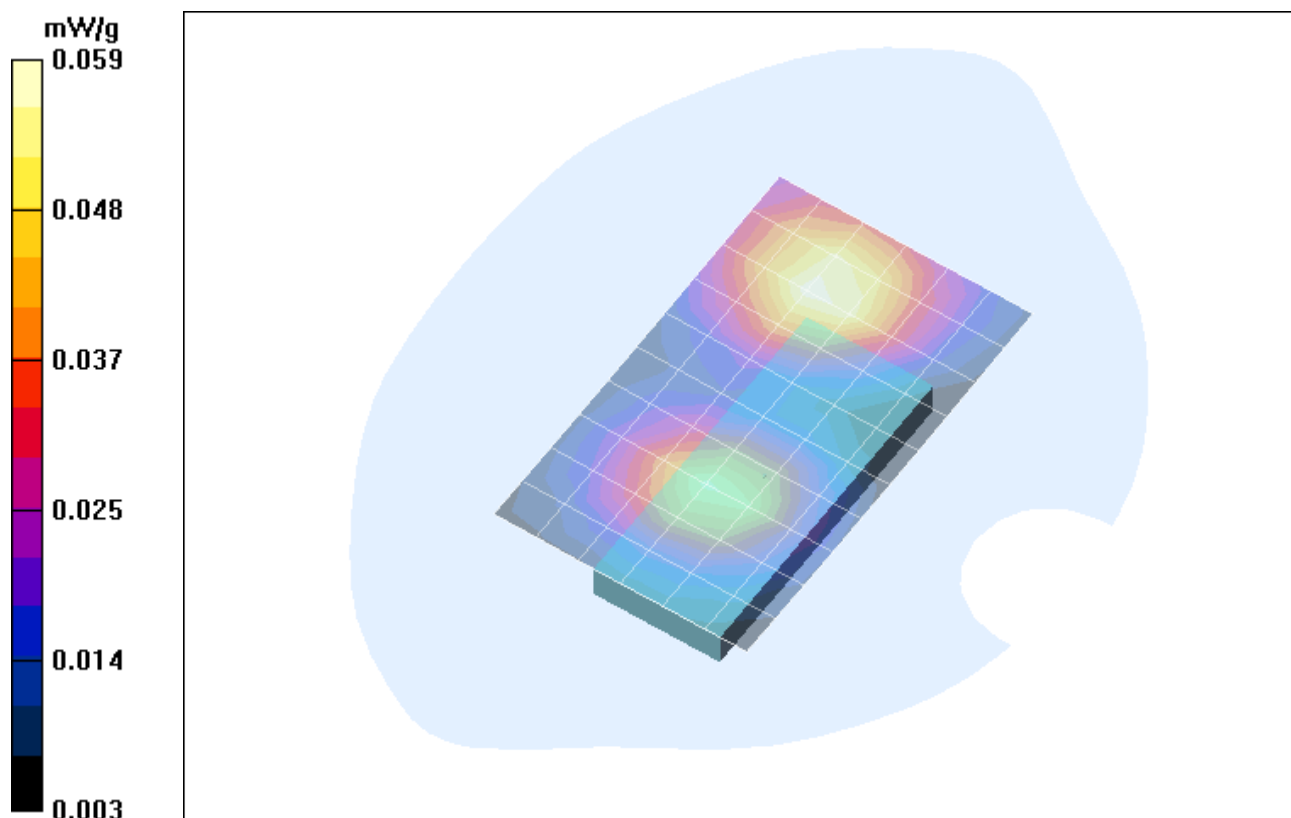


Fig. 10: SAR distribution for GPRS 1900, channel 661, body worn configuration, display towards the phantom, PTT mode, 25mm distance (July 28, 2006; Ambient Temperature: 22.4° C; Liquid Temperature: 21.3° C).

3 SAR z-axis scans (Validation)

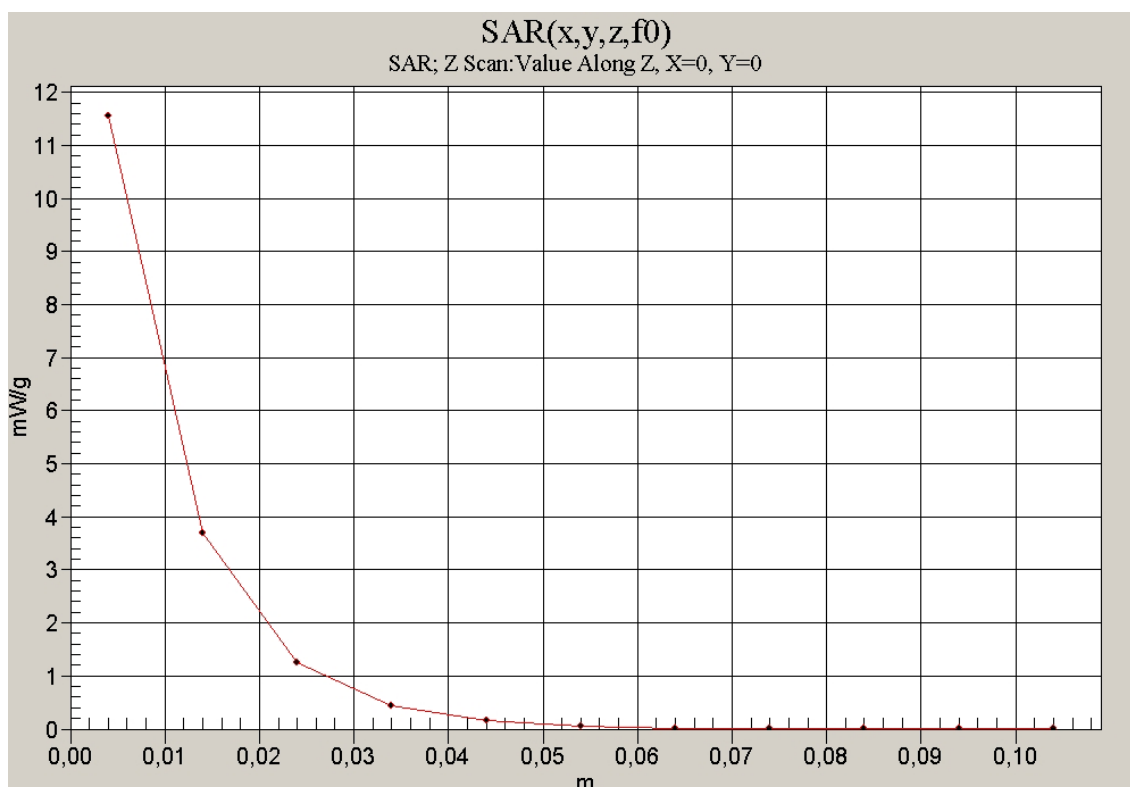


Fig. 11: SAR versus liquid depth, 1900 MHz, head (July 26, 2006; Ambient Temperature: 22.5° C; Liquid Temperature : 21.3° C).

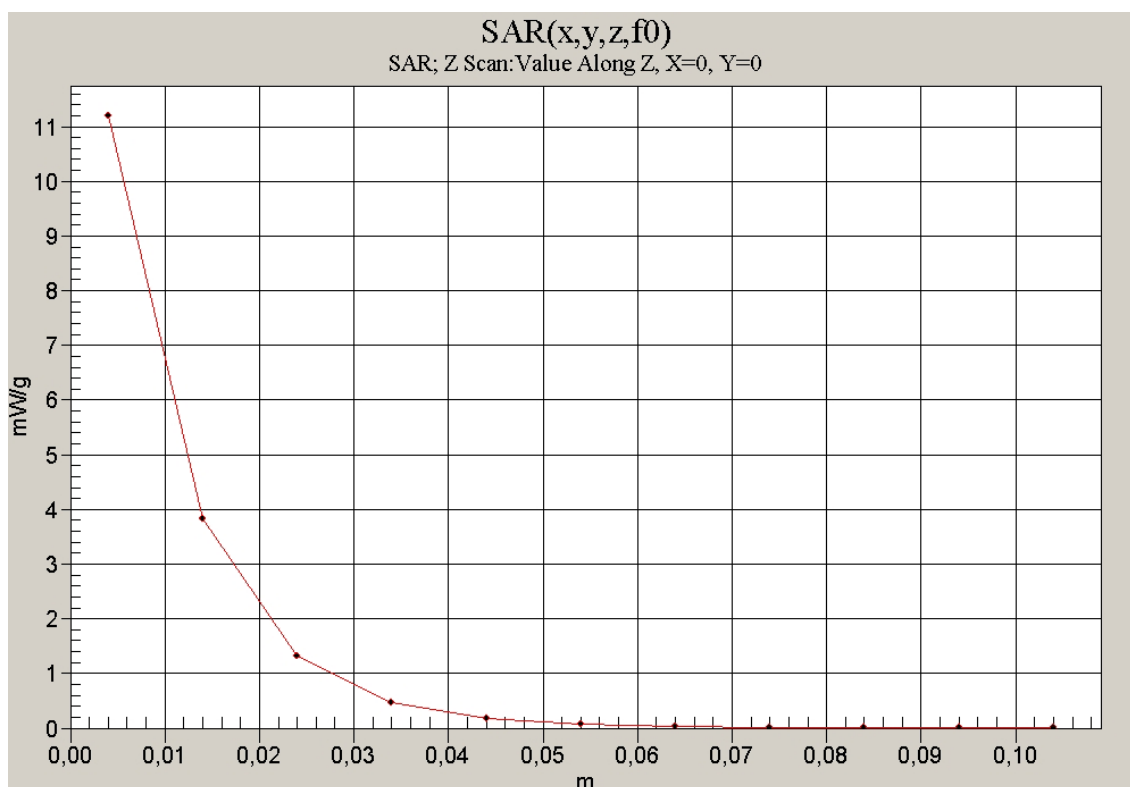


Fig. 12: SAR versus liquid depth, 1900 MHz, body (July 28, 2006; Ambient Temperature: 22.3° C; Liquid Temperature : 21.2° C).

4 SAR z-axis scans (Measurements)

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

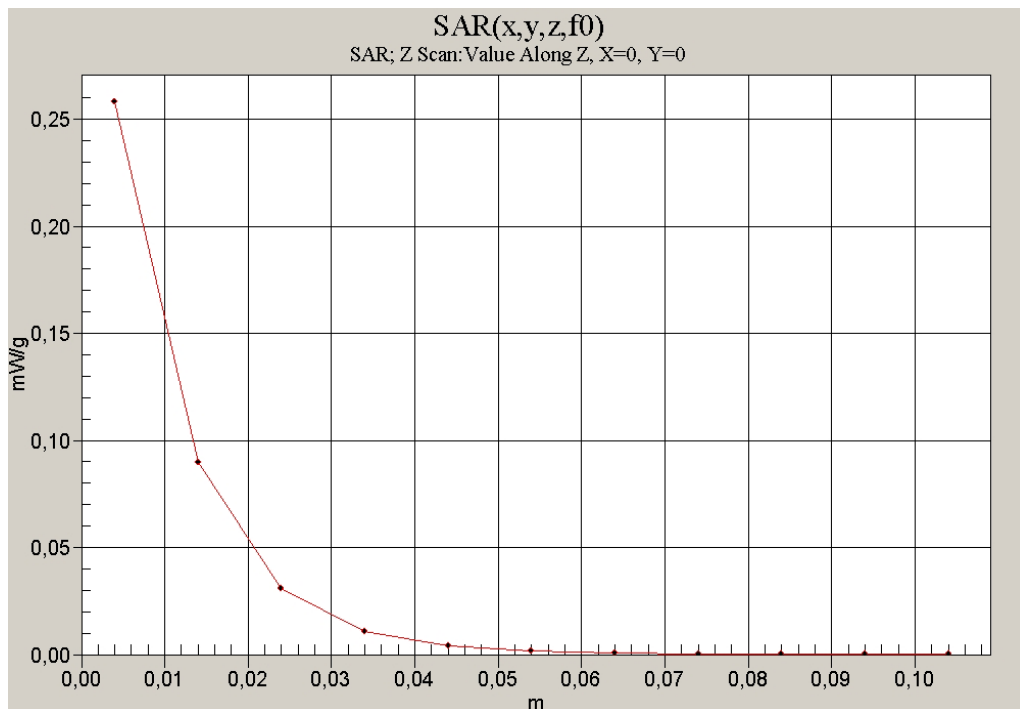


Fig. 13: SAR versus liquid depth, head: PCS 1900, channel 661, tilted position, right side of head (July 26, 2006; Ambient Temperature: 22.1° C; Liquid Temperature : 21.2° C).

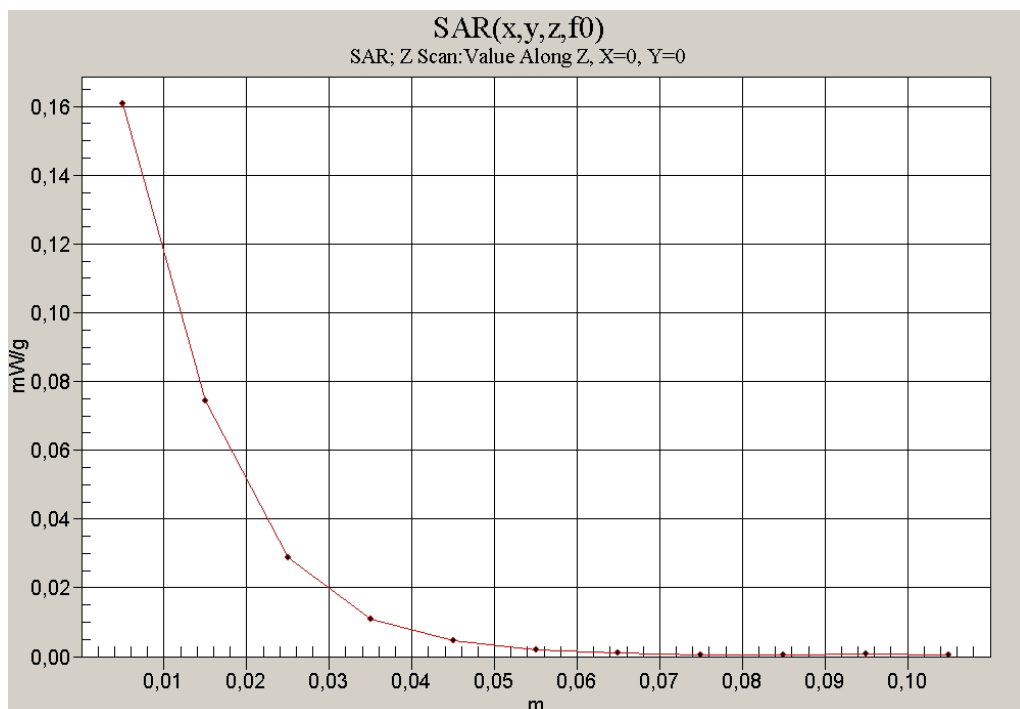


Fig. 14: SAR versus liquid depth, body: GPRS 1900 (Class 10), channel 661, without accessory and BT activated, with 22 mm distance (July 28, 2006; Ambient Temperature: 22.4° C; Liquid Temperature: 21.3° C).