
Appendix for the Report

Dosimetric Assessment of the Siemens A70 (FCC ID: PWX-A70)

According to the FCC Requirements

SAR Distribution Plots

May 04, 2005
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1 SAR Distribution Plots, PCS 1900 head.

Test Laboratory: IMST GmbH, DASY Yellow (II); **File Name:** [323yp1m_1_wdh.da4](#)

DUT: Siemens; **Type:** A70; **Serial:** 004400000141323

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; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.19, 8.19, 8.19); Calibrated: 27.08.2004

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

- Electronics: DAE4 Sn631; Calibrated: 23.07.2004

- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340

- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

Maximum value of SAR (measured) = 0.325 mW/g

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

Reference Value = 13.5 V/m; Power Drift = -0.047 dB

Peak SAR (extrapolated) = 0.483 W/kg

SAR(1 g) = 0.294 mW/g; SAR(10 g) = 0.164 mW/g

Maximum value of SAR (measured) = 0.327 mW/g

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

Reference Value = 13.5 V/m; Power Drift = -0.047 dB

Peak SAR (extrapolated) = 0.422 W/kg

SAR(1 g) = 0.159 mW/g; SAR(10 g) = 0.099 mW/g

Maximum value of SAR (measured) = 0.175 mW/g

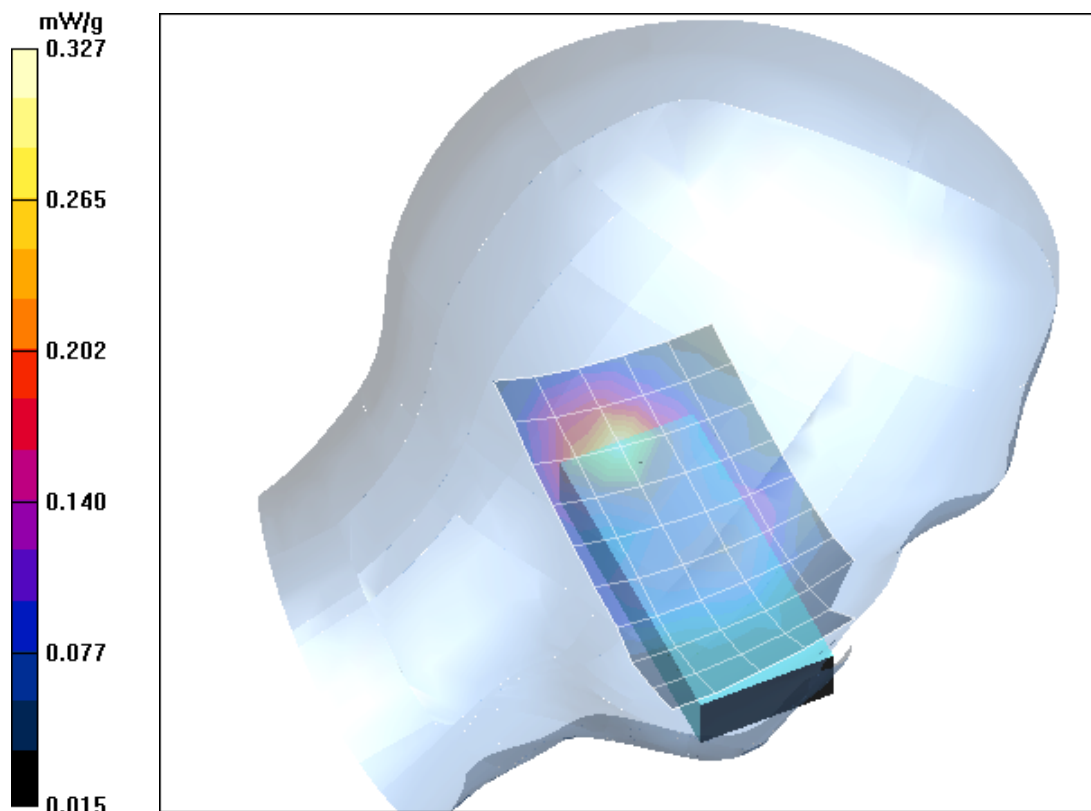


Fig. 1: SAR distribution for PCS 1900, channel 661, cheek position, left side of head (27.04.2005; Ambient Temperature: 21.6° C; Liquid Temperature: 20.9° C).

Test Laboratory: IMST GmbH, DASY Yellow (II); **File Name:** [323yp1m_2.da4](#)

DUT: Siemens; **Type:** A70; **Serial:** 004400000141323

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; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.19, 8.19, 8.19); Calibrated: 27.08.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 23.07.2004
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

Maximum value of SAR (measured) = 0.326 mW/g

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

Reference Value = 12.9 V/m; Power Drift = -0.200 dB

Peak SAR (extrapolated) = 0.511 W/kg

SAR(1 g) = 0.319 mW/g; SAR(10 g) = 0.171 mW/g

Maximum value of SAR (measured) = 0.353 mW/g

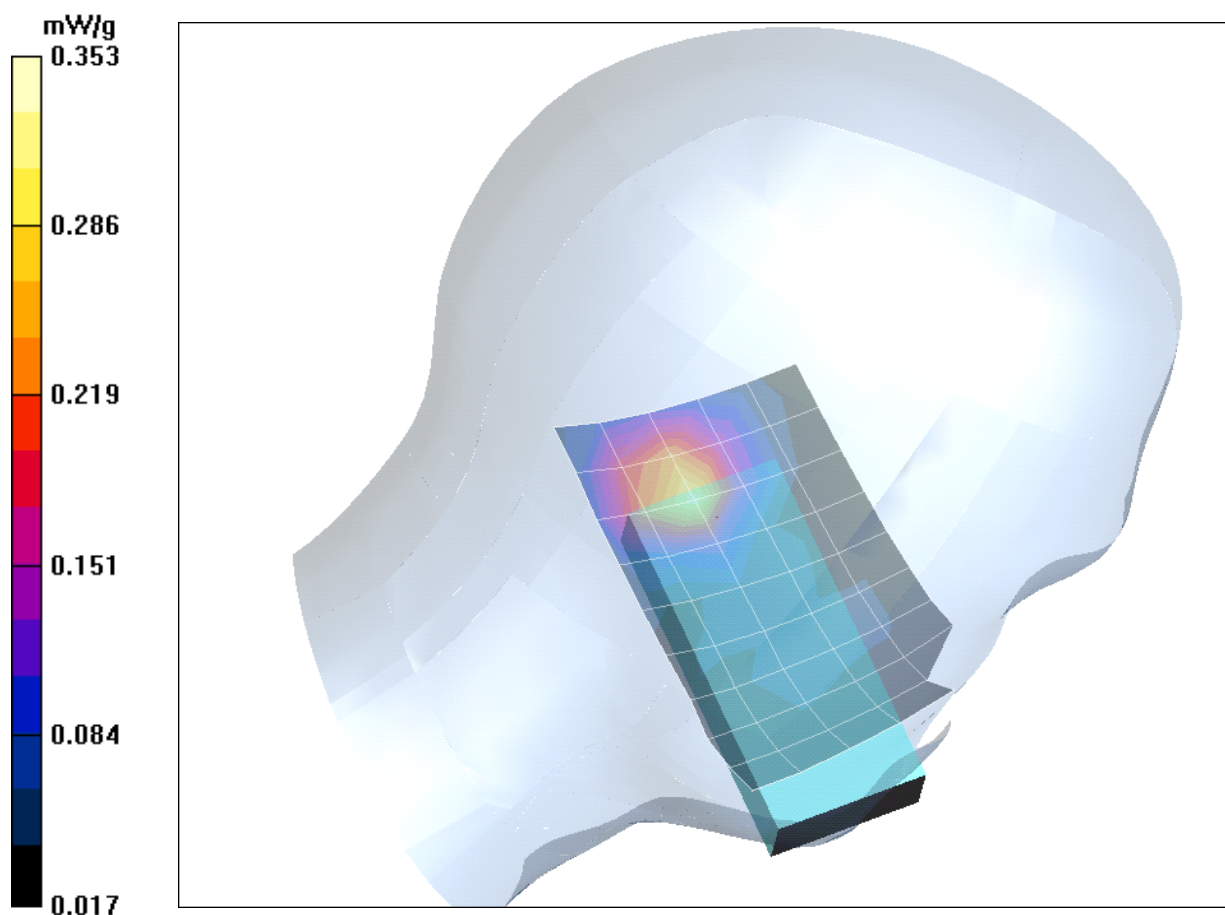


Fig. 2: SAR distribution for PCS 1900, channel 661, tilted position, left side of head (27.04.2005; Ambient Temperature: 21.7° C; Liquid Temperature: 20.9° C).

Test Laboratory: IMST GmbH, DASY Yellow (II); **File Name:** [323yprm_1.da4](#)

DUT: Siemens; **Type:** A70; **Serial:** 004400000141323

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; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.19, 8.19, 8.19); Calibrated: 27.08.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 23.07.2004
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

Maximum value of SAR (measured) = 0.396 mW/g

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

Reference Value = 12.2 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 0.753 W/kg

SAR(1 g) = 0.444 mW/g; SAR(10 g) = 0.251 mW/g

Maximum value of SAR (measured) = 0.492 mW/g

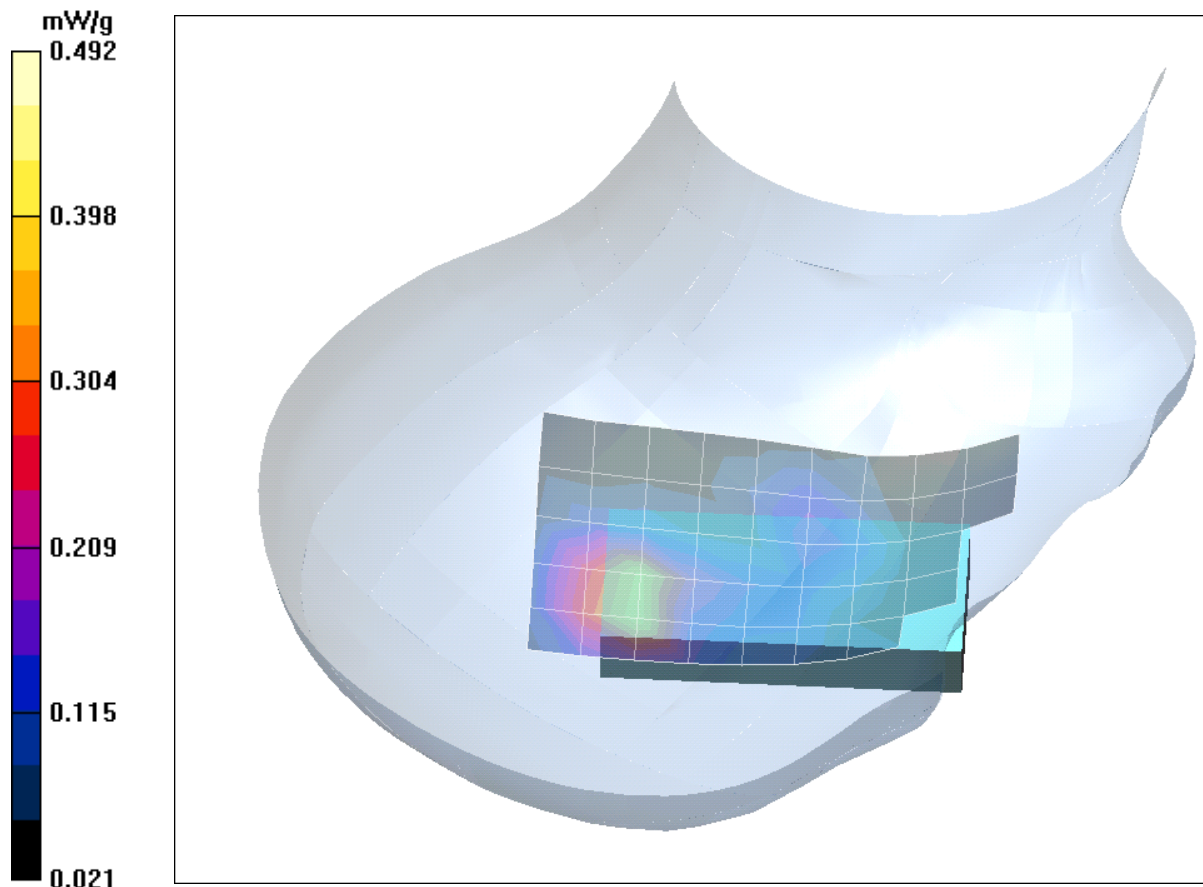


Fig. 3: SAR distribution for PCS 1900, channel 661, cheek position, right side of head (27.04.2005; Ambient Temperature: 21.7° C; Liquid Temperature: 20.9° C).

Test Laboratory: IMST GmbH, DASY Yellow (II); **File Name:** [323yprm_2.da4](#)

DUT: Siemens; **Type:** A70; **Serial:** 004400000141323

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; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Phantom section: Right Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(8.19, 8.19, 8.19); Calibrated: 27.08.2004
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 23.07.2004
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

Maximum value of SAR (measured) = 0.429 mW/g

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

Reference Value = 10.9 V/m; Power Drift = 0.164 dB

Peak SAR (extrapolated) = 0.754 W/kg

SAR(1 g) = 0.453 mW/g; SAR(10 g) = 0.252 mW/g

Maximum value of SAR (measured) = 0.522 mW/g

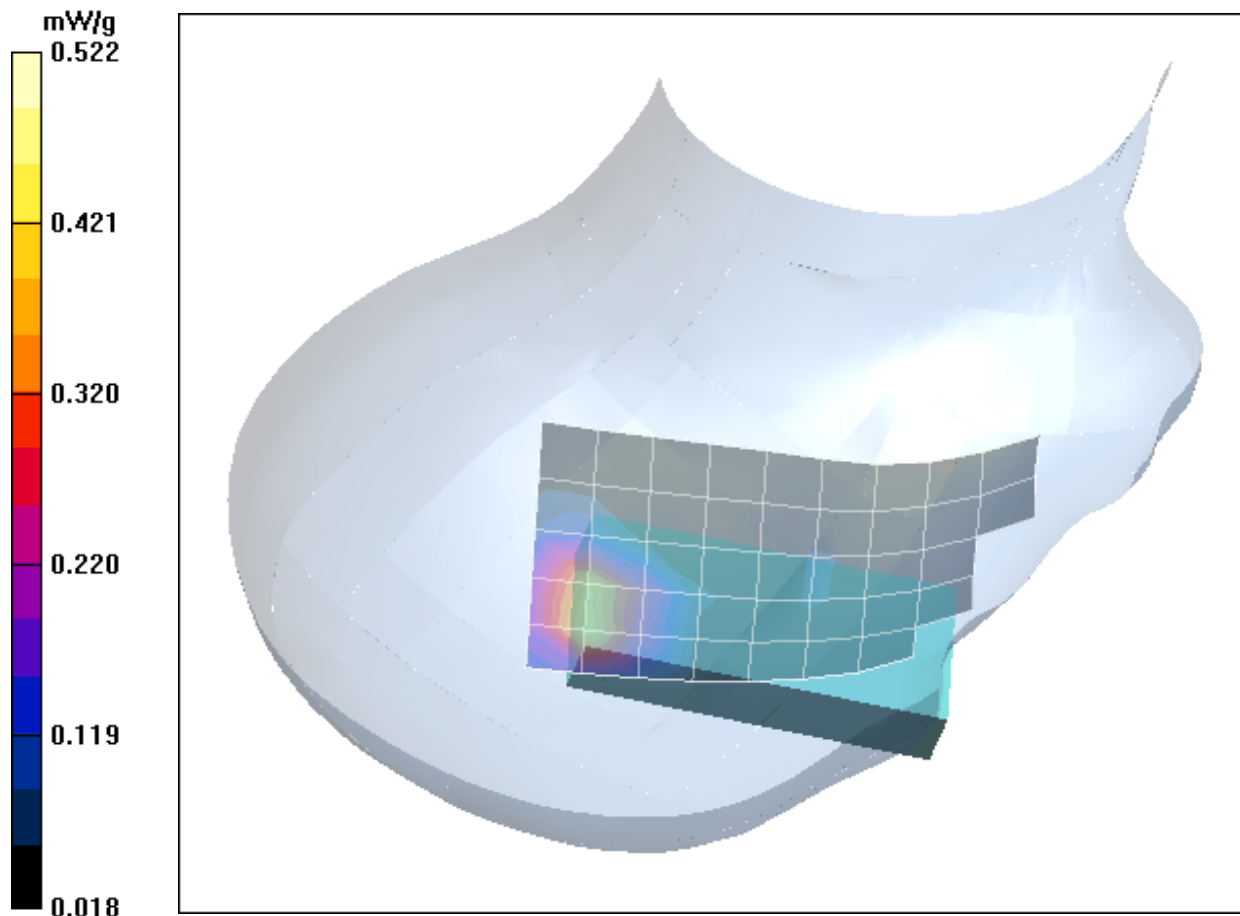


Fig. 4: SAR distribution for PCS 1900, channel 661, tilted position, right side of head (27.04.2005; Ambient Temperature: 21.6° C; Liquid Temperature : 20.9° C).

2 SAR Distribution Plots, PCS 1900 Body worn

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [323bphm_1_FCT650.da4](#)

DUT: Siemens; Type: A70; Serial: 004400000141323

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; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.52, 4.52, 4.52); Calibrated: 13.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 17.03.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

Maximum value of SAR (measured) = 0.330 mW/g

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

Reference Value = 11.1 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.497 W/kg

SAR(1 g) = 0.317 mW/g; SAR(10 g) = 0.202 mW/g

Maximum value of SAR (measured) = 0.340 mW/g

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

Reference Value = 11.1 V/m; Power Drift = -0.045 dB

Peak SAR (extrapolated) = 0.379 W/kg

SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.168 mW/g

Maximum value of SAR (measured) = 0.285 mW/g

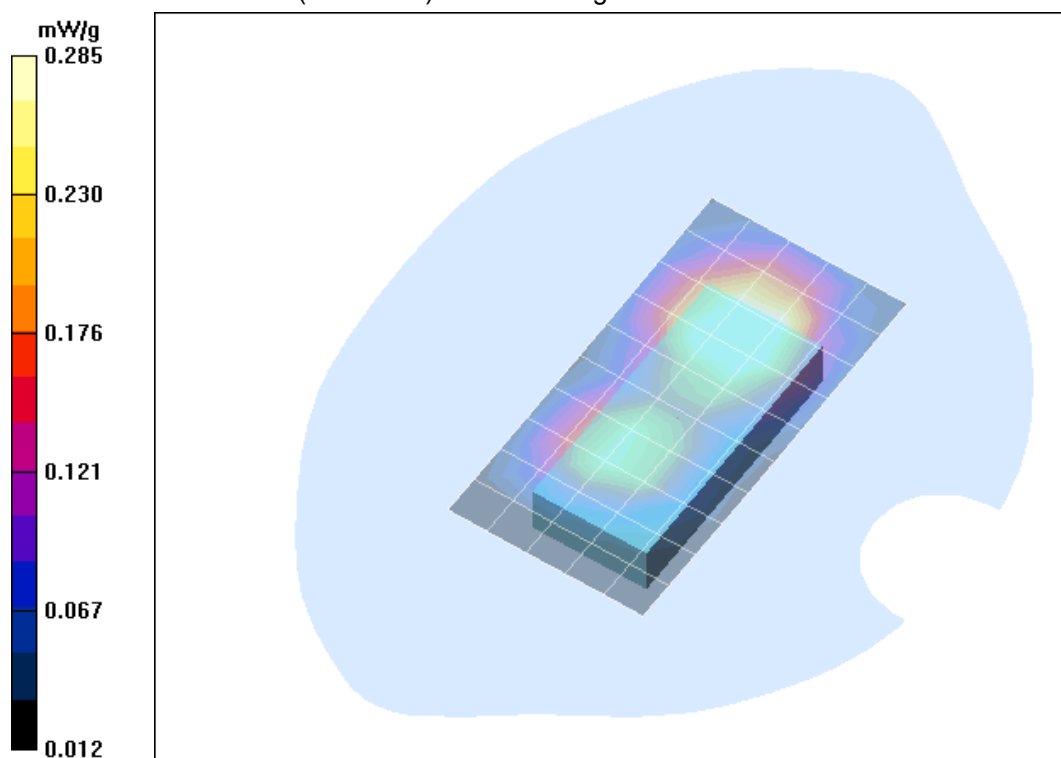


Fig. 5: SAR distribution for PCS 1900, channel 661, antenna towards the phantom, GSM with headset and FCT650 carry case, (02.05.2005; Ambient Temperature: 22.2° C; Liquid Temperature: 21.3° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [323bphm 2 FCL600.da4](#)

DUT: Siemens; **Type:** A70; **Serial:** 004400000141323

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; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.52, 4.52, 4.52); Calibrated: 13.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 17.03.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

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

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

Reference Value = 11.6 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 0.362 W/kg

SAR(1 g) = 0.255 mW/g; SAR(10 g) = 0.164 mW/g

Maximum value of SAR (measured) = 0.274 mW/g

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

Reference Value = 11.6 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 0.348 W/kg

SAR(1 g) = 0.225 mW/g; SAR(10 g) = 0.143 mW/g

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

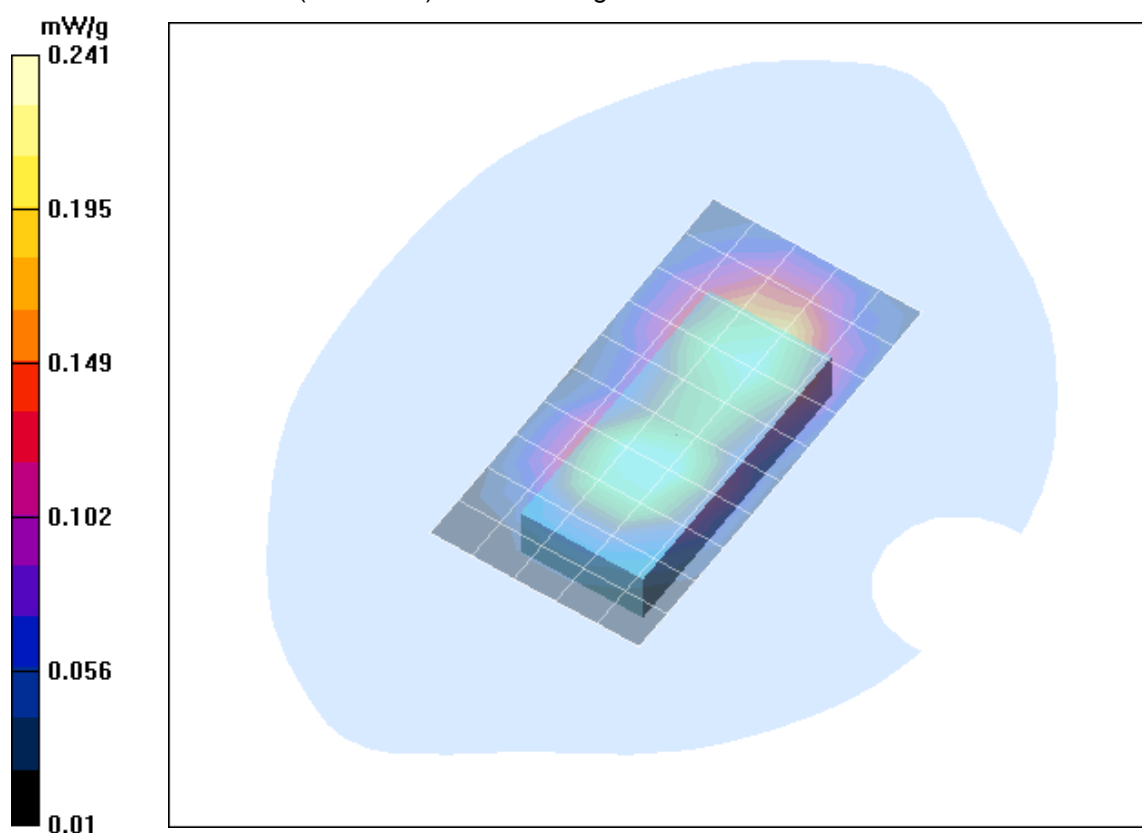


Fig. 6: SAR distribution for PCS 1900, channel 661, antenna towards the phantom, GSM with headset and FCL600 carry case, (02.05.2005; Ambient Temperature: 22.2° C; Liquid Temperature: 21.3° C).

Test Laboratory: IMST GmbH, DASY Blue (I); **File Name:** [323bphm 3 FCL600.da4](#)

DUT: Siemens; **Type:** A70; **Serial:** 004400000141323

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; $\epsilon_r = 51.9$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.52, 4.52, 4.52); Calibrated: 13.01.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 17.03.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.5 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 146

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

Maximum value of SAR (measured) = 0.244 mW/g

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

Reference Value = 12.1 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 0.335 W/kg

SAR(1 g) = 0.226 mW/g; SAR(10 g) = 0.145 mW/g

Maximum value of SAR (measured) = 0.242 mW/g

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

Reference Value = 12.1 V/m; Power Drift = -0.102 dB

Peak SAR (extrapolated) = 0.310 W/kg

SAR(1 g) = 0.217 mW/g; SAR(10 g) = 0.140 mW/g

Maximum value of SAR (measured) = 0.235 mW/g

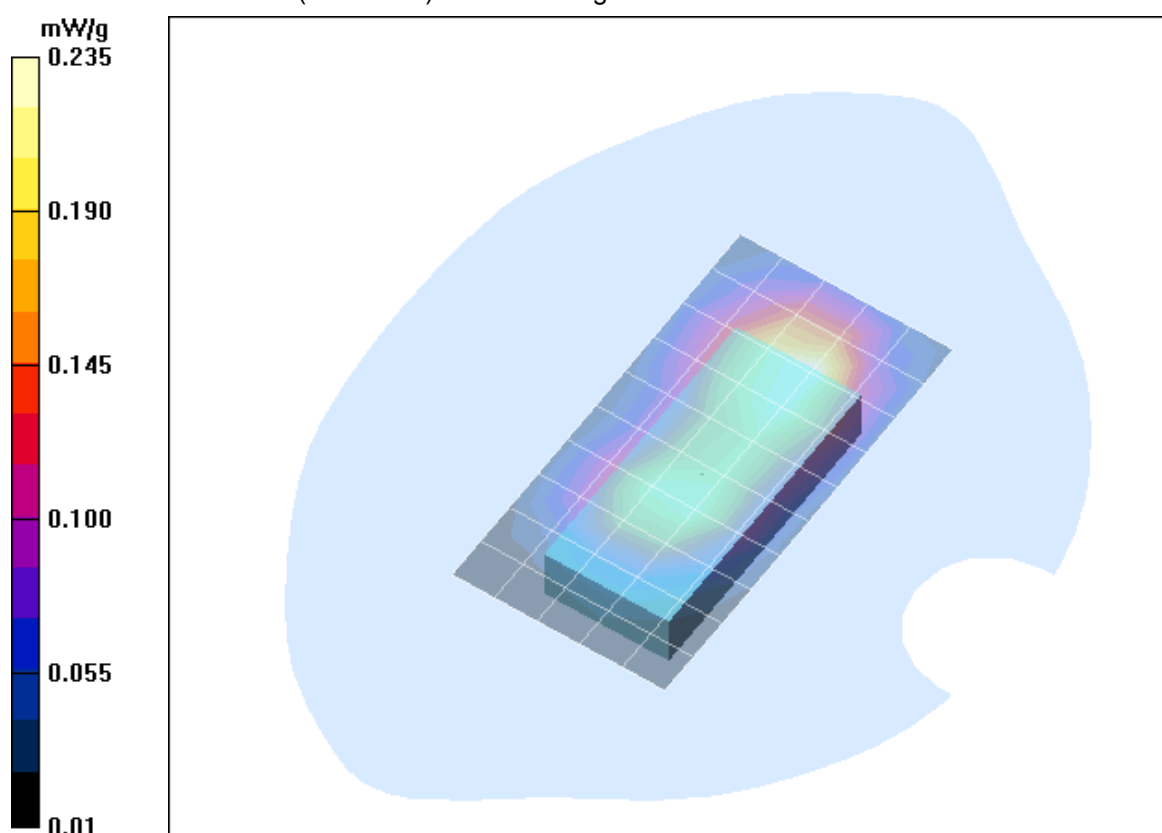


Fig. 7: SAR distribution for PCS 1900, channel 661, antenna towards the phantom, GPRS Class 8 with data cable and FCL600 carry case, (02.05.2005; Ambient Temperature: 22.2° C; Liquid Temperature: 21.3° C)

3 SAR z-axis scans (Validation)

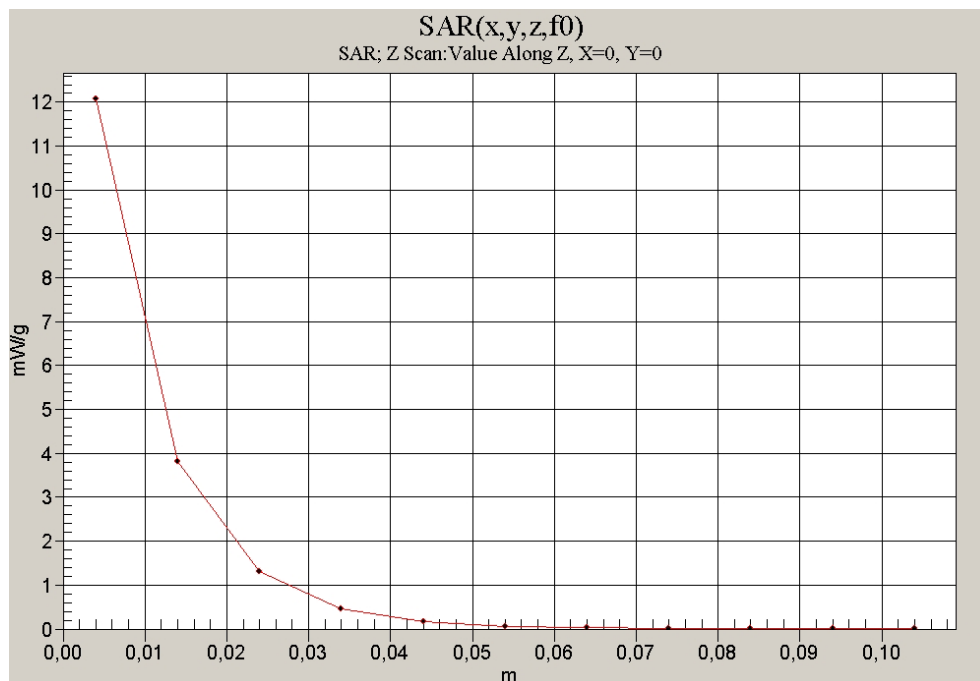


Fig. 8: SAR versus liquid depth, 1900 MHz, head (27.04.2005; Ambient Temperature: 21.8° C; Liquid Temperature: 20.8° C).

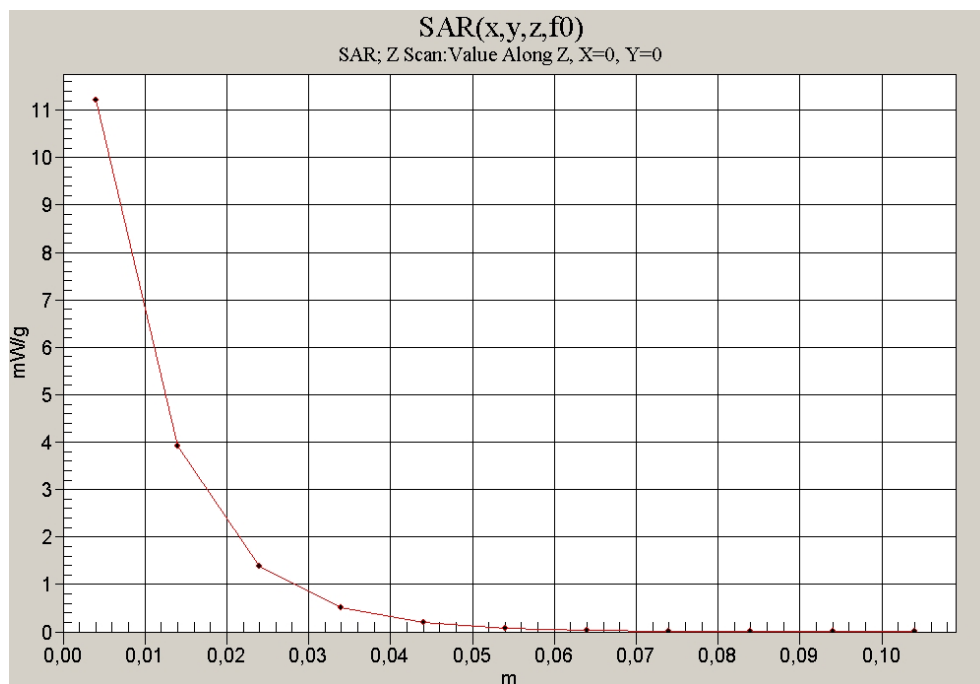


Fig. 9: SAR versus liquid depth, 1900 MHz, body (02.05.2005; Ambient Temperature: 21.5° C; Liquid Temperature: 20.9° C).

4 SAR z-axis scans (Measurements)

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

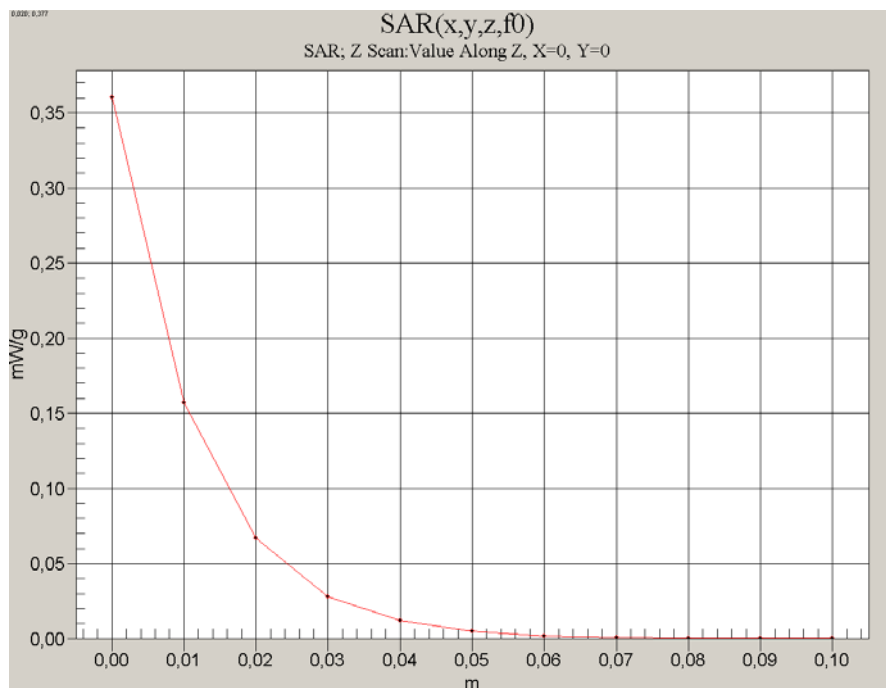


Fig. 10: SAR versus liquid depth, head: PCS 1900, channel 661, tilted position, right side of head (27.04.2005, Ambient Temperature: 21.6° C; Liquid Temperature: 20.9° C).

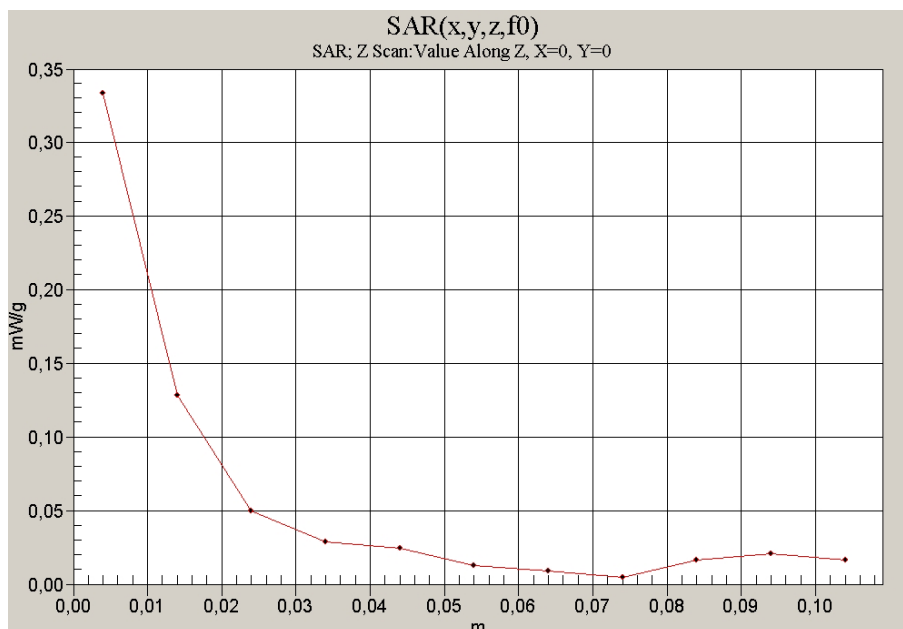


Fig. 11: SAR versus liquid depth, body: PCS 1900, channel 661, antenna towards the phantom, GSM with headset and FCT650 carry case, (02.05.2005; Ambient Temperature: 22.2° C; Liquid Temperature: 21.3° C).