

---

**Appendix for the Report**

**Dosimetric Assessment of the  
Portable Device G10031 from Option  
(FCC ID: NCMOGI0031)  
tested in three host products**

**According to the FCC Requirements**

**SAR Distribution Plots**

November 21, 2007  
**IMST GmbH**  
**Carl-Friedrich-Gauß-Str. 2**  
**D-47475 Kamp-Lintfort**

Customer  
7layers AG  
Borsigstrasse 11  
D-40880 Ratingen

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.

**Table of Contents**

1 SAR DISTRIBUTION PLOTS, GPRS 850 BODY ..... 3

2 SAR DISTRIBUTION PLOTS, GPRS 1900 BODY ..... 6

3 SAR Z-AXIS SCANS (VALIDATION) ..... 9

4 SAR Z-AXIS SCANS (MEASUREMENTS)..... 10

## 1 SAR Distribution Plots, GPRS 850 Body

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [014\\_bahl\\_1\\_BQ.da4](#)

DUT: Option; Type: GI0031; Serial: 004401440650014

Program Name: Body Worn

Communication System: GPRS 850; Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium parameters used:  $f = 824.2$  MHz;  $\sigma = 0.98$  mho/m;  $\epsilon_r = 54.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(6.22, 6.22, 6.22); Calibrated: 15.02.2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 17.09.2007
- Phantom: SAM Sugar 1059; Type: Speag; Serial: 1059
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**Body Worn/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.39 mW/g

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

Reference Value = 31.5 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 2.05 W/kg

**SAR(1 g) = 1.37 mW/g; SAR(10 g) = 0.879 mW/g**

Maximum value of SAR (measured) = 1.49 mW/g

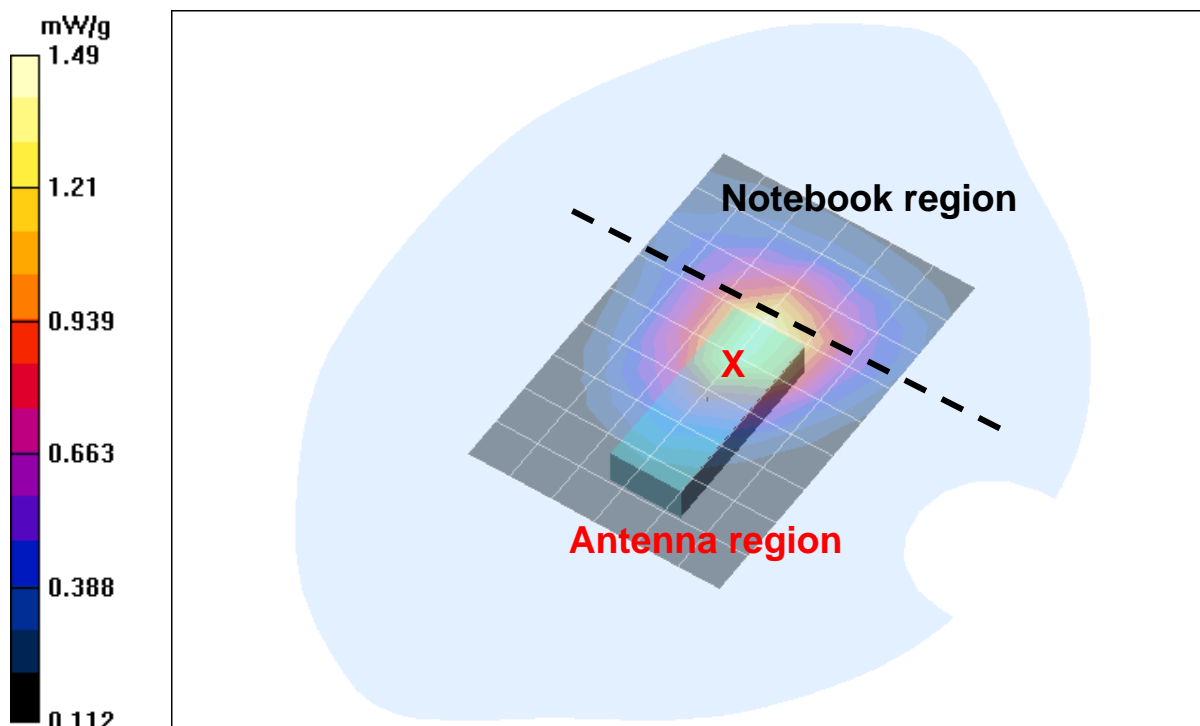


Fig. 1: SAR distribution for GPRS 850 (Class 10), channel 128, Lap Held Position (BenQ Joybook S72, November 19, 2007; Ambient Temperature: 21.5°C; Liquid Temperature: 20.8°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [014\\_bahl\\_1\\_HP.da4](#)

DUT: Option; Type: GI0031; Serial: 004401440650014

Program Name: Body Worn

Communication System: GPRS 850; Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium parameters used:  $f = 824.2$  MHz;  $\sigma = 0.98$  mho/m;  $\epsilon_r = 54.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(6.22, 6.22, 6.22); Calibrated: 15.02.2007

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

- Electronics: DAE4 Sn631; Calibrated: 17.09.2007

- Phantom: SAM Sugar 1059; Type: Speag; Serial: 1059

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

**Body Worn/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.31 mW/g

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

Reference Value = 32.0 V/m; Power Drift = -0.084 dB

Peak SAR (extrapolated) = 1.82 W/kg

**SAR(1 g) = 1.23 mW/g; SAR(10 g) = 0.794 mW/g**

Maximum value of SAR (measured) = 1.33 mW/g

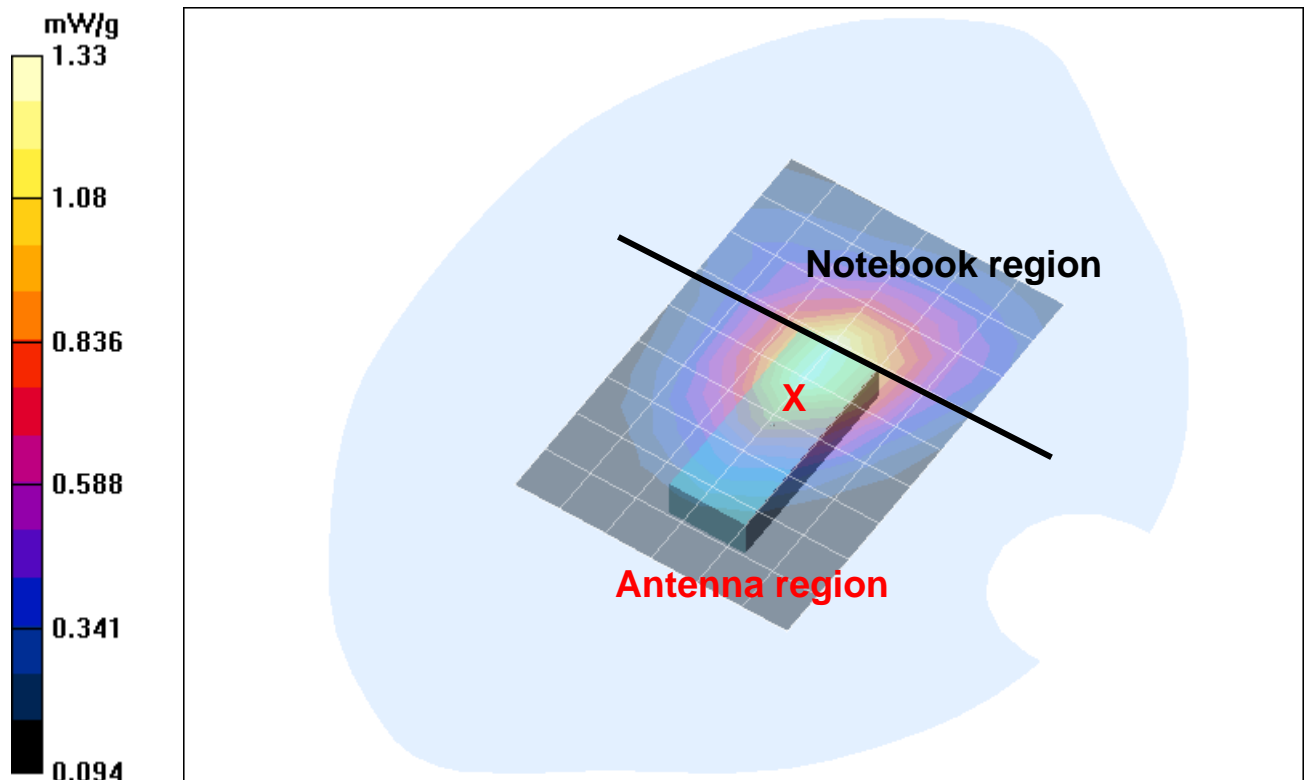


Fig. 2: SAR distribution for GPRS 850 (Class 10), channel 128, Lap Held Position (HP Compaq 6510b, November 19, 2007; Ambient Temperature: 21.5°C; Liquid Temperature: 20.8°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [014\\_bahl\\_1\\_A9.da4](#)

DUT: Option; Type: GI0031; Serial: 004401440650014

Program Name: Body Worn

Communication System: GPRS 850; Frequency: 824.2 MHz; Duty Cycle: 1:4

Medium parameters used:  $f = 824.2$  MHz;  $\sigma = 0.98$  mho/m;  $\epsilon_r = 54.6$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(6.22, 6.22, 6.22); Calibrated: 15.02.2007

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

- Electronics: DAE4 Sn631; Calibrated: 17.09.2007

- Phantom: SAM Sugar 1059; Type: Speag; Serial: 1059

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

**Body Worn/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.29 mW/g

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

Reference Value = 28.9 V/m; Power Drift = -0.163 dB

Peak SAR (extrapolated) = 2.02 W/kg

**SAR(1 g) = 1.25 mW/g; SAR(10 g) = 0.770 mW/g**

Maximum value of SAR (measured) = 1.35 mW/g

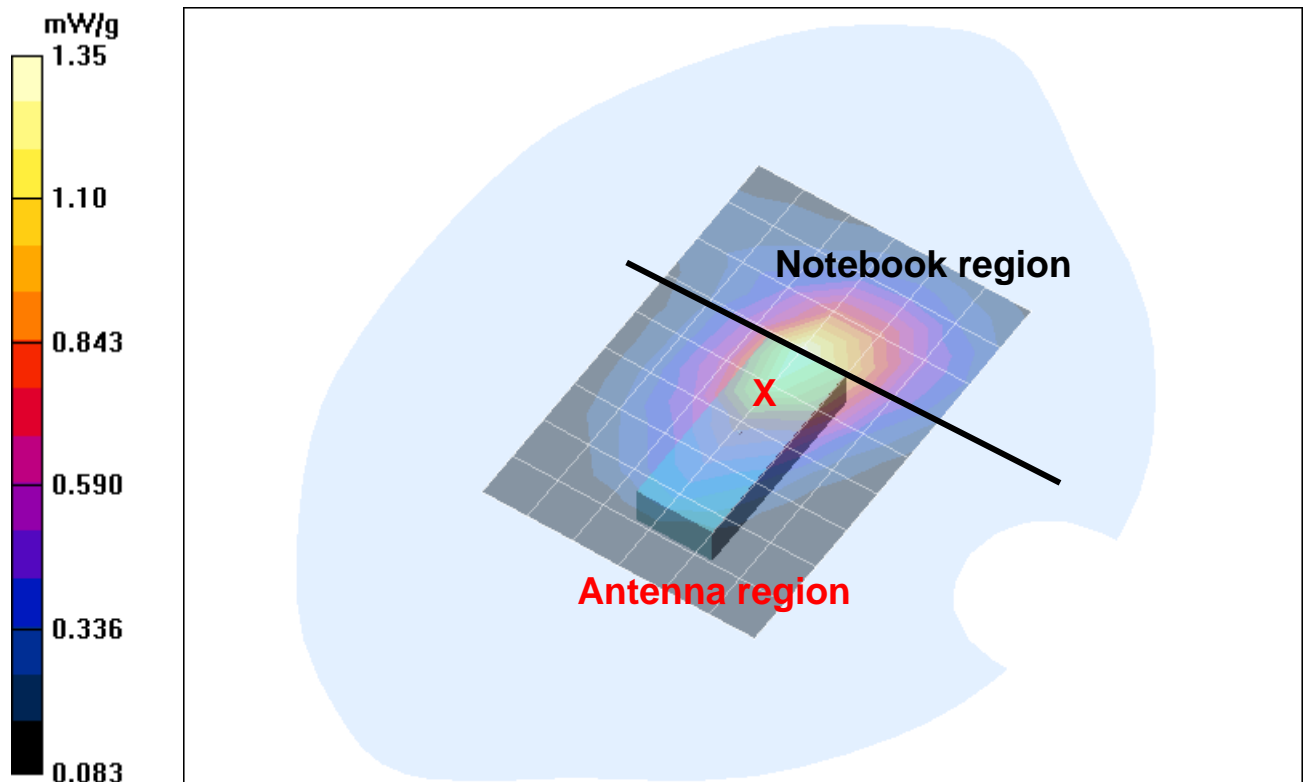


Fig. 3: SAR distribution for GPRS 850 (Class 10), channel 128, Lap Held Position (Toshiba Tecra A9, November 19, 2007; Ambient Temperature: 21.5°C; Liquid Temperature: 20.8°C).

## 2 SAR Distribution Plots, GPRS 1900 Body

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [014\\_bphm\\_1\\_BQ.da4](#)

DUT: Option; Type: GI0031; Serial: 004401440650014

Program Name: Body Worn

Communication System: GPRS 1900; Frequency: 1880 MHz; Duty Cycle: 1:2.66

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.5$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.72, 4.72, 4.72); Calibrated: 15.02.2007

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

- Electronics: DAE4 Sn631; Calibrated: 17.09.2007

- 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 (6x9x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.361 mW/g

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

Reference Value = 17.3 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 0.707 W/kg

**SAR(1 g) = 0.427 mW/g; SAR(10 g) = 0.230 mW/g**

Maximum value of SAR (measured) = 0.477 mW/g

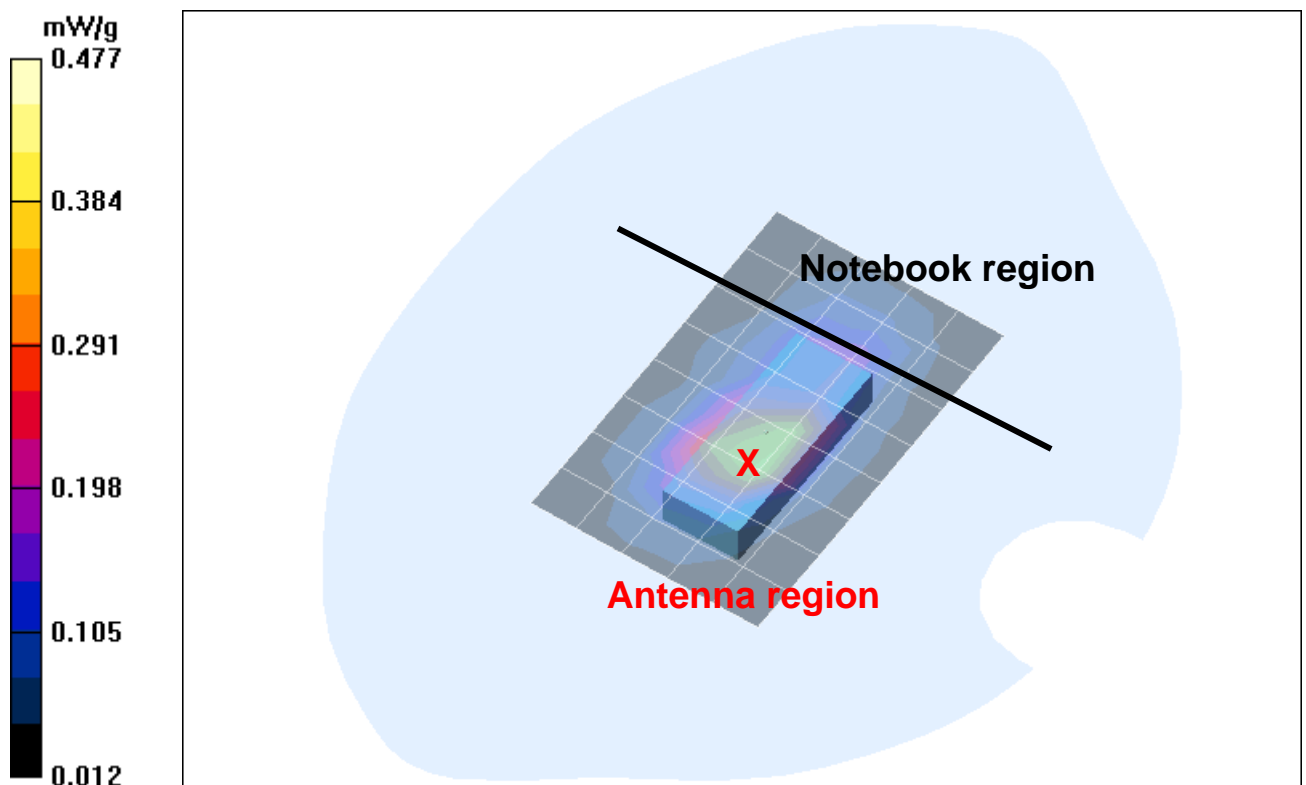


Fig. 4: Worst case SAR distribution for GPRS 1900 (Class 11), channel 661, Lap Held Position (BenQ Joybook S72, November 19, 2007; Ambient Temperature: 21.5°C; Liquid Temperature: 20.7 C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [014 bphm 1 HP.da4](#)

DUT: Option; Type: GI0031; Serial: 004401440650014

Program Name: Body Worn

Communication System: GPRS 1900; Frequency: 1880 MHz; Duty Cycle: 1:2.66

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.5$  mho/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.72, 4.72, 4.72); Calibrated: 15.02.2007

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

- Electronics: DAE4 Sn631; Calibrated: 17.09.2007

- 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 (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.544 mW/g

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

Reference Value = 17.0 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 0.949 W/kg

**SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.301 mW/g**

Maximum value of SAR (measured) = 0.654 mW/g

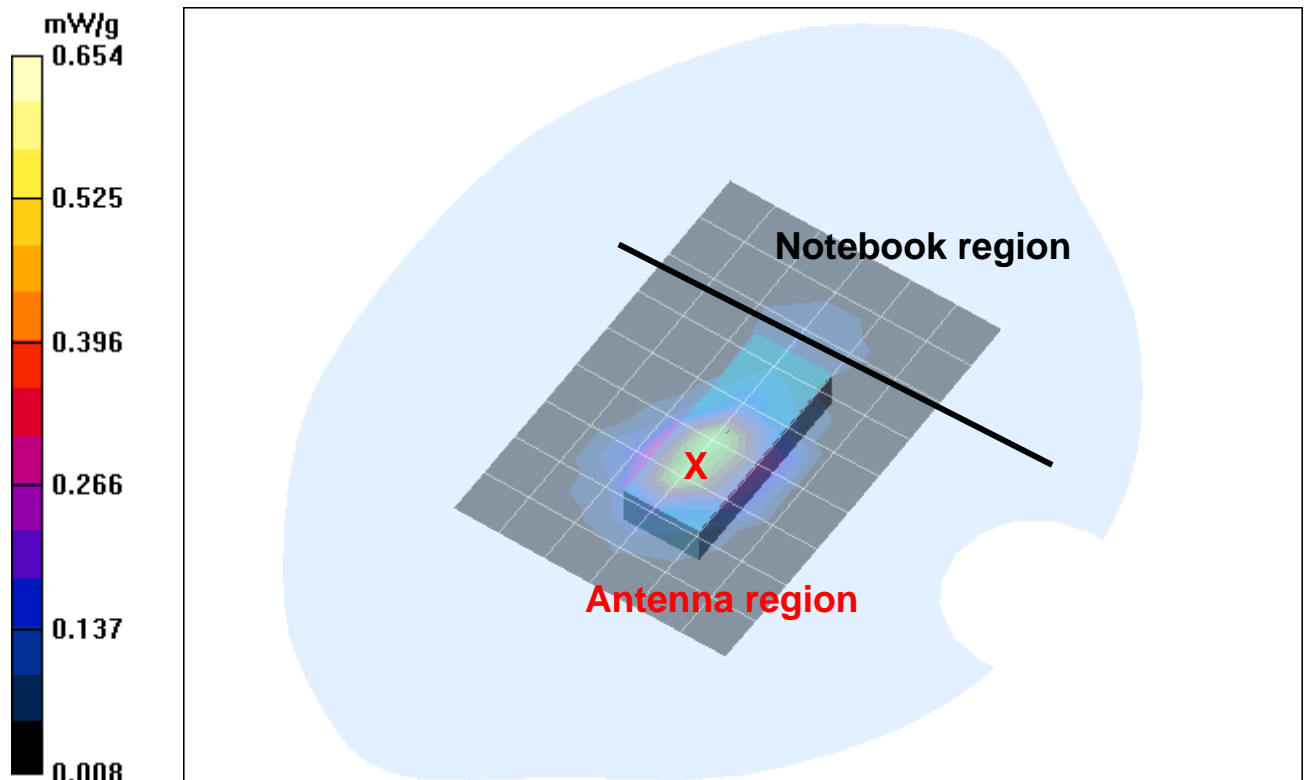


Fig. 5: SAR distribution for GPRS 1900 (Class 11), channel 661, Lap Held Position (HP Compaq 6510b, November 19, 2007; Ambient Temperature: 21.5° C; Liquid Temperature: 20.7°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [014 bphl 1 A9.da4](#)

DUT: Option; Type: GI0031; Serial: 004401440650014

Program Name: Body Worn

Communication System: GPRS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:2.66

Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.46$  mho/m;  $\epsilon_r = 54.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6R - SN1669; ConvF(4.72, 4.72, 4.72); Calibrated: 15.02.2007

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

- Electronics: DAE4 Sn631; Calibrated: 17.09.2007

- 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 (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.54 mW/g

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

Reference Value = 34.3 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 2.24 W/kg

**SAR(1 g) = 1.39 mW/g; SAR(10 g) = 0.720 mW/g**

Maximum value of SAR (measured) = 1.55 mW/g

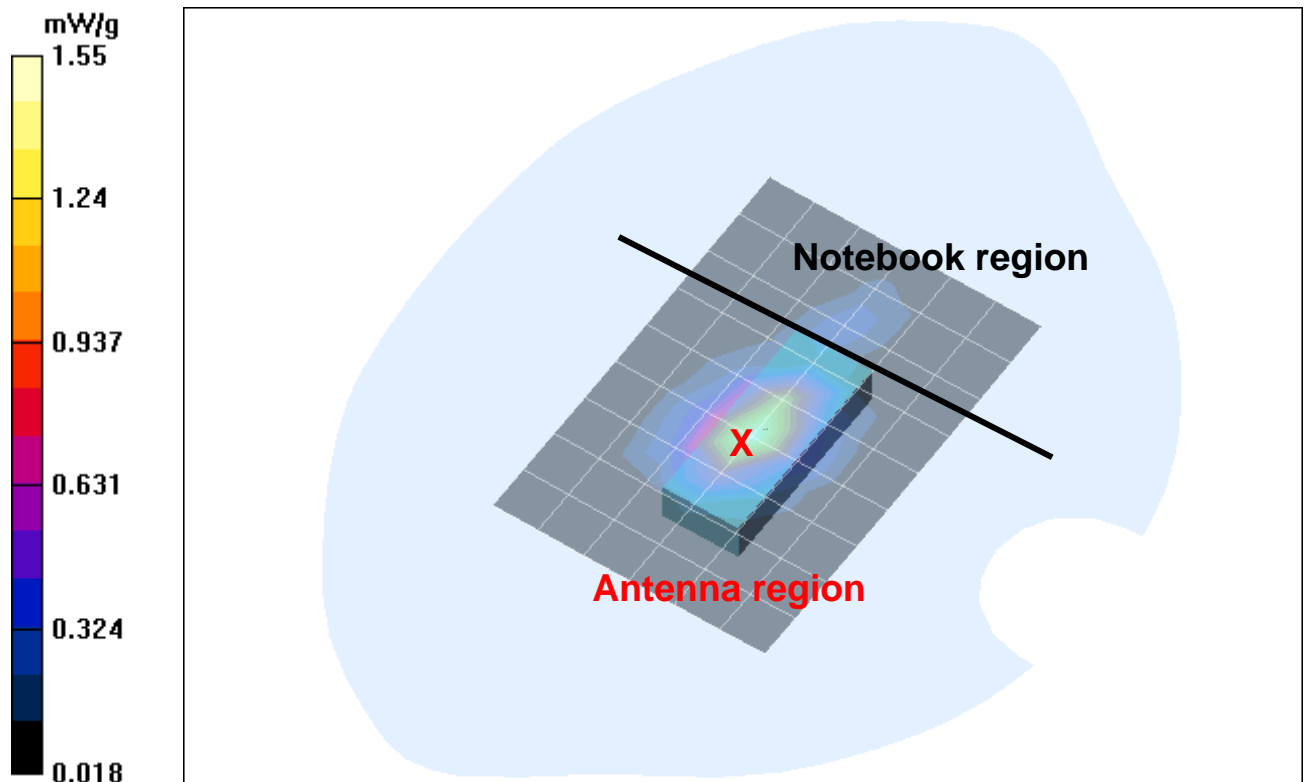


Fig. 6: SAR distribution for GPRS 1900 (Class 11), channel 512, Lap Held Position (Toshiba Tecra A9, November 19, 2007; Ambient Temperature: 21.5° C; Liquid Temperature: 20.7 C).



### 3 SAR z-axis scans (Validation)

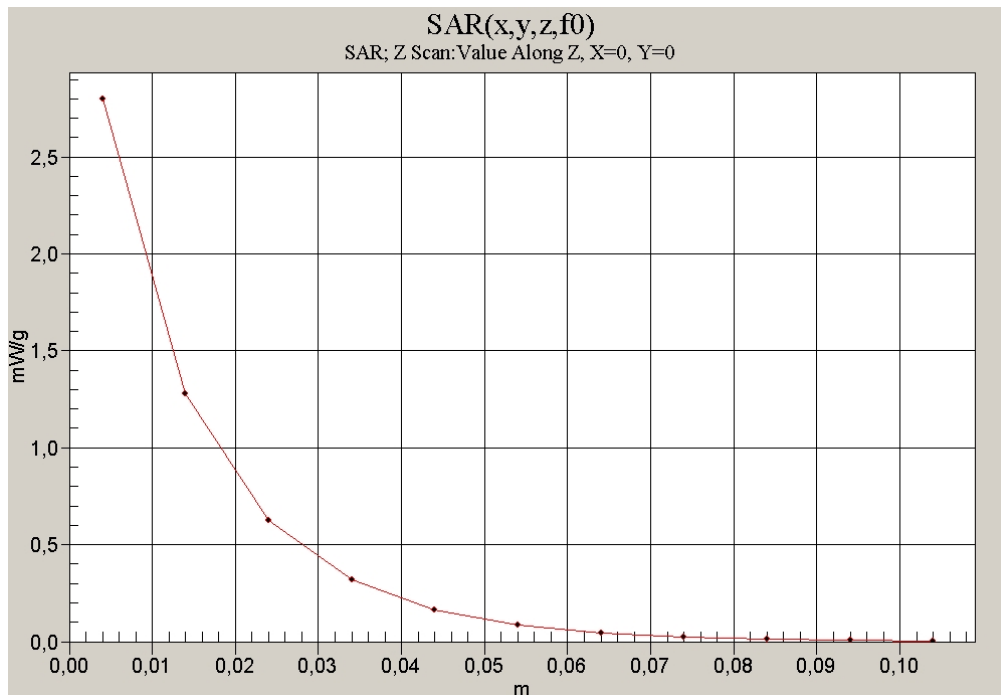


Fig. 7: SAR versus liquid depth, 835 MHz, body (November 19, 2007; Ambient Temperature: 21.5° C; Liquid Temperature : 20.8° C).

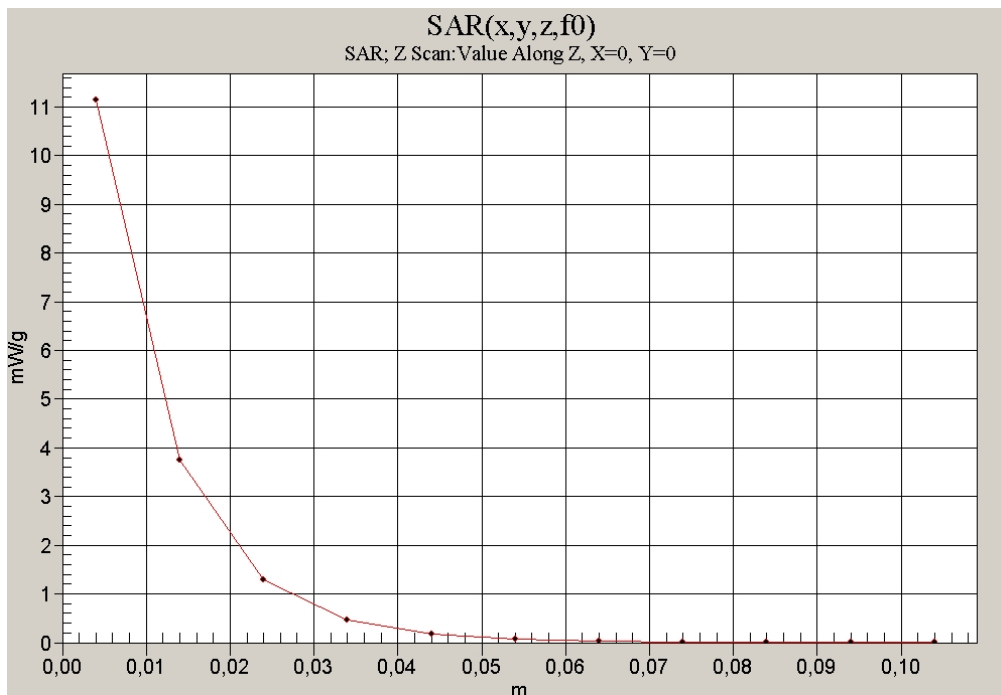


Fig. 8: SAR versus liquid depth, 1900 MHz, body (November 19, 2007; Ambient Temperature: 21.6° C; Liquid Temperature : 20.7° C).

### 4 SAR z-axis scans (Measurements)

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

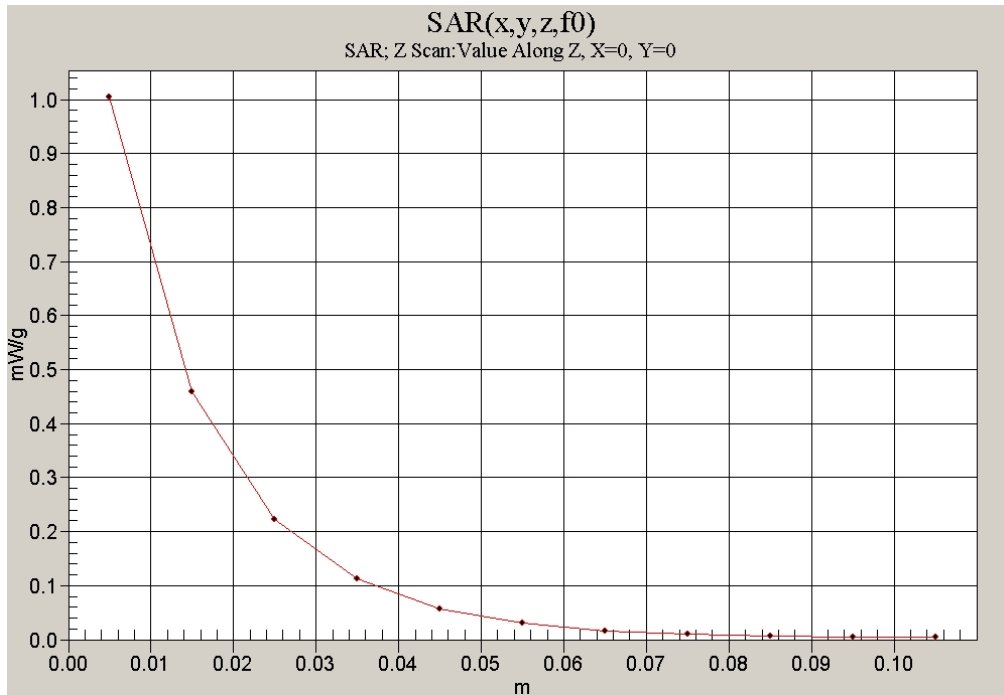


Fig. 9: SAR versus liquid depth, body: GPRS 850, channel 190 (BenQ Joybook S72, November 19, 2007; Ambient Temperature: 21.5° C; Liquid Temperature: 20.8°C).

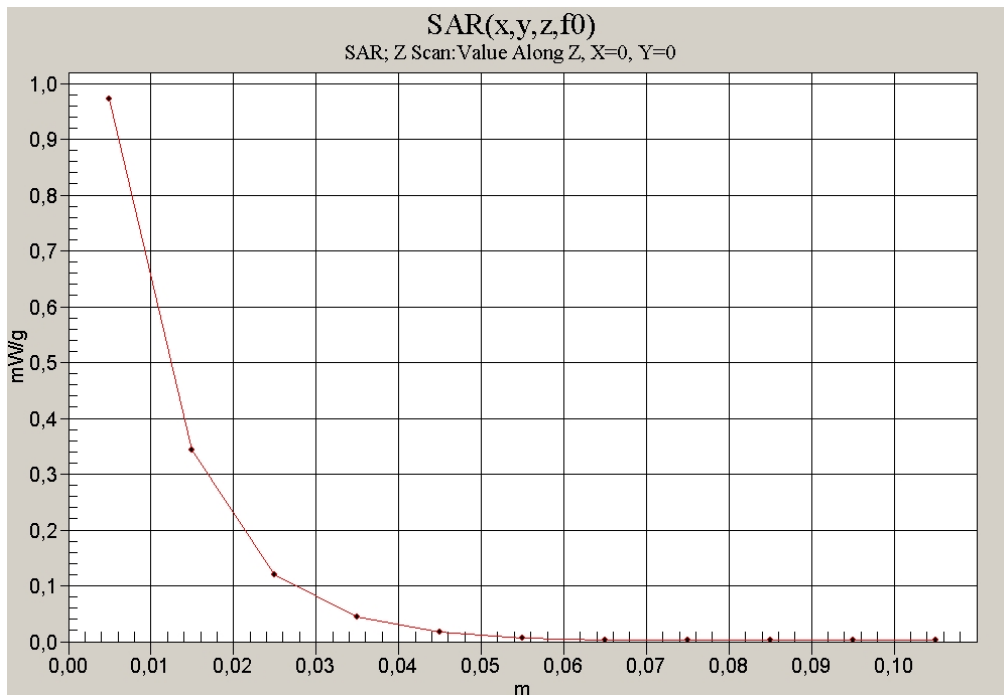


Fig. 10: SAR versus liquid depth, body: GPRS 1900, channel 512 (Toshiba Tecra A9 , November 19, 2007; Ambient Temperature: 21.5° C; Liquid Temperature: 20.7° C).