



TTI-P-G 158



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## **Appendix for the Report**

# **Dosimetric Assessment of the Bang & Olufsen BeoCom 2 US (FCC ID: BV5BEOCOM2) According to the FCC Requirements**

## **SAR Distribution Plots**

December 10, 2003

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Customer

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The test results only relate to the items tested.  
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approval of the testing laboratory.

## Table of Contents

1	SAR DISTRIBUTION PLOTS, 2450 MHZ HEAD.....	3
2	SAR Z-AXIS SCANS (VALIDATION).....	7
3	SAR Z-AXIS SCANS (MEASUREMENTS).....	8

# 1 SAR Distribution Plots, 2450 MHz Head

Test Laboratory: IMST; File Name: [Com2lm\\_1.da4](#)

**DUT: B&O; Type: Beo Com 2US;**

**Program: Measurement**

Communication System: 2.4 GHz Cordless Phone; Frequency: 2450 MHz; Duty Cycle: 1:16

Medium: Head 2450 ( $\sigma = 1.82 \text{ mho/m}$ ,  $\epsilon_r = 38.2$ ,  $\rho = 1000 \text{ kg/m}^3$ )

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.8, 4.8, 4.8); Calibrated: 15.05.2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn335; Calibrated: 05.05.2003
- Phantom: SAM TP:1176;
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**cheek left/Area Scan (5x17x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 6.01 V/m

Power Drift = -0.06 dB

Maximum value of SAR = 0.123 mW/g

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

Peak SAR (extrapolated) = 0.295 W/kg

SAR(1 g) = 0.124 mW/g; SAR(10 g) = 0.0587 mW/g

Reference Value = 6.01 V/m

Power Drift = -0.06 dB

Maximum value of SAR = 0.134 mW/g

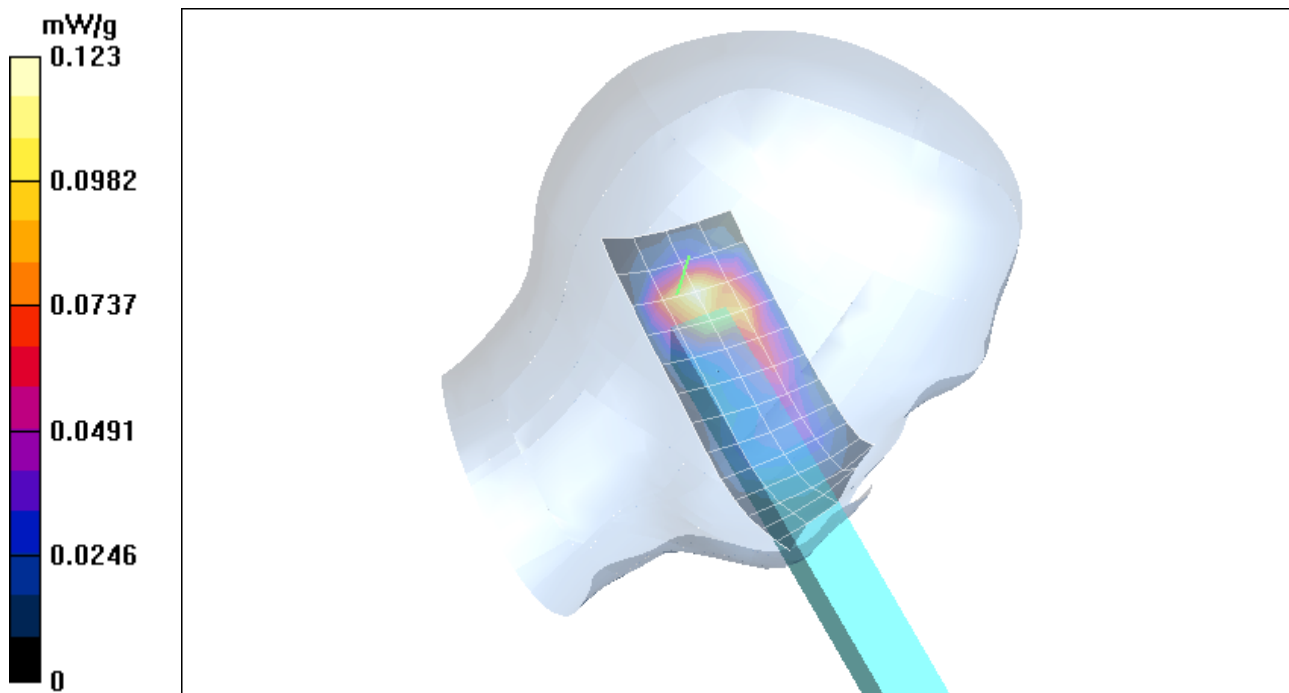


Fig. 1: SAR distribution for 2450 MHz, channel 041, cheek position, left side of head. (December 08, 2003; Ambient Temperature: 20.3° C; Liquid Temperature: 19.5° C).

Test Laboratory: IMST; File Name: [Com2lm\\_2.da4](#)

**DUT: B&O; Type: Beo Com 2US;**

**Program: Measurement**

Communication System: 2.4 GHz Cordless Phone; Frequency: 2450 MHz; Duty Cycle: 1:16

Medium: Head 2450 ( $\sigma = 1.82$  mho/m,  $\epsilon_r = 38.2$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.8, 4.8, 4.8); Calibrated: 15.05.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**cheek left/Area Scan (5x18x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 6.66 V/m

Power Drift = 0.02 dB

Maximum value of SAR = 0.248 mW/g

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

Peak SAR (extrapolated) = 0.607 W/kg

SAR(1 g) = 0.238 mW/g; SAR(10 g) = 0.104 mW/g

Reference Value = 6.66 V/m

Power Drift = 0.02 dB

Maximum value of SAR = 0.269 mW/g

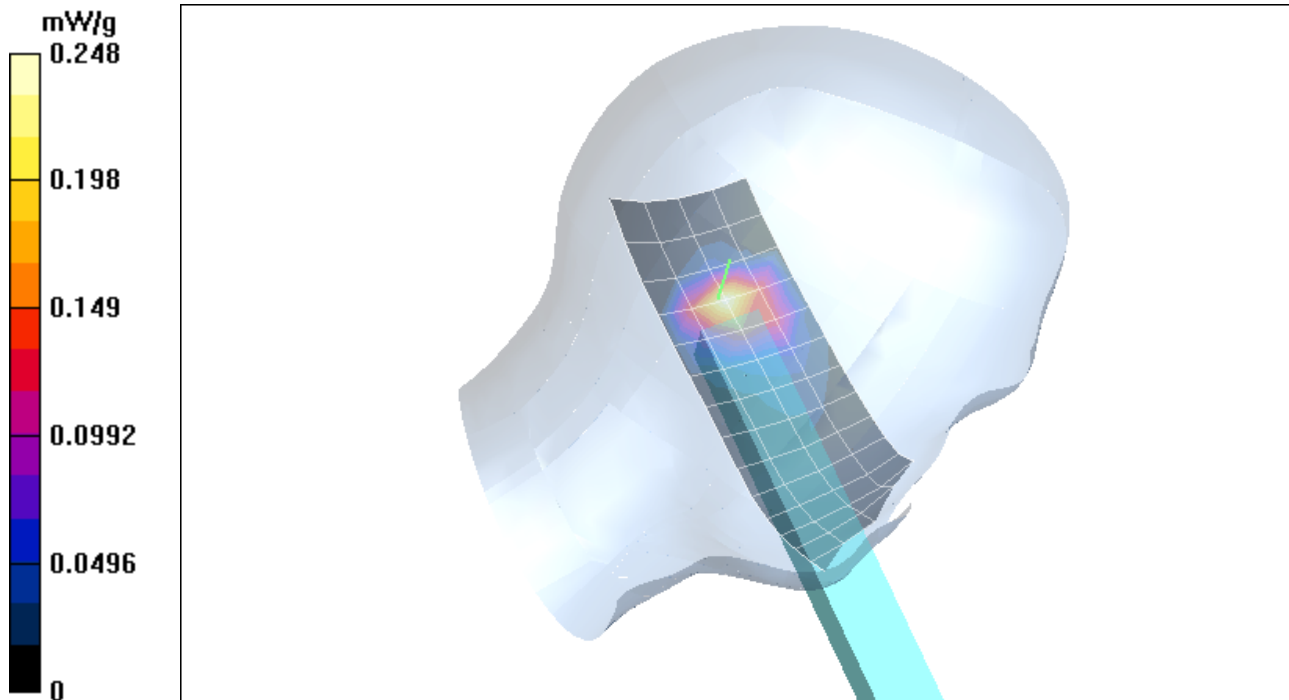


Fig. 2: SAR distribution for 2450 MHz, channel 041, tilted position, left side of head. (December 08, 2003; Ambient Temperature: 20.3° C; Liquid Temperature: 19.5° C).

Test Laboratory: IMST; File Name: [Com2rm\\_1.da4](#)

**DUT: B&O; Type: Beo Com 2US;**

**Program: Measurement**

Communication System: 2.4 GHz Cordless Phone; Frequency: 2450 MHz; Duty Cycle: 1:16

Medium: Head 2450 ( $\sigma = 1.82$  mho/m,  $\epsilon_r = 38.2$ ,  $\rho = 1000$  kg/m<sup>3</sup>)

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.8, 4.8, 4.8); Calibrated: 15.05.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**cheek right/Area Scan (5x18x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 6.18 V/m

Power Drift = -0.01 dB

Maximum value of SAR = 0.139 mW/g

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

Peak SAR (extrapolated) = 0.357 W/kg

SAR(1 g) = 0.143 mW/g; SAR(10 g) = 0.0642 mW/g

Reference Value = 6.18 V/m

Power Drift = -0.01 dB

Maximum value of SAR = 0.154 mW/g

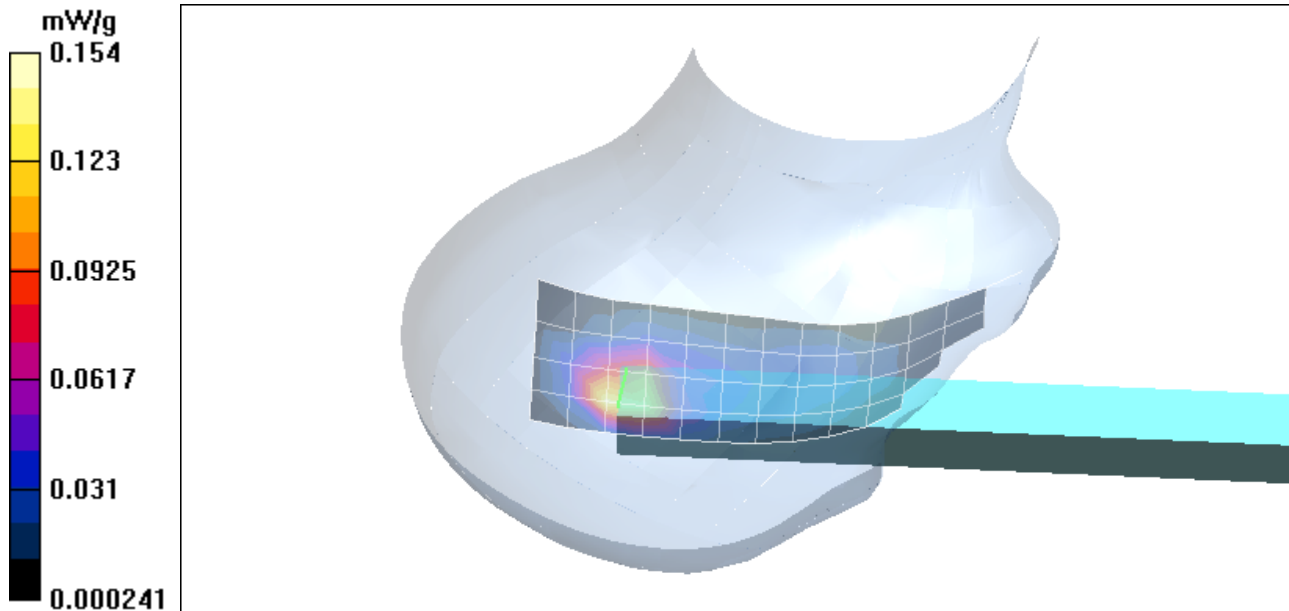


Fig. 3: SAR distribution for 2450 MHz, channel 041, cheek position, right side of head ( December 08, 2003; Ambient Temperature: 20.3° C; Liquid Temperature: 19.5° C).

Test Laboratory: IMST; File Name: [Com2rm\\_2.da4](#)

**DUT: B&O; Type: Beo Com 2US;**

**Program: Measurement**

Communication System: 2.4 GHz Cordless Phone; Frequency: 2450 MHz; Duty Cycle: 1:16

Medium: Head 2450 ( $\sigma = 1.82 \text{ mho/m}$ ,  $\epsilon_r = 38.2$ ,  $\rho = 1000 \text{ kg/m}^3$ )

Phantom section: Right Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1579; ConvF(4.8, 4.8, 4.8); Calibrated: 15.05.2003

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

- Electronics: DAE3 Sn335; Calibrated: 05.05.2003

- Phantom: SAM TP:1176;

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 115

**cheek right/Area Scan (5x18x1):** Measurement grid: dx=15mm, dy=15mm

Reference Value = 6.69 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 0.259 mW/g

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

Peak SAR (extrapolated) = 0.688 W/kg

SAR(1 g) = 0.26 mW/g; SAR(10 g) = 0.113 mW/g

Reference Value = 6.69 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 0.292 mW/g

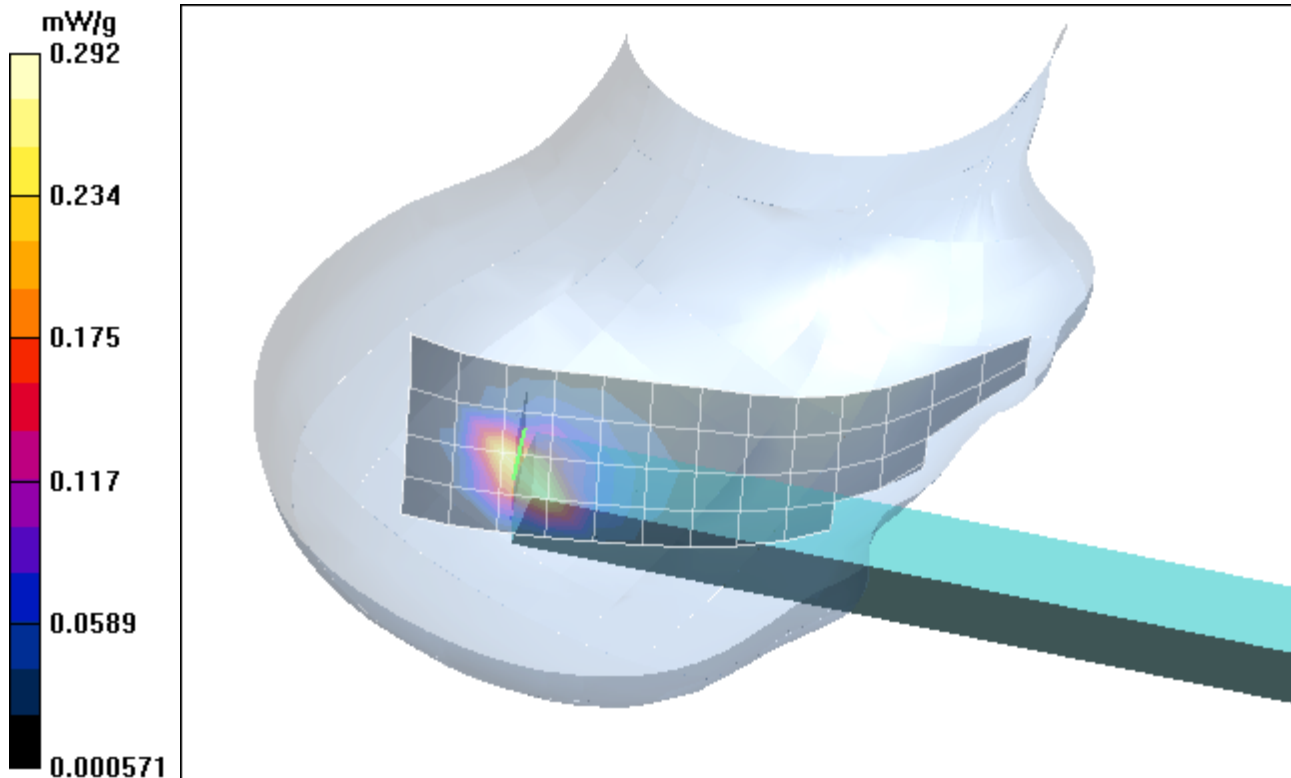


Fig. 4: SAR distribution for 2450 MHz, channel 041, tilted position, right side of head. (December 08, 2003; Ambient Temperature: 20.3° C; Liquid Temperature: 19.5° C).

## 2 SAR z-axis scans (Validation)

The following pictures show the z-axis scan for the worst case values.

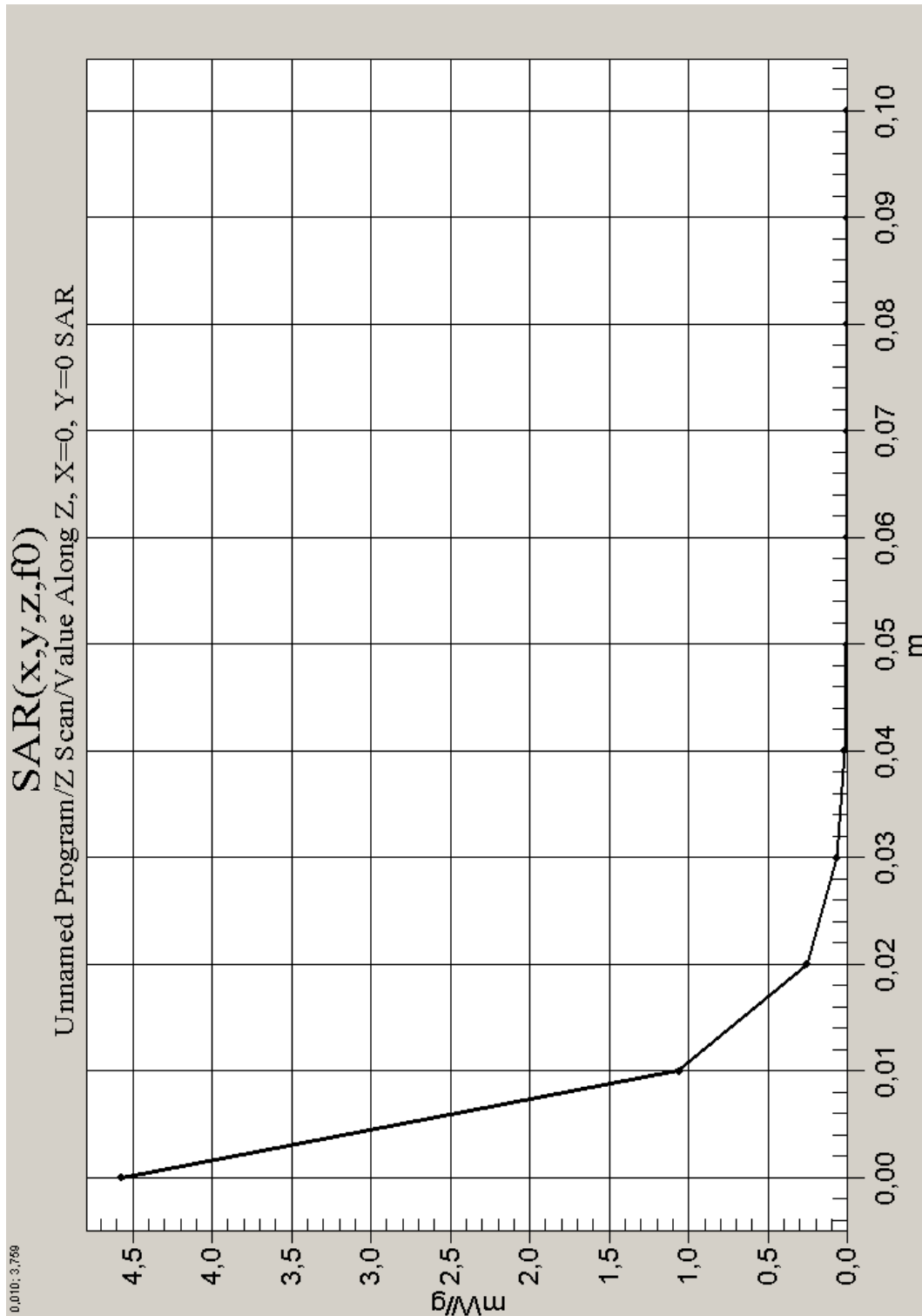


Fig. 5: Validation measurement 2450 MHz Head (December 08, 2003), coarse grid. Ambient Temperature: 20.3° C, Liquid Temperature: 19.5° C.

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

The following pictures show the z-axis scan for the worst case values.

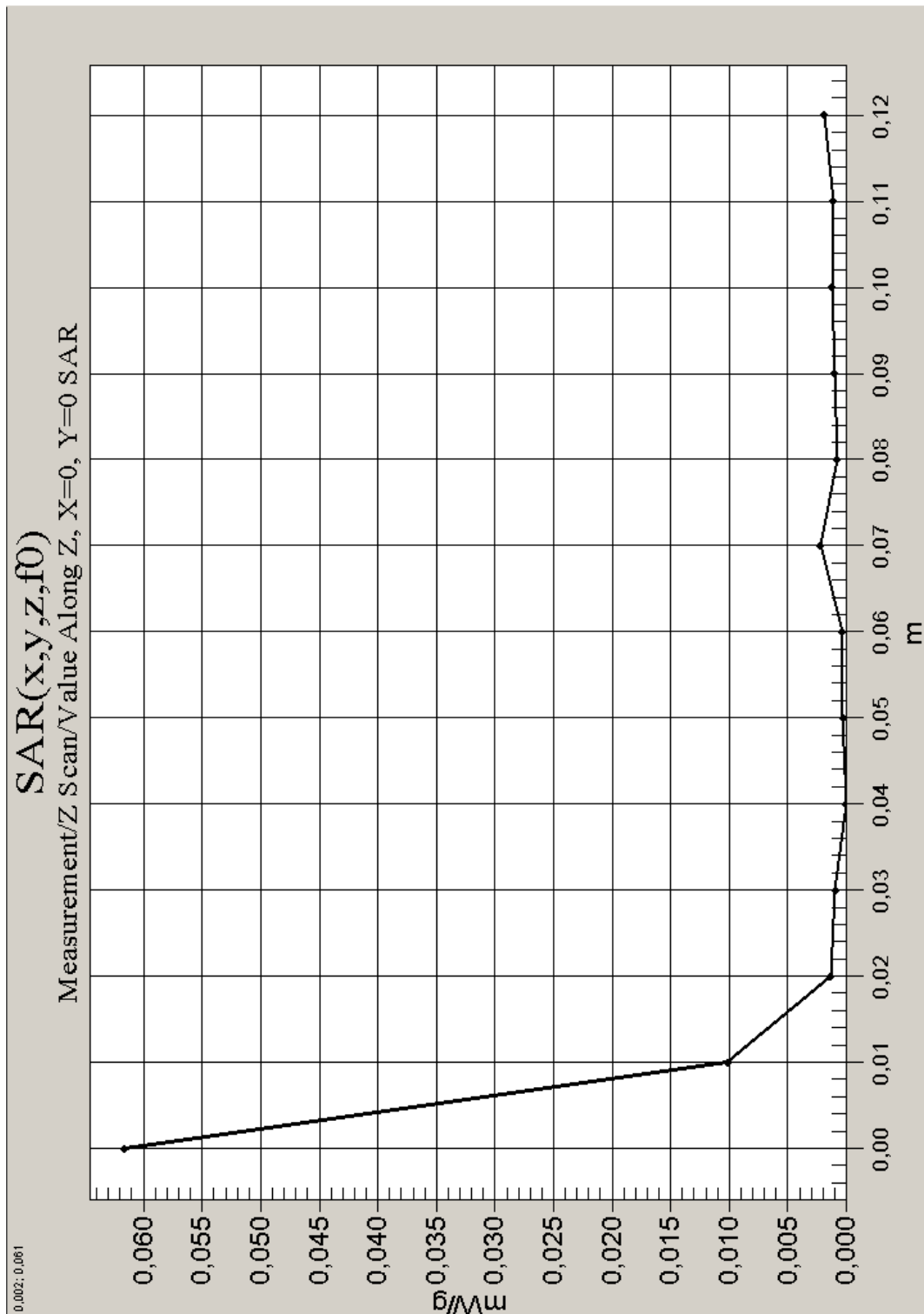


Fig. 6: 2450MHz, tilted position, right side of head, channel 041 (December 08 2003; Ambient Temperature: 20.4° C; Liquid Temperature : 19.5° C).