Deutscher Akkreditierungs Rat

DAT-P-152/98-01

Appendix for the Report

Dosimetric Assessment of the Ascom KATY-ACAAA/AGAAA (FCC ID: BXZKATY)

According to the FCC Requirements

SAR Distribution Plots

December 01, 2005

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Table of Contents

1 SAR DISTRIBUTION PLOTS, WLAN 2450 MHZ, HEAD 3

2 SAR DISTRIBUTION PLOTS, WLAN 2450 MHZ, BODY WITH HEADSET 7

3 SAR DISTRIBUTION PLOTS, WLAN 2450 MHZ, BODY WITHOUT HEADSET 9

4 SAR Z-AXIS SCANS (VALIDATION) 10

5 SAR Z-AXIS SCANS (MEASUREMENTS) 11

1 SAR Distribution Plots, WLAN 2450 MHz, Head

Test Laboratory: Imst GmbH; File Name: AAAywlm_1.da4

DUT: KATY; Type: ACAAA/AGAAA; Serial: T26000003J

Program Name: Cheek Left

Communication System: WLAN 2450; Frequency: 2437 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 2437 MHz; σ = 1.82 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3

Phantom section: Left Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3536; ConvF(7.63, 7.63, 7.63); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Cheek Left/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.039 mW/g

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

Reference Value = 4.18 V/m; Power Drift = -0.2 dB

Peak SAR (extrapolated) = 0.074 W/kg

SAR(1 g) = 0.036 mW/g; SAR(10 g) = 0.018 mW/g

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

Reference Value = 4.18 V/m; Power Drift = -0.2 dB

Peak SAR (extrapolated) = 0.036 W/kg

SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.00982 mW/g

Maximum value of SAR (measured) = 0.023 mW/g

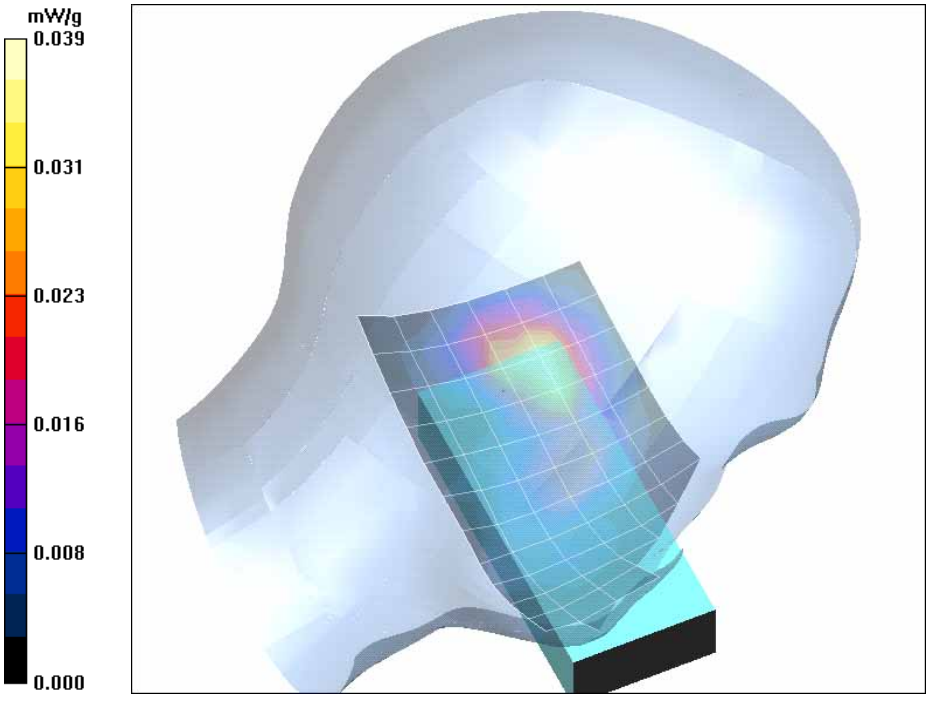

Fig. 1: SAR distribution for Ascom WLAN handset, channel 006, cheek position, left side of head (November 22, 2005; Ambient Temperature: 22.3°C; Liquid Temperature: 21.5°C).

Test Laboratory: Imst GmbH; File Name: AAAywlm_2.da4

DUT: KATY; Type: ACAAA/AGAAA; Serial: T26000003J
Program Name: Tilted Left

Communication System: WLAN 2450; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.82 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3536; ConvF(7.63, 7.63, 7.63); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilted Left/Area Scan (6x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.034 mW/g
Tilted Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.64 V/m; Power Drift = 0.2 dB
Peak SAR (extrapolated) = 0.060 W/kg
SAR(1 g) = 0.031 mW/g; SAR(10 g) = 0.015 mW/g
Maximum value of SAR (measured) = 0.035 mW/g

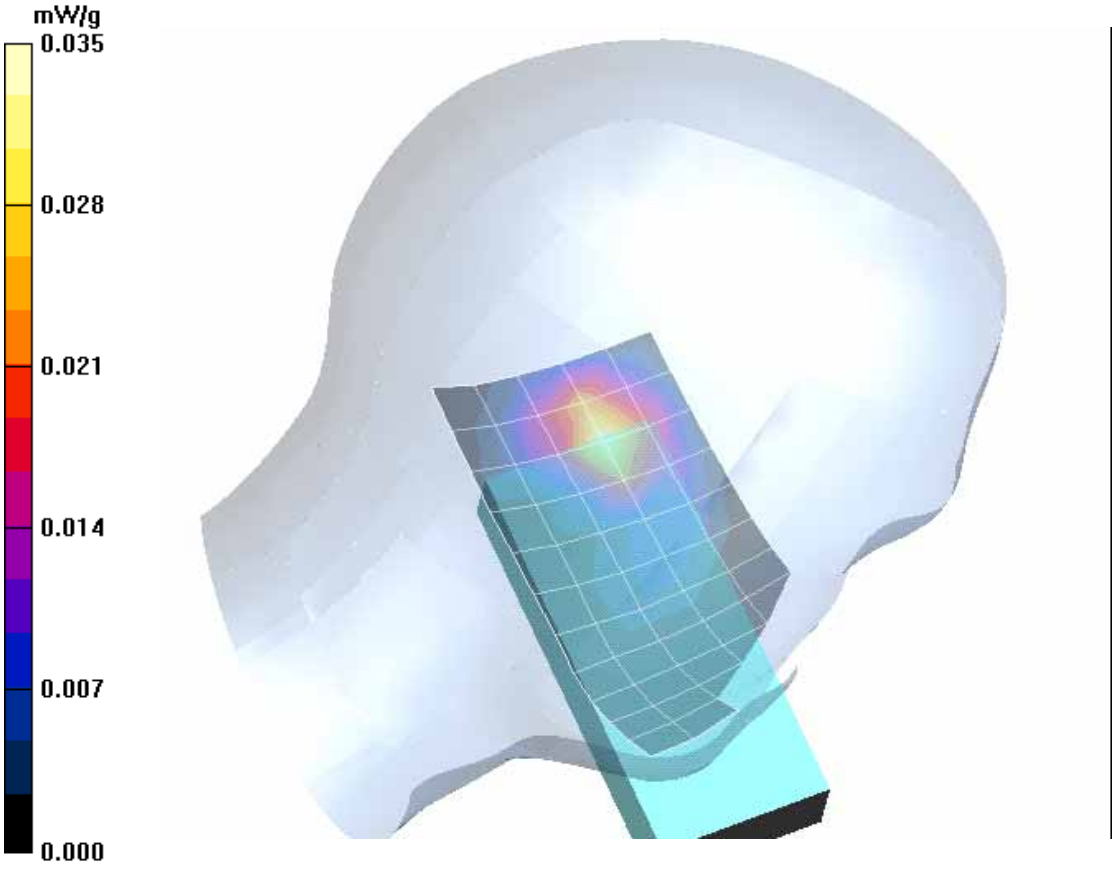

Fig. 2: SAR distribution for Ascom WLAN handset, channel 006, tilted position, left side of head (November 22, 2005; Ambient Temperature: 22.2° C; Liquid Temperature : 21.4° C).

Test Laboratory: Imst GmbH; File Name: AAAywrm_1.da4
DUT: KATY; Type: ACAAA/AGAAA; Serial: T26000003J
Program Name: Cheek Right
Communication System: WLAN 2450; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.82 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3
Phantom section: Right Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3536; ConvF(7.63, 7.63, 7.63); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159
Cheek Right/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.027 mW/g
Cheek Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.81 V/m; Power Drift = 0.051 dB
Peak SAR (extrapolated) = 0.067 W/kg
SAR(1 g) = 0.025 mW/g; SAR(10 g) = 0.012 mW/g
Maximum value of SAR (measured) = 0.029 mW/g
Cheek Right/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.81 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.023 W/kg
SAR(1 g) = 0.013 mW/g; SAR(10 g) = 0.00623 mW/g
Maximum value of SAR (measured) = 0.015 mW/g

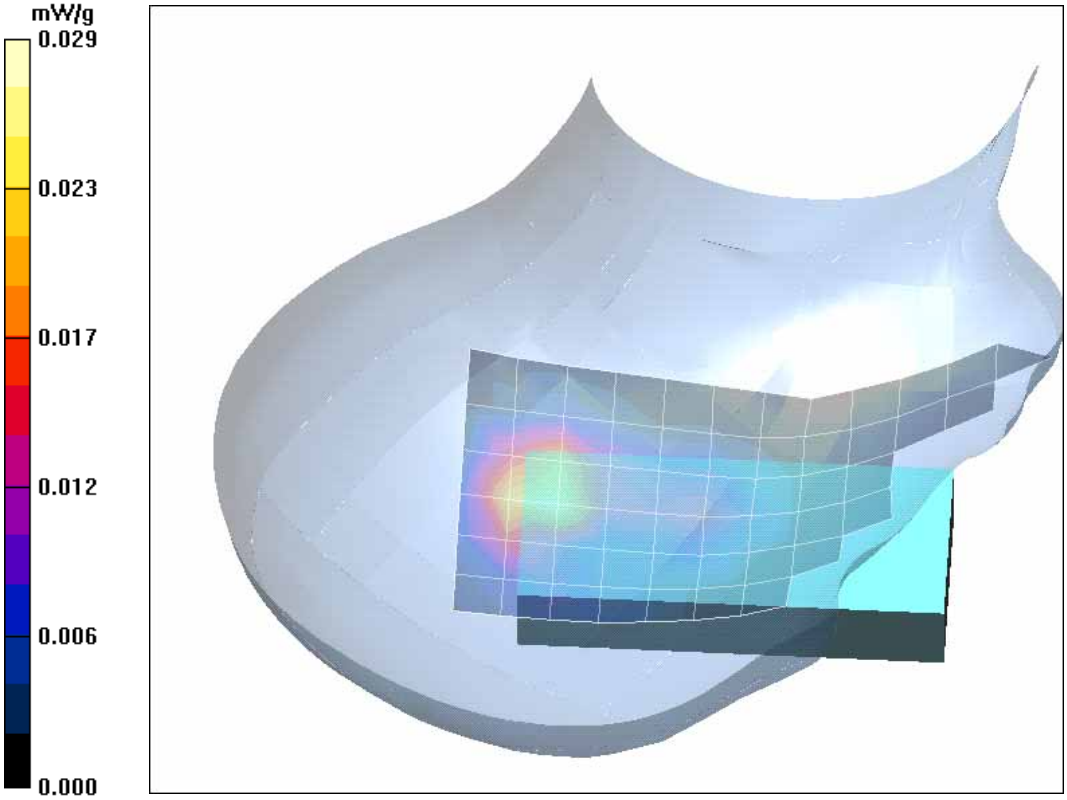

Fig. 3: SAR distribution for Ascom WLAN handset, channel 006, cheek position, right side of head (November 22, 2005; Ambient Temperature: 22.2° C; Liquid Temperature : 21.4° C).

Test Laboratory: Imst GmbH; File Name: AAAywrm_2.da4

DUT: KATY; Type: ACAAA/AGAAA; Serial: T26000003J
Program Name: Tilted Right

Communication System: WLAN 2450; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.82 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: EX3DV4 - SN3536; ConvF(7.63, 7.63, 7.63); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1340; Type: QD 000 P40 CB; Serial: TP-1340
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159

Tilted Right/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.032 mW/g
Tilted Right/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.95 V/m; Power Drift = 0.116 dB
Peak SAR (extrapolated) = 0.067 W/kg
SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.015 mW/g
Maximum value of SAR (measured) = 0.037 mW/g

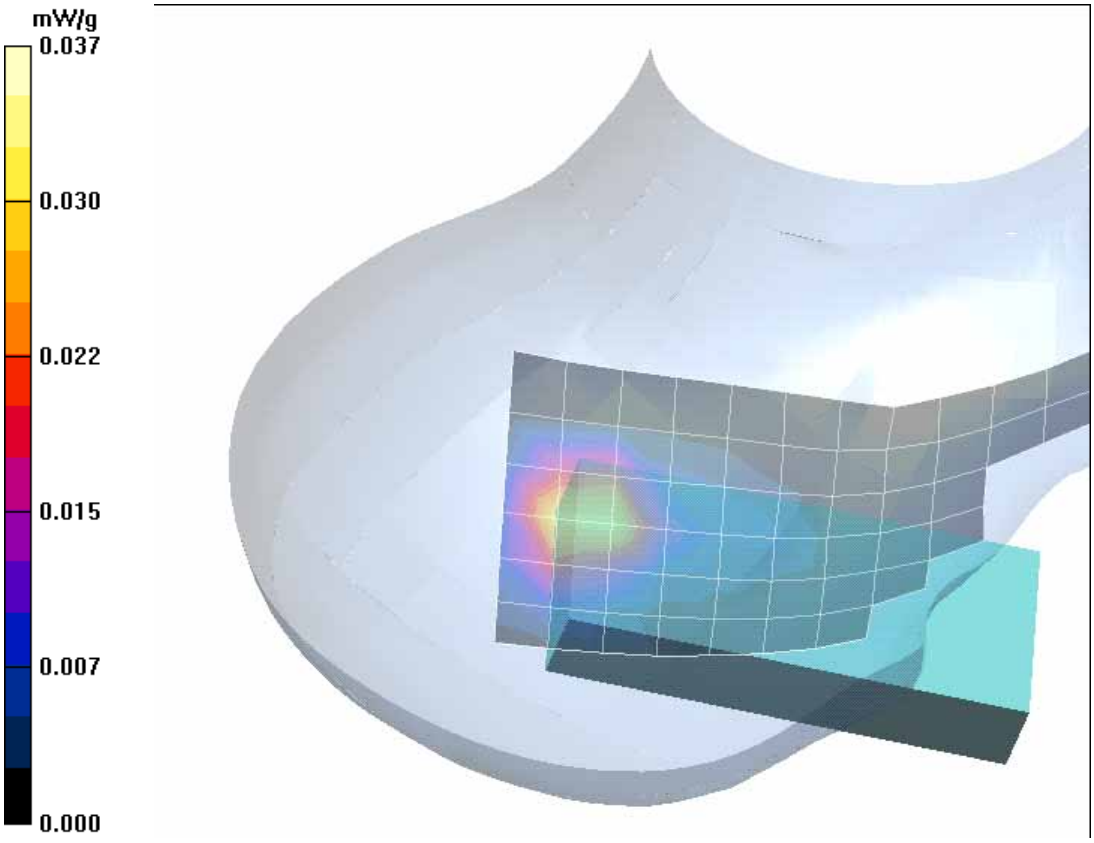

Fig. 4: SAR distribution for Ascom WLAN handset, channel 006, tilted position, right side of head (November 22, 2005; Ambient Temperature: 22.4 °C; Liquid Temperature : 21.3° C)

2 SAR Distribution Plots, WLAN 2450 MHz, Body with headset

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: AAAbwhm_1.da4

DUT: KATY; Type: ACAAA/AGAAA; Serial: T26000003J
Program Name: Cheek Left
Communication System: WLAN 2450; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3536; ConvF(7.58, 7.58, 7.58); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159
Cheek Left/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.023 mW/g
Cheek Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.829 V/m; Power Drift = 0.2 dB
Peak SAR (extrapolated) = 0.057 W/kg
SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.010 mW/g
Maximum value of SAR (measured) = 0.024 mW/g

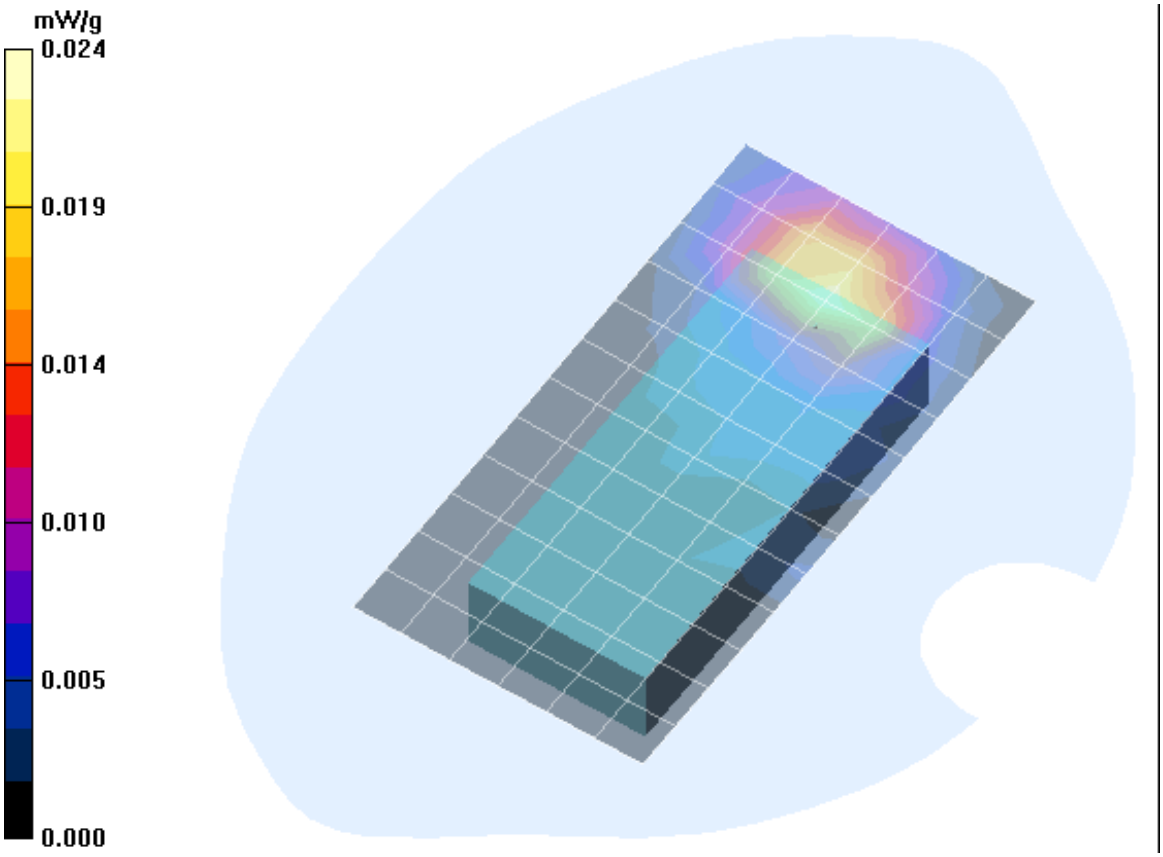

Fig. 5: SAR distribution for Ascom WLAN handset, channel 006, body worn configuration, display towards the phantom, with headset and 0 mm distance (November 22, 2005; Ambient Temperature: 22.1°C; Liquid Temperature: 21.3°C).

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: AAAbwhm_2.da4

DUT: KATY; Type: ACAAA/AGAAA; Serial: T26000003J
Program Name: Cheek Left
Communication System: WLAN 2450; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3536; ConvF(7.58, 7.58, 7.58); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159
Cheek Left/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.113 mW/g
Cheek Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.07 V/m; Power Drift = 0.2 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.117 mW/g; SAR(10 g) = 0.059 mW/g
Maximum value of SAR (measured) = 0.131 mW/g

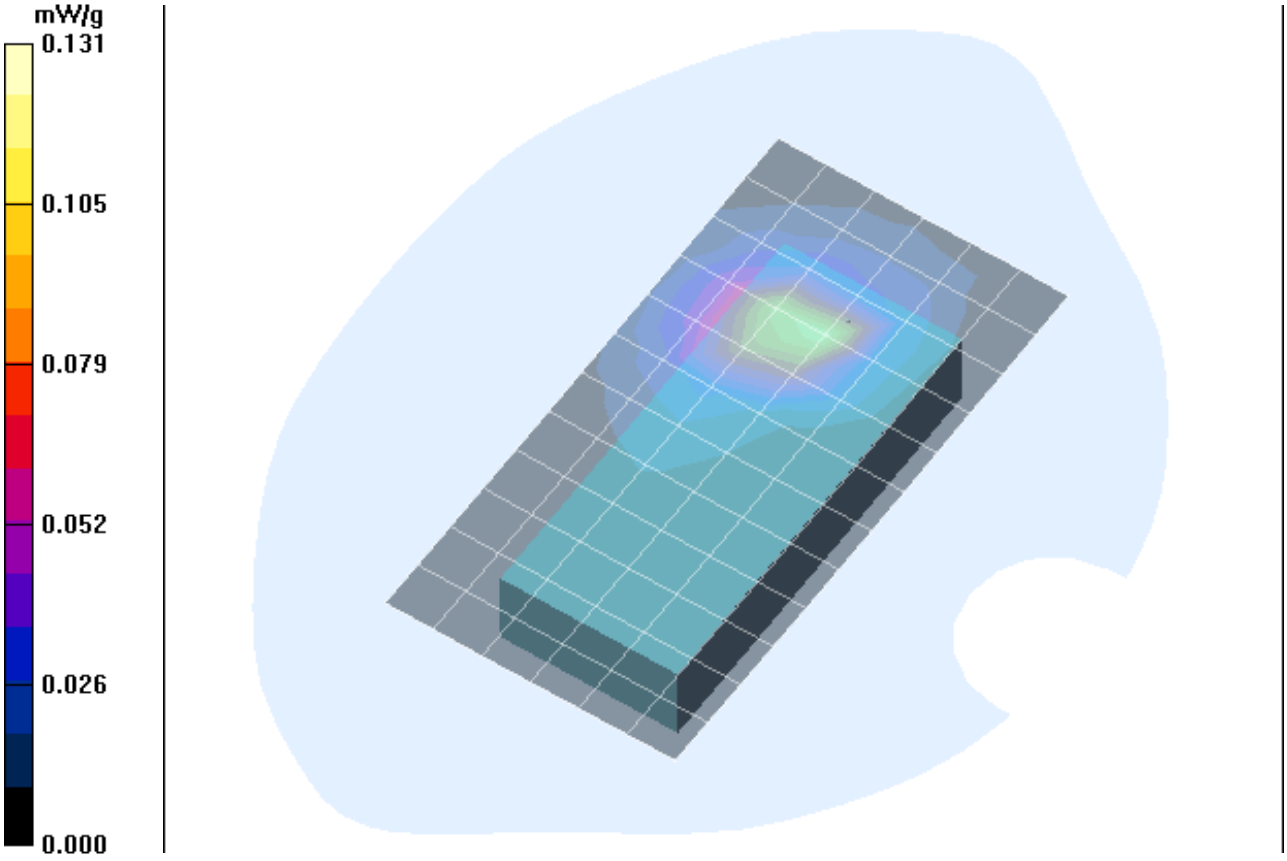

Fig. 6: SAR distribution for Ascom WLAN handset, channel 006, body worn configuration, display towards the ground, with headset and 10 mm distance (November 22, 2005; Ambient Temperature: 22.1°C; Liquid Temperature: 21.3°C).

3 SAR Distribution Plots, WLAN 2450 MHz, Body without headset

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: AAAbwhm_3.da4
DUT: KATY; Type: ACAAA/AGAAA; Serial: T26000003J
Program Name: Cheek Left
Communication System: WLAN 2450; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.99 mho/m; ε_r = 50.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3536; ConvF(7.58, 7.58, 7.58); Calibrated: 23.09.2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 07.07.2005
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.6 Build 19; Postprocessing SW: SEMCAD, V1.8 Build 159
Cheek Left/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.035 mW/g
Cheek Left/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.52 V/m; Power Drift = 0.2 dB
Peak SAR (extrapolated) = 0.085 W/kg
SAR(1 g) = 0.036 mW/g; SAR(10 g) = 0.017 mW/g
Maximum value of SAR (measured) = 0.041 mW/g

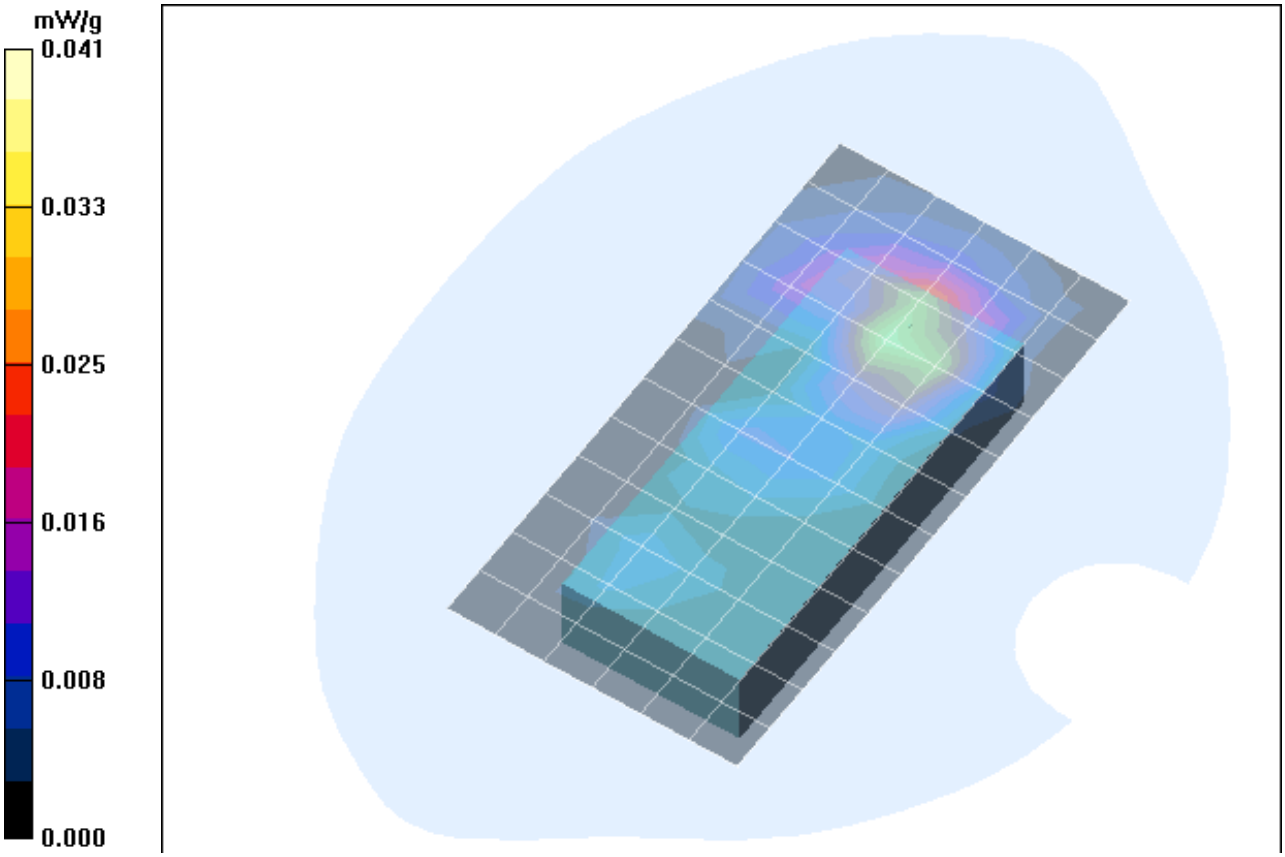

Fig. 7: SAR distribution for Ascom WLAN handset, body worn configuration, display towards the phantom, with 0 mm distance (November 22, 2005; Ambient Temperature: 22.0° C; Liquid Temperature: 21.2° C).

4 SAR z-axis scans (Validation)

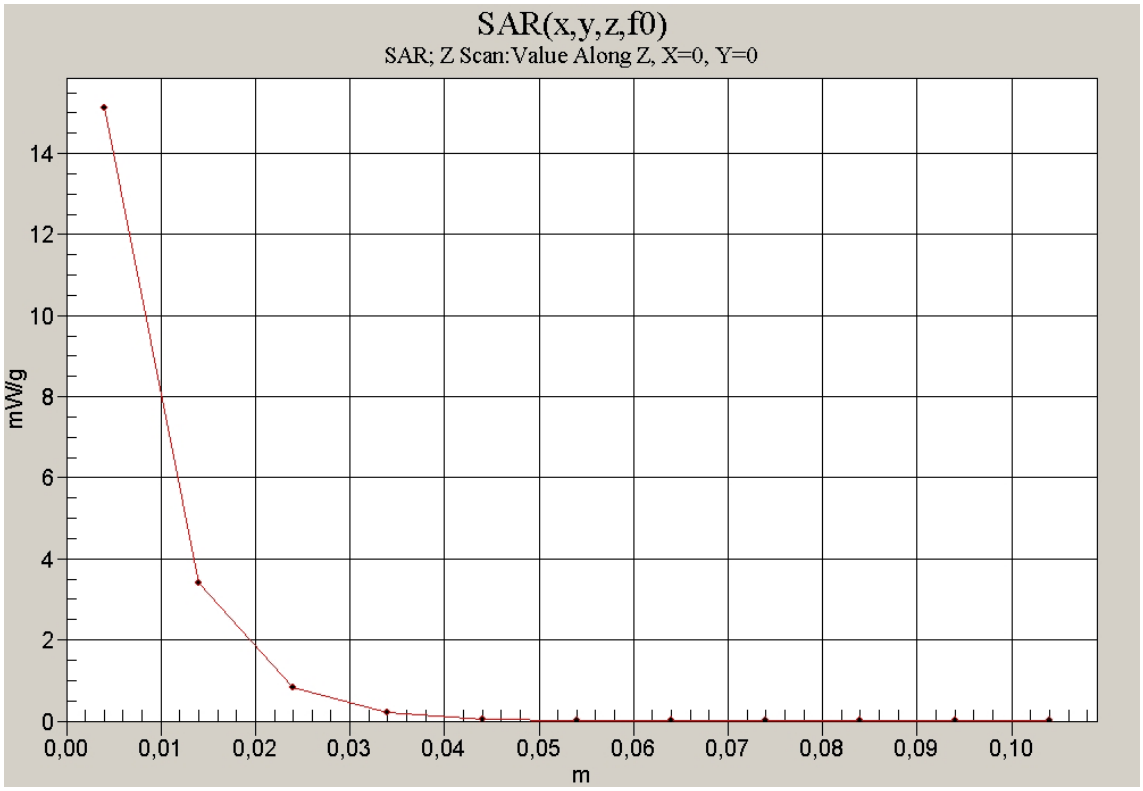

Fig. 8: SAR versus liquid depth, 2450 MHz, head (November 22, 2005; Ambient Temperature: 21.8° C; Liquid Temperature : 21.1° C).

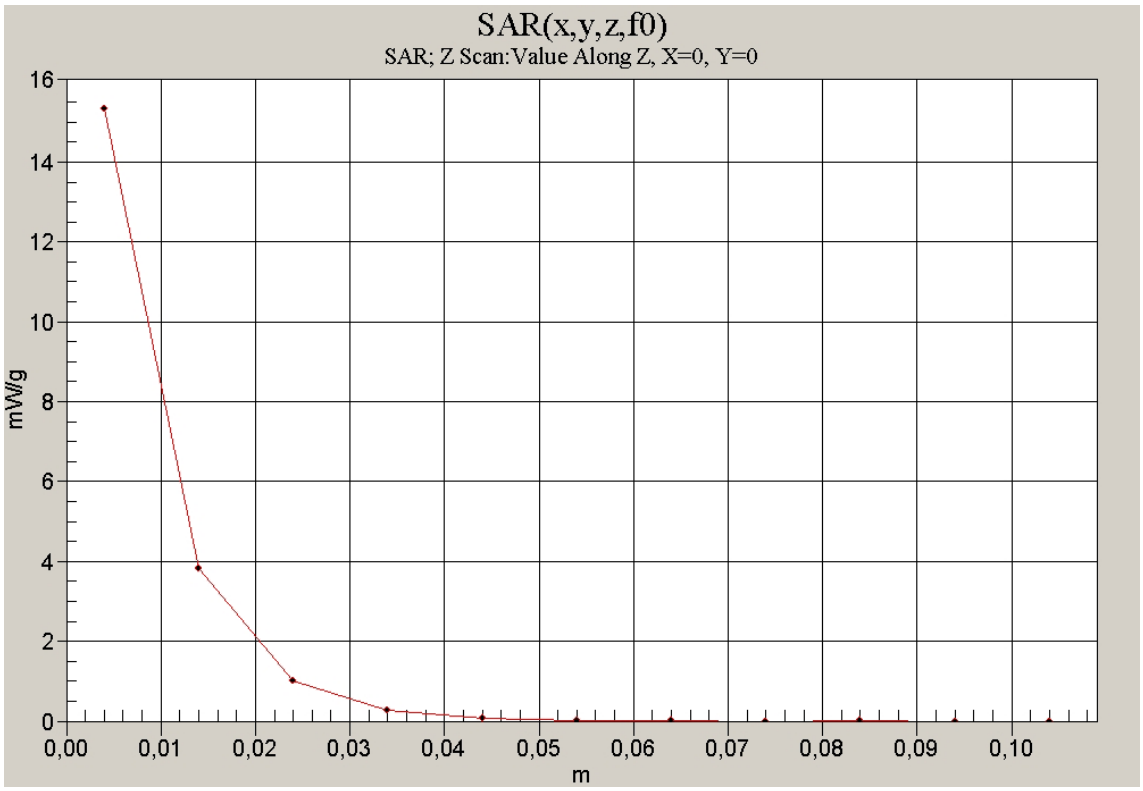

Fig. 9: SAR versus liquid depth, 2450 MHz, body (November 22, 2005; Ambient Temperature: 21.8° C; Liquid Temperature : 21.1° C).

5 SAR z-axis scans (Measurements)

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

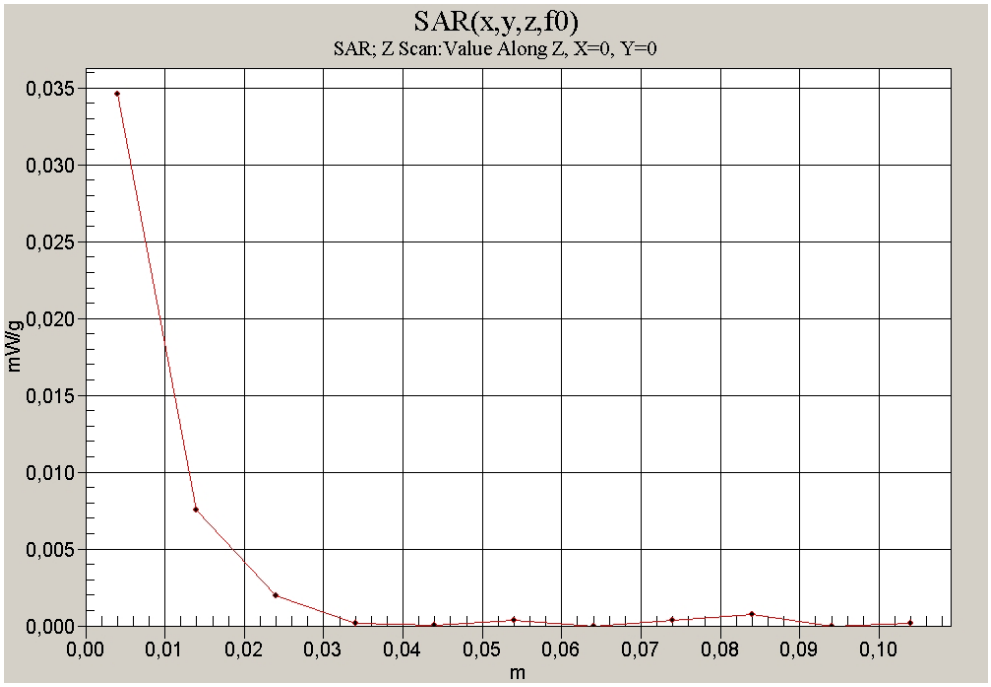

Fig. 10: SAR versus liquid depth, head: 2450 MHz, channel 006, cheek position, left side of head (November 22, 2005; Ambient Temperature: 22.3° C; Liquid Temperature : 21.5° C).

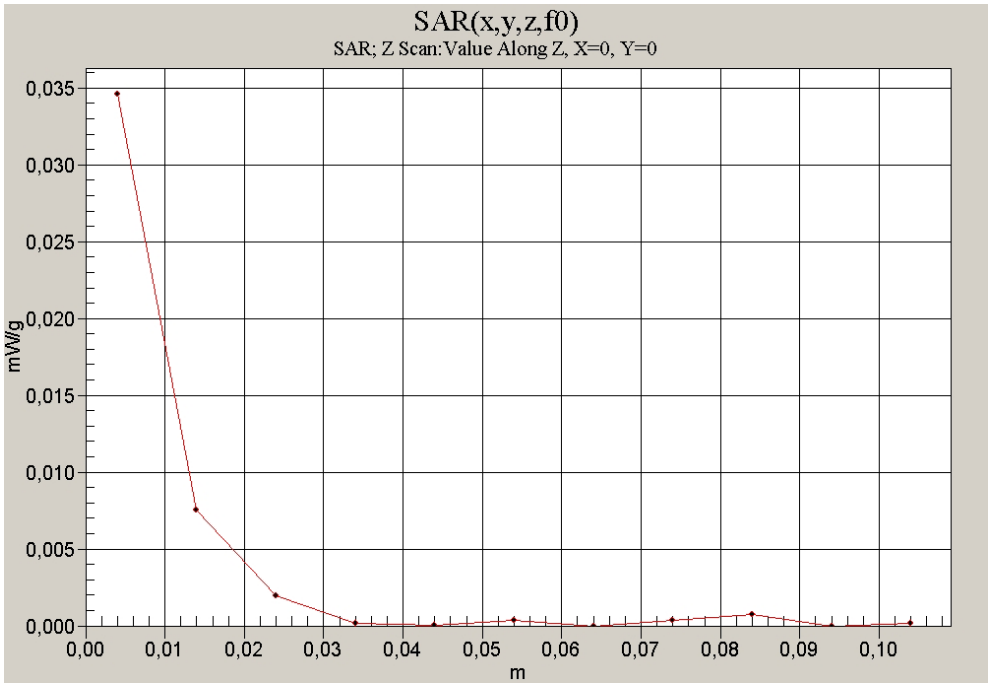

Fig. 11: SAR versus liquid depth, body: 2450 MHz, channel 006, display towards the ground, with headset and 10 mm distance (November 22, 2005; Ambient Temperature: 22.1° C; Liquid Temperature: 21.3° C).