
Appendix for the Report

Dosimetric Assessment of the Avantra AR100 (FCC ID: O33AR100) According to the FCC Requirements

SAR Distribution Plots

October 04, 2002
IMST GmbH
Carl-Friedrich-Gauß-Str. 2
D-47475 Kamp-Lintfort

Customer
Avantra International
Flanders Language Valley 90
B-8900-Ieper

The test results only relate to the items tested.
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1 SAR Distribution Plots, Test side ambient condition.

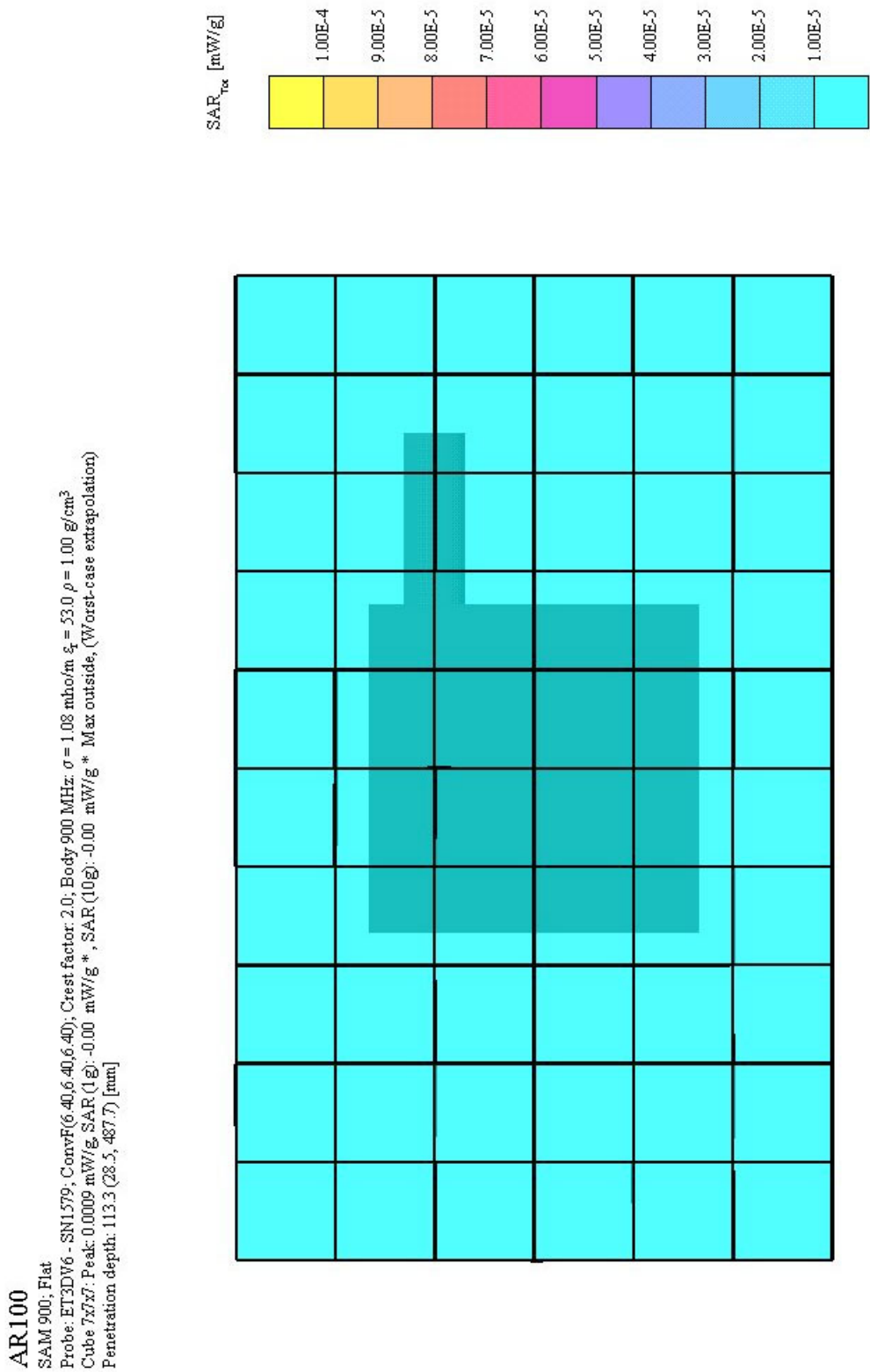


Fig. 1: Test side ambient measurements, 900 MHz, body position.

2 SAR Distribution Plots, 900 MHz

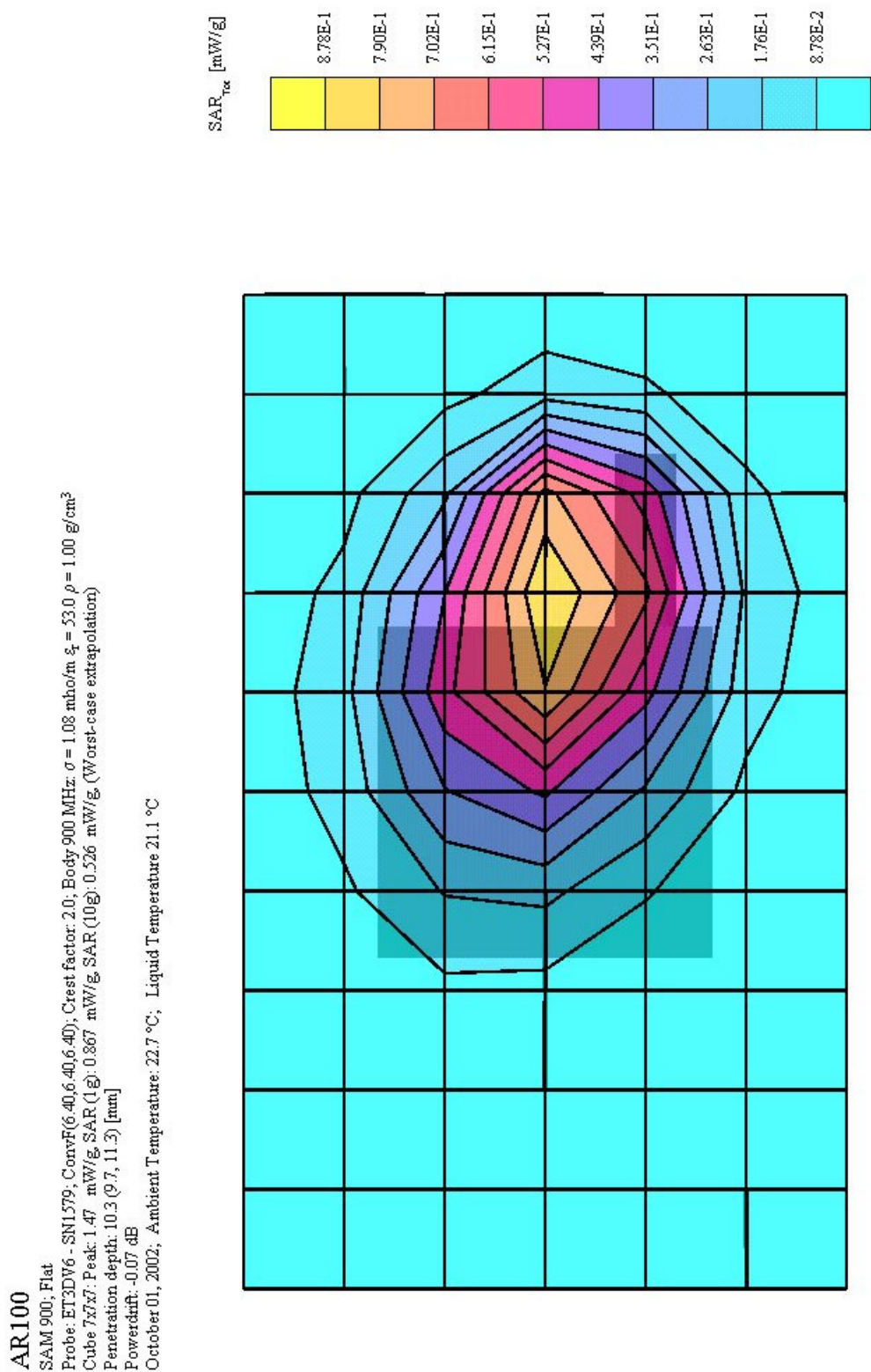


Fig. 2: SAR distribution, 896 MHz, position 1, connector down.

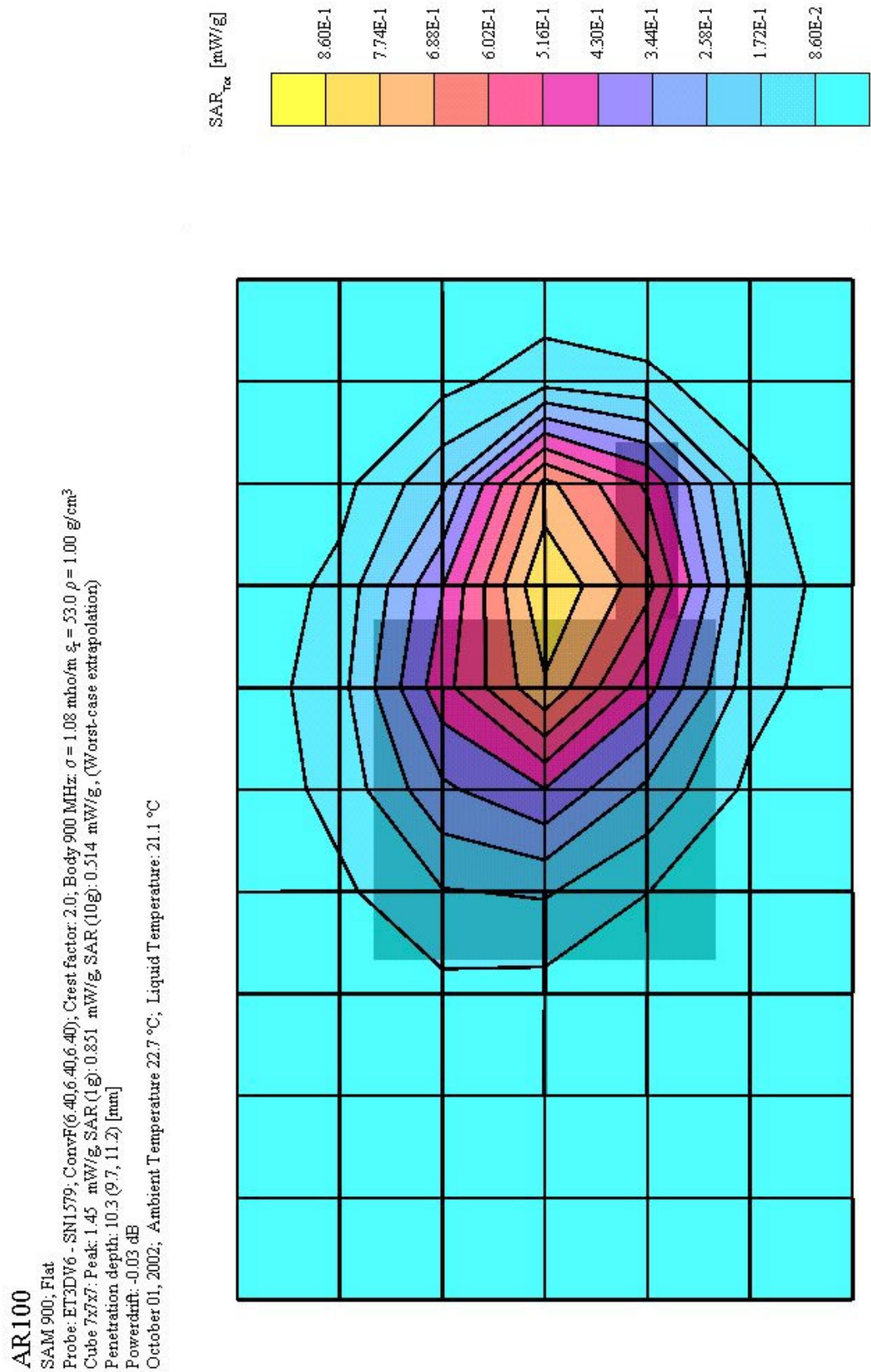


Fig. 3: SAR distribution, 899 MHz, position 1, connector down.

AR100

SAM 900; Flat

Probe: ET3DV6 - SN1579; ConvF(6.40,6.40,6.40); Crest factor: 2.0; Body 900 MHz: $\sigma = 1.08$ mho/m $\epsilon_r = 53.0$ $\rho = 1.00$ g/cm³

Cube 7x7x7: Peak: 1.34 mW/g, SAR (1g): 0.795 mW/g, SAR (10g): 0.480 mW/g (Worst-case extrapolation)

Penetration depth: 10.5 (10.0, 11.4) [mm]

Powerdrift: -0.11 dB

October 01, 2002; Ambient Temperature 22.8 °C; Liquid Temperature: 21.1 °C

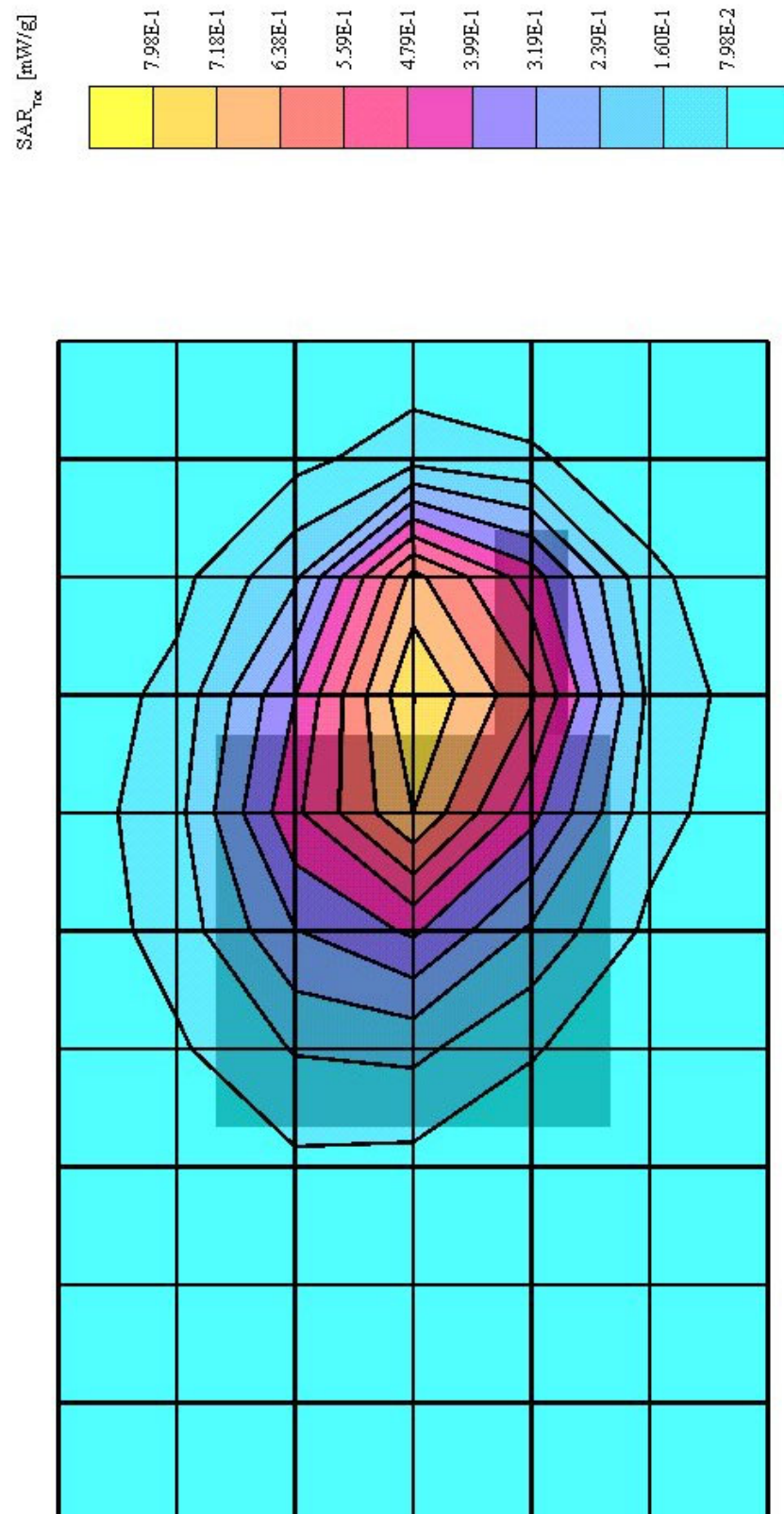


Fig. 4: SAR distribution, 902 MHz, position 1, connector down.

AR100

SAM 900, Flat

Probe: ET3DV6 - SN1579; ConvF(6.40,6.40); Ctest factor: 2.0; Body 900 MHz: $\sigma = 1.08 \text{ mho/m}$ $\epsilon_r = 53.0$ $\rho = 1.00 \text{ g/cm}^3$

Cube 7x7x7: Peak: 1.44 mW/g; SAR (1g): 0.775 mW/g; SAR (10g): 0.474 mW/g (Worst-case extrapolation)

Penetration depth: 10.1 (9.7, 10.8) [mm]

Powerdft: -0.16 dB

October 01, 2002; Ambient Temperature: 23.2 °C; Liquid Temperature: 21.1 °C

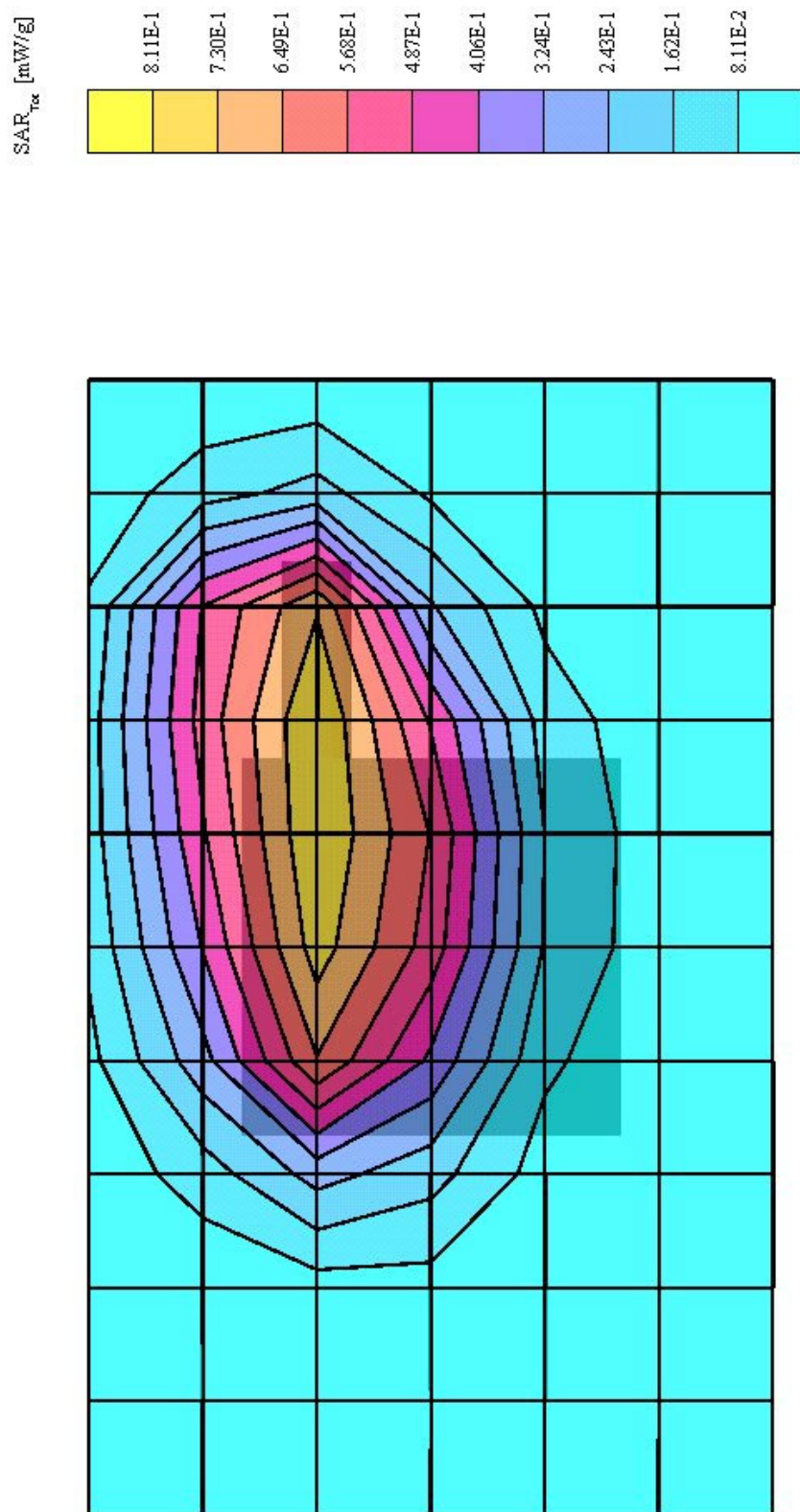


Fig. 5: SAR distribution, 896 MHz, position 2, connector up.

AR100

SAM 900; Flat

Probe: ET3DV6 - SN1579; ConvF(6.40,6.40,6.40); Crest factor: 2.0; Body 900 MHz: $\sigma = 1.08$ mho/m $\epsilon_r = 53.0$ $\rho = 1.00$ g/cm³

Cube 7x7x7: Peak: 1.66 mW/g SAR (1g): 0.755 mW/g SAR (10g): 0.495 mW/g (Worst-case extrapolation)

Penetration depth: 6.6 (6.0, 8.3) [mm]

Powerdrift: -0.11 dB

October 01, 2002; Ambient Temperature: 23.1 °C; Liquid Temperature: 21.1 °C

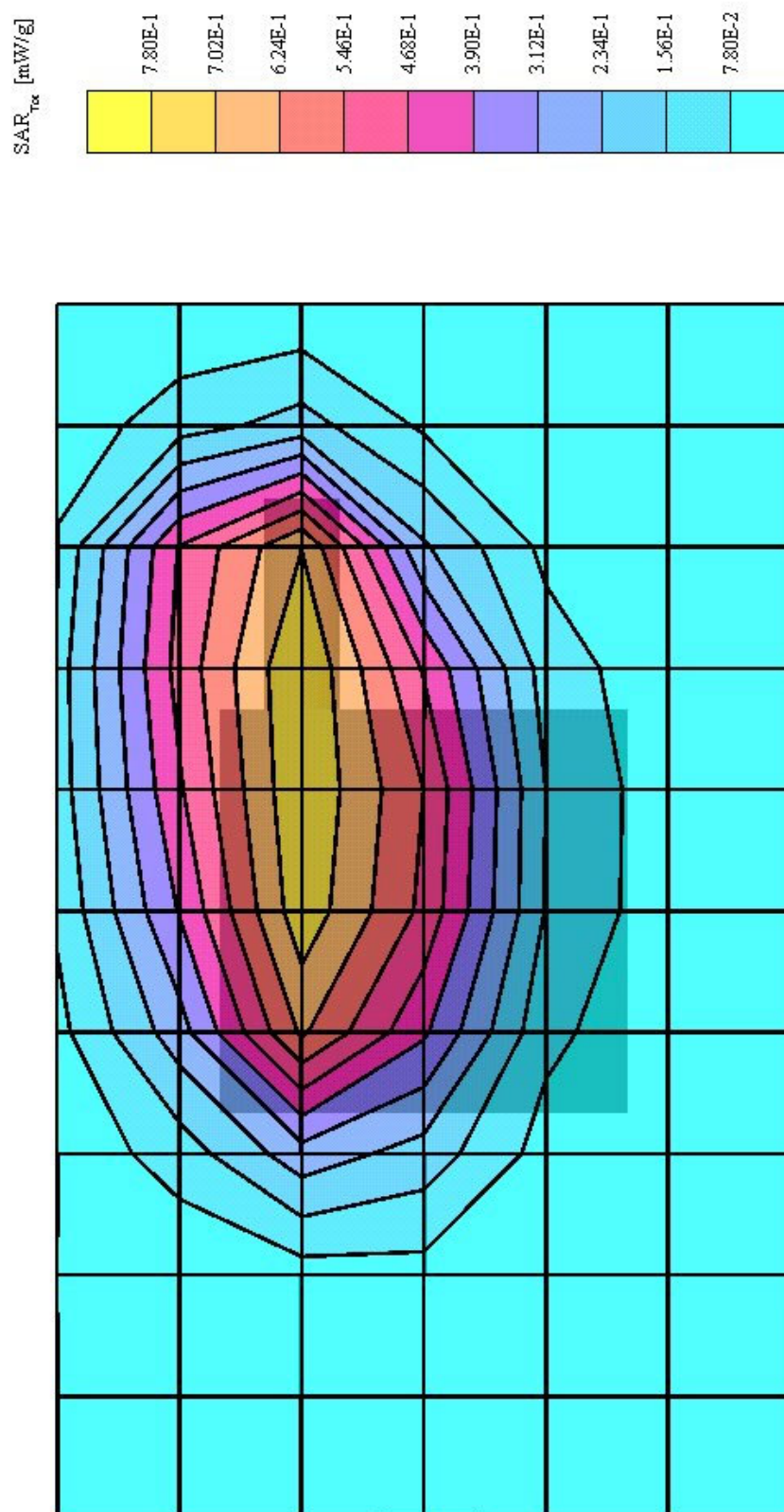


Fig. 6: SAR distribution, 899 MHz, position 2, connector up.

AR100

SAM 900; Flat

Probe: ET3DV6 - SN1579; ConvF(6.40,6.40,6.40); Crest factor: 2.0; Body 900 MHz: $\sigma = 1.08$ mho/m, $\epsilon_r = 53.0$, $\rho = 1.00$ g/cm³

Cube 7x7x7: Peak: 1.16 mW/g, SAR (1g): 0.750 mW/g, SAR (10g): 0.493 mW/g, SAR (10g): 0.493 mW/g, (Worst-case extrapolation)

Penetration depth: 13.2 (12.3, 14.3) [mm]

Powerdrift: -0.07 dB

October 01, 2002, Ambient Temperature: 22.7 °C; Liquid Temperature: 21.1 °C

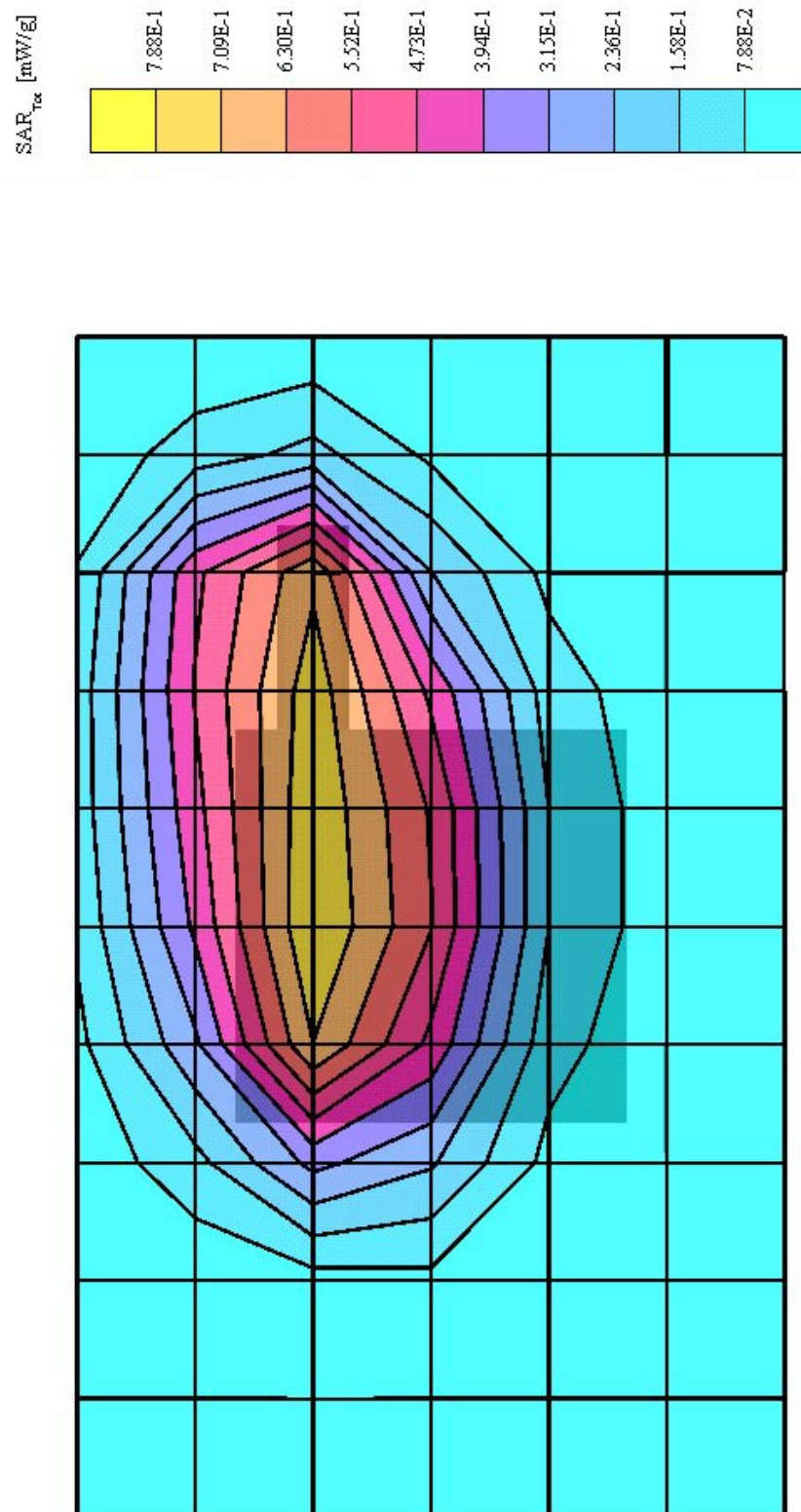


Fig. 7: SAR distribution, 902 MHz, position 2, connector up.

AR100

SAM 900; Flat

Probe: ET3DV6 - SN1579; ConvF(6.40,6.40,6.40); Crest factor: 2.0; Body 900 MHz: $\sigma = 1.08 \text{ mho/m}$ $\epsilon_r = 53.0$ $\rho = 1.00 \text{ g/cm}^3$

Cube 7x7x7: Peak: 1.29 mW/g SAR (1g); 0.744 mW/g SAR (10g); 0.438 mW/g SAR (Worst-case extrapolation)

Penetration depth: 10.1 (9.4, 11.2) [mm]

Powerdrift: -0.07 dB

October 01, 2002; Ambient Temperature: 23.1 °C; Liquid Temperature: 21.1 °C

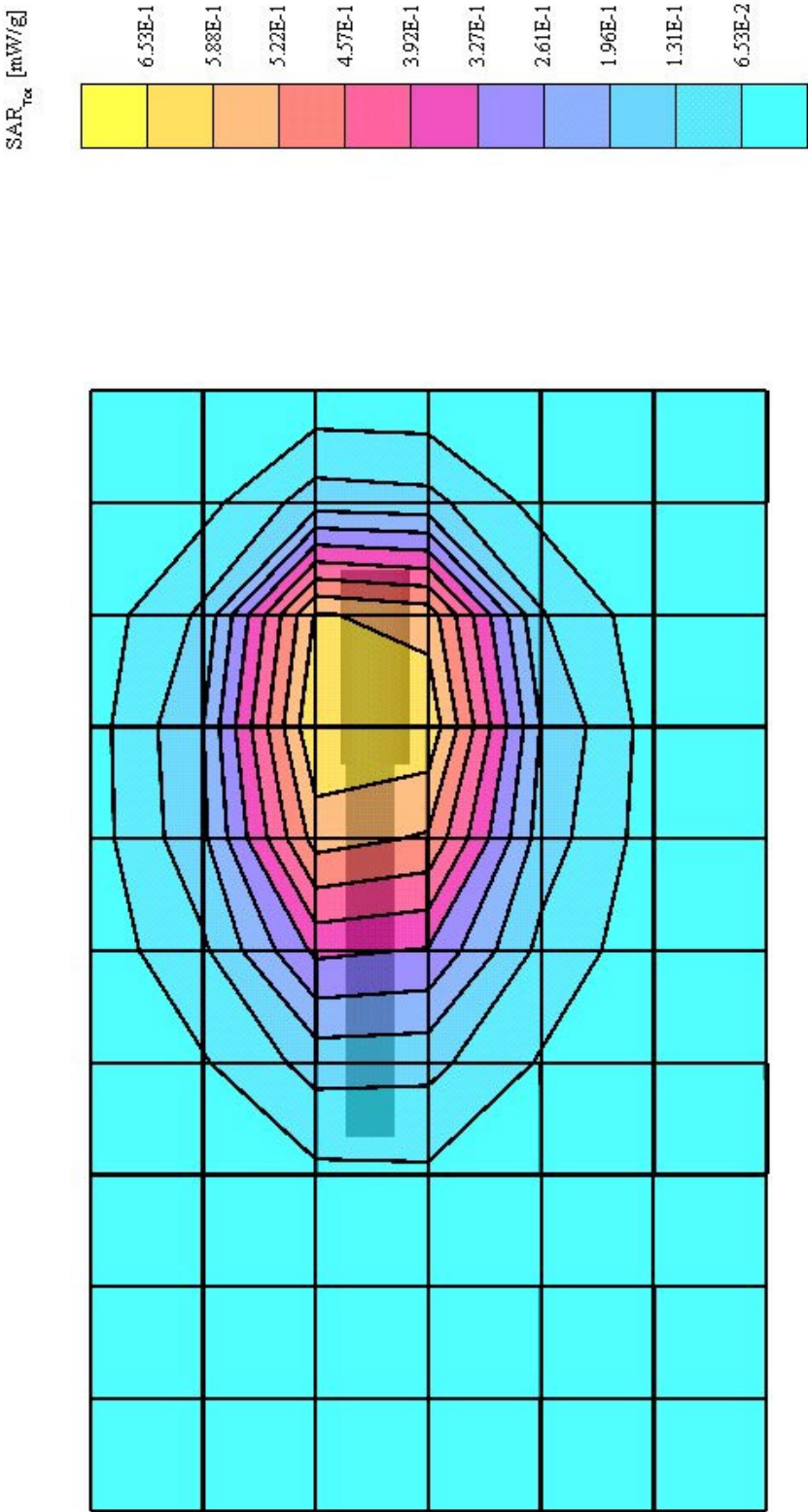


Fig. 8: SAR distribution, 896 MHz, position 3, device set up on edge.

AR100

SAM900; Flat
Probe: ET3DV6 - SN1579; ConvF(6.40,6.40,6.40); Crest factor: 2.0; Body 900 MHz: $\sigma = 1.08$ mho/m $\epsilon_r = 53.0$ $\rho = 1.00$ g/cm³
Cube 7x7x7: Peak: 1.22 mW/g SAR (1g) 0.711 mW/g SAR (10g) 0.417 mW/g (Worst-case extrapolation)
Penetration depth: 9.7 (9.2, 10.6) [mm]
Powerdrift: 0.03 dB
October 01, 2002; Ambient Temperature: 23.3 °C; Liquid Temperature: 21.1 °C

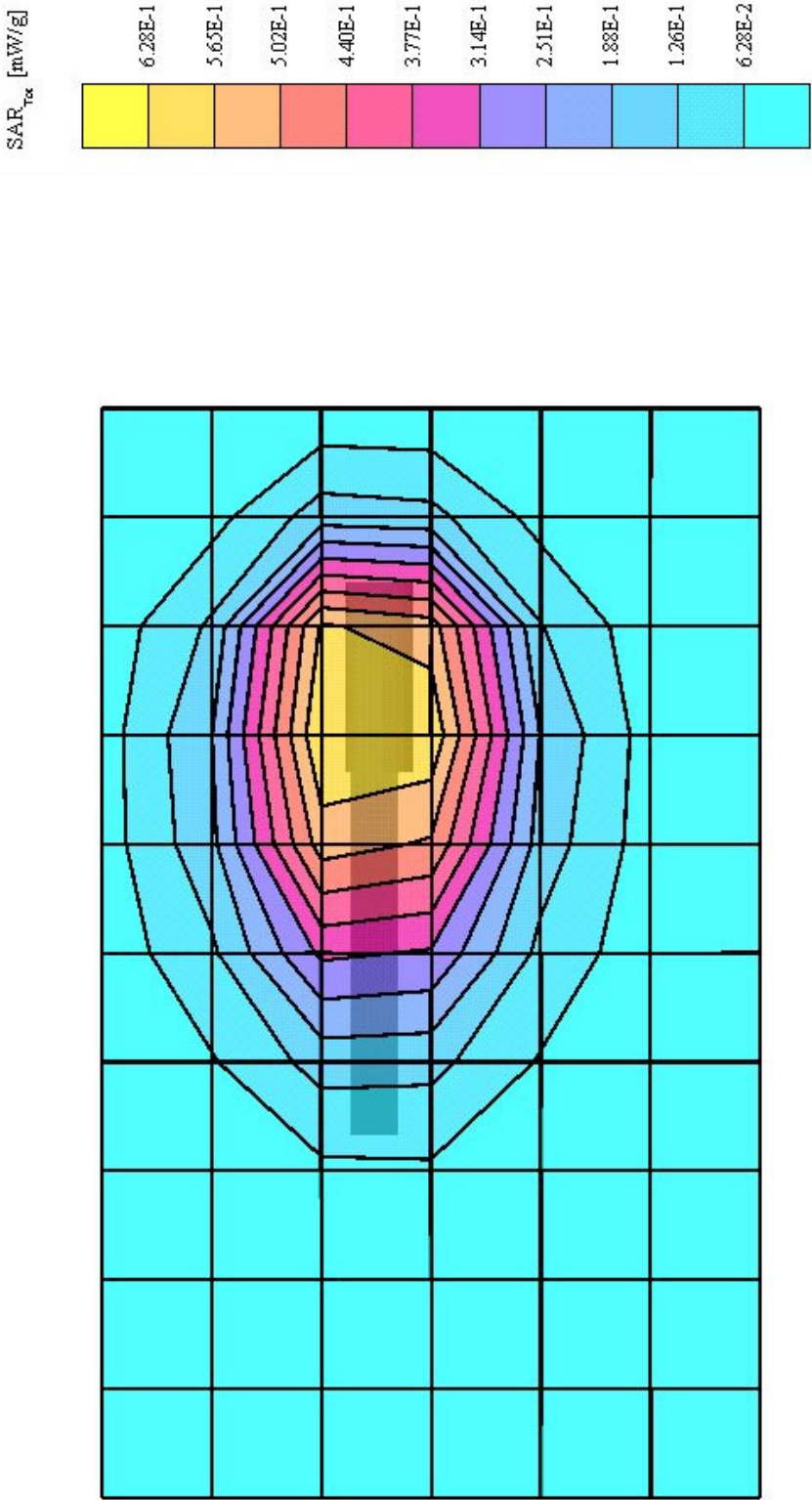


Fig. 9: SAR distribution, 899 MHz, position 3, device set up on edge.

AR100
SAM 900; Flat
Probe: ET3DV6 - SN1579; ConvF(6.40,6.40,6.40); Crest factor: 2.0; Body 900 MHz: $\sigma = 1.08$ mho/m $\epsilon_r = 53.0$ $\rho = 1.00$ g/cm³
Cube 7x7x7: Peak: 1.37 mW/g, SAR (1 g): 0.788 mW/g, SAR (10 g): 0.462 mW/g (Worst-case extrapolation)
Penetration depth: 9.8 (9.3, 10.7) [mm]
Powerdrift: 0.04 dB
October 01, 2002; Ambient Temperature: 23.3 °C; Liquid Temperature: 21.1 °C

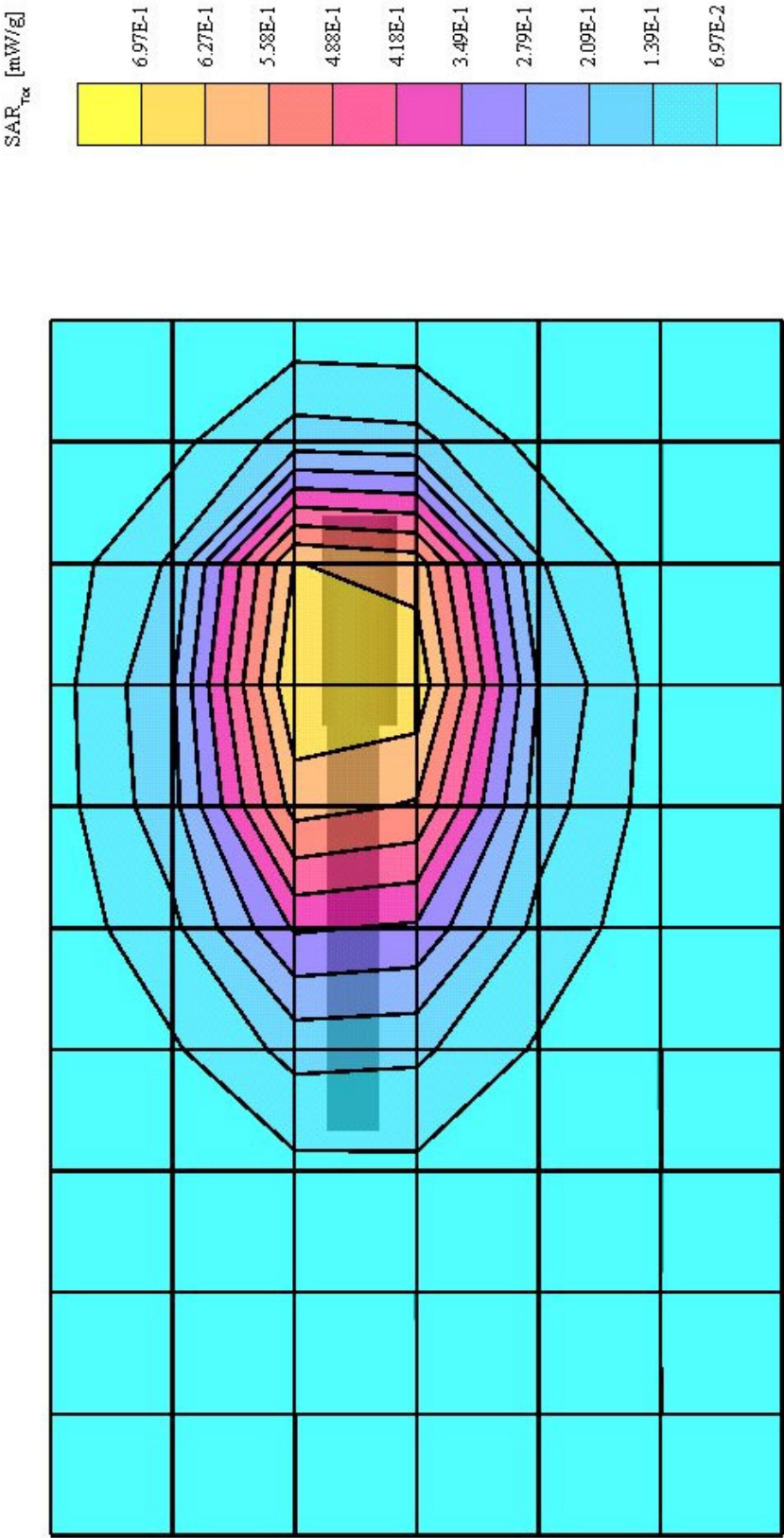


Fig. 10: SAR distribution, 902 MHz, position 3, device set up on edge.

3 SAR z-axis scan (Validation)

Dipole 900 MHz

SAM 900; Flat

Probe: ET3DV6 - SN1579, ConvF(6.40,6.40,6.40); Crest factor: 1.0; Body 900 MHz: $\sigma = 1.08 \text{ mho/m}$, $\epsilon_r = 53.0$, $\rho = 1.00 \text{ g/cm}^3$

Cubes (2): Peak: $4.71 \text{ mW/g} \pm 0.06 \text{ dB}$, SAR (1g): $2.96 \text{ mW/g} \pm 0.05 \text{ dB}$, SAR (10g): $1.85 \text{ mW/g} \pm 0.05 \text{ dB}$, (Worst-case extrapolation)

Penetration depth: $11.5 (10.6, 12.6) \text{ [mm]}$

Powerdrift: -0.02 dB

October 01, 2002 Ambient Temperature: 22.1°C Liquid Temperature: 20.9°C

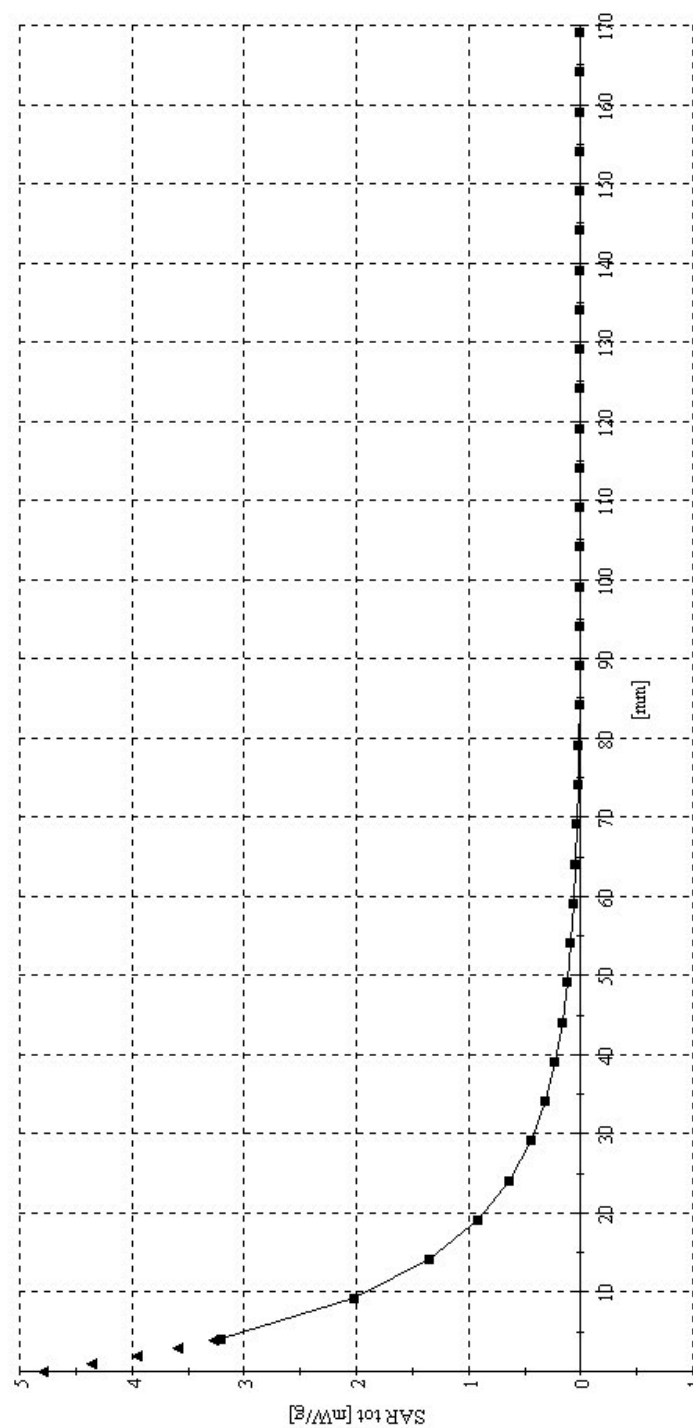


Fig. 11: SAR versus liquid depth, 900 MHz, Validation Body.

4 SAR z-axis scan (Measurements)

AR100

SAM 900; Flat

Probe: ET3DV6 - SN1579, ConvF(6.40,6.40,6.40); Crest factor: 2.0; Body 900 MHz: $\sigma = 1.08$ mho/m $\epsilon_r = 53.0$ $\rho = 1.00$ g/cm³

Cube 7x7x7: Peak: 1.47 mW/g, SAR (1g): 0.867 mW/g, SAR (10g): 0.526 mW/g, SAR (Worst-case extrapolation)

Penetration depth: 11.0 (10.5, 11.8) [mm]

Powerdrift: -0.07 dB

October 01, 2002; Ambient Temperature: 22.7 °C; Liquid Temperature: 21.1 °C

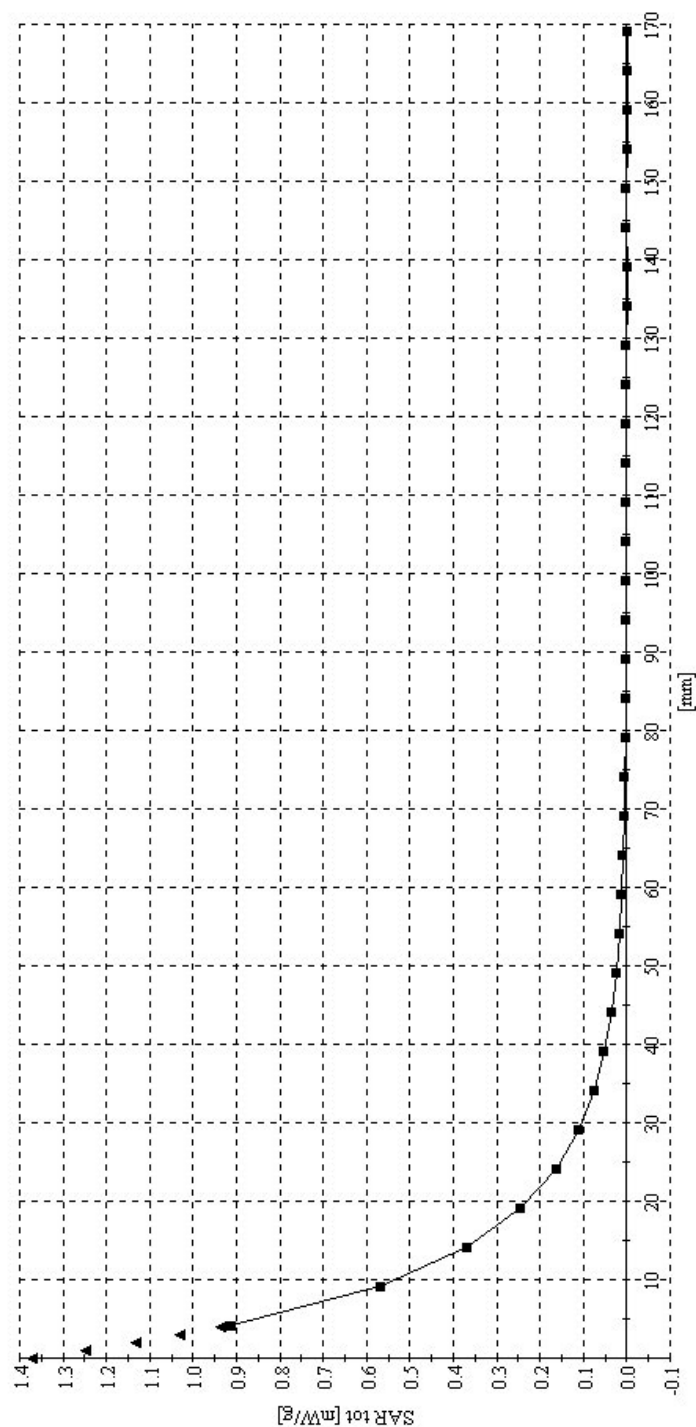


Fig. 12: SAR versus liquid depth, 896 MHz, position 1.