

APPENDIX A: SAR TEST DATA

PCTEST SAR REPORT		FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)	FCC ID: AZ489FT5831	Page A-1 of A-23	

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN/33; Frequency: 813.513 MHz; Duty Cycle: 1:3

Medium: 835 Brain ($\sigma = 0.92$ mho/m, $\epsilon_r = 42.28$, $\rho = 1000$ kg/m³)

Phantom section: Right Section

Test Date: 03-22-2004; Ambient Temp: 21.8°C; Tissue Temp: 20.4°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Mid Ch, Touch, Maximum Capacity Battery

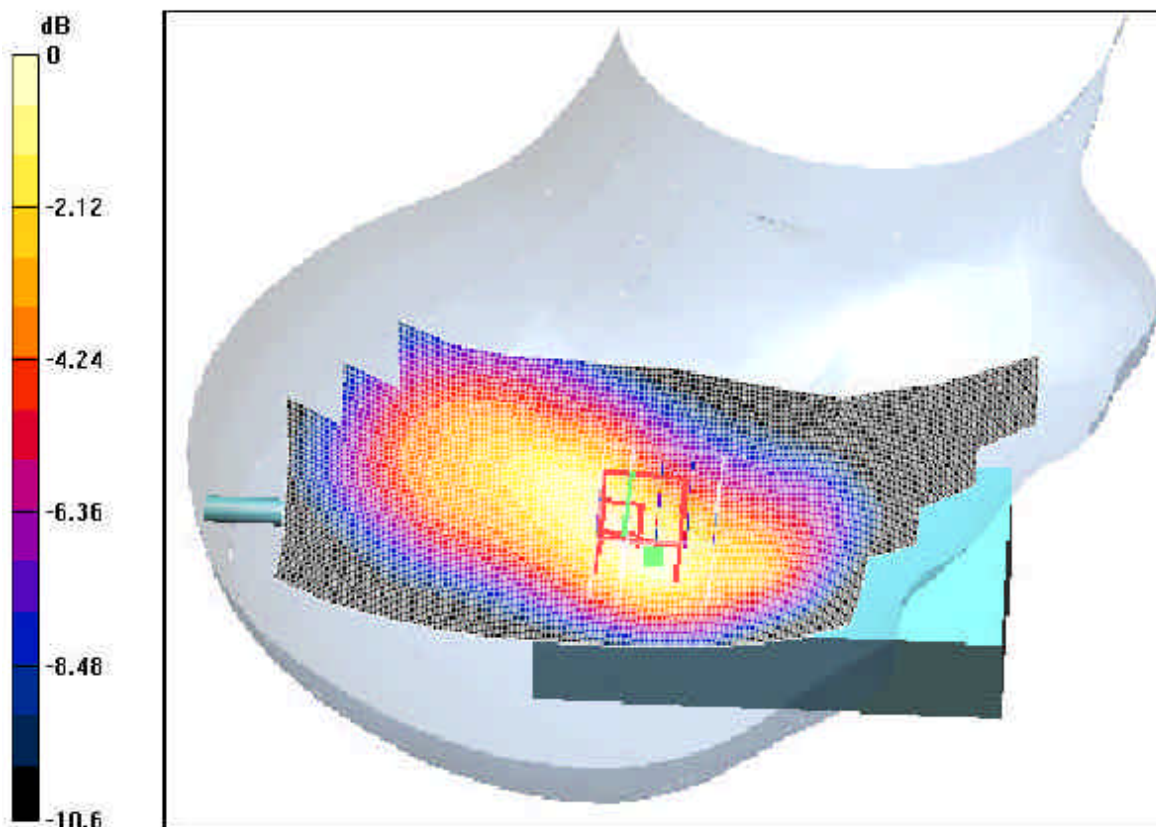
Area Scan (61x161x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.864 mW/g; SAR(10 g) = 0.574 mW/g

Reference Value = 30 V/m



0 dB = 1.06mW/g

PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

FCC ID:
AZ489FT5831

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PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN/33; Frequency: 813.513 MHz; Duty Cycle: 1:3

Medium: 835 Brain ($\sigma = 0.92 \text{ mho/m}$, $\epsilon_r = 42.28$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Right Section

Test Date: 03-22-2004; Ambient Temp: 21.8°C; Tissue Temp: 20.4°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Mid Ch, Tilt, Maximum Capacity Battery

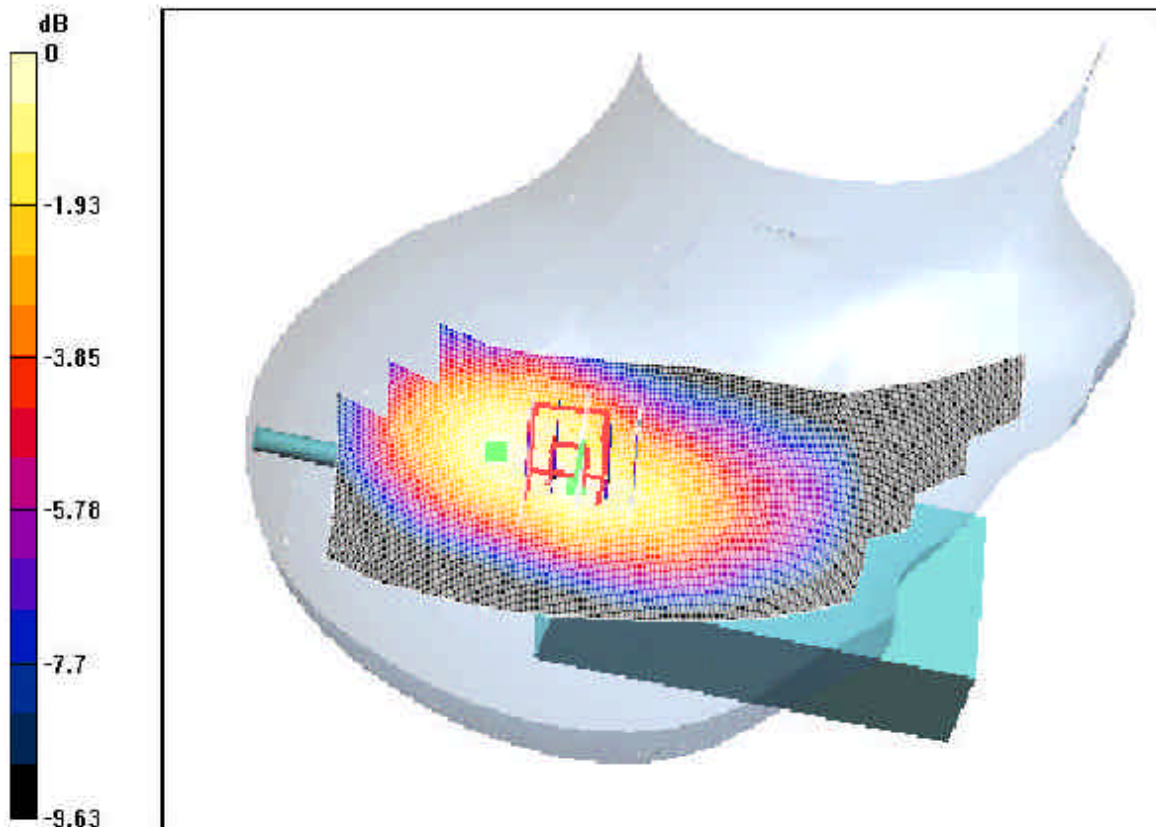
Area Scan (61x161x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.859 mW/g; SAR(10 g) = 0.585 mW/g

Reference Value = 30 V/m



0 dB = 1mW/g

PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN/33; Frequency: 813.513 MHz; Duty Cycle: 1:3

Medium: 835 Brain ($\sigma = 0.92$ mho/m, $\epsilon_r = 42.28$, $\rho = 1000$ kg/m³)

Phantom section: Left Section

Test Date: 03-22-2004; Ambient Temp: 21.8°C; Tissue Temp: 20.4°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Mid Ch, Touch, Maximum Capacity Battery

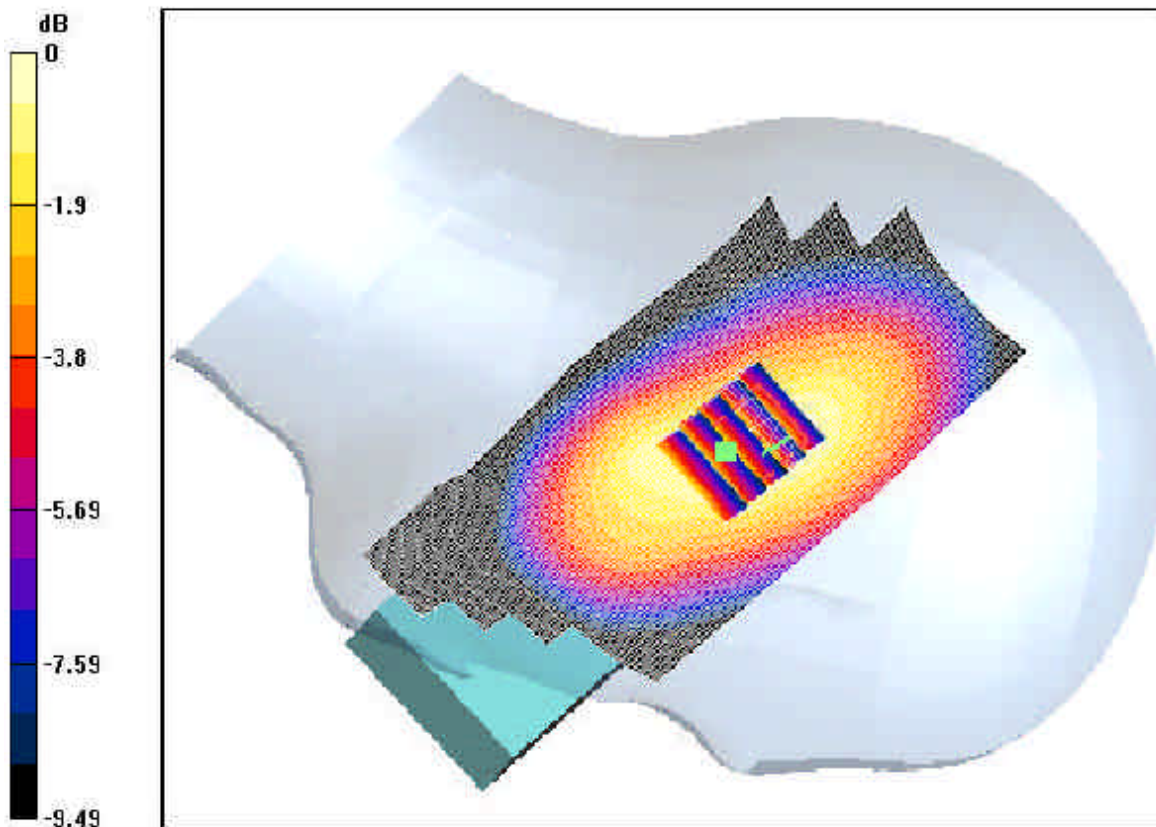
Area Scan (61x161x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.841 mW/g; SAR(10 g) = 0.583 mW/g

Reference Value = 33.8 V/m



0 dB = 1.01 mW/g

PCTEST SAR REPORT			FCC CERTIFICATION		Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)	FCC ID: AZ489FT5831	Page A-4 of A-23	

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN/33; Frequency: 813.513 MHz; Duty Cycle: 1:3

Medium: 835 Brain ($\sigma = 0.92 \text{ mho/m}$, $\epsilon_r = 42.28$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Left Section

Test Date: 03-22-2004; Ambient Temp: 21.8°C; Tissue Temp: 20.4°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Mid Ch, Tilt, Maximum Capacity Battery

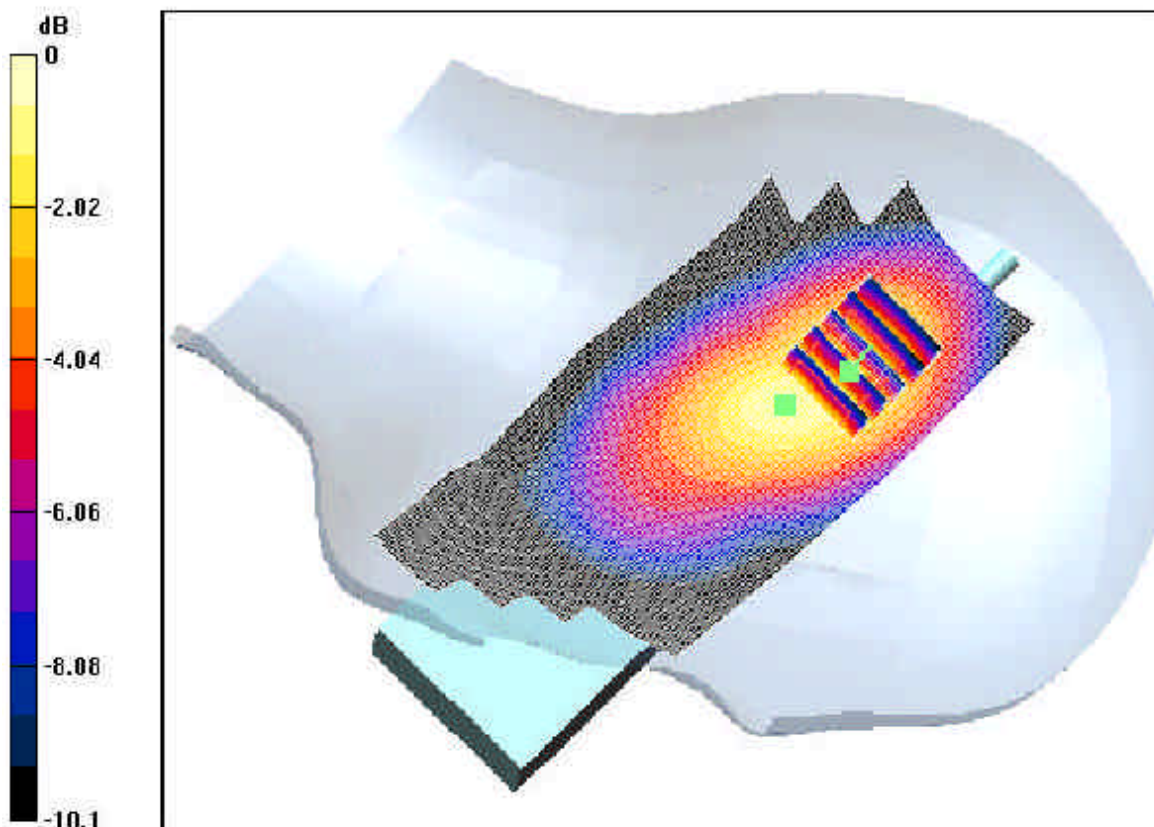
Area Scan (61x161x1): Measurement grid: dx=15mm, dy=15mm

Reference Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.904 mW/g; SAR(10 g) = 0.610 mW/g

Reference Value = 28.8 V/m



0 dB = 1.15mW/g

PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		Page A-5 of A-23

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA i325iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN II/33; Frequency: 901.981 MHz; Duty Cycle: 1:3

Medium: 900 Brain ($\sigma = 0.95 \text{ mho/m}$, $\epsilon_r = 41.85$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Right Section

Test Date: 03-24-2004; Ambient Temp: 22.8°C; Tissue Temp: 20.6°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Right Touch, High Ch, Maximum Capacity Battery, Fixed Antenna

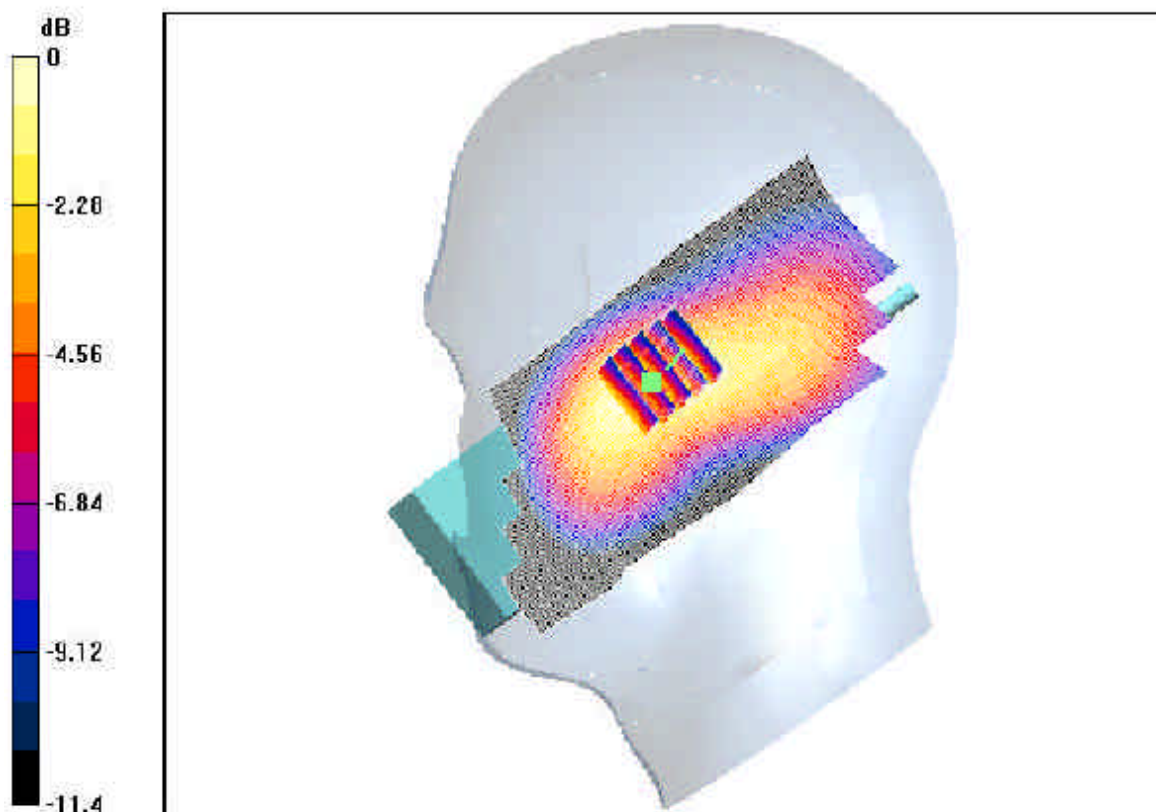
Area Scan (61x161x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 0.781 W/kg

SAR(1 g) = 0.515 mW/g; SAR(10 g) = 0.344 mW/g

Reference Value = 22.8 V/m



0 dB = 0.601mW/g

PCTEST SAR REPORT		FCC CERTIFICATION		Reviewed by:
				Quality Manager
SAR Filename: SAR.240309236.AZA	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)	FCC ID: AZ489FT5831	Page A-6 of A-23

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA i325iDEN/ISM Phone; Serial: 364AEA QKP3; FCC ID: AZ489FT5831

Communication System: iDEN II/33; Frequency: 896.019 MHz; Duty Cycle: 1:3

Medium: 900 Brain ($\sigma = 0.95 \text{ mho/m}$, $\epsilon_r = 41.85$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Right Section

Test Date: 03-24-2004; Ambient Temp: 22.8°C; Tissue Temp: 20.6°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Right Tilt, Low Ch, Maximum Capacity Battery, Fixed Antenna

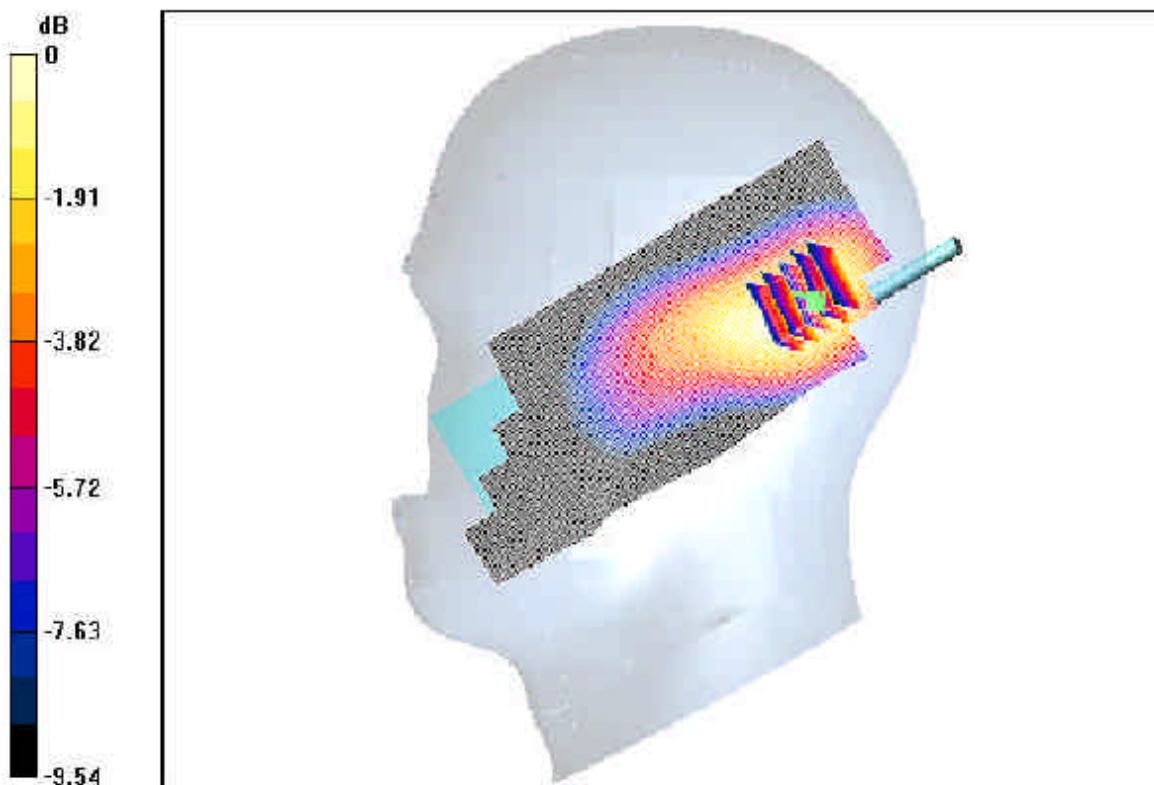
Area Scan (61x161x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 0.934 W/kg

SAR(1 g) = 0.684 mW/g; SAR(10 g) = 0.486 mW/g

Reference Value = 21.7 V/m



0 dB = 0.774mW/g

PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA i325 iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN II/33 ; Frequency: 901.981 MHz; Duty Cycle: 1:3

Medium: 900 Brain ($\sigma = 0.95 \text{ mho/m}$, $\epsilon_r = 41.85$ $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Left Section

Test Date: 03-24-2004; Ambient Temp: 22.8°C; Tissue Temp: 20.6°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Left Touch, High Ch, Maximum Capacity Battery, Fixed Antenna

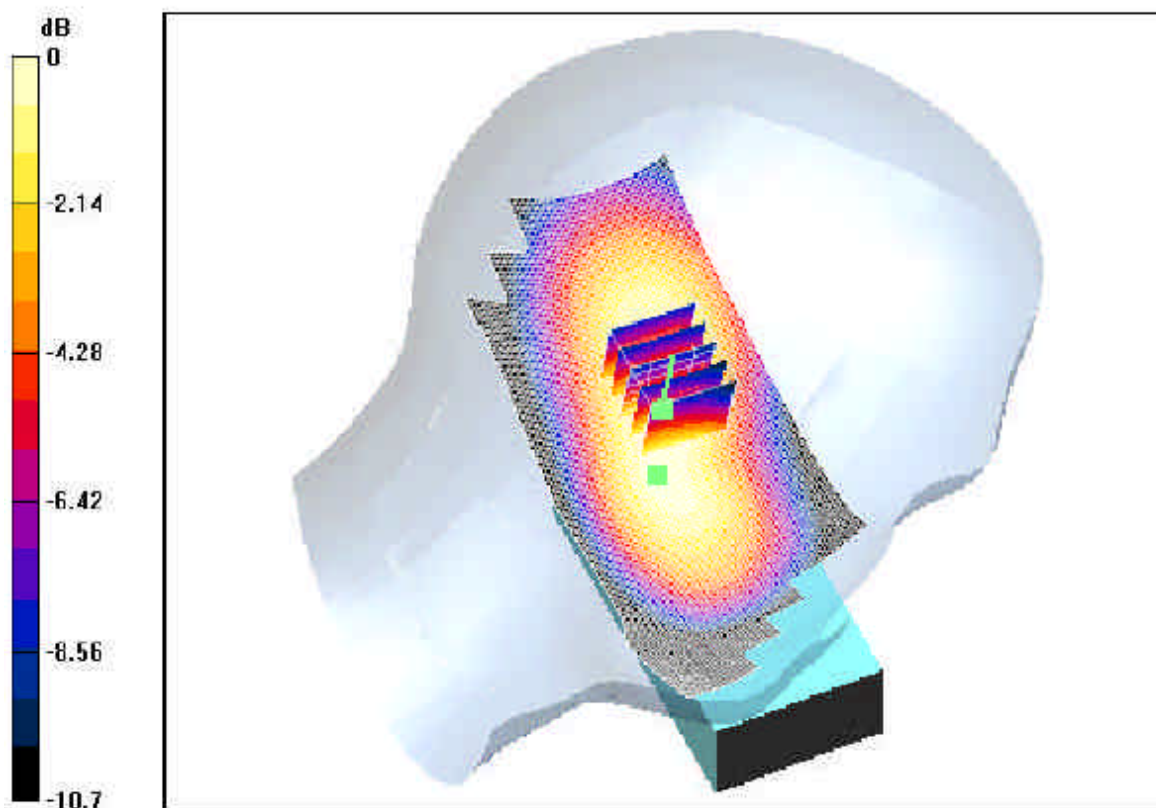
Area Scan (61x161x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 0.756 W/kg

SAR(1 g) = 0.540 mW/g; SAR(10 g) = 0.374 mW/g

Reference Value = 25.2 V/m



0 dB = 0.612mW/g

PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZA	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA i325 iDEN/ISM Phone; Serial: 364AEA QKP3; FCC ID: AZ489FT5831

Communication System: iDEN II/33; Frequency: 901.981 MHz; Duty Cycle: 1:3

Medium: 900 Brain ($\sigma = 0.95 \text{ mho/m}$, $\epsilon_r = 41.85$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Left Section

Test Date: 03-24-2004; Ambient Temp: 22.8°C; Tissue Temp: 20.6°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Left Tilt, High Ch, Maximum Capacity Battery, Fixed Antenna

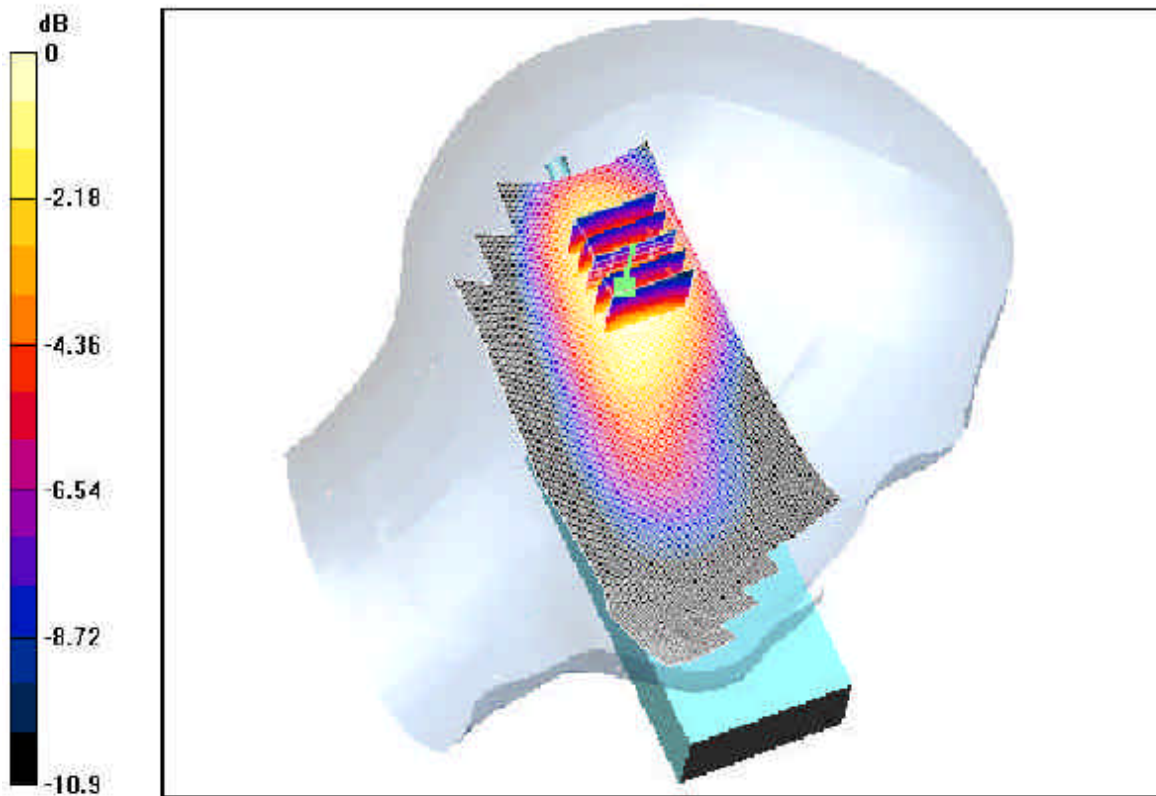
Area Scan (61x161x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.887 mW/g; SAR(10 g) = 0.597 mW/g

Reference Value = 23.2 V/m



0 dB = 1.04 mW/g

PCTEST SAR REPORT		FCC CERTIFICATION		Reviewed by:
				Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)	FCC ID: AZ489FT5831	Page A-9 of A-23

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN/16; Frequency: 813.513 MHz; Duty Cycle: 1:6

Medium: 835 Brain ($\sigma = 0.92 \text{ mho/m}$, $\epsilon_r = 42.28$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Flat Section; Space: 2.5 cm

Test Date: 03-23-2004; Ambient Temp: 22.2°C; Tissue Temp: 20.8°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Mid Ch, Maximum Capacity Battery

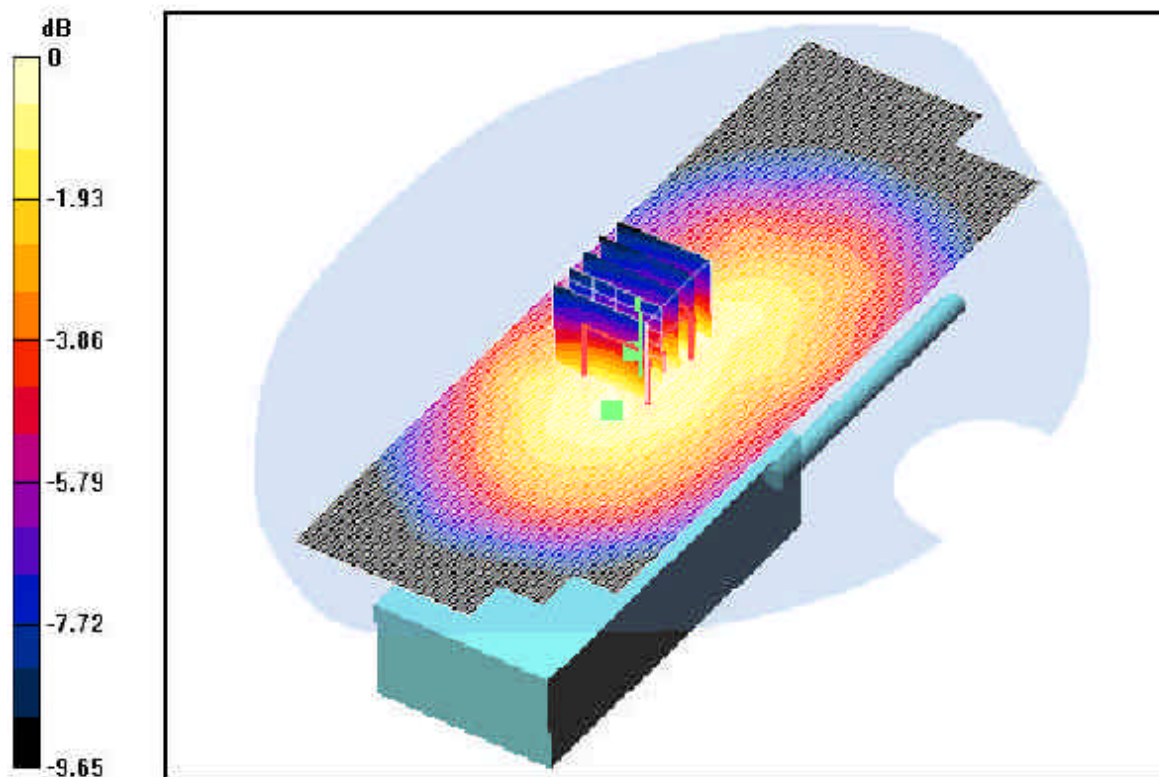
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 0.637 W/kg

SAR(1 g) = 0.463 mW/g; SAR(10 g) = 0.323 mW/g

Reference Value = 24.8 V/m



0 dB = 0.548mW/g

PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: IDEN II/16; Frequency: 896.019 MHz; Duty Cycle: 1:6

Medium: 900 Brain ($\sigma = 0.95$ mho/m, $\epsilon_r = 41.85$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section; Space: 2.5 cm

Test Date: 03-24-2004; Ambient Temp: 22.8°C; Tissue Temp: 20.6°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Low Ch, Maximum Capacity Battery

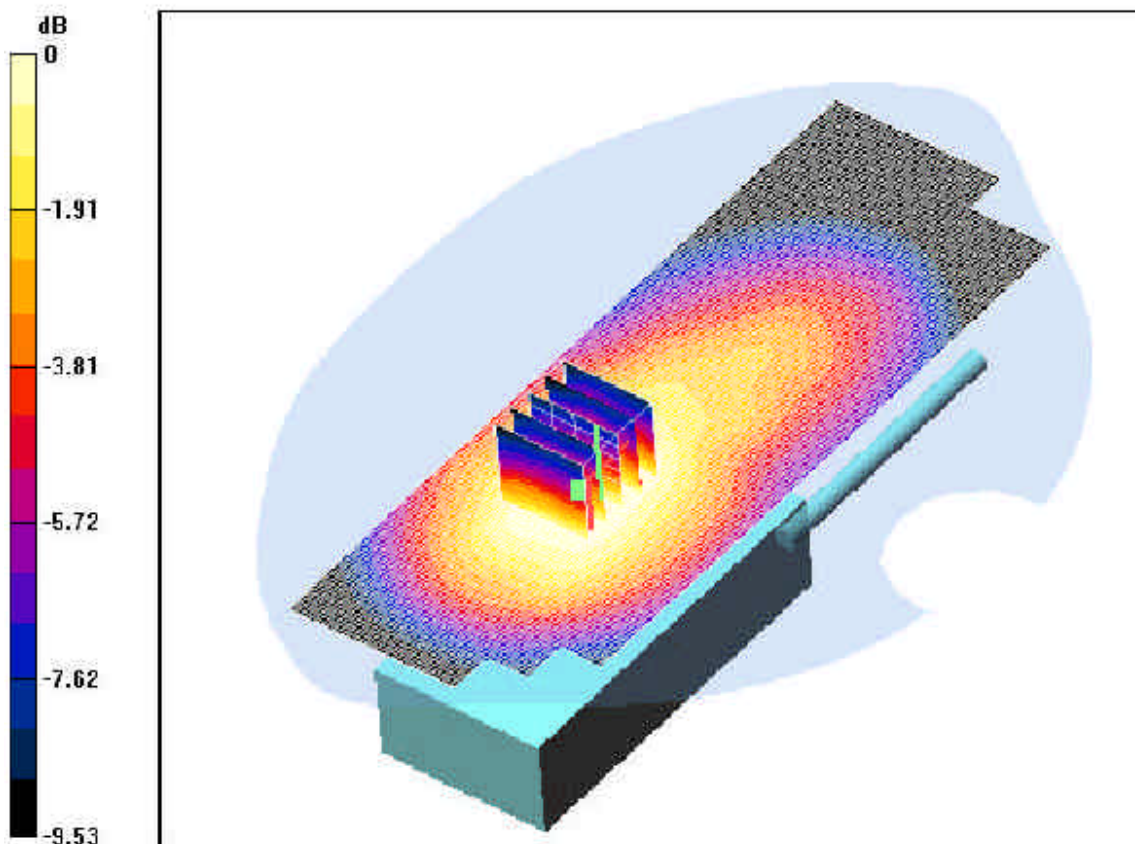
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 0.734 W/kg

SAR(1 g) = 0.502 mW/g; SAR(10 g) = 0.360 mW/g

Reference Value = 21.1 V/m



0 dB = 0.570mW/g

PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: ISM; Frequency: 902.525 MHz; Duty Cycle: 1:1

Medium: 900 Brain ($\sigma = 0.95$ mho/m, $\epsilon_r = 41.85$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section; Space: 2.5 cm

Test Date: 03-23-2004; Ambient Temp: 23.4°C; Tissue Temp: 21.2°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Low Ch, Maximum Capacity Battery

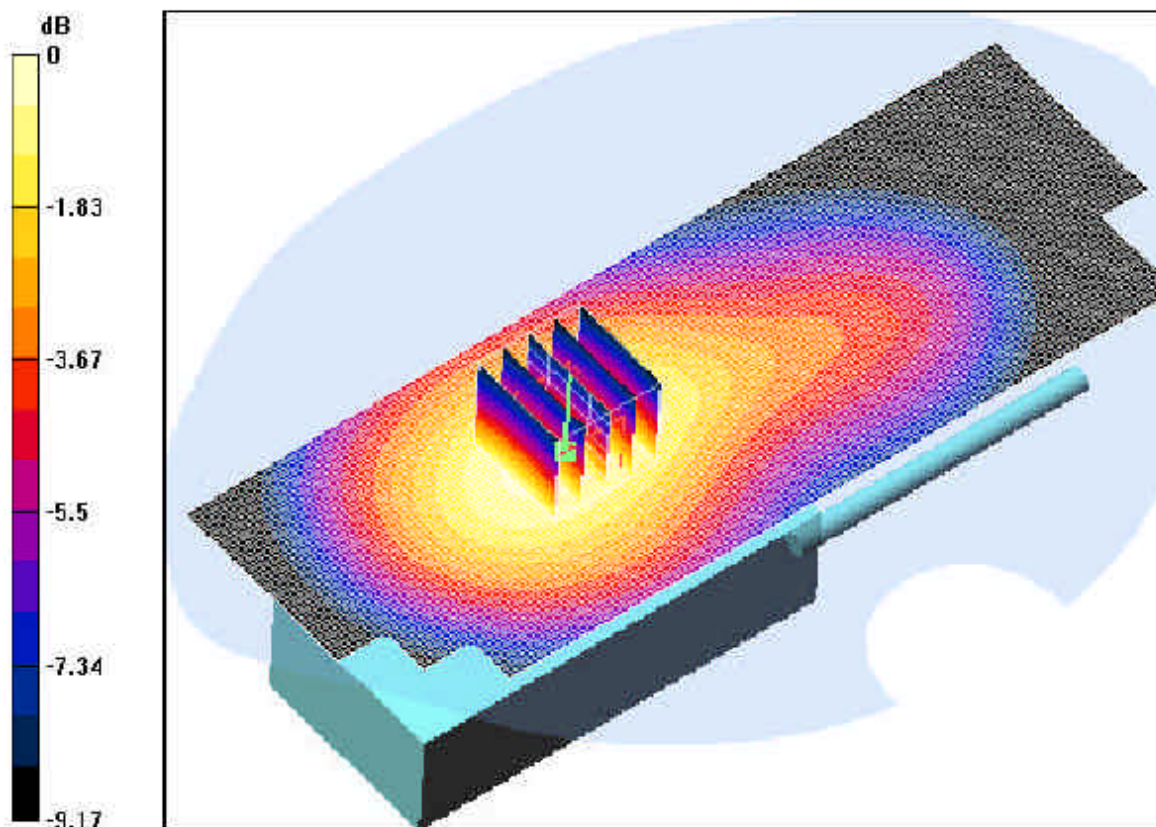
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.752 mW/g; SAR(10 g) = 0.541 mW/g

Reference Value = 23 V/m



0 dB = 0.848mW/g

PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		FCC ID: AZ489FT5831 Page A-12 of A-23

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN/66; Frequency: 806.013 MHz; Duty Cycle: 1:3

Medium: 835 Muscle ($\sigma = 0.98$ mho/m, $\epsilon_r = 53.16$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section; Space: 2.5 cm; Tested without Beltclip

Test Date: 03-23-2004; Ambient Temp: 22.8°C; Tissue Temp: 20.5°C

Probe: ES3DV2 - SN3022; ConvF(6, 6, 6); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Low Ch, Maximum Capacity Battery

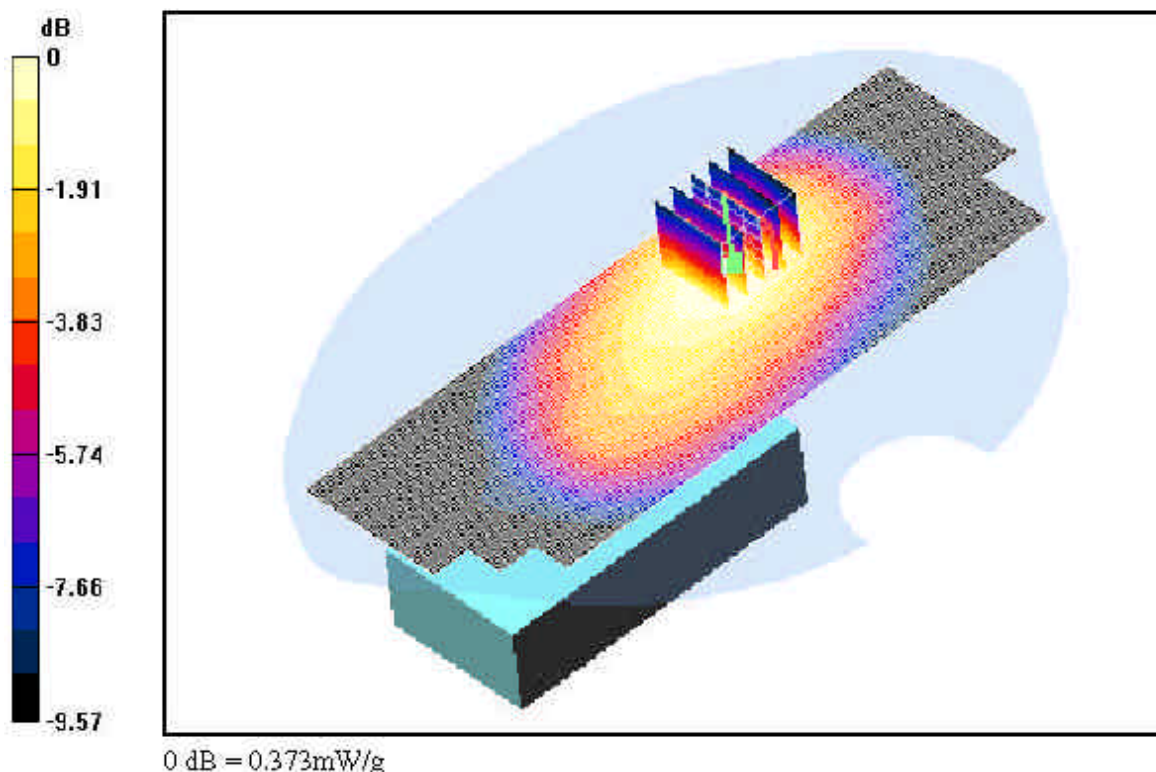
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 0.436 W/kg

SAR(1 g) = 0.327 mW/g; SAR(10 g) = 0.228 mW/g

Reference Value = 19.9 V/m



PCTEST SAR REPORT		FCC CERTIFICATION		Reviewed by:
				Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)	FCC ID: AZ489FT5831	Page A-13 of A-23

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN/66; Frequency: 813.513 MHz; Duty Cycle: 1:3

Medium: 835 Muscle ($\sigma = 0.98$ mho/m, $\epsilon_r = 53.16$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section; Space: 2.8 cm; Tested with Beltclip

Test Date: 03-23-2004; Ambient Temp: 22.8°C; Tissue Temp: 20.5°C

Probe: ES3DV2 - SN3022; ConvF(6, 6, 6); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Mid Ch, Maximum Capacity Battery

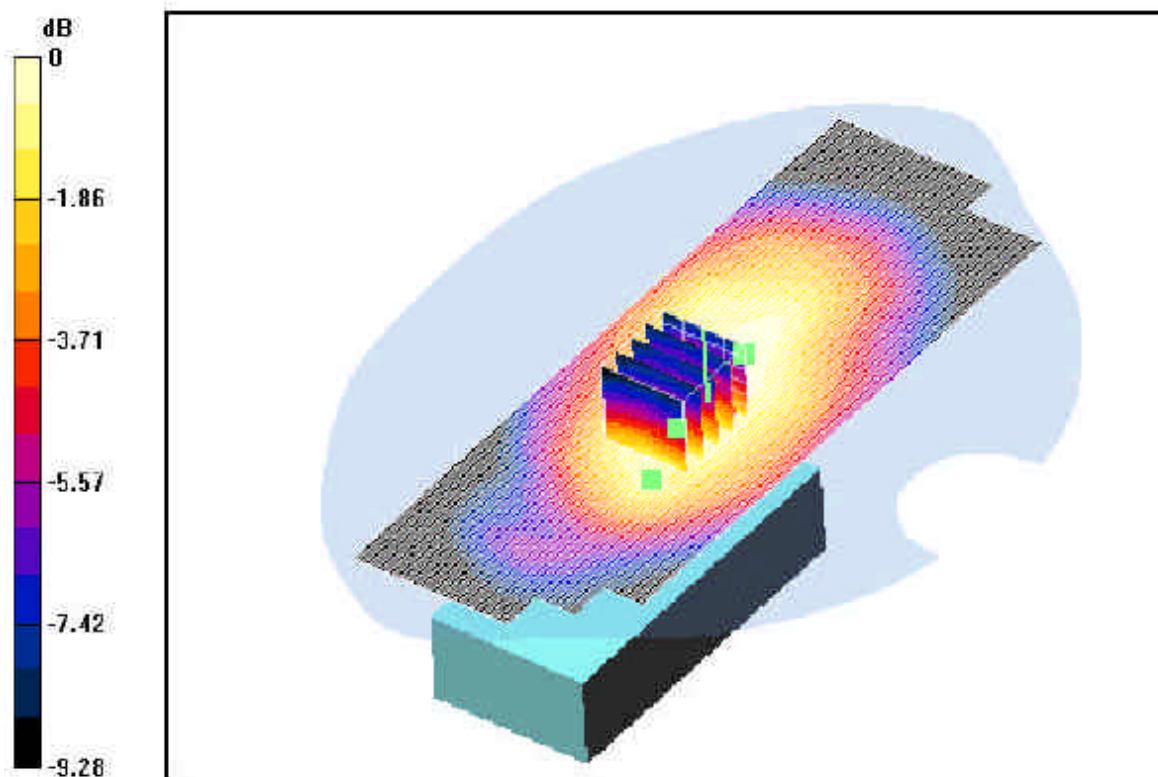
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 0.914 W/kg

SAR(1 g) = 0.563 mW/g; SAR(10 g) = 0.392 mW/g

Reference Value = 28.5 V/m



0 dB = 0.661mW/g

PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: IDEN II; Frequency: 896.019 MHz; Duty Cycle: 1:6

Medium: 900 Muscle ($\sigma = 1.03$ mho/m, $\epsilon_r = 53.62$, $\rho = 1000$ kg/m³)

anatom section: Flat Section; Space: 2.5 cm; Tested without Beltclip

Test Date: 03-24-2004; Ambient Temp: 22.4 °C; Tissue Temp: 20.5 °C

Probe: ES3DV2 - SN3022; ConvF(6, 6, 6); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DAS4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Low Ch, Maximum Capacity Battery

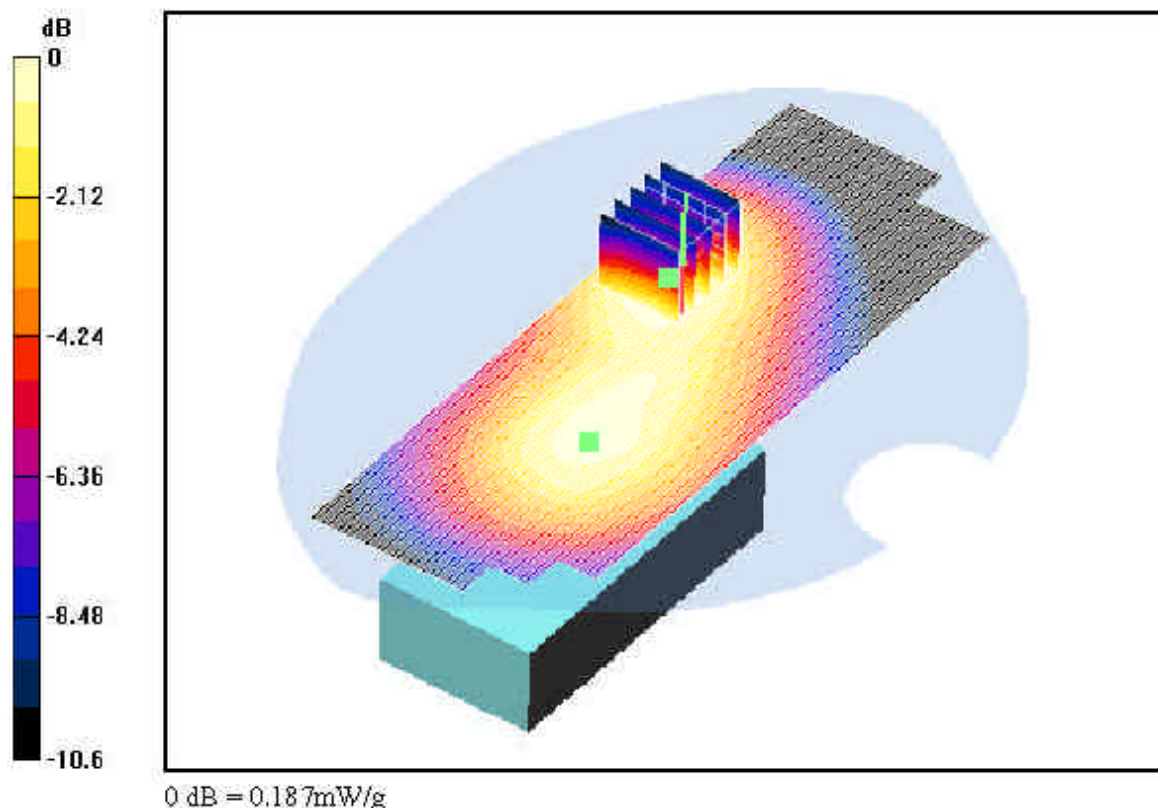
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 0.243 W/kg

SAR(1 g) = 0.163 mW/g; SAR(10 g) = 0.113 mW/g

Reference Value = 12.5 V/m



PCTEST SAR REPORT	 FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR 240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)	FCC ID: AZ489FT5831	Page A-15 of A-23

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: IDEN II; Frequency: 896.019 MHz; Duty Cycle: 1:6

Medium: 900 Muscle ($\sigma = 1.03$ mho/m, $\epsilon_r = 53.62$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section; Space: 2.8 cm; Tested with Beltclip

Test Date: 03-24-2004; Ambient Temp: 22.4 °C; Tissue Temp: 20.5 °C

Probe: ES3DV2 - SN3022; ConvF(6, 6, 6); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Low Ch, Maximum Capacity Battery

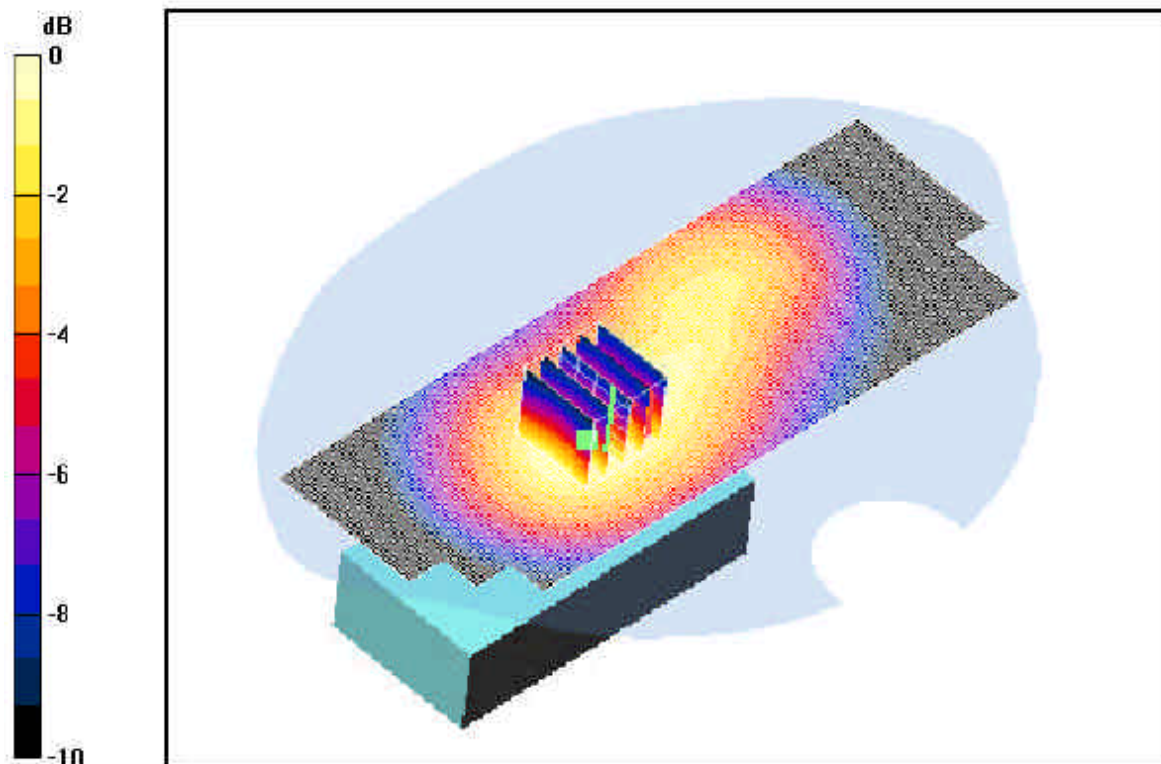
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 0.336 W/kg

SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.162 mW/g

Reference Value = 14.4 V/m



0 dB = 0.263mW/g

PCTEST SAR REPORT		FCC CERTIFICATION		Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)	FCC ID: AZ489FT5831	

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: ISM; Frequency: 915.525 MHz; Duty Cycle: 1:1

Medium: 900 Muscle ($\sigma = 1.03 \text{ mho/m}$, $\epsilon_r = 53.62$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Flat Section; Space: 2.5 cm; Tested without Beltclip

Test Date: 03-23-2004; Ambient Temp: 22.9°C; Tissue Temp: 20.8°C

Probe: ES3DV2 - SN3022; ConvF(6, 6, 6); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Mid Ch, Maximum Capacity Battery

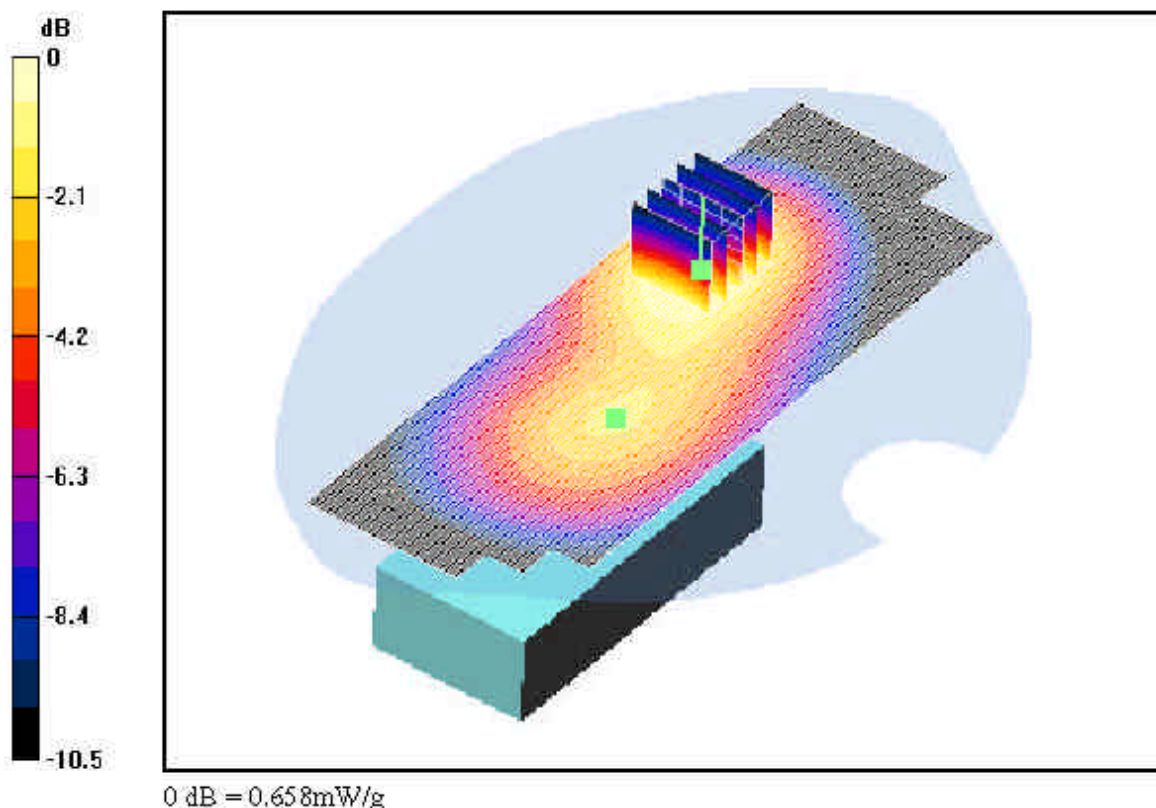
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 0.820 W/kg

SAR(1 g) = 0.568 mW/g; SAR(10 g) = 0.385 mW/g

Reference Value = 20 V/m



PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: ISM; Frequency: 902.525 MHz; Duty Cycle: 1:1

Medium: 900 Muscle ($\sigma = 1.03 \text{ mho/m}$, $\epsilon_r = 53.62$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Flat Section; Space: 2.8 cm; Tested with Beltclip

Test Date: 03-23-2004; Ambient Temp: 22.9°C; Tissue Temp: 20.8°C

Probe: ES3DV2 - SN3022; ConvF(6, 6, 6); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Low Ch, Maximum Capacity Battery

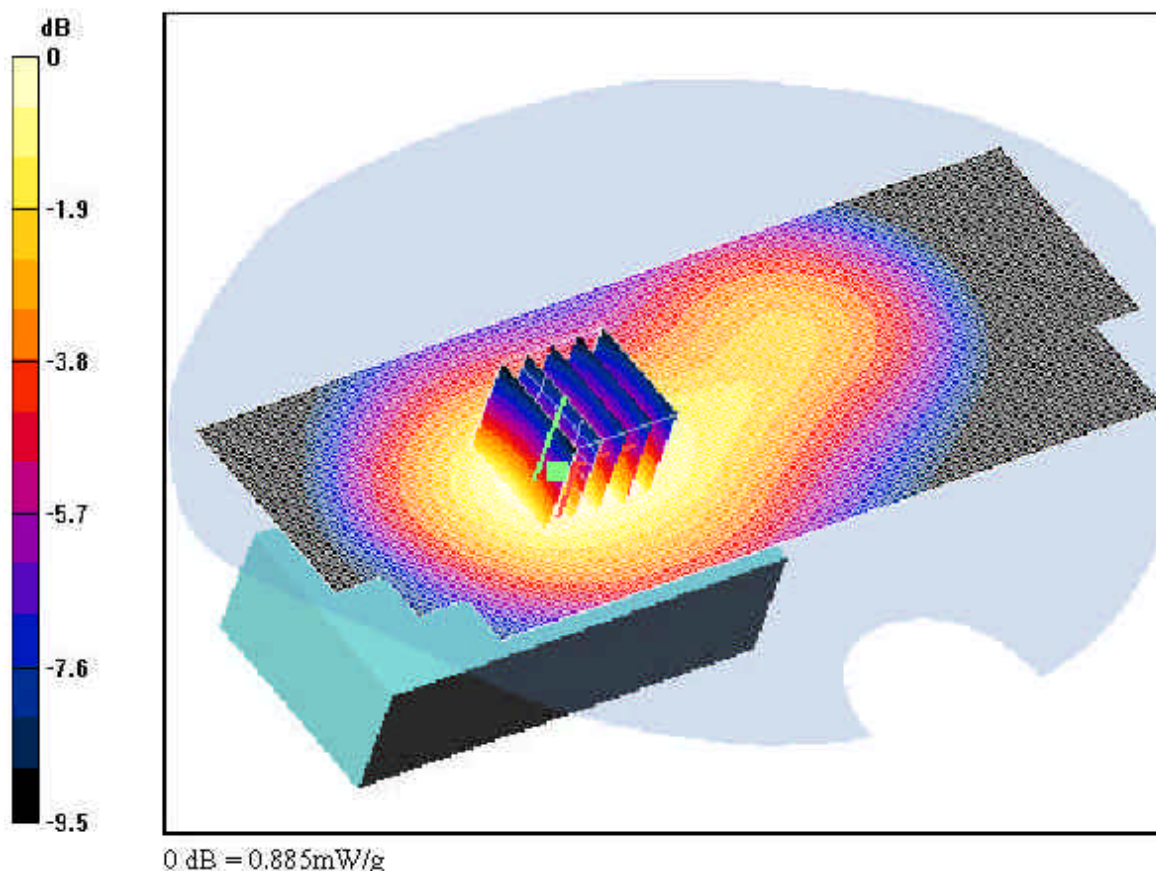
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 1.1 W/kg

SAR(1 g) = 0.793 mW/g; SAR(10 g) = 0.560 mW/g

Reference Value = 24.1 V/m



PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN/33; Frequency: 813.513 MHz; Duty Cycle: 1:3

Medium: 835 Brain ($\sigma = 0.92 \text{ mho/m}$, $\epsilon_r = 42.28$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Left Section

Test Date: 03-22-2004; Ambient Temp: 21.8°C; Tissue Temp: 20.4°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Calibrated: 1/6/2004

Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Mid Ch, Tilt, Maximum Capacity Battery

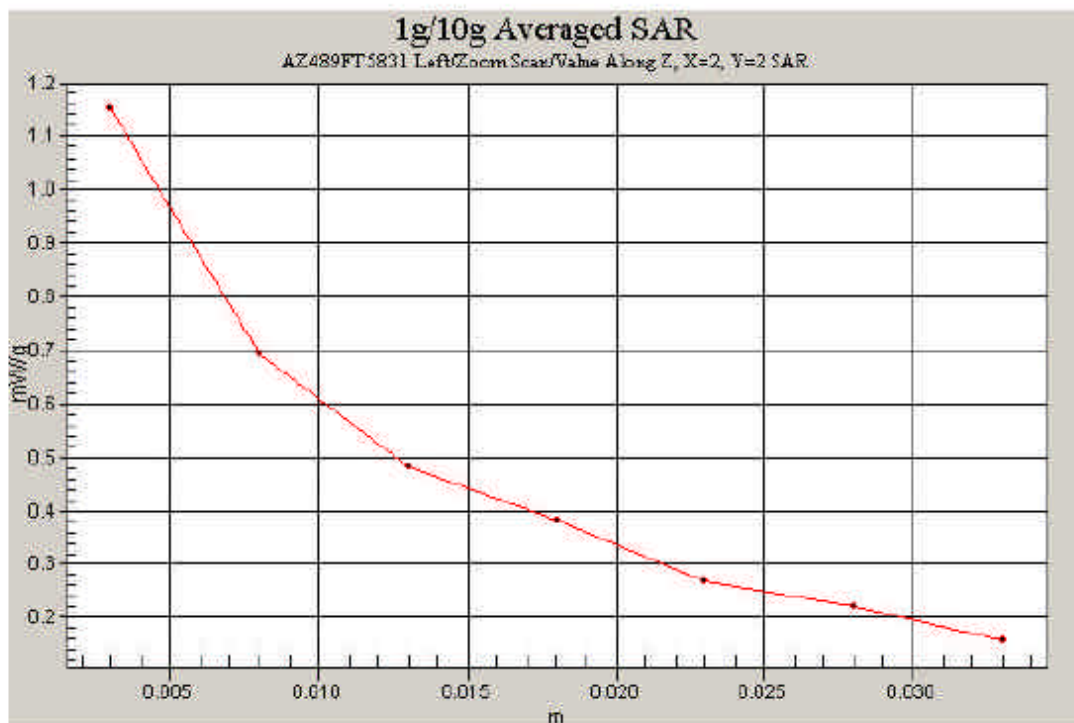
Area Scan (61x161x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 1.44 W/kg

SAR(1 g) = 0.904 mW/g; SAR(10 g) = 0.610 mW/g

Reference Value = 28.8 V/m



PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		Page A-19 of A-23

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: ISM; Frequency: 902.525 MHz; Duty Cycle: 1:1

Medium: 900 Brain ($\sigma = 0.95 \text{ mho/m}$, $\epsilon_r = 41.85$, $\rho = 1000 \text{ kg/m}^3$)

Phantom section: Flat Section; Space: 2.5 cm

Test Date: 03-23-2004; Ambient Temp: 23.4°C; Tissue Temp: 21.2°C

Probe: ES3DV2 - SN3022; ConvF(6.1, 6.1, 6.1); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Calibrated: 1/6/2004

Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Low Ch, Maximum Capacity Battery

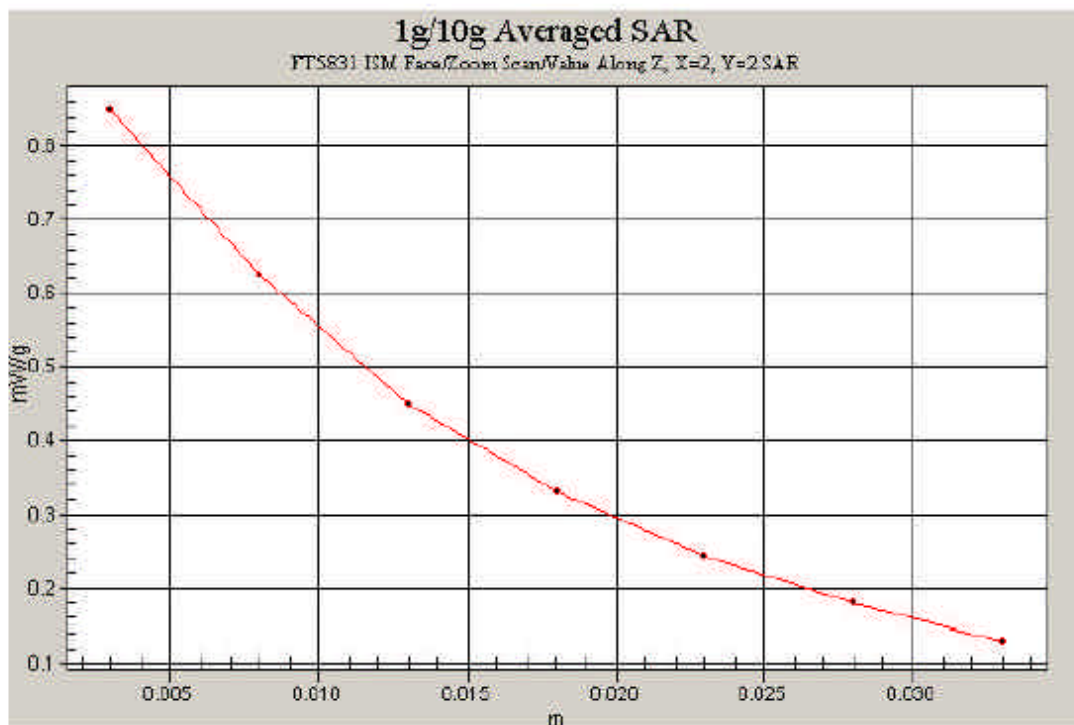
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.752 mW/g; SAR(10 g) = 0.541 mW/g

Reference Value = 23 V/m



PCTEST SAR REPORT		FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)	FCC ID: AZ489FT5831	Page A-20 of A-23	

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: iDEN/33; Frequency: 813.513 MHz; Duty Cycle: 1:3

Medium: 835 Muscle ($\sigma = 0.98$ mho/m, $\epsilon_r = 53.16$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section; Space: 2.8 cm; Tested with Beltclip

Test Date: 03-23-2004; Ambient Temp: 22.8°C; Tissue Temp: 20.5°C

Probe: ES3DV2 - SN3022; ConvF(6, 6, 6); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Calibrated: 1/6/2004

Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Mid Ch, Maximum Capacity Battery

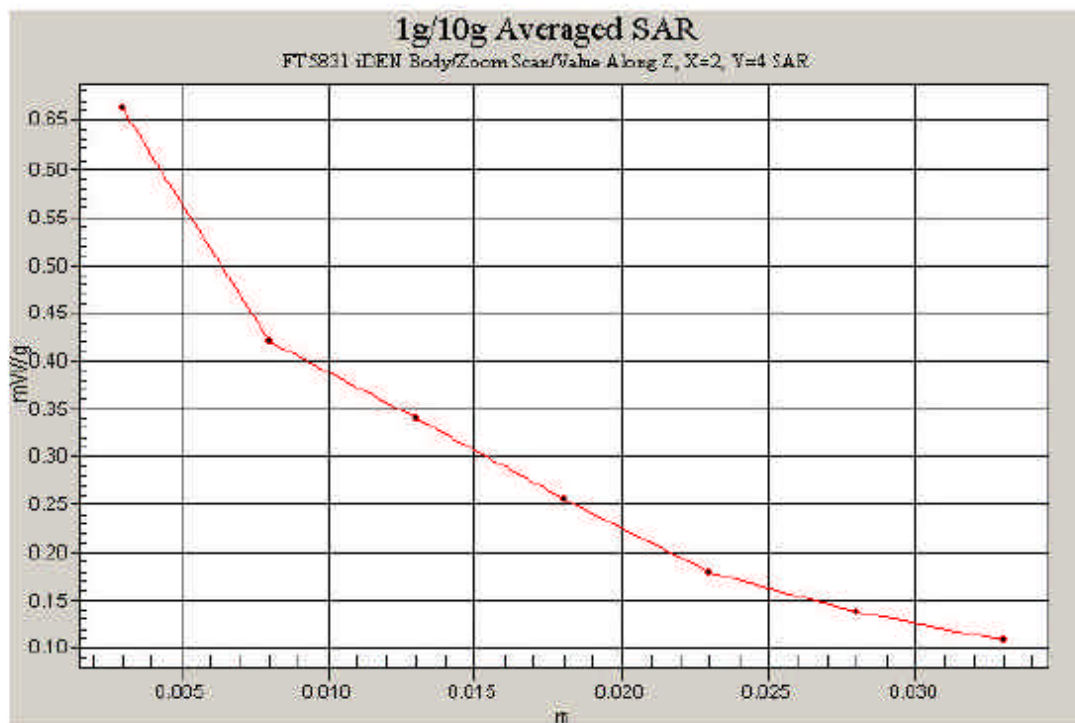
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 0.914 W/kg

SAR(1 g) = 0.563 mW/g; SAR(10 g) = 0.392 mW/g

Reference Value = 28.5 V/m



PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

PCTEST ENGINEERING LABORATORY, INC.

DUT: MOTOROLA iDEN/ISM Phone; Serial: 364AEAQKP3; FCC ID: AZ489FT5831

Communication System: ISM; Frequency: 902.525 MHz; Duty Cycle: 1:1

Medium: 900 Muscle ($\sigma = 1.03$ mho/m, $\epsilon_r = 53.62$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section; Space: 0.0 cm; Tested with Beltclip

Test Date: 03-23-2004; Ambient Temp: 22.9°C; Tissue Temp: 20.8°C

Probe: ES3DV2 - SN3022; ConvF(6, 6, 6); Calibrated: 9/23/2003

Sensor-Surface: 3mm (Mechanical Surface Detection)

Electronics: DAE3 Sn455; Calibrated: 1/6/2004

Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

Measurement SW: DASY4, V4.2 Build 12; Postprocessing SW: SEMCAD, V1.8 Build 93

Low Ch, Maximum Capacity Battery

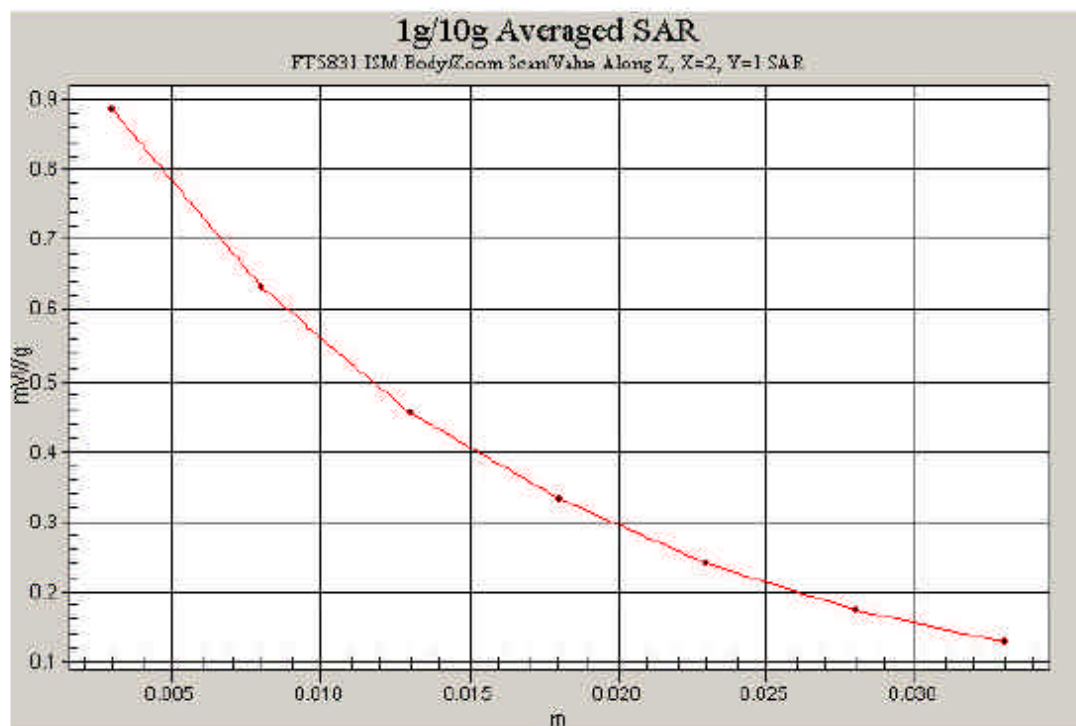
Area Scan (61x171x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 1.1 W/kg

SAR(1 g) = 0.793 mW/g; SAR(10 g) = 0.560 mW/g

Reference Value = 24.1 V/m



PCTEST SAR REPORT	FCC CERTIFICATION			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)		

PCTESTÔ SAR REPORT	 FCC CERTIFICATION 			Reviewed by: Quality Manager
SAR Filename: SAR.240309236.AZ4	Test Dates: March 22-24, 2004	Phone Type: Dual-Mode PTT Phone (iDEN/ISM)	FCC ID: AZ489FT5831	Page A-23 of A-23