

GSM 1900 Towards Ground High

Date/Time: 1/11/2010 9:23:36 PM

Communication System: PCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.401 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 0.613 W/kg

SAR(1 g) = 0.366 mW/g; SAR(10 g) = 0.211 mW/g

Maximum value of SAR (measured) = 0.399 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.0 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 0.463 W/kg

SAR(1 g) = 0.297 mW/g; SAR(10 g) = 0.182 mW/g

Maximum value of SAR (measured) = 0.320 mW/g

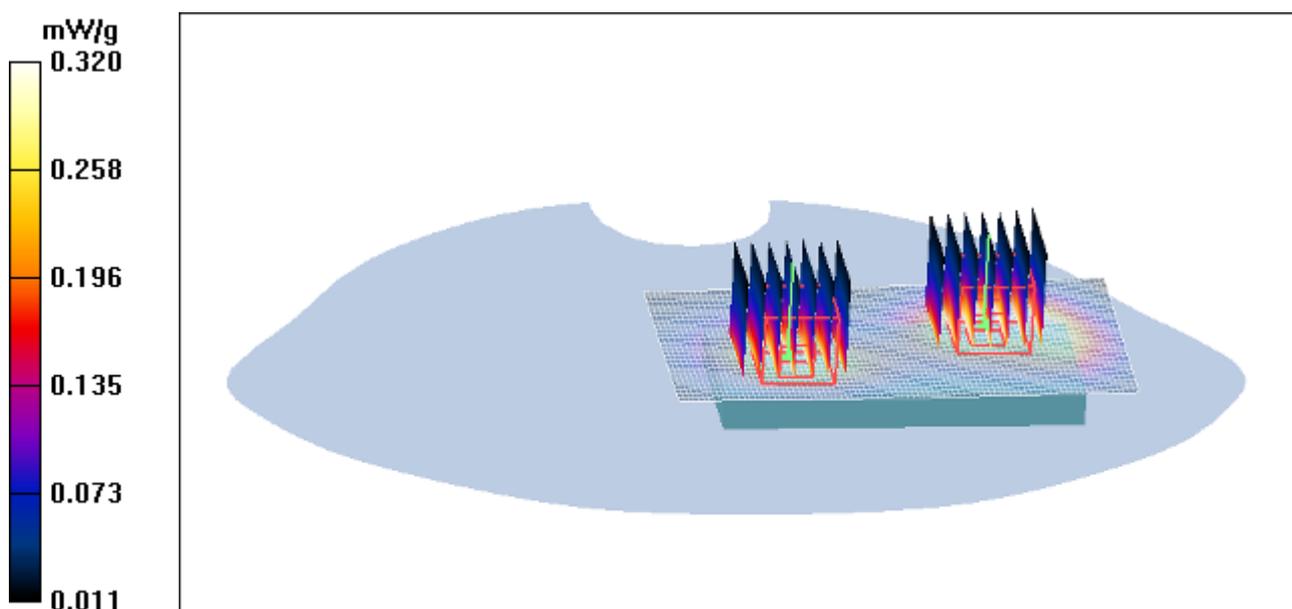


Figure 71 Body, Towards Ground, GSM 1900 Channel 810

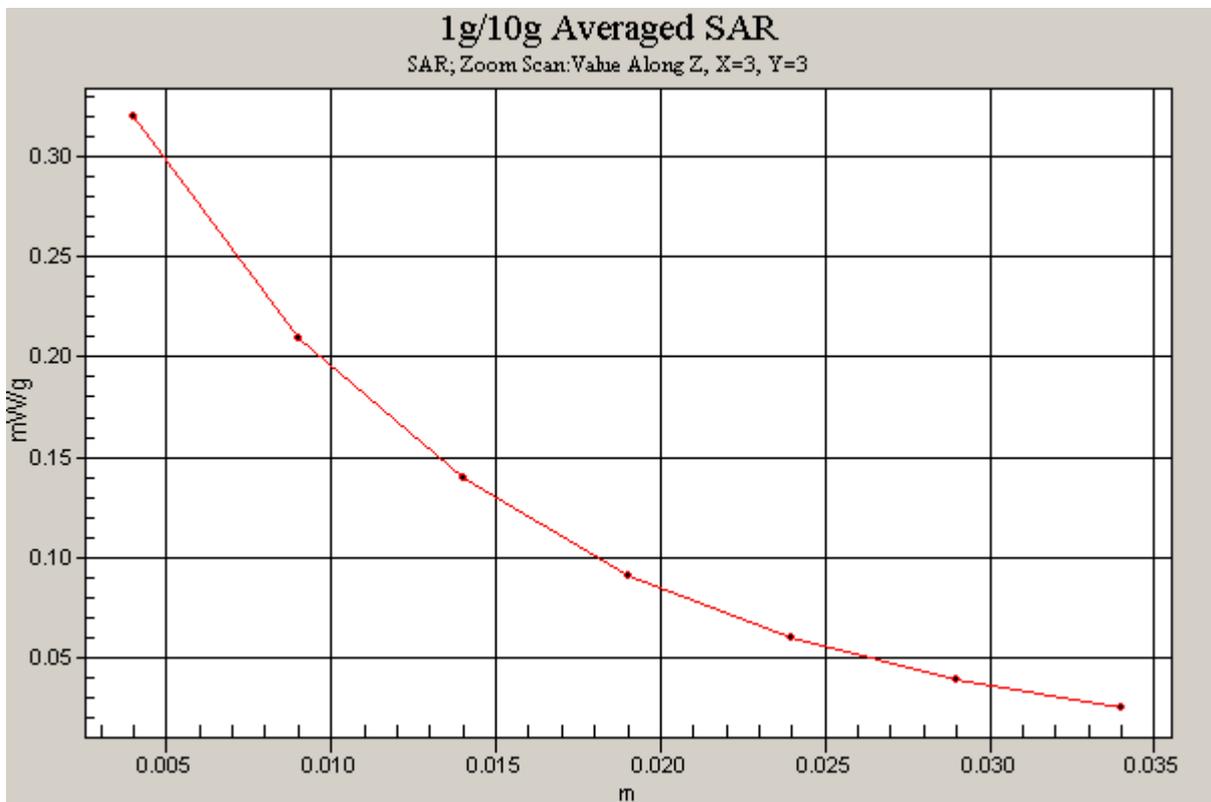
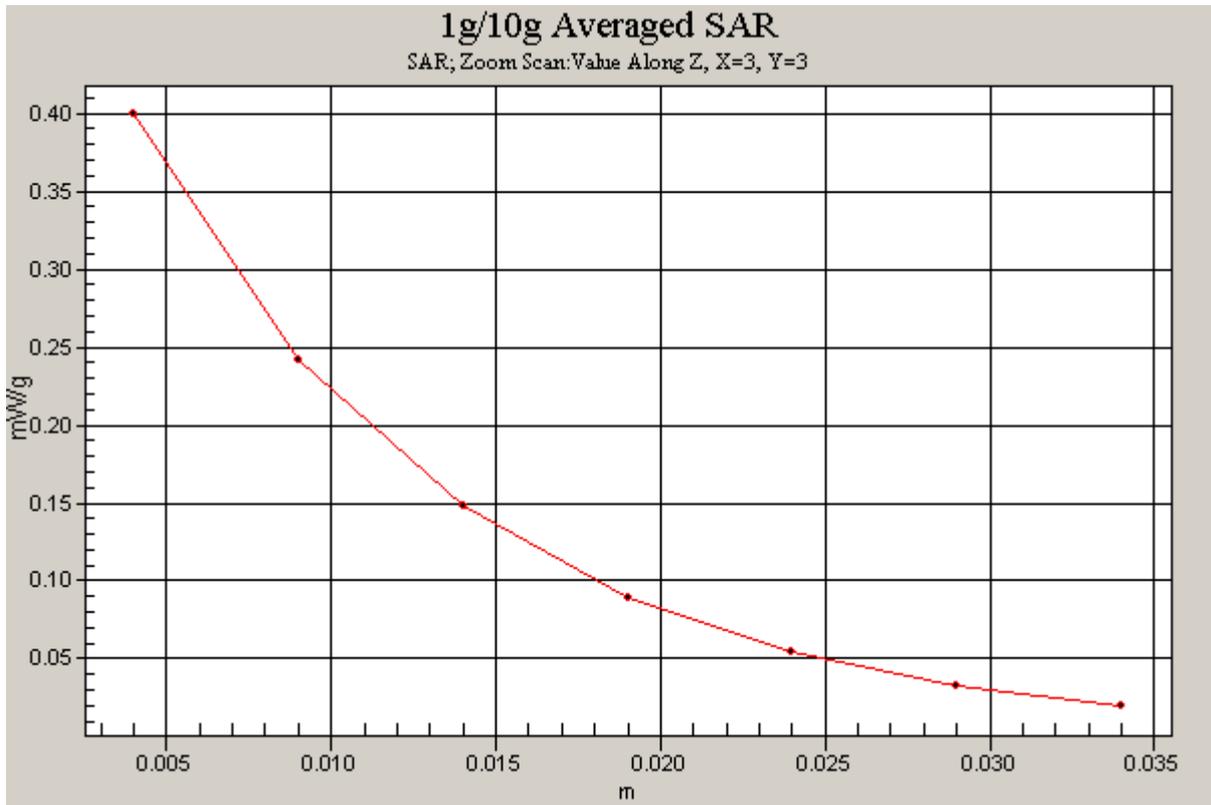


Figure 72 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 Channel 810)

GSM 1900 Towards Ground Middle

Date/Time: 1/11/2010 8:22:38 PM

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.358 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.8 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 0.538 W/kg

SAR(1 g) = 0.325 mW/g; SAR(10 g) = 0.190 mW/g

Maximum value of SAR (measured) = 0.353 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.8 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 0.407 W/kg

SAR(1 g) = 0.265 mW/g; SAR(10 g) = 0.165 mW/g

Maximum value of SAR (measured) = 0.286 mW/g

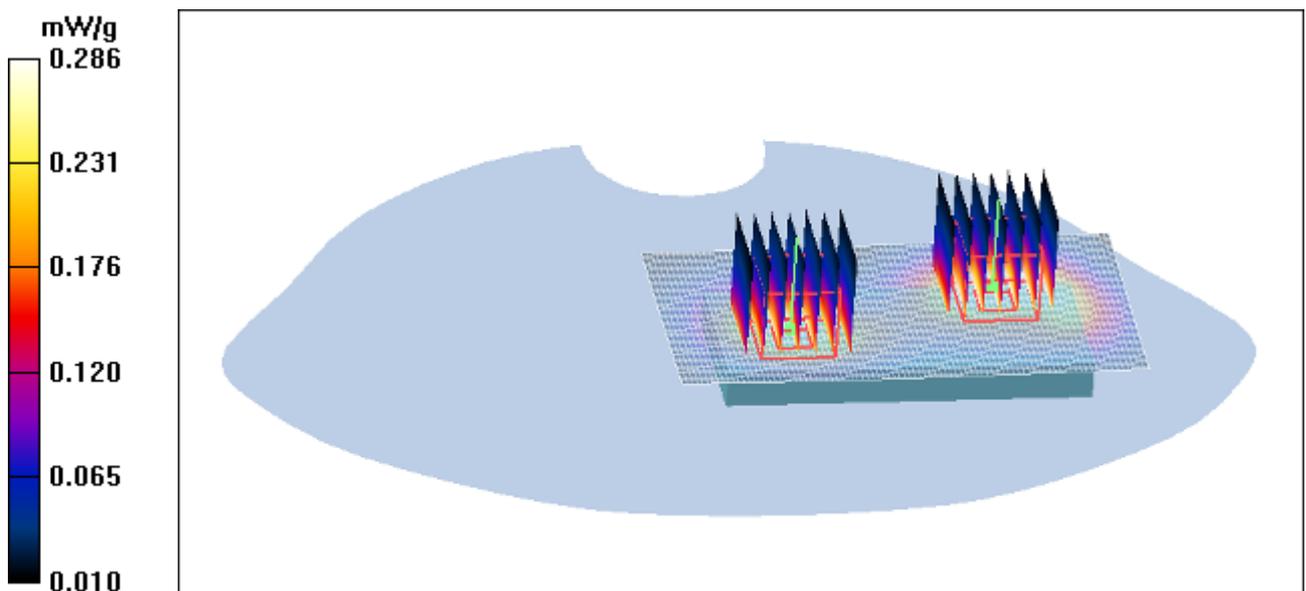


Figure 73 Body, Towards Ground, GSM 1900 Channel 661

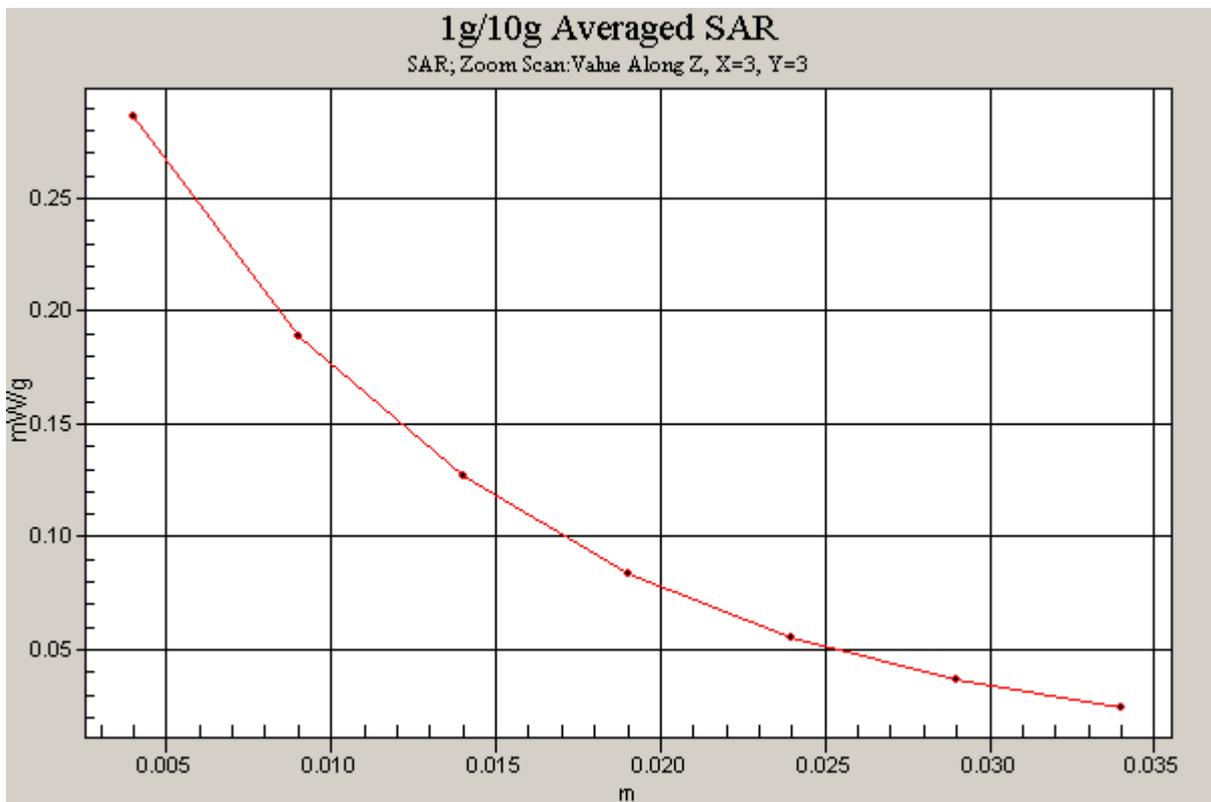
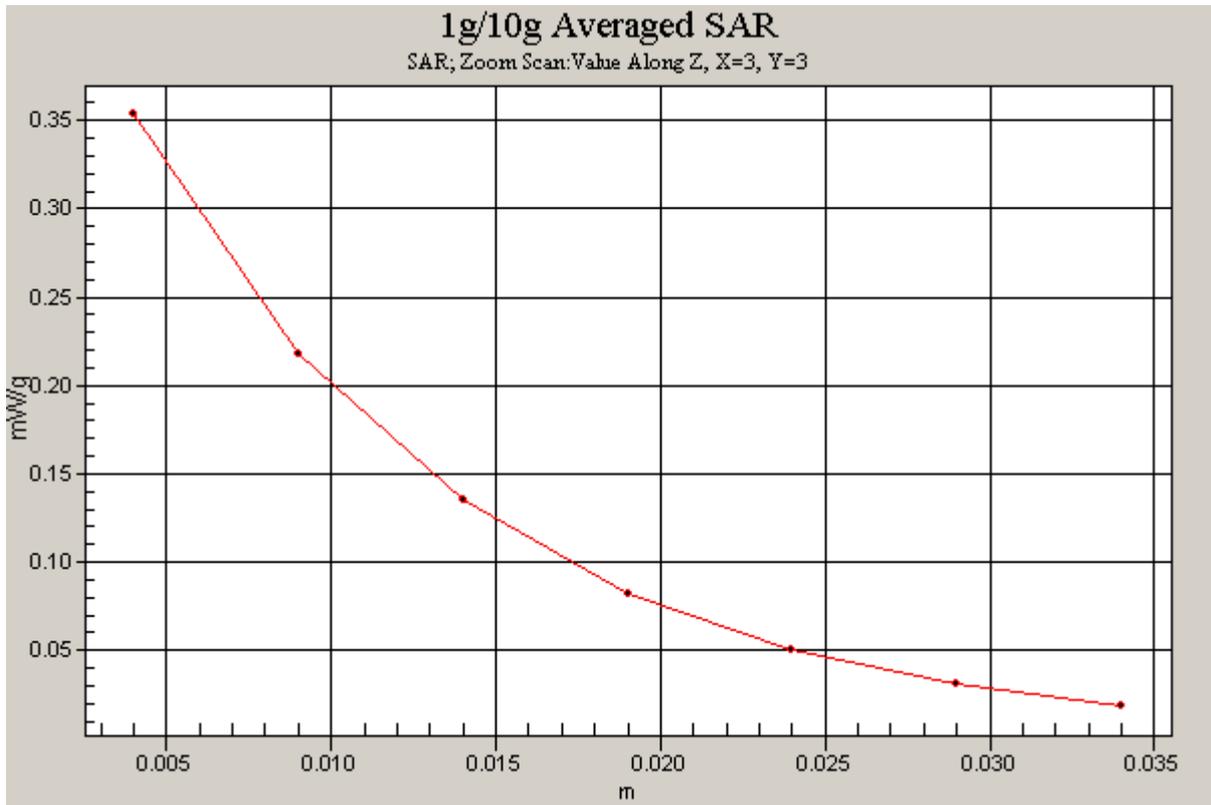


Figure 74 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 Channel 661)

GSM 1900 Towards Ground Low

Date/Time: 1/11/2010 8:52:38 PM

Communication System: PCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.325 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.1 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 0.491 W/kg

SAR(1 g) = 0.296 mW/g; SAR(10 g) = 0.174 mW/g

Maximum value of SAR (measured) = 0.324 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.1 V/m; Power Drift = 0.007 dB

Peak SAR (extrapolated) = 0.357 W/kg

SAR(1 g) = 0.233 mW/g; SAR(10 g) = 0.147 mW/g

Maximum value of SAR (measured) = 0.251 mW/g

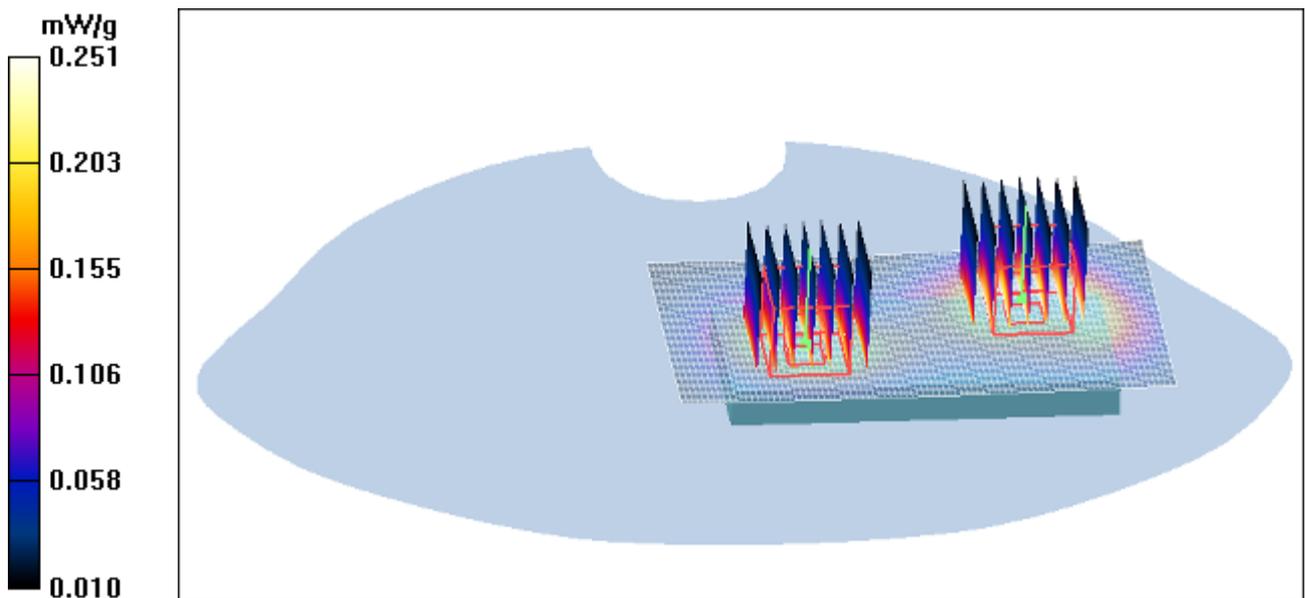


Figure 75 Body, Towards Ground, GSM 1900 Channel 512

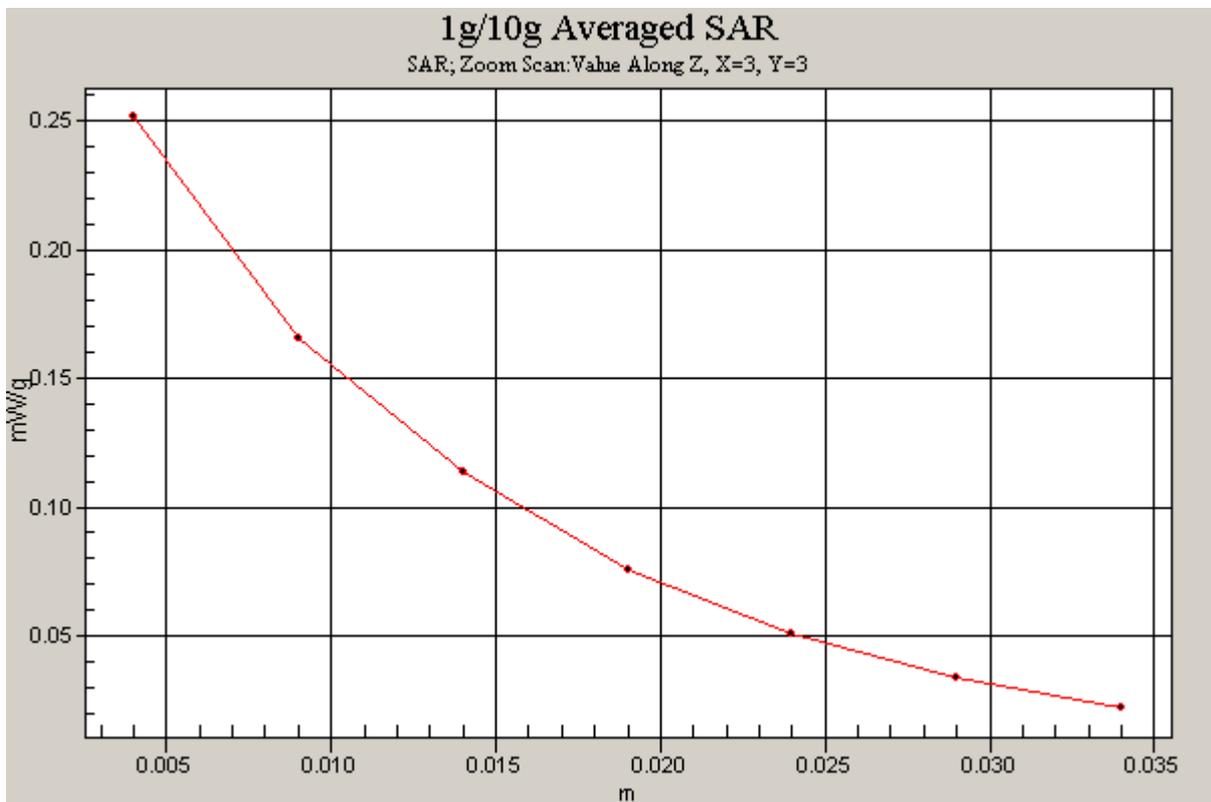
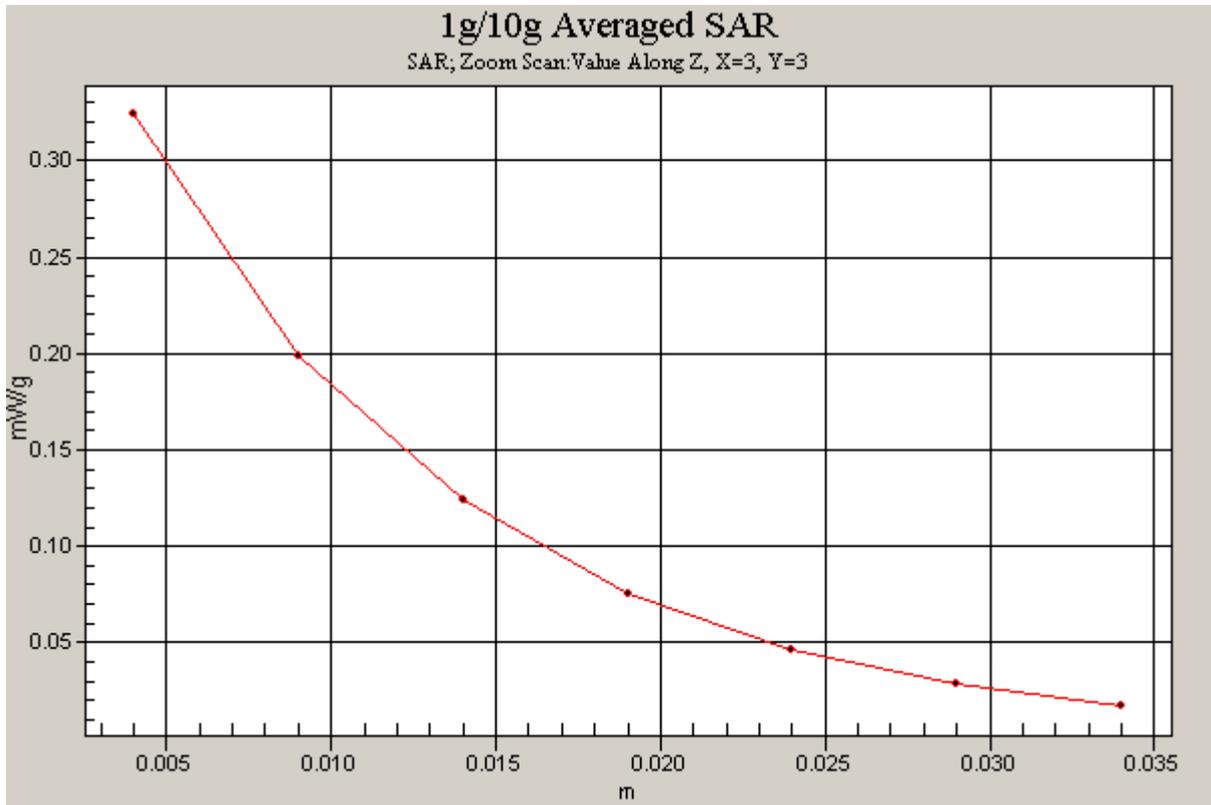


Figure 76 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 Channel 512)

GSM 1900 Towards Phantom Middle

Date/Time: 1/11/2010 7:51:54 PM

Communication System: PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.275 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.76 V/m; Power Drift = -0.088 dB

Peak SAR (extrapolated) = 0.411 W/kg

SAR(1 g) = 0.250 mW/g; SAR(10 g) = 0.148 mW/g

Maximum value of SAR (measured) = 0.274 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.76 V/m; Power Drift = -0.088 dB

Peak SAR (extrapolated) = 0.342 W/kg

SAR(1 g) = 0.225 mW/g; SAR(10 g) = 0.142 mW/g

Maximum value of SAR (measured) = 0.241 mW/g

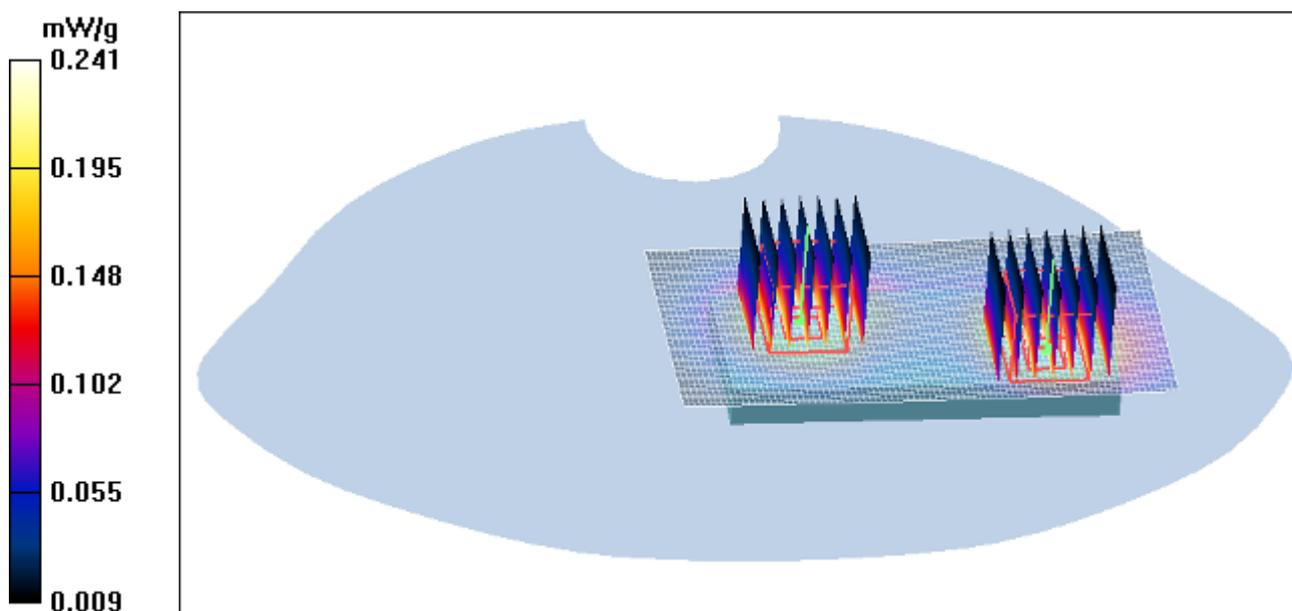


Figure 77 Body, Towards Phantom, GSM 1900 Channel 661

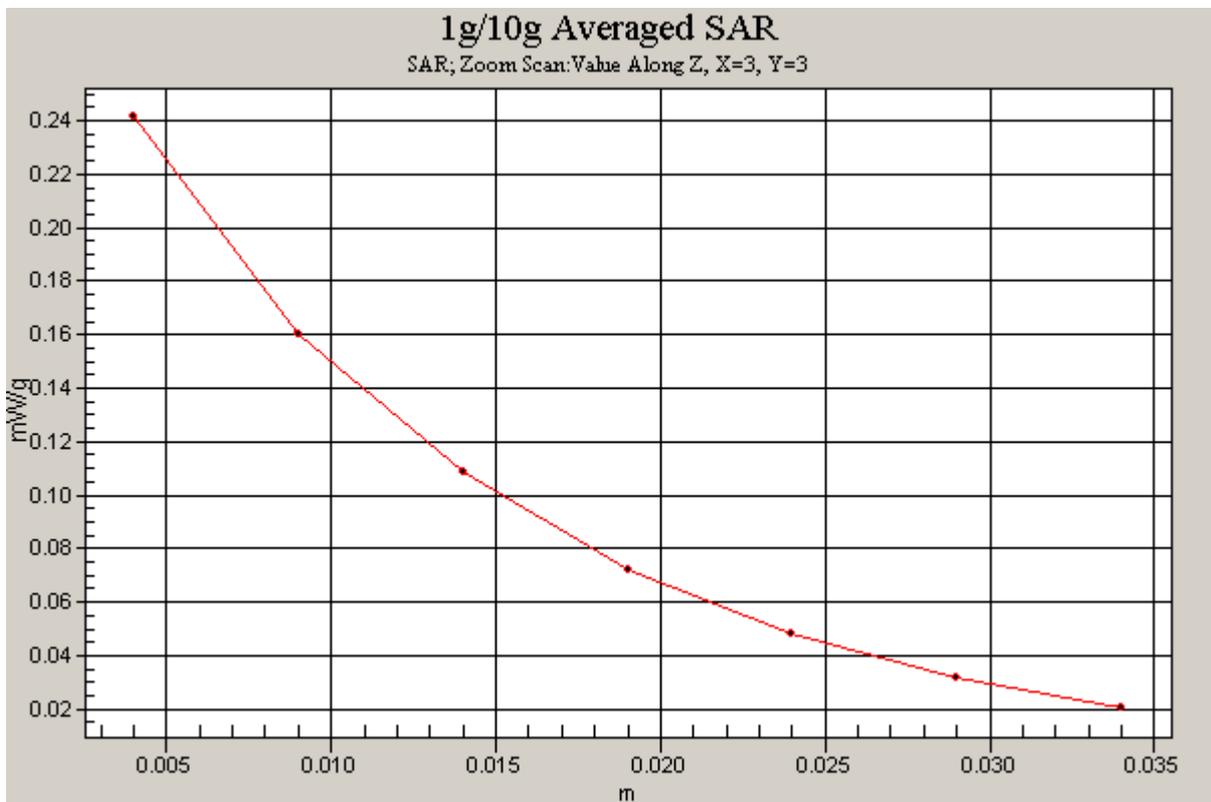
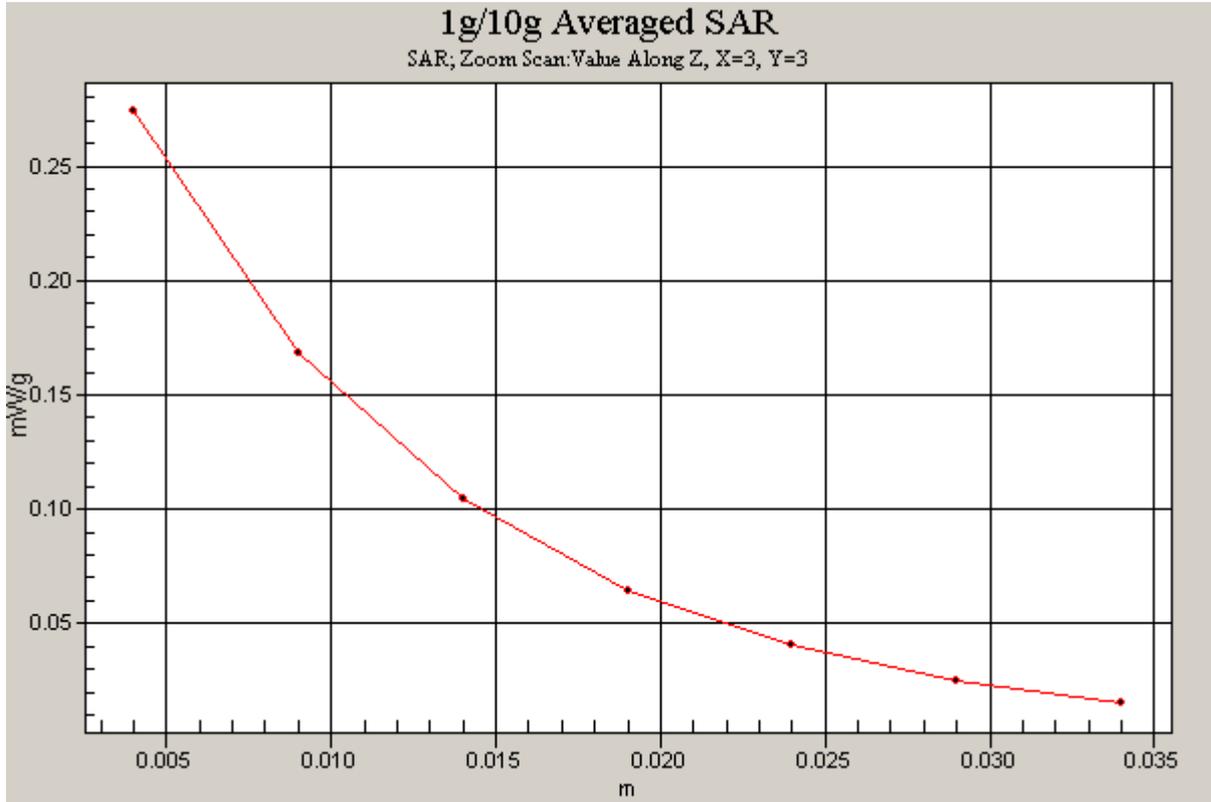


Figure 78 Z-Scan at power reference point (Body, Towards Phantom, GSM 1900 Channel 661)

GSM 1900 with Earphone Towards Ground High

Date/Time: 1/12/2010 11:52:55 AM

Communication System: PCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.383 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.43 V/m; Power Drift = 0.115 dB

Peak SAR (extrapolated) = 0.570 W/kg

SAR(1 g) = 0.342 mW/g; SAR(10 g) = 0.200 mW/g

Maximum value of SAR (measured) = 0.369 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.43 V/m; Power Drift = 0.115 dB

Peak SAR (extrapolated) = 0.422 W/kg

SAR(1 g) = 0.272 mW/g; SAR(10 g) = 0.170 mW/g

Maximum value of SAR (measured) = 0.293 mW/g

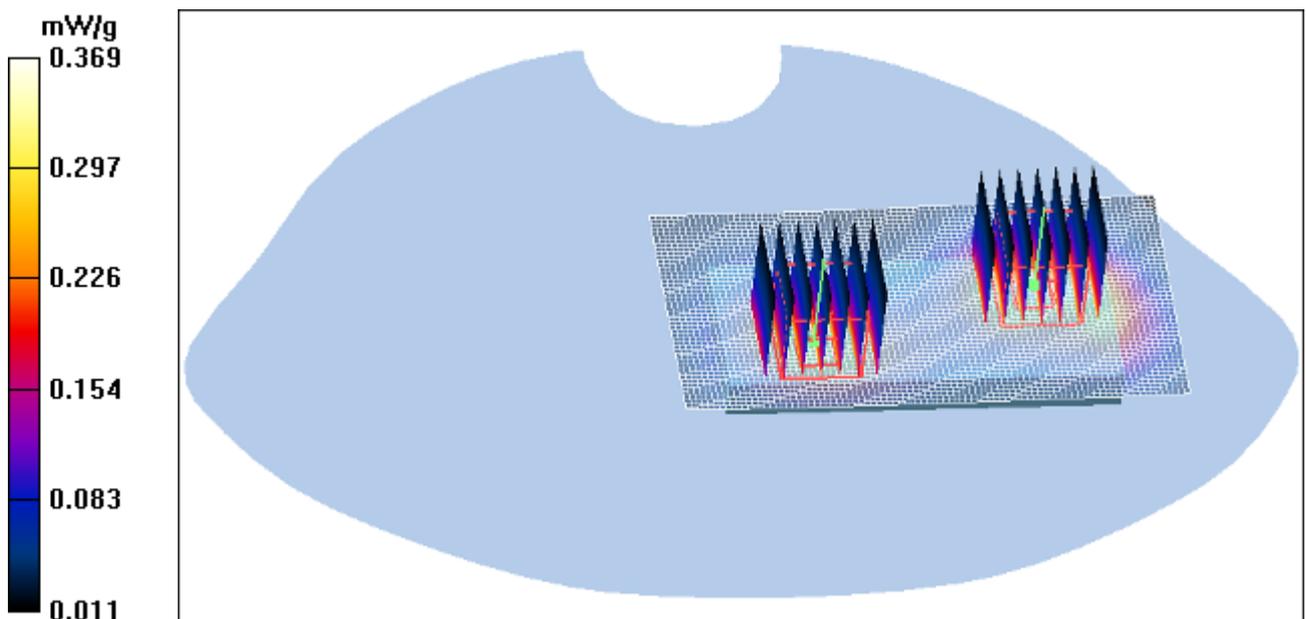


Figure 79 Body, Towards Ground, GSM 1900 Channel 810

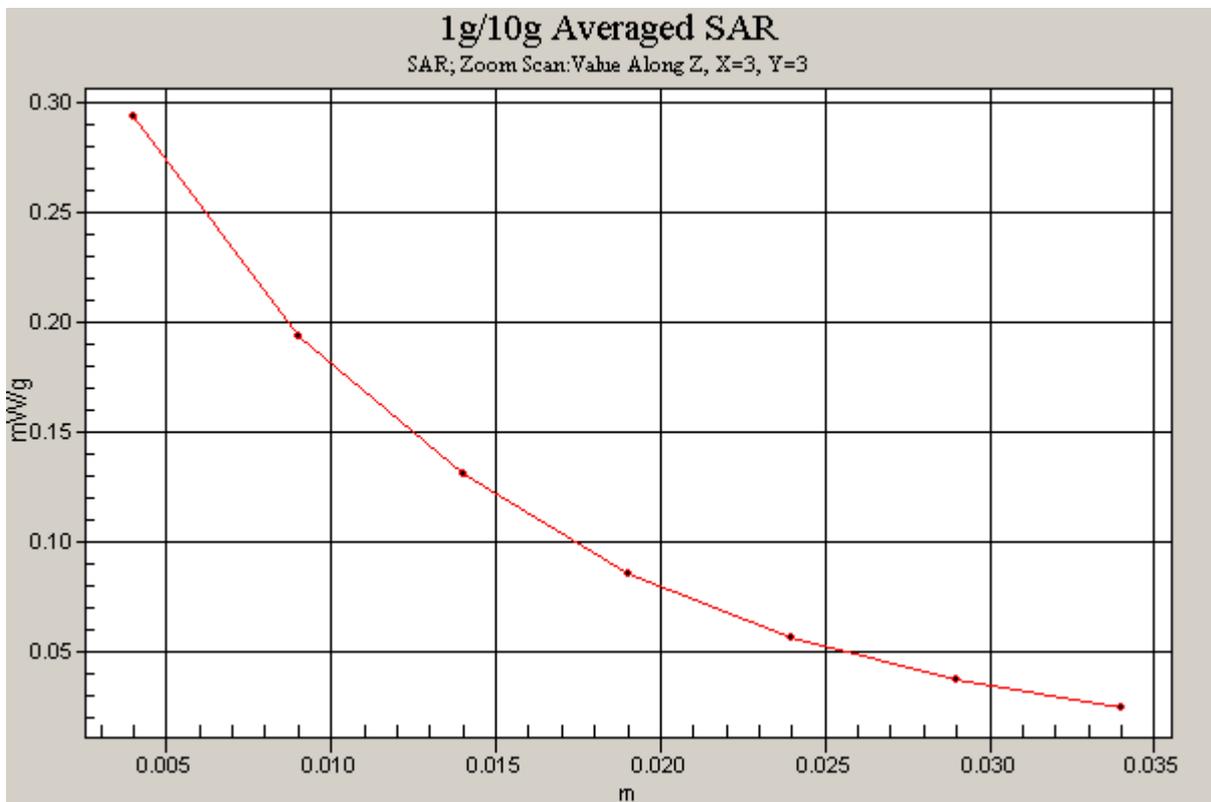
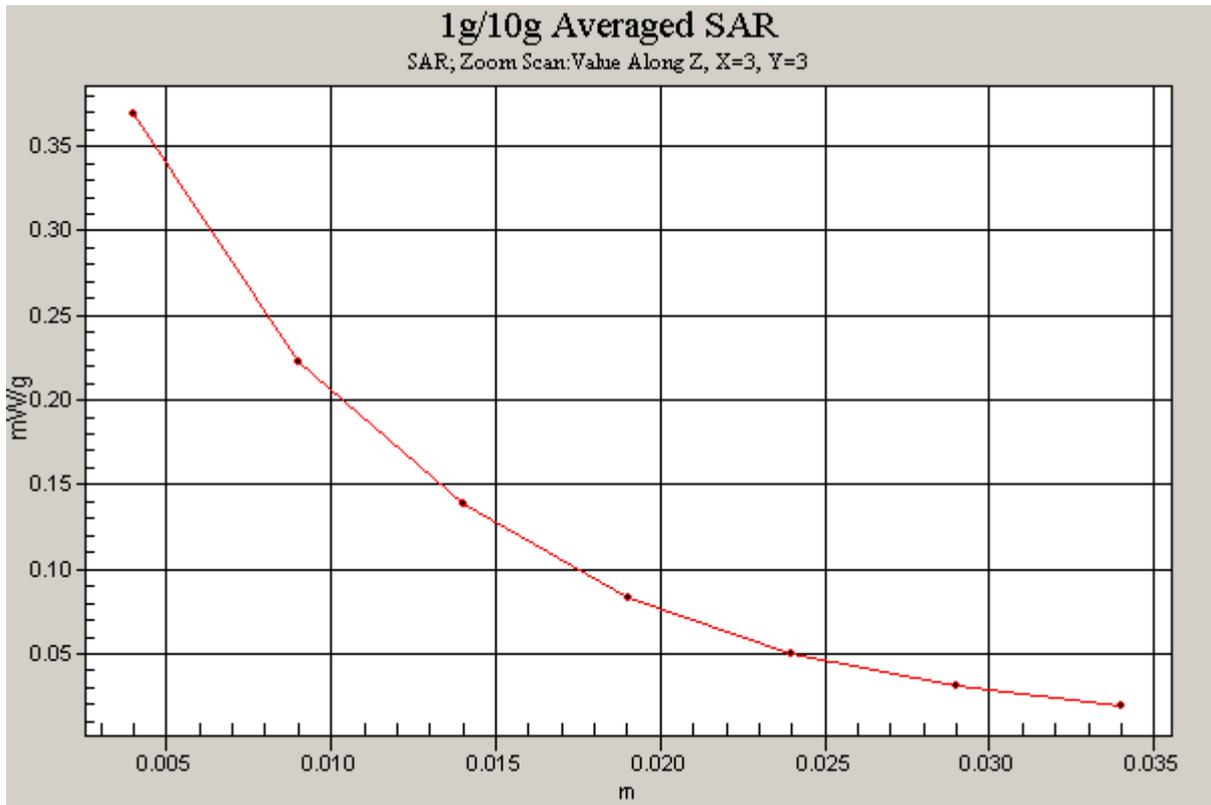


Figure 80 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 Channel 810)

GSM 1900+GPRS(2Up) Towards Ground High

Date/Time: 1/11/2010 10:35:20 PM

Communication System: PCS 1900+GPRS(2Up); Frequency: 1909.8 MHz; Duty Cycle: 1:4.15

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.527 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 0.836 W/kg

SAR(1 g) = 0.499 mW/g; SAR(10 g) = 0.289 mW/g

Maximum value of SAR (measured) = 0.546 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.7 V/m; Power Drift = -0.007 dB

Peak SAR (extrapolated) = 0.652 W/kg

SAR(1 g) = 0.417 mW/g; SAR(10 g) = 0.258 mW/g

Maximum value of SAR (measured) = 0.445 mW/g

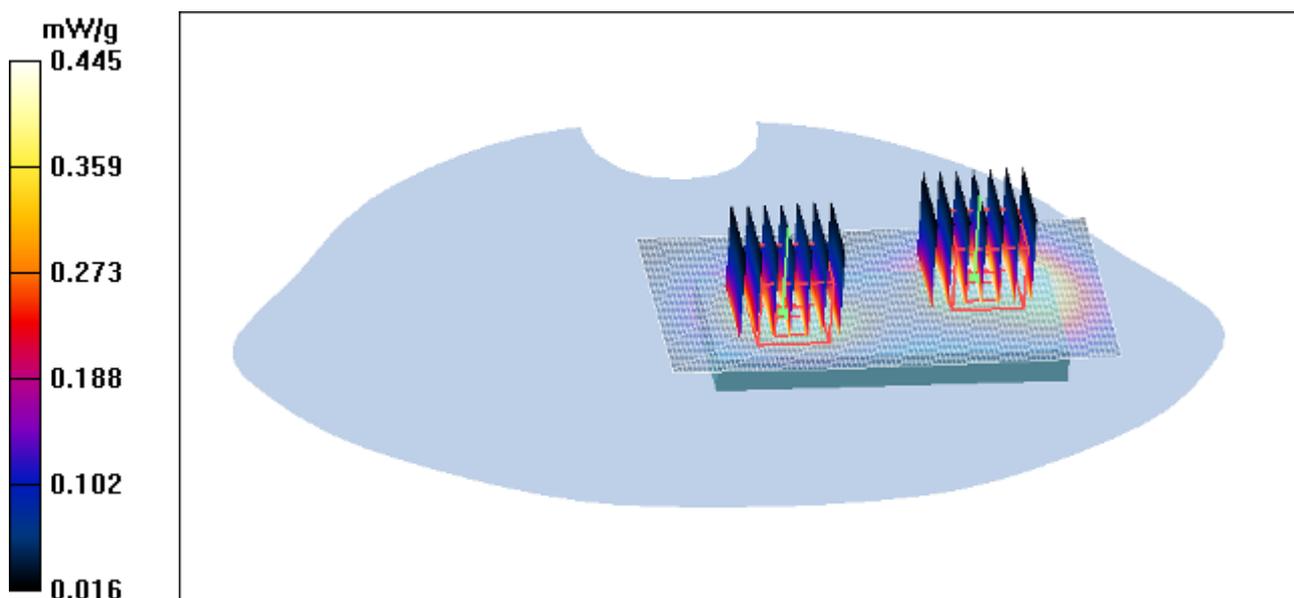


Figure 81 Body, Towards Ground, GSM 1900 GPRS (2up) Channel 810

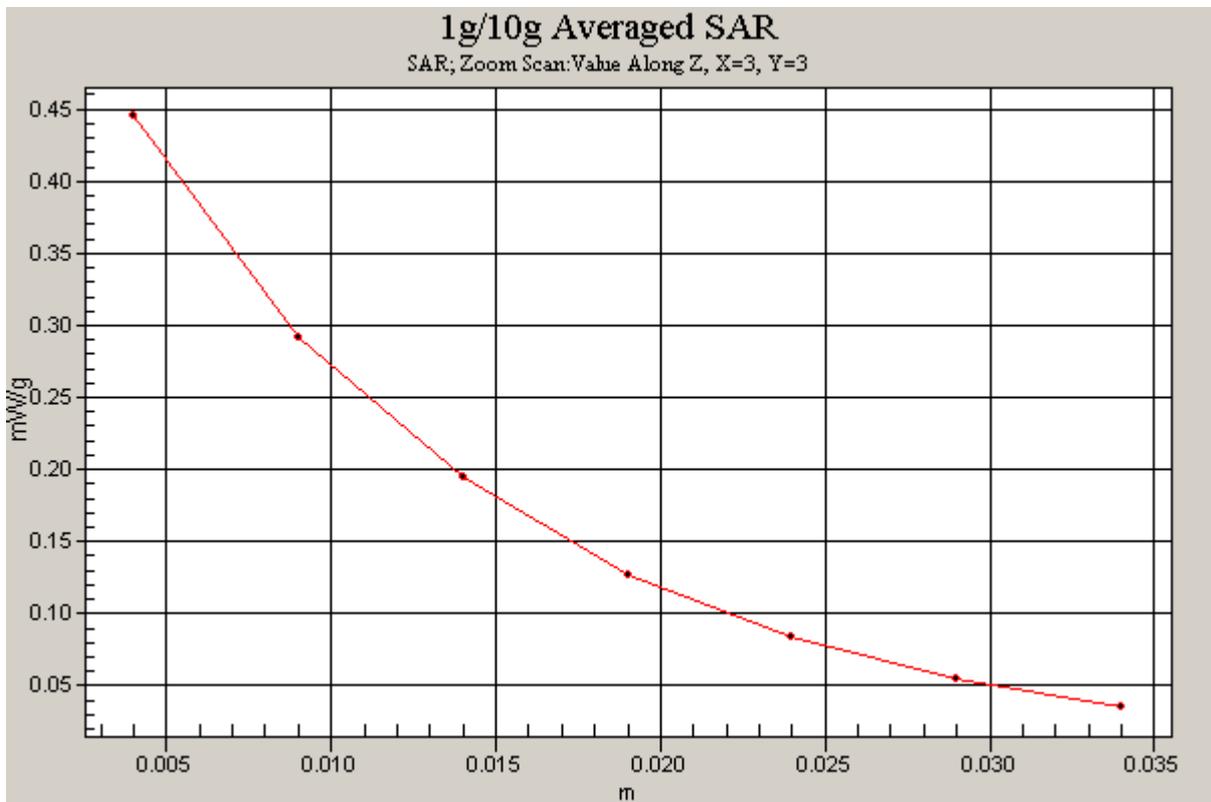
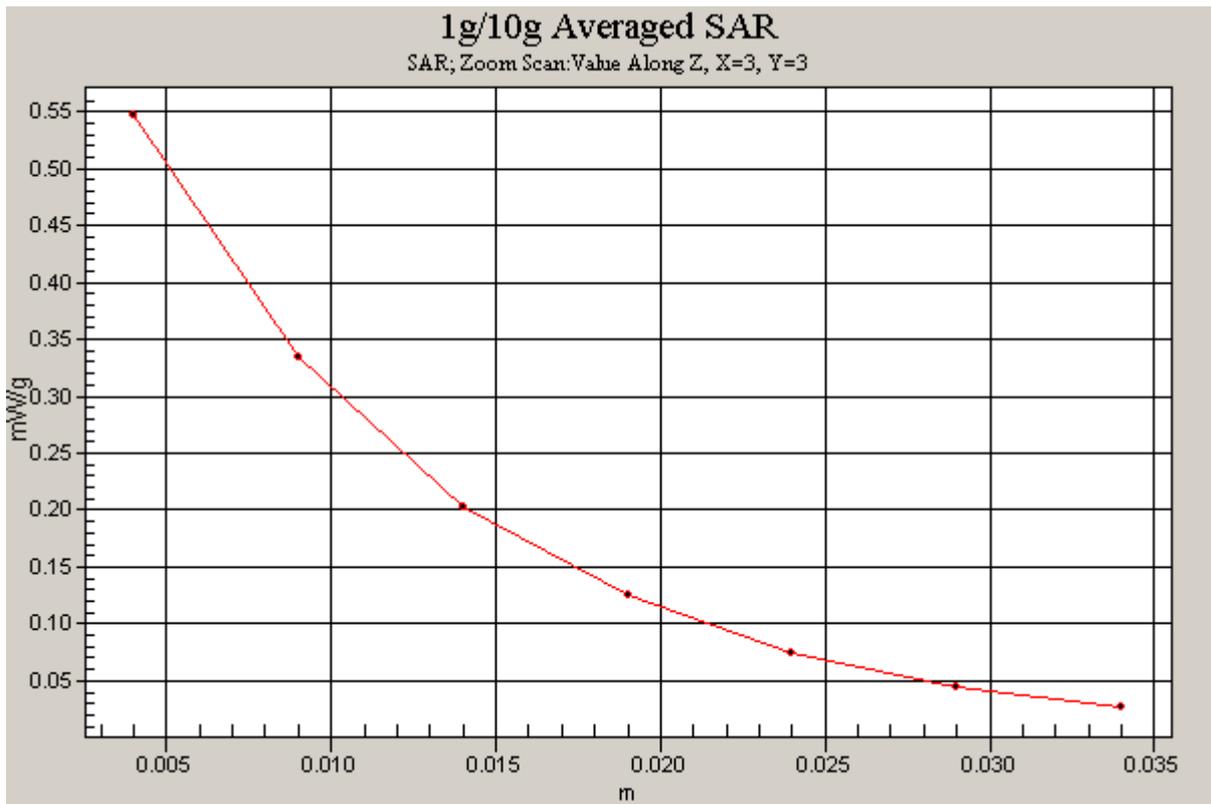


Figure 82 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 GPRS (2up) Channel 810)

GSM 1900+GPRS(2Up) Towards Ground Middle

Date/Time: 1/11/2010 9:57:58 PM

Communication System: PCS 1900+GPRS(2Up); Frequency: 1880 MHz; Duty Cycle: 1:4.15

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.509 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.3 V/m; Power Drift = -0.147 dB

Peak SAR (extrapolated) = 0.808 W/kg

SAR(1 g) = 0.476 mW/g; SAR(10 g) = 0.279 mW/g

Maximum value of SAR (measured) = 0.519 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.3 V/m; Power Drift = -0.147 dB

Peak SAR (extrapolated) = 0.592 W/kg

SAR(1 g) = 0.387 mW/g; SAR(10 g) = 0.242 mW/g

Maximum value of SAR (measured) = 0.414 mW/g

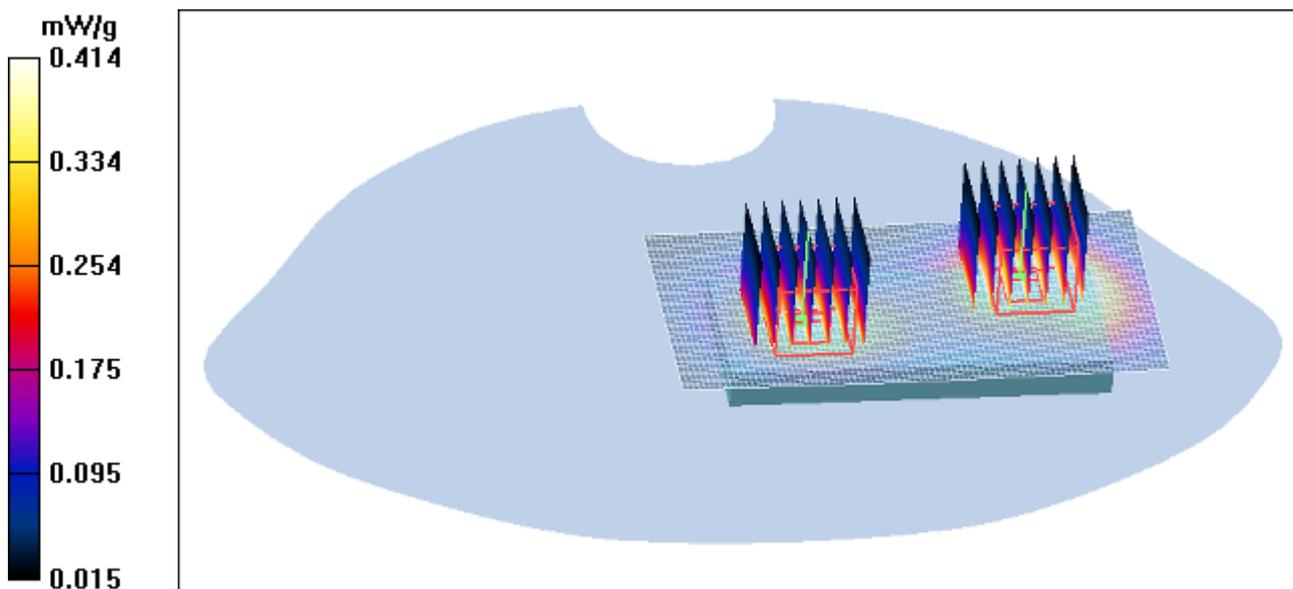


Figure 83 Body, Towards Ground, GSM 1900 GPRS (2up) Channel 661

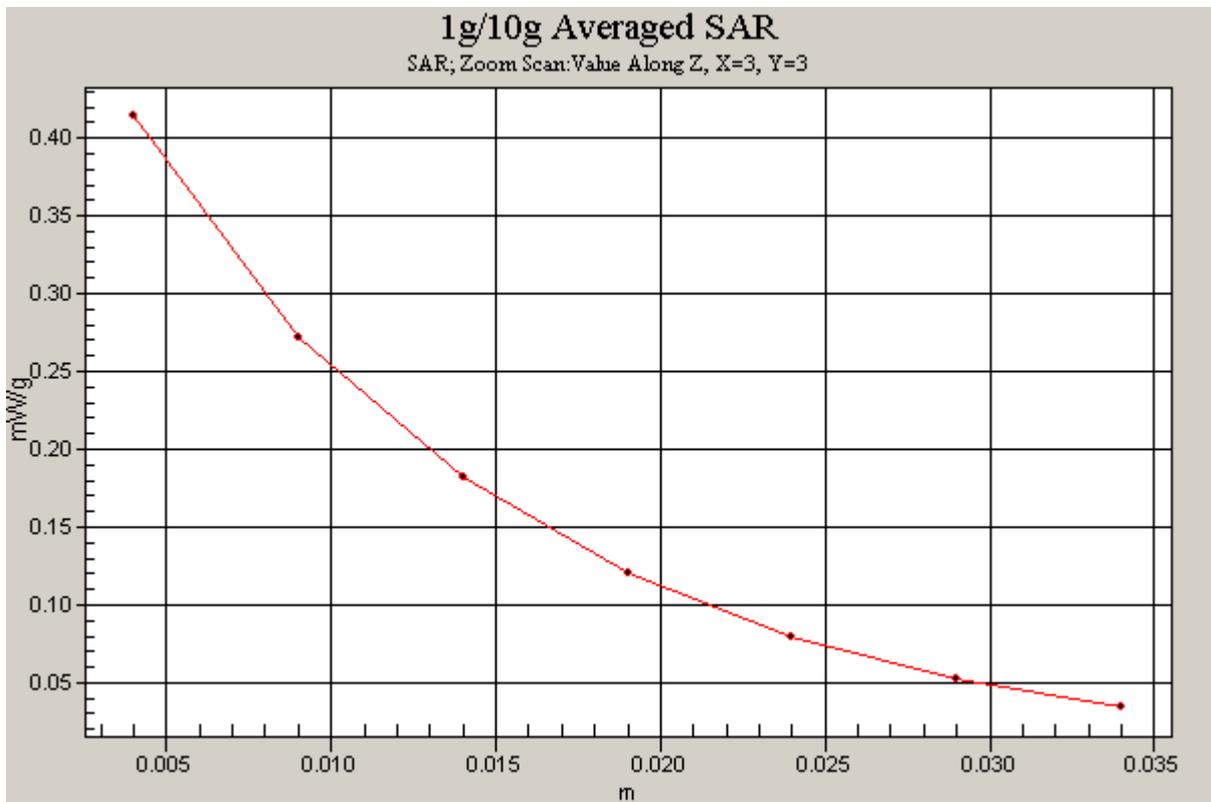
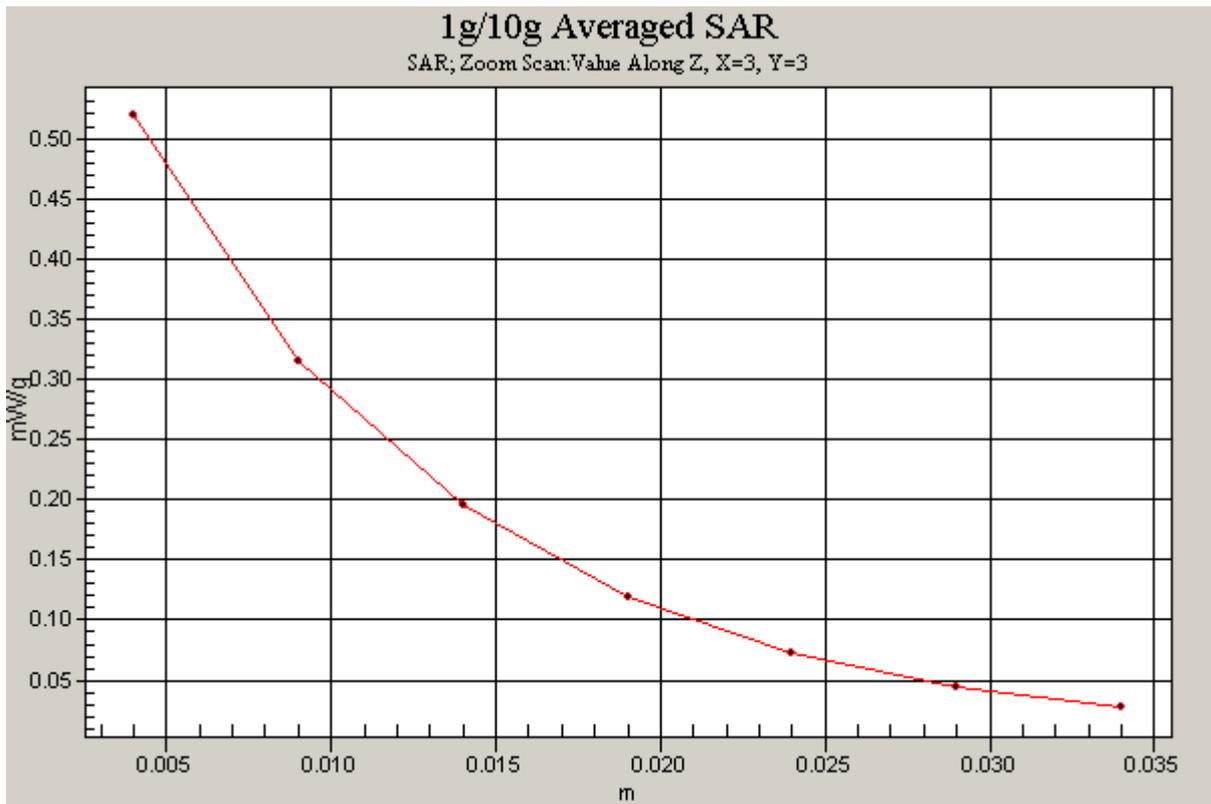


Figure 84 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 GPRS (2up) Channel 661)

GSM 1900+GPRS(2Up) Towards Ground Low

Date/Time: 1/11/2010 11:05:49 PM

Communication System: PCS 1900+GPRS(2Up); Frequency: 1850.2 MHz; Duty Cycle: 1:4.15

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.465 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 0.705 W/kg

SAR(1 g) = 0.426 mW/g; SAR(10 g) = 0.248 mW/g

Maximum value of SAR (measured) = 0.456 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 0.524 W/kg

SAR(1 g) = 0.341 mW/g; SAR(10 g) = 0.215 mW/g

Maximum value of SAR (measured) = 0.363 mW/g

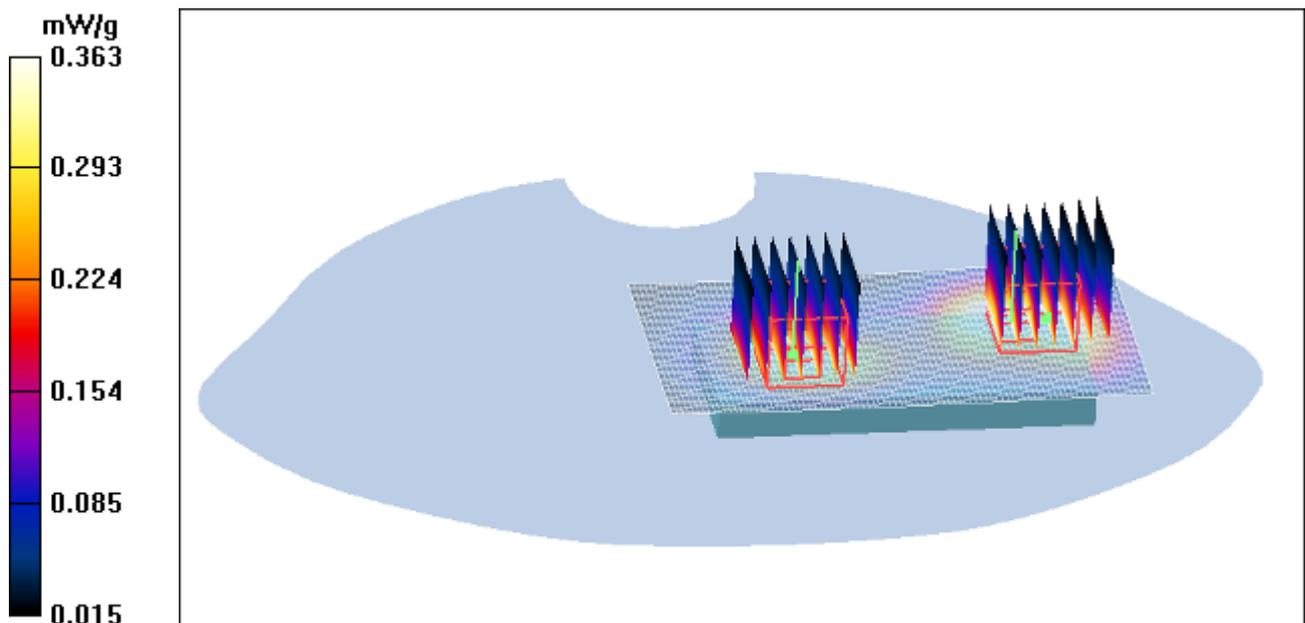


Figure 85 Body, Towards Ground, GSM 1900 GPRS (2up) Channel 512

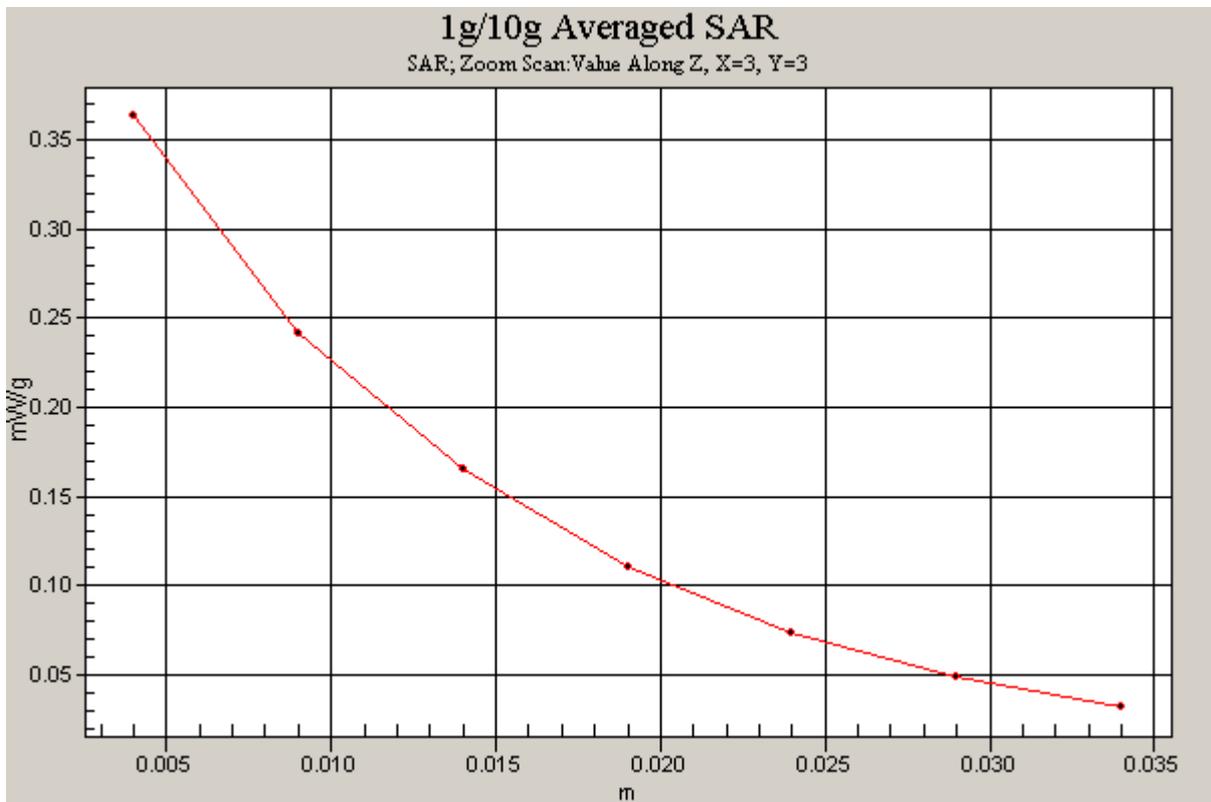
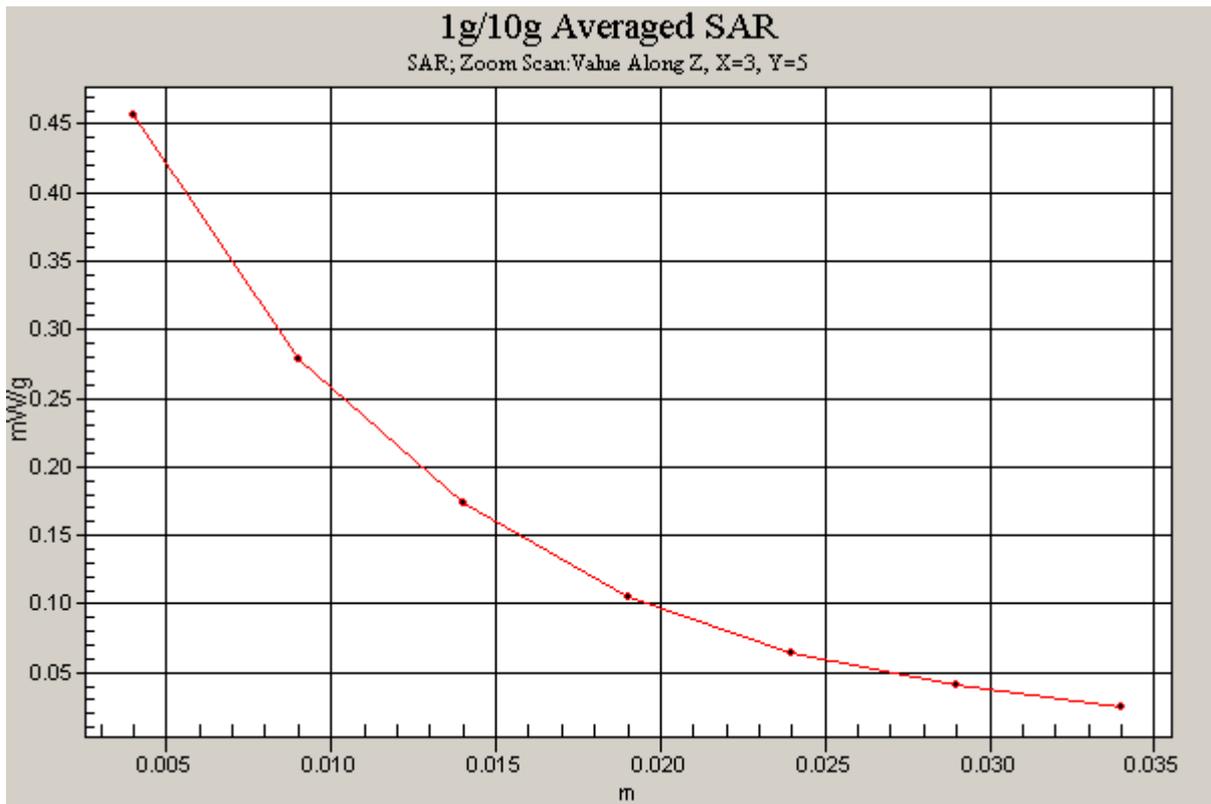


Figure 86 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 GPRS (2up) Channel 512)

GSM 1900+GPRS(2Up) Towards Phantom Middle

Date/Time: 1/12/2010 10:48:24 AM

Communication System: PCS 1900+GPRS(2Up); Frequency: 1880 MHz;Duty Cycle: 1:4.15

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liqid Temperature: 21.5°C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.478 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 0.693 W/kg

SAR(1 g) = 0.424 mW/g; SAR(10 g) = 0.252 mW/g

Maximum value of SAR (measured) = 0.465 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.3 V/m; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 0.494 W/kg

SAR(1 g) = 0.328 mW/g; SAR(10 g) = 0.210 mW/g

Maximum value of SAR (measured) = 0.352 mW/g

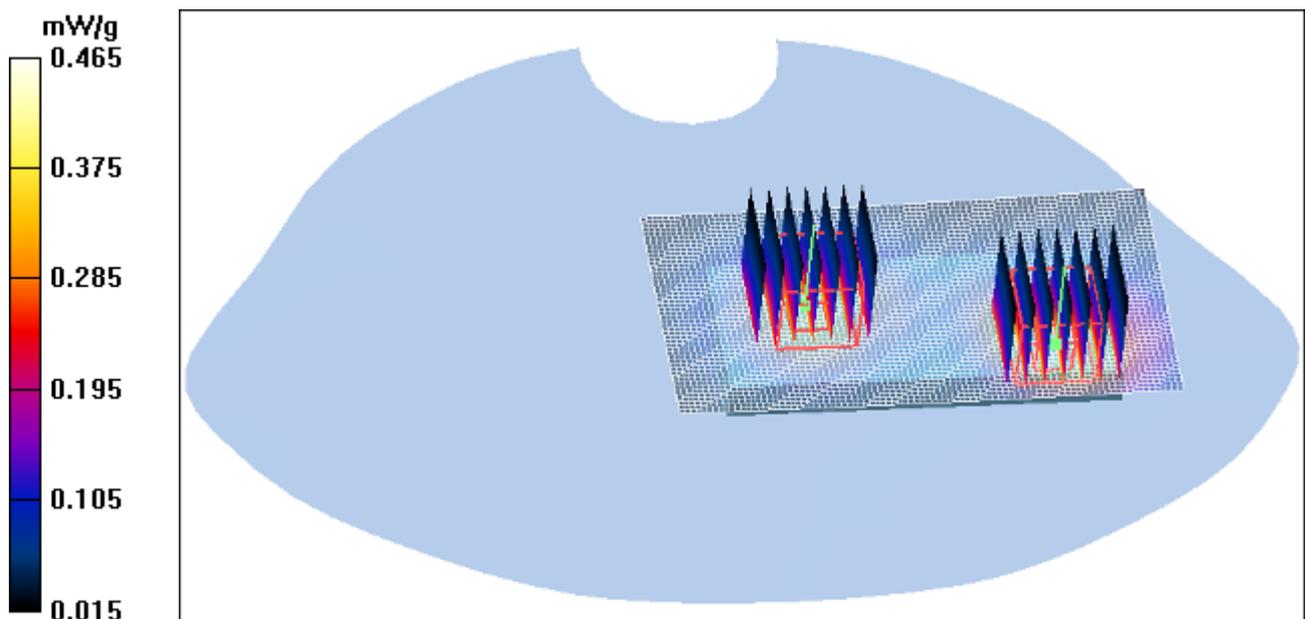


Figure 87 Body, Towards Phantom, GSM 1900 GPRS(2up) Channel 661

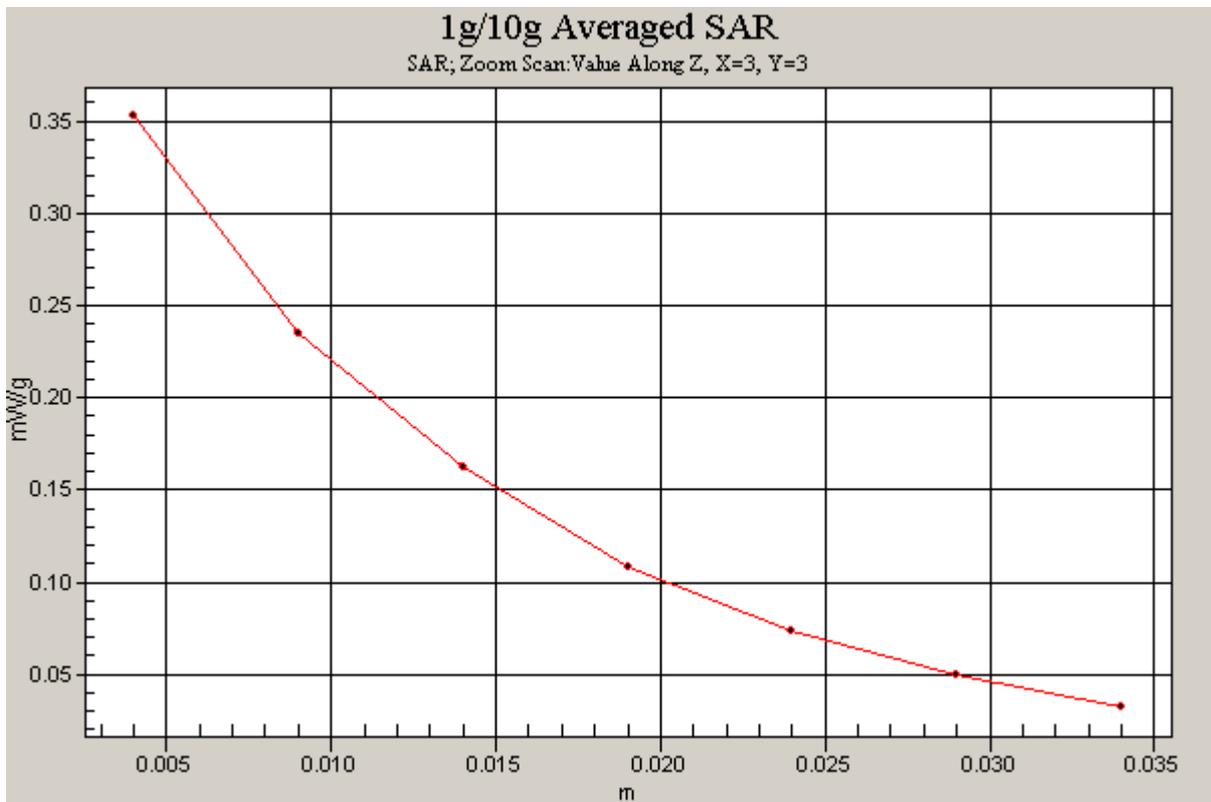
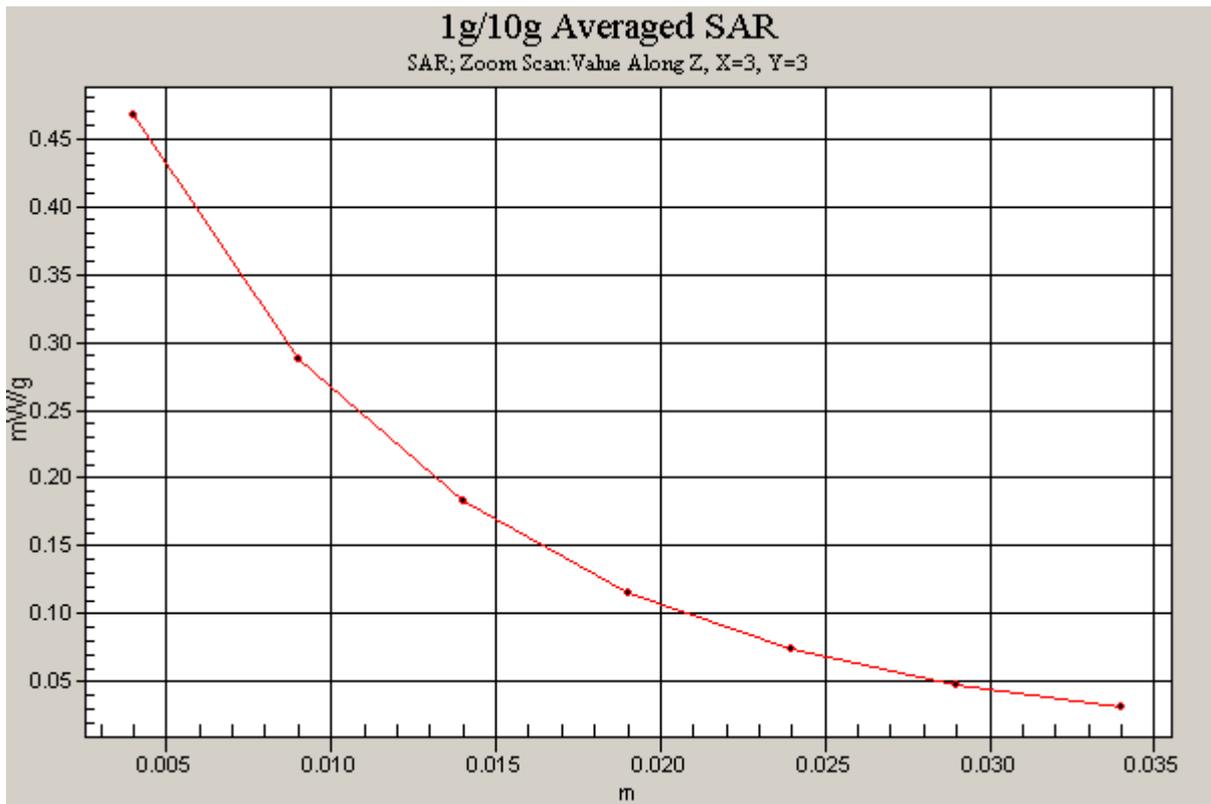


Figure 88 Z-Scan at power reference point (Body, Towards Phantom, GSM 1900 GPRS(2up)
Channel 661)

GSM 1900+EGPRS(2Up) Towards Ground High

Date/Time: 1/12/2010 11:21:53 AM

Communication System: PCS 1900+EGPRS(2Up); Frequency: 1909.8 MHz; Duty Cycle: 1:4.15

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.54$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(7.62, 7.62, 7.62); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM000 T01 ; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.557 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.8 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.834 W/kg

SAR(1 g) = 0.505 mW/g; SAR(10 g) = 0.296 mW/g

Maximum value of SAR (measured) = 0.552 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.8 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.623 W/kg

SAR(1 g) = 0.405 mW/g; SAR(10 g) = 0.253 mW/g

Maximum value of SAR (measured) = 0.437 mW/g

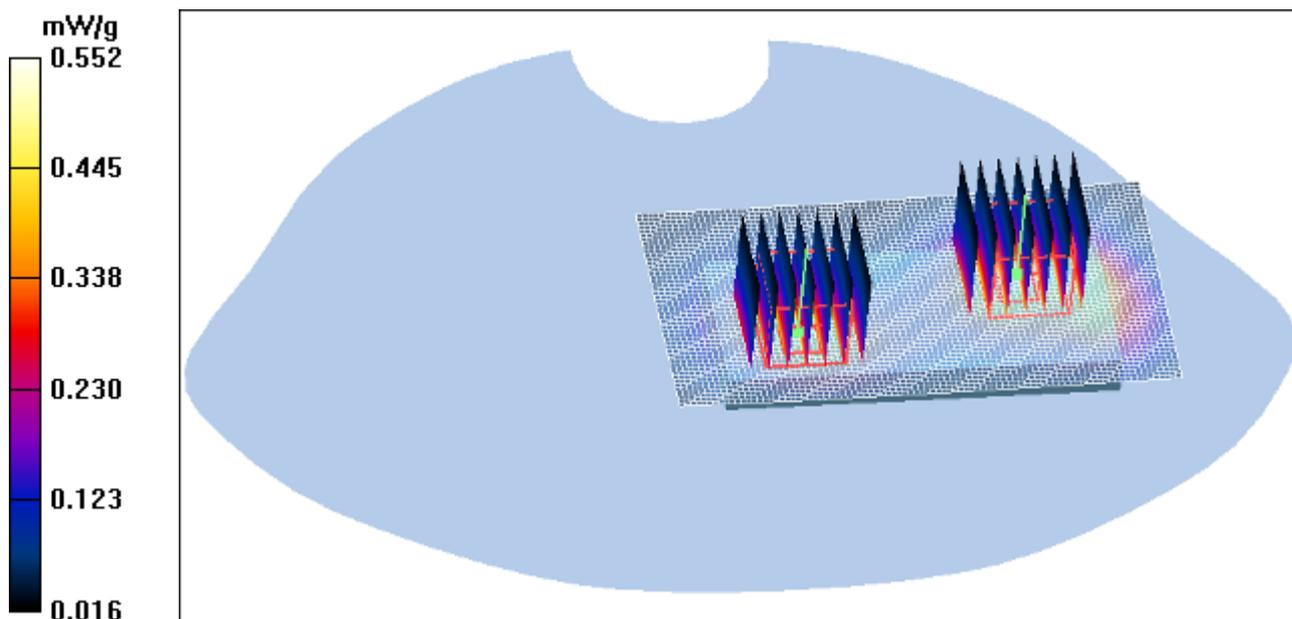


Figure 89 Body, Towards Ground, GSM 1900 EGPRS (2up) Channel 810

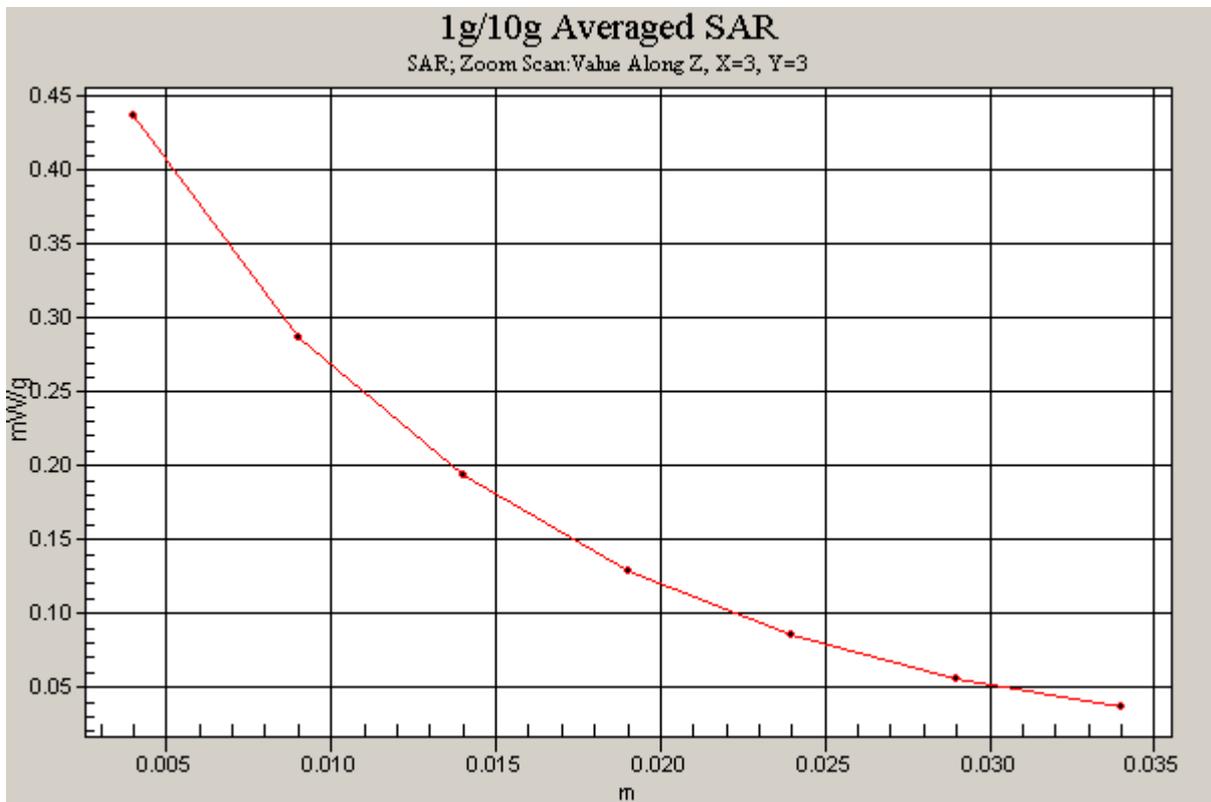
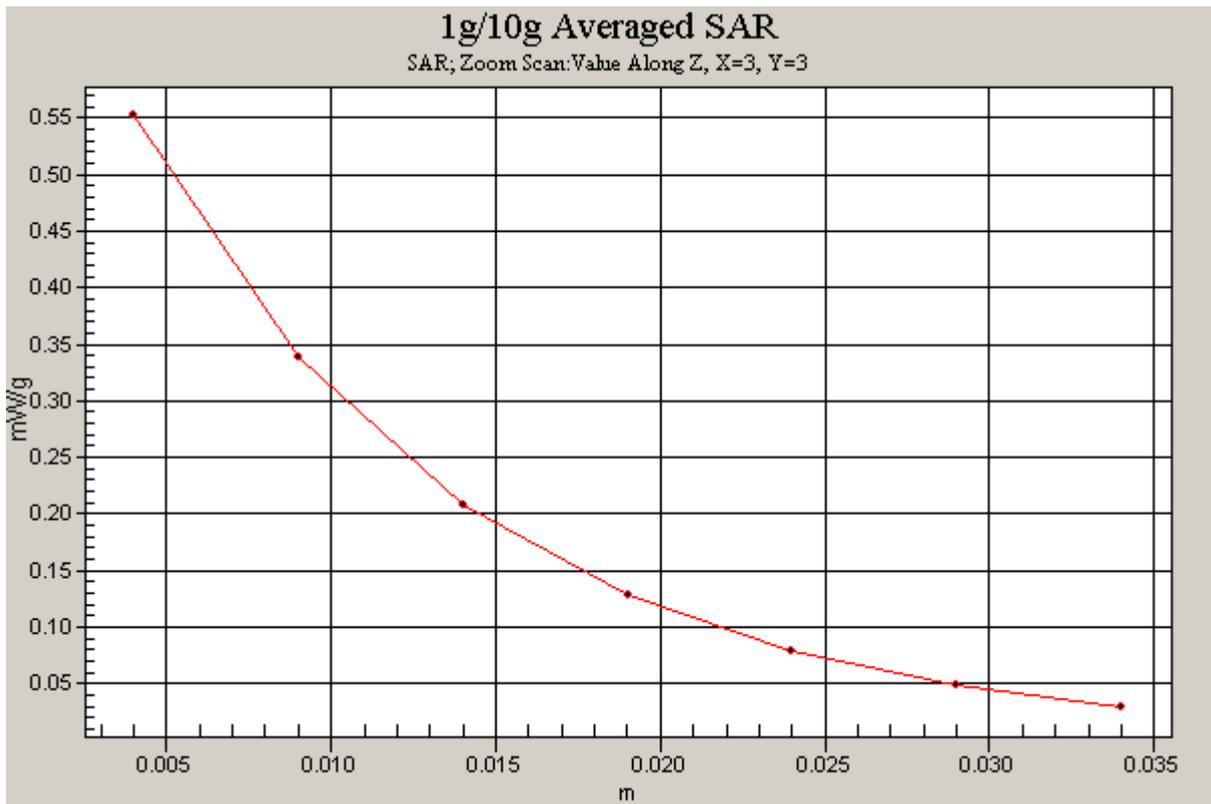


Figure 90 Z-Scan at power reference point (Body, Towards Ground, GSM 1900 EGPRS (2up) Channel 810)

WCDMA Band V Left Cheek High

Date/Time: 1/12/2010 1:17:25 PM

Communication System: WCDMA Band V; Frequency: 846.6 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 847$ MHz; $\sigma = 0.927$ mho/m; $\epsilon_r = 41.4$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.20, 9.20, 9.20); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.882 mW/g

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

Reference Value = 8.25 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.854 mW/g; SAR(10 g) = 0.586 mW/g

Maximum value of SAR (measured) = 0.915 mW/g

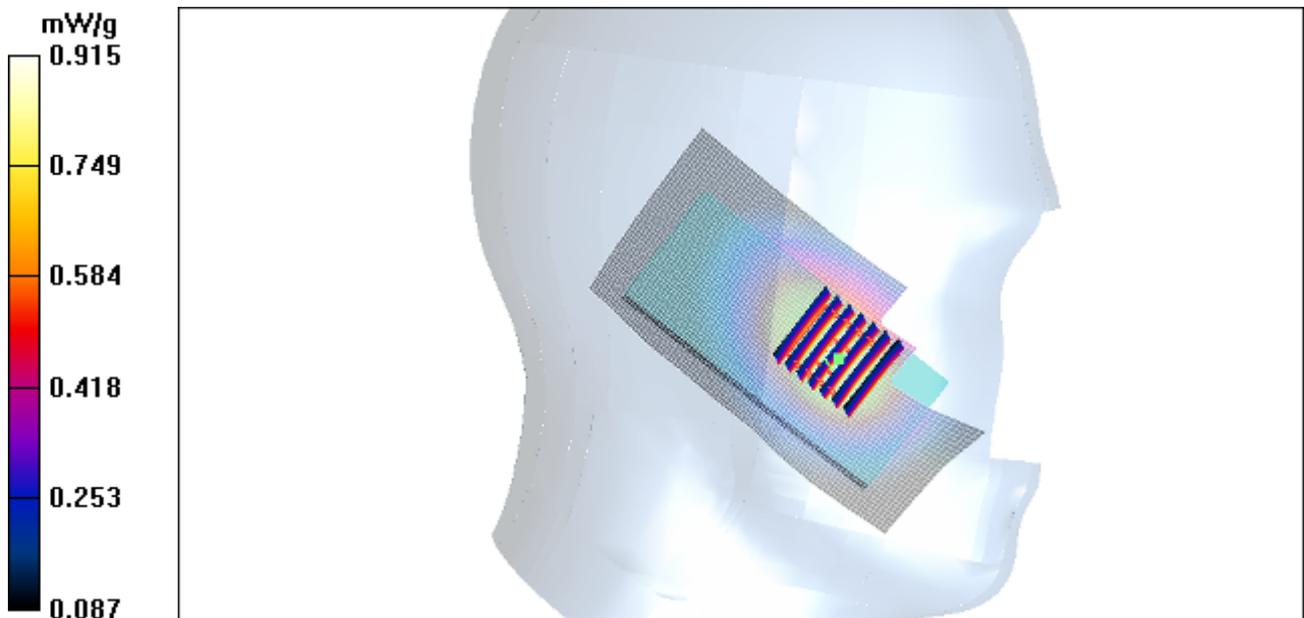


Figure 91 Left Hand Touch Cheek WCDMA Band V Channel 4233

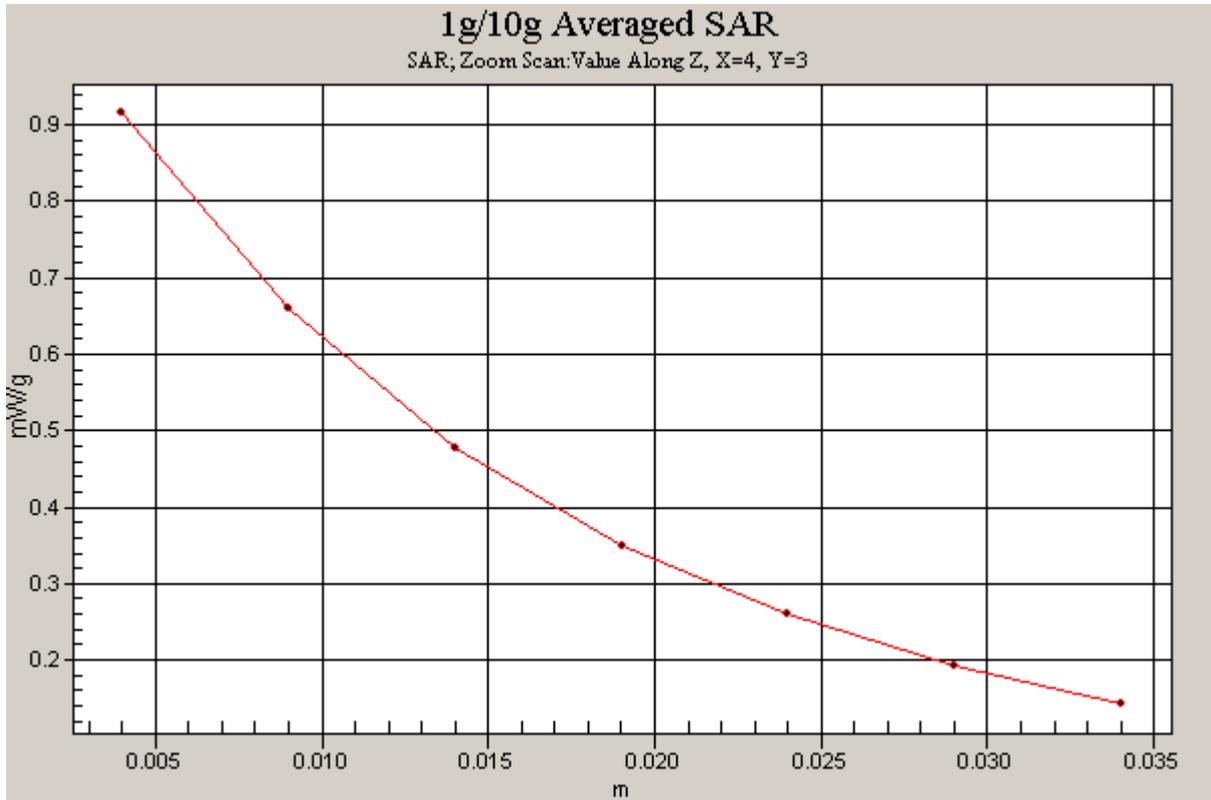


Figure 92 Z-Scan at power reference point (Left Hand Touch Cheek WCDMA Band V Channel 4233)

WCDMA Band V Left Cheek Middle

Date/Time: 1/12/2010 12:34:33 PM

Communication System: WCDMA Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.20, 9.20, 9.20); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.852 mW/g

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

Reference Value = 8.01 V/m; Power Drift = 0.120 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.811 mW/g; SAR(10 g) = 0.558 mW/g

Maximum value of SAR (measured) = 0.863 mW/g

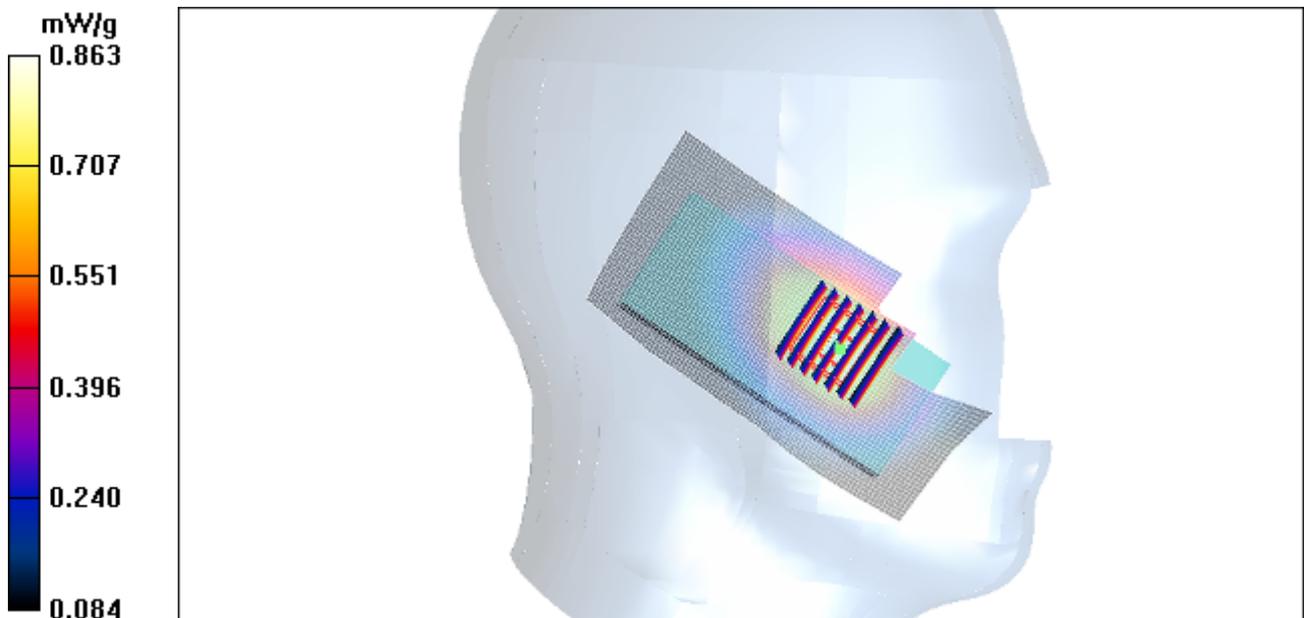


Figure 93 Left Hand Touch Cheek WCDMA Band V Channel 4183

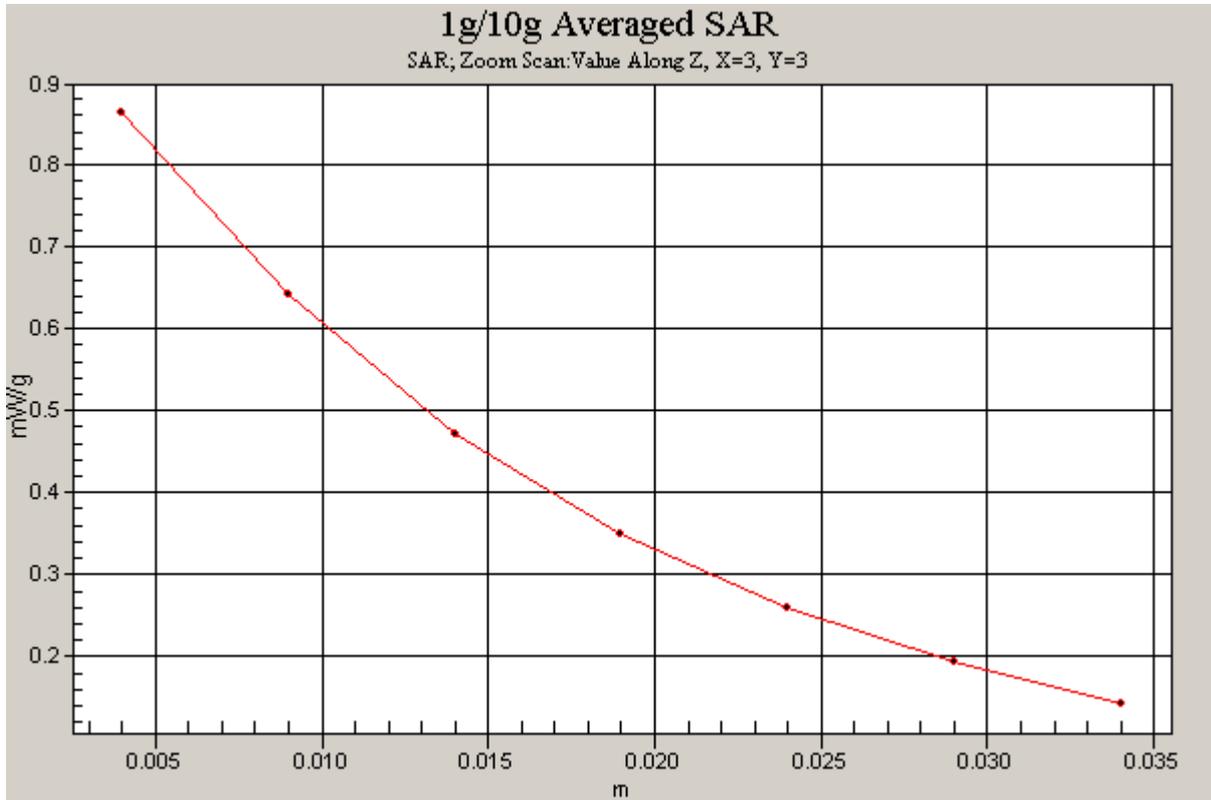


Figure 94 Z-Scan at power reference point (Left Hand Touch Cheek WCDMA Band V Channel 4183)

WCDMA Band V Left Cheek Low

Date/Time: 1/12/2010 12:58:08 PM

Communication System: WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.905$ mho/m; $\epsilon_r = 41.7$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.20, 9.20, 9.20); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.735 mW/g

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

Reference Value = 7.56 V/m; Power Drift = 0.149 dB

Peak SAR (extrapolated) = 0.963 W/kg

SAR(1 g) = 0.700 mW/g; SAR(10 g) = 0.482 mW/g

Maximum value of SAR (measured) = 0.750 mW/g

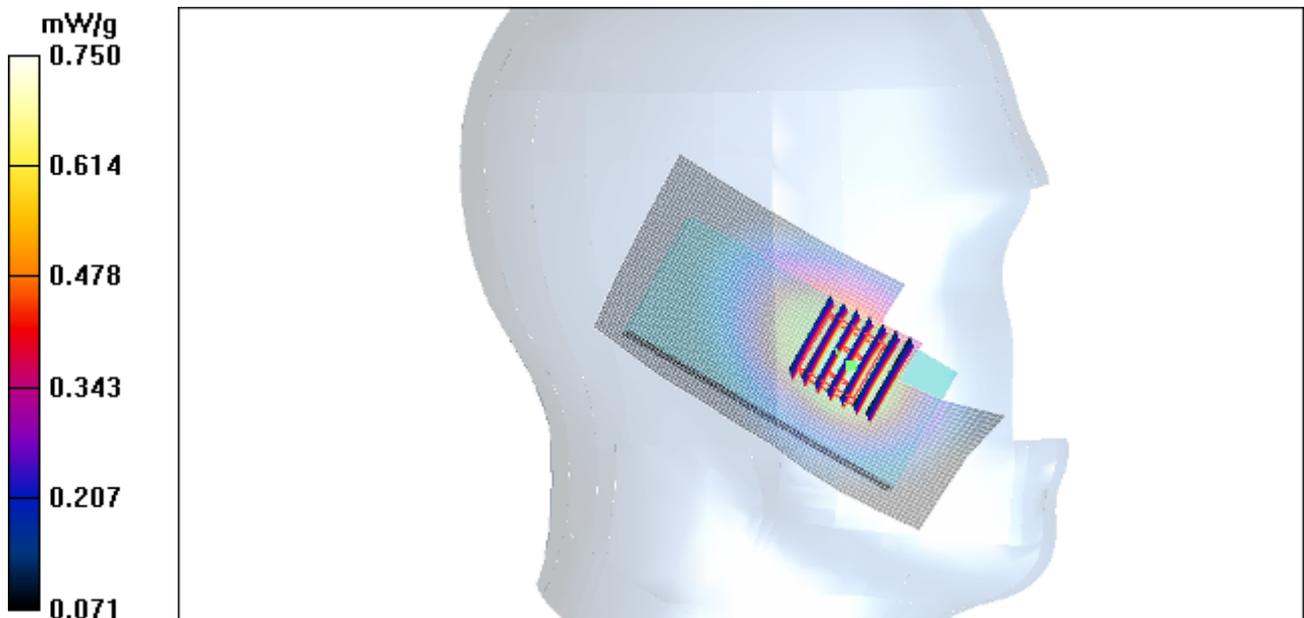


Figure 95 Left Hand Touch Cheek WCDMA Band V Channel 4132

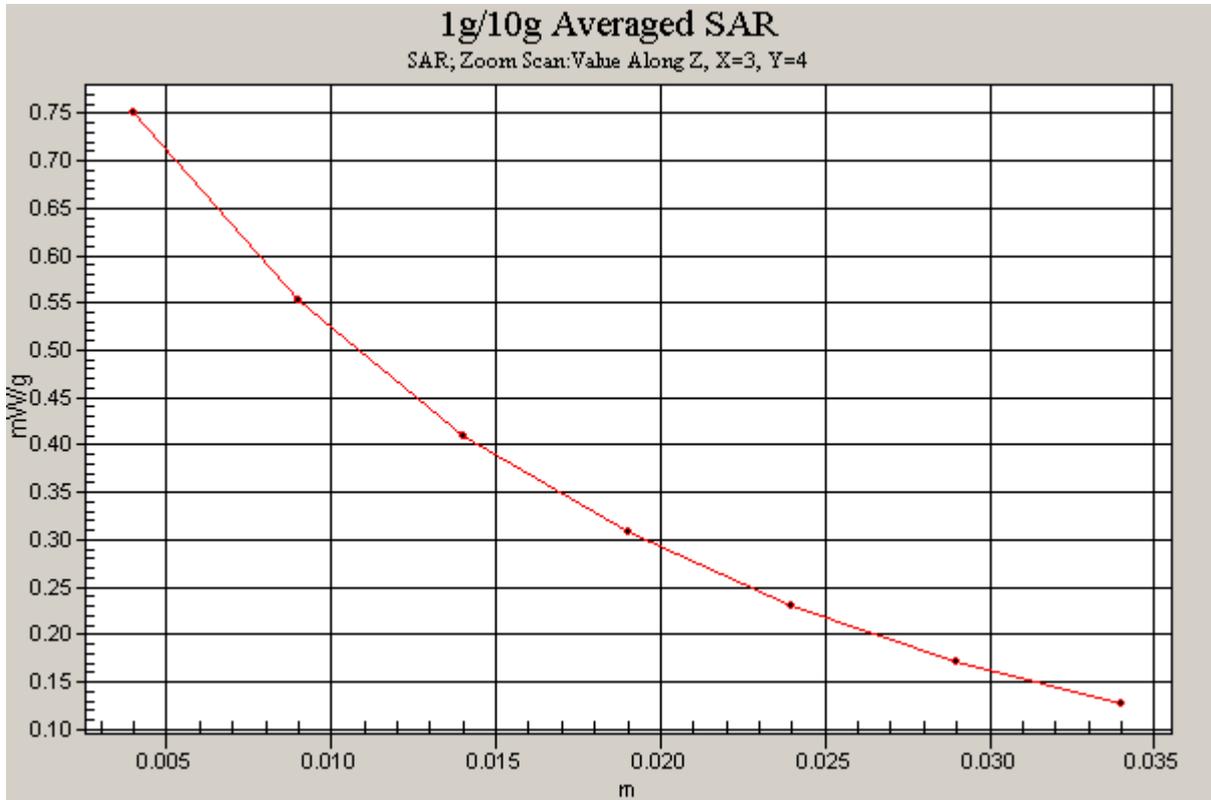


Figure 96 Z-Scan at power reference point (Left Hand Touch Cheek WCDMA Band V Channel 4132)

WCDMA Band V Left Tilt Middle

Date/Time: 1/12/2010 1:37:14 PM

Communication System: WCDMA Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.20, 9.20, 9.20); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.459 mW/g

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

Reference Value = 11.1 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 0.550 W/kg

SAR(1 g) = 0.428 mW/g; SAR(10 g) = 0.312 mW/g

Maximum value of SAR (measured) = 0.452 mW/g

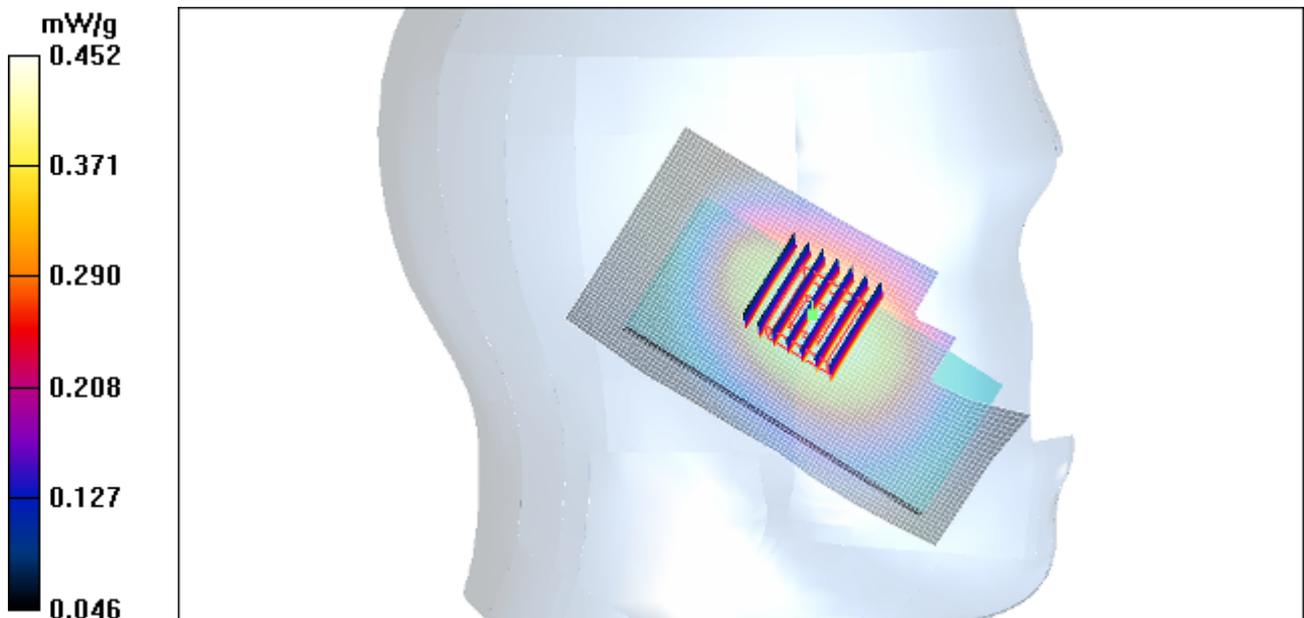


Figure 97 Left Hand Tilt 15° WCDMA Band V Channel 4183

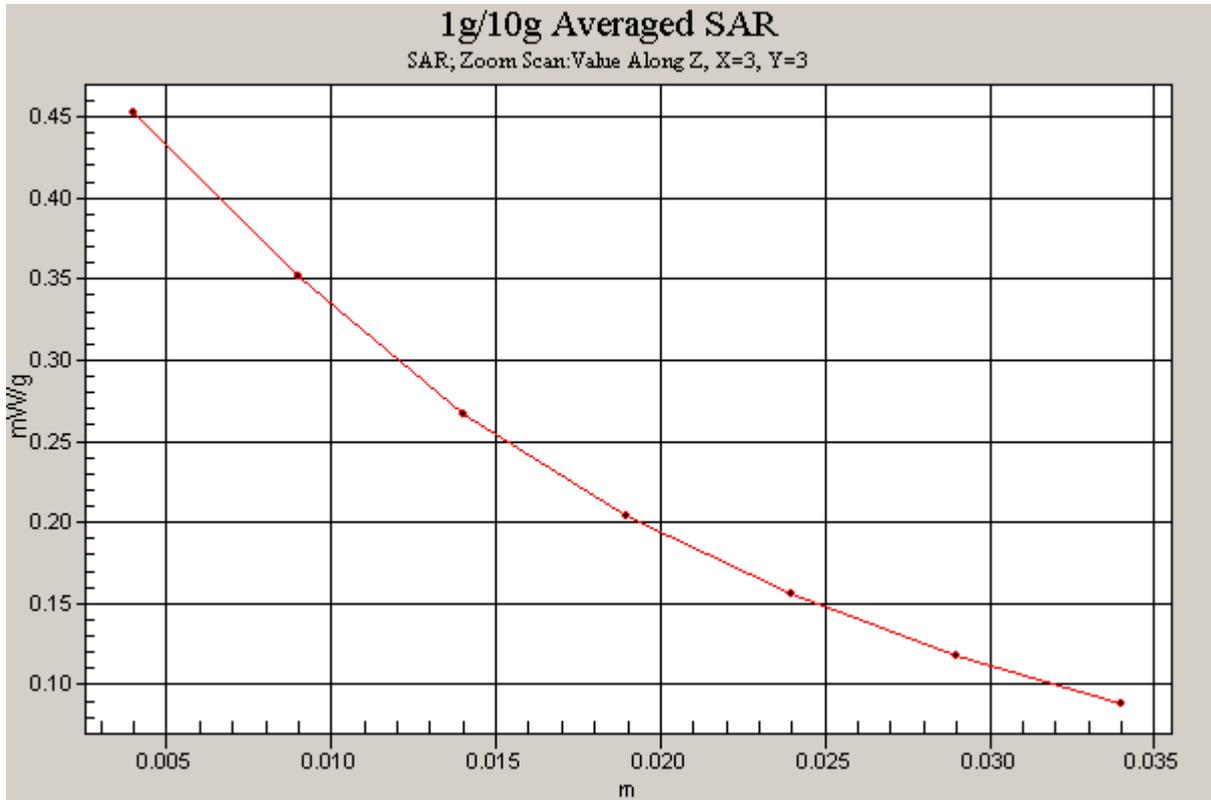


Figure 98 Z-Scan at power reference point (Left Hand Tilt 15° WCDMA Band V Channel 4183)

WCDMA Band V Right Cheek High

Date/Time: 1/12/2010 2:40:00 PM

Communication System: WCDMA Band V; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 847$ MHz; $\sigma = 0.927$ mho/m; $\epsilon_r = 41.4$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.20, 9.20, 9.20); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.950 mW/g

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

Reference Value = 7.86 V/m; Power Drift = 0.046 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.889 mW/g; SAR(10 g) = 0.616 mW/g

Maximum value of SAR (measured) = 0.955 mW/g

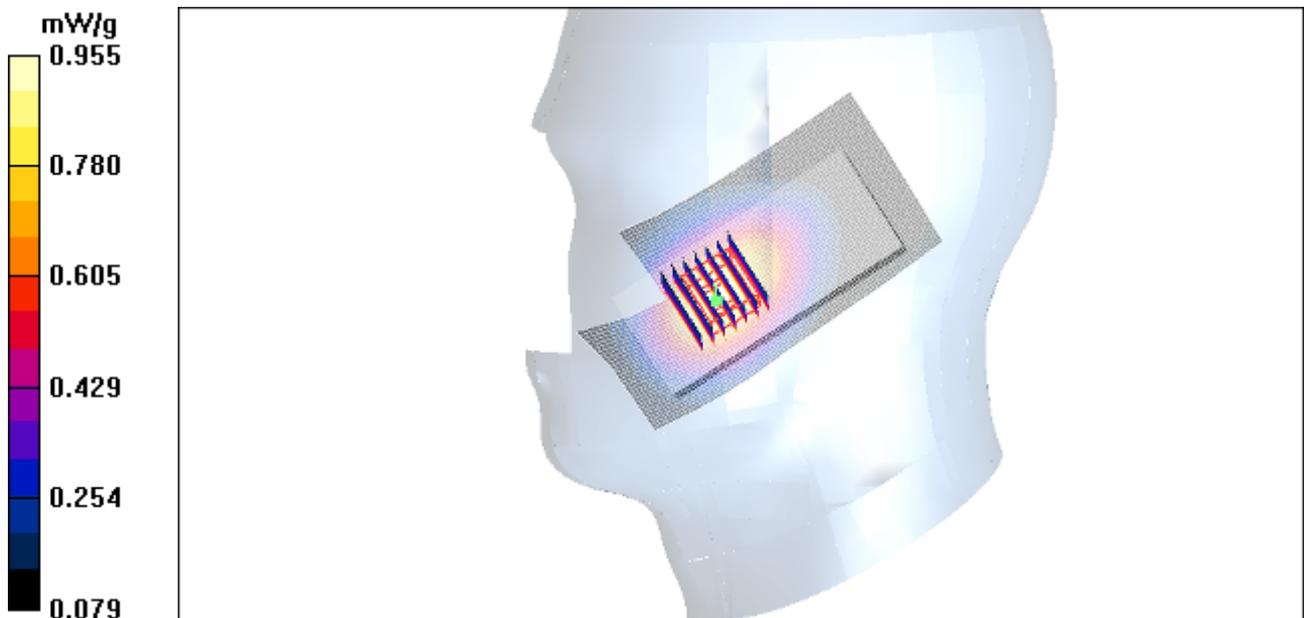


Figure 99 Right Hand Touch Cheek WCDMA Band V Channel 4233

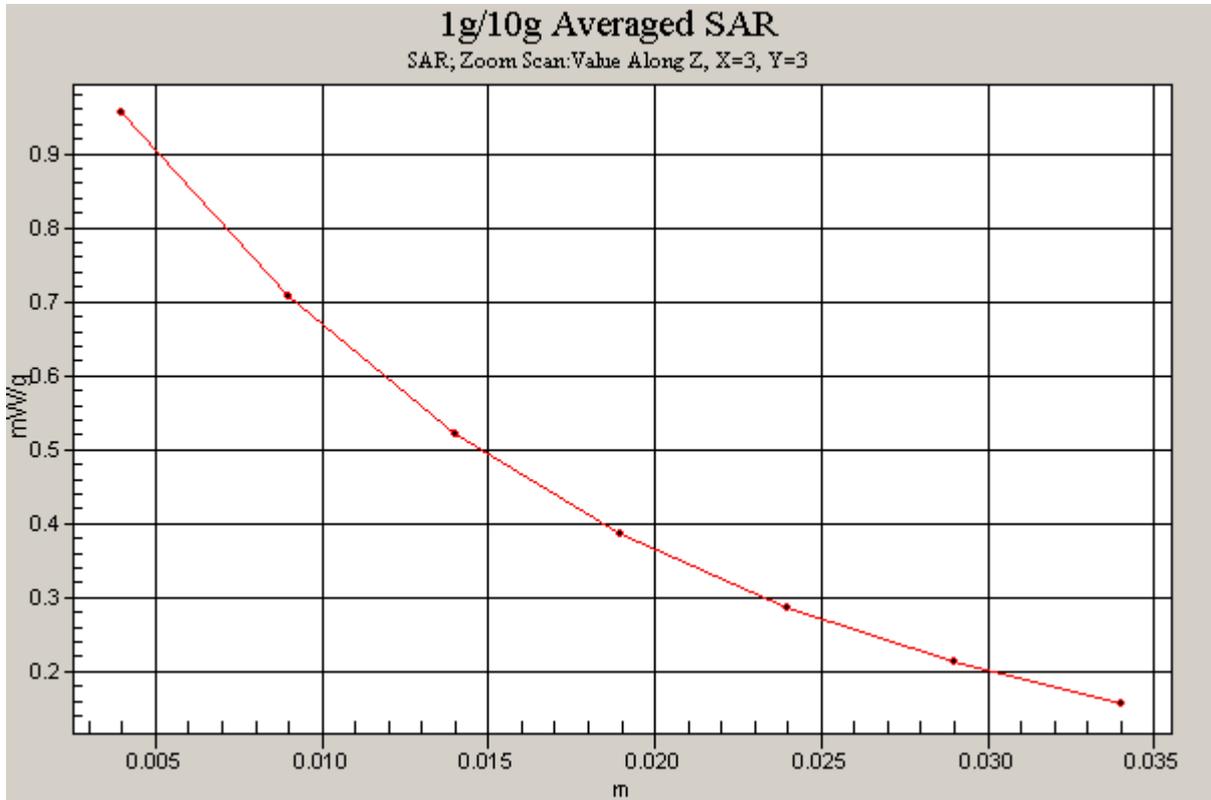


Figure 100 Z-Scan at power reference point (Right Hand Touch Cheek WCDMA Band V Channel 4233)

WCDMA Band V Right Cheek Middle

Date/Time: 1/12/2010 1:57:51 PM

Communication System: WCDMA Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.20, 9.20, 9.20); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.919 mW/g

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

Reference Value = 9.01 V/m; Power Drift = -0.117 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.850 mW/g; SAR(10 g) = 0.589 mW/g

Maximum value of SAR (measured) = 0.925 mW/g

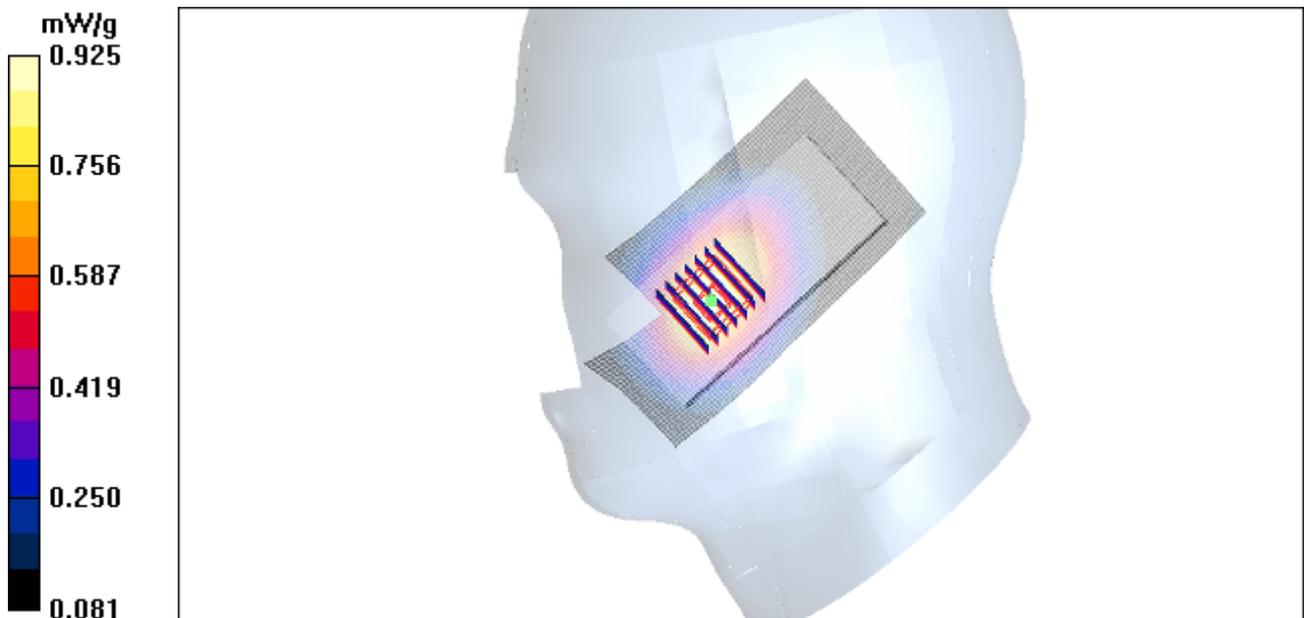


Figure 101 Right Hand Touch Cheek WCDMA Band V Channel 4183

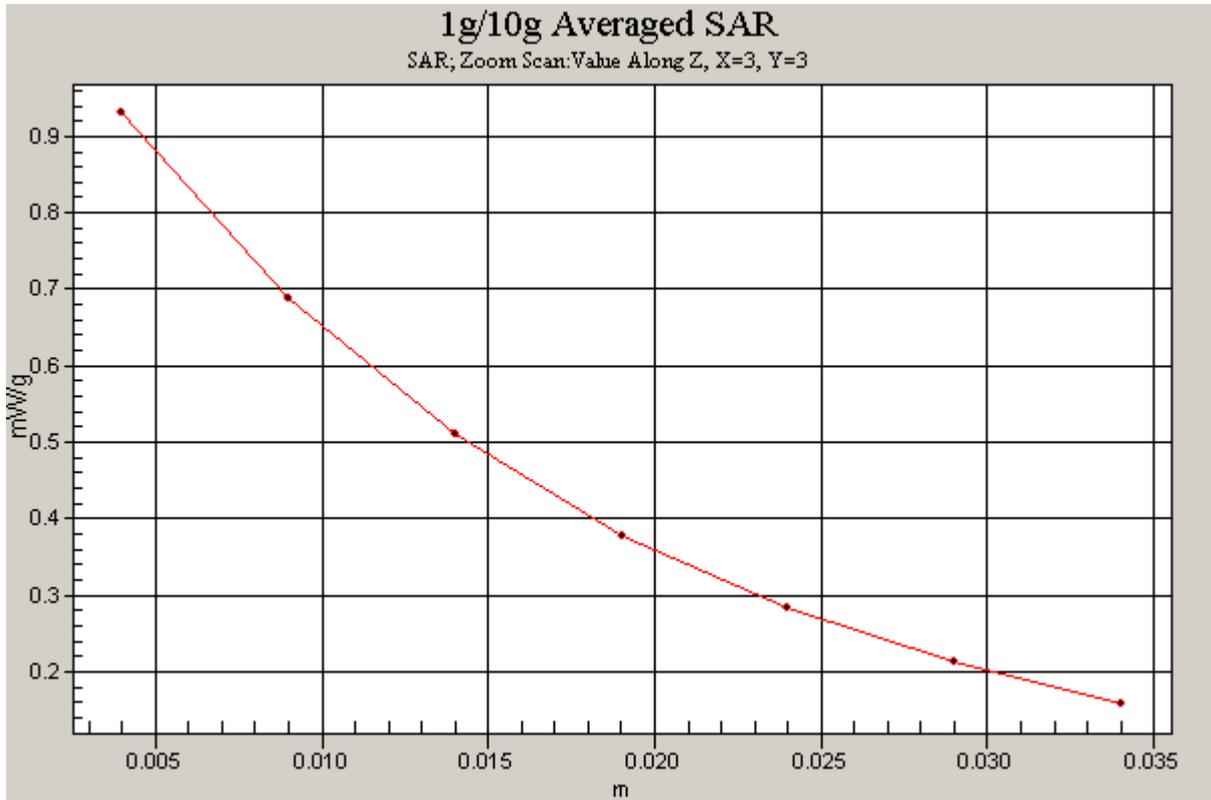


Figure 102 Z-Scan at power reference point (Right Hand Touch Cheek WCDMA Band V Channel 4183)

WCDMA Band V Right Cheek Low

Date/Time: 1/12/2010 2:20:52 PM

Communication System: WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.905$ mho/m; $\epsilon_r = 41.7$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.20, 9.20, 9.20); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Cheek Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.803 mW/g

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

Reference Value = 7.64 V/m; Power Drift = -0.129 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.754 mW/g; SAR(10 g) = 0.521 mW/g

Maximum value of SAR (measured) = 0.805 mW/g

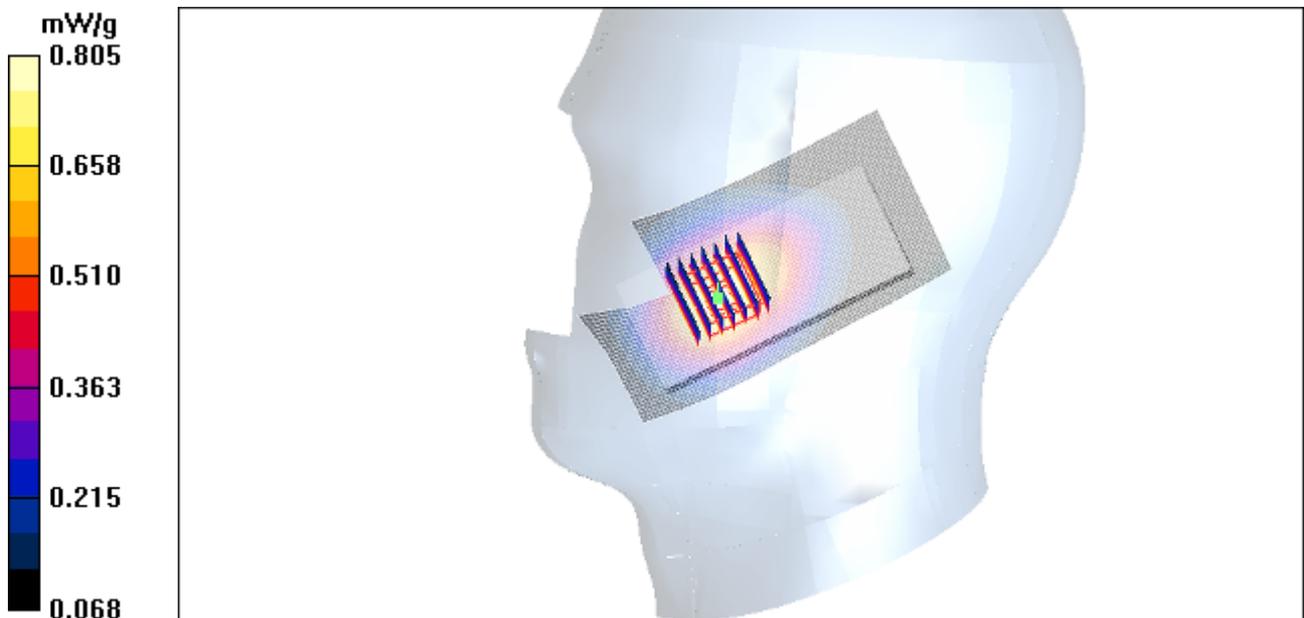


Figure 103 Right Hand Touch Cheek WCDMA Band V Channel 4132

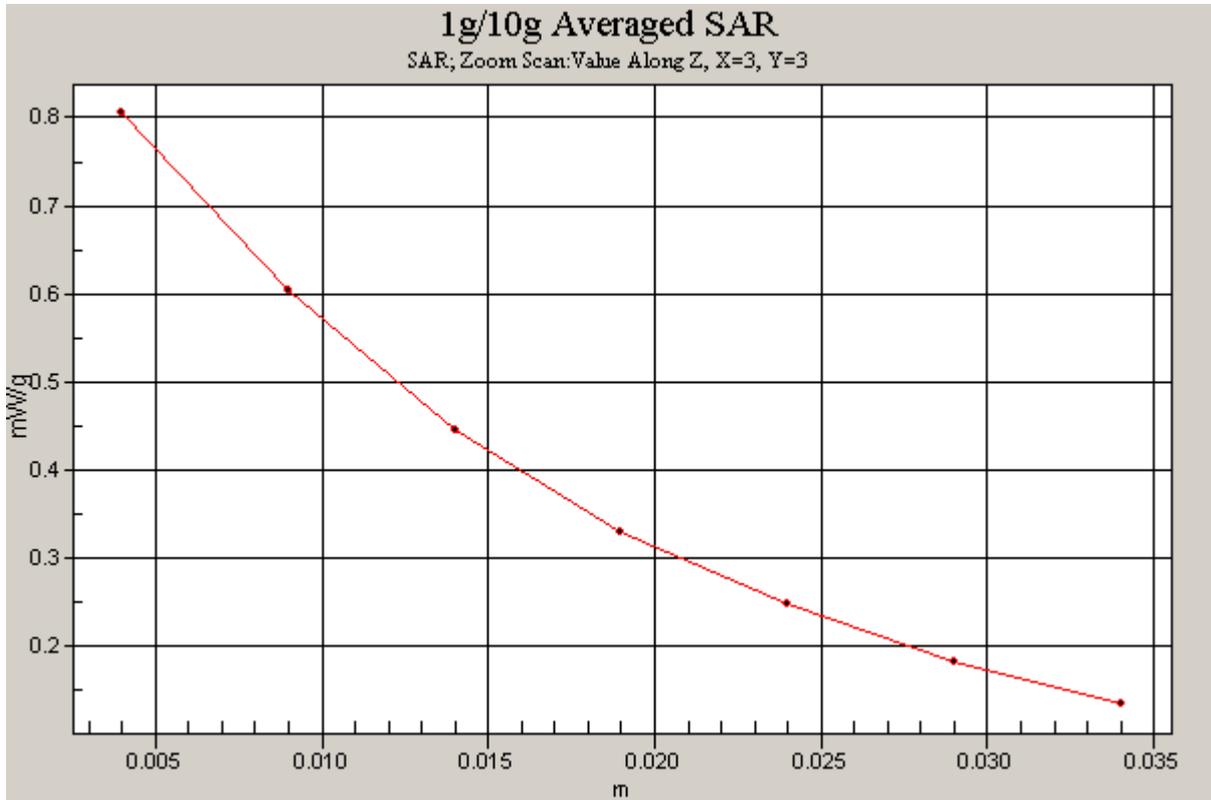


Figure 104 Z-Scan at power reference point (Right Hand Touch Cheek WCDMA Band V Channel 4132)

WCDMA Band V Right Tilt Middle

Date/Time: 1/12/2010 3:00:37 PM

Communication System: WCDMA Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.915$ mho/m; $\epsilon_r = 41.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.20, 9.20, 9.20); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Tilt Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.462 mW/g

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

Reference Value = 10.7 V/m; Power Drift = 0.046 dB

Peak SAR (extrapolated) = 0.555 W/kg

SAR(1 g) = 0.434 mW/g; SAR(10 g) = 0.314 mW/g

Maximum value of SAR (measured) = 0.462 mW/g

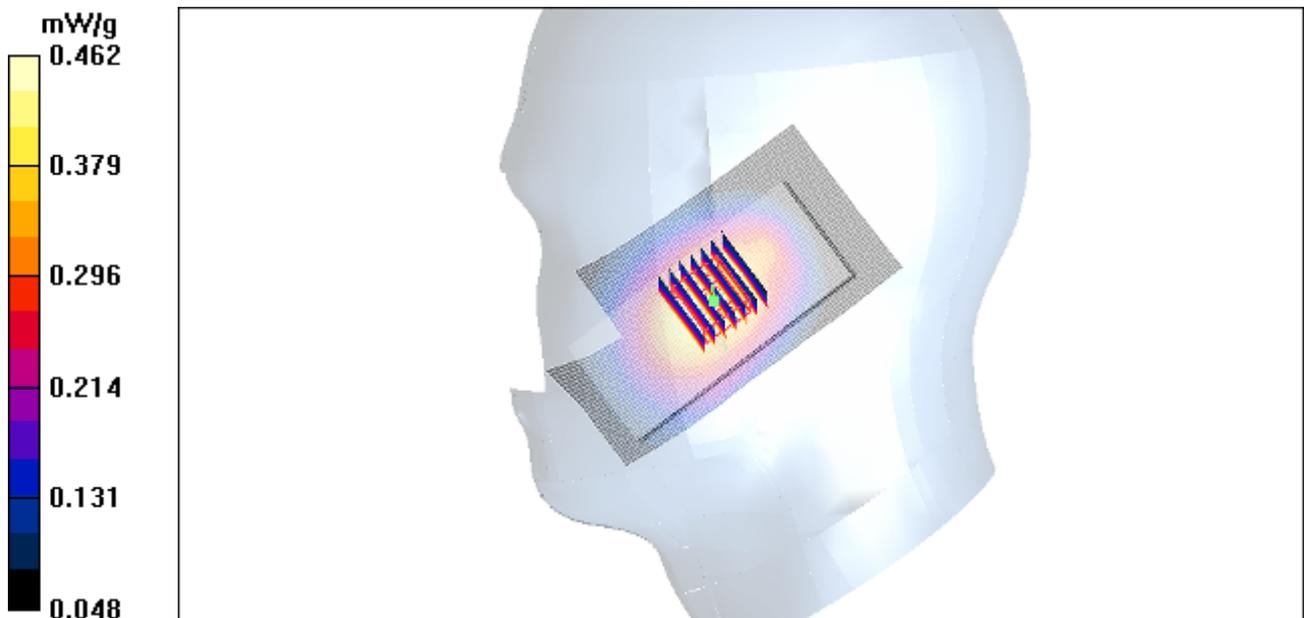


Figure 105 Right Hand Tilt 15° WCDMA Band V Channel 4183

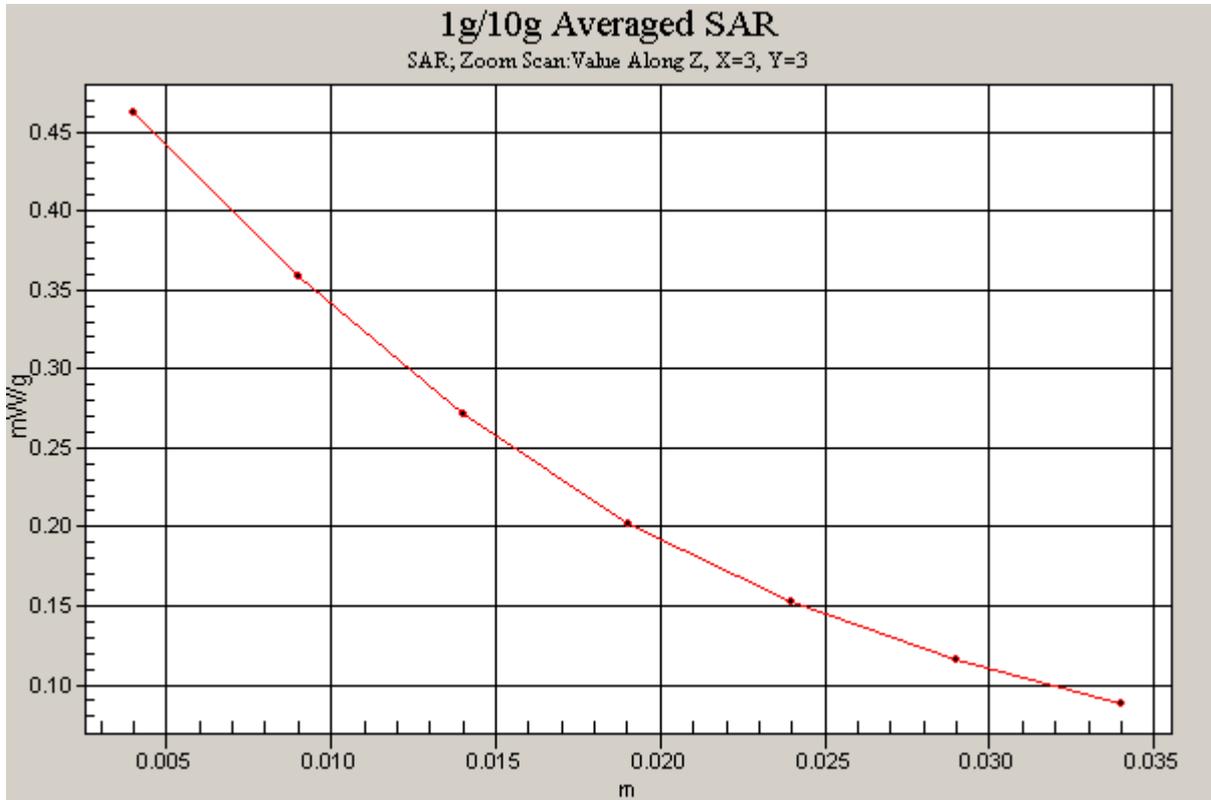


Figure 106 Z-Scan at power reference point (Right Hand Tilt 15° WCDMA Band V Channel 4183)

WCDMA Band V Towards Ground High

Date/Time: 1/12/2010 5:13:02 PM

Communication System: WCDMA Band V; Frequency: 846.6 MHz;Duty Cycle: 1:1

Medium parameters used: $f = 847$ MHz; $\sigma = 0.985$ mho/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³

Ambient Temperature:22.3 °C Liqiud Temperature: 21.5°C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground High/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.924 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.6 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.870 mW/g; SAR(10 g) = 0.621 mW/g

Maximum value of SAR (measured) = 0.930 mW/g

Towards Ground High/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.6 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.792 mW/g; SAR(10 g) = 0.531 mW/g

Maximum value of SAR (measured) = 0.875 mW/g

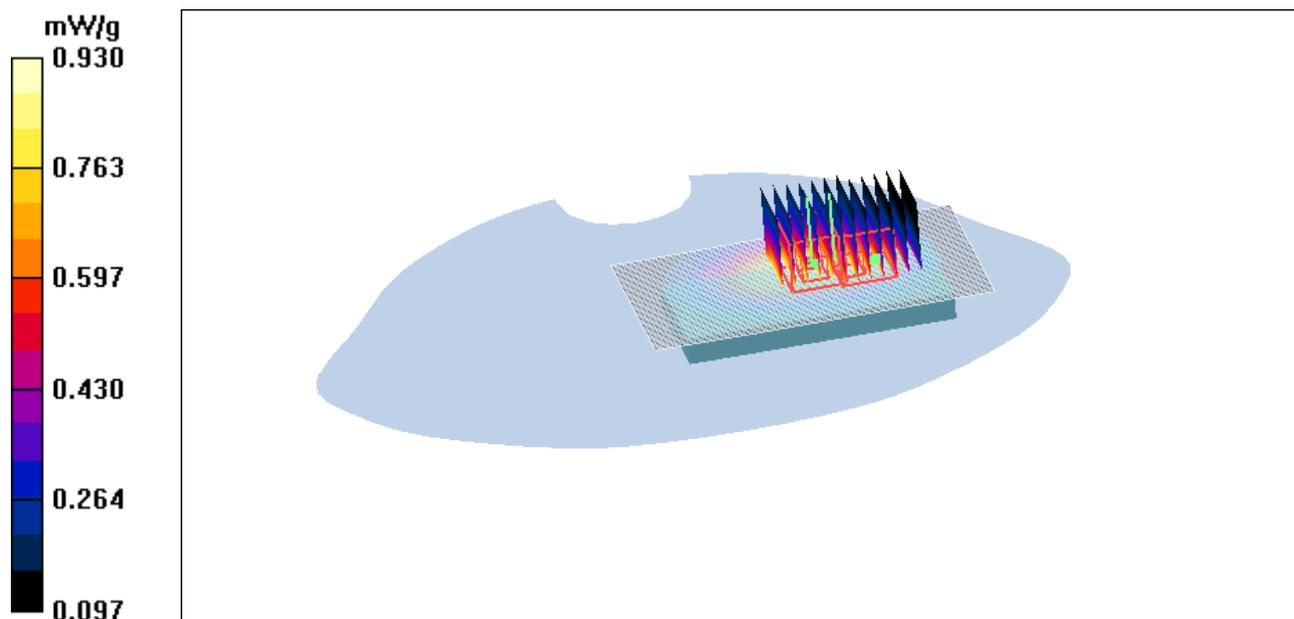


Figure 107 Body, Towards Ground, WCDMA Band V Channel 4233

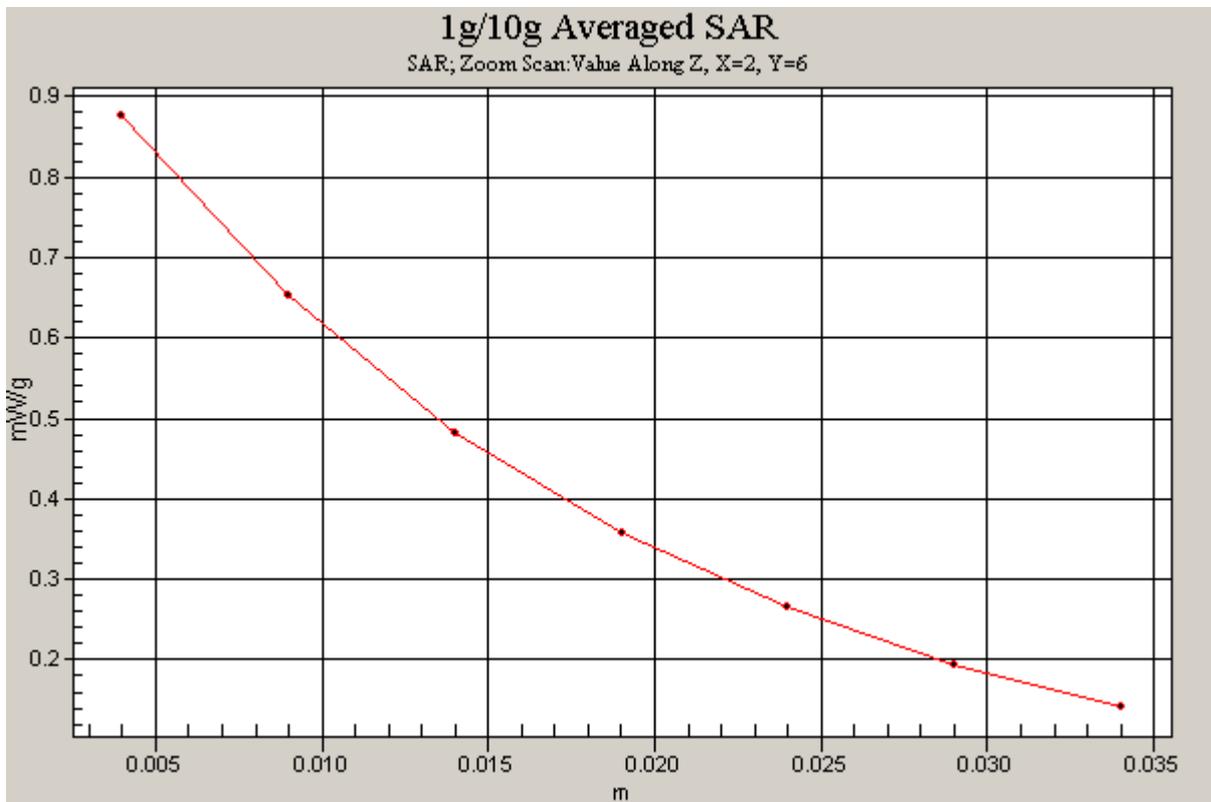
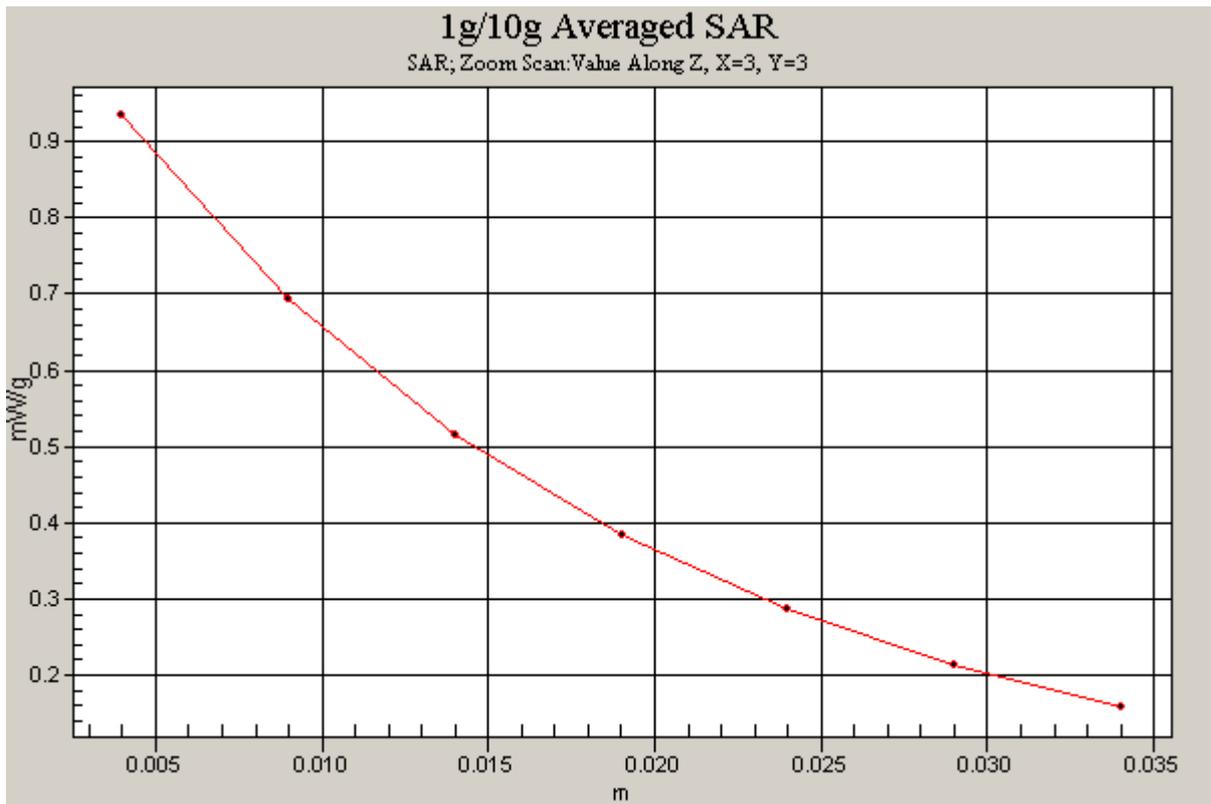


Figure 108 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band V Channel 4233)

WCDMA Band V Towards Ground Middle

Date/Time: 1/12/2010 4:06:08 PM

Communication System: WCDMA Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.931 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.4 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.887 mW/g; SAR(10 g) = 0.635 mW/g

Maximum value of SAR (measured) = 0.946 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.4 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.818 mW/g; SAR(10 g) = 0.552 mW/g

Maximum value of SAR (measured) = 0.909 mW/g

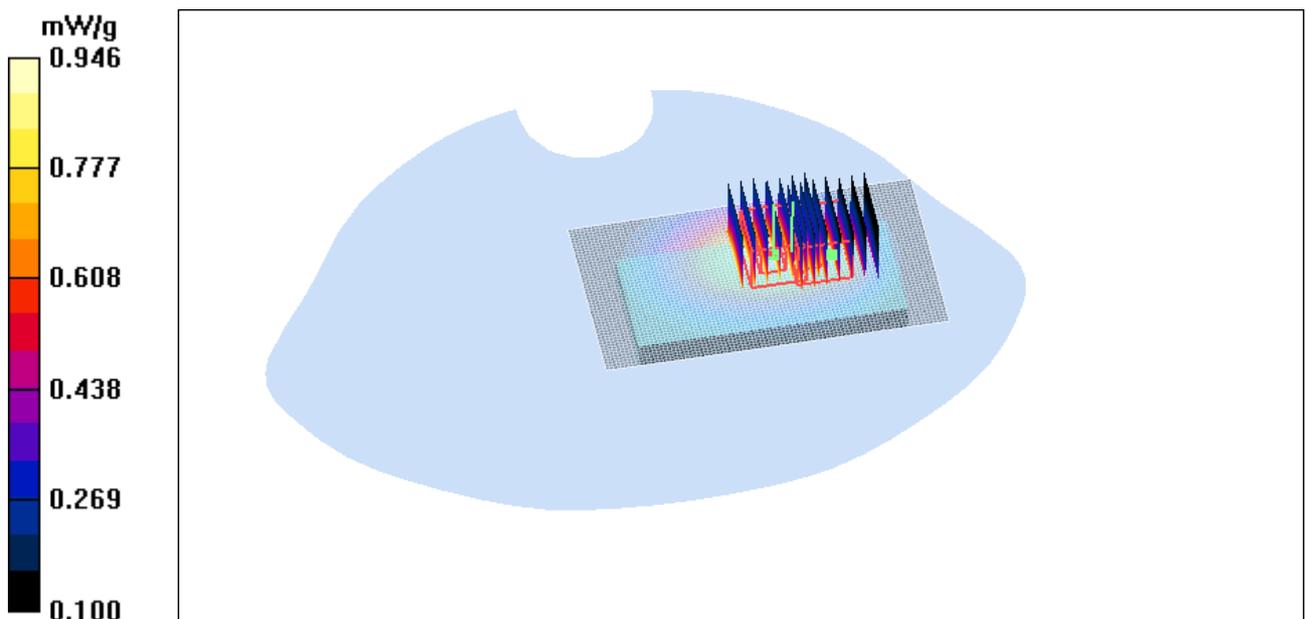


Figure 109 Body, Towards Ground, WCDMA Band V Channel 4183

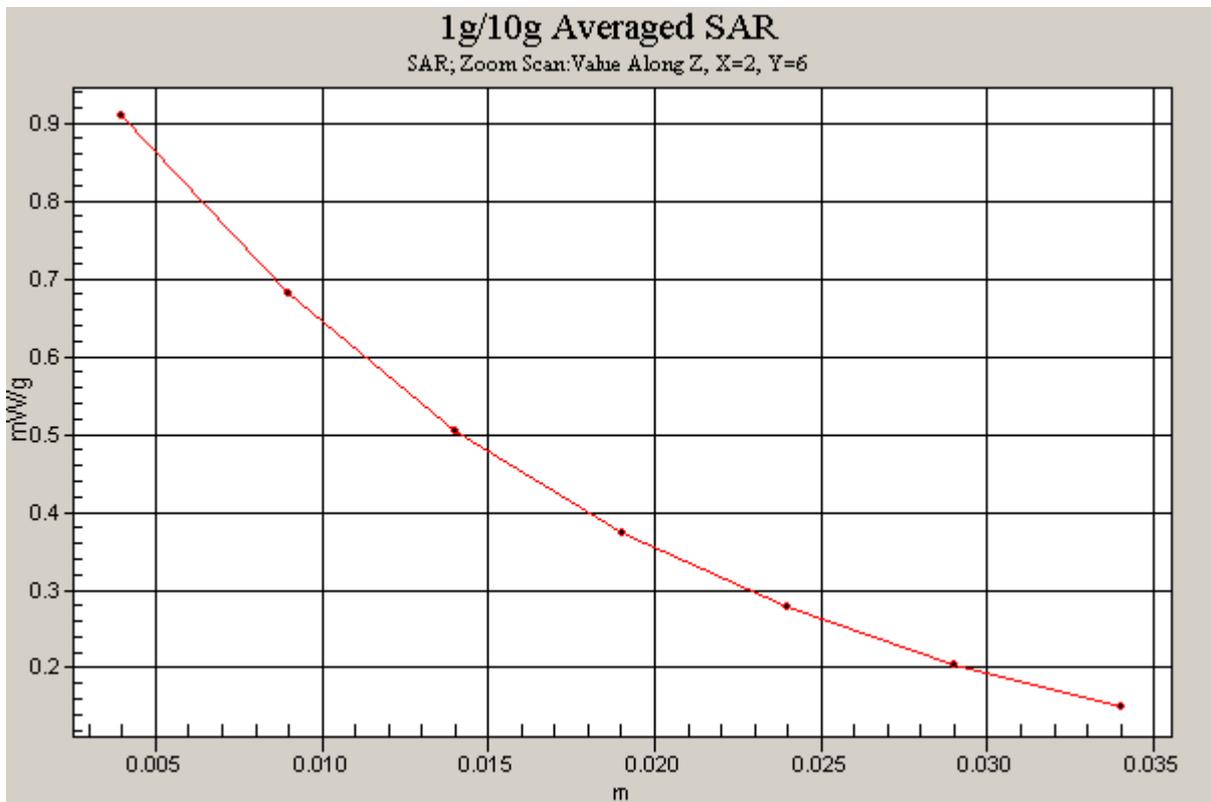
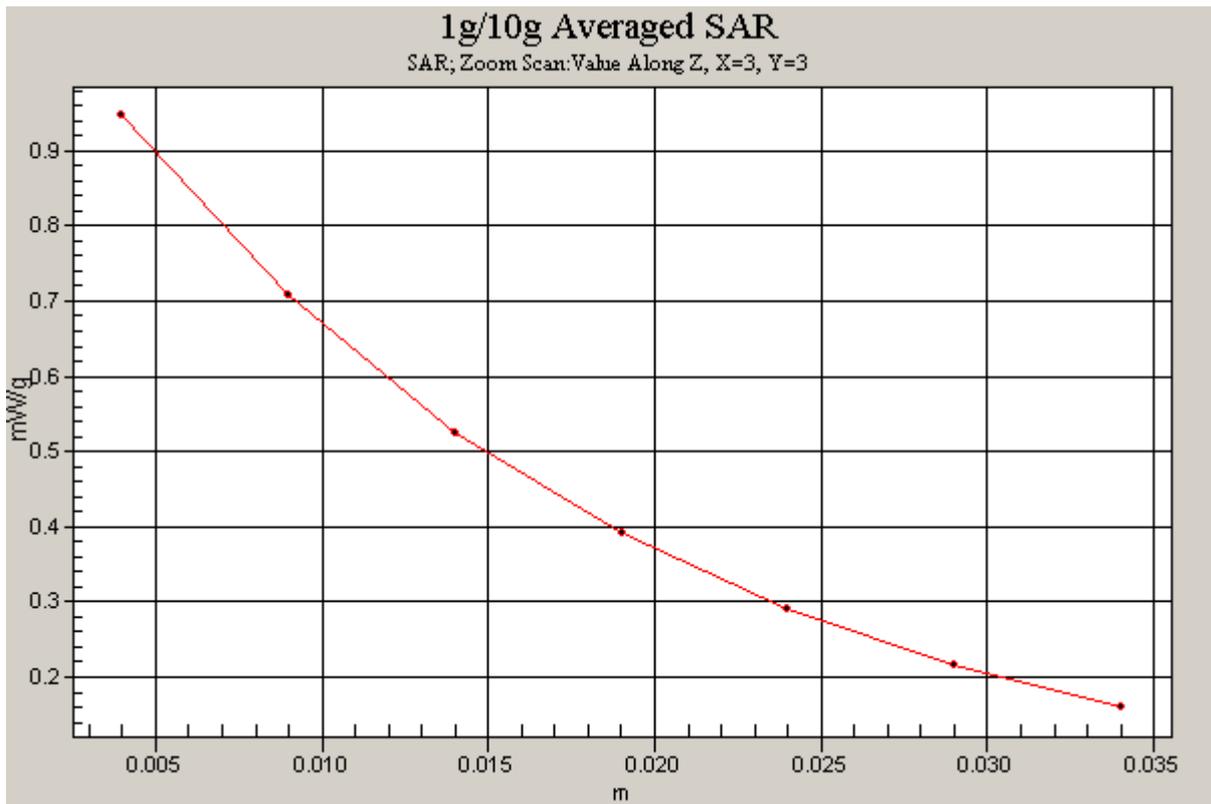


Figure 110 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band V Channel 4183)

WCDMA Band V Towards Ground Low

Date/Time: 1/12/2010 4:35:31 PM

Communication System: WCDMA Band V; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.962$ mho/m; $\epsilon_r = 54.3$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Low/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.814 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.4 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.775 mW/g; SAR(10 g) = 0.554 mW/g

Maximum value of SAR (measured) = 0.826 mW/g

Towards Ground Low/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.4 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 0.988 W/kg

SAR(1 g) = 0.721 mW/g; SAR(10 g) = 0.488 mW/g

Maximum value of SAR (measured) = 0.796 mW/g

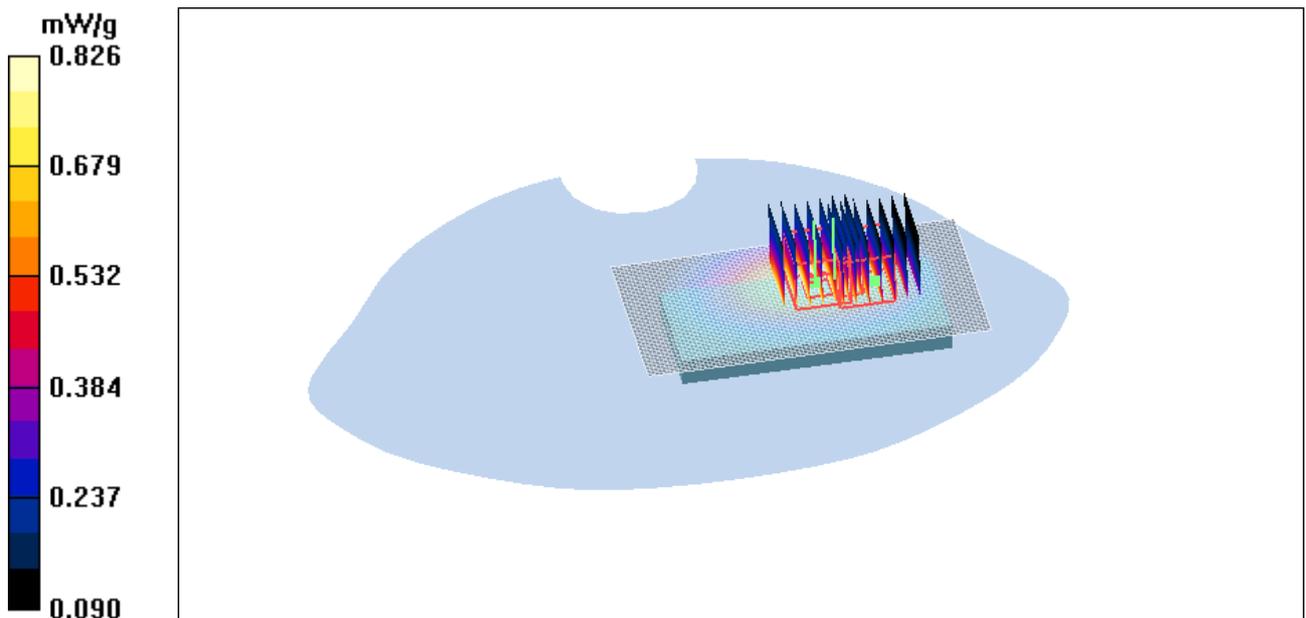


Figure 111 Body, Towards Ground, WCDMA Band V Channel 4132

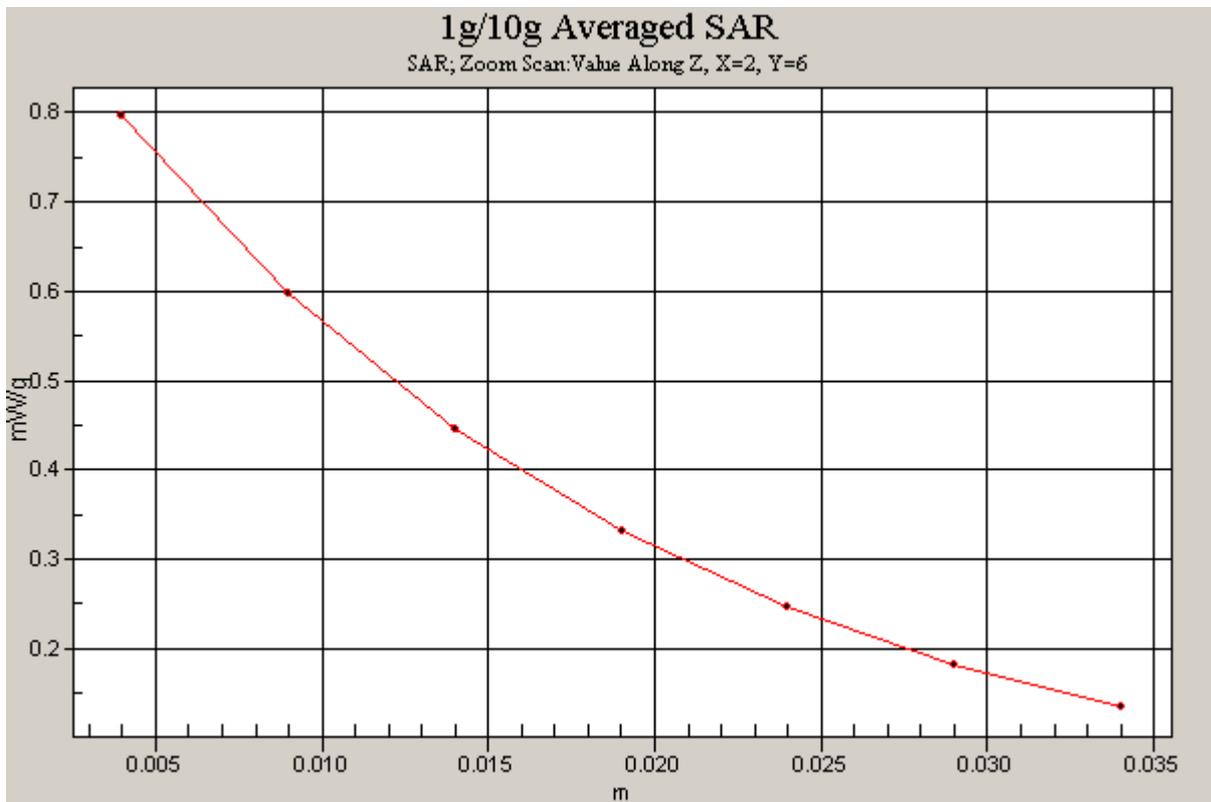
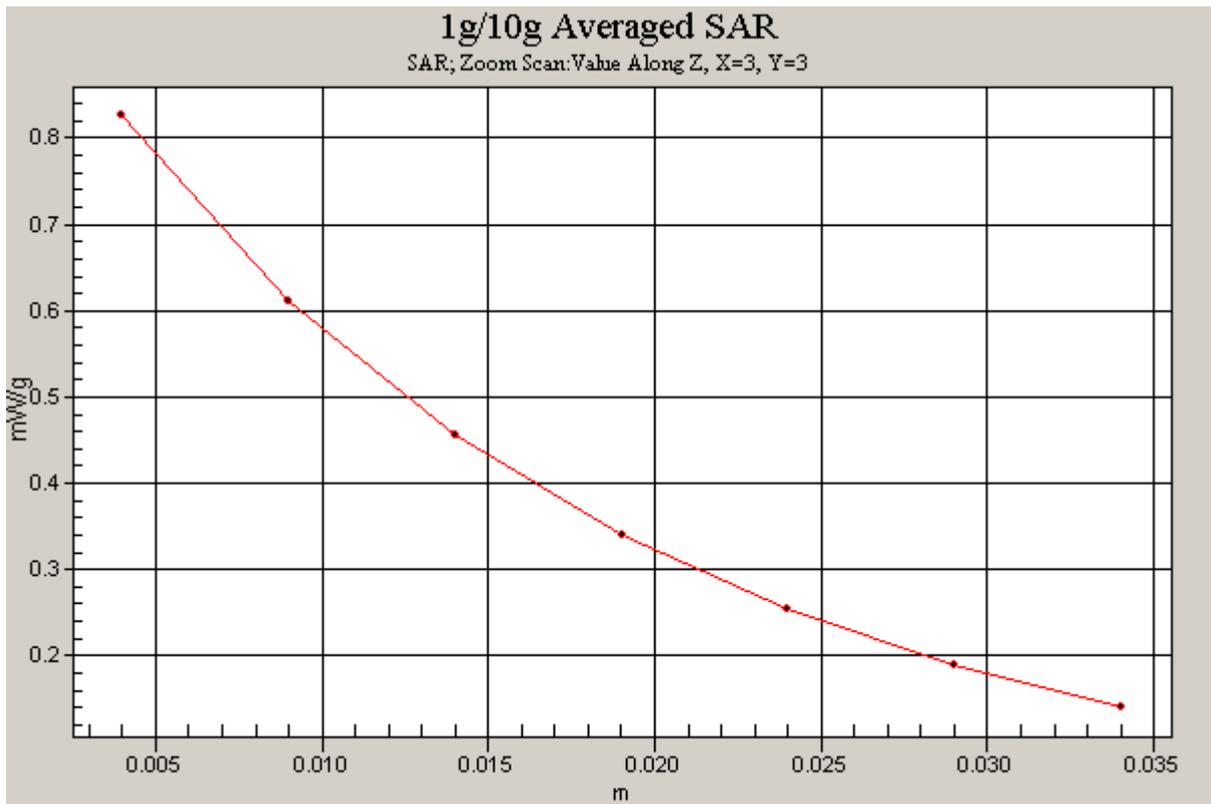


Figure 112 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band V Channel 4132)

WCDMA Band V Towards Phantom Middle

Date/Time: 1/12/2010 3:36:37 PM

Communication System: WCDMA Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Phantom Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.731 mW/g

Towards Phantom Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm,
dz=5mm

Reference Value = 13.3 V/m; Power Drift = -0.170 dB

Peak SAR (extrapolated) = 0.875 W/kg

SAR(1 g) = 0.672 mW/g; SAR(10 g) = 0.485 mW/g

Maximum value of SAR (measured) = 0.714 mW/g

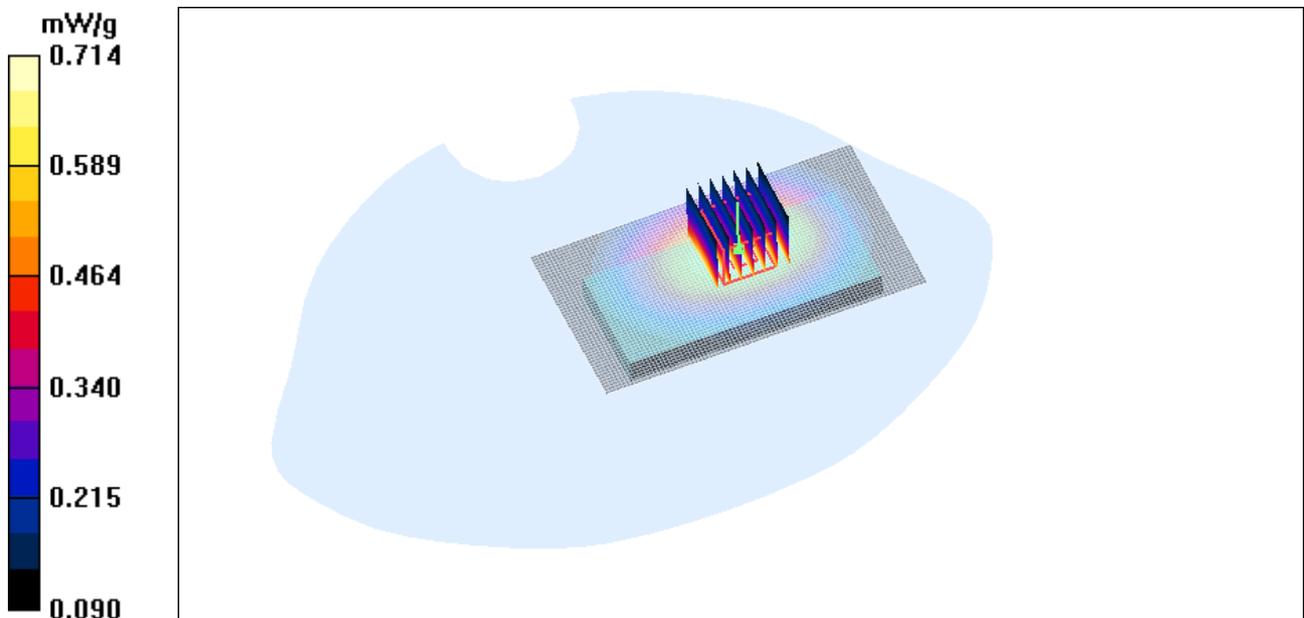


Figure 113 Body, Towards Phantom, WCDMA Band V Channel 4183

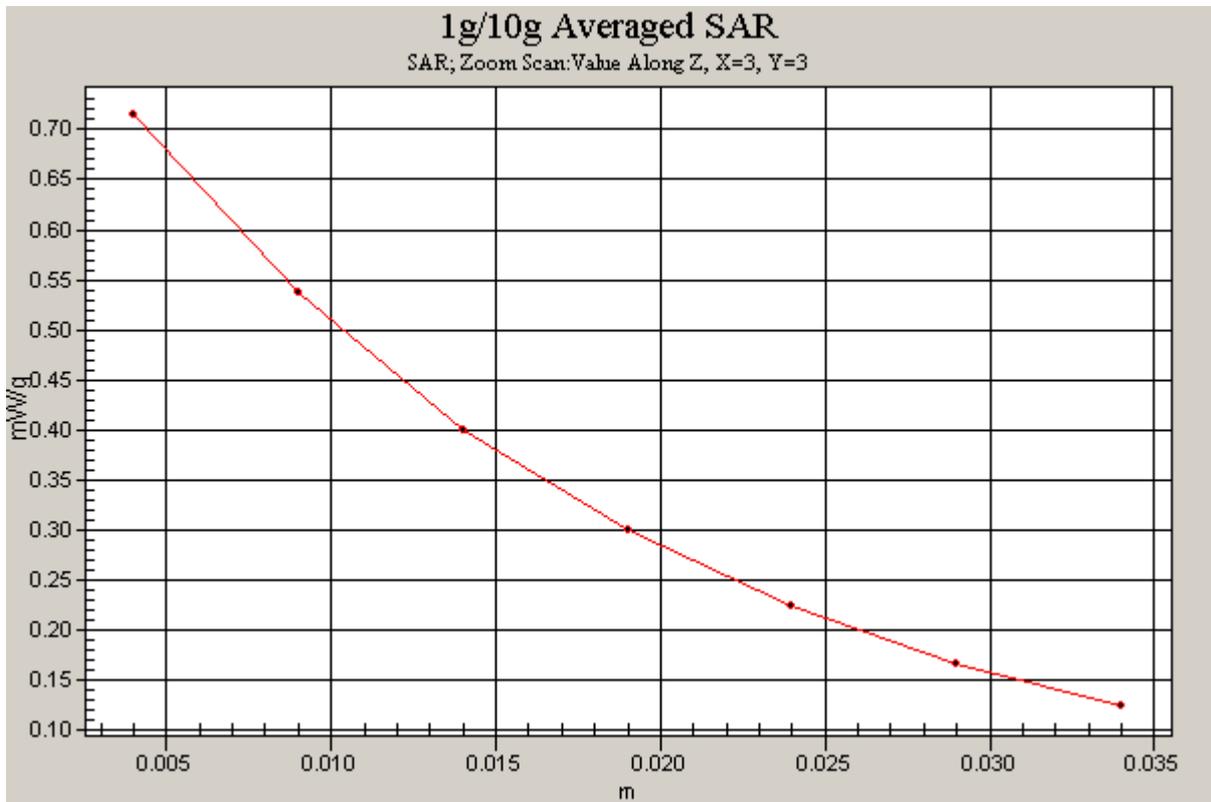


Figure 114 Z-Scan at power reference point (Body, Towards Phantom, WCDMA Band V Channel 4183)

WCDMA Band V with Earphone Towards Ground Middle

Date/Time: 1/12/2010 5:44:26 PM

Communication System: WCDMA Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.615 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.2 V/m; Power Drift = 0.193 dB

Peak SAR (extrapolated) = 0.760 W/kg

SAR(1 g) = 0.579 mW/g; SAR(10 g) = 0.417 mW/g

Maximum value of SAR (measured) = 0.617 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.2 V/m; Power Drift = 0.193 dB

Peak SAR (extrapolated) = 0.695 W/kg

SAR(1 g) = 0.509 mW/g; SAR(10 g) = 0.341 mW/g

Maximum value of SAR (measured) = 0.566 mW/g

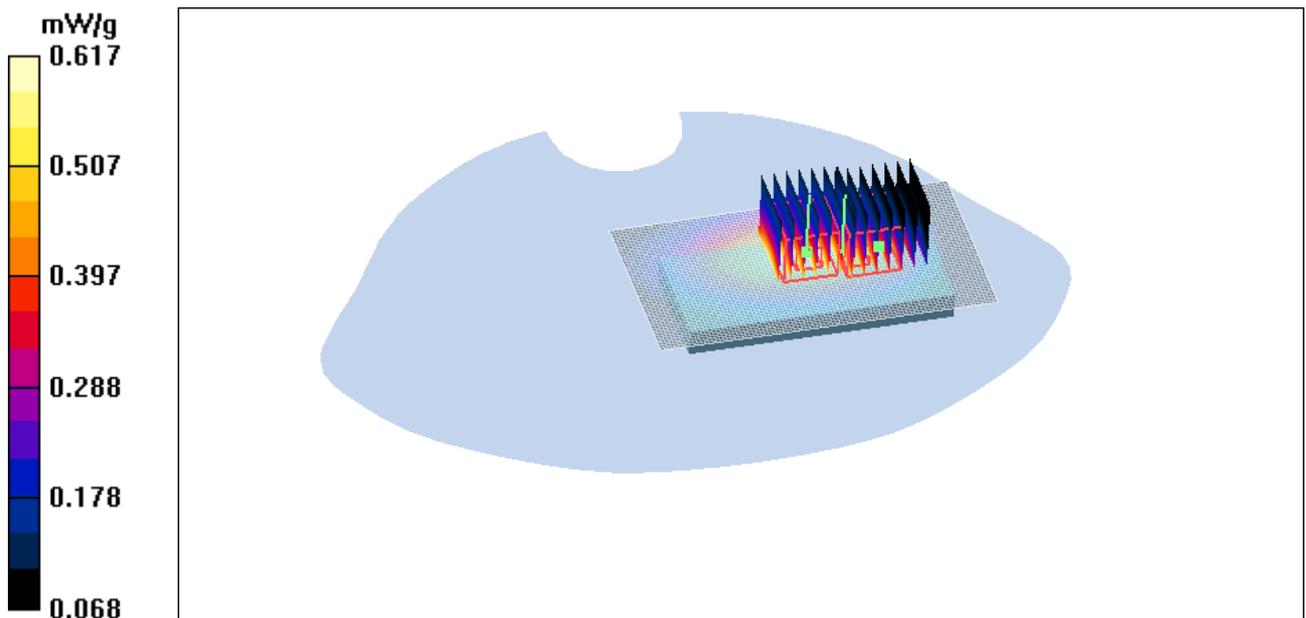


Figure 115 Body, Towards Ground, WCDMA Band V Channel 4183

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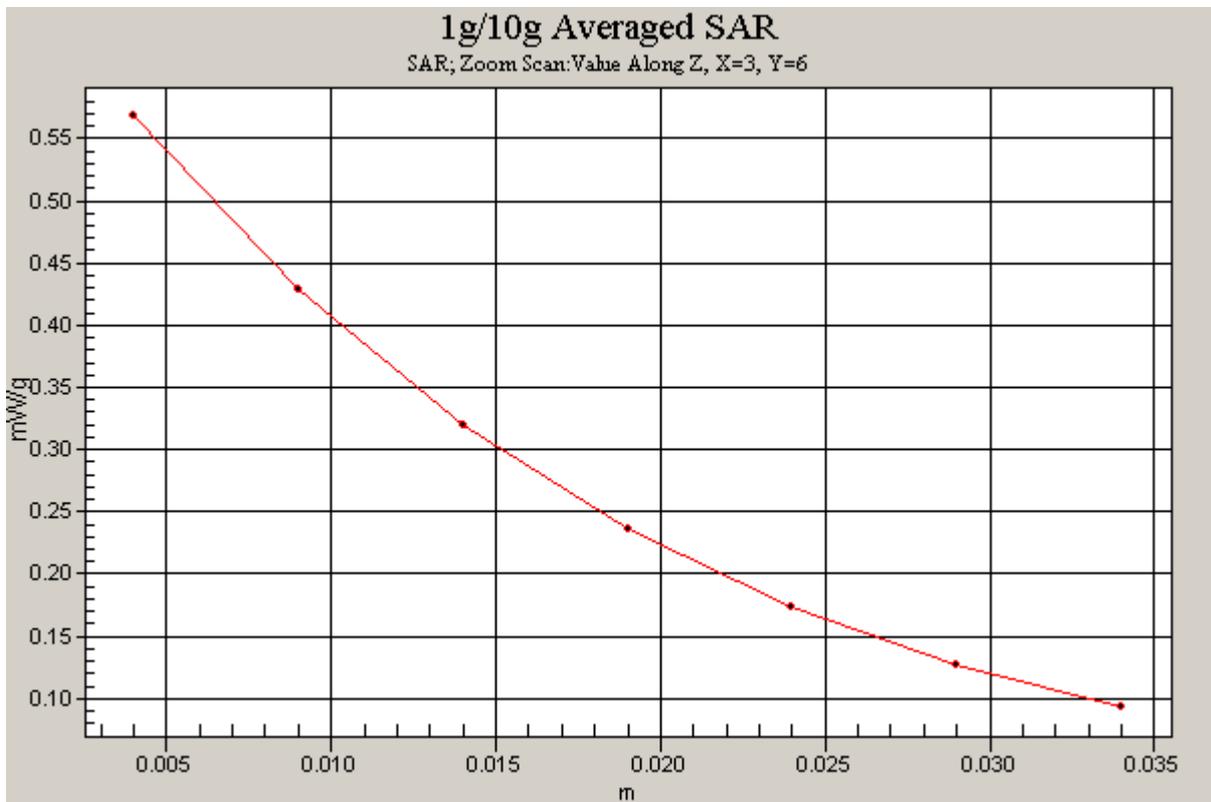
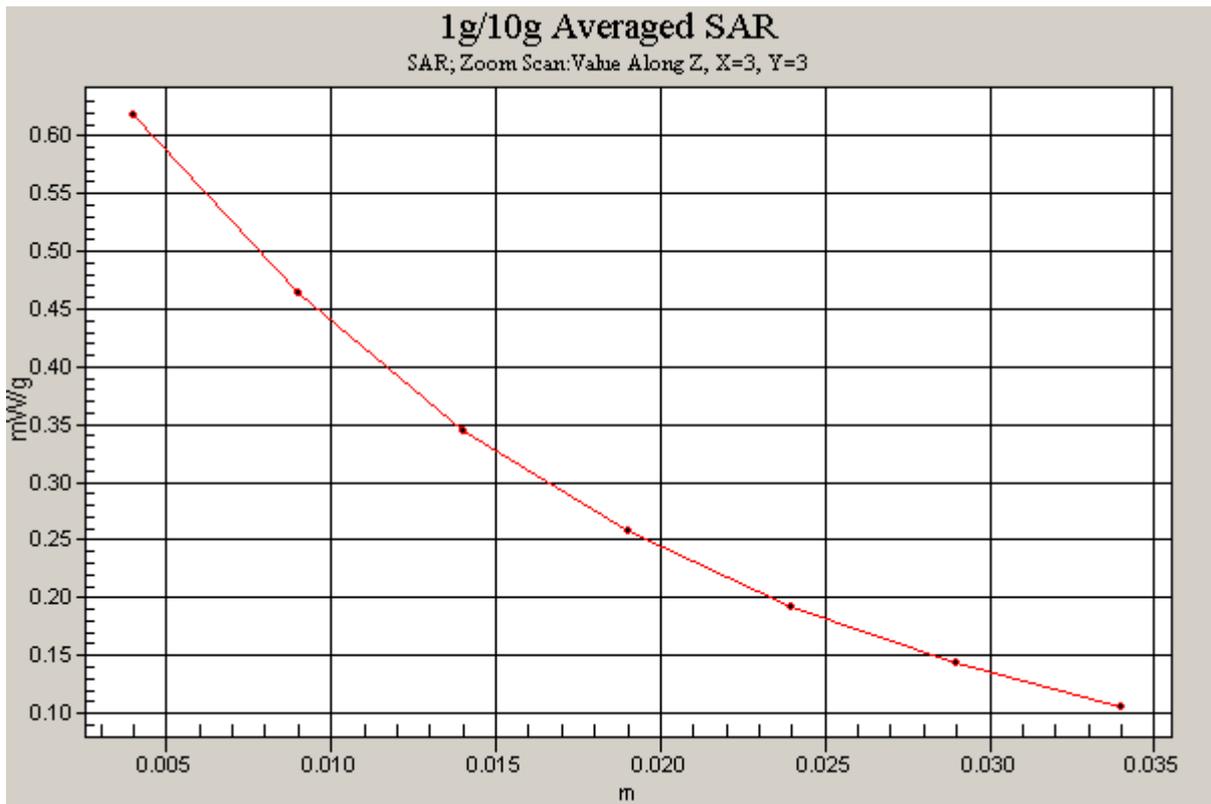


Figure 116 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band V Channel 4183)

WCDMA Band V+HSDPA Towards Ground Middle

Date/Time: 1/12/2010 7:29:01 PM

Communication System: WCDMA Band V+HSDPA; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.976$ mho/m; $\epsilon_r = 54.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY4 Configuration:

Probe: EX3DV4 - SN3677; ConvF(9.11, 9.11, 9.11); Calibrated: 9/23/2009

Electronics: DAE4 Sn905; Calibrated: 6/24/2009

Phantom: SAM 12; Type: SAM V4.0; Serial: TP-1246

Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Towards Ground Middle/Area Scan (51x91x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.919 mW/g

Towards Ground Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.1 V/m; Power Drift = -0.111 dB

Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.857 mW/g; SAR(10 g) = 0.614 mW/g

Maximum value of SAR (measured) = 0.907 mW/g

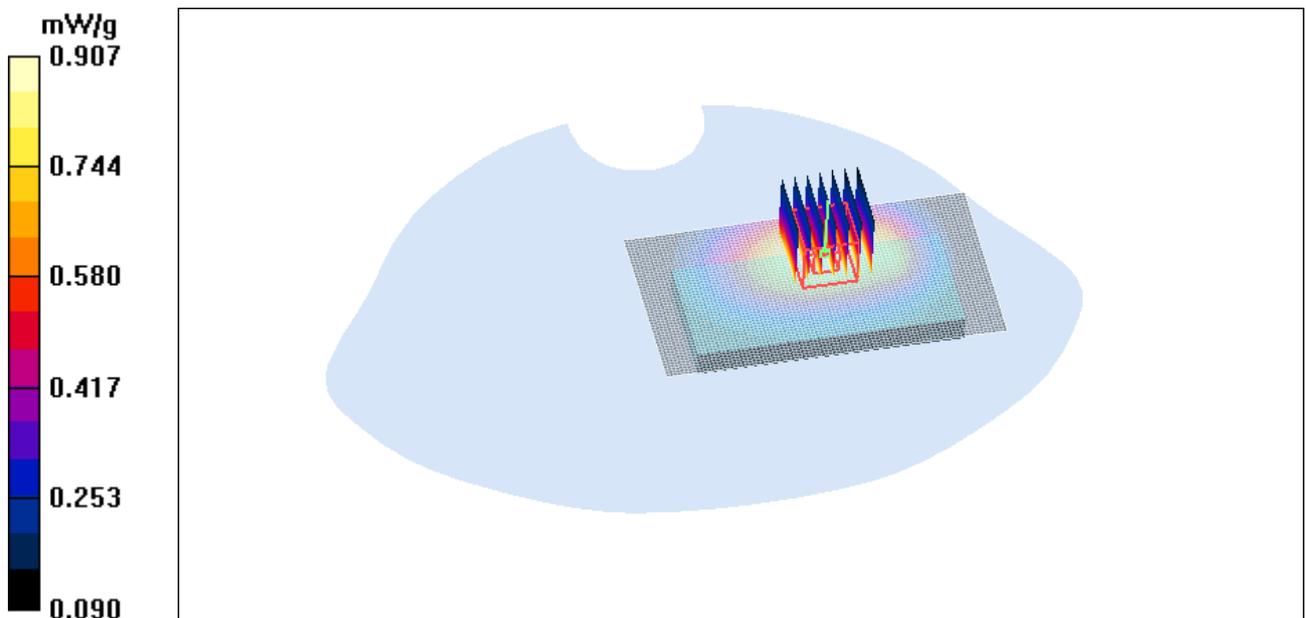


Figure 117 Body, Towards Ground, WCDMA Band V HSDPA Channel 4183

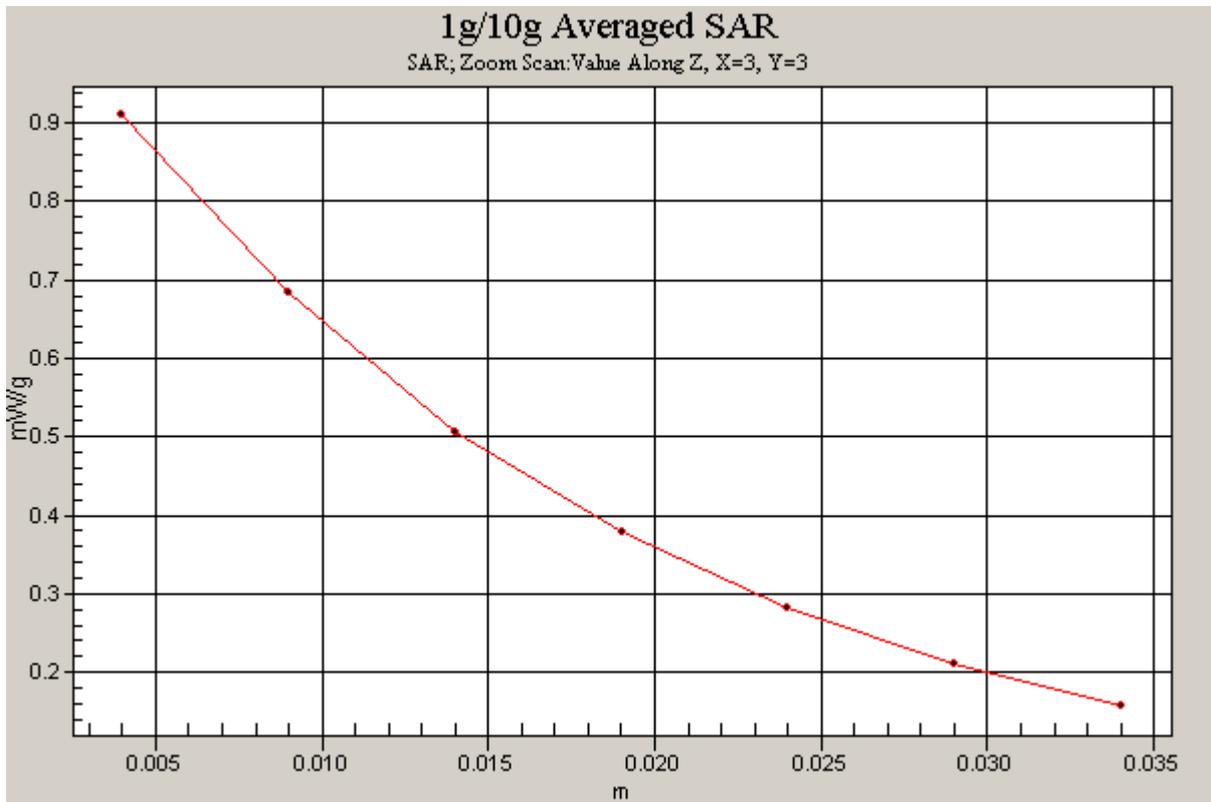


Figure 118 Z-Scan at power reference point (Body, Towards Ground, WCDMA Band V HSDPA Channel 4183)

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ANNEX D: Probe Calibration Certificate

**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **TA (Auden)**

Certificate No: **EX3-3677_Sep09**

CALIBRATION CERTIFICATE																																																			
Object	EX3DV4 - SN:3677																																																		
Calibration procedure(s)	QA CAL-01.v6, QA CAL-12.v5, QA CAL-23.v3 and QA CAL-25.v2 Calibration procedure for dosimetric E-field probes																																																		
Calibration date:	September 23, 2009																																																		
Condition of the calibrated item	In Tolerance																																																		
<p>This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.</p> <p>All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.</p> <p>Calibration Equipment used (M&TE critical for calibration)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Primary Standards</th> <th style="width: 15%;">ID #</th> <th style="width: 30%;">Cal Date (Certificate No.)</th> <th style="width: 25%;">Scheduled Calibration</th> </tr> </thead> <tbody> <tr> <td>Power meter E4419B</td> <td>GB41293874</td> <td>1-Apr-09 (No. 217-01030)</td> <td>Apr-10</td> </tr> <tr> <td>Power sensor E4412A</td> <td>MY41495277</td> <td>1-Apr-09 (No. 217-01030)</td> <td>Apr-10</td> </tr> <tr> <td>Power sensor E4412A</td> <td>MY41498087</td> <td>1-Apr-09 (No. 217-01030)</td> <td>Apr-10</td> </tr> <tr> <td>Reference 3 dB Attenuator</td> <td>SN: S5054 (3c)</td> <td>31-Mar-09 (No. 217-01026)</td> <td>Mar-10</td> </tr> <tr> <td>Reference 20 dB Attenuator</td> <td>SN: S5086 (20b)</td> <td>31-Mar-09 (No. 217-01028)</td> <td>Mar-10</td> </tr> <tr> <td>Reference 30 dB Attenuator</td> <td>SN: S5129 (30b)</td> <td>31-Mar-09 (No. 217-01027)</td> <td>Mar-10</td> </tr> <tr> <td>Reference Probe ES3DV2</td> <td>SN: 3013</td> <td>2-Jan-09 (No. ES3-3013_Jan09)</td> <td>Jan-10</td> </tr> <tr> <td>DAE4</td> <td>SN: 660</td> <td>9-Sep-08 (No. DAE4-660_Sep08)</td> <td>Sep-09</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Secondary Standards</th> <th style="width: 15%;">ID #</th> <th style="width: 30%;">Check Date (in house)</th> <th style="width: 25%;">Scheduled Check</th> </tr> </thead> <tbody> <tr> <td>RF generator HP 8648C</td> <td>US3642U01700</td> <td>4-Aug-99 (in house check Oct-07)</td> <td>In house check: Oct-09</td> </tr> <tr> <td>Network Analyzer HP 8753E</td> <td>US37390585</td> <td>18-Oct-01 (in house check Oct-08)</td> <td>In house check: Oct-09</td> </tr> </tbody> </table>				Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration	Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10	Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10	Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10	Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10	Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10	Reference 30 dB Attenuator	SN: S5129 (30b)	31-Mar-09 (No. 217-01027)	Mar-10	Reference Probe ES3DV2	SN: 3013	2-Jan-09 (No. ES3-3013_Jan09)	Jan-10	DAE4	SN: 660	9-Sep-08 (No. DAE4-660_Sep08)	Sep-09	Secondary Standards	ID #	Check Date (in house)	Scheduled Check	RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-07)	In house check: Oct-09	Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-08)	In house check: Oct-09
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Calibrated by:	Name Claudio Leubler	Function Laboratory Technician	Signature 																																																
Approved by:	Name Katja Pokovic	Function Technical Manager	Signature 																																																
Issued: September 23, 2009																																																			
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.																																																			

Certificate No: EX3-3677_Sep09

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Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis

Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
- IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not effect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z} = NORM_{x,y,z} * frequency_response** (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.