

2437MHz/Touch position/Right Head/b mode/std batt

Date/Time: 9/27/2006 10:23:52 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.6 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$

kg/m³

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(7.64, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.173 mW/g

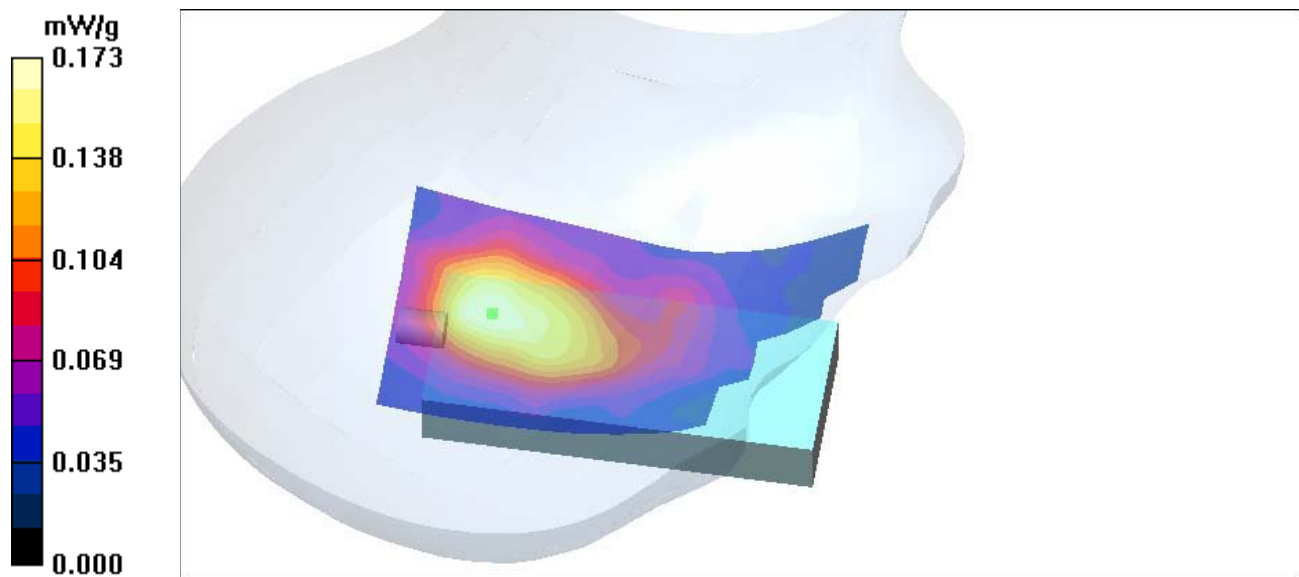
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.55 V/m; Power Drift = -0.110 dB

Peak SAR (extrapolated) = 0.308 W/kg

SAR(1 g) = 0.165 mW/g; SAR(10 g) = 0.107 mW/g

Maximum value of SAR (measured) = 0.178 mW/g



2437MHz/tilt position/Right Head/b mode/std batt

Date/Time: 9/27/2006 10:49:03 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.6 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$

kg/m³

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(7.64, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.170 mW/g

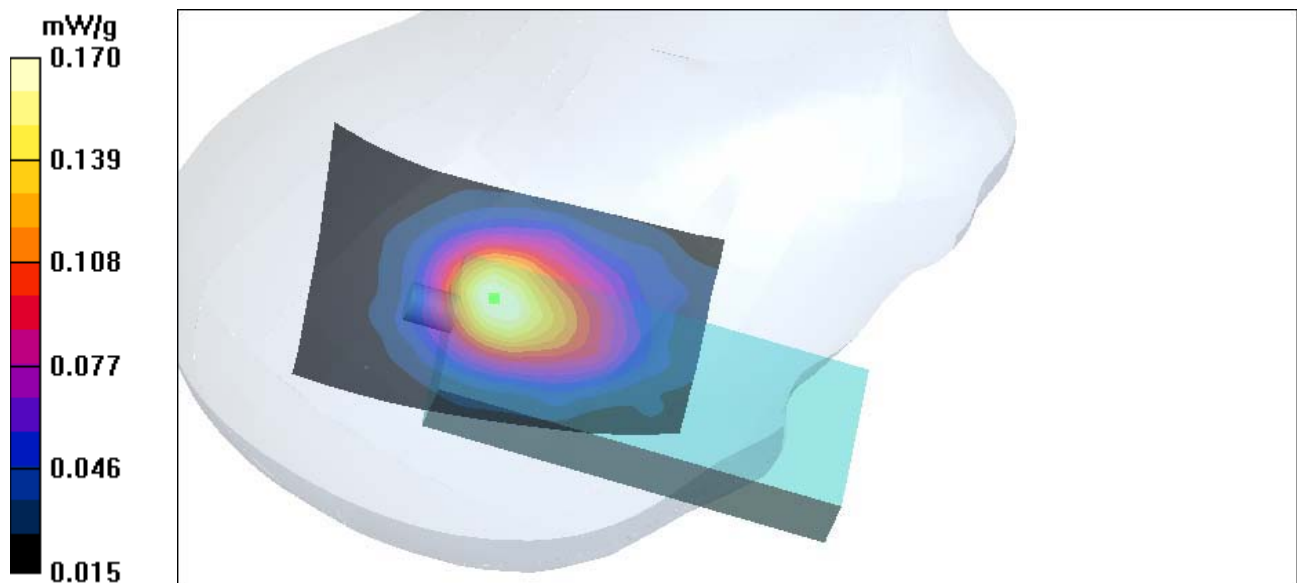
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.42 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 0.294 W/kg

SAR(1 g) = 0.154 mW/g; SAR(10 g) = 0.092 mW/g

Maximum value of SAR (measured) = 0.166 mW/g



2437MHz/Touch position/Right Head/g mode/std batt

Date/Time: 9/27/2006 11:36:24 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.6 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$

kg/m³

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(7.64, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.177 mW/g

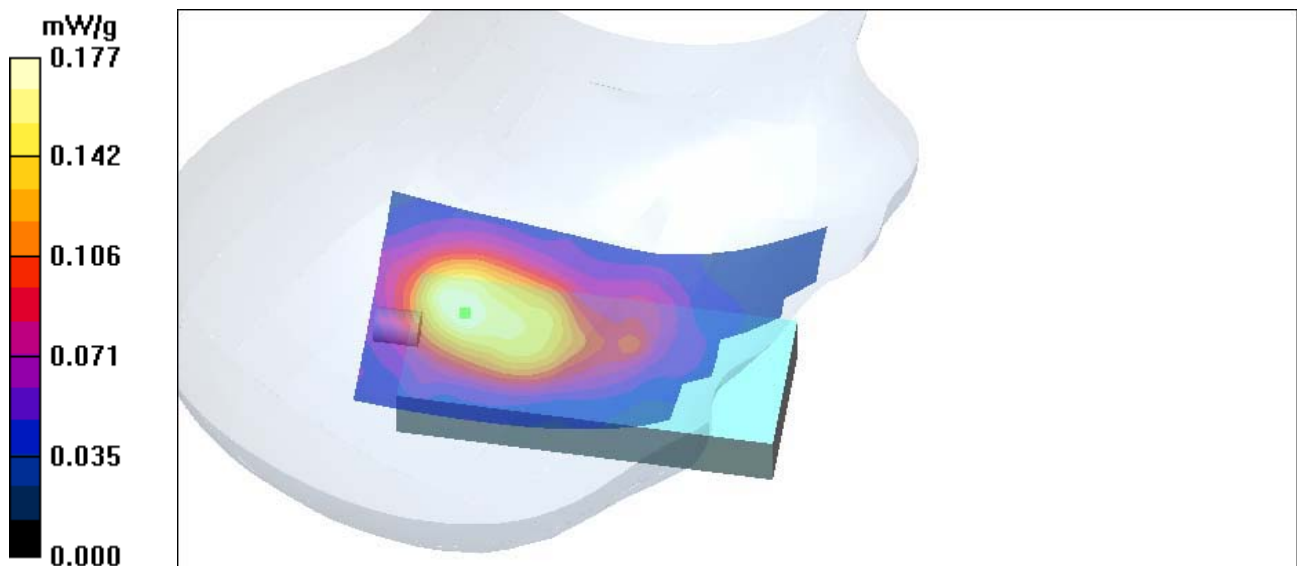
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.63 V/m; Power Drift = 0.144 dB

Peak SAR (extrapolated) = 0.318 W/kg

SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.181 mW/g



2437MHz/tilt position/Right Head/g mode/std batt

Date/Time: 9/27/2006 11:12:48 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.6 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$

kg/m³

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(7.64, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.179 mW/g

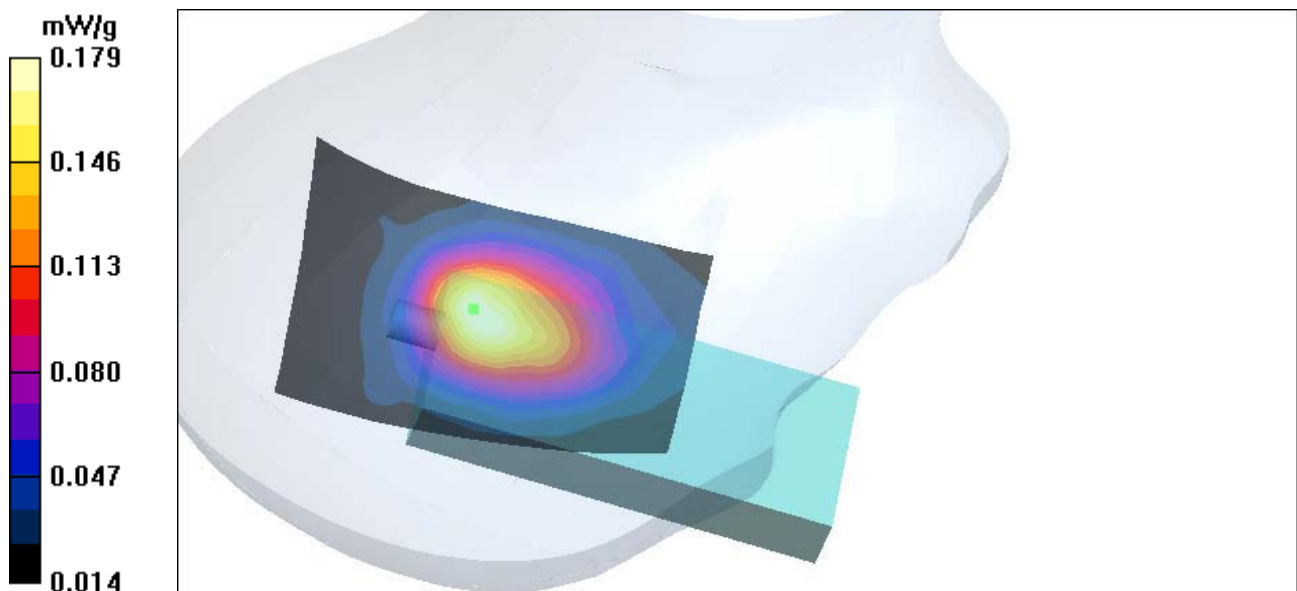
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.72 V/m; Power Drift = 0.125 dB

Peak SAR (extrapolated) = 0.316 W/kg

SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.101 mW/g

Maximum value of SAR (measured) = 0.183 mW/g



2437MHz/Touch position/Right Head/g mode/ext batt

Date/Time: 9/27/2006 12:04:56 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.6 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$

kg/m³

Phantom section: Right Section

Probe: EXDV3 - SN3511; ConvF(7.6 4, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.187 mW/g

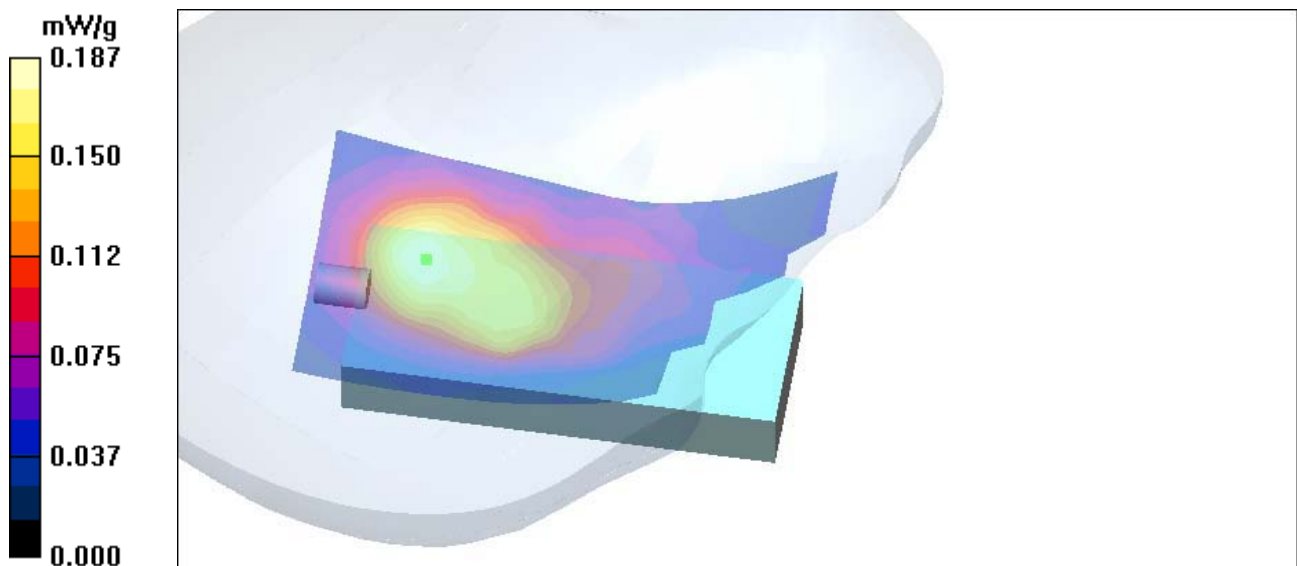
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.55 V/m; Power Drift = 0.115 dB

Peak SAR (extrapolated) = 0.335 W/kg

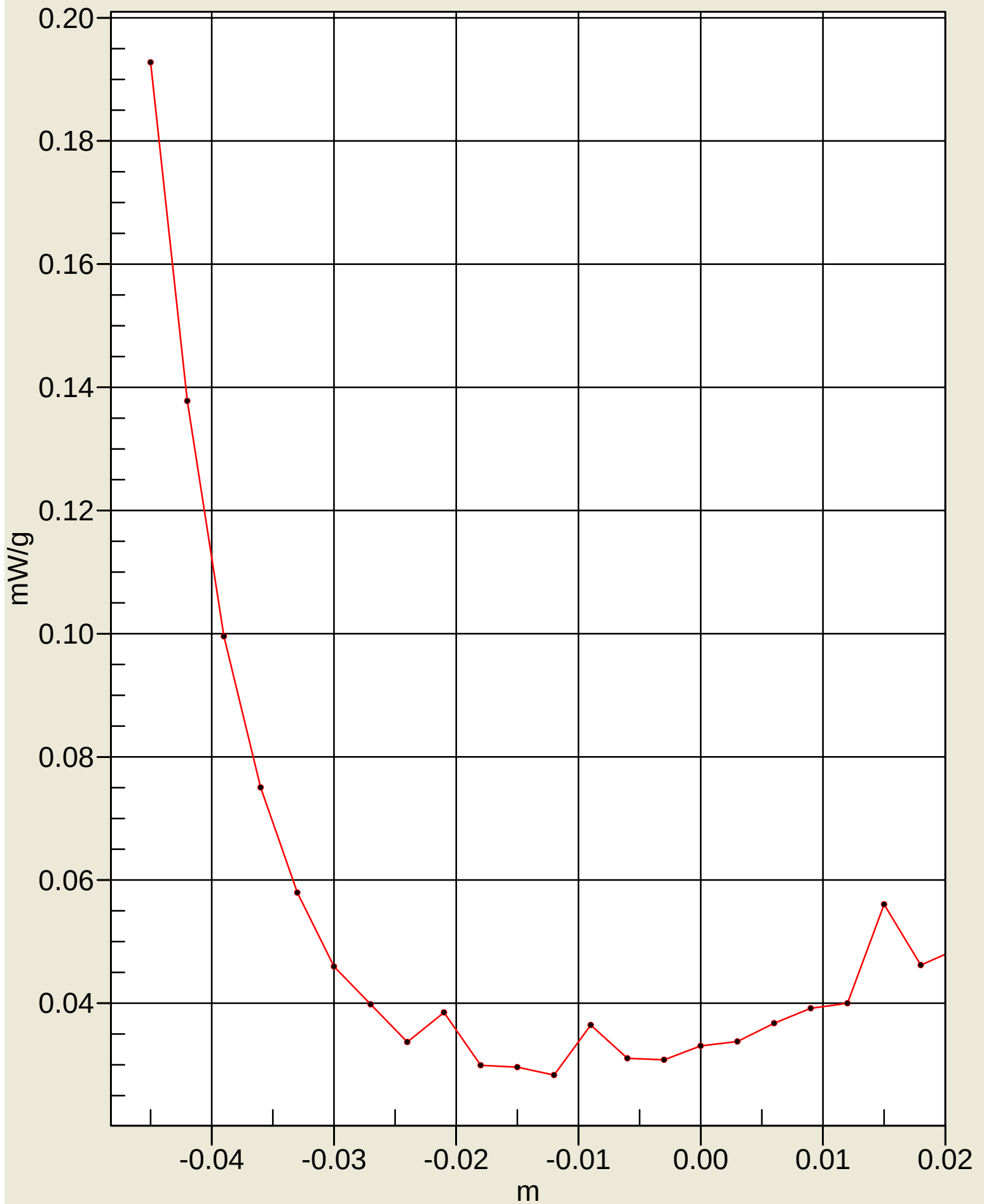
SAR(1 g) = 0.172 mW/g; SAR(10 g) = 0.110 mW/g

Maximum value of SAR (measured) = 0.185 mW/g



SAR(x,y,z,f0)

SAR; Z Scan Right Hand Touch g-mode Ext Batt



2437MHz/Touch position/Left Head/b mode/std batt

Date/Time: 9/27/2006 1:51:24 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.6 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$

kg/m³

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(7.64, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.212 mW/g

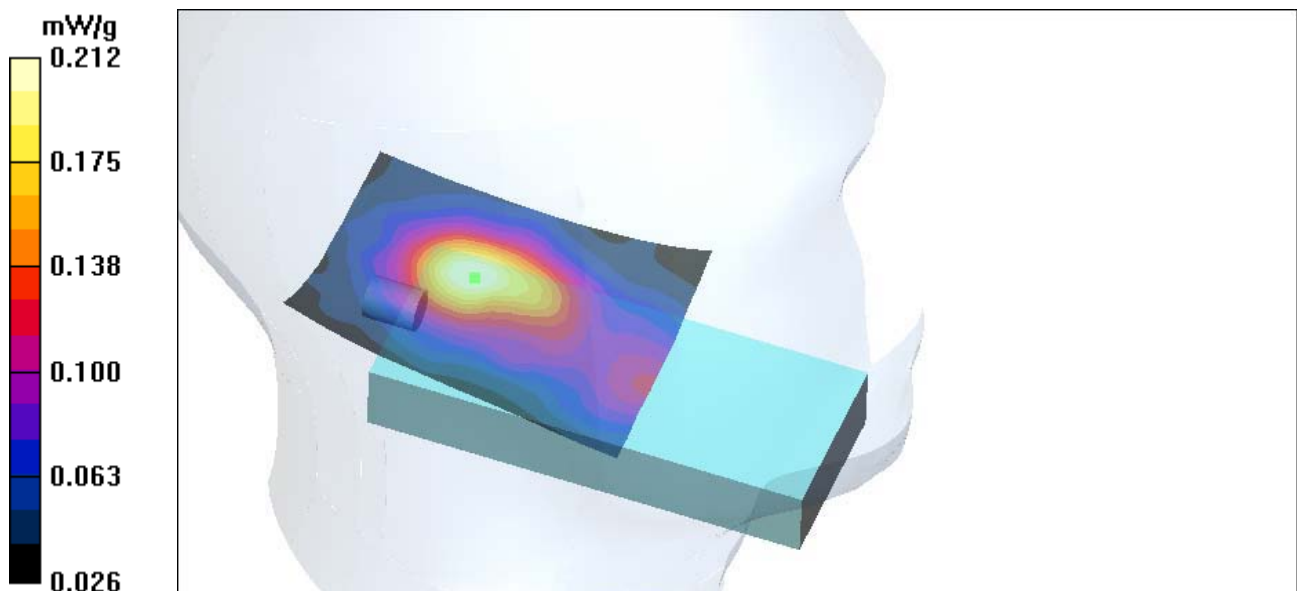
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.70 V/m; Power Drift = 0.122 dB

Peak SAR (extrapolated) = 0.403 W/kg

SAR(1 g) = 0.197 mW/g; SAR(10 g) = 0.119 mW/g

Maximum value of SAR (measured) = 0.209 mW/g



243MHz tilt position Left Headb modestd batt

Date/Time: 9/27/2006 2:12:31 PM

DU: Cisco;Type: C210Serial: IA C10290A4

Medium Notes: Ambient Temp: 22.6 deg C;Fluid Temp: 21.7 deg C

Communication System: EDM;;Freque ncy: 2450 MHzDuty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.83 \text{ mho/m}$; $\epsilon_r = 38.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Probe: EX3DV3 - SN3511;ConvF(7.6 4, 7.64, 7.64);Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP;T type: SAM;Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44;Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81211): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.237 mW/g

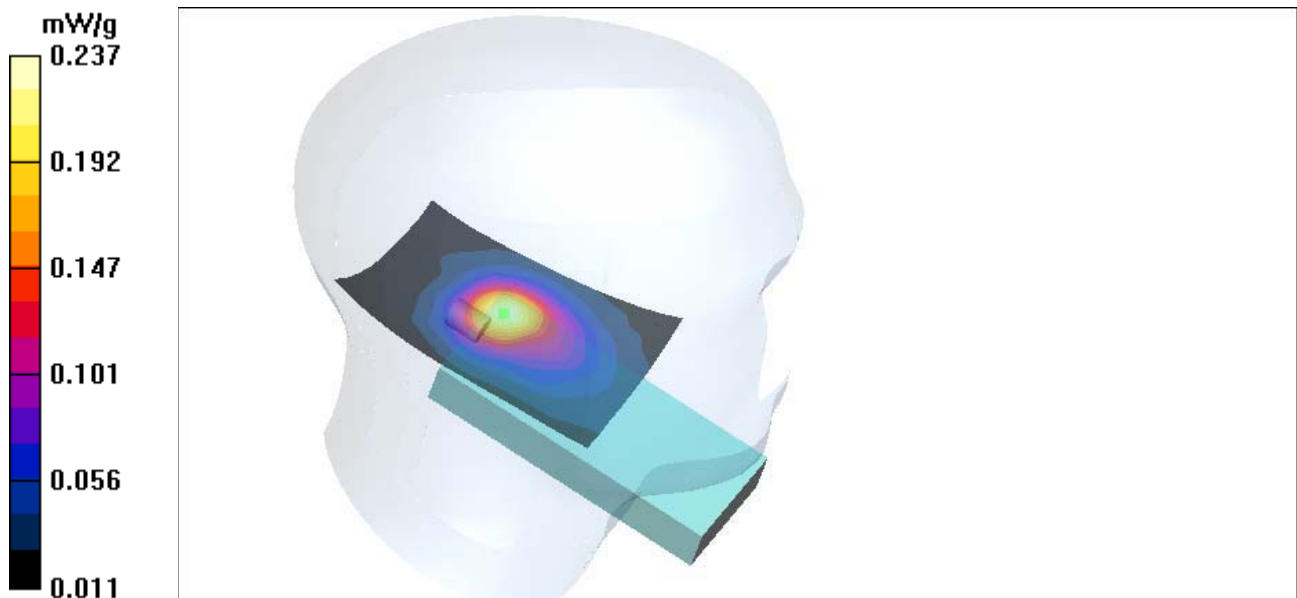
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.99 V/m ;Power Drift = 0.061 dB

Peak SAR (extrapolated) = 0.390 W/kg

SAR(1 g) = 0.207 mW/g ;SAR(10 g) = 0.116 mW/g

Maximum value of SAR (measured) = 0.226 mW/g



2437MHz Touch position/Left Head/g mode/std batt

Date/Time: 9/27/2006 1:29:57 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.6 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$

kg/m³

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(7.64, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.228 mW/g

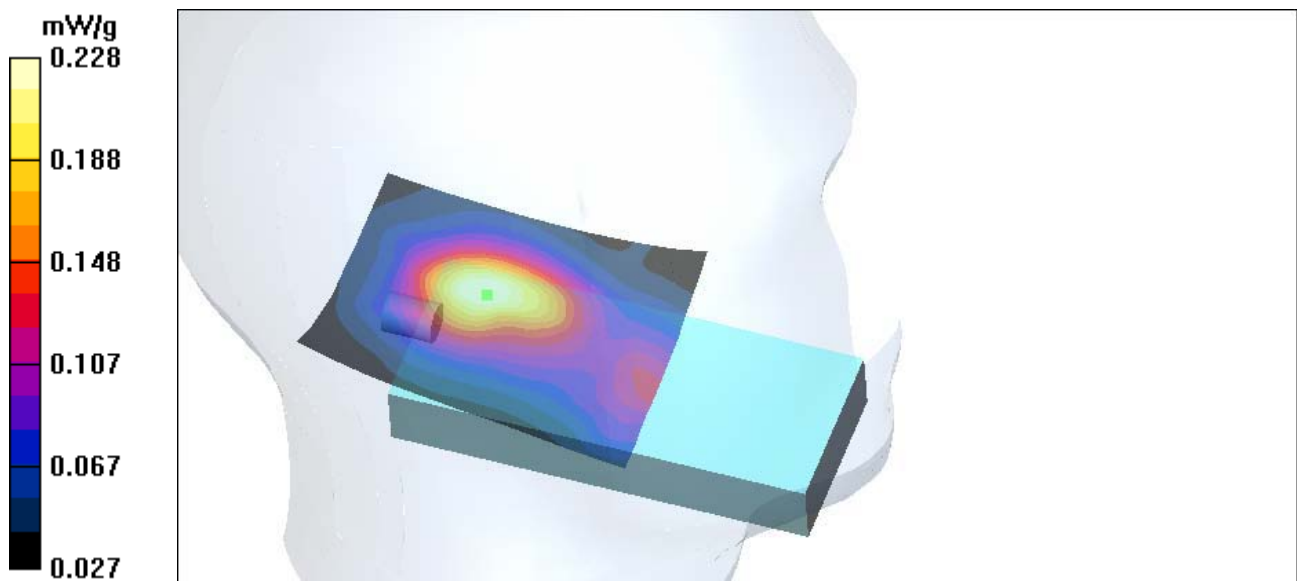
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.1 V/m; Power Drift = 0.133 dB

Peak SAR (extrapolated) = 0.366 W/kg

SAR(1 g) = 0.207 mW/g; SAR(10 g) = 0.127 mW/g

Maximum value of SAR (measured) = 0.221 mW/g



2437MHz/tilt position/Left Head/g mode/std batt

Date/Time: 9/27/2006 2:35:06 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.6 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$

kg/m³

Phantom section: Left Section

Probe: EXDV3 - SN3511; ConvF(7.6 4, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.260 mW/g

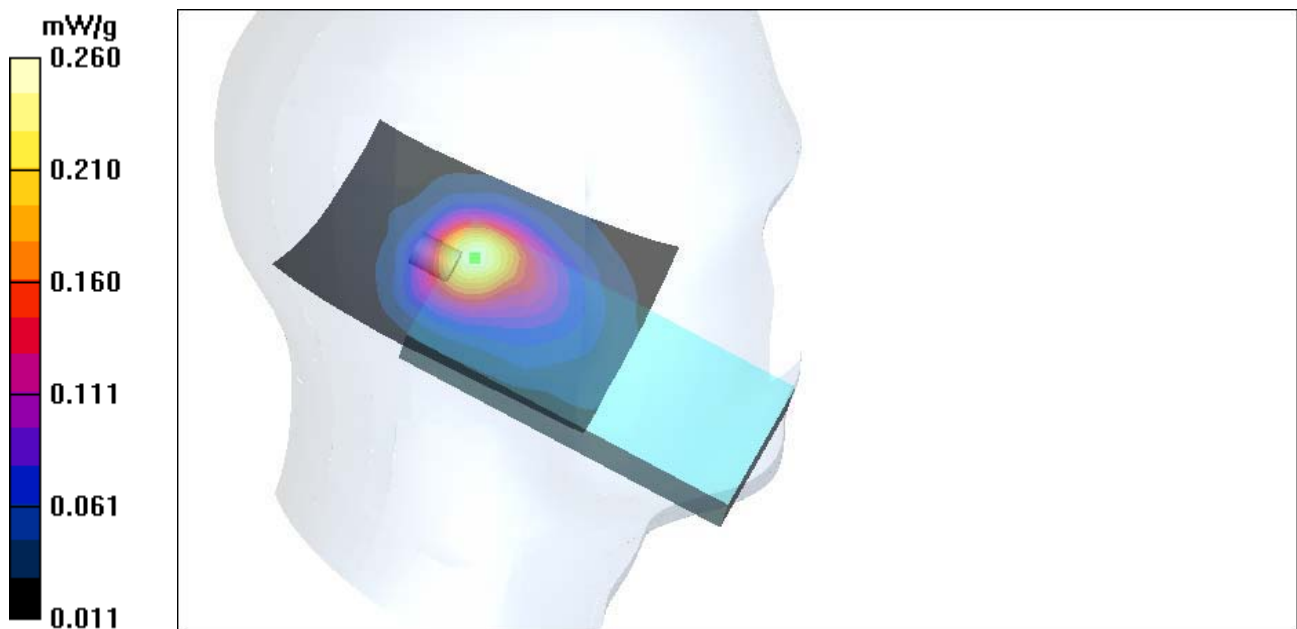
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.5 V/m; Power Drift = -0.135 dB

Peak SAR (extrapolated) = 0.452 W/kg

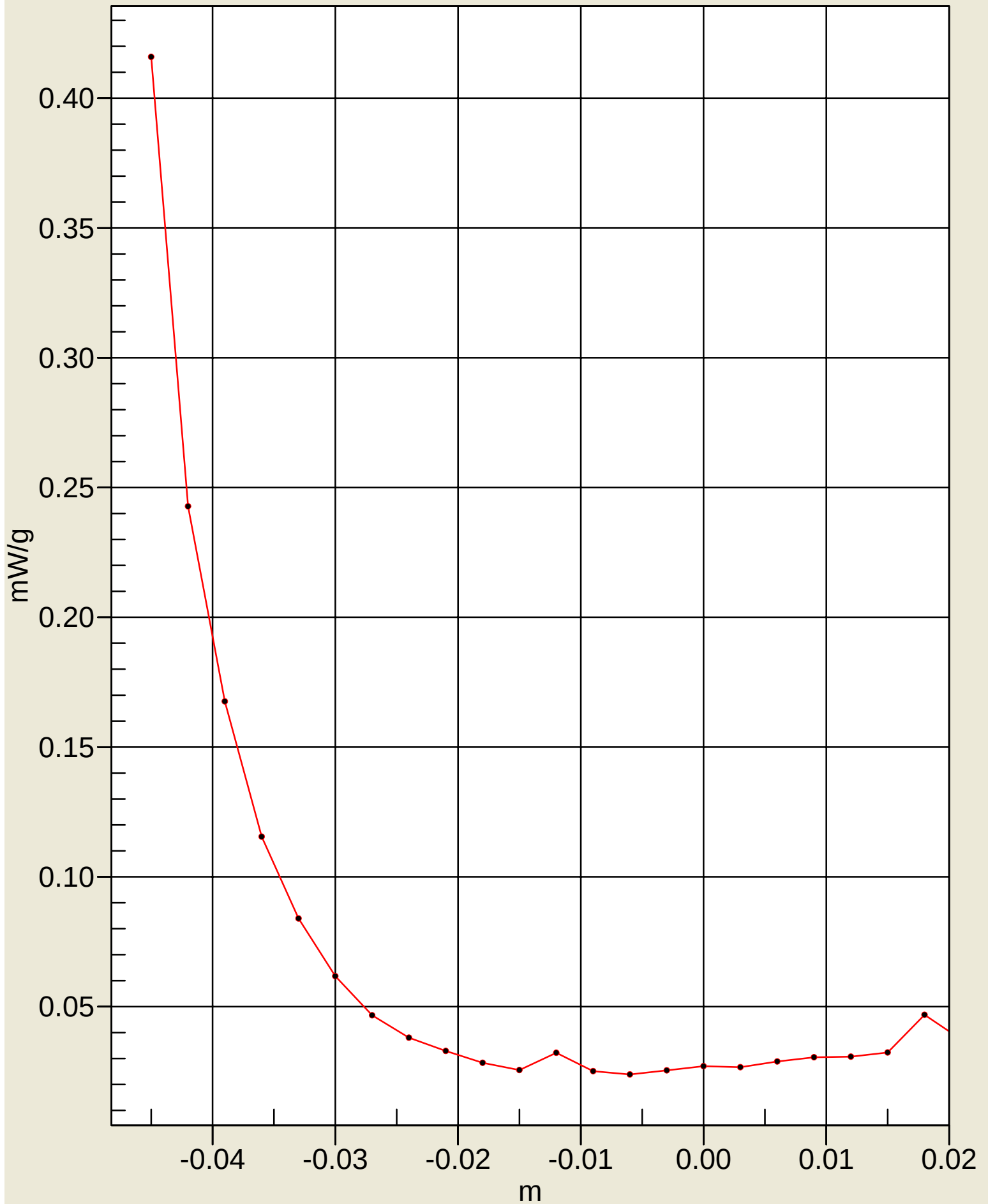
SAR(1 g) = 0.232 mW/g; SAR(10 g) = 0.127 mW/g

Maximum value of SAR (measured) = 0.252 mW/g



SAR(x,y,z,f0)

SAR; Z Scan Left Head Tilt g-mode std batt



2437MHz/tilt position/Left Hand/g mode/ext batt

Date/Time: 9/27/2006 3:15:06 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.1 deg C; Fluid Temp 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$

kg/m³

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(7.64, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.256 mW/g

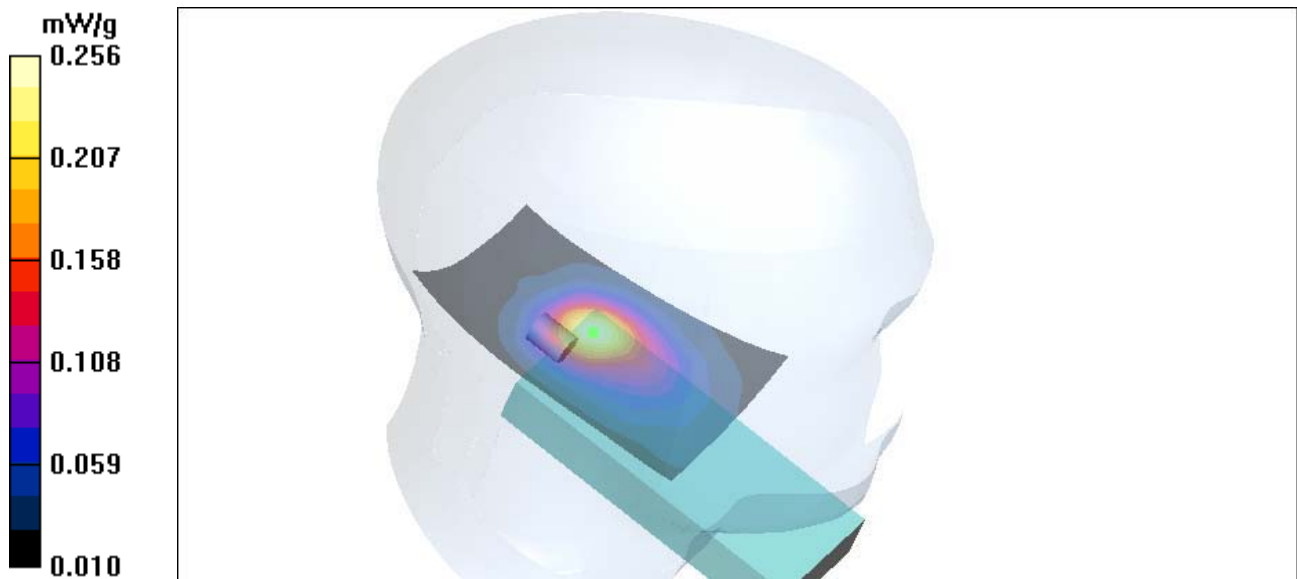
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.5 V/m; Power Drift = -0.135 dB

Peak SAR (extrapolated) = 0.445 W/kg

SAR(1 g) = 0.228 mW/g; SAR(10 g) = 0.125 mW/g

Maximum value of SAR (measured) = 0.248 mW/g



2437MHz/body worn/plastic holder/b mode/std batt

Date/Time: 9/27/2006 3:26:44 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.1 deg C; Fluid Temp 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.108 mW/g

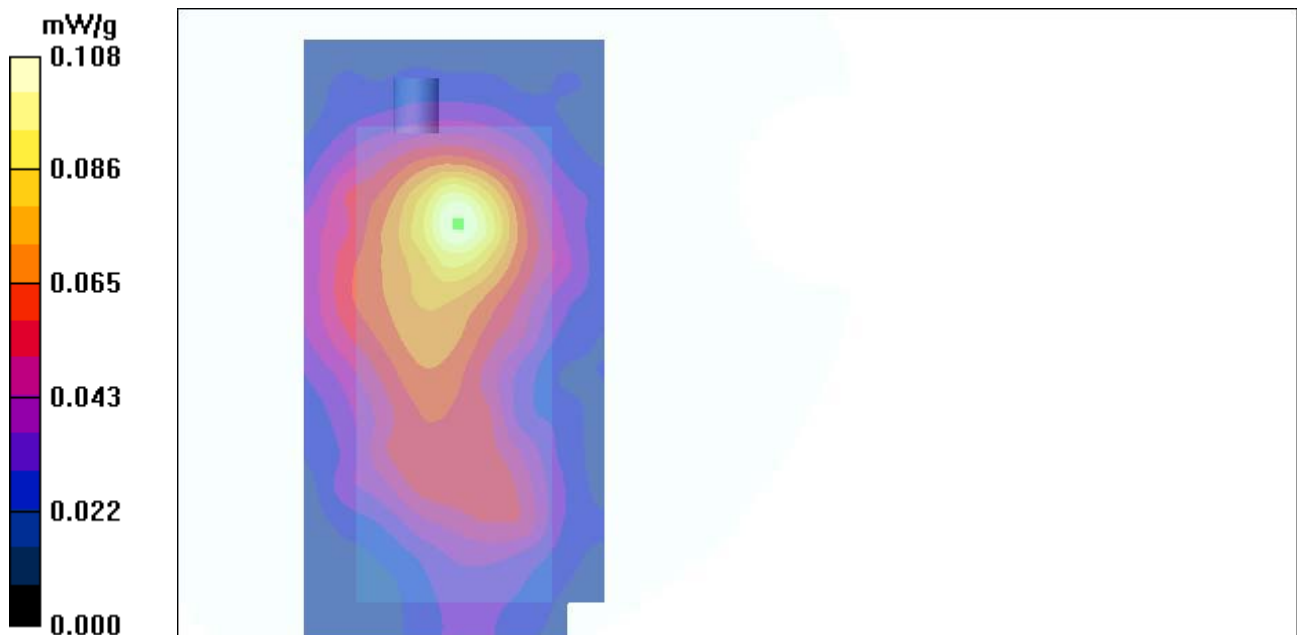
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.76 V/m; Power Drift = -0.006 dB

Peak SAR (extrapolated) = 0.202 W/kg

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.062 mW/g

Maximum value of SAR (measured) = 0.109 mW/g



2437MHz/body worn/plastic holder/g mode/std batt

Date/Time: 9/27/2006 3:51:08 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.1 deg C; Fluid Temp 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.113 mW/g

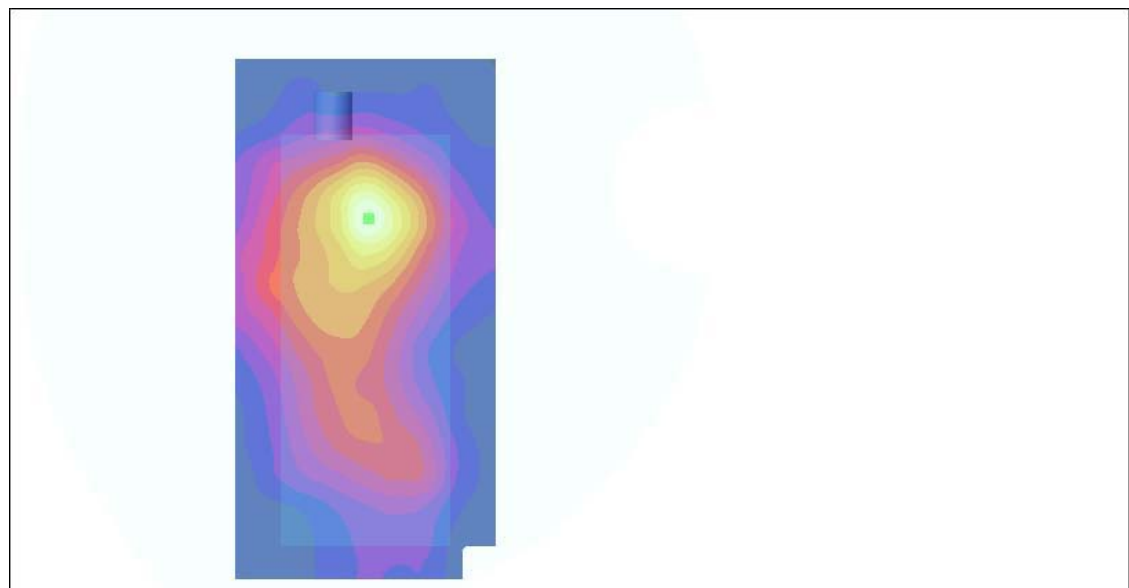
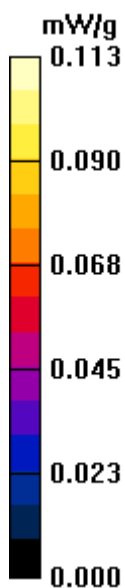
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.99 V/m; Power Drift = -0.106 dB

Peak SAR (extrapolated) = 0.201 W/kg

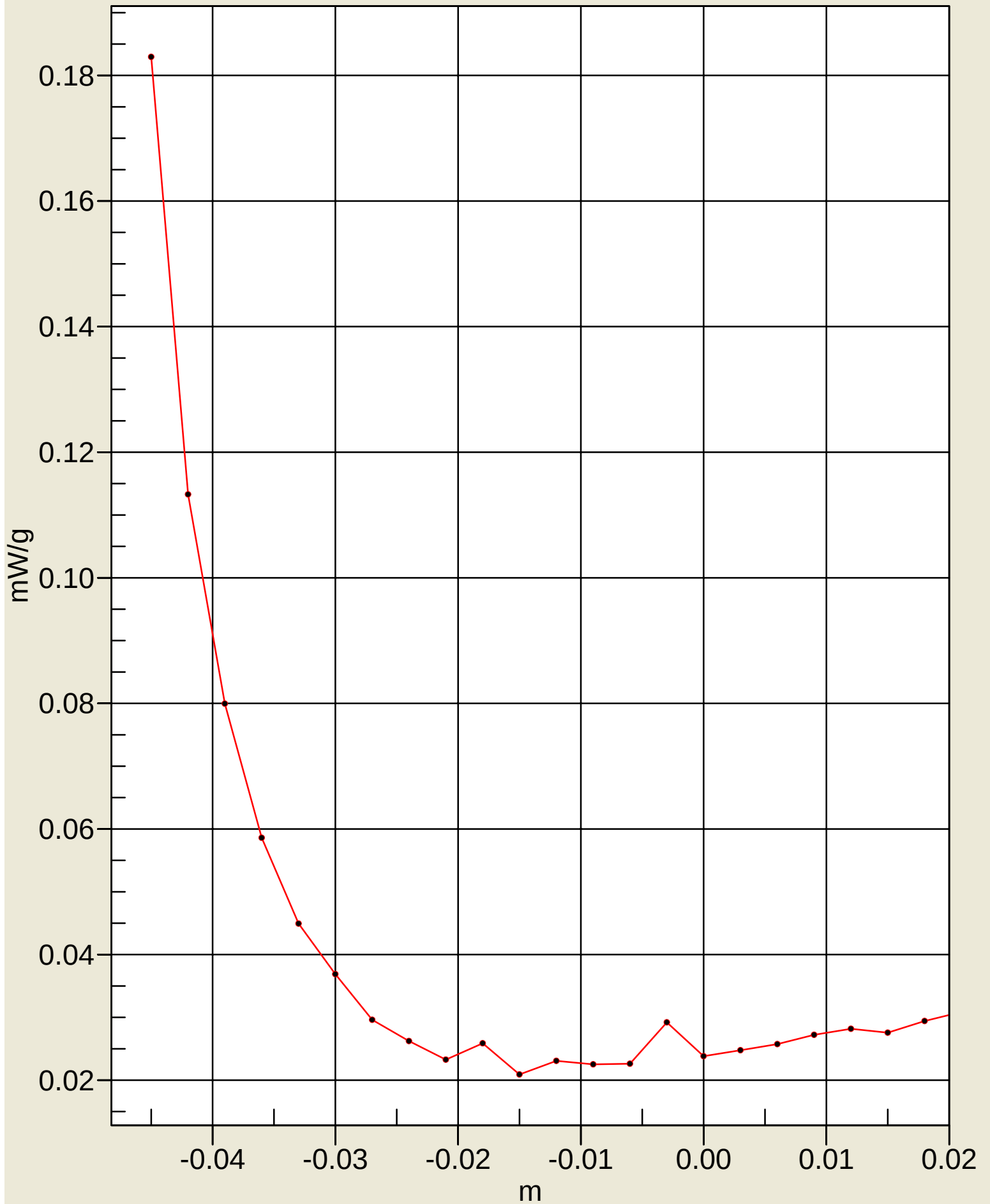
SAR(1 g) = 0.107 mW/g; SAR(10 g) = 0.063 mW/g

Maximum value of SAR (measured) = 0.114 mW/g



SAR(x,y,z,f0)

SAR; Z Scan:2437MHz body worn



2437MHz/body worn/plastic holder/g mode/ext batt

Date/Time: 9/27/2006 4:16:46 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.1 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.113 mW/g

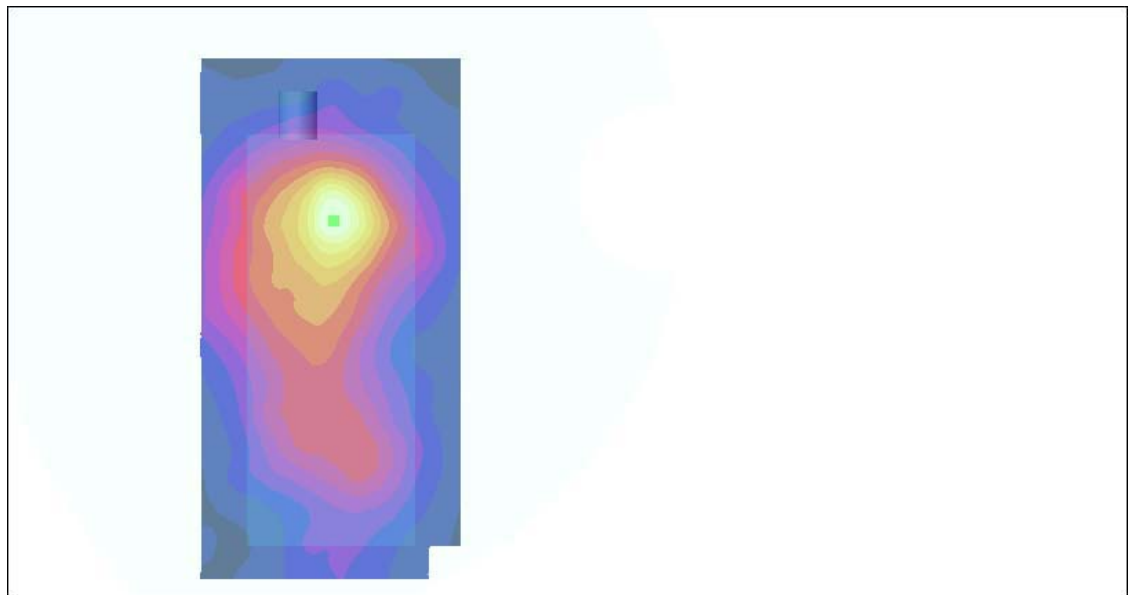
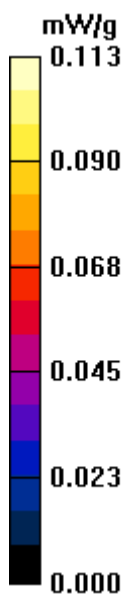
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.86 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 0.185 W/kg

SAR(1 g) = 0.104 mW/g; SAR(10 g) = 0.062 mW/g

Maximum value of SAR (measured) = 0.112 mW/g



2437MHz/body worn/leather holster/b mode/std batt

Date/Time: 9/27/2006 4:42:04 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.1 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.088 mW/g

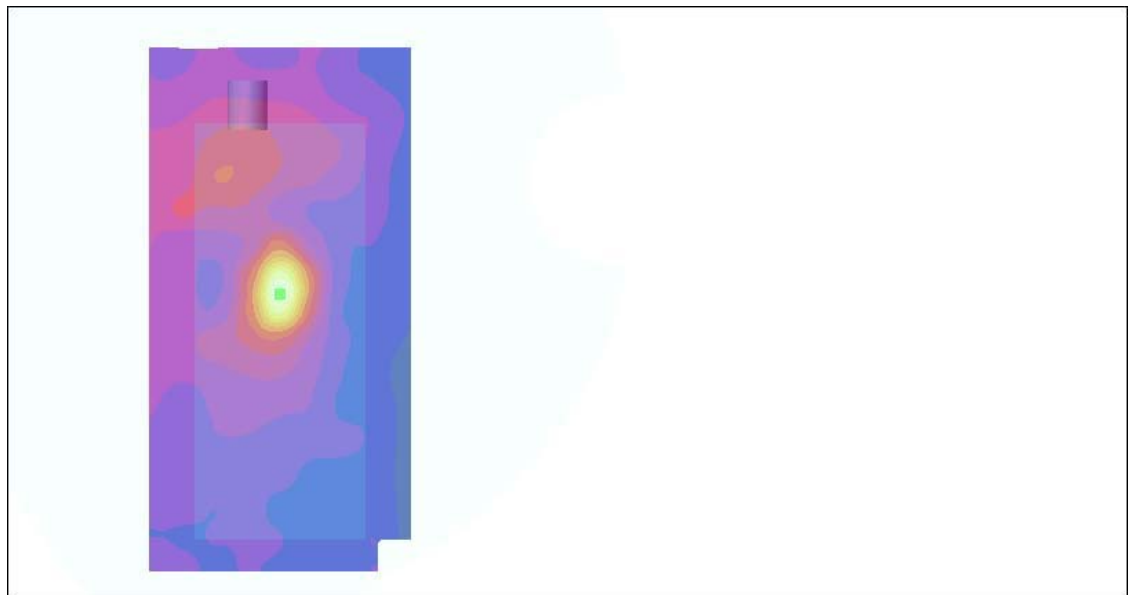
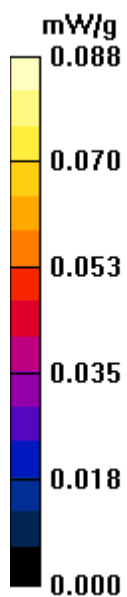
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.14 V/m; Power Drift = -0.206 dB

Peak SAR (extrapolated) = 0.153 W/kg

SAR(1 g) = 0.071 mW/g; SAR(10 g) = 0.040 mW/g

Maximum value of SAR (measured) = 0.074 mW/g



2437MHz/body worn/leather holster/g mode/std batt

Date/Time: 9/27/2006 5:19:44 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.1 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz;Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.084 mW/g

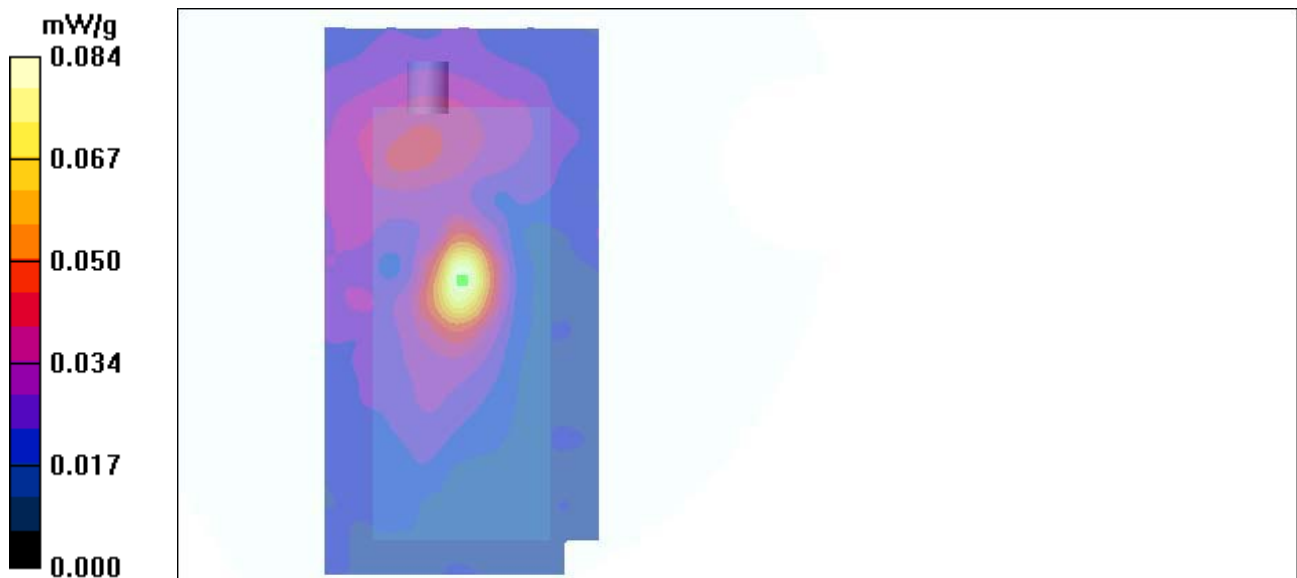
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.07 V/m; Power Drift = 0.124 dB

Peak SAR (extrapolated) = 0.168 W/kg

SAR(1 g) = 0.074 mW/g; SAR(10 g) = 0.041 mW/g

Maximum value of SAR (measured) = 0.079 mW/g



2437MHz/body worn/leather holster/g mode/ext batt

Date/Time: 9/27/2006 5:38:28 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.1 deg C; Fluid Temp: 21.7 deg C

Communication System: OFDM; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: M2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 2.04$ mho/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(7.8, 7.8, 7.8); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.084 mW/g

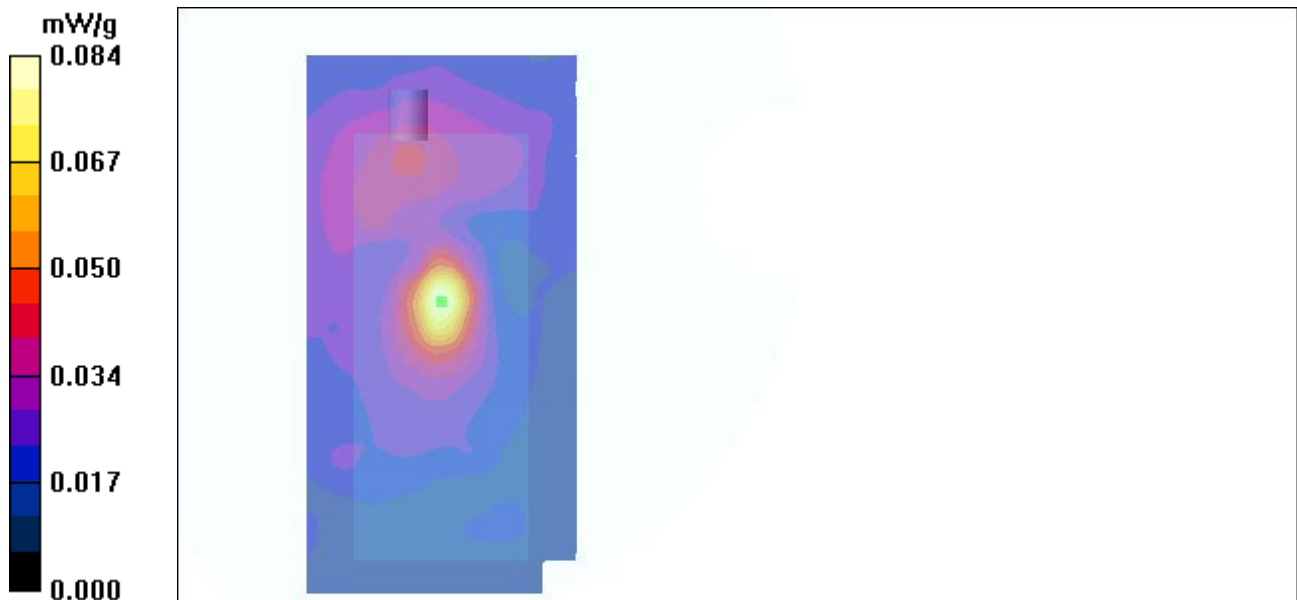
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.38 V/m; Power Drift = -0.147 dB

Peak SAR (extrapolated) = 0.144 W/kg

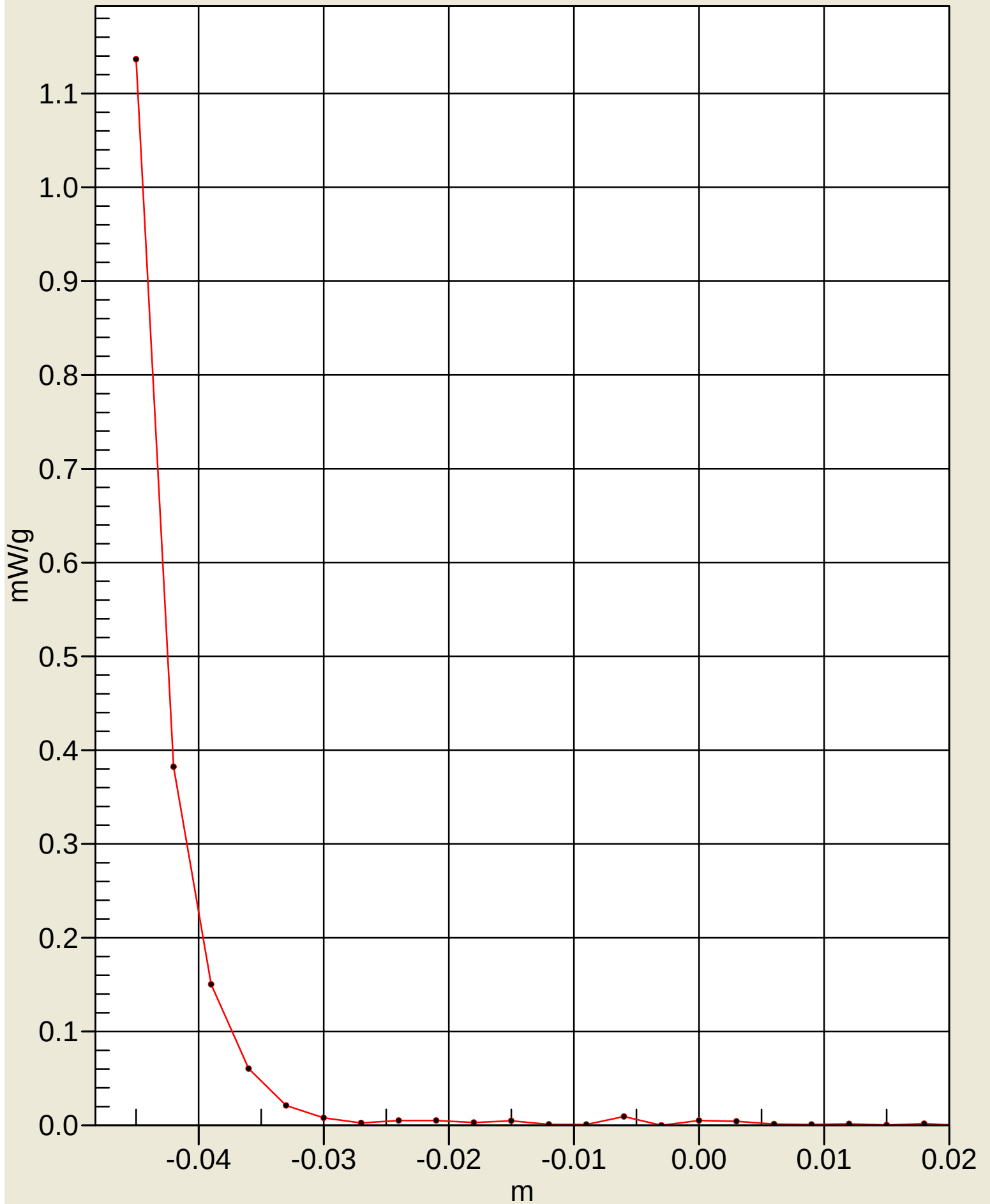
SAR(1 g) = 0.072 mW/g; SAR(10 g) = 0.040 mW/g

Maximum value of SAR (measured) = 0.079 mW/g



SAR(x,y,z,f0)

SAR; Z Scan:2437MHz Body Worn



5200MHz Touch Right Hand

Date/Time: 9/21/2006 9:49:38 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5-6GHz Head Medium parameters used: $f = 5200$ MHz; $\sigma = 4.5$ mho/m; $\epsilon_r = 37.2$; $\rho = 1000$

kg/m³

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.522 mW/g

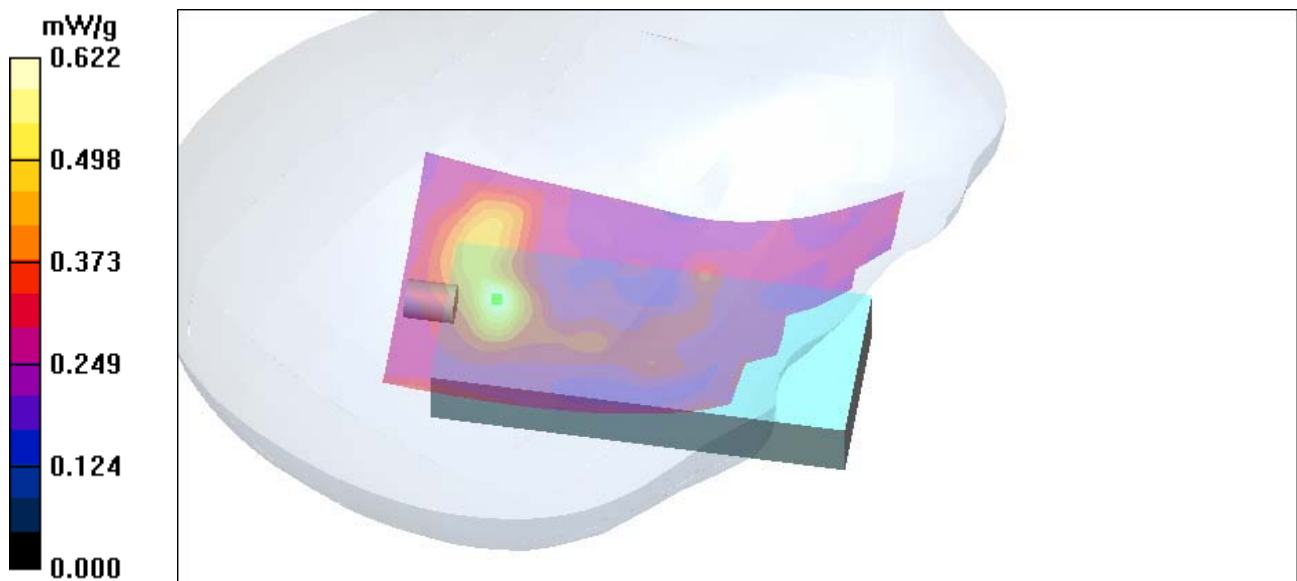
Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 12.4 V/m; Power Drift = -0.133 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.510 mW/g; SAR(10 g) = 0.348 mW/g

Maximum value of SAR (measured) = 0.612 mW/g



5200MHz Tilt Right Hand

Date/Time: 9/21/2006 10:15:42 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5-6GHz Head Medium parameters used: $f = 5200$ MHz; $\sigma = 4.5$ mho/m; $\epsilon_r = 37.2$; $\rho = 1000$

kg/m³

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.473 mW/g

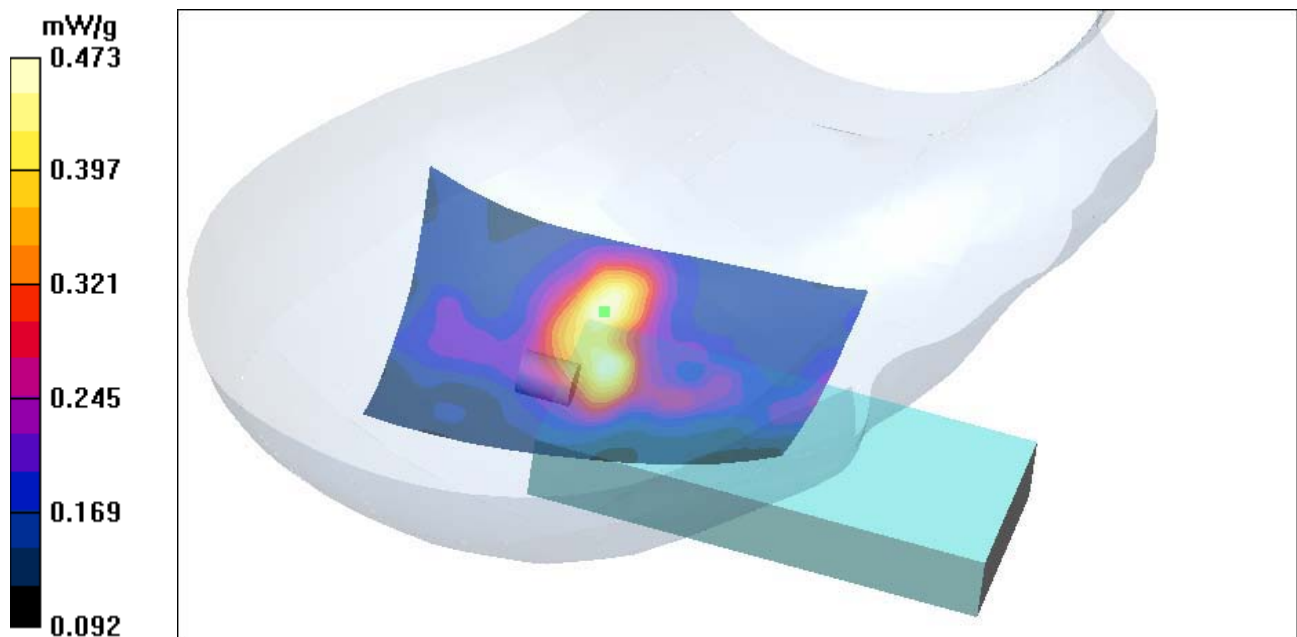
Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 9.48 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 0.890 W/kg

SAR(1 g) = 0.372 mW/g; SAR(10 g) = 0.211 mW/g

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



5200MHz Touch left Hand

Date/Time: 9/21/2006 4:47:08 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5200 MHz Head Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 4.5 \text{ mho/m}$; $\epsilon_r = 37.2$; $\rho = 1000$

kg/m^3

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.413 mW/g

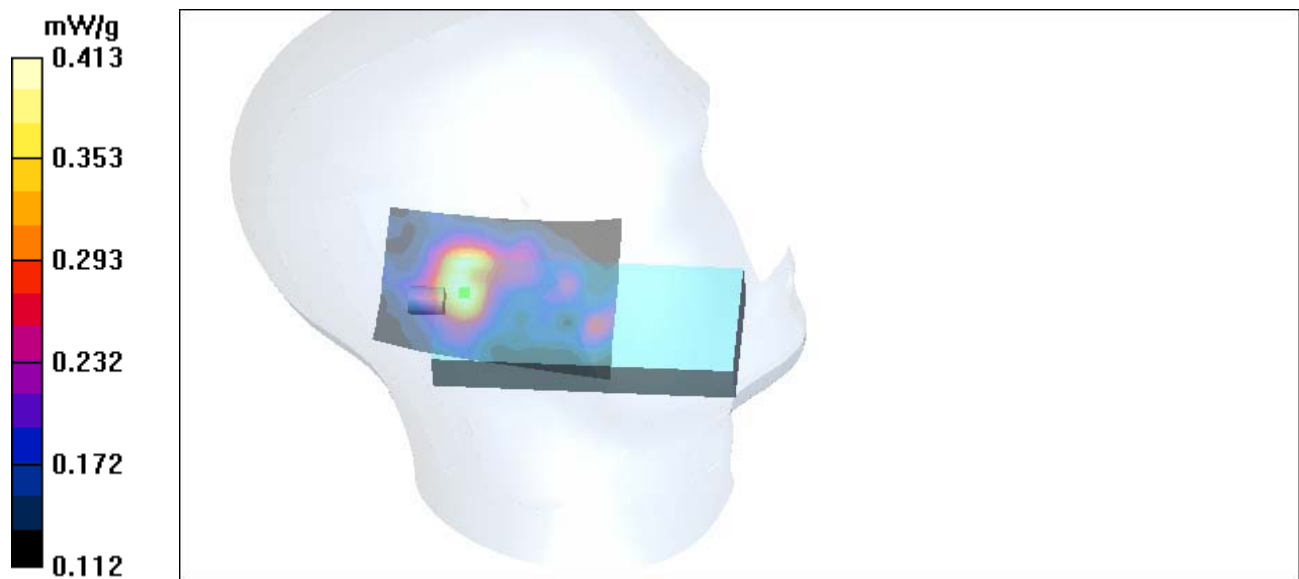
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 10.1 V/m ; Power Drift = -0.104 dB

Peak SAR (extrapolated) = 0.840 W/kg

SAR(1 g) = 0.379 mW/g ; SAR(10 g) = 0.238 mW/g

Maximum value of SAR (measured) = 0.429 mW/g



5200MHz Tilt Left Hand

Date/Time: 9/21/2006 4:24:54 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5-6GHz Head Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 4.5 \text{ mho/m}$; $\epsilon_r = 37.2$; $\rho = 1000$

kg/m^3

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.408 mW/g

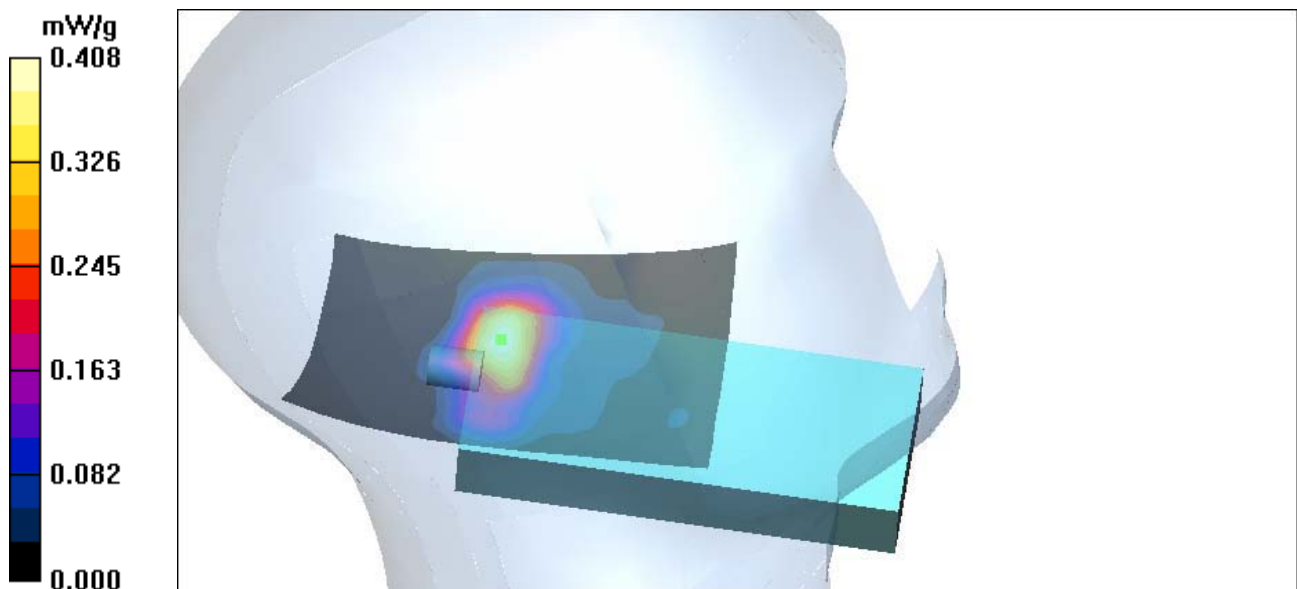
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.13 V/m ; Power Drift = -0.142 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.343 mW/g ; SAR(10 g) = 0.130 mW/g

Maximum value of SAR (measured) = 0.391 mW/g



5200MHz Touch Right Hand/ext batt

Date/Time: 9/21/2006 5:19:48 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5200 MHz Head Medium parameters used: $f = 5200$ MHz; $\sigma = 4.5$ mho/m; $\epsilon_r = 37.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x151x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.539 mW/g

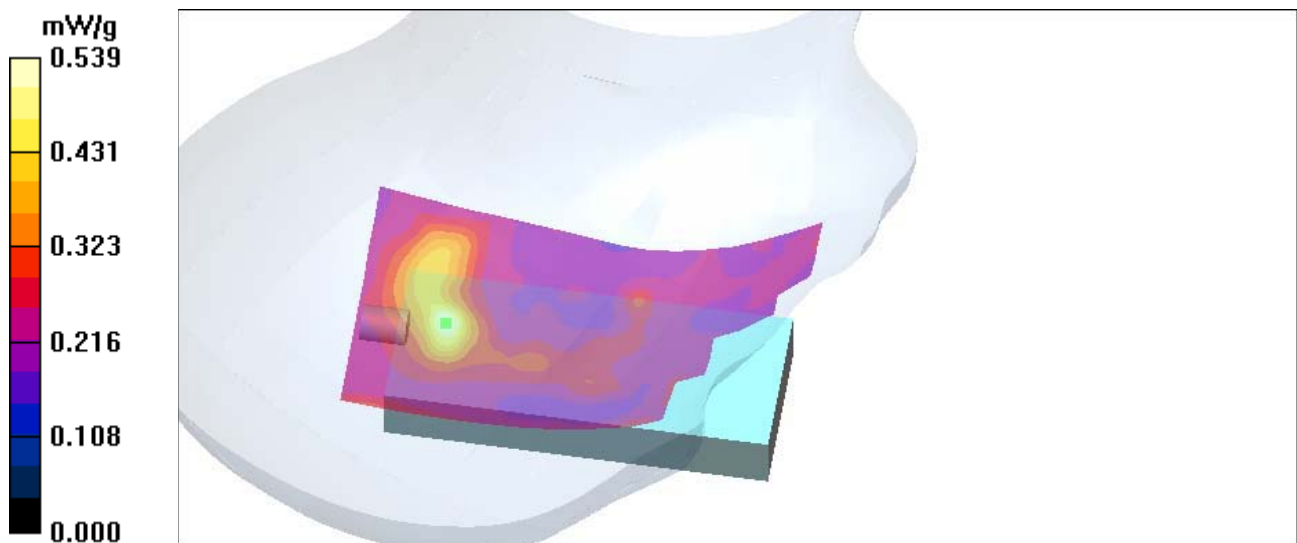
Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 11.6 V/m; Power Drift = -0.135 dB

Peak SAR (extrapolated) = 0.878 W/kg

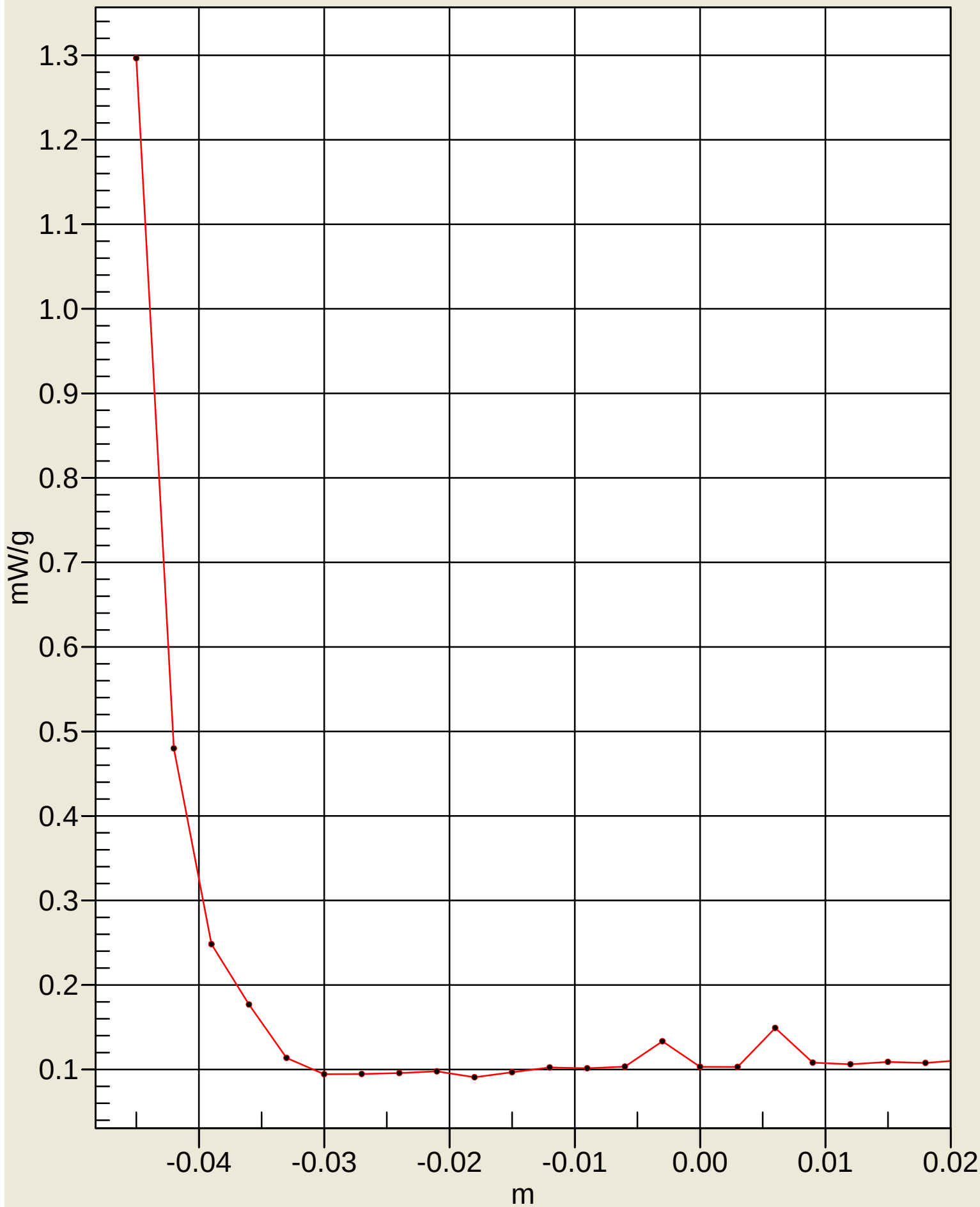
SAR(1 g) = 0.442 mW/g; SAR(10 g) = 0.301 mW/g

Maximum value of SAR (measured) = 0.530 mW/g



SAR(x,y,z,f0)

SAR; Z Scan:5300MHz Touch Right Hand



5300MHz Touch Right Hand

Date/Time: 9/21/2006 11:03:49 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5300 MHz Head Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 4.64 \text{ mho/m}$; $\epsilon_r = 37.1$; $\rho =$

1000 kg/m^3

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.450 mW/g

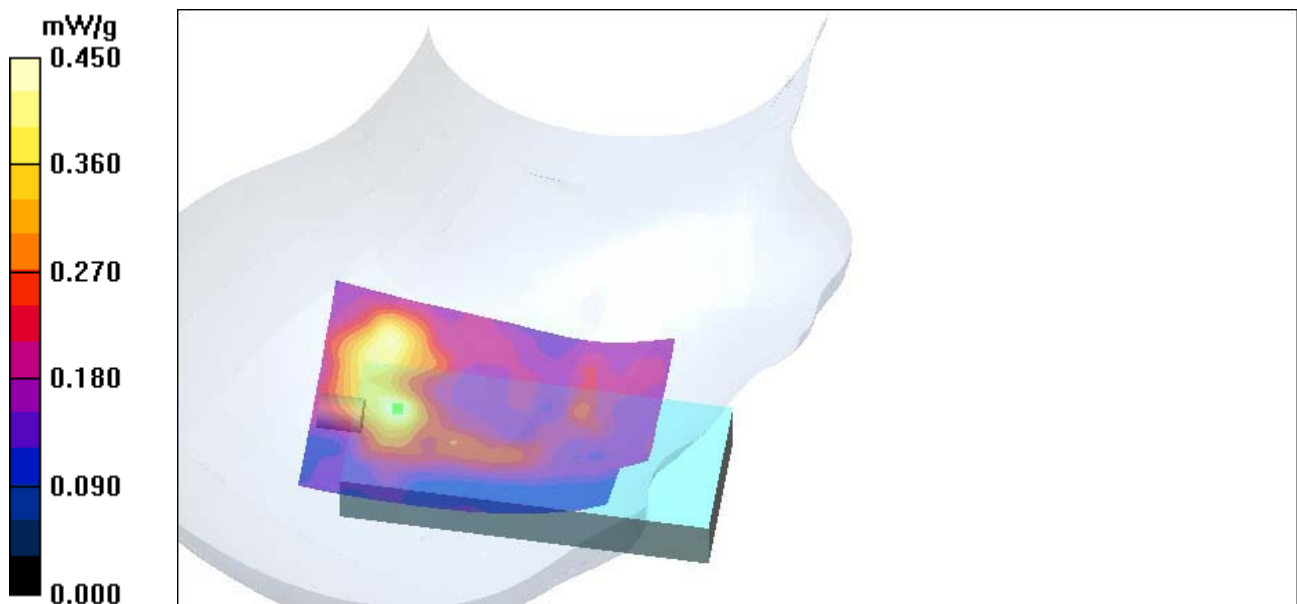
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 9.31 V/m ; Power Drift = 0.131 dB

Peak SAR (extrapolated) = 0.857 W/kg

SAR(1 g) = 0.426 mW/g ; SAR(10 g) = 0.282 mW/g

Maximum value of SAR (measured) = 0.483 mW/g



5300MHz Tilt Right Hand

Date/Time: 9/21/2006 10:40:53 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5300 MHz Head Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 4.64 \text{ mho/m}$; $\epsilon_r = 37.1$; $\rho =$

1000 kg/m^3

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.407 mW/g

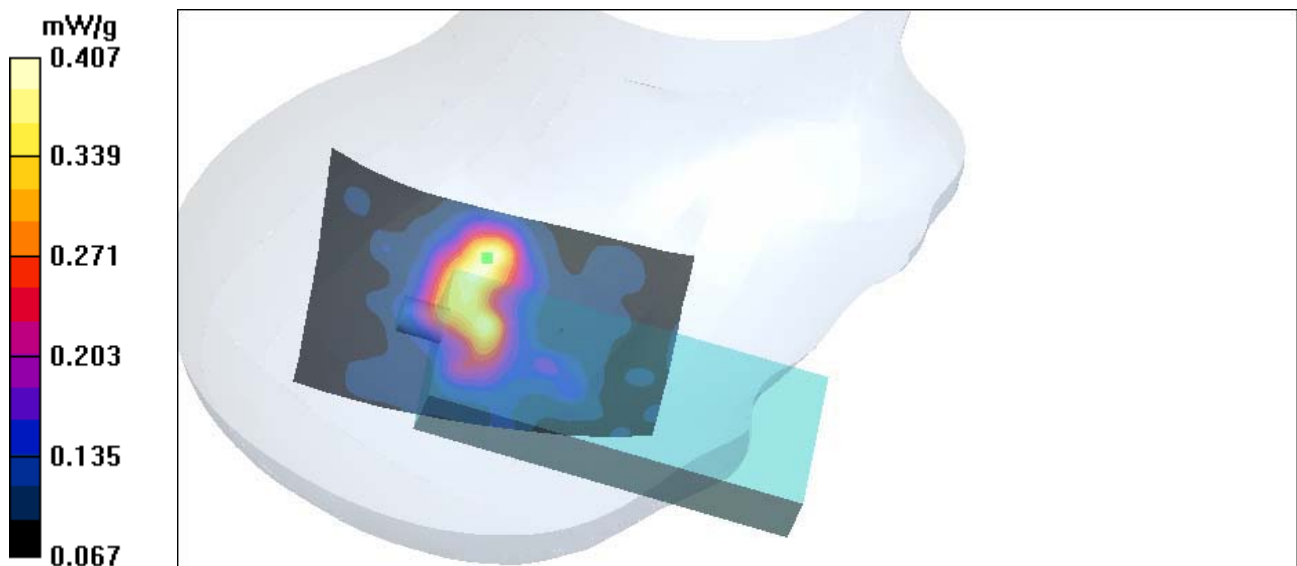
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.63 V/m ; Power Drift = 0.149 dB

Peak SAR (extrapolated) = 0.847 W/kg

SAR(1 g) = 0.368 mW/g ; SAR(10 g) = 0.197 mW/g

Maximum value of SAR (measured) = 0.397 mW/g



5300MHz Touch Left Hand

Date/Time: 9/21/2006 3:00:08 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5300 MHz Head Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 4.64 \text{ mho/m}$; $\epsilon_r = 37.1$; $\rho =$

1000 kg/m^3

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x101x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.426 mW/g

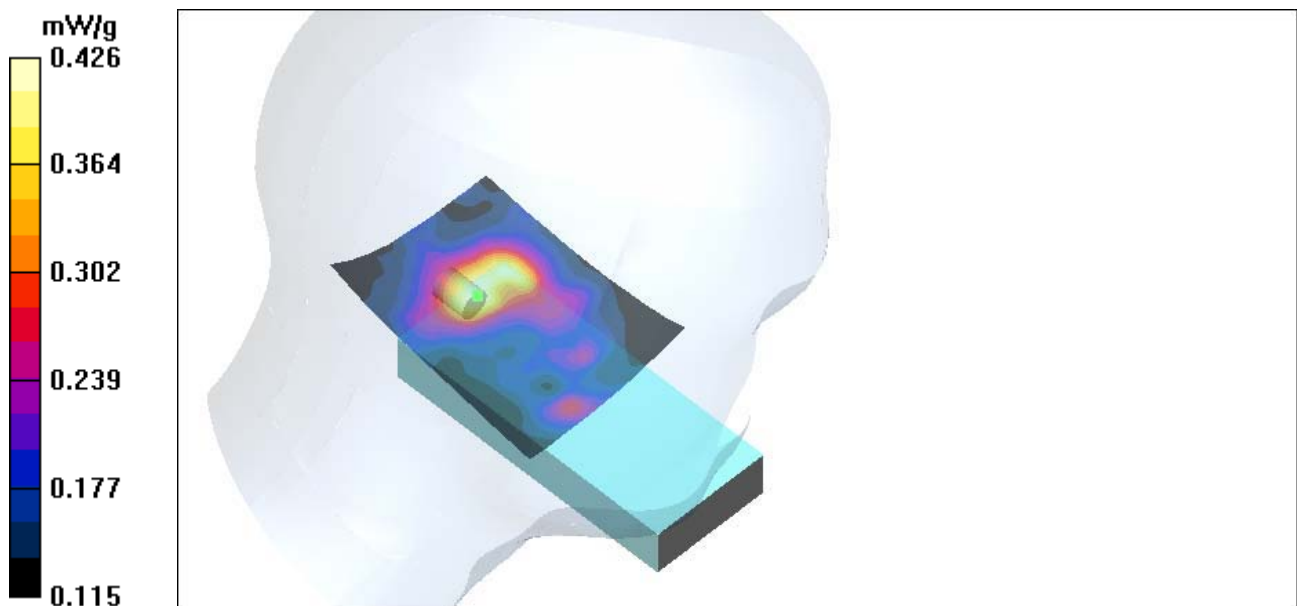
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 10.1 V/m ; Power Drift = -0.104 dB

Peak SAR (extrapolated) = 0.867 W/kg

SAR(1 g) = 0.391 mW/g ; SAR(10 g) = 0.245 mW/g

Maximum value of SAR (measured) = 0.442 mW/g



5300MHz Tilt Left Hand

Date/Time: 9/21/2006 3:57:59 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5300 MHz Head Medium parameters used: $f = 5300$ MHz; $\sigma = 4.64$ mho/m; $\epsilon_r = 37.1$; $\rho =$

1000 kg/m^3

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

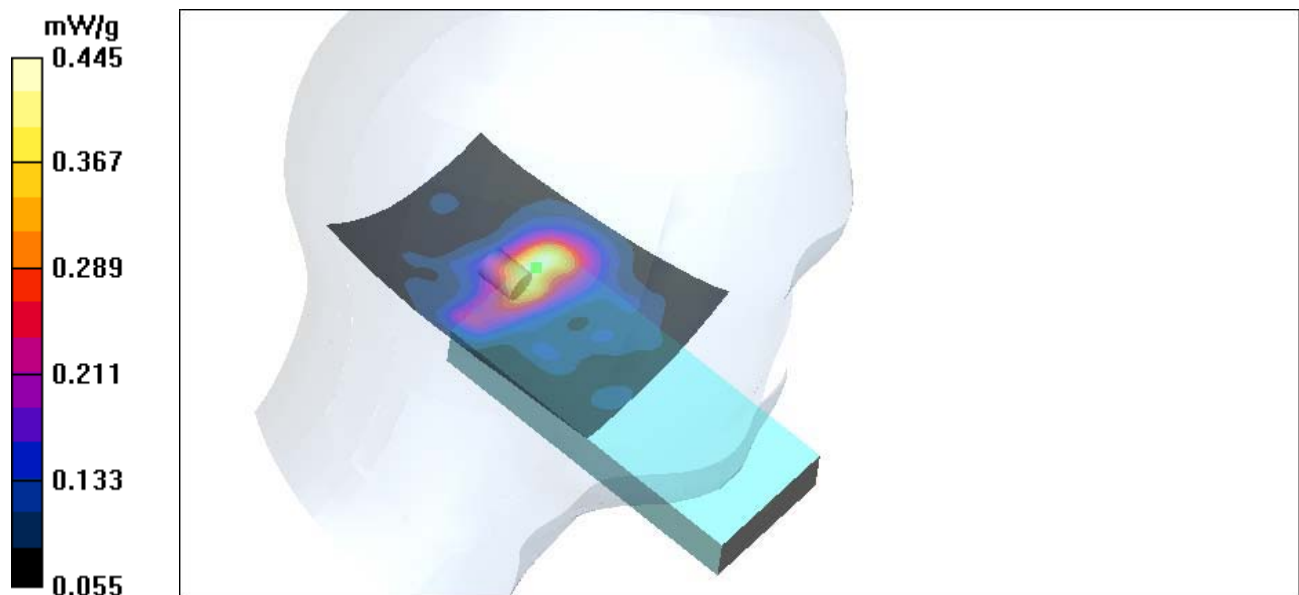
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.52 V/m ; Power Drift = 0.159 dB

Peak SAR (extrapolated) = 0.931 W/kg

SAR(1 g) = 0.378 mW/g ; SAR(10 g) = 0.193 mW/g

Maximum value of SAR (measured) = 0.431 mW/g



5300MHz Touch Right Hand/ext batt

Date/Time: 9/21/2006 6:02:49 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5300 MHz Head Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 4.64 \text{ mho/m}$; $\epsilon_r = 37.1$; $\rho =$

1000 kg/m^3

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.446 mW/g

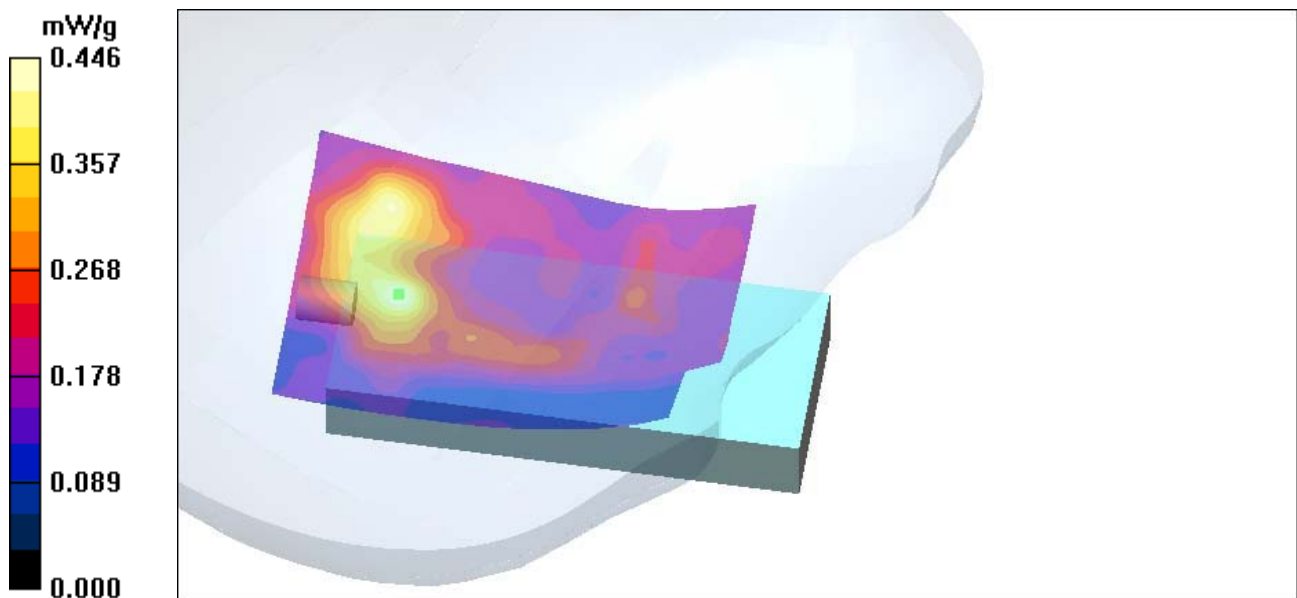
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 9.31 V/m ; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 0.849 W/kg

SAR(1 g) = 0.422 mW/g ; SAR(10 g) = 0.279 mW/g

Maximum value of SAR (measured) = 0.479 mW/g



5600MHz Touch Right Hand

Date/Time: 9/22/2006 1:50:28 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5600 MHz Head Medium parameters used: $f = 5600$ MHz; $\sigma = 5.05$ mho/m; $\epsilon_r = 37.2$; $\rho =$

1000 kg/m^3

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.601 mW/g

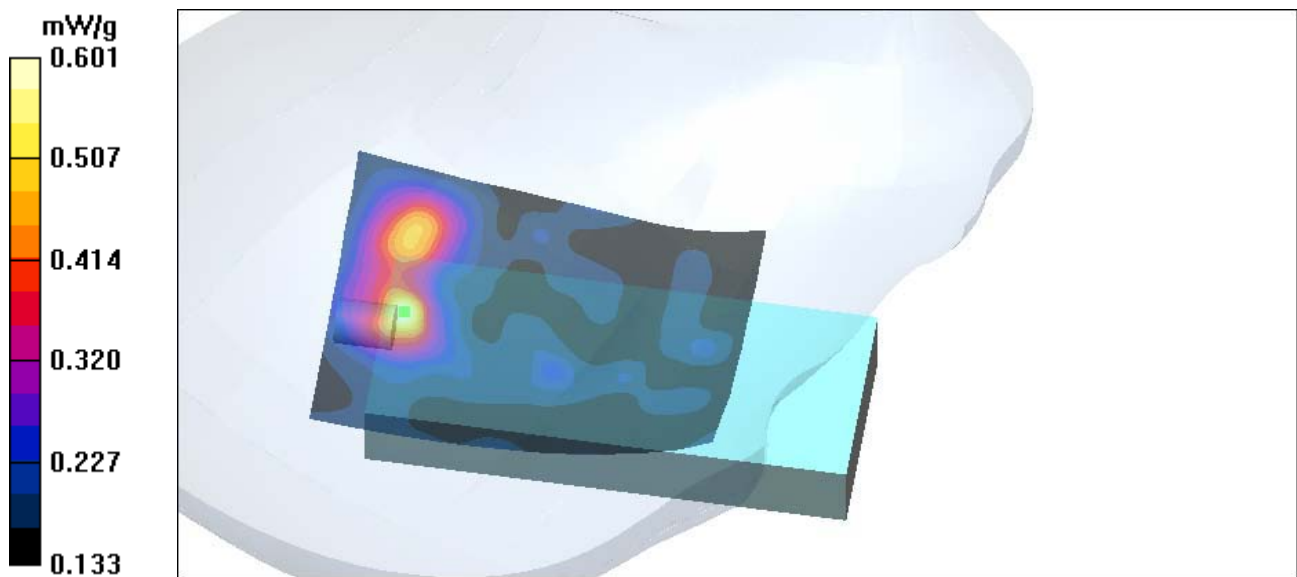
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.02 V/m ; Power Drift = -0.214 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.491 mW/g ; SAR(10 g) = 0.294 mW/g

Maximum value of SAR (measured) = 0.598 mW/g

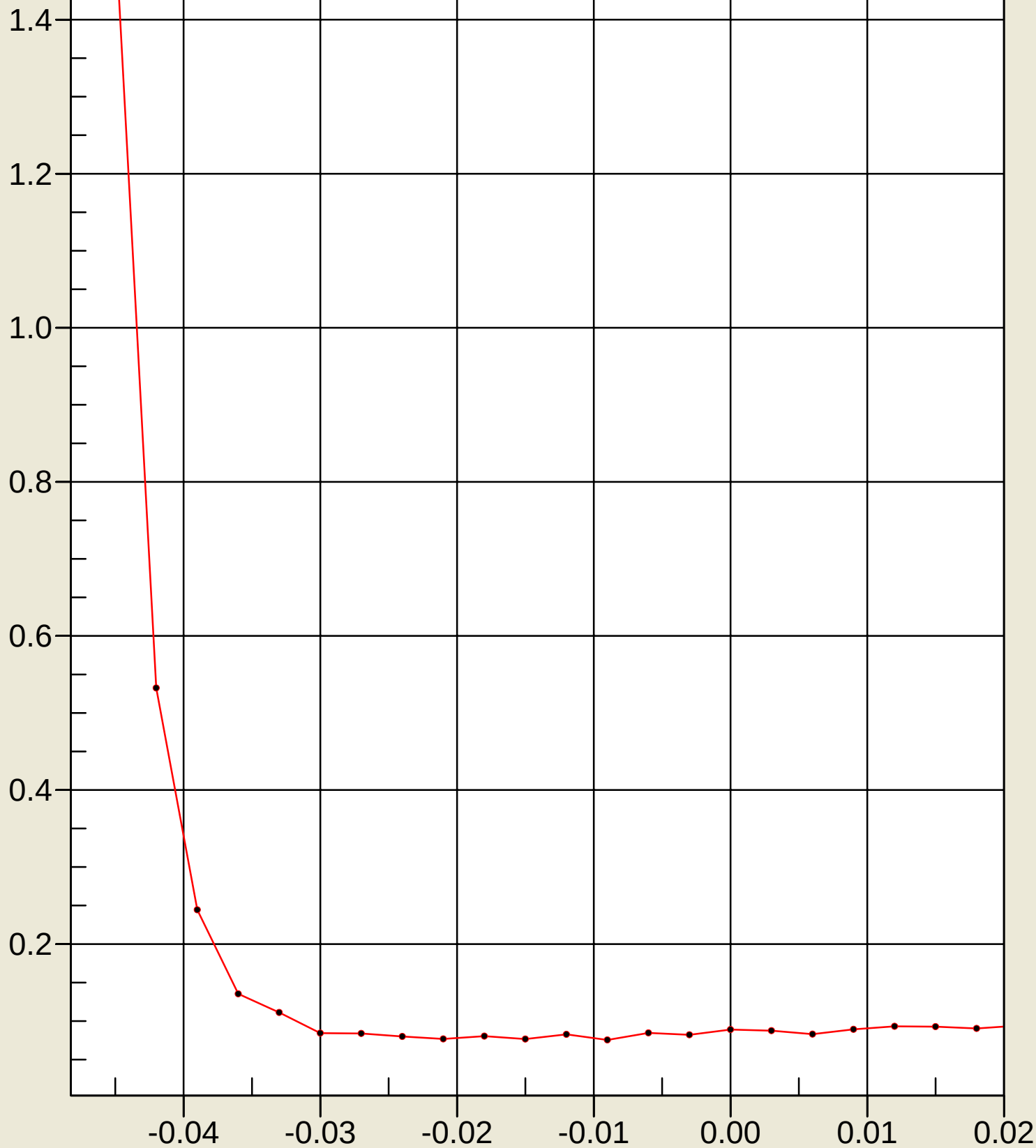


SAR(x,y,z,f0)

SAR; Z Scan:5600 MHz Touch Right Hand

0

mW/g



m

5600MHz Tilt Right Hand

Date/Time: 9/22/2006 2:13:39 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5600 MHz Head Medium parameters used: $f = 5600$ MHz; $\sigma = 5.05$ mho/m; $\epsilon_r = 37.2$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.547 mW/g

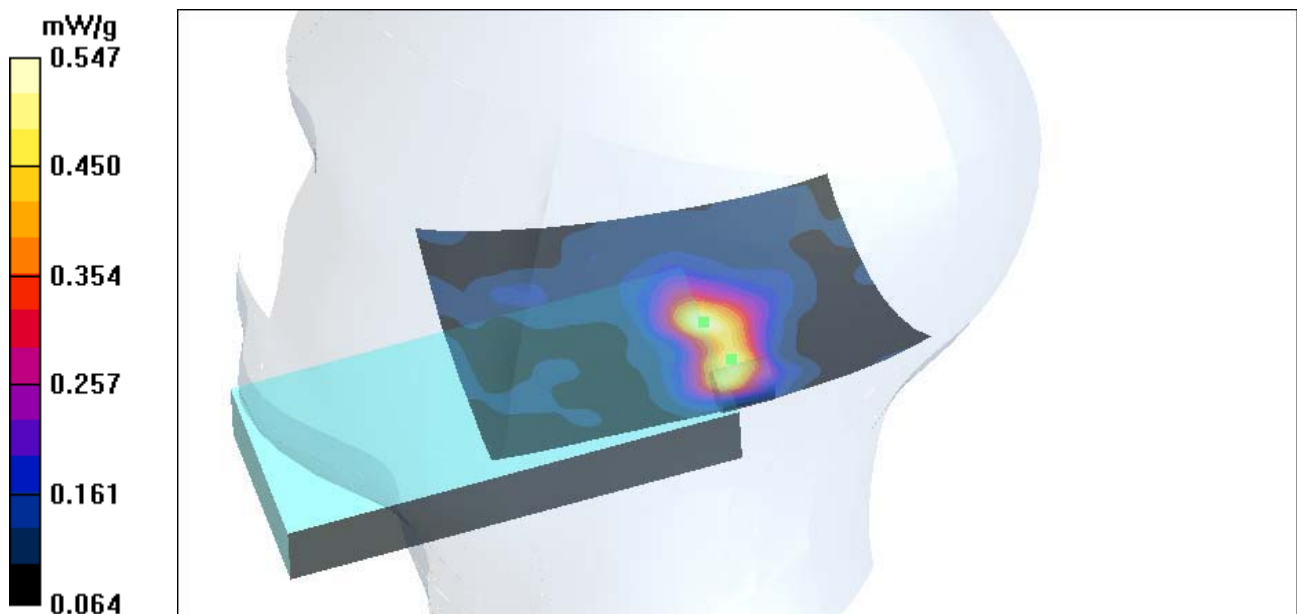
Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 6.65 V/m; Power Drift = 0.124 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.473 mW/g; SAR(10 g) = 0.242 mW/g

Maximum value of SAR (measured) = 0.555 mW/g



5600MHz Touch Left Hand

Date/Time: 9/22/2006 2:37:10 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: 5600 MHz Head Medium parameters used: $f = 5600$ MHz; $\sigma = 5.05$ mho/m; $\epsilon_r = 37.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.570 mW/g

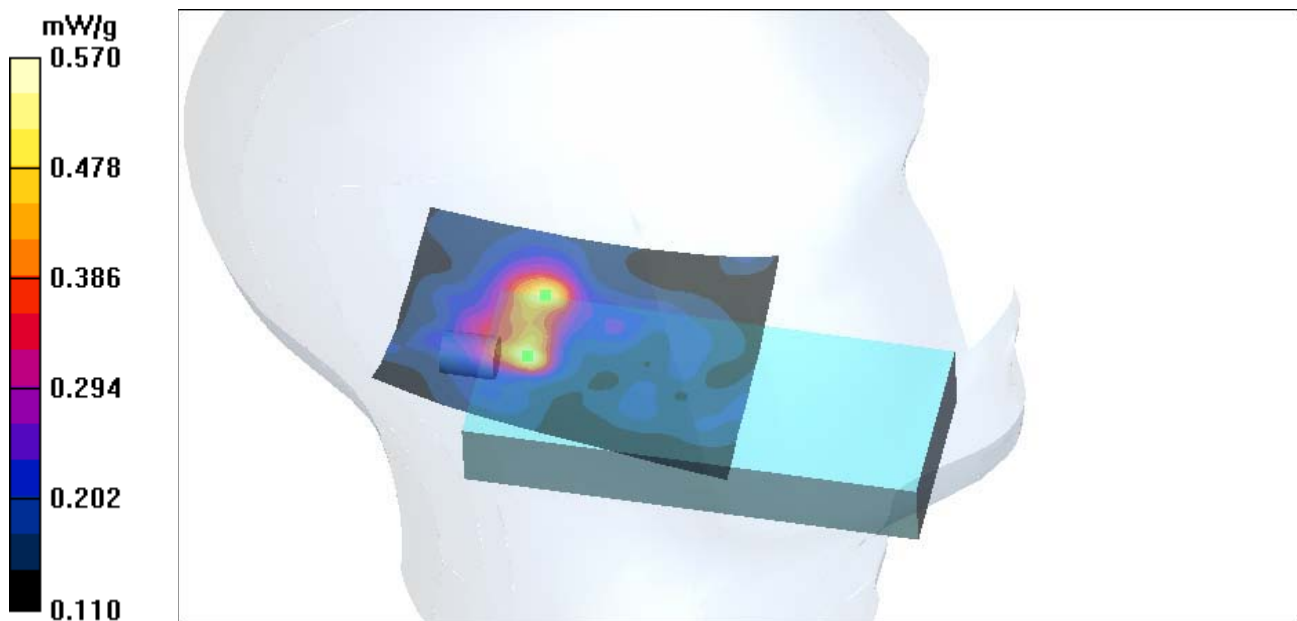
Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 9.30 V/m; Power Drift = -0.128 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.445 mW/g; SAR(10 g) = 0.251 mW/g

Maximum value of SAR (measured) = 0.513 mW/g



5600MHz Tilt Left Hand

Date/Time: 9/22/2006 2:59:49 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: 5600 MHz Head Medium parameters used: $f = 5600$ MHz; $\sigma = 5.05$ mho/m; $\epsilon_r = 37.2$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (interpolated) = 0.530 mW/g

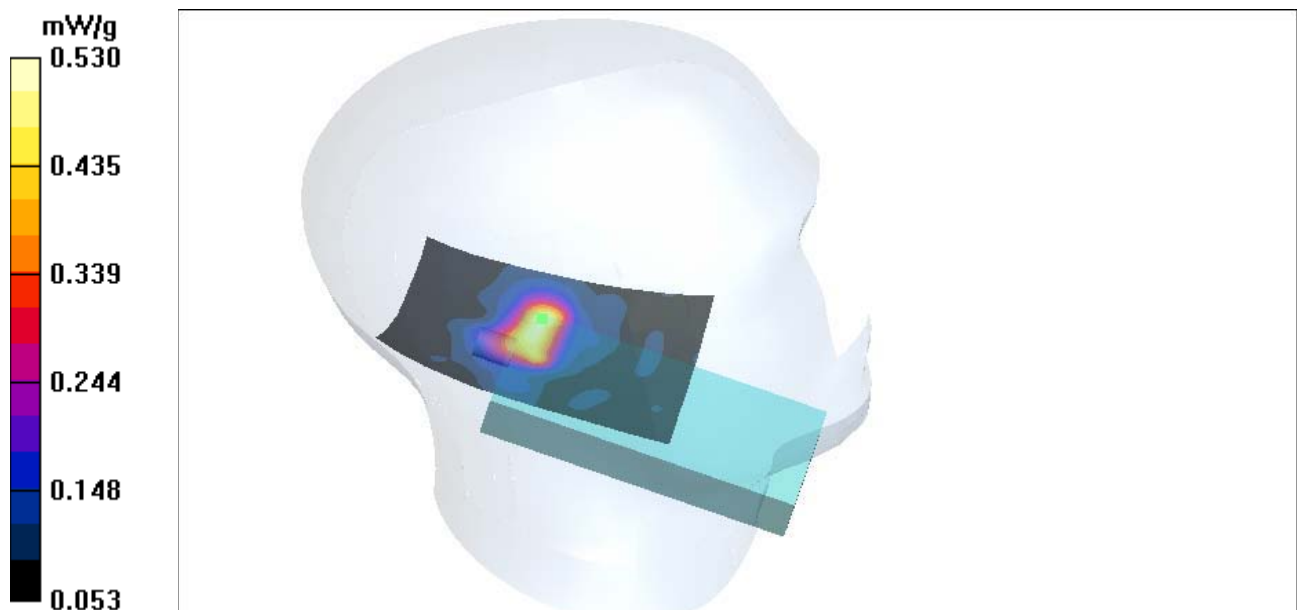
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2.5$ mm

Reference Value = 7.97 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.465 mW/g; SAR(10 g) = 0.212 mW/g

Maximum value of SAR (measured) = 0.532 mW/g



5600MHz Touch Right Hand/ext batt

Date/Time: 9/22/2006 3:14:28 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5600 MHz Head Medium parameters used: $f = 5600$ MHz; $\sigma = 5.05$ mho/m; $\epsilon_r = 37.2$; $\rho =$

1000 kg/m^3

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x111x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.595 mW/g

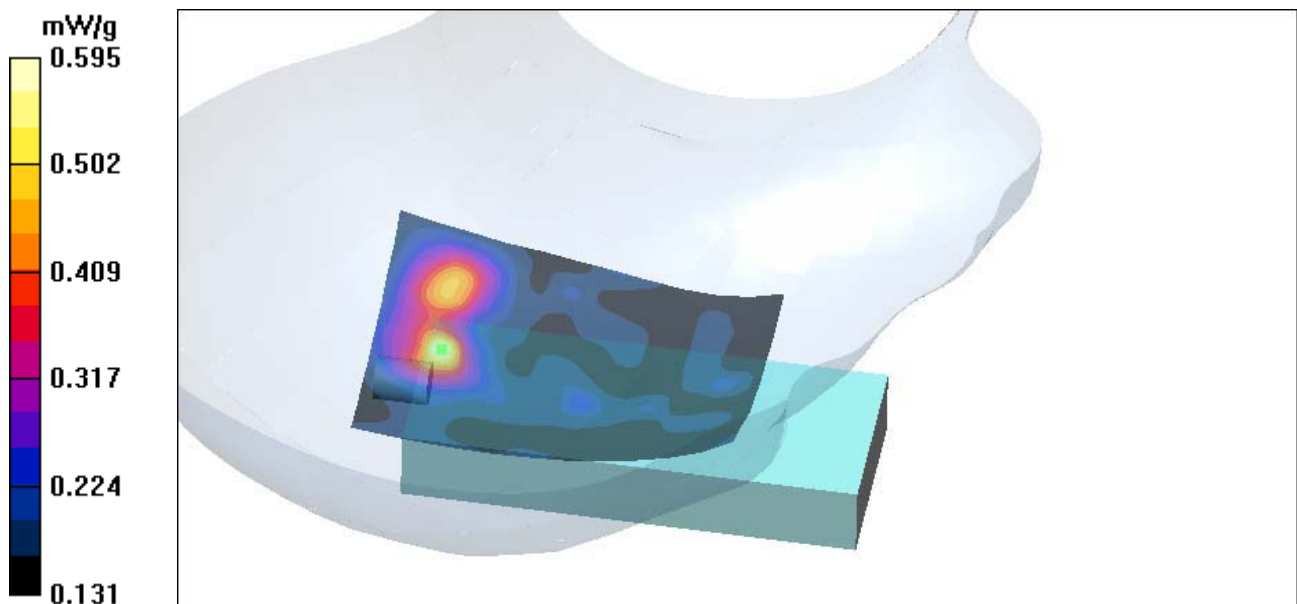
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.02 V/m ; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.486 mW/g ; SAR(10 g) = 0.291 mW/g

Maximum value of SAR (measured) = 0.592 mW/g



5765MHz Touch Right Hand

Date/Time: 9/22/2006 3:35:29 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Head Medium parameters used: $f = 5800$ MHz; $\sigma = 5.15$ mho/m; $\epsilon_r = 37$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(4.47, 4.47, 4.47); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.499 mW/g

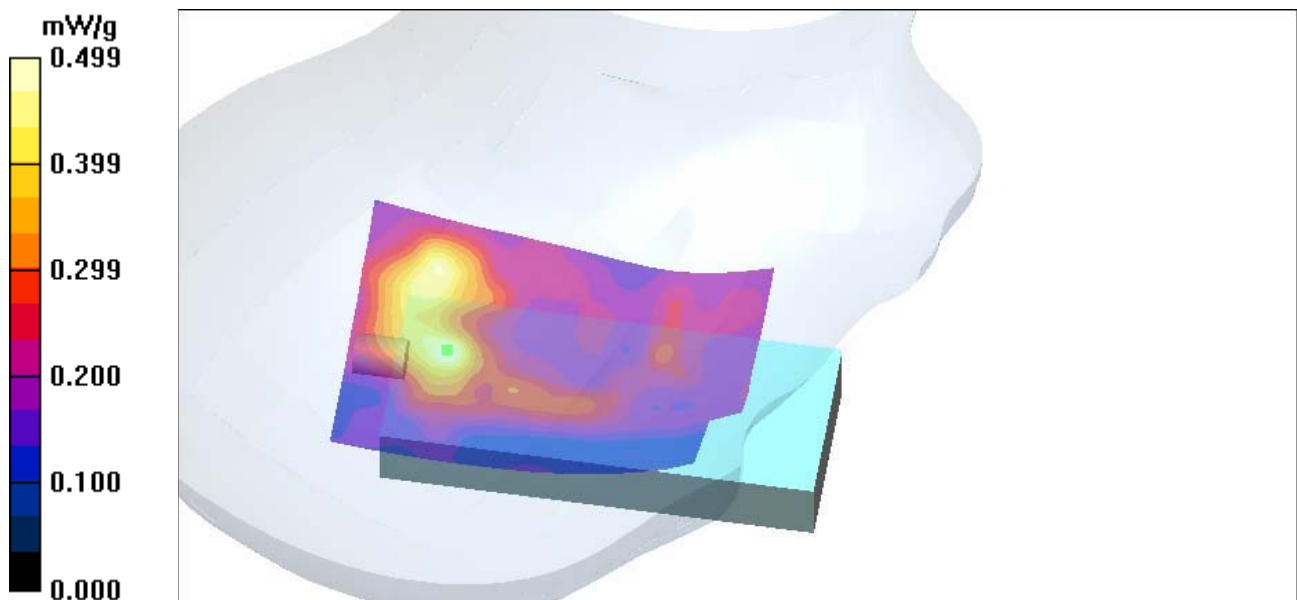
Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 9.31 V/m; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 0.951 W/kg

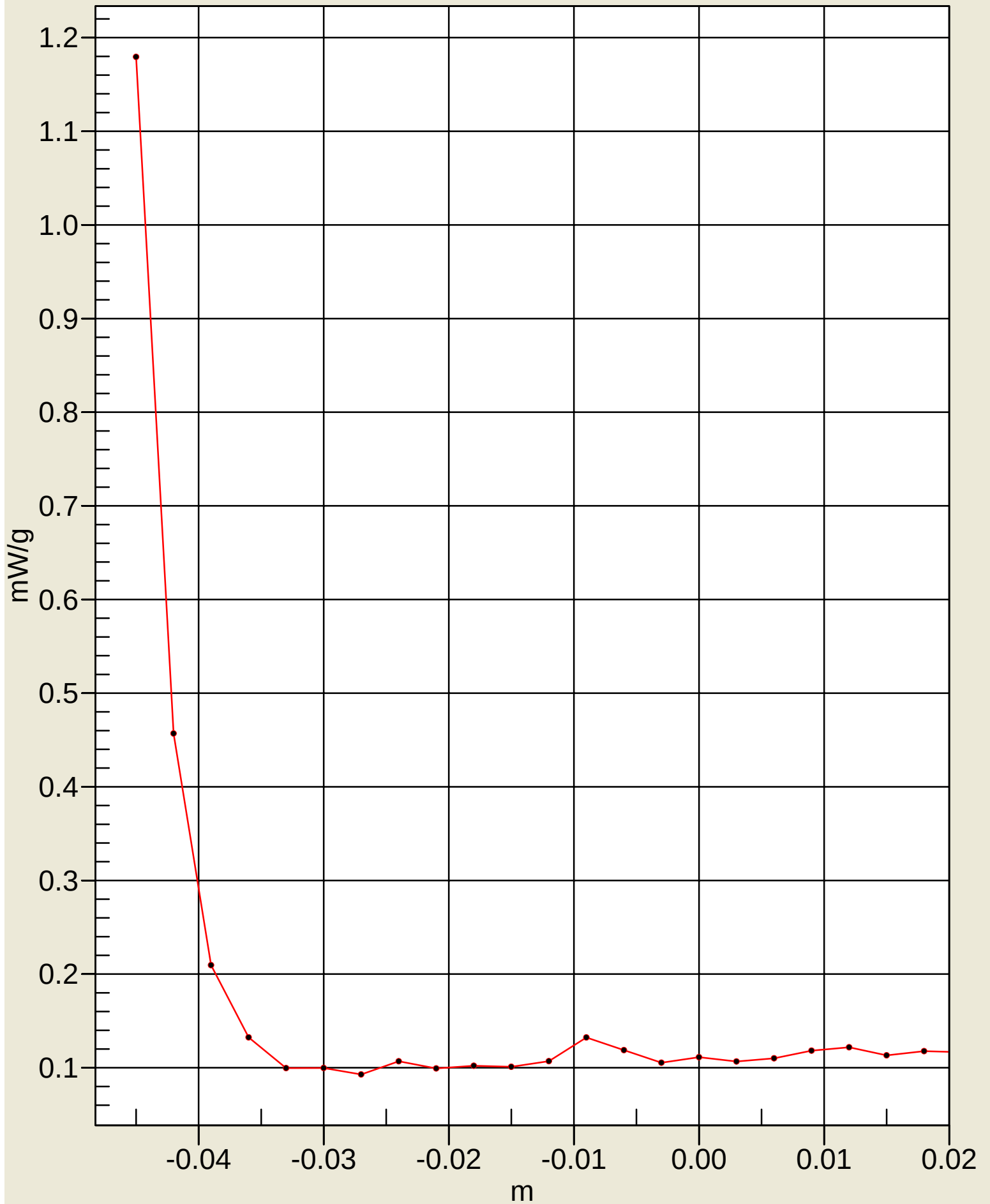
SAR(1 g) = 0.472 mW/g; SAR(10 g) = 0.313 mW/g

Maximum value of SAR (measured) = 0.536 mW/g



SAR(x,y,z,f0)

SAR; Z Scan: 5765MHz Touch Right Hand



5765MHz Tilt Right Hand

Date/Time: 9/21/2006 1:37:00 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Head Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 5.15 \text{ mho/m}$; $\epsilon_r = 37$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(4.47, 4.47, 4.47); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.378 mW/g

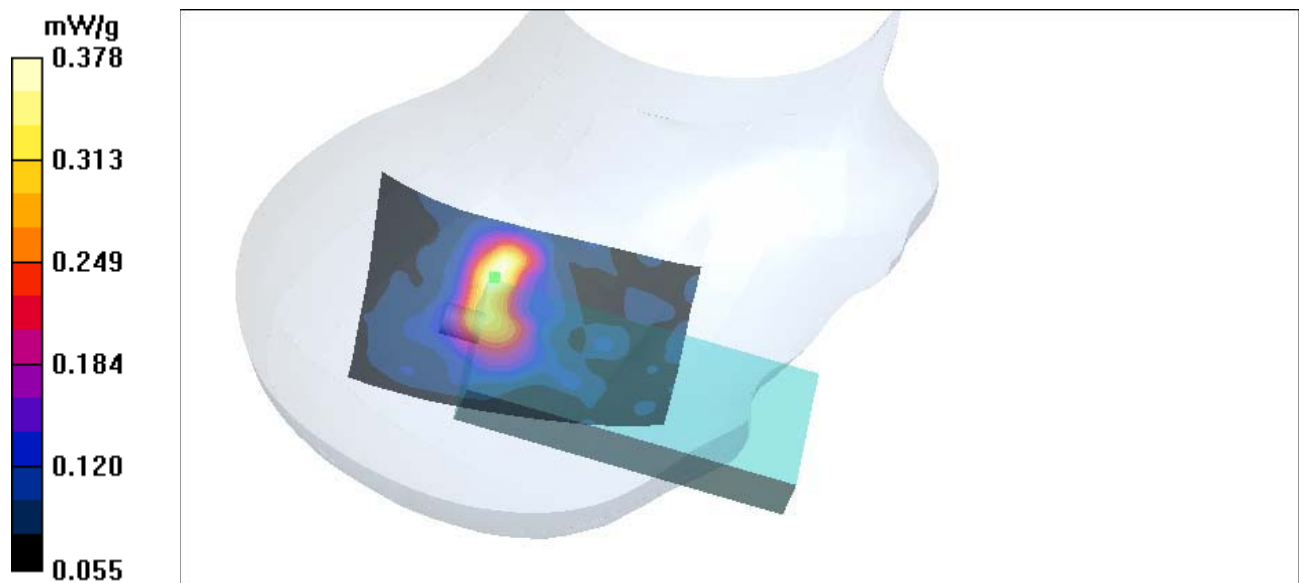
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.51 V/m ; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 0.898 W/kg

SAR(1 g) = 0.354 mW/g ; SAR(10 g) = 0.180 mW/g

Maximum value of SAR (measured) = 0.397 mW/g



5765MHz Touch Left Hand

Date/Time: 9/21/2006 2:35:31 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Head Medium parameters used: $f = 5800$ MHz; $\sigma = 5.15$ mho/m; $\epsilon_r = 37$; $\rho = 1000$

kg/m³

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(4.47, 4.47, 4.47); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x101x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.396 mW/g

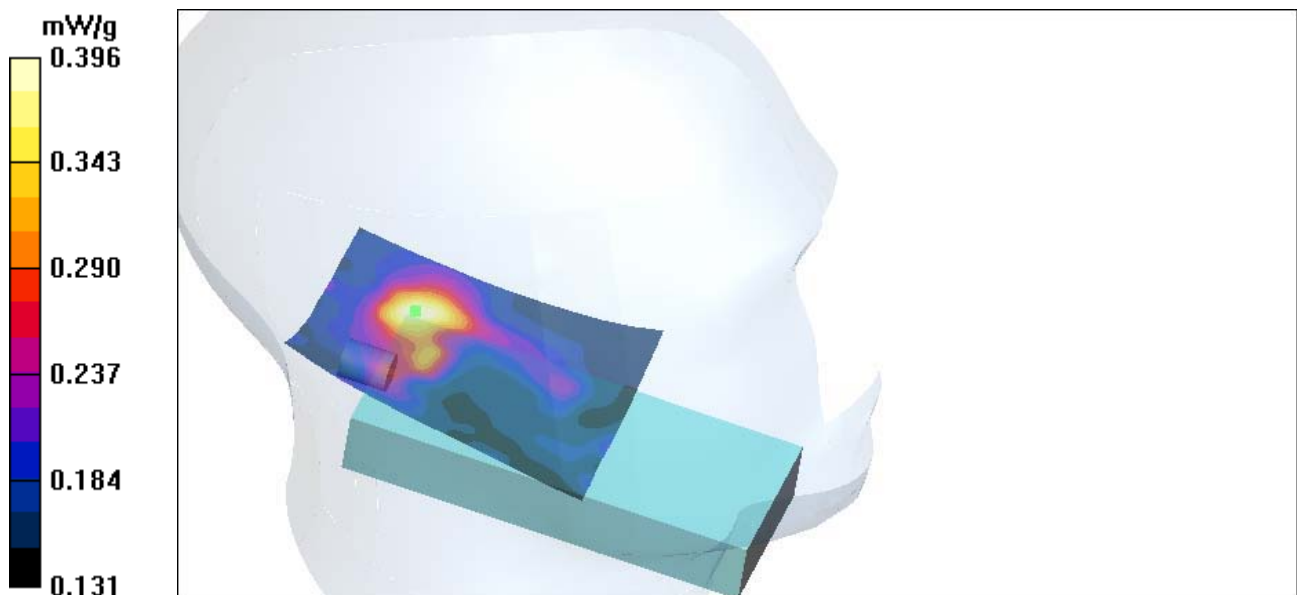
Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 7.95 V/m; Power Drift = -0.176 dB

Peak SAR (extrapolated) = 0.659 W/kg

SAR(1 g) = 0.362 mW/g; SAR(10 g) = 0.239 mW/g

Maximum value of SAR (measured) = 0.407 mW/g



5765MHz Tilt Left Hand

Date/Time: 9/21/2006 2:06:46 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Head Medium parameters used: $f = 5800$ MHz; $\sigma = 5.15$ mho/m; $\epsilon_r = 37$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Probe: EX3DV3 - SN3511; ConvF(4.47, 4.47, 4.47); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.430 mW/g

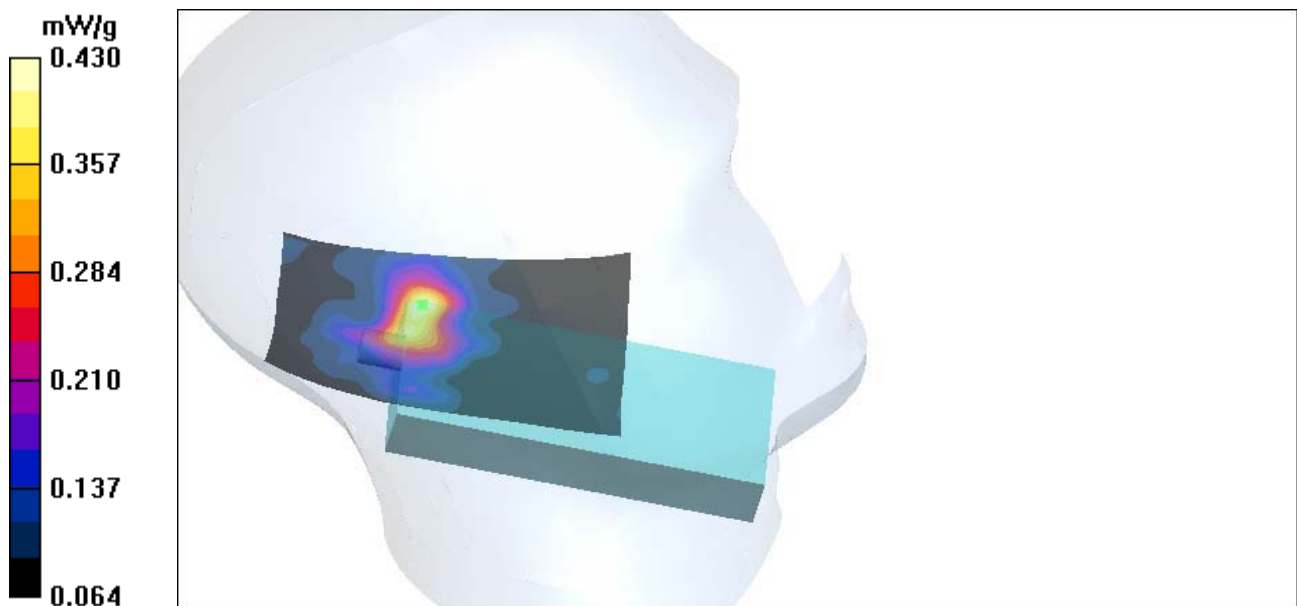
Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 6.26 V/m; Power Drift = 0.073 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.385 mW/g; SAR(10 g) = 0.195 mW/g

Maximum value of SAR (measured) = 0.439 mW/g



5765MHz Touch Right Hand/ext batt

Date/Time: 9/21/2006 6:03:29 PM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Head Medium parameters used: $f = 5800$ MHz; $\sigma = 5.15$ mho/m; $\epsilon_r = 37$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Probe: EX3DV3 - SN3511; ConvF(4.47, 4.47, 4.47); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x121x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.494 mW/g

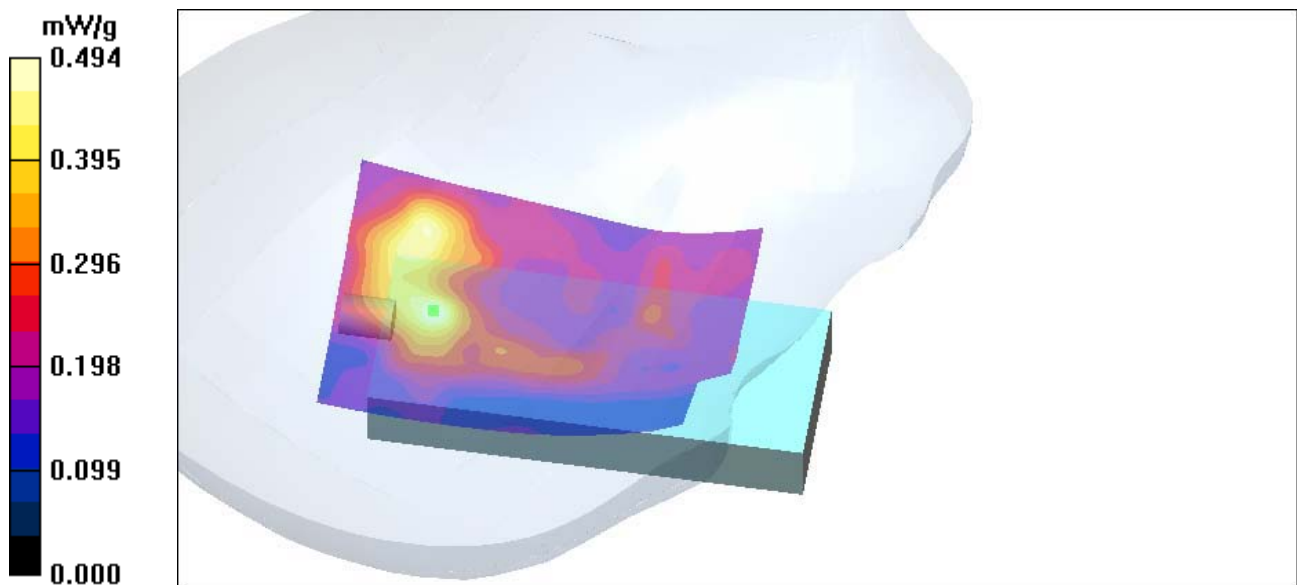
Zoom Scan (7x7x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2.5mm

Reference Value = 9.31 V/m; Power Drift = 0.2211 dB

Peak SAR (extrapolated) = 0.942 W/kg

SAR(1 g) = 0.468 mW/g; SAR(10 g) = 0.310 mW/g

Maximum value of SAR (measured) = 0.531 mW/g



5200MHz/body worn/plastic holster/std bat

Date/Time: 9/22/2006 8:02:04 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5200 MHz Body Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.4 \text{ mho/m}$; $\epsilon_r = 49.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.421 mW/g

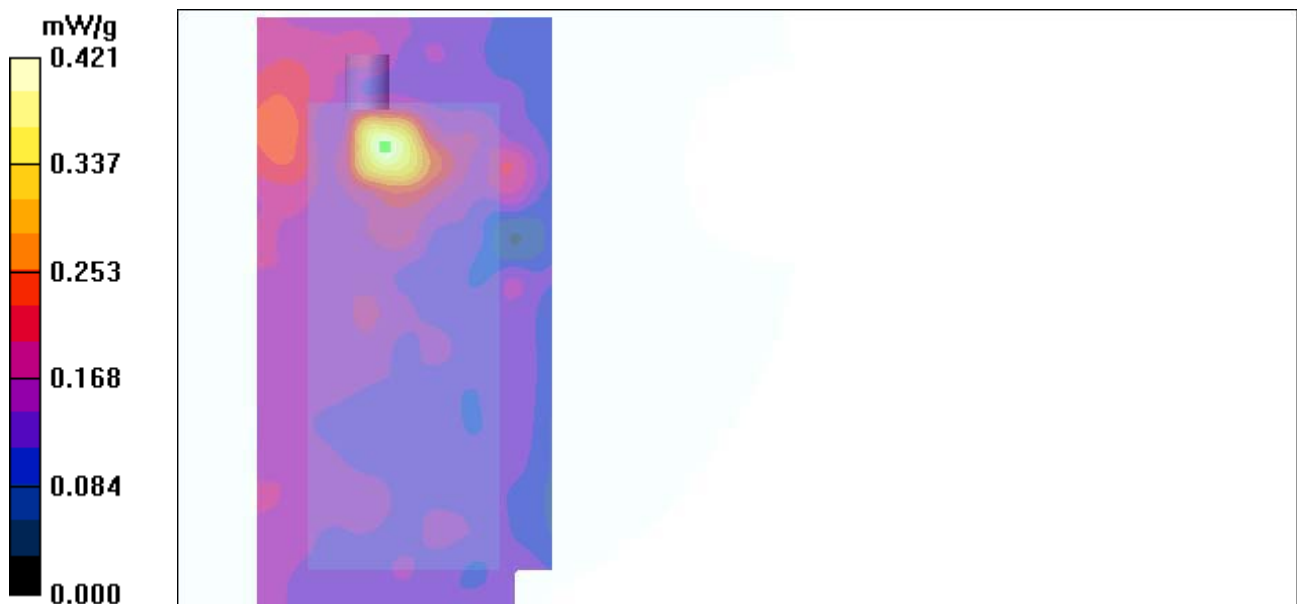
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 7.41 V/m; Power Drift = 0.002 dB

Peak SAR (extrapolated) = 0.937 W/kg

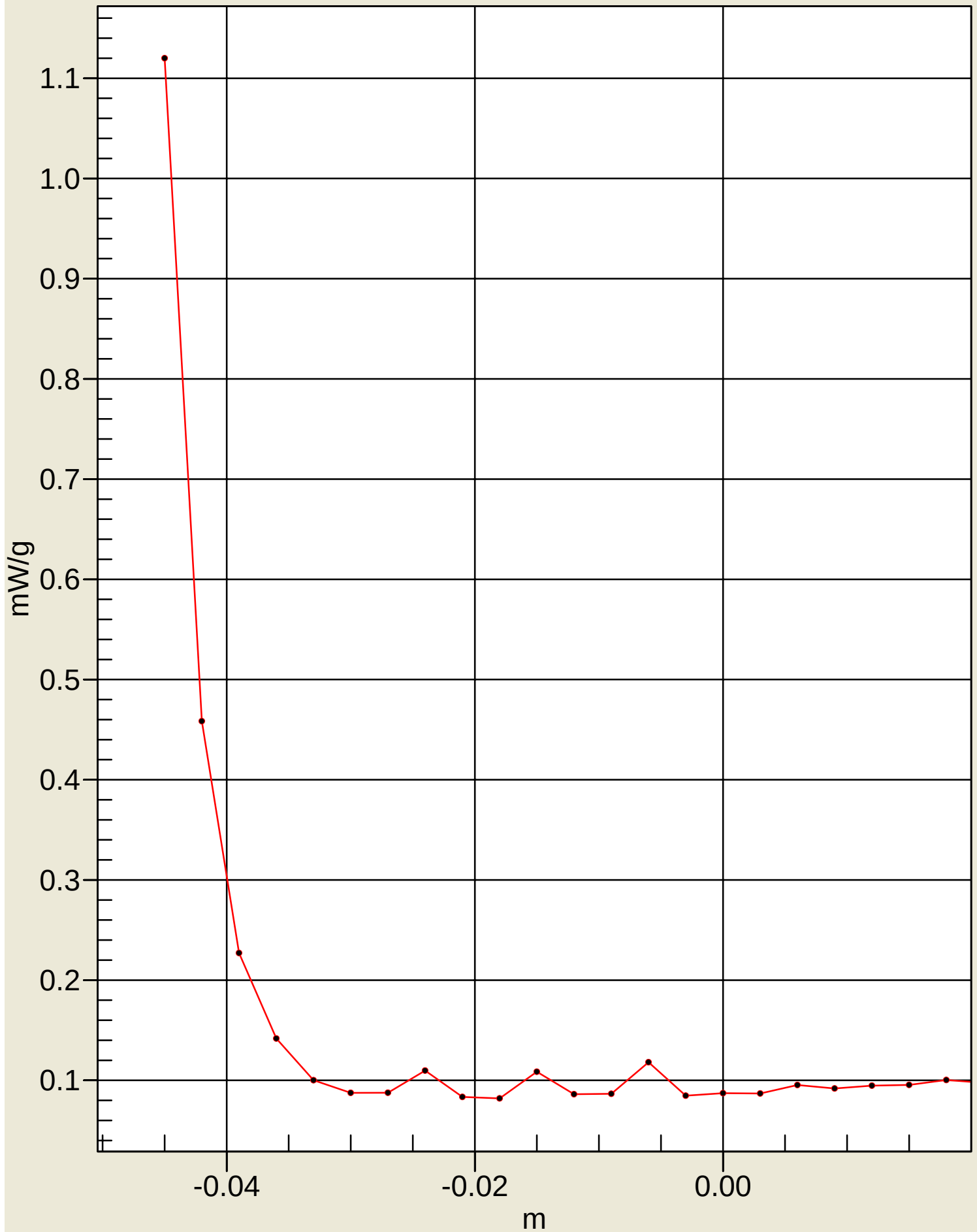
SAR(1 g) = 0.372 mW/g; SAR(10 g) = 0.172 mW/g

Maximum value of SAR (measured) = 0.469 mW/g



SAR(x,y,z,f0)

SAR; Z Scan:5200MHz Body Worn



5200MHz/body worn/leather holster/std batt

Date/Time: 9/22/2006 8:28:05 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5200 MHz Body Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.4 \text{ mho/m}$; $\epsilon_r = 49.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.254 mW/g

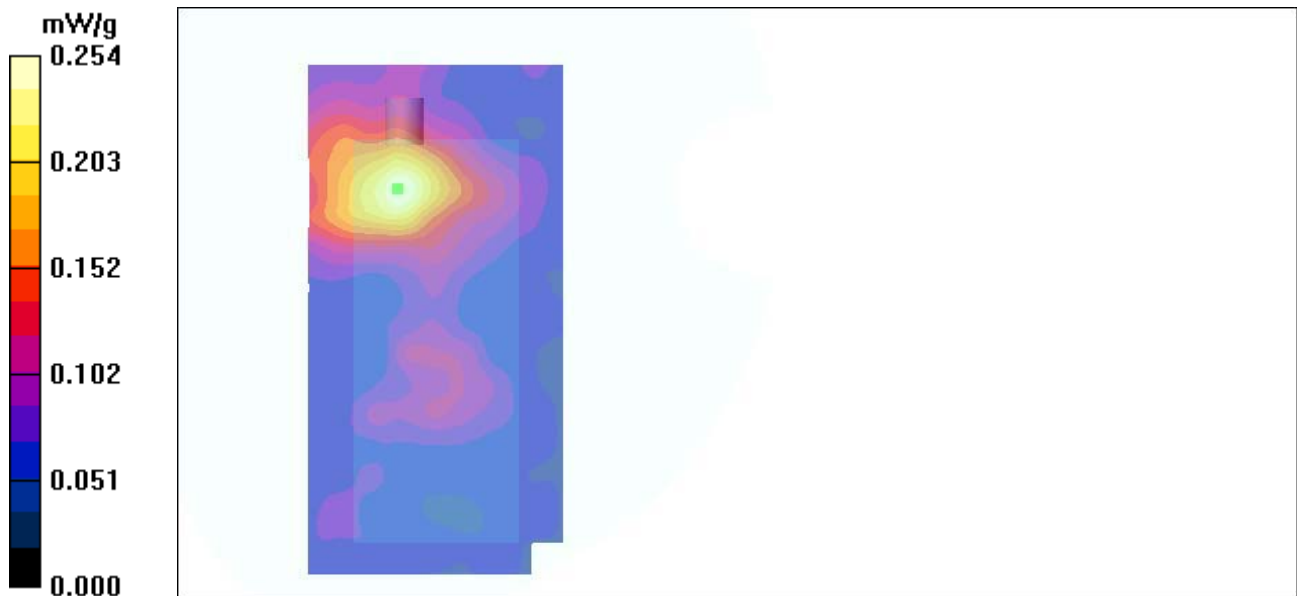
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 5.93 V/m; Power Drift = 0.189 dB

Peak SAR (extrapolated) = 0.572 W/kg

SAR(1 g) = 0.218 mW/g; SAR(10 g) = 0.128 mW/g

Maximum value of SAR (measured) = 0.240 mW/g



5200MHz/body worn/plastic holster/ext batt

Date/Time: 9/22/2006 8:42:04 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5200 MHz Body Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.4 \text{ mho/m}$; $\epsilon_r = 49.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.413 mW/g

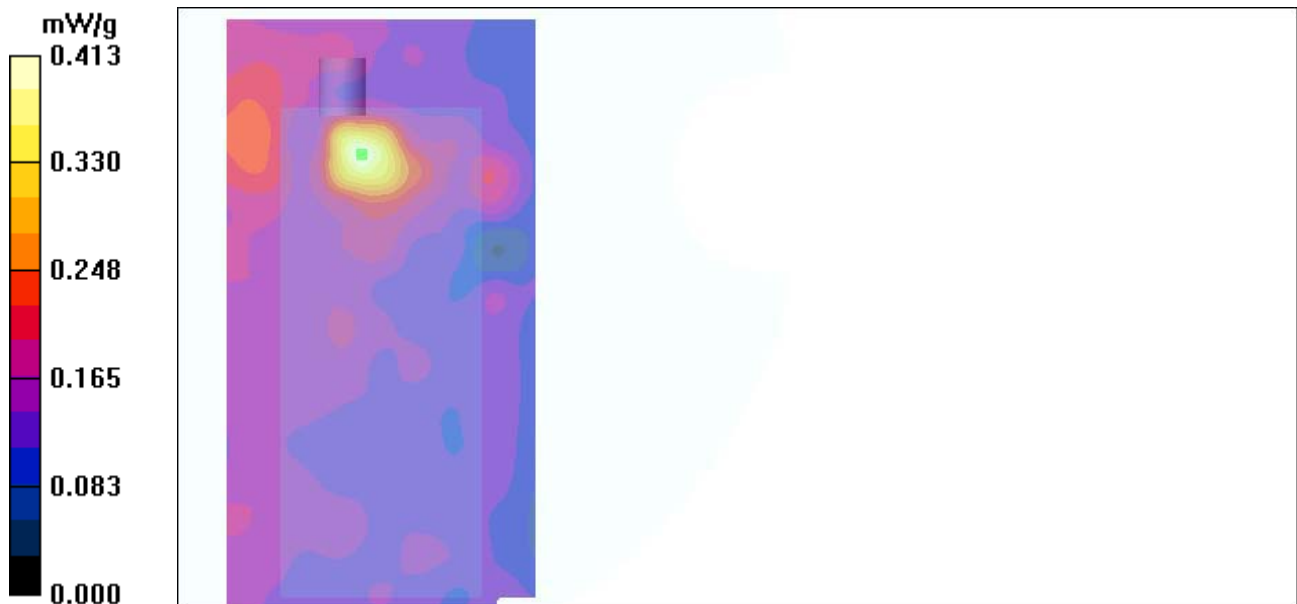
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 7.41 V/m; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 0.920 W/kg

SAR(1 g) = 0.365 mW/g; SAR(10 g) = 0.169 mW/g

Maximum value of SAR (measured) = 0.460 mW/g



5300MHz/body worn/plastic holster/std batt

Date/Time: 9/22/2006 9:04:58 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5300 MHz Body Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 5.56 \text{ mho/m}$; $\epsilon_r = 49.2$; $\rho =$

1000 kg/m^3

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.466 mW/g

Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 7.46 V/m; Power Drift = 0.133 dB

Peak SAR (extrapolated) = 1.02 W/kg

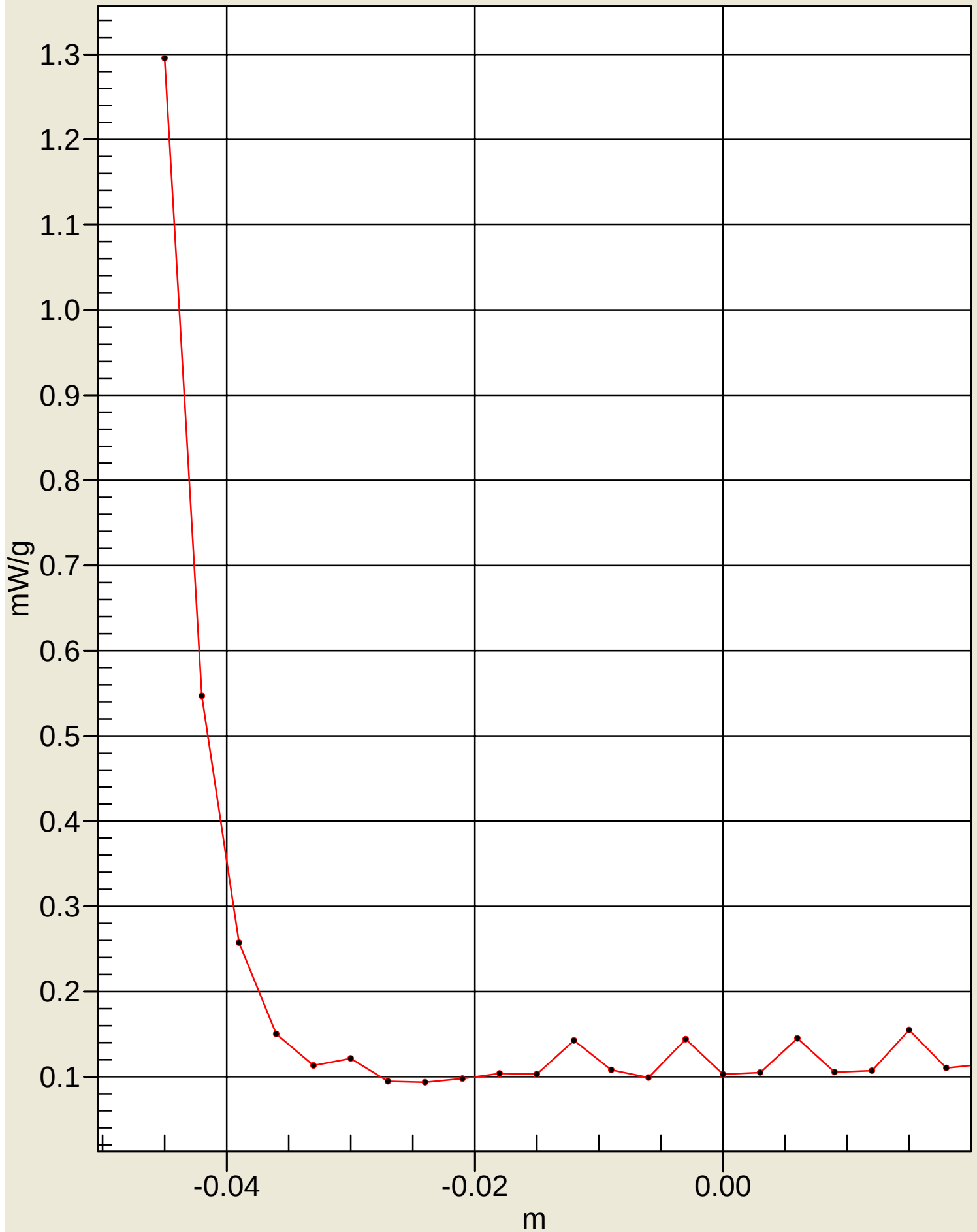
SAR(1 g) = 0.381 mW/g; SAR(10 g) = 0.174 mW/g

Maximum value of SAR (measured) = 0.504 mW/g



SAR(x,y,z,f0)

SAR; Z Scan:5300MHz Body worn



5300MHz/body worn/leather holster/std batt

Date/Time: 9/22/2006 9:23:37 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5200 MHz Body Medium parameters used: $f = 5300$ MHz; $\sigma = 5.56$ mho/m; $\epsilon_r = 49.2$; $\rho =$

1000 kg/m^3

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.245 mW/g

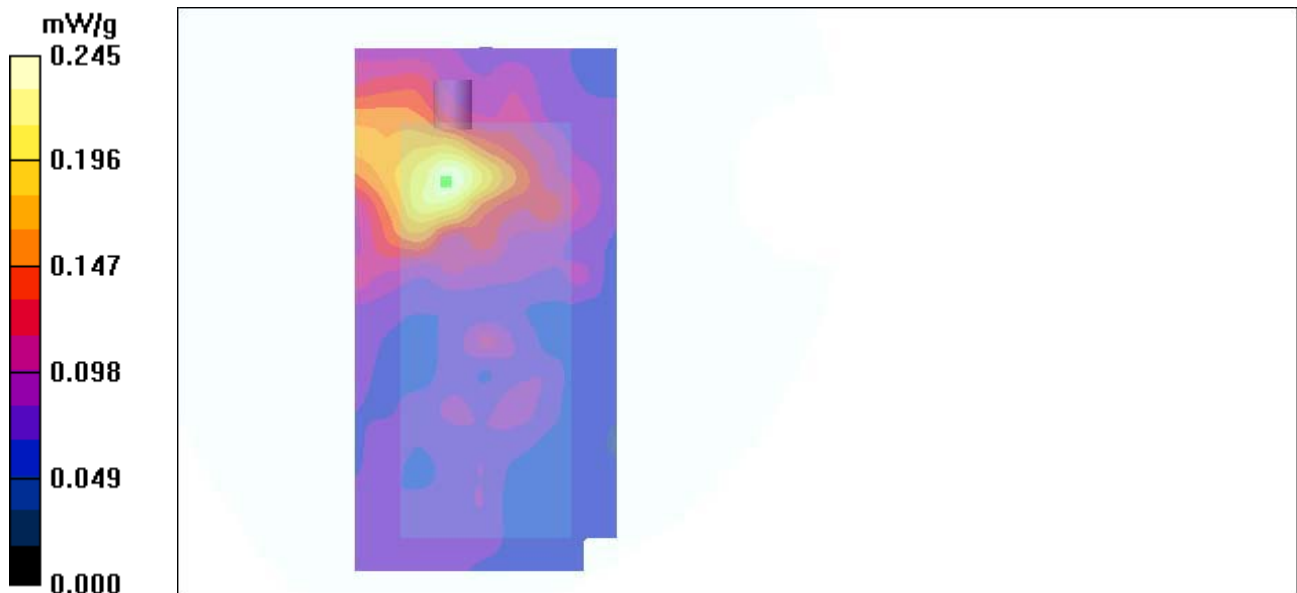
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.09 V/m ; Power Drift = -0.187 dB

Peak SAR (extrapolated) = 0.434 W/kg

SAR(1 g) = 0.202 mW/g ; SAR(10 g) = 0.128 mW/g

Maximum value of SAR (measured) = 0.214 mW/g



5300MHz/body worn/plastic holster/ext batt

Date/Time: 9/22/2006 9:47:58 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5300 MHz Body Medium parameters used: $f = 5300 \text{ MHz}$; $\sigma = 5.56 \text{ mho/m}$; $\epsilon_r = 49.2$; $\rho =$

1000 kg/m^3

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.427 mW/g

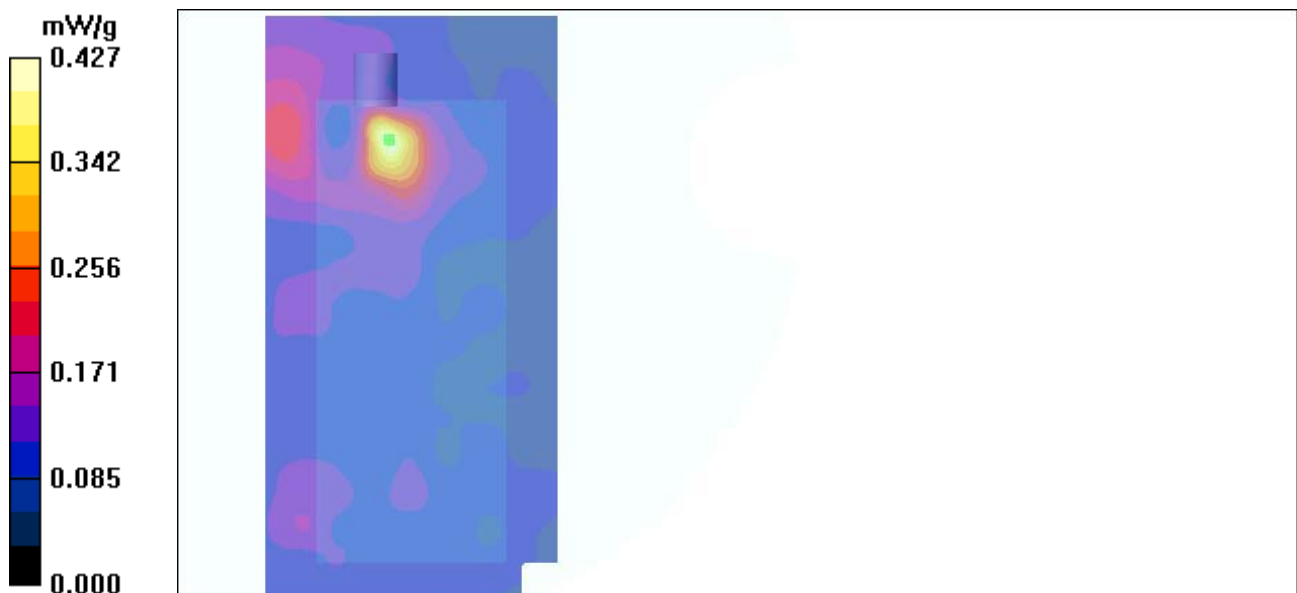
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 7.03 V/m ; Power Drift = 0.103 dB

Peak SAR (extrapolated) = 0.955 W/kg

SAR(1 g) = 0.350 mW/g ; SAR(10 g) = 0.157 mW/g

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



5600MHz/body worn/plastic holster/std batt

Date/Time: 9/22/2006 10:13:20 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: 5600 MHz Body Medium parameters used: $f = 5600$ MHz; $\sigma = 5.94$ mho/m; $\epsilon_r = 48.4$; $\rho =$

1000 kg/m^3

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.3, 4.3, 4.3); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.543 mW/g

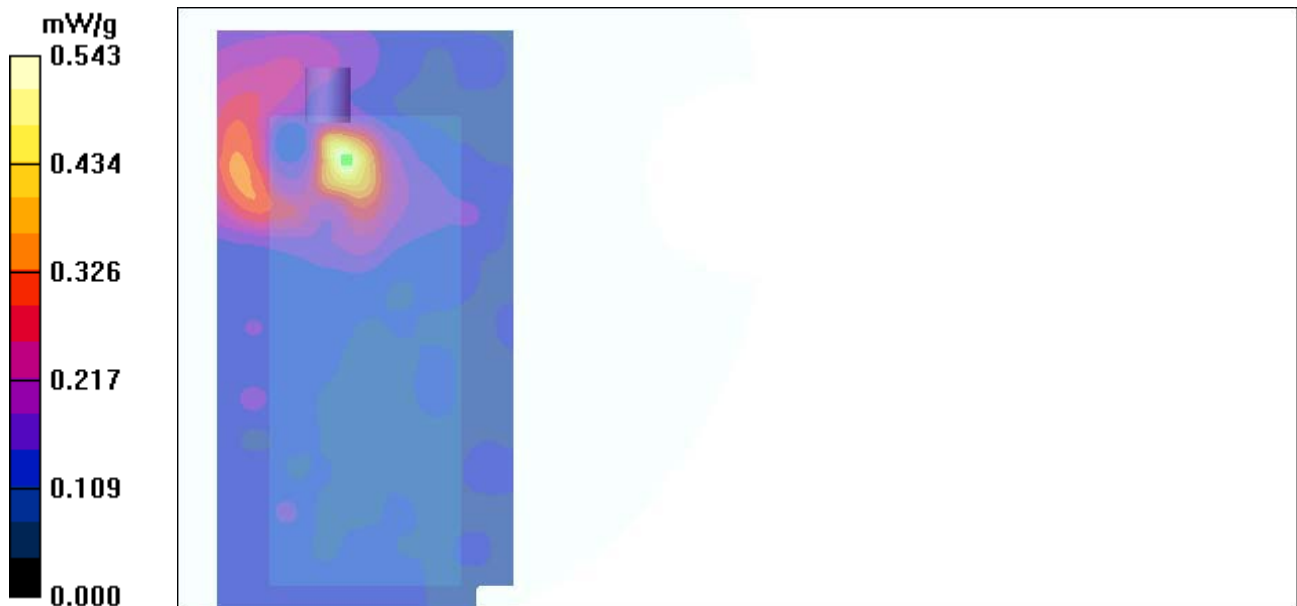
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.08 V/m ; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.37 W/kg

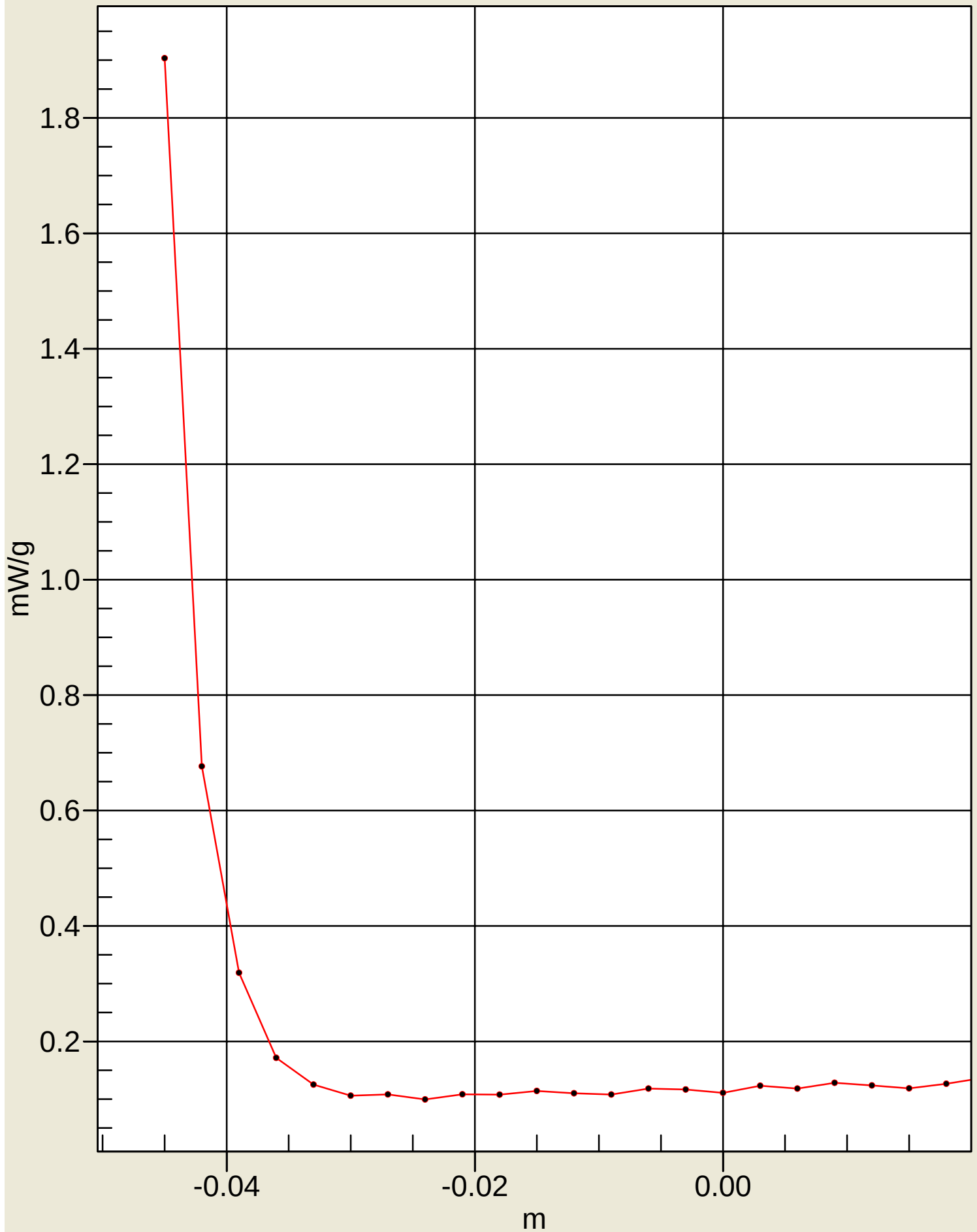
SAR(1 g) = 0.492 mW/g ; SAR(10 g) = 0.210 mW/g

Maximum value of SAR (measured) = 0.638 mW/g



SAR(x,y,z,f0)

SAR; Z Scan:5600MHz Body worn



5600MHz/body worn/leather holster/std batt

Date/Time: 9/22/2006 10:31:14 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: 5600 MHz Body Medium parameters used: $f = 5600$ MHz; $\sigma = 5.94$ mho/m; $\epsilon_r = 48.4$; $\rho =$

1000 kg/m^3

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.3, 4.3, 4.3); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.245 mW/g

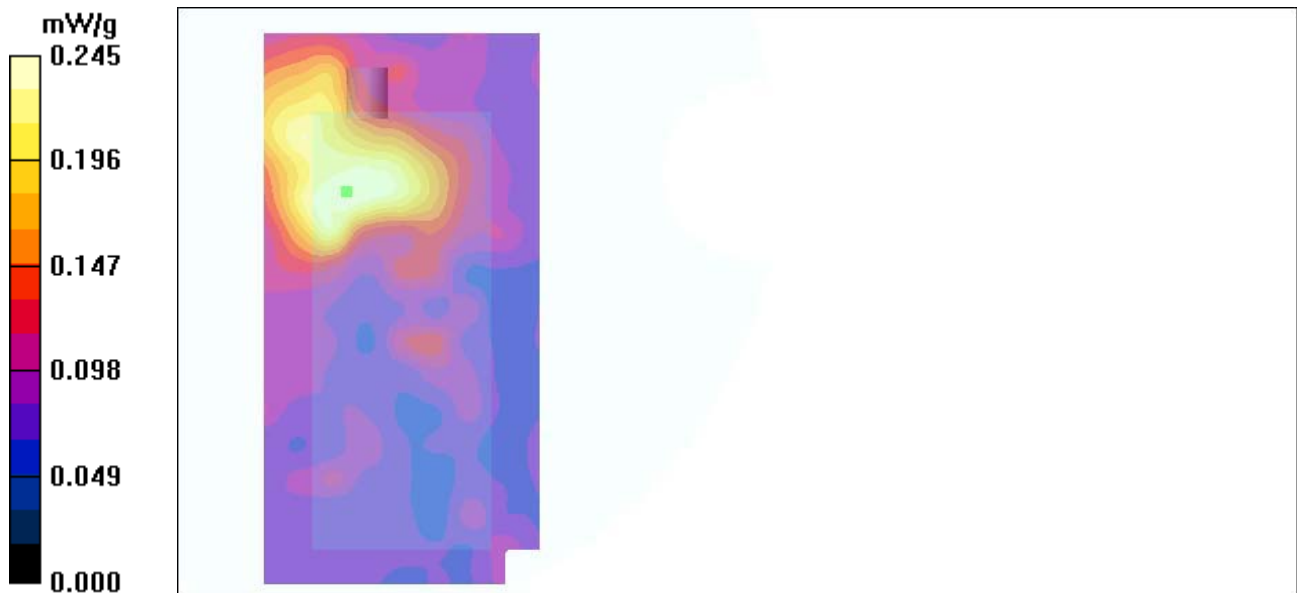
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.30 V/m ; Power Drift = -0.121 dB

Peak SAR (extrapolated) = 0.558 W/kg

SAR(1 g) = 0.258 mW/g ; SAR(10 g) = 0.173 mW/g

Maximum value of SAR (measured) = 0.292 mW/g



5600MHz/body worn/plastic holster/ext batt

Date/Time: 9/22/2006 10:53:20 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5600 MHz Body Medium parameters used: $f = 5600$ MHz; $\sigma = 5.94$ mho/m; $\epsilon_r = 48.4$; $\rho =$

1000 kg/m^3

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.3, 4.3, 4.3); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.522 mW/g

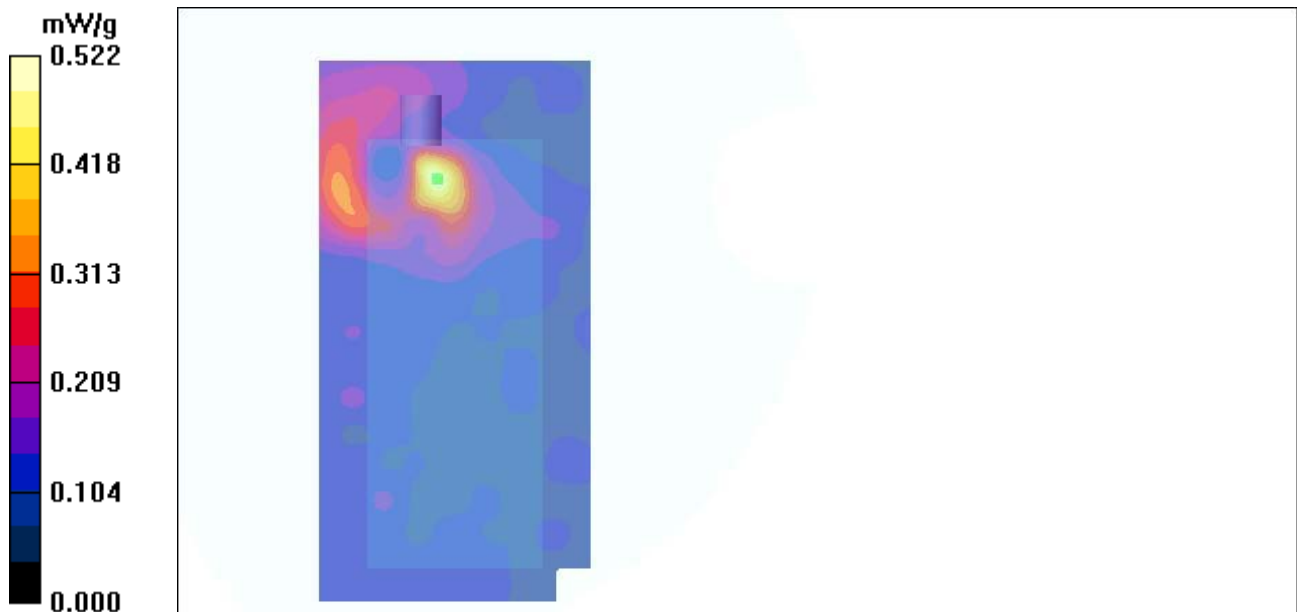
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 8.08 V/m ; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.472 mW/g ; SAR(10 g) = 0.201 mW/g

Maximum value of SAR (measured) = 0.612 mW/g



5765MHz/body worn/plastic holster/std batt

Date/Time: 9/22/2006 11:13:04 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Body Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.18 \text{ mho/m}$; $\epsilon_r = 48.0$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.356 mW/g

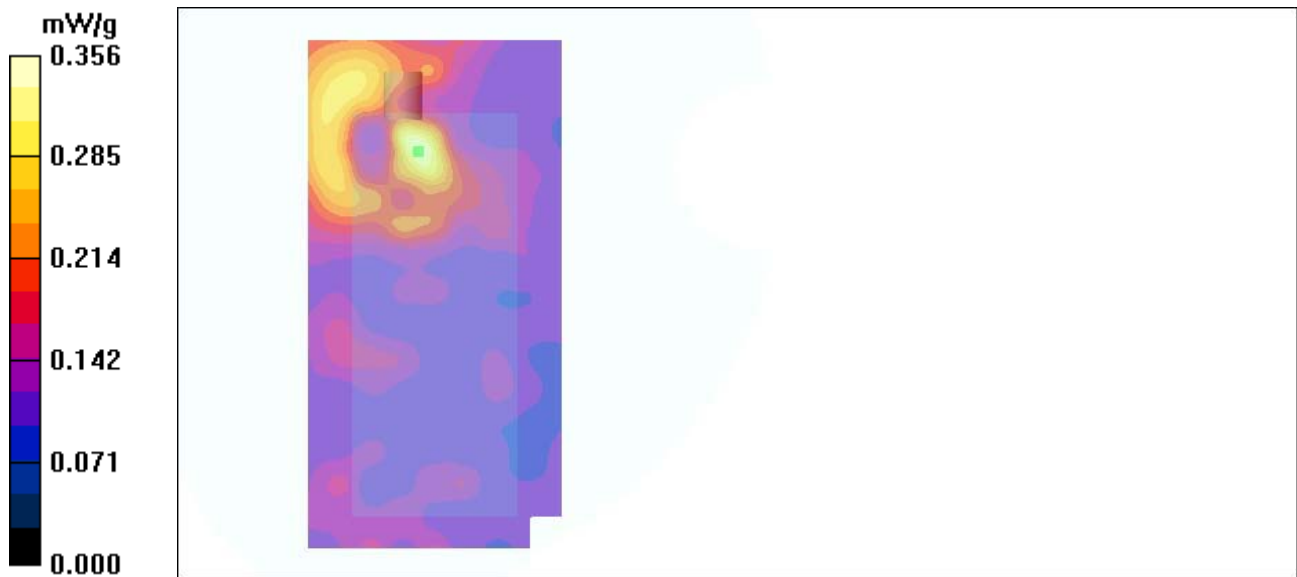
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.83 V/m; Power Drift = 0.062 dB

Peak SAR (extrapolated) = 0.930 W/kg

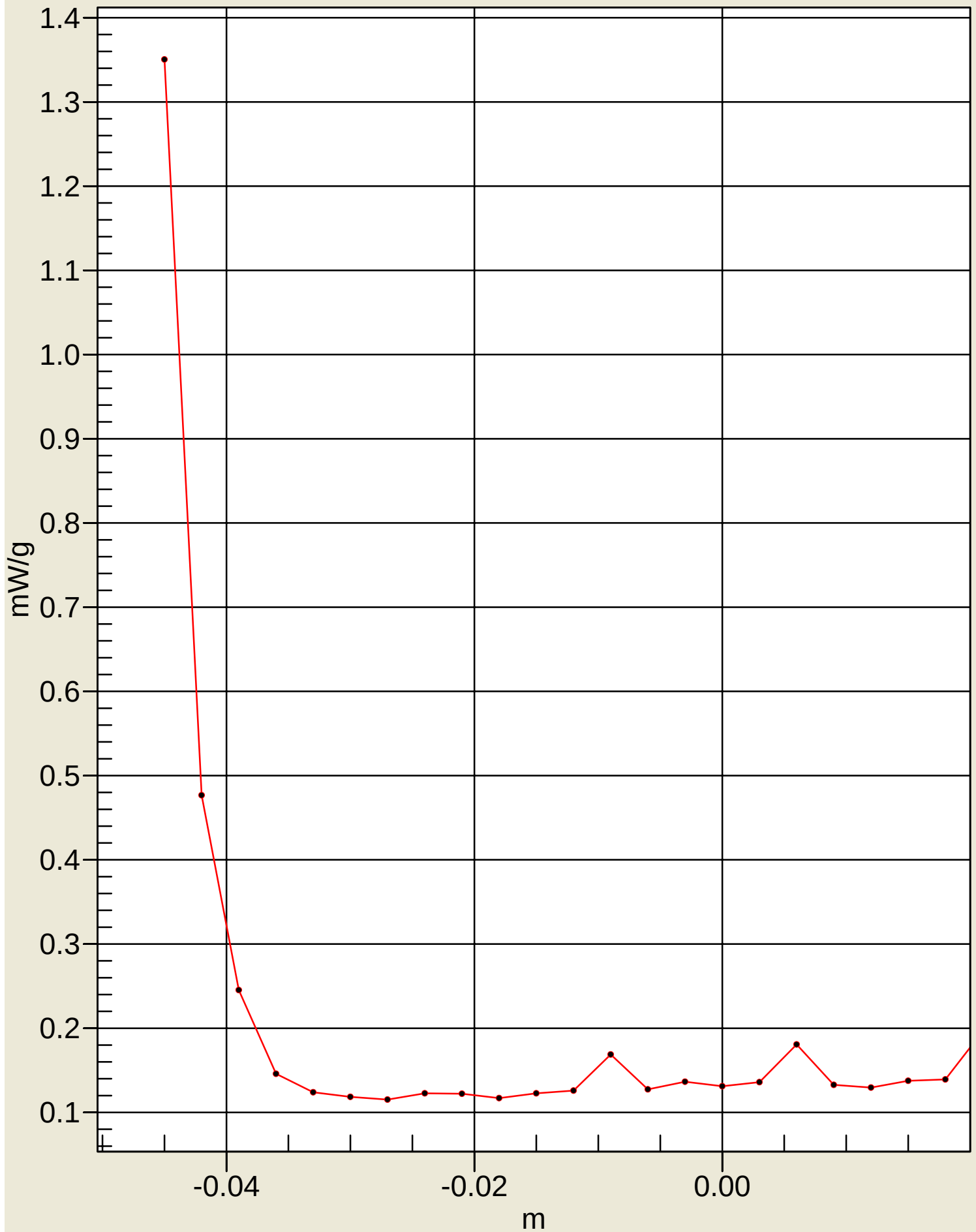
SAR(1 g) = 0.353 mW/g; SAR(10 g) = 0.175 mW/g

Maximum value of SAR (measured) = 0.468 mW/g



SAR(x,y,z,f0)

SAR; Z Scan:5765MHz Body worn



5765MHz/body worn/Leather Holster/std bat

Date/Time: 9/22/2006 11:35:02 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Body Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.18 \text{ mho/m}$; $\epsilon_r = 48.0$; $\rho =$

1000 kg/m^3

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (61x131x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.267 mW/g

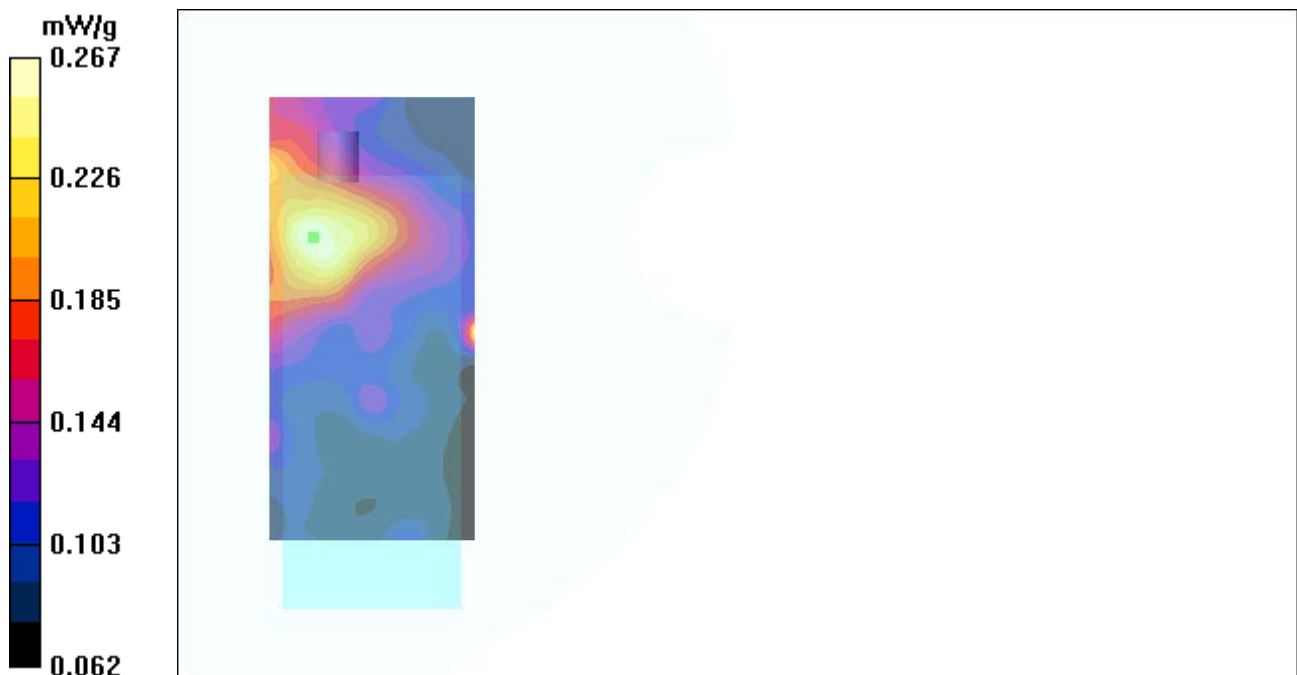
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.06 V/m ; Power Drift = 0.092 dB

Peak SAR (extrapolated) = 0.496 W/kg

SAR(1 g) = 0.234 mW/g ; SAR(10 g) = 0.157 mW/g

Maximum value of SAR (measured) = 0.263 mW/g



5765MHz/body worn/plastic holster/ext batt

Date/Time: 9/22/2006 11:53:04 AM

DUT: Cisco; Type: CP-7921G; Serial: IAC102900A4

Medium Notes: Ambient Temp: 22.0 deg C; Fluid Temp: 21.6 deg C

Communication System: OFDM; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Body Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.18 \text{ mho/m}$; $\epsilon_r = 48.0$; $\rho =$

1000 kg/m^3

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x161x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 0.347 mW/g

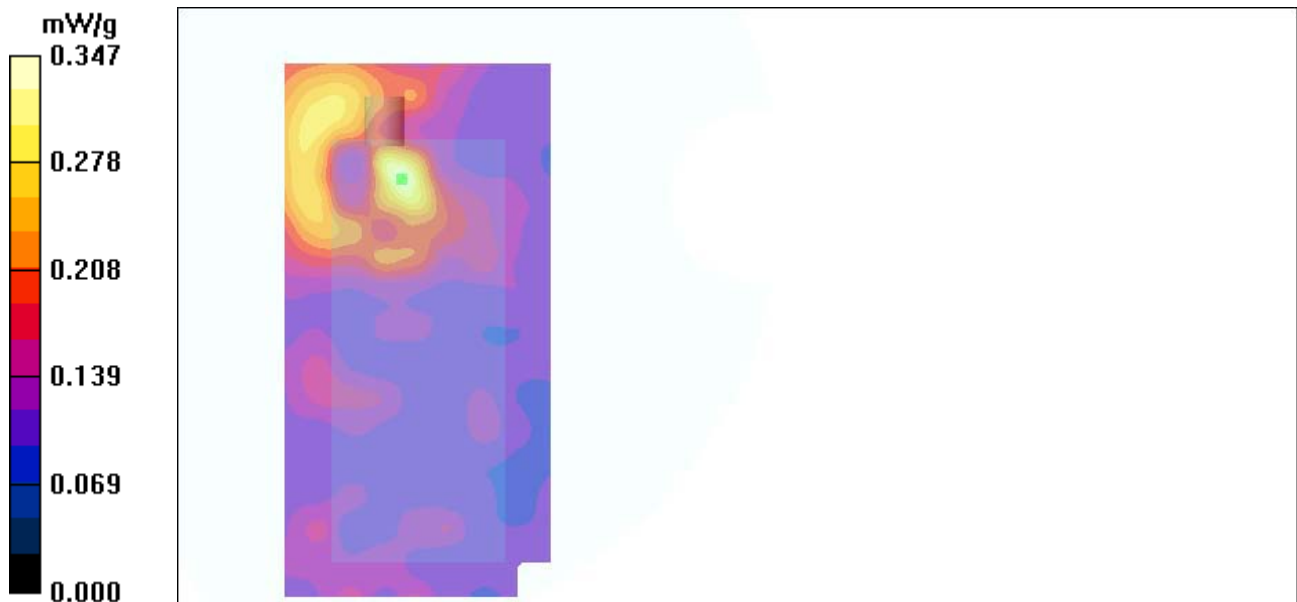
Zoom Scan (7x7x9)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2.5\text{mm}$

Reference Value = 6.83 V/m ; Power Drift = 0.062 dB

Peak SAR (extrapolated) = 0.906 W/kg

SAR(1 g) = 0.344 mW/g ; SAR(10 g) = 0.170 mW/g

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



5200MHz Head Validation

Date/Time: 9/21/2006 8:01:44 AM

DUT: Dipole 5200 MHz; Type: D5200V2; Serial: D5200V2 - SN:001

Communication System: CW; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5200 MHz Head Medium parameters used: $f = 5200$ MHz; $\sigma = 4.5$ mho/m; $\epsilon_r = 37.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 21.1 mW/g

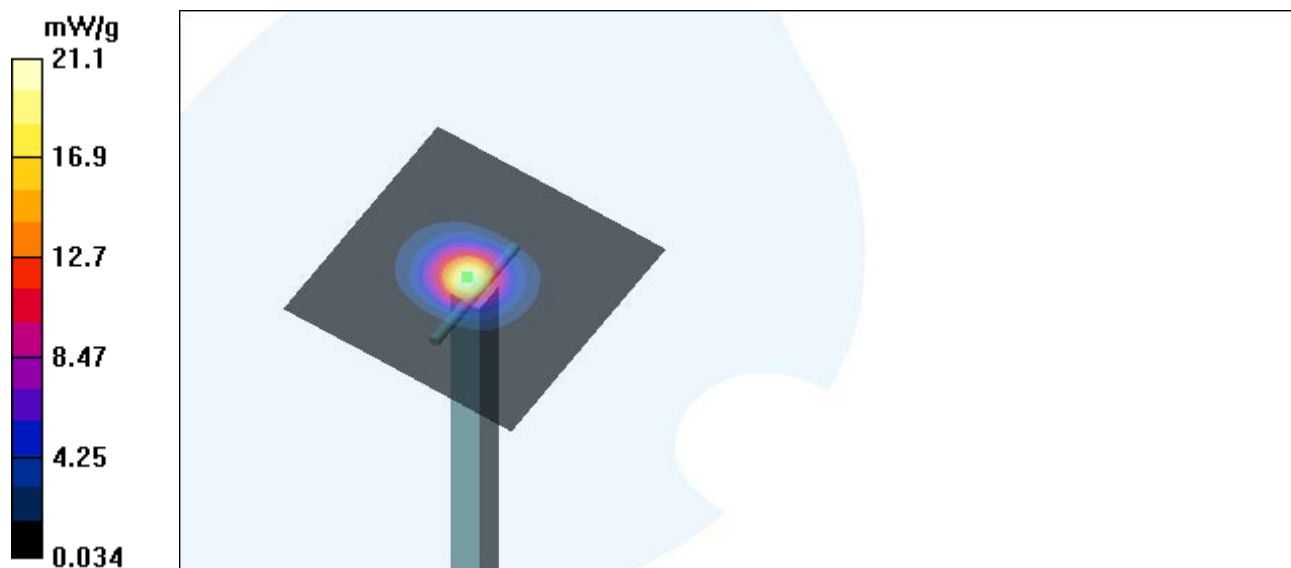
Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 67.2 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 97.1 W/kg

SAR(1 g) = 21.4 mW/g; SAR(10 g) = 6.52 mW/g

Maximum value of SAR (measured) = 39.9 mW/g



5500MHz Head Validation

Date/Time: 9/21/2006 8:25:05 AM

DUT: Dipole 5500 MHz; Type: D5500V2; Serial: D5500V2 - SN:001

Communication System: CW; ; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5500 MHz Head Medium parameters used: $f = 5500$ MHz; $\sigma = 4.95$ mho/m; $\epsilon_r = 37.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.7, 4.7, 4.7); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 21.4 mW/g

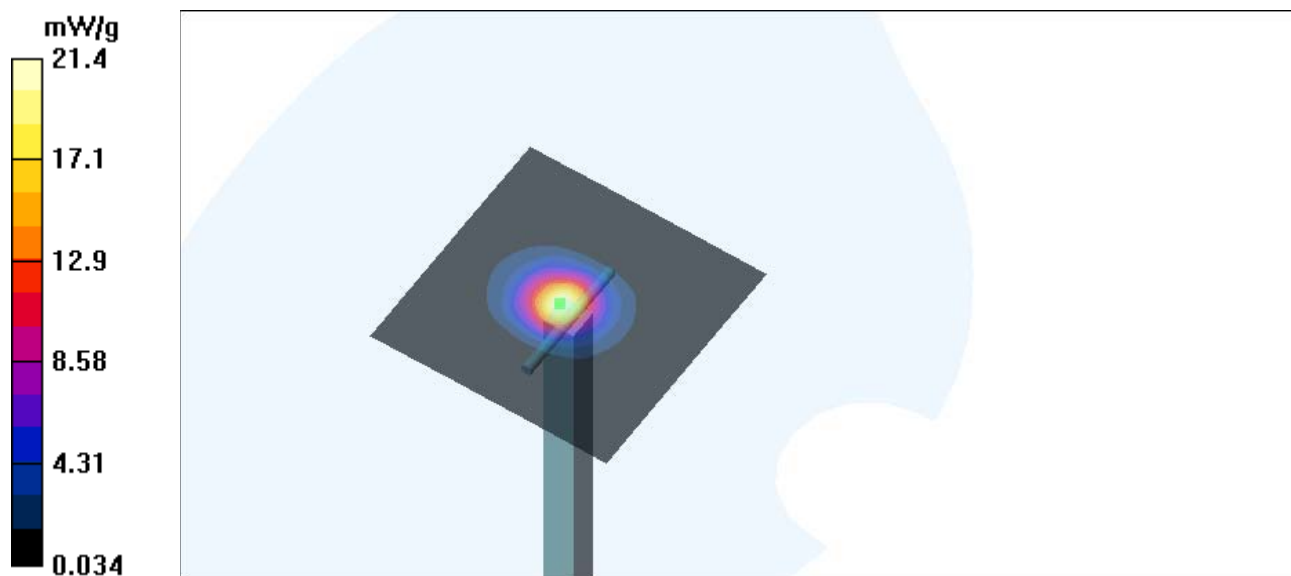
Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 65.4 V/m; Power Drift = -0.022 dB

Peak SAR (extrapolated) = 81.4 W/kg

SAR(1 g) = 20.3 mW/g; SAR(10 g) = 6.24 mW/g

Maximum value of SAR (measured) = 38.5 mW/g



5800MHz Head Validation

Date/Time: 9/21/2006 9:02:21 AM

DUT: Dipole 5800 MHz; Type: D5800V2; Serial: D5800V2 - SN:001

Communication System: CW; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Head Medium parameters used: $f = 5800$ MHz; $\sigma = 5.15$ mho/m; $\epsilon_r = 37$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.47, 4.47, 4.47); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 17.9 mW/g

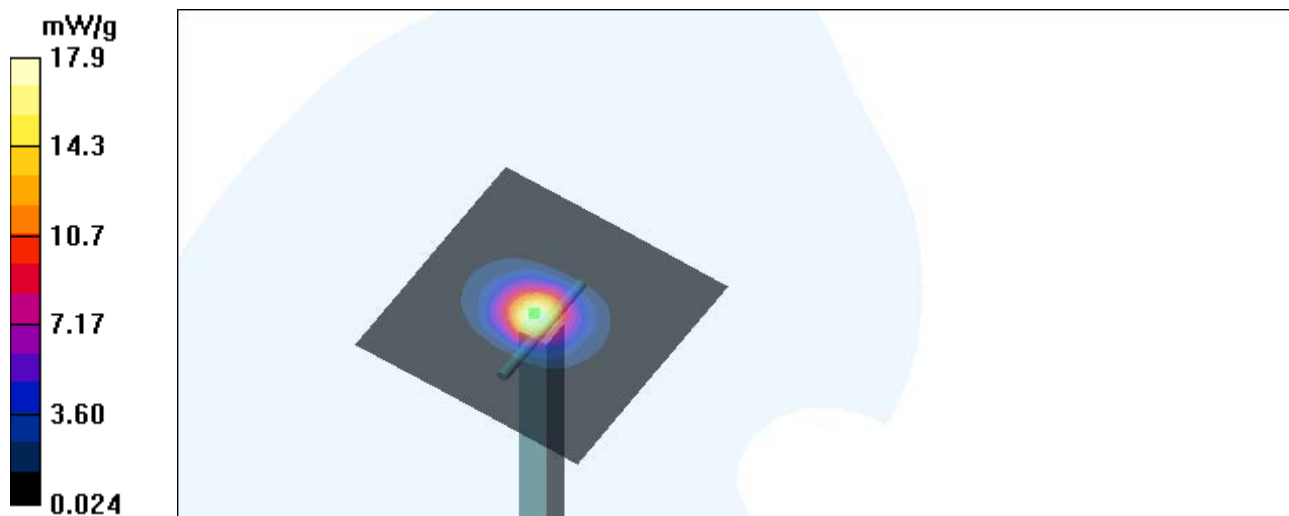
Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 58.2 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 100.6 W/kg

SAR(1 g) = 19.9 mW/g; SAR(10 g) = 6.16 mW/g

Maximum value of SAR (measured) = 37.1 mW/g



5200MHz body Validation

Date/Time: 9/22/2006 7:57:49 AM

DUT: Dipole 5200 MHz; Type: D5200V2; Serial: D5200V2 - SN:001

Communication System: CW; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5200 MHz Body Medium parameters used: $f = 5200$ MHz; $\sigma = 5.4$ mho/m; $\epsilon_r = 49.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 16.9 mW/g

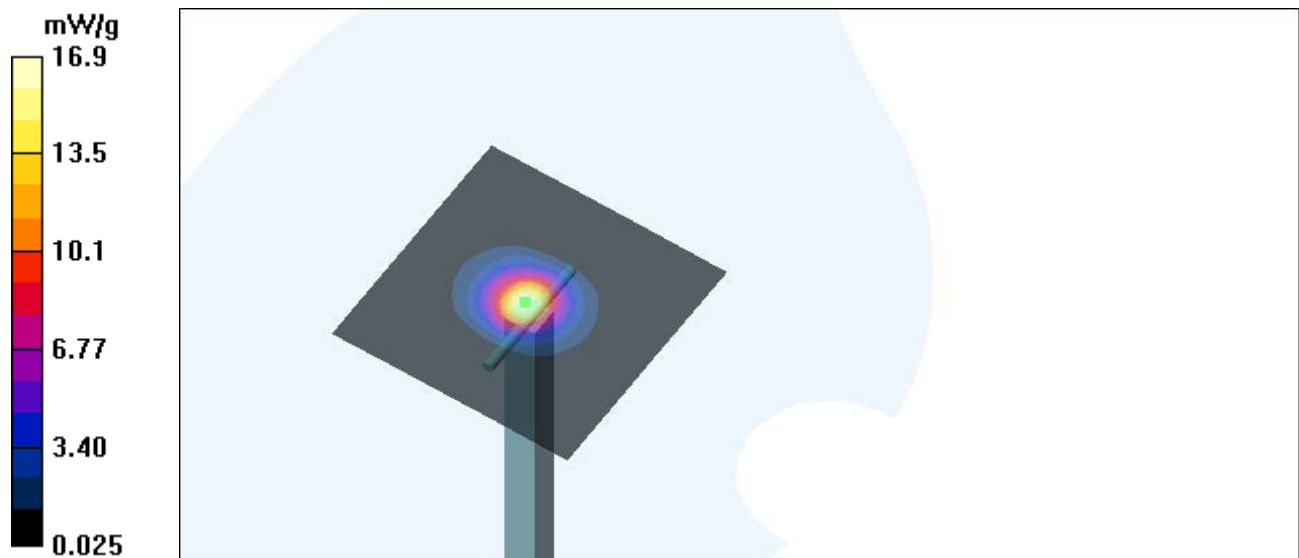
Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 54.9 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 77.4 W/kg

SAR(1 g) = 17.1 mW/g; SAR(10 g) = 5.16 mW/g

Maximum value of SAR (measured) = 32.3 mW/g



5500MHz body Validation

Date/Time: 9/22/2006 8:19:52 AM

DUT: Dipole 5500 MHz; Type: D5500V2; Serial: D5500V2 - SN:001

Communication System: CW; ; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5500 MHz Body Medium parameters used: $f = 5500$ MHz; $\sigma = 5.8$ mho/m; $\epsilon_r = 48.6$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.3, 4.3, 4.3); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 18.4 mW/g

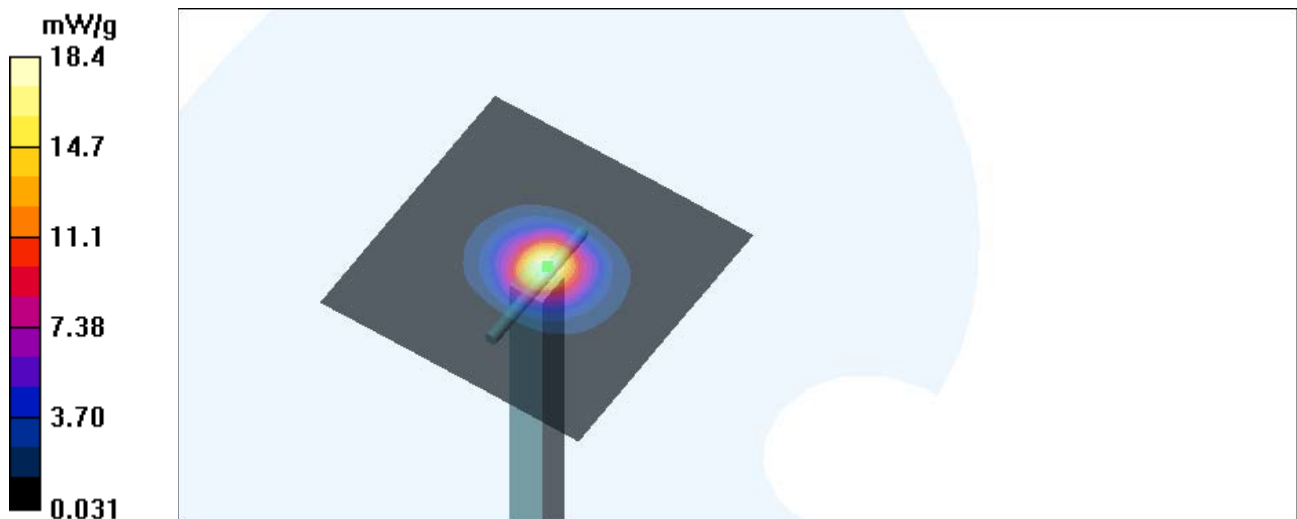
Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 56.2 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 66.9 W/kg

SAR(1 g) = 17.2 mW/g; SAR(10 g) = 5.39 mW/g

Maximum value of SAR (measured) = 32.8 mW/g



5800MHz Body Validation

Date/Time: 9/22/2006 8:53:39 AM

DUT: Dipole 5800 MHz; Type: D5800V2; Serial: D5800V2 - SN:001

Communication System: CW; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Body Medium parameters used: $f = 5800$ MHz; $\sigma = 6.18$ mho/m; $\epsilon_r = 47.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 16.9 mW/g

Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 53.4 V/m; Power Drift = 0.114 dB

Peak SAR (extrapolated) = 70.6 W/kg

SAR(1 g) = 16.3 mW/g; SAR(10 g) = 5.01 mW/g

Maximum value of SAR (measured) = 31.8 mW/g



2450MHz System Validation

Date/Time: 9/27/2006 8:31:59 AM

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:002

Medium Notes: Ambient Temp: 22.6 deg C; Fluid Temp: 21.7 deg C

Communication System: CW; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(7.64, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (61x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 16.8 mW/g

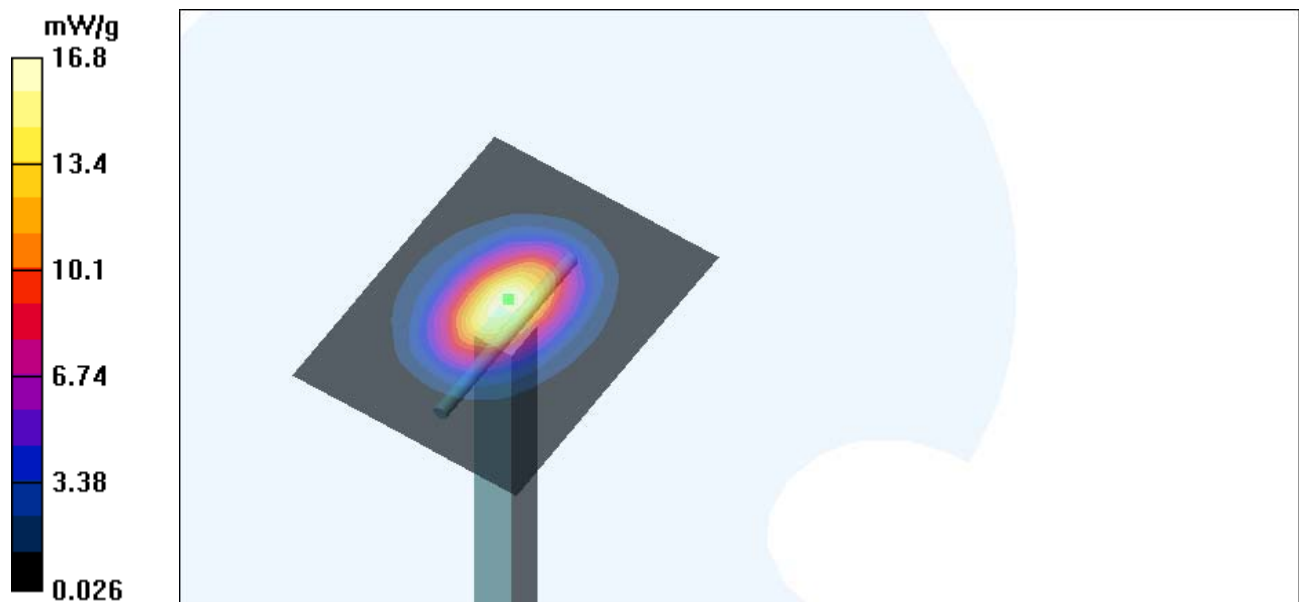
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.0 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 31.3 W/kg

SAR(1 g) = 14.4 mW/g; SAR(10 g) = 6.51 mW/g

Maximum value of SAR (measured) = 16.2 mW/g





Accredited by the Swiss Federal Office of Metrology and Accreditation
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 **MET Laboratories**

Certificate No: **EX3-3511_Jan06**

CALIBRATION CERTIFICATE

Object **EX3DV3 - SN:3511**

Calibration procedure(s) **QA CAL-01.v5 and QA CAL-14.v3
Calibration procedure for dosimetric E-field probes**

Calibration date: **January 23, 2006**

Condition of the calibrated item **In Tolerance**

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.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	3-May-05 (METAS, No. 251-00466)	May-06
Power sensor E4412A	MY41495277	3-May-05 (METAS, No. 251-00466)	May-06
Power sensor E4412A	MY41498087	3-May-05 (METAS, No. 251-00466)	May-06
Reference 3 dB Attenuator	SN: S5054 (3c)	11-Aug-05 (METAS, No. 251-00499)	Aug-06
Reference 20 dB Attenuator	SN: S5086 (20b)	3-May-05 (METAS, No. 251-00467)	May-06
Reference 30 dB Attenuator	SN: S5129 (30b)	11-Aug-05 (METAS, No. 251-00500)	Aug-06
Reference Probe ES3DV2	SN: 3013	2-Jan-06 (SPEAG, No. ES3-3013_Jan06)	Jan-07
DAE4	SN: 654	27-Oct-05 (SPEAG, No. DAE4-654_Oct05)	Oct-06
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (SPEAG, in house check Nov-05)	In house check: Nov-07
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, in house check Nov-05)	In house check: Nov 06

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

Issued: January 23, 2006

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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 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
ConF	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
- CENELEC EN 50361, "Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz), July 2001

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.

Probe EX3DV3

SN:3511

Manufactured:	December 15, 2003
Last calibrated:	January 23, 2004
Recalibrated:	January 23, 2006

Calibrated for DASY Systems

(Note: non-compatible with DASY2 system!)

DASY - Parameters of Probe: EX3DV3 SN:3511

Sensitivity in Free Space^A

Diode Compression^B

NormX	0.770 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP X	96 mV
NormY	0.606 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP Y	96 mV
NormZ	0.634 ± 10.1%	$\mu\text{V}/(\text{V}/\text{m})^2$	DCP Z	96 mV

Sensitivity in Tissue Simulating Liquid (Conversion Factors)

Please see Page 8.

Boundary Effect

TSL **900 MHz** **Typical SAR gradient: 5 % per mm**

Sensor Center to Phantom Surface Distance		2.0 mm	3.0 mm
SAR _{be} [%]	Without Correction Algorithm	3.3	1.3
SAR _{be} [%]	With Correction Algorithm	0.2	0.4

TSL **1810 MHz** **Typical SAR gradient: 10 % per mm**

Sensor Center to Phantom Surface Distance		2.0 mm	3.0 mm
SAR _{be} [%]	Without Correction Algorithm	2.5	1.3
SAR _{be} [%]	With Correction Algorithm	0.4	0.4

Sensor Offset

Probe Tip to Sensor Center **1.0 mm**

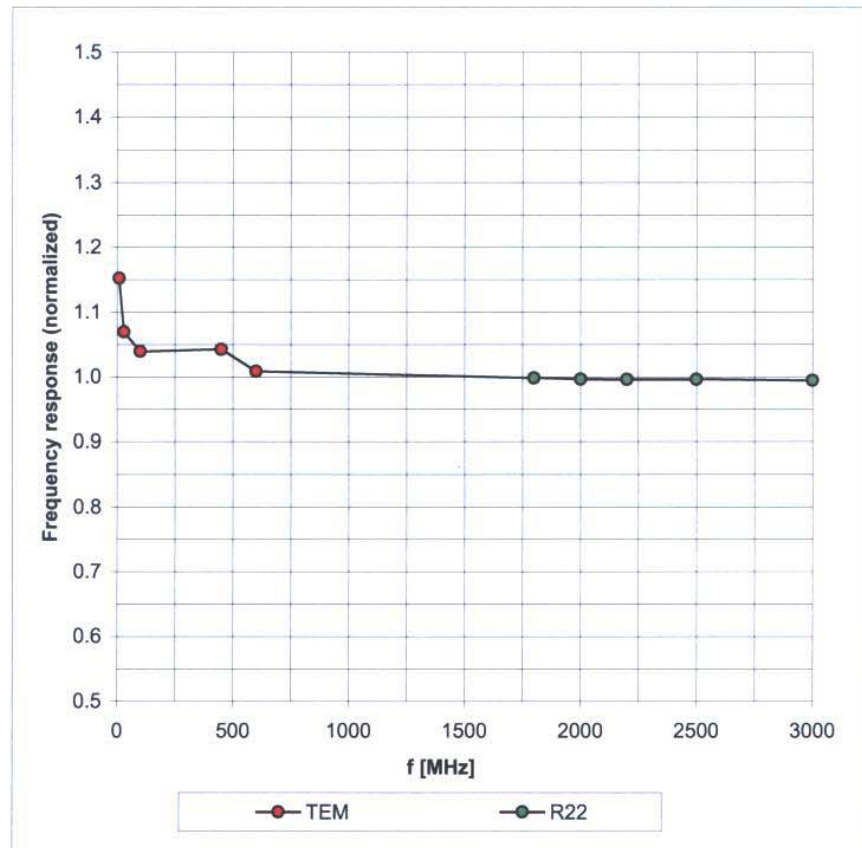
The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of NormX,Y,Z do not affect the E²-field uncertainty inside TSL (see Page 8).

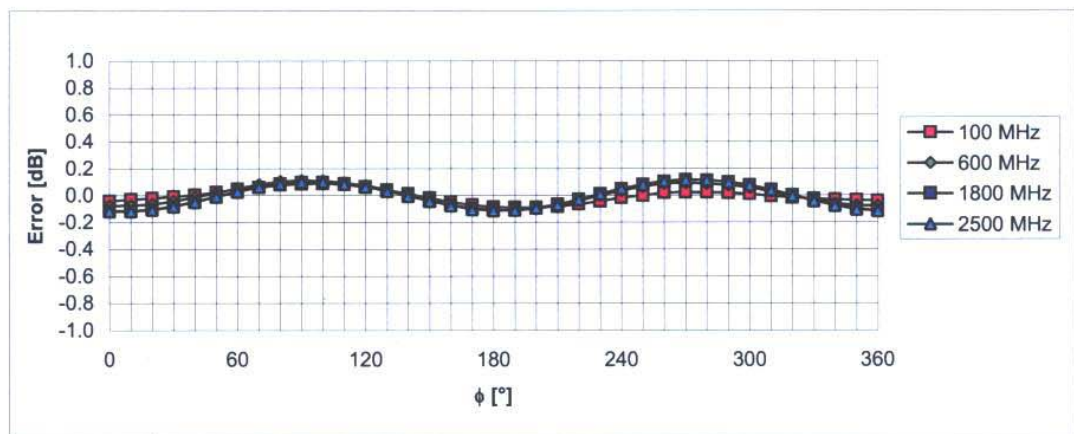
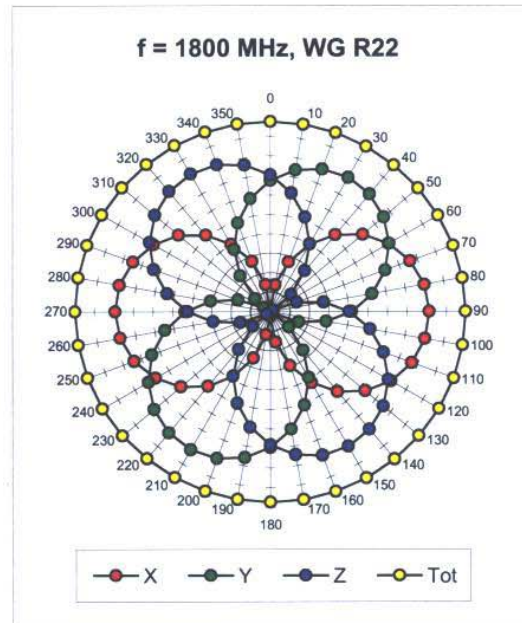
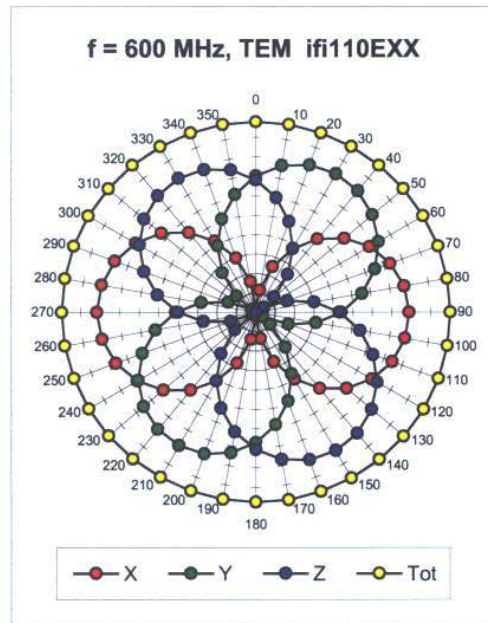
^B Numerical linearization parameter: uncertainty not required.

Frequency Response of E-Field

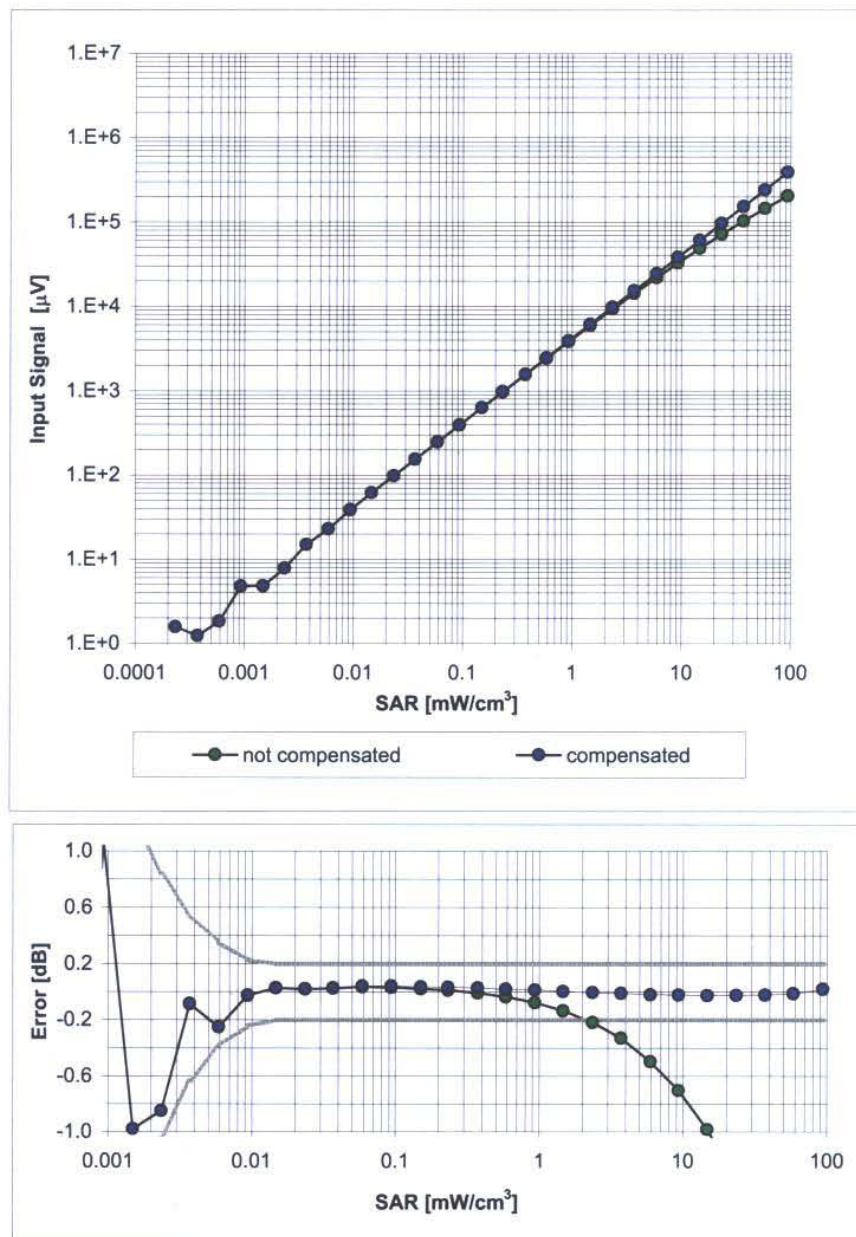
(TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

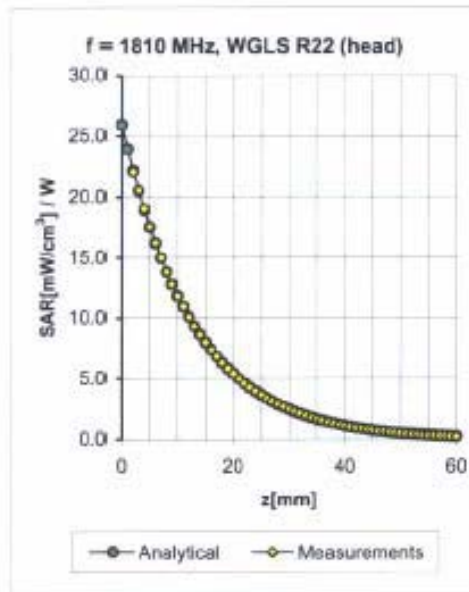
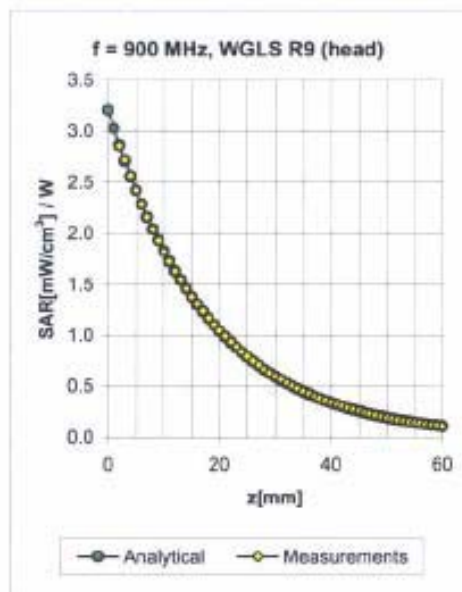
Receiving Pattern (ϕ), $\vartheta = 0^\circ$ Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

Dynamic Range $f(\text{SAR}_{\text{head}})$ (Waveguide R22, $f = 1800 \text{ MHz}$)



Uncertainty of Linearity Assessment: $\pm 0.6\%$ ($k=2$)

Conversion Factor Assessment

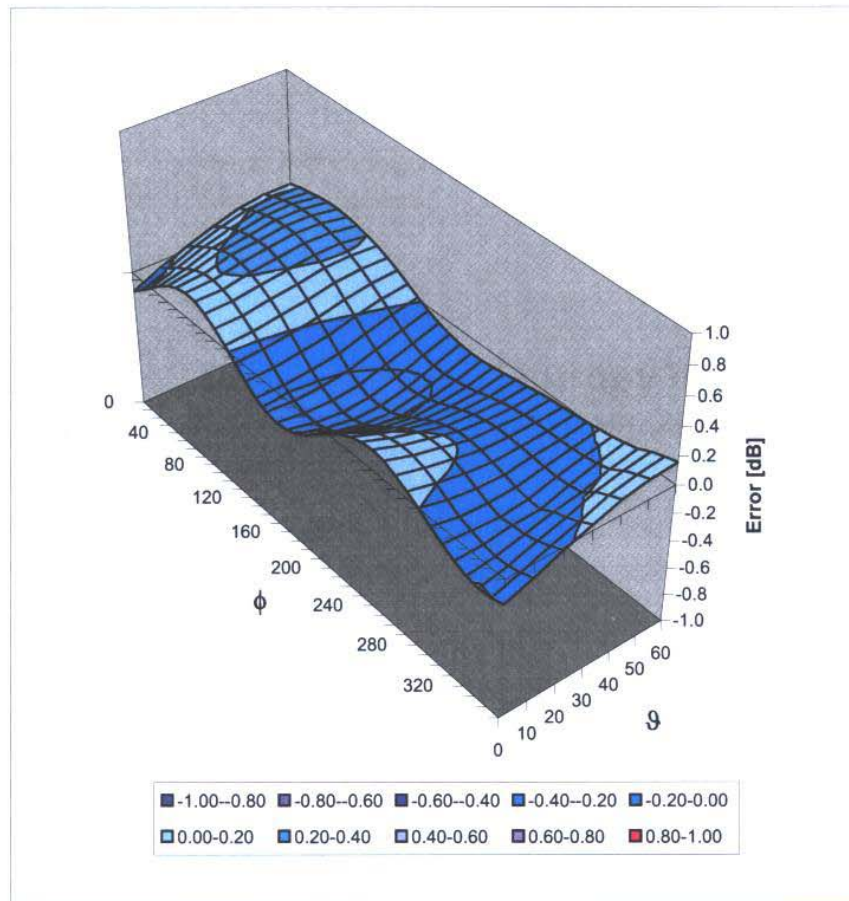


f [MHz]	Validity [MHz] ^c	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF Uncertainty
900	± 50 / ± 100	Head	41.5 ± 5%	0.97 ± 5%	0.58	0.70	9.68 ± 11.0% (k=2)
1810	± 50 / ± 100	Head	40.0 ± 5%	1.40 ± 5%	0.29	0.86	8.41 ± 11.0% (k=2)
2450	± 50 / ± 100	Head	39.2 ± 5%	1.80 ± 5%	0.49	0.55	7.64 ± 11.8% (k=2)
5200	± 50 / ± 100	Head	35.6 ± 5%	4.66 ± 5%	0.49	1.10	5.10 ± 13.1% (k=2)
5500	± 50 / ± 100	Head	35.6 ± 5%	4.96 ± 5%	0.49	1.10	4.70 ± 13.1% (k=2)
5800	± 50 / ± 100	Head	35.3 ± 5%	5.30 ± 5%	0.49	1.10	4.47 ± 13.1% (k=2)
900	± 50 / ± 100	Body	55.0 ± 5%	1.05 ± 5%	0.57	0.72	9.55 ± 11.0% (k=2)
1810	± 50 / ± 100	Body	53.3 ± 5%	1.52 ± 5%	0.21	1.95	8.14 ± 11.0% (k=2)
2450	± 50 / ± 100	Body	52.7 ± 5%	1.95 ± 5%	0.99	0.39	7.80 ± 11.8% (k=2)
5200	± 50 / ± 100	Body	49.0 ± 5%	5.30 ± 5%	0.44	1.69	4.68 ± 13.1% (k=2)
5500	± 50 / ± 100	Body	48.6 ± 5%	5.65 ± 5%	0.45	1.68	4.30 ± 13.1% (k=2)
5800	± 50 / ± 100	Body	48.2 ± 5%	6.00 ± 5%	0.46	1.69	4.10 ± 13.1% (k=2)

^c The validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

Deviation from Isotropy in HSL

Error (ϕ , θ), $f = 900$ MHz



Uncertainty of Spherical Isotropy Assessment: $\pm 2.6\%$ ($k=2$)

CALIBRATION CERTIFICATE

Object: 2450MHz Validation Dipole; serial # 002

Calibration Procedure: Calibration procedure for a validation dipole

Calibration Date: February09, 2006

Condition of the Calibrated Item: In Tolerance

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.

All calibrations have been conducted in a closed laboratory facility: environment temperature $(21 \pm 3) ^\circ \text{C}$ and humidity $< 70\%$

Calibration equipment used

Model Type	Serial Number	MET Asset #	Cal due Date
Anritsu Power Meter ML2488A	6K00001832	1S2430	June 2006
Anritsu Power Sensor	030864	1S2432	June 2006
HP E4418B Power Meter	GB40205140	1S2276	June 2006
HP 8482A Power Sensor	2607A11286	1S2140	June 2006
83650B Signal Generator	3844A00910	1S2278	June 2006
HP 8722D Vector Network Analyzer	3S36140188	1S2272	March 2006

Calibrated by: Shawn McMillen
Name

Senior Engineer
Function



Signature

This calibration certificate shall not be reproduced except in full

Date of Issue: February 09, 2006

Calibration procedure for validation dipole

Calibration is performed according to the following standards:

- a) IEEE Std 1528-2003, “IEEE Recommended Practice for Determining the Peak Spatial Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communication Devices: Measurement Techniques”, December 2003
- b) CENELEC EN 50361, “Basic standard for the measurement of Specific Absorption Rate related to human exposure to electromagnetic fields from mobile phones (300MHz – 3GHz), July 2001
- c) Federal Communications Commission Office of Engineering & Technology (FCC OET), “Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions”, Bulletin 65 Supplement C (Edition 01-01).

Additional Documents

- d) DASY4 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All Figures stated in the certificate are valid at the frequency indicated.
- Antenna flatness: The antenna is checked for straightness using a straight edge placed parallel to the dipole arms.
- Antenna Parameters with Tissue Simulating Liquid (TSL): The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Vector Network Analyzer: The network analyzer is calibrated as per the user’s manual.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. A Return Loss >20dB ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No Uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1W at the antenna connector. No Uncertainty required
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the SAR results.

Measurement Conditions

DASY system configuration

DASY Version	DASY4	V4.4
Extrapolation	Advanced Extrapolation	
Phantom	SAM	
Dipole Spacer		
Distance Dipole Center-TSL	10.14mm $\pm$ 0.2mm	With spacer
Area Scan resolution	dx, dy = 10mm	
Zoom Scan resolution	dx, dy, dz = 5mm	
Frequency	2450MHz $\pm$ 1MHz	

Head TSL Parameters

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Head TSL Parameters	23.1 °C	39.2	1.80
Measured Head TSL Parameters		40.5	1.85 $\pm$ 5%
Head TSL Temperature during Test	23.9 °C	--	--

Measurement Uncertainty of Dipole Calibration

Error Description	Uncertainty Value $\pm$ %	Probability Distribution	Divisor	C_i 1g	Standard Uncertainty $\pm$ % (1g)
Anritsu Power Meter ML2488A	$\pm$ 1.4	normal	2	1	$\pm$ 0.7
Anritsu Power Sensor	$\pm$ 1.4	normal	2	1	$\pm$ 0.7
HP E4418B Power Meter	$\pm$ 0.2	normal	2	1	$\pm$ 0.1
HP 8482A Power Sensor	$\pm$ 0.8	normal	2	1	$\pm$ 0.4
83650B Signal Generator	$\pm$ 2.0	normal	2	1	$\pm$ 1.0
HP 8722D Vector Network Analyzer	$\pm$ 2.0	normal	2	1	$\pm$ 1.0
Combined Standard Uncertainty					$\pm$ 3.9

SAR results with Head TSL and system uncertainty

SAR averaged over 1 cm ³ (1g) of Head TSL	Condition	
SAR Normalized	Normalized to 1 W	58.4 mW/g
SAR for nominal Head TSL Parameters	Normalized to 1W	58.4 $\pm$ 24.29% mW/g (k=2)

SAR averaged over 1 cm ³ (10g) of Head TSL	Condition	
SAR Normalized	Normalized to 1 W	26.4 mW/g
SAR for nominal Head TSL Parameters	Normalized to 1W	26.4 $\pm$ 23.51% mW/g (k=2)



2400 MHz System Validation Dipole

Type:	2450Mhz
-------	---------

Serial Number:	002
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Place of Calibration:	MET Laboratories, Inc. 4855 Patrick Henry Dr. Bldg #6 Santa Clara, CA 95054USA
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Date of Calibration:	09 February 2006
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MET Laboratories, Inc certifies that this device has been calibrated on the date indicated above.

:

Approved By:



Shawn McMillen
SAR Compliance Manager



1. Measurement Conditions

The DASY4 System with a dosimetric E-Field probe EX3DV3 (3511), Conversion factor 7.64 at 2450 MHz was used for the measurements.

The measurements were performed in the flat section of the SAM twin phantom filled with head tissue simulating solution of the following electrical parameters at 1900 MHz:

Relative Dielectricity	40.8	±5%
Conductivity	1.94	±5%

The dipole was mounted so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10mm from dipole center to solution surface. A loss-less dielectric spacer was used during measurements for accurate distance positioning.

The course grid with a grid spacing of 15mm was aligned with the dipole. The 7x7x7 fine cube was chosen for cube integration. The dipole input power (forward power) was 250mW ±3%. The results are normalized to 1W input power.

2. SAR Measurement with DASY4 System

Standard SAR measurement were performed according to the measurement conditions described in section 1. The results (see figure supplied) have been normalized to a dipole input power of 1W (forward power). The resulting average SAR values measured with the dosimetric probe EX3DV3 (3511), and applying advanced extrapolation are:

Averaged over 1cm ³ (1g) of tissue:	58.4 mW/g
Averaged over 10cm ³ (10g) of tissue:	26.4 mW/g

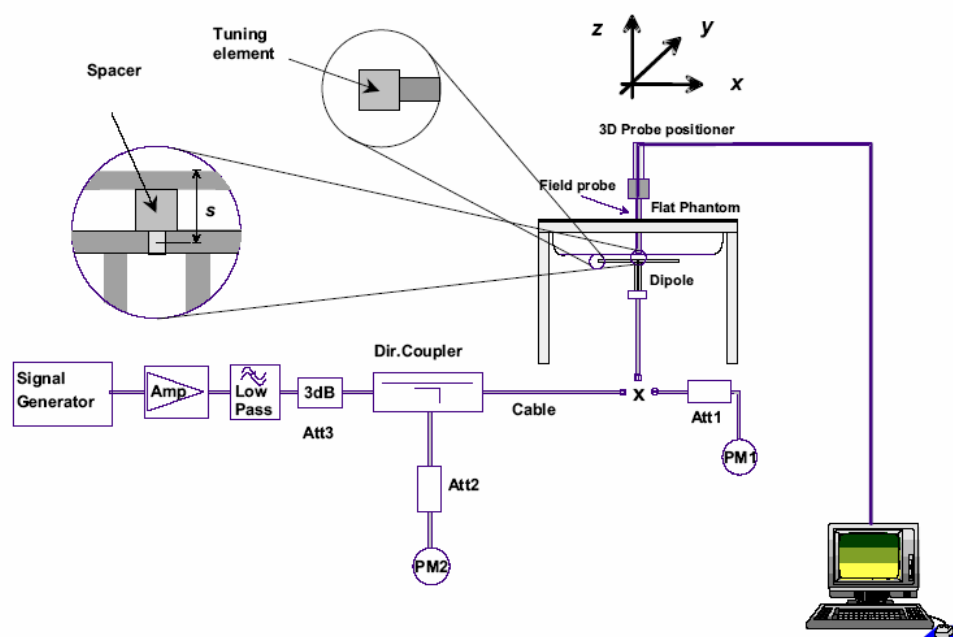
3. Dipole Impedance and Return Loss

The dipole was positioned at the flat phantom sections according to section 1 with the 10mm spacer. The impedance and return loss measurements are

Complex impedance at 2450 MHz	Re{Z}= 47.5 Ω
	Im {Z}= 1.41Ω
Return Loss at 2450 MHz	-30.8 dB

4. SAR Measurement

The SAR measurement was performed with the E-field probe in mechanical detection mode only. The setup and determination of the forward power into the dipole was performed using the following procedures.



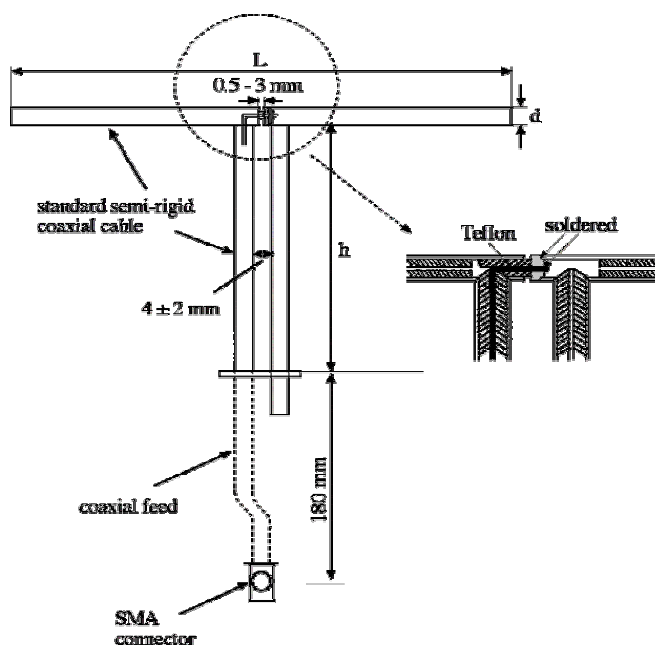
First the power meter PM1 (including attenuator Att1) is connected to the RF cable to measure the forward power at the location of the dipole connector (X). The signal generator is adjusted for the desired forward power at the dipole connector (taking into account the attenuation of Att1) as read by power meter PM2. After connecting the cable to the dipole, the signal generator is readjusted for the same reading at power meter PM2. If the signal generator does not allow adjustment in 0.01dB steps, the remaining difference at PM2 must be taken into consideration. The matching of the dipole should be checked using a network analyzer to ensure that the reflected power is at least 20 dB below the forward power.

4. Handling

Do not apply excessive force to the dipole arms, because they might bend. Bending of the dipole arms stresses the soldered connections near the feed point leading to a damage of the dipole.

5. Design

The validation dipole is made of standard semi ridged coaxial cable and is constructed in accordance with the IEEE Std “Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.



Frequency (MHz)	L (mm)	h (mm)	d (mm)
300	396.0	250.0	6.35
450	270.0	166.7	6.35
835	161.0	89.8	3.6
900	149.0	83.3	3.6
1450	89.1	51.7	3.6
1800	72.0	41.7	3.6
1900	68.0	39.5	3.6
2000	64.5	37.5	3.6
2450	51.8	30.4	3.6
3000	41.5	25.0	3.6

Validation Dipole Dimensions

2450MHz Dipole Calibration

Date/Time: 2/09/2006 3:31:59 PM

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:002

Communication System: CW; ; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: HSL2450 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.85$ mho/m; $\epsilon_r = 40.5$; $\rho = 1000\text{kg/m}^3$

Phantom section: Flat Section

Probe: EXD V3 - SN3511; ConvF(7.64, 7.64, 7.64); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Area Scan (61x81x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 17.0 mW/g

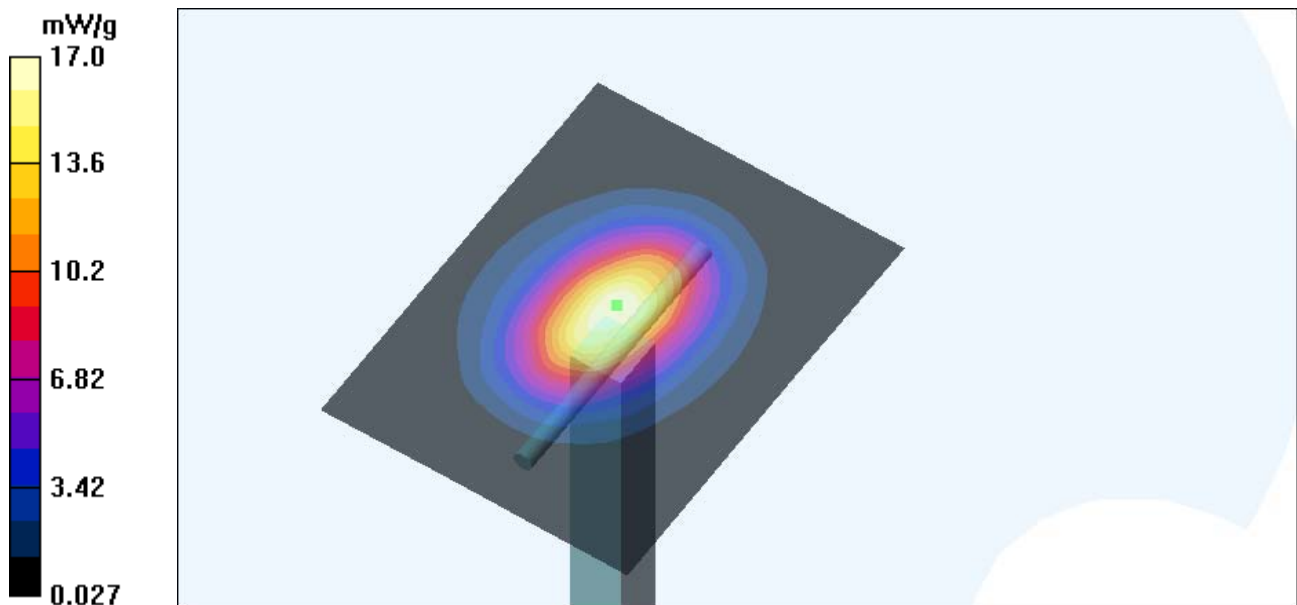
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 93.0 V/m ; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 32.0 W/kg

SAR(1 g) = 14.6 mW/g ; SAR(10 g) = 6.6 mW/g

Maximum value of SAR (measured) = 16.5 mW/g



CALIBRATION CERTIFICATE

Object: 5000MHz Validation Dipole serial #001

Calibration Procedure: Calibration procedure for a validation dipole

Calibration Date: August 22, 2006

Condition of the Calibrated Item: In Tolerance

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.

All calibrations have been conducted in a closed laboratory facility: environment temperature $(22 \pm 3) ^\circ \text{C}$ and humidity $< 70\%$

Calibration equipment used

Model Type	Serial Number	MET Asset #	Cal Date
Anritsu Power Meter ML2488A	6K00001832	1S2430	June 2006
Anritsu Power Sensor	030864	1S2432	Jan 2006
HP E4418B Power Meter	GB40205140	1S2276	June 2006
HP 8482A Power Sensor	2607A11286	1S2140	June 2006
83650B Signal Generator	3844A00910	1S2278	June 2006
HP 8722D Vector Network Analyzer	3S36140188	1S2272	March 2006

Calibrated by: Shawn McMillen
Name

Senior Engineer
Function



Signature

This calibration certificate shall not be reproduced except in full

Date of Issue: August 22, 2006

Calibration procedure for validation dipole

Calibration is performed according to the following standards:

- a) IEC Std 62209 Part 2, "Evaluation of Human Exposure to Radio Frequency Fields from Handheld and Body-Mounted Wireless Communication Devices in the Frequency Range of 30MHz- 6GHz: Human models, Instrumentation and Procedures" Part 2: "Procedure to determine the Specific Absorption Rate (SAR) for including accessories and multiple transmitter", Draft Version 0.9, December 2004.
- b) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Bulletin 65 Supplement C (Edition01-01).

Additional Documents

- c) DASY4 System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All Figures stated in the certificate are valid at the frequency indicated.
- Antenna check: The antenna is checked for straightness using a straight edge placed parallel to the dipole arms prior to installing it against the phantom surface.
- The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Antenna flatness: The spacer thickness used for the 5000MHz dipole is 10.00mm +/- 0.2mm. To insure the antenna is within +/- 2 degrees of flatness to the phantom surface use a caliper to measure the dipole ends from the surface of the phantom.
- Vector Network Analyzer: The network analyzer is calibrated as per the user's manual.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. A Return Loss >20dB ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No Uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1W at the antenna connector. No Uncertainty required
- SAR for nominal head and muscle parameters: The measured TSL parameters are used to calculate the SAR results.

Measurement Conditions

DASY system configuration

DASY Version	DASY4	V4.6
Extrapolation	Advanced Extrapolation	
Phantom	Planar Validation Phantom	
Dipole Spacer		
Distance Dipole Center-TSL	10.0mm $\pm$ 0.2mm	With spacer
Area Scan resolution	dx, dy = 10mm	
Zoom Scan resolution	dx, dy, = 4.3mm, dz = 3mm	
Frequency	5200MHz $\pm$ 1MHz 5500MHz $\pm$ 1MHz 5800MHz $\pm$ 1MHz	

Head TSL Parameters @ 5200 MHz

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Head TSL Parameters	22.0 °C	36.0	4.66
Measured Head TSL Parameters		37.4 $\pm$ 5%	4.70 $\pm$ 5%
Head TSL Temperature during Test	22.0 °C	--	--

SAR results with Head TSL @ 5200 MHz

SAR averaged over 1 cm ³ (1g) of Head TSL	Condition	22.3 mW/g
SAR Normalized	Normalized to 1 W	89.2 mW/g
SAR for nominal Head TSL Parameters	Normalized to 1W	89.2 $\pm$ 23.32% mW/g (k=2)

SAR averaged over 1 cm ³ (10g) of Head TSL	Condition	6.81 mW/g
SAR Normalized	Normalized to 1 W	27.2 mW/g
SAR for nominal Head TSL Parameters	Normalized to 1W	27.2 $\pm$ 21.46% mW/g (k=2)

Head TSL Parameters @ 5500 MHz

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Head TSL Parameters	22.0 °C	35.6	4.96
Measured Head TSL Parameters		37.1 ±5%	5.04 ±5%
Head TSL Temperature during Test	21.9 °C	--	--

SAR results with Head TSL @ 5500 MHz

SAR averaged over 1 cm ³ (1g) of Head TSL	Condition	20.9 mW/g
SAR Normalized	Normalized to 1 W	83.6 mW/g
SAR for nominal Head TSL Parameters	Normalized to 1W	83.6 ± 23.32% mW/g (k=2)

SAR averaged over 1 cm ³ (10g) of Head TSL	Condition	6.41 mW/g
SAR Normalized	Normalized to 1 W	25.6 mW/g
SAR for nominal Head TSL Parameters	Normalized to 1W	25.6 ± 21.46% mW/g (k=2)

Head TSL Parameters @ 5800 MHz

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Head TSL Parameters	22.0 °C	35.3	5.27
Measured Head TSL Parameters		36.4 ±5%	5.31 ±5%
Head TSL Temperature during Test	22.0 °C	--	--

SAR results with Head TSL @ 5800 MHz

SAR averaged over 1 cm ³ (1g) of Head TSL	Condition	20.5 mW/g
SAR Normalized	Normalized to 1 W	82.0 mW/g
SAR for nominal Head TSL Parameters	Normalized to 1W	82.0 ± 23.32% mW/g (k=2)

SAR averaged over 1 cm ³ (10g) of Head TSL	Condition	6.35 mW/g
SAR Normalized	Normalized to 1 W	25.4 mW/g
SAR for nominal Head TSL Parameters	Normalized to 1W	25.4 ± 21.46% mW/g (k=2)

Body TSL Parameters @ 5200 MHz

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Body TSL Parameters	22.0 °C	49.0	5.30
Measured Body TSL Parameters		48.2 ±5%	5.37 ±5%
Body TSL Temperature during Test	22.0 °C	--	--

SAR results with Body TSL @ 5200 MHz

SAR averaged over 1 cm ³ (1g) of Body TSL	Condition	17.0
SAR Normalized	Normalized to 1 W	68.0 mW/g
SAR for nominal Body TSL Parameters	Normalized to 1W	68.0 ± 23.32% mW/g (k=2)

SAR averaged over 1 cm ³ (10g) of Body TSL	Condition	5.13
SAR Normalized	Normalized to 1 W	20.5 mW/g
SAR for nominal Body TSL Parameters	Normalized to 1W	20.5 ± 21.46% mW/g (k=2)

Body TSL Parameters @ 5500 MHz

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Body TSL Parameters	22.0 °C	47.8	5.65
Measured Body TSL Parameters		47.8 ±5%	5.80 ±5%
Body TSL Temperature during Test	22.0 °C	--	--

SAR results with Body TSL @ 5500 MHz

SAR averaged over 1 cm ³ (1g) of Body TSL	Condition	16.8
SAR Normalized	Normalized to 1 W	67.2 mW/g
SAR for nominal Body TSL Parameters	Normalized to 1W	67.2 ± 23.32% mW/g (k=2)

SAR averaged over 1 cm ³ (10g) of Body TSL	Condition	5.24
SAR Normalized	Normalized to 1 W	20.9 mW/g
SAR for nominal Body TSL Parameters	Normalized to 1W	20.9 ± 21.46% mW/g (k=2)

Body TSL Parameters @ 5800 MHz

The following parameters and calculations were applied

	Temperature	Permittivity	Conductivity
Nominal Body TSL Parameters	22.0 °C	48.2	6.00
Measured Body TSL Parameters		47.1 ±5%	6.15 ±5%
Body TSL Temperature during Test	22.0 °C	--	--

SAR results with Body TSL @ 5800 MHz

SAR averaged over 1 cm ³ (1g) of Body TSL	Condition	16.2
SAR Normalized	Normalized to 1 W	64.8 mW/g
SAR for nominal Body TSL Parameters	Normalized to 1W	64.8 ± 23.32% mW/g (k=2)

SAR averaged over 1 cm ³ (10g) of Body TSL	Condition	4.99
SAR Normalized	Normalized to 1 W	19.6 mW/g
SAR for nominal Body TSL Parameters	Normalized to 1W	19.6 ± 21.46% mW/g (k=2)

5200MHz Head

Date/Time: 8/21/2006 3:28:44 PM

DUT: Dipole ; Type: 5000 MHz; Serial: SN:001

Communication System: CW; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5500 MHz Head Medium parameters used: $f = 5200$ MHz; $\sigma = 4.7$ mho/m; $\epsilon_r = 37.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(5.1, 5.1, 5.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 22.1 mW/g

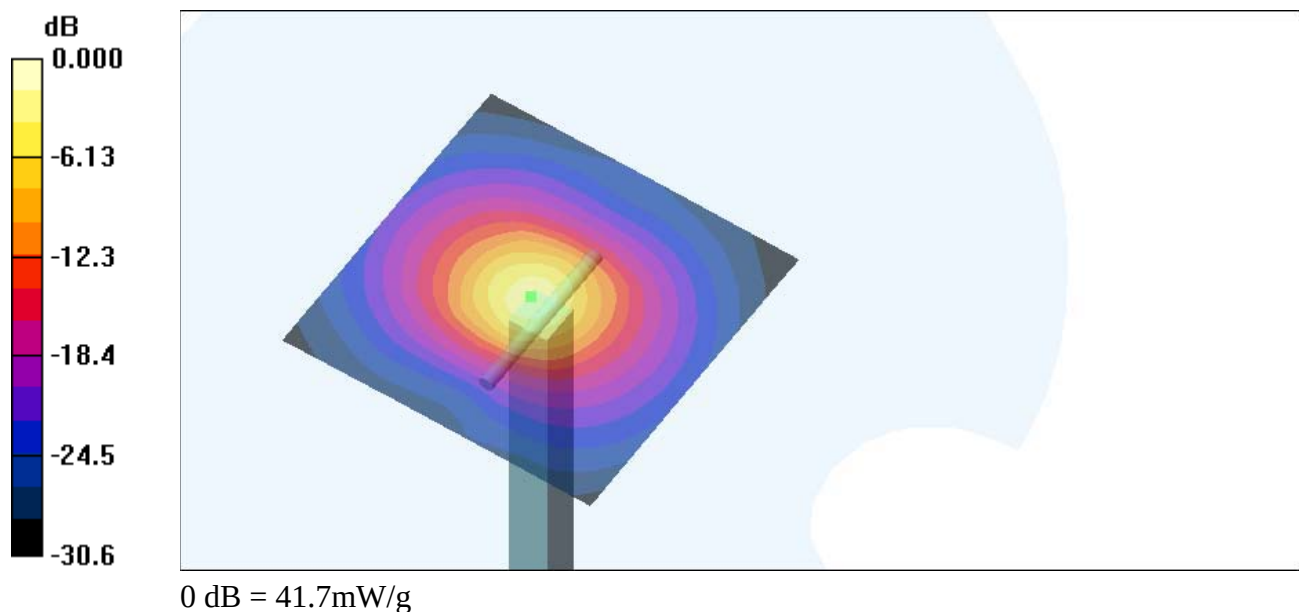
Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 67.2 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 101.4 W/kg

SAR(1 g) = 22.3 mW/g; SAR(10 g) = 6.81 mW/g

Maximum value of SAR (measured) = 41.7 mW/g



5500MHz Head

Date/Time: 8/21/2006 2:45:05 PM

DUT: Dipole ; Type: 5000 MHz; Serial: SN:001

Communication System: CW; ; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5500 MHz Head Medium parameters used: $f = 5500$ MHz; $\sigma = 5.08$ mho/m; $\epsilon_r = 36.5$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.7, 4.7, 4.7); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 22.0 mW/g

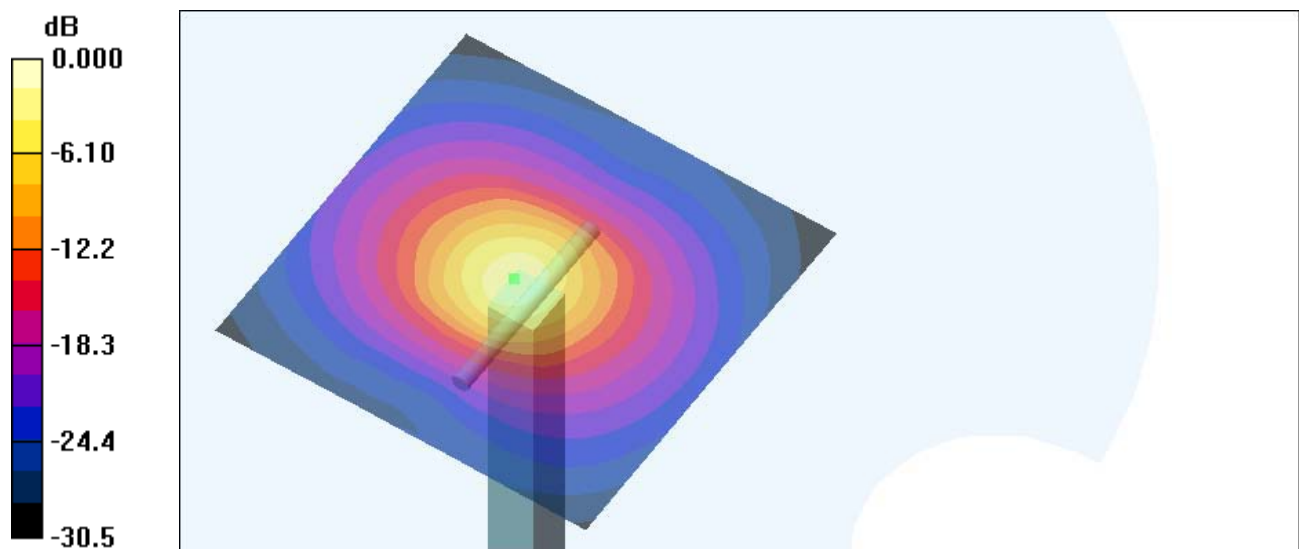
Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 65.4 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 83.5 W/kg

SAR(1 g) = 20.9 mW/g; SAR(10 g) = 6.41 mW/g

Maximum value of SAR (measured) = 39.6 mW/g



0 dB = 39.6mW/g

5800MHz Head

Date/Time: 8/21/2006 4:22:21 PM

DUT: Dipole ; Type: 5000 MHz; Serial: SN:001

Communication System: CW; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Head Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 5.31 \text{ mho/m}$; $\epsilon_r = 36.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.47, 4.47, 4.47); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 18.5 mW/g

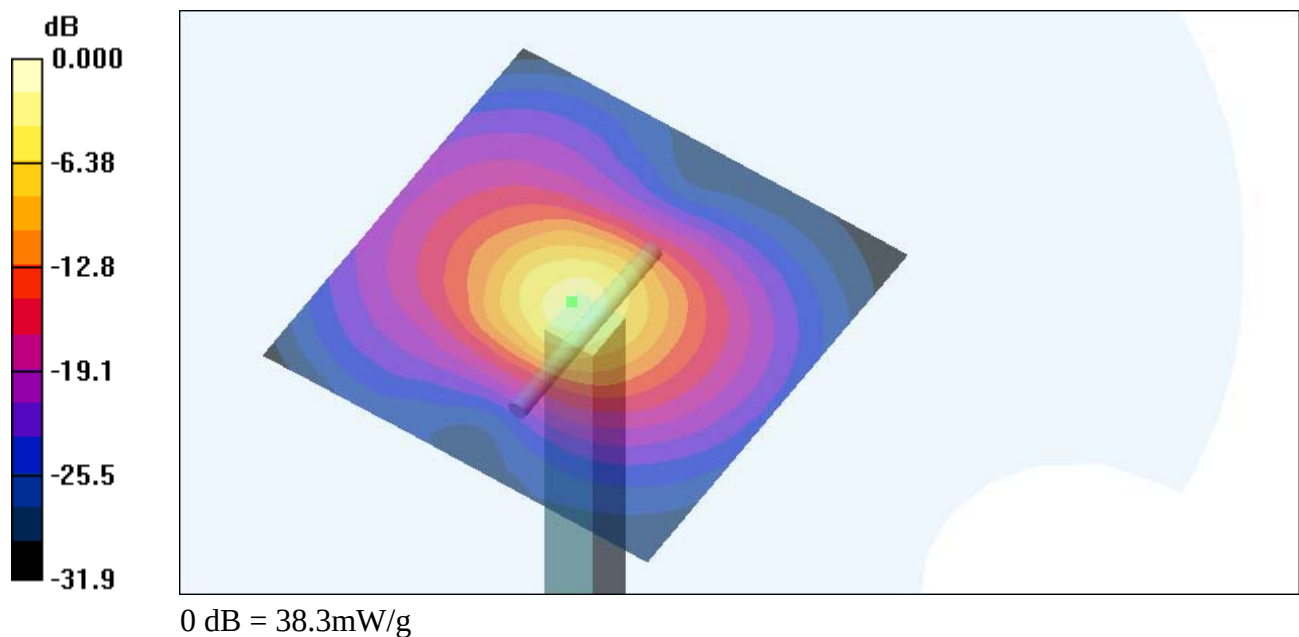
Zoom Scan (9x9x9)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 58.2 V/m ; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 103.7 W/kg

SAR(1 g) = 20.5 mW/g ; SAR(10 g) = 6.35 mW/g

Maximum value of SAR (measured) = 38.3 mW/g



5200MHz Body

Date/Time: 8/21/2006 5:57:49 PM

DUT: Dipole ; Type: 5000 MHz; Serial: SN:001

Communication System: CW; ; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: 5200 MHz Body Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.37 \text{ mho/m}$; $\epsilon_r = 48.2$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.68, 4.68, 4.68); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 16.8 mW/g

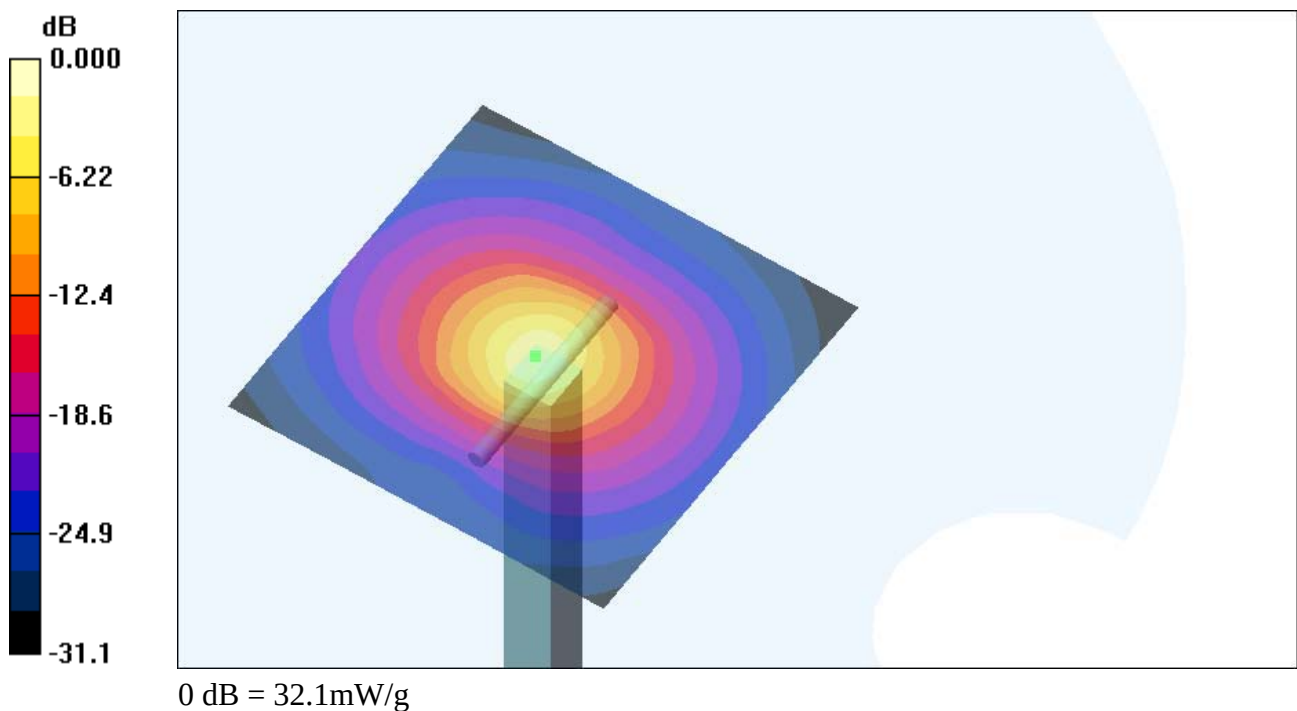
Zoom Scan (9x9x9)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

Reference Value = 54.9 V/m ; Power Drift = 0.096 dB

Peak SAR (extrapolated) = 77.0 W/kg

SAR(1 g) = 17 mW/g ; SAR(10 g) = 5.13 mW/g

Maximum value of SAR (measured) = 32.1 mW/g



5500MHz Body

Date/Time: 8/22/2006 1:17:09 PM

DUT: Dipole ; Type: 5000 MHz; Serial: SN:001

Communication System: CW; ; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5500 MHz Body Medium parameters used: $f = 5500$ MHz; $\sigma = 5.8$ mho/m; $\epsilon_r = 47.8$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.3, 4.3, 4.3); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 17.3 mW/g

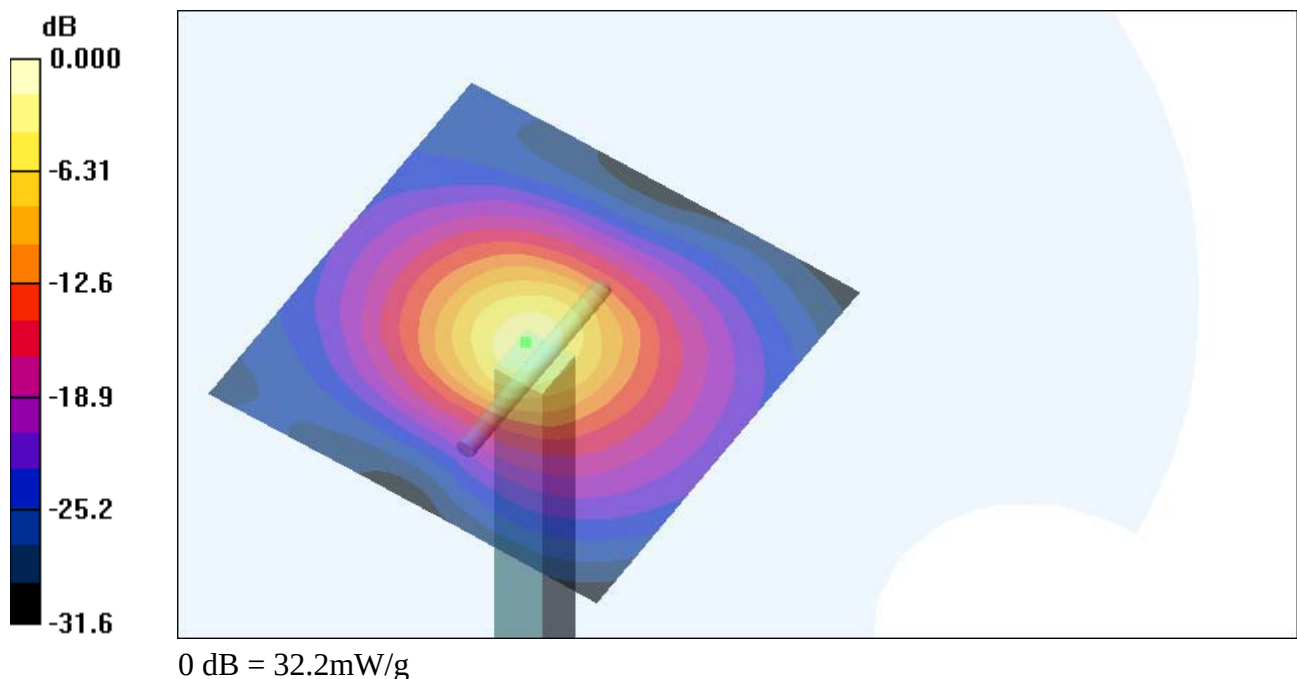
Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 55.3 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 67.3 W/kg

SAR(1 g) = 16.8 mW/g; SAR(10 g) = 5.24 mW/g

Maximum value of SAR (measured) = 32.2 mW/g



5800MHz Body

Date/Time: 8/22/2006 2:23:39 PM

DUT: Dipole ; Type: 5000 MHz; Serial: SN:001

Communication System: CW; ; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: 5800 MHz Body Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.15 \text{ mho/m}$; $\epsilon_r = 47.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Probe: EX3DV3 - SN3511; ConvF(4.1, 4.1, 4.1); Calibrated: 1/23/2006

Sensor-Surface: 4mm (Mechanical Surface Detection) Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE3 Sn584; Calibrated: 9/22/2005

Phantom: SAM with CRP; Type: SAM; Serial: TP 1310

Measurement SW: DASY4, V4.7 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 171

Area Scan (81x81x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (interpolated) = 16.8 mW/g

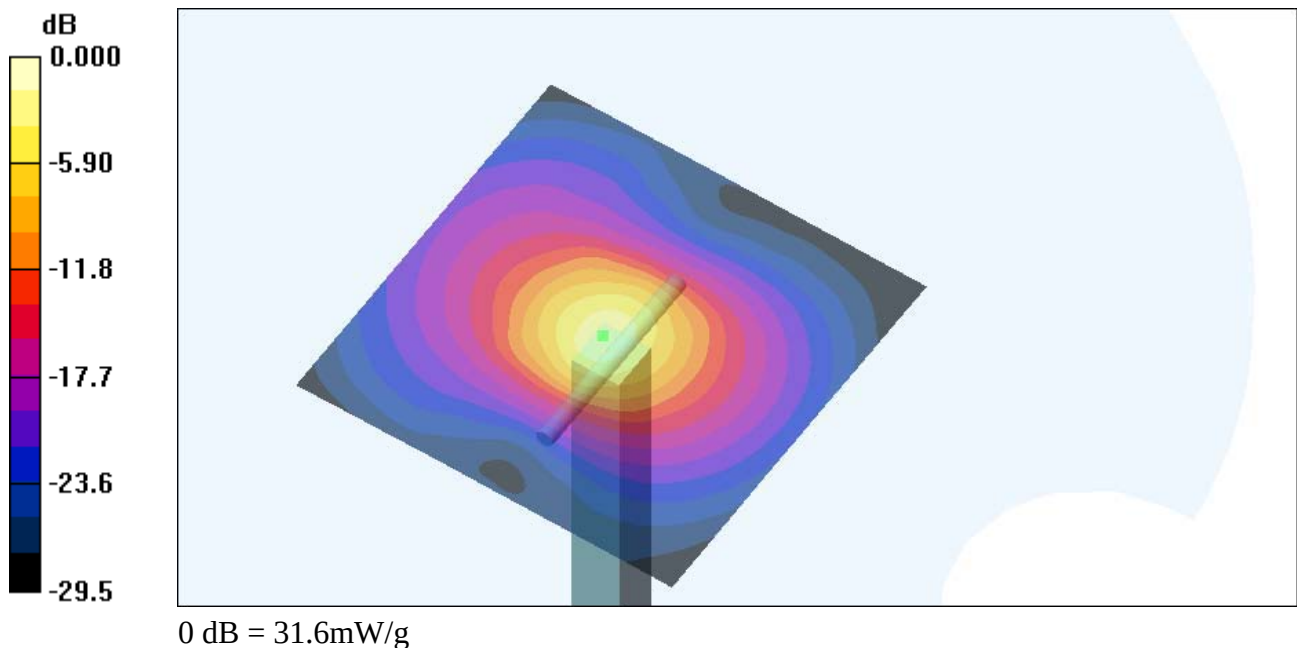
Zoom Scan (9x9x9)/Cube 0: Measurement grid: $dx=4.3\text{mm}$, $dy=4.3\text{mm}$, $dz=3\text{mm}$

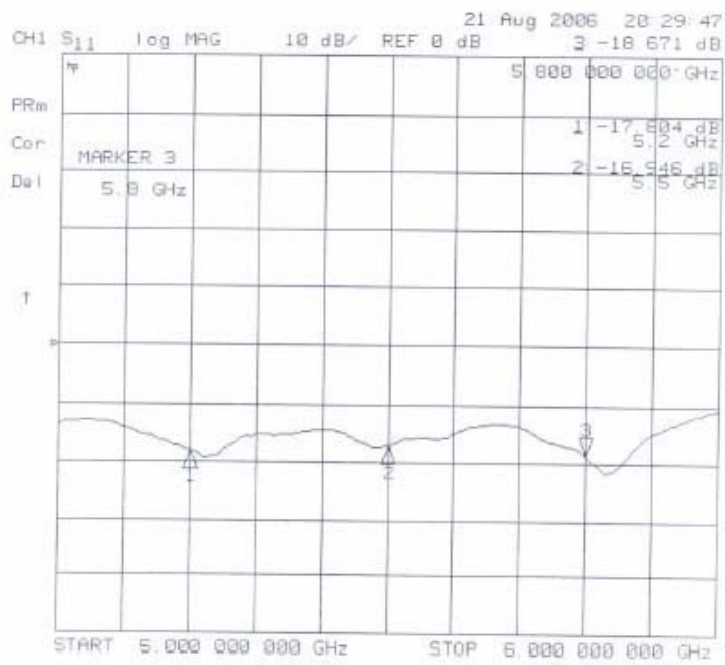
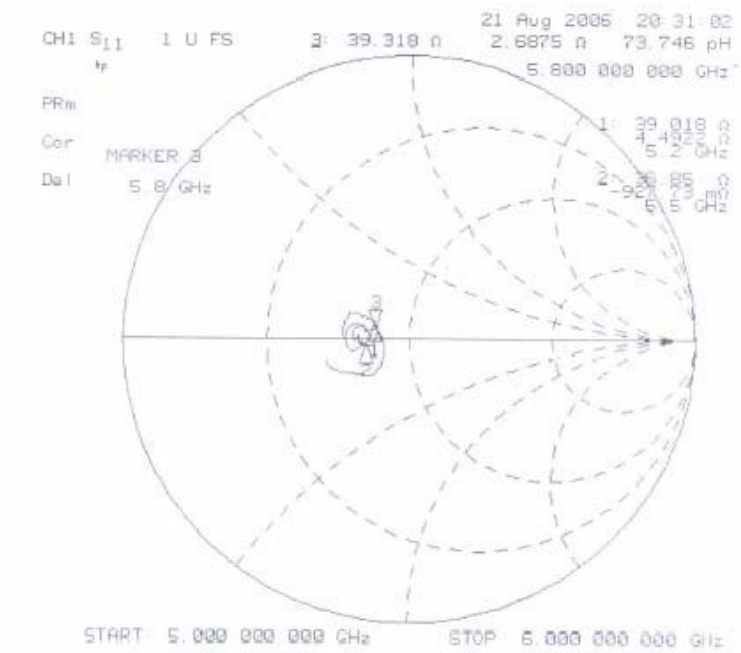
Reference Value = 53.4 V/m ; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 70.2 W/kg

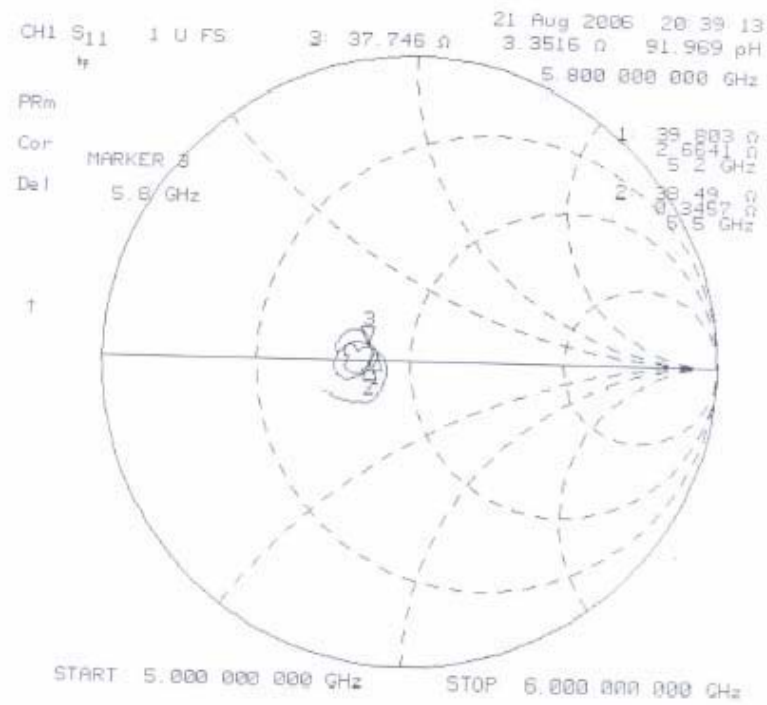
SAR(1 g) = 16.2 mW/g ; SAR(10 g) = 4.99 mW/g

Maximum value of SAR (measured) = 31.6 mW/g





5000MHz Dipole with HSL Fluid



5000MHz Dipole with MSL Fluid

2450MHz Head

September 27, 2006 08:14 AM

Frequency	e'	e''
2.400000000 GHz	39.0605	13.4191
2.402000000 GHz	39.0629	13.4285
2.404000000 GHz	39.0715	13.4384
2.406000000 GHz	39.0677	13.4471
2.408000000 GHz	39.0674	13.4529
2.410000000 GHz	39.0522	13.4511
2.412000000 GHz	39.0338	13.4348
2.414000000 GHz	39.0000	13.4171
2.416000000 GHz	39.0001	13.4198
2.418000000 GHz	38.9951	13.4267
2.420000000 GHz	38.9582	13.4258
2.422000000 GHz	38.9494	13.4245
2.424000000 GHz	38.9335	13.4319
2.426000000 GHz	38.9511	13.4316
2.428000000 GHz	38.9499	13.4327
2.430000000 GHz	38.9490	13.4476
2.432000000 GHz	38.9388	13.4617
2.434000000 GHz	38.9137	13.4542
2.436000000 GHz	38.9165	13.4632
2.438000000 GHz	38.8986	13.4611
2.440000000 GHz	38.9021	13.4640
2.442000000 GHz	38.9150	13.4646
2.444000000 GHz	38.9039	13.4909
2.446000000 GHz	38.9057	13.4782
2.448000000 GHz	38.8958	13.4921
2.450000000 GHz	38.8879	13.4846
2.452000000 GHz	38.8859	13.4807
2.454000000 GHz	38.8758	13.4977
2.456000000 GHz	38.8763	13.5002
2.458000000 GHz	38.8682	13.5128
2.460000000 GHz	38.8591	13.5205
2.462000000 GHz	38.8491	13.5205
2.464000000 GHz	38.8539	13.5279
2.466000000 GHz	38.8401	13.5368
2.468000000 GHz	38.8441	13.5534
2.470000000 GHz	38.8318	13.5639
2.472000000 GHz	38.8189	13.5635
2.474000000 GHz	38.8226	13.5662
2.476000000 GHz	38.8115	13.5644
2.478000000 GHz	38.7993	13.5749
2.480000000 GHz	38.8048	13.5930
2.482000000 GHz	38.8137	13.6083
2.484000000 GHz	38.7967	13.6398
2.486000000 GHz	38.7806	13.6253
2.488000000 GHz	38.7787	13.6243

2450MHz Body

September 27, 2006 10:02 AM

Frequency	e'	e''
2.400000000 GHz	54.4041	14.7667
2.402000000 GHz	54.3991	14.8025
2.404000000 GHz	54.3894	14.8047
2.406000000 GHz	54.3846	14.8165
2.408000000 GHz	54.3242	14.8225
2.410000000 GHz	54.2989	14.8217
2.412000000 GHz	54.2942	14.8094
2.414000000 GHz	54.2949	14.8460
2.416000000 GHz	54.2764	14.8683
2.418000000 GHz	54.3097	14.8693
2.420000000 GHz	54.2971	14.8959
2.422000000 GHz	54.2792	14.9095
2.424000000 GHz	54.2685	14.8894
2.426000000 GHz	54.2374	14.9049
2.428000000 GHz	54.2259	14.9021
2.430000000 GHz	54.2680	14.9033
2.432000000 GHz	54.2620	14.9374
2.434000000 GHz	54.2539	14.9460
2.436000000 GHz	54.2248	14.9390
2.438000000 GHz	54.1931	14.9715
2.440000000 GHz	54.2146	14.9483
2.442000000 GHz	54.2118	14.9903
2.444000000 GHz	54.2183	15.0035
2.446000000 GHz	54.2192	15.0243
2.448000000 GHz	54.2107	15.0500
2.450000000 GHz	54.1808	15.0362
2.452000000 GHz	54.1609	15.0533
2.454000000 GHz	54.1592	15.0778
2.456000000 GHz	54.1517	15.0982
2.458000000 GHz	54.1351	15.1028
2.460000000 GHz	54.1579	15.1303
2.462000000 GHz	54.1151	15.1305
2.464000000 GHz	54.1190	15.1233
2.466000000 GHz	54.1108	15.1369
2.468000000 GHz	54.0953	15.1686
2.470000000 GHz	54.1076	15.1823
2.472000000 GHz	54.1286	15.1963
2.474000000 GHz	54.1340	15.2196
2.476000000 GHz	54.1181	15.2155
2.478000000 GHz	54.1044	15.2247
2.480000000 GHz	54.0848	15.2177
2.482000000 GHz	54.0855	15.2314
2.484000000 GHz	54.0779	15.2566
2.486000000 GHz	54.0832	15.2559
2.488000000 GHz	54.0628	15.2747

5-6GHz Head

September 2, 2006 08:05 AM

Frequency	e'	e''
5.000000000 GHz	37.7330	15.4121
5.020000000 GHz	37.7012	15.4408
5.040000000 GHz	37.6972	15.4584
5.060000000 GHz	37.7211	15.4589
5.080000000 GHz	37.6364	15.4801
5.100000000 GHz	37.4950	15.4980
5.120000000 GHz	37.4054	15.5360
5.140000000 GHz	37.3809	15.5466
5.160000000 GHz	37.4048	15.5667
5.180000000 GHz	37.3761	15.5970
5.200000000 GHz	37.2895	15.6040
5.220000000 GHz	37.2327	15.6733
5.240000000 GHz	37.1862	15.7134
5.260000000 GHz	37.2150	15.7601
5.280000000 GHz	37.2262	15.7739
5.300000000 GHz	37.1913	15.7716
5.320000000 GHz	37.1569	15.8236
5.340000000 GHz	37.0837	15.8881
5.360000000 GHz	37.1094	15.9453
5.380000000 GHz	37.1851	15.9985
5.400000000 GHz	37.2324	15.9820
5.420000000 GHz	37.1971	15.9988
5.440000000 GHz	37.1011	16.0186
5.460000000 GHz	37.0793	16.0683
5.480000000 GHz	37.1209	16.1734
5.500000000 GHz	37.2272	16.2073
5.520000000 GHz	37.3091	16.1986
5.540000000 GHz	37.2890	16.1687
5.560000000 GHz	37.2208	16.1803
5.580000000 GHz	37.1757	16.2065
5.600000000 GHz	37.2238	16.2566
5.620000000 GHz	37.3240	16.2795
5.640000000 GHz	37.3990	16.2584
5.660000000 GHz	37.3548	16.1781
5.680000000 GHz	37.2519	16.1188
5.700000000 GHz	37.1243	16.0768
5.720000000 GHz	37.1055	16.1000
5.740000000 GHz	37.1831	16.1118
5.760000000 GHz	37.2573	16.1310
5.780000000 GHz	37.1989	16.1000
5.800000000 GHz	37.0340	16.0126
5.820000000 GHz	36.8948	15.9526
5.840000000 GHz	36.8499	15.9035
5.860000000 GHz	36.8601	15.9464
5.880000000 GHz	36.8772	15.9498

5-6GHz Body

September 22, 2006 07:25 AM

Frequency	e'	e''
5.000000000 GHz	50.1642	18.2094
5.020000000 GHz	50.1202	18.3123
5.040000000 GHz	50.0010	18.3053
5.060000000 GHz	49.9039	18.3509
5.080000000 GHz	49.8751	18.4545
5.100000000 GHz	49.8627	18.5620
5.120000000 GHz	49.9039	18.5153
5.140000000 GHz	49.8702	18.4994
5.160000000 GHz	49.7623	18.5958
5.180000000 GHz	49.6304	18.7668
5.200000000 GHz	49.5544	18.7369
5.220000000 GHz	49.5030	18.8339
5.240000000 GHz	49.5278	18.9788
5.260000000 GHz	49.4427	18.9259
5.280000000 GHz	49.3228	18.9280
5.300000000 GHz	49.2068	18.9573
5.320000000 GHz	49.1432	18.9461
5.340000000 GHz	49.0990	18.9891
5.360000000 GHz	48.9990	18.9269
5.380000000 GHz	48.9773	18.8947
5.400000000 GHz	48.8656	18.9588
5.420000000 GHz	48.7637	18.9631
5.440000000 GHz	48.6931	19.0102
5.460000000 GHz	48.6719	19.0827
5.480000000 GHz	48.6689	19.0365
5.500000000 GHz	48.6832	19.0603
5.520000000 GHz	48.6700	19.1025
5.540000000 GHz	48.5948	19.1291
5.560000000 GHz	48.5489	19.1088
5.580000000 GHz	48.4577	19.0868
5.600000000 GHz	48.4682	19.1734
5.620000000 GHz	48.4697	19.1196
5.640000000 GHz	48.5002	19.0781
5.660000000 GHz	48.3100	18.9416
5.680000000 GHz	48.3246	18.8969
5.700000000 GHz	48.3844	18.8821
5.720000000 GHz	48.2832	19.0450
5.740000000 GHz	48.2288	19.0866
5.760000000 GHz	48.1080	19.1279
5.780000000 GHz	48.1095	19.1789
5.800000000 GHz	48.0977	19.2430
5.820000000 GHz	48.0285	19.2995
5.840000000 GHz	47.9581	19.2988
5.860000000 GHz	47.7866	19.2394
5.880000000 GHz	47.9775	19.3239

Certificate of conformity / First Article Inspection

Item	SAM Twin Phantom V4.0
Type No	QD 000 P40 C
Series No	TP-1150 and higher
Manufacturer / Origin	Untersee Composites Hauptstr. 69 CH-8559 Fruthwilen Switzerland

Tests

The series production process used allows the limitation to test of first articles.

Complete tests were made on the pre-series Type No. QD 000 P40 AA, Serial No. TP-1001 and on the series first article Type No. QD 000 P40 BA, Serial No. TP-1006. Certain parameters have been retested using further series units (called samples).

Test	Requirement	Details	Units tested
Shape	Compliance with the geometry according to the CAD model.	IT'IS CAD File (*)	First article, Samples
Material thickness	Compliant with the requirements according to the standards	2mm +/- 0.2mm in specific areas; 6mm +/- 0.2mm at ERP	First article, Samples
Material parameters	Dielectric parameters for required frequencies	200 MHz – 3 GHz Relative permittivity < 5 Loss tangent < 0.05.	Material sample TP 104-5
Material resistivity	The material has been tested to be compatible with the liquids defined in the standards if handled and cleaned according to the instructions	DEGMBE based simulating liquids	Pre-series, First article, Samples

Standards

[1] CENELEC EN 50361

[2] IEEE Std 1528-200x Draft CD 1.1 (Dec 02)

[3] IEC 62209/CD (Nov 02)

(*) The IT'IS CAD file is derived from [2] and is also within the tolerance requirements of the shapes of [1] and [3].

Conformity

Based on the sample tests above, we certify that this item is in compliance with the uncertainty requirements of SAR measurements specified in standard [1] and draft standards [2] and [3].

Date

7.8.2003

Signature / Stamp

s p e a g

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