Appendix 1

SAR distribution comparison for the system accuracy verification

Date/Time: 2/25/2011 8:35:12 AM

Test Laboratory: Motorola - Feb-25-2011 835 MHz

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 425TR; FCC ID: IHPD56LS2
Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 425TR; Input Power = 200 mW
Sim.Temp@meas = 20.2□C; Sim.Temp@SPC = 20.3□C; Room Temp @ SPC = 20.2□C
Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 41.6; ρ = 1000 kg/m^3

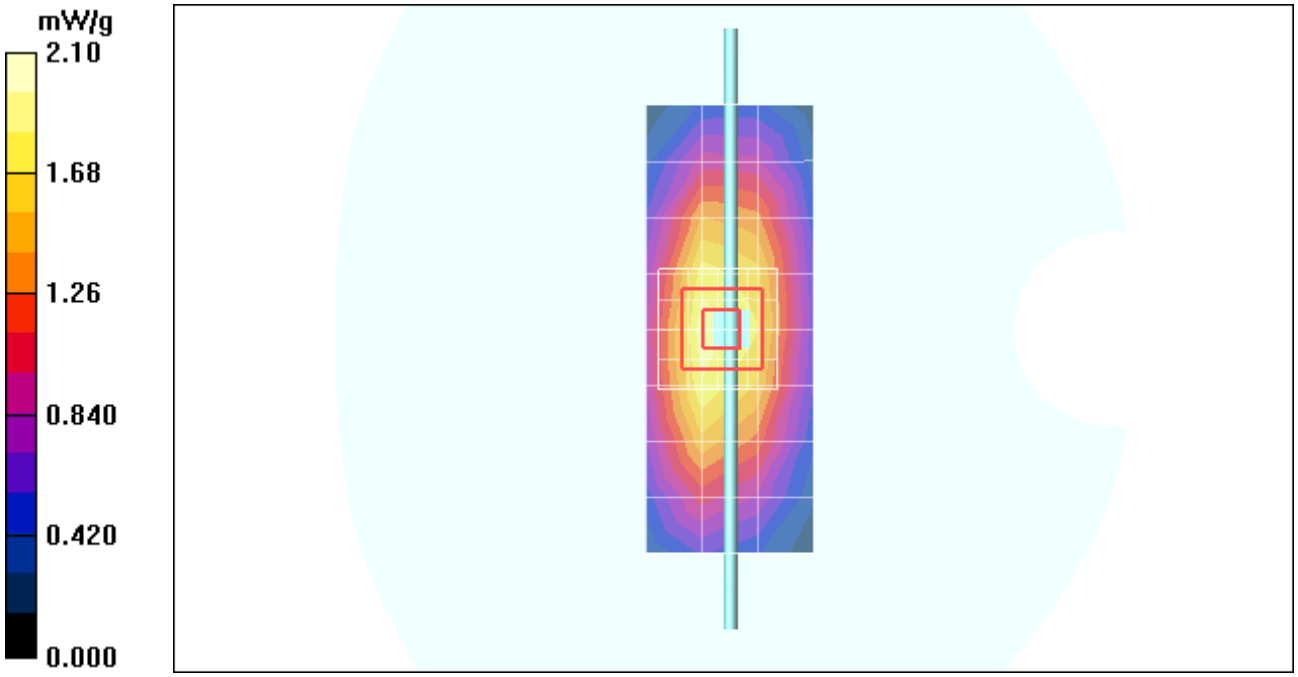
DASY4 Configuration:

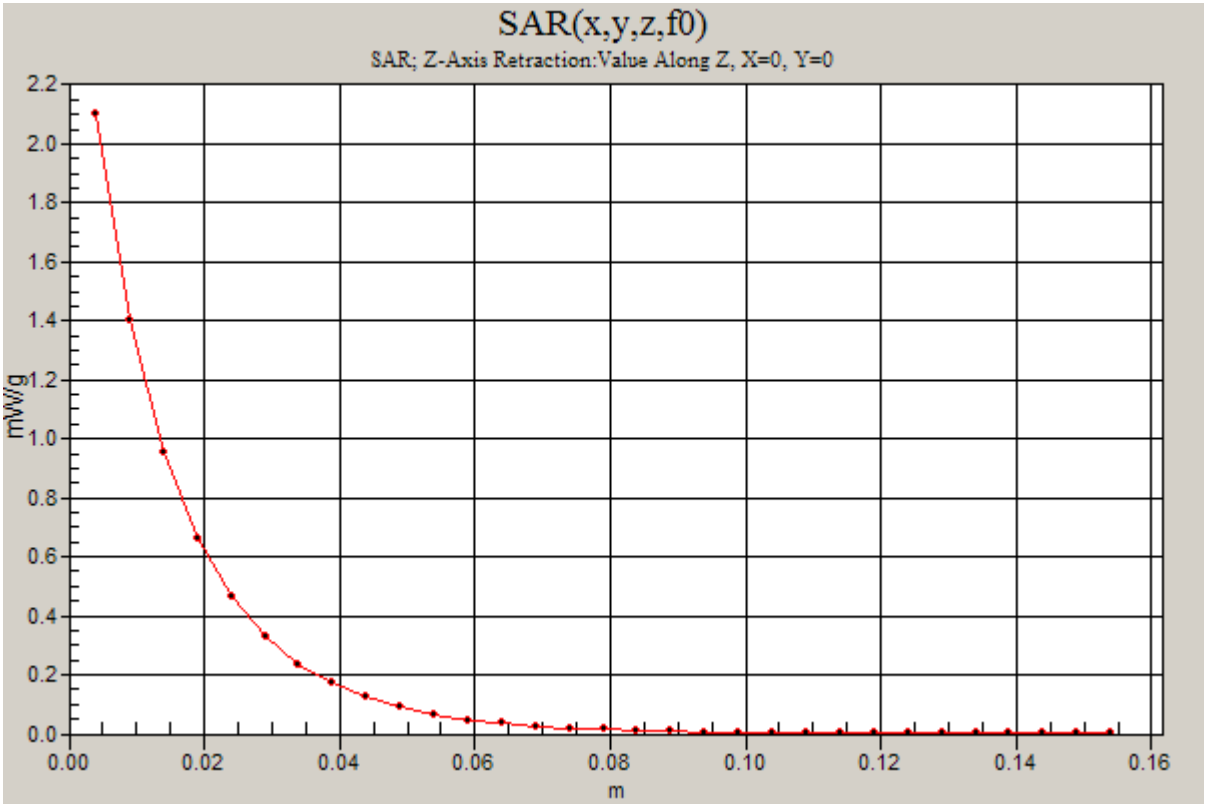
- Probe: ES3DV3 - SN3124; ConvF(5.89, 5.89, 5.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 1.92 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.4 V/m; Power Drift = -0.028 dB; Peak SAR (extrapolated) = 2.91 W/kg
SAR(1 g) = 1.95 mW/g; SAR(10 g) = 1.27 mW/g; Maximum value of SAR (measured) = 2.10 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm


mW/g
2.10
1.68
1.26
0.840
0.420
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 2/27/2011 3:47:15 AM

Test Laboratory: Motorola - Feb-27-2011 835 MHz

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 425TR; FCC ID: IHDP56LS2
Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 425TR; Input Power = 200 mW
Sim.Temp@meas = 20.5□C; Sim.Temp@SPC = 20.5□C; Room Temp @ SPC = 20.3□C
Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 40.7; ρ = 1000 kg/m^3

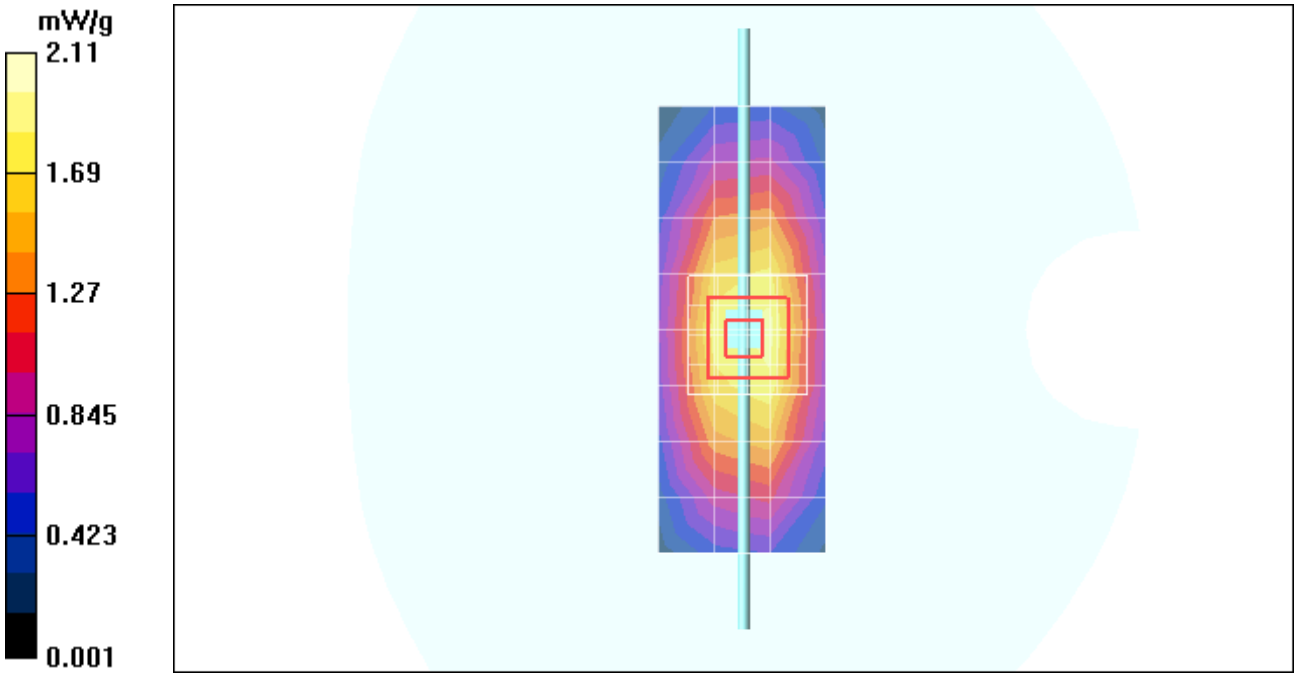
DASY4 Configuration:

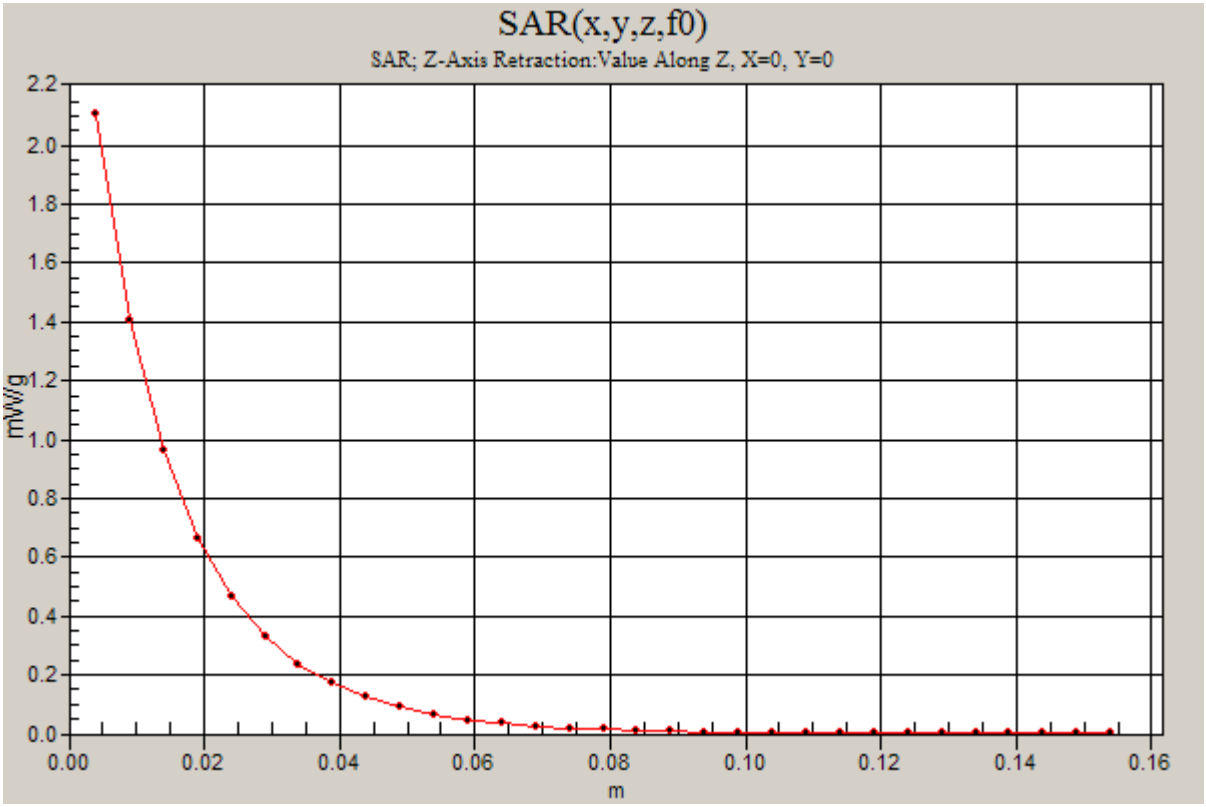
- Probe: ES3DV3 - SN3124; ConvF(5.89, 5.89, 5.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 1.90 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 49.1 V/m; Power Drift = -0.091 dB; Peak SAR (extrapolated) = 2.95 W/kg
SAR(1 g) = 1.97 mW/g; SAR(10 g) = 1.28 mW/g; Maximum value of SAR (measured) = 2.13 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 2.11 mW/g


mW/g
2.11
1.69
1.27
0.845
0.423
0.001


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 2/28/2011 8:04:34 AM

Test Laboratory: Motorola - Feb-28-2011 835 MHz

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 425TR; FCC ID: IHDP56LS2
Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 425TR; Input Power = 200 mW
Sim.Temp@meas = 21.3□C; Sim.Temp@SPC = 21.3□C; Room Temp @ SPC = 20.5□C
Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 835 MHz; σ = 0.92 mho/m; ε_r = 41.5; ρ = 1000 kg/m^3

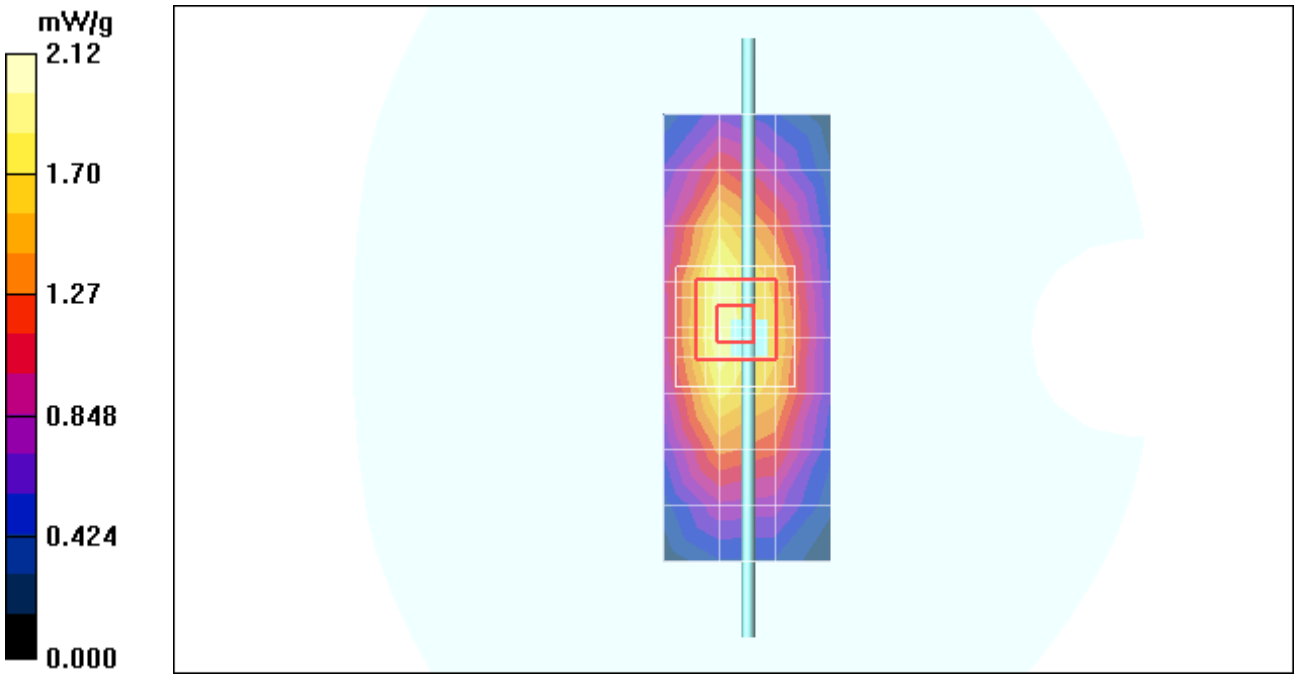
DASY4 Configuration:

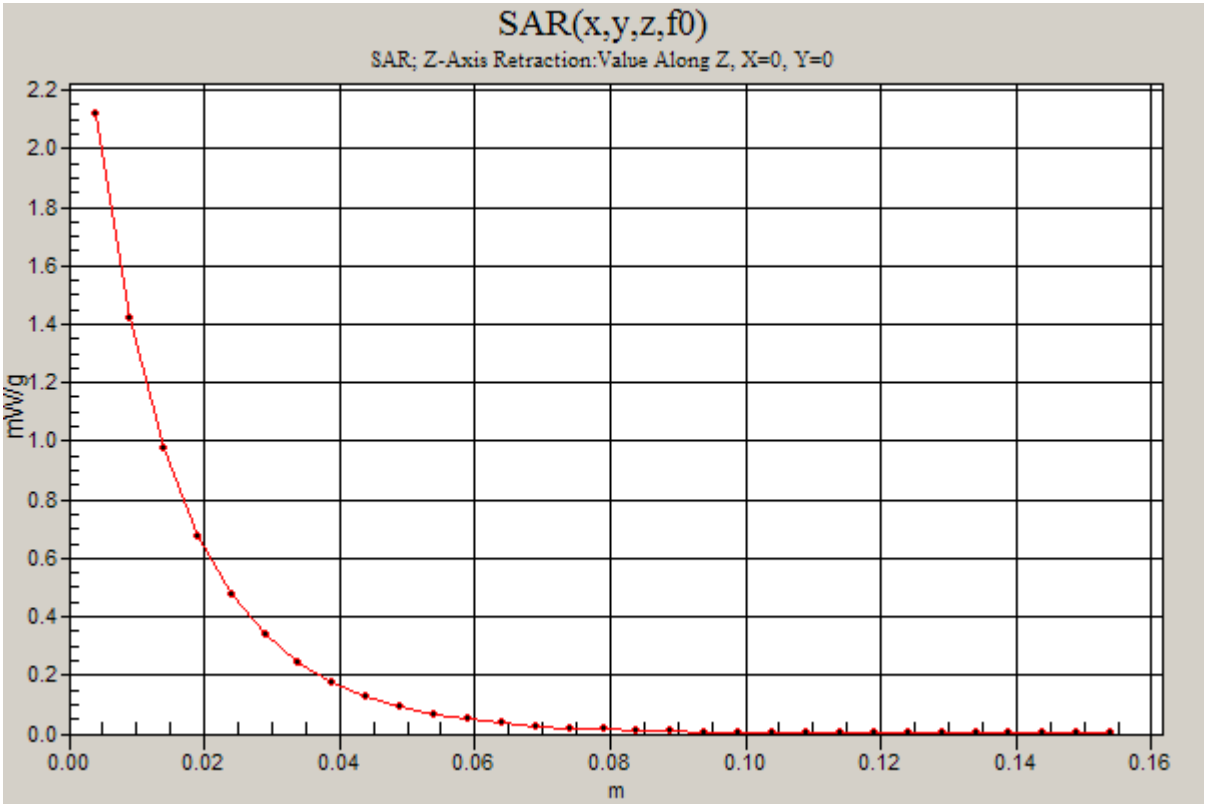
- Probe: ES3DV3 - SN3124; ConvF(5.89, 5.89, 5.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 2.00 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.8 V/m; Power Drift = -0.045 dB; Peak SAR (extrapolated) = 2.93 W/kg
SAR(1 g) = 1.96 mW/g; SAR(10 g) = 1.28 mW/g; Maximum value of SAR (measured) = 2.13 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 2.12 mW/g


mW/g
2.12
1.70
1.27
0.848
0.424
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/1/2011 9:04:03 AM

Test Laboratory: Motorola - Mar-01-2011 835 MHz

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 425TR; FCC ID: IHDP56LS2
Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 425TR; Input Power = 200 mW
Sim.Temp@meas = 20.5□C; Sim.Temp@SPC = 20.5□C; Room Temp @ SPC = 20.6□C
Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 41.1; ρ = 1000 kg/m^3

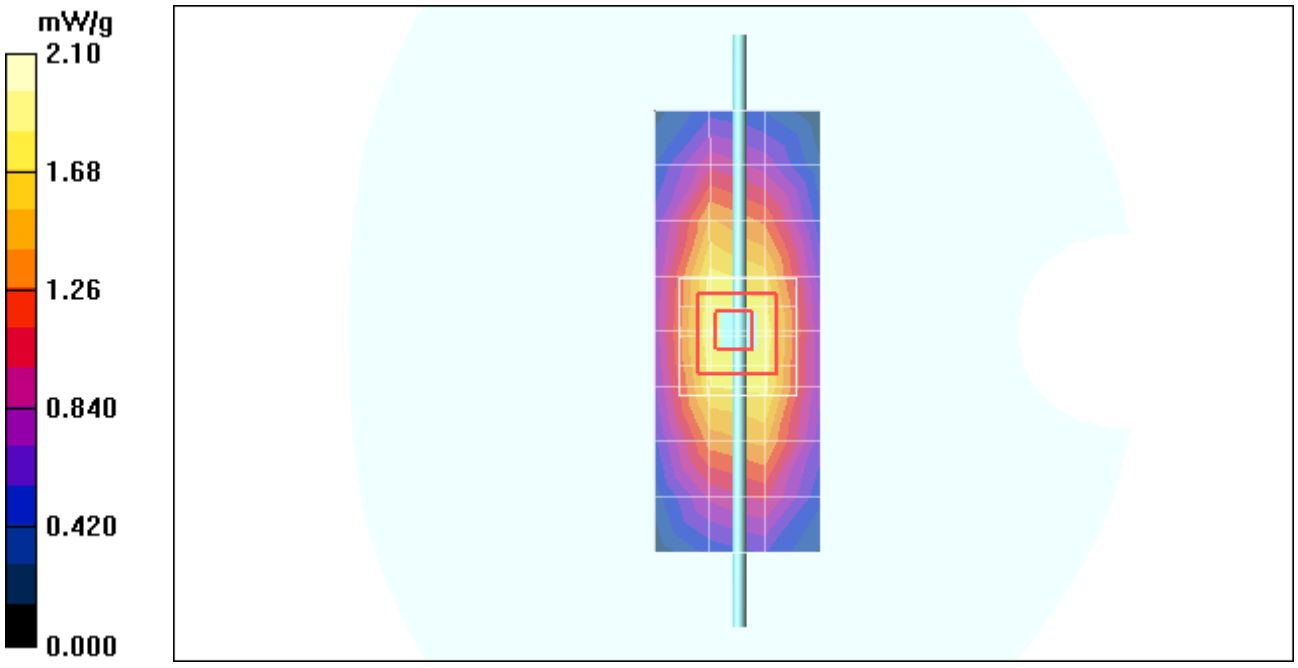
DASY4 Configuration:

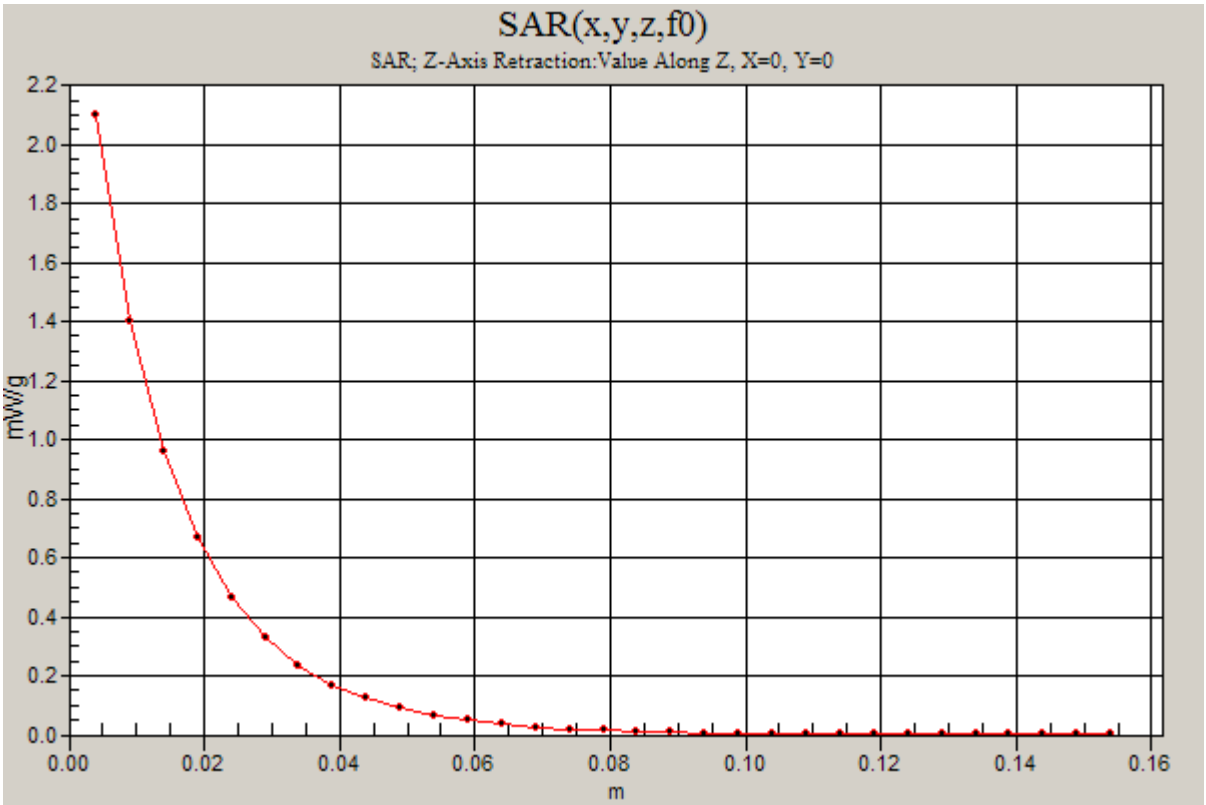
- Probe: ES3DV3 - SN3124; ConvF(5.89, 5.89, 5.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 1.84 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.7 V/m; Power Drift = -0.034 dB; Peak SAR (extrapolated) = 2.87 W/kg
SAR(1 g) = 1.93 mW/g; SAR(10 g) = 1.26 mW/g; Maximum value of SAR (measured) = 2.09 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 2.10 mW/g


mW/g
2.10
1.68
1.26
0.840
0.420
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/4/2011 7:26:24 AM

Test Laboratory: Motorola - Mar-04-2011 835 MHz

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 424TR; FCC ID: IHDP56LS2
Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 424TR; Input Power = 200 mW
Sim.Temp@meas = 19.5*C; Sim.Temp@SPC = 19.5*C; Room Temp @ SPC = 20.5*C
Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 41.5; ρ = 1000 kg/m^3

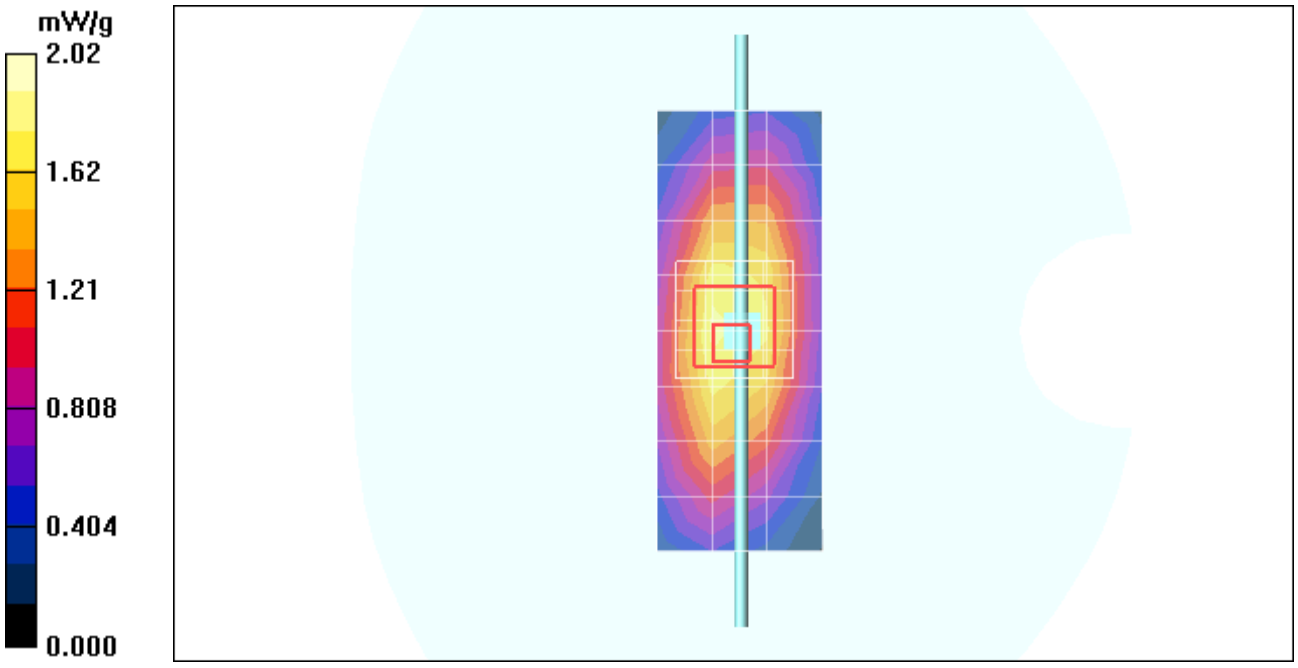
DASY4 Configuration:

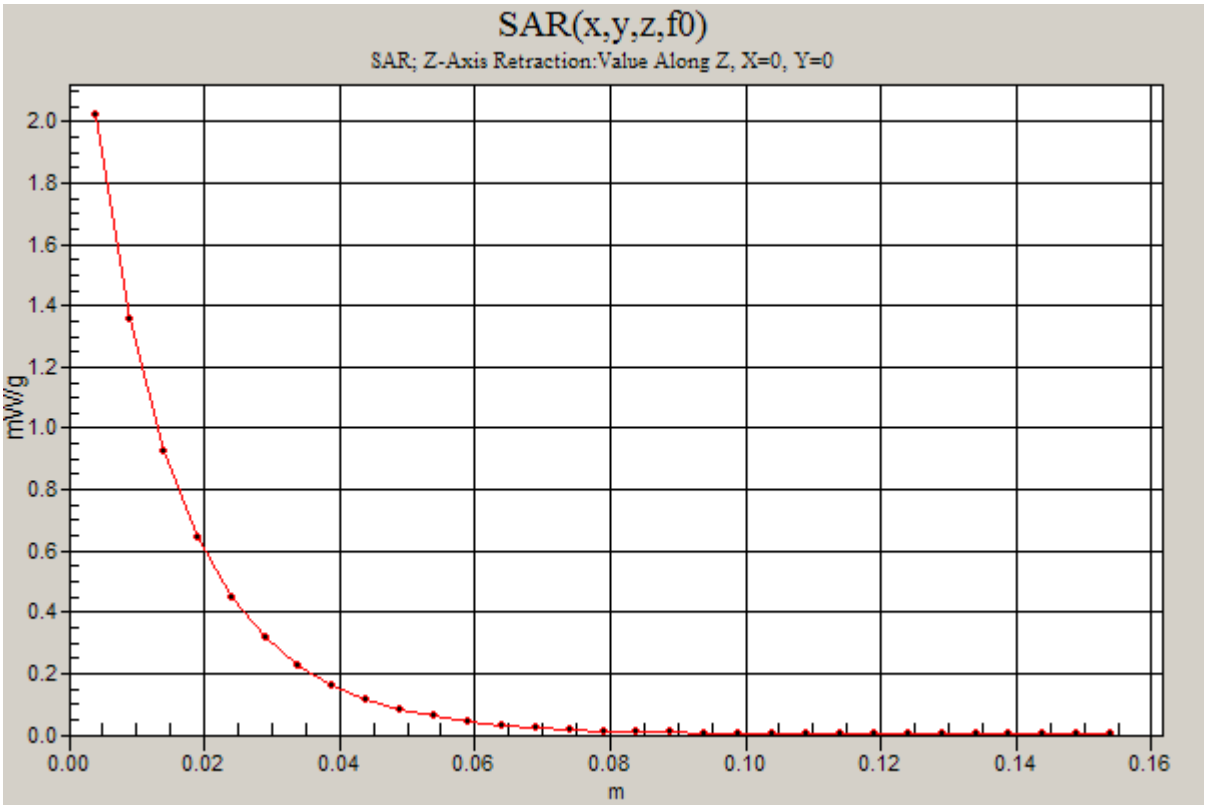
- Probe: ES3DV3 - SN3183; ConvF(6.11, 6.11, 6.11); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1156;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 1.80 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.3 V/m; Power Drift = -0.029 dB; Peak SAR (extrapolated) = 2.89 W/kg
SAR(1 g) = 1.9 mW/g; SAR(10 g) = 1.22 mW/g; Maximum value of SAR (measured) = 2.04 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 2.02 mW/g


mW/g
2.02
1.62
1.21
0.808
0.404
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 3/11/2011 7:11:16 AM

Test Laboratory: Motorola - Mar-11-2011 835 MHz

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 424TR; FCC ID: IHDP56LS2
Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 424TR; Input Power = 200 mW
Sim.Temp@meas = 20.1□C; Sim.Temp@SPC = 20.1□C; Room Temp @ SPC = 20.5□C
Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 835 MHz; σ = 0.9 mho/m; ε_r = 40.6; ρ = 1000 kg/m^3

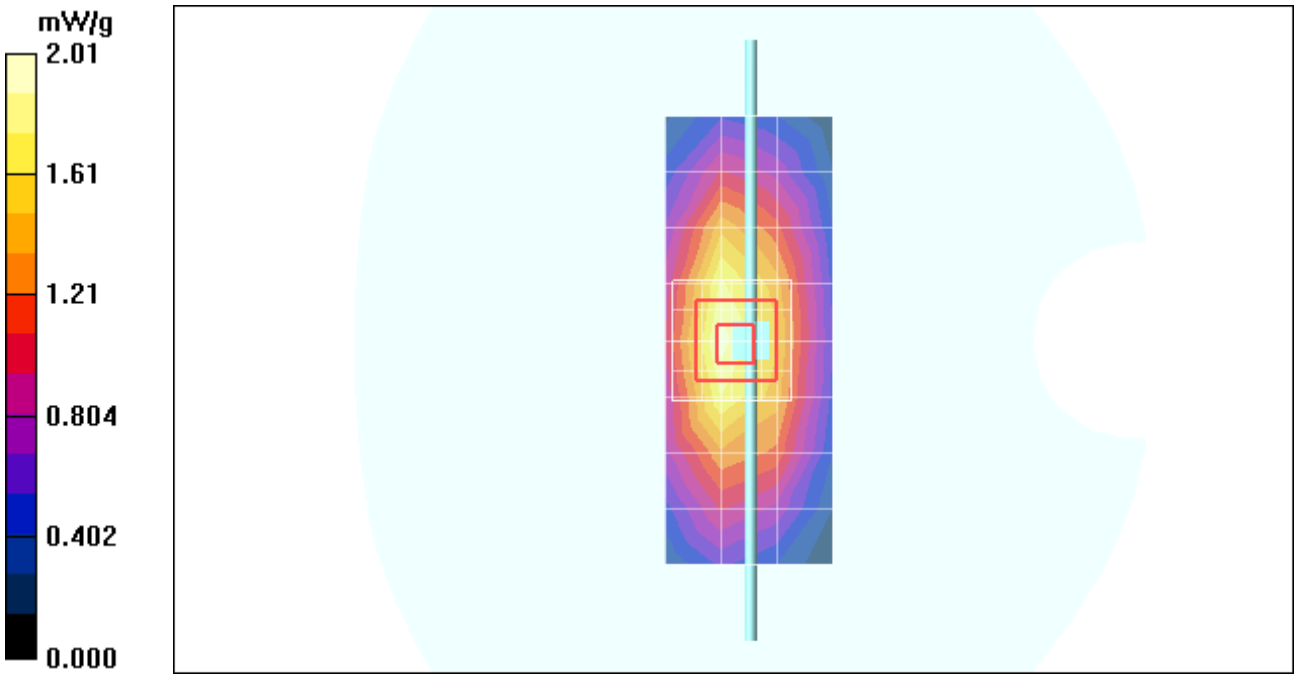
DASY4 Configuration:

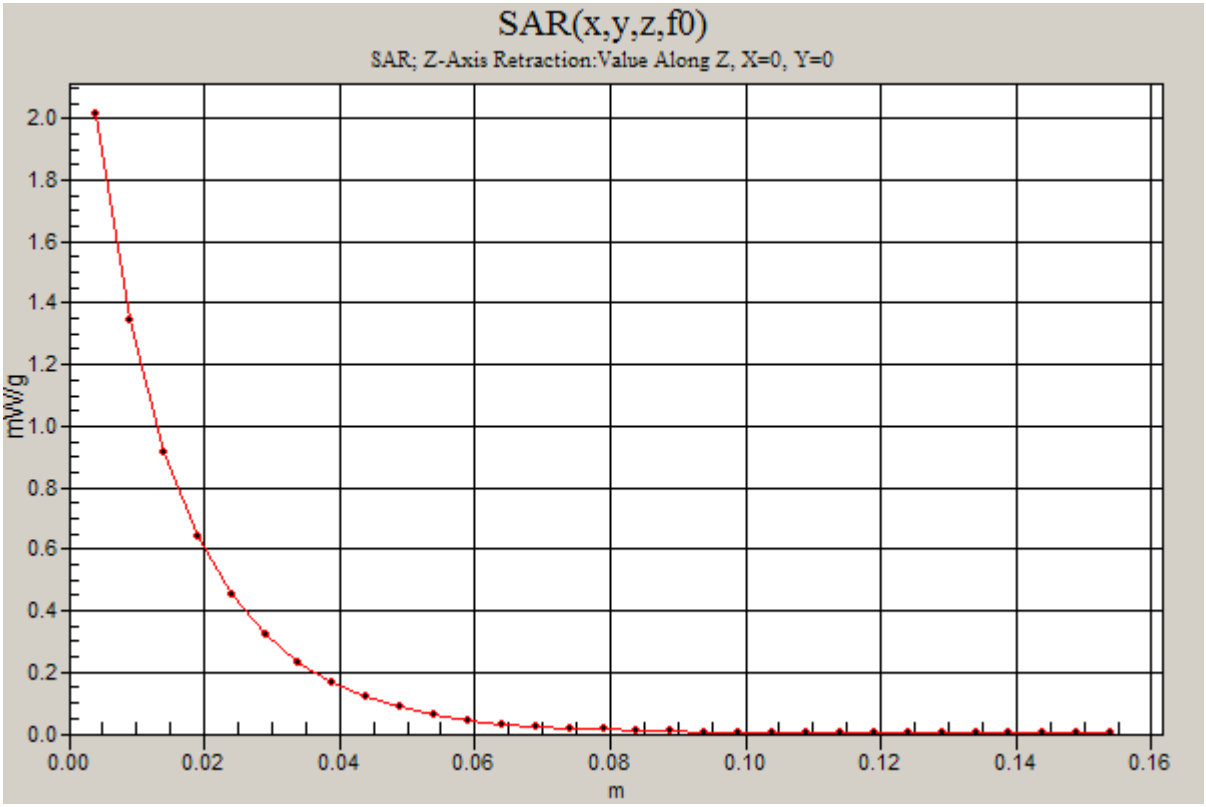
- Probe: ES3DV3 - SN3183; ConvF(6.11, 6.11, 6.11); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1156;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 1.95 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.9 V/m; Power Drift = -0.031 dB; Peak SAR (extrapolated) = 2.83 W/kg
SAR(1 g) = 1.87 mW/g; SAR(10 g) = 1.22 mW/g; Maximum value of SAR (measured) = 2.02 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 2.01 mW/g


mW/g
2.01
1.61
1.21
0.804
0.402
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16
m

Date/Time: 2/25/2011 7:04:40 AM

Test Laboratory: Motorola - Feb-25-2011 1800 MHz

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:279TR; FCC ID: IHDP56LS2
Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 279TR; Input Power = 200 mW
Sim.Temp@meas = 19.0□C; Sim.Temp@SPC = 19.0□C; Room Temp @ SPC = 20.5□C
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 1800 MHz; σ = 1.39 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3

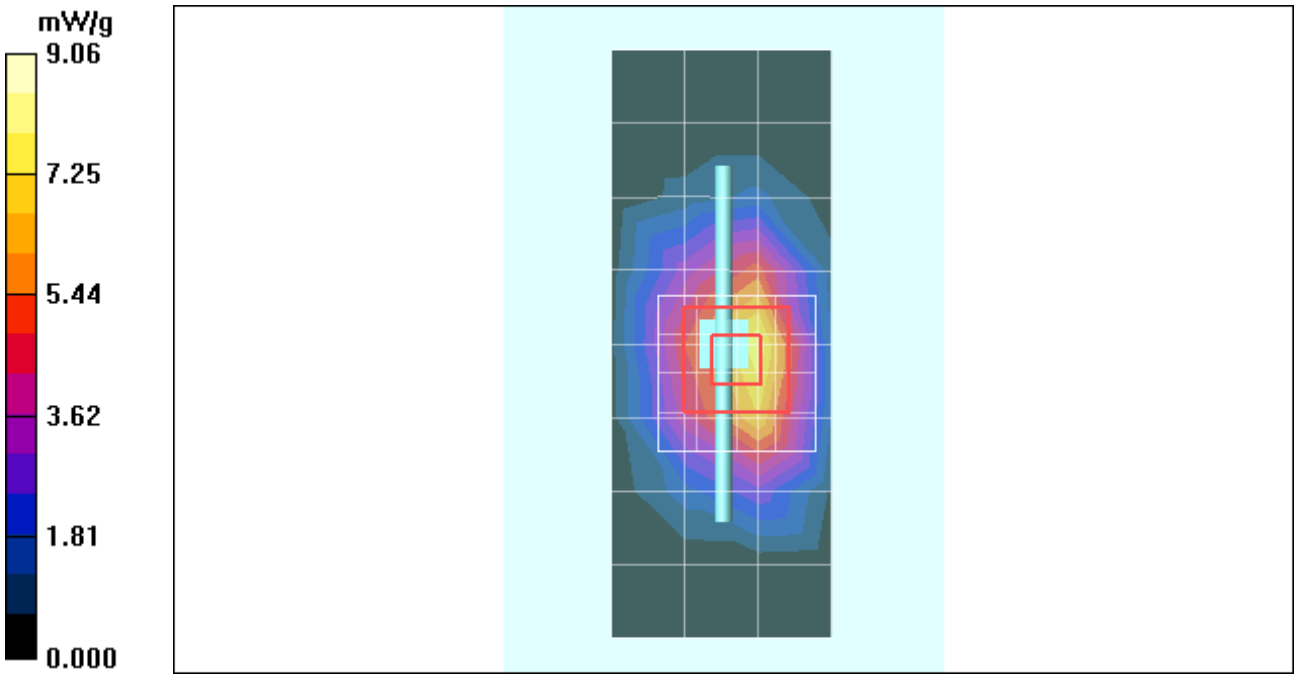
DASY4 Configuration:

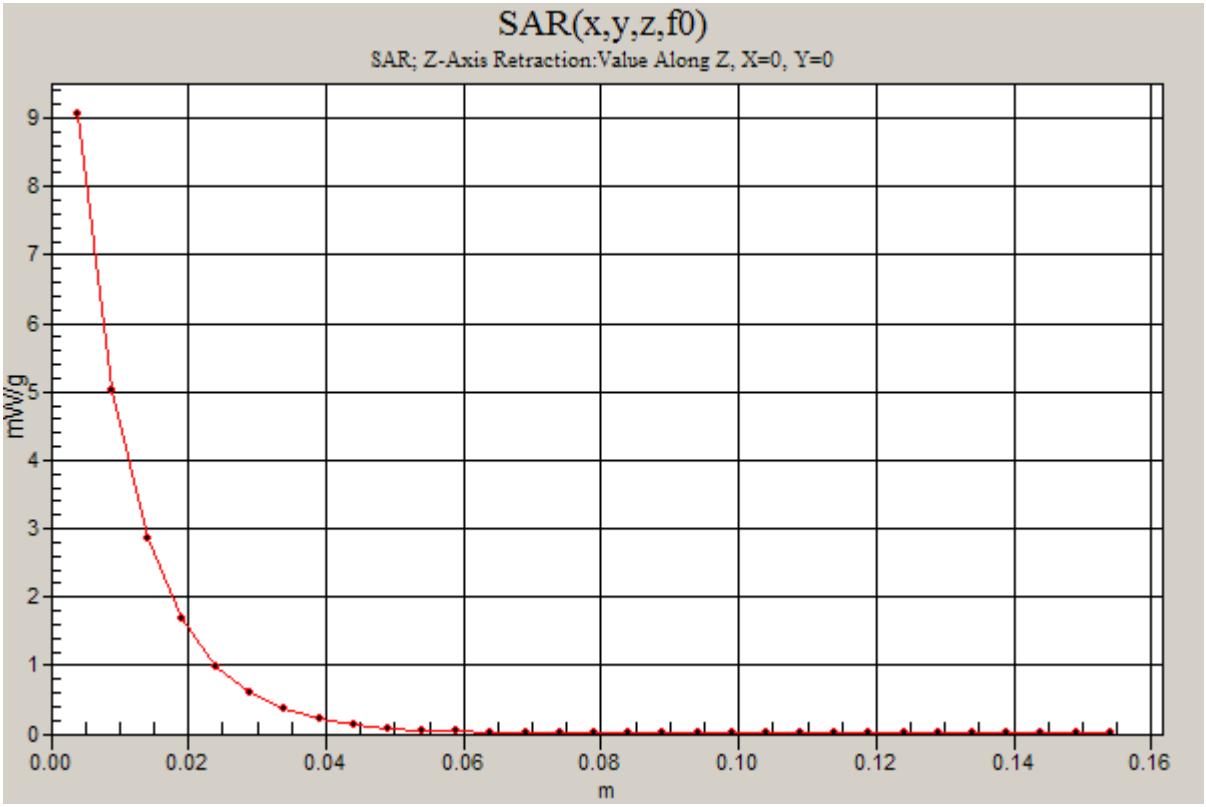
- Probe: ES3DV3 - SN3124; ConvF(4.89, 4.89, 4.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R4 : Sect.1, Amy Twin, Rev.3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 7.78 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 80.2 V/m; Power Drift = -0.010 dB; Peak SAR (extrapolated) = 14.7 W/kg
SAR(1 g) = 8.03 mW/g; SAR(10 g) = 4.24 mW/g; Maximum value of SAR (measured) = 8.95 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 9.06 mW/g


mW/g
9.06
7.25
5.44
3.62
1.81
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 2/28/2011 7:17:01 AM

Test Laboratory: Motorola - Feb-28-2011 1800 MHz

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 279TR; FCC ID: IHDP56LS2
Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 279TR; Input Power = 200 mW
Sim.Temp@meas = 20.0□C; Sim.Temp@SPC = 20.0□C; Room Temp @ SPC = 20.5□C
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 1800 MHz; σ = 1.37 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3

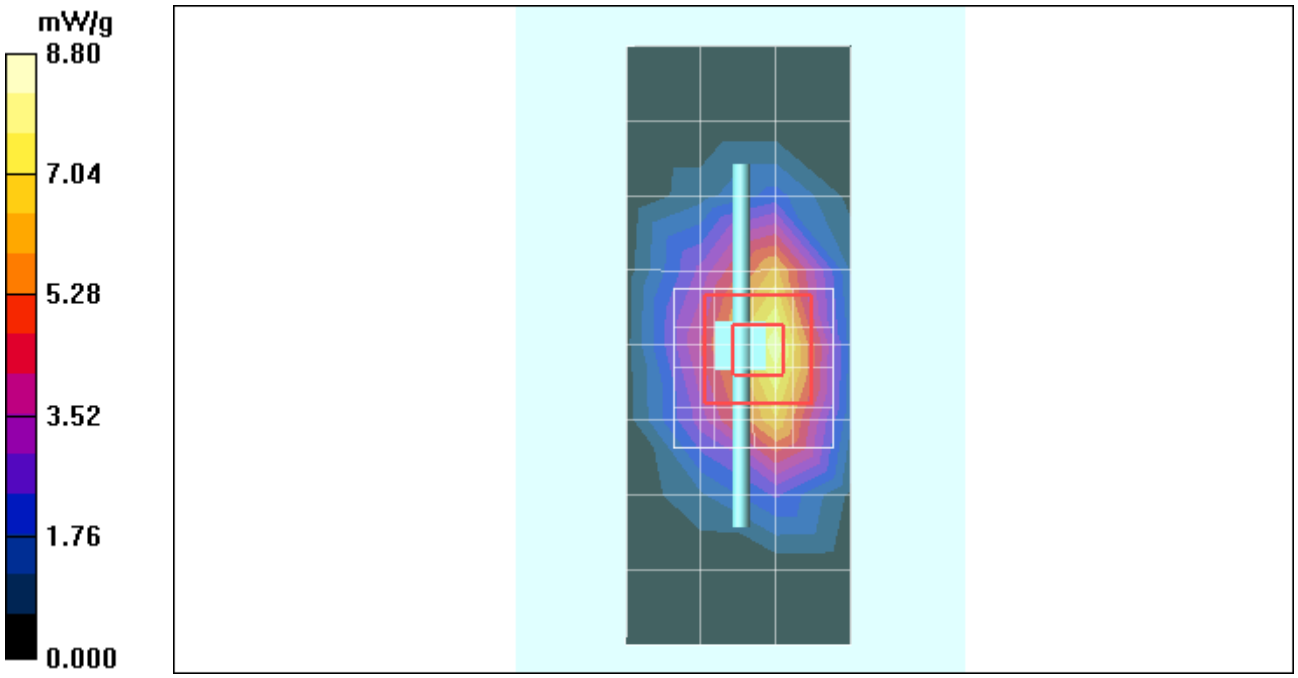
DASY4 Configuration:

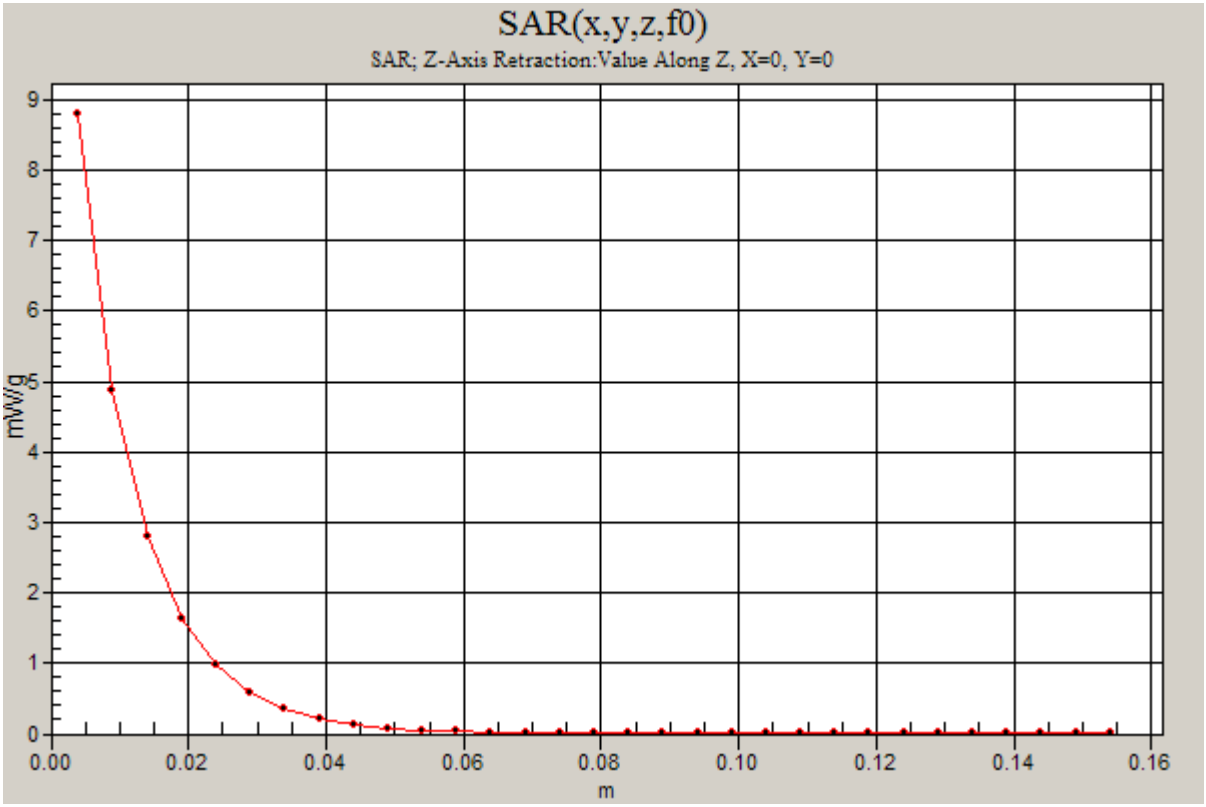
- Probe: ES3DV3 - SN3124; ConvF(4.89, 4.89, 4.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R4 : Sect.1, Amy Twin, Rev.3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 8.12 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 78.6 V/m; Power Drift = -0.019 dB; Peak SAR (extrapolated) = 14.2 W/kg
SAR(1 g) = 7.8 mW/g; SAR(10 g) = 4.13 mW/g; Maximum value of SAR (measured) = 8.58 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 8.80 mW/g


mW/g
8.80
7.04
5.28
3.52
1.76
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 2/27/2011 6:37:36 AM

Test Laboratory: Motorola - Feb-27-2011 1800 MHz

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 281TR; FCC ID: IHDP56LS2
Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 281TR; Input Power = 200 mW
Sim.Temp@meas = 20.2*C; Sim.Temp@SPC = 20.0*C; Room Temp @ SPC = 20.5*C
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 1800 MHz; σ = 1.37 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3

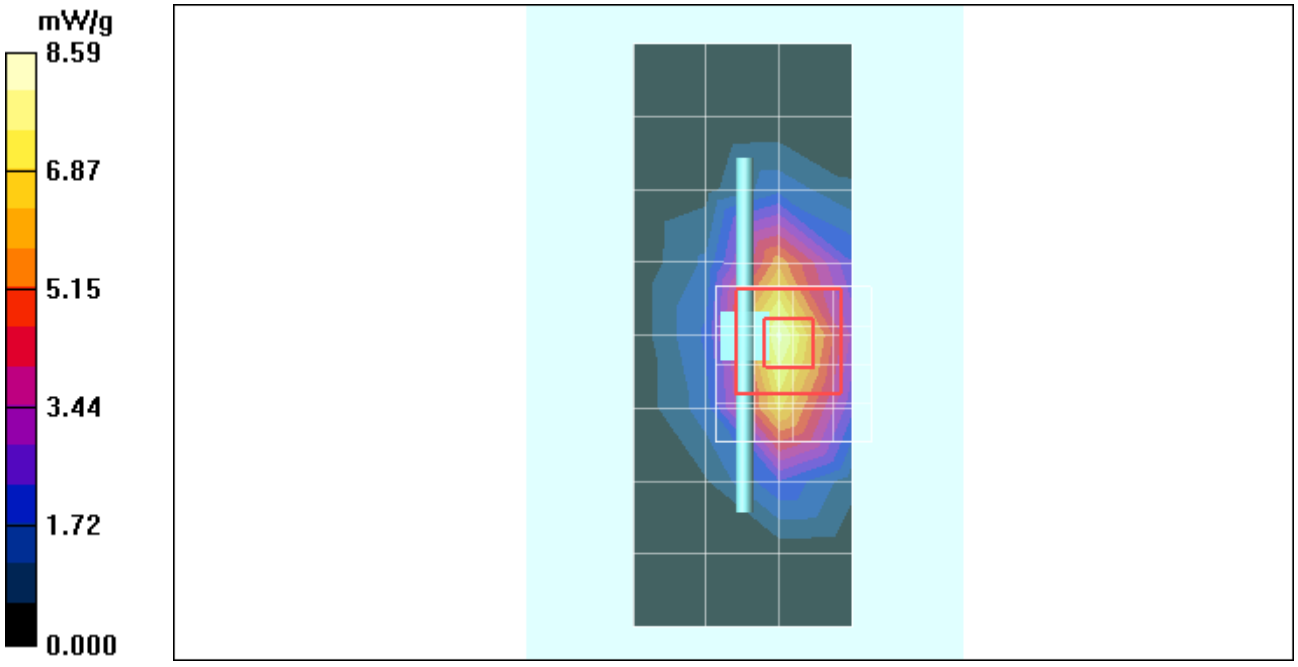
DASY4 Configuration:

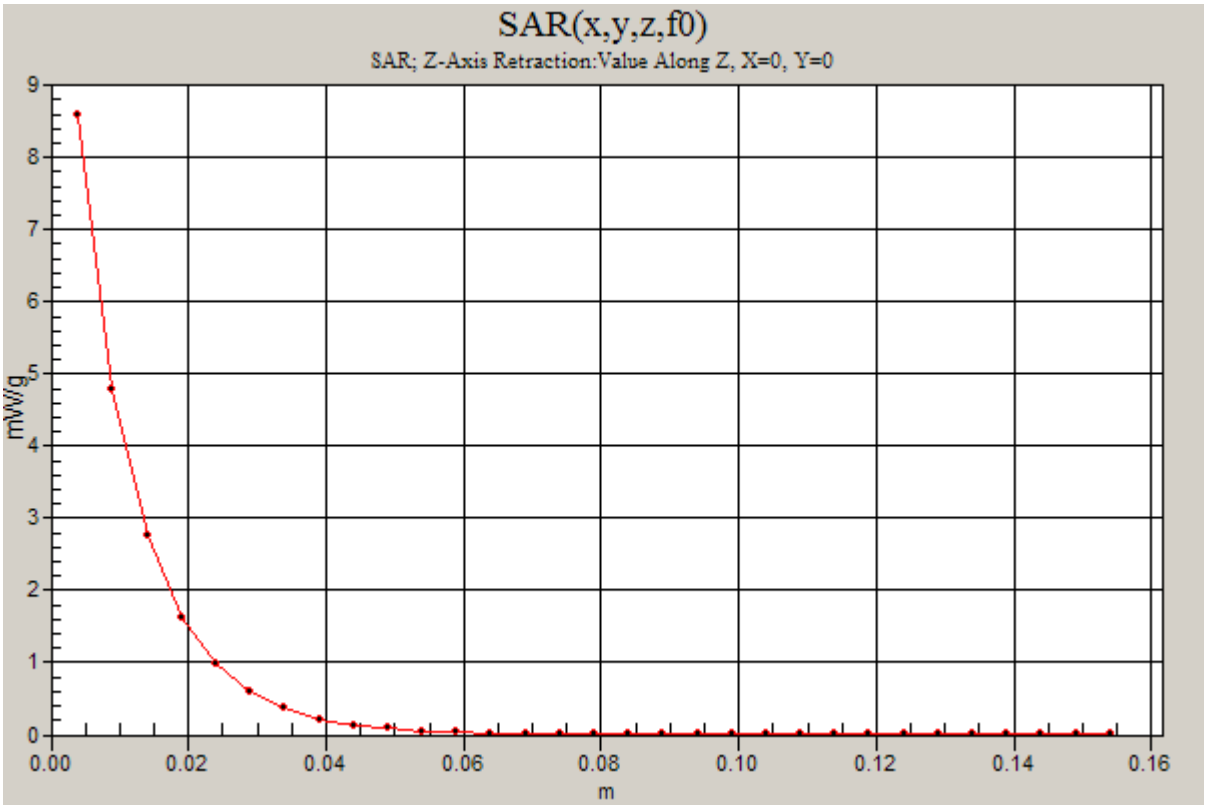
- Probe: ES3DV3 - SN3183; ConvF(5.05, 5.05, 5.05); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 8.25 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 62.7 V/m; Power Drift = -0.008 dB; Peak SAR (extrapolated) = 13.8 W/kg
SAR(1 g) = 7.58 mW/g; SAR(10 g) = 3.98 mW/g; Maximum value of SAR (measured) = 8.27 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 8.59 mW/g


mW/g
8.59
6.87
5.15
3.44
1.72
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/4/2011 6:53:58 AM

Test Laboratory: Motorola - Mar-04-2011 1800 MHz

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 281TR; FCC ID: IHDP56LS2
Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 281TR; Input Power = 200 mW
Sim.Temp@meas = 19.2□C; Sim.Temp@SPC = 19.9□C; Room Temp @ SPC = 20.8□C
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 1800 MHz; σ = 1.36 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3

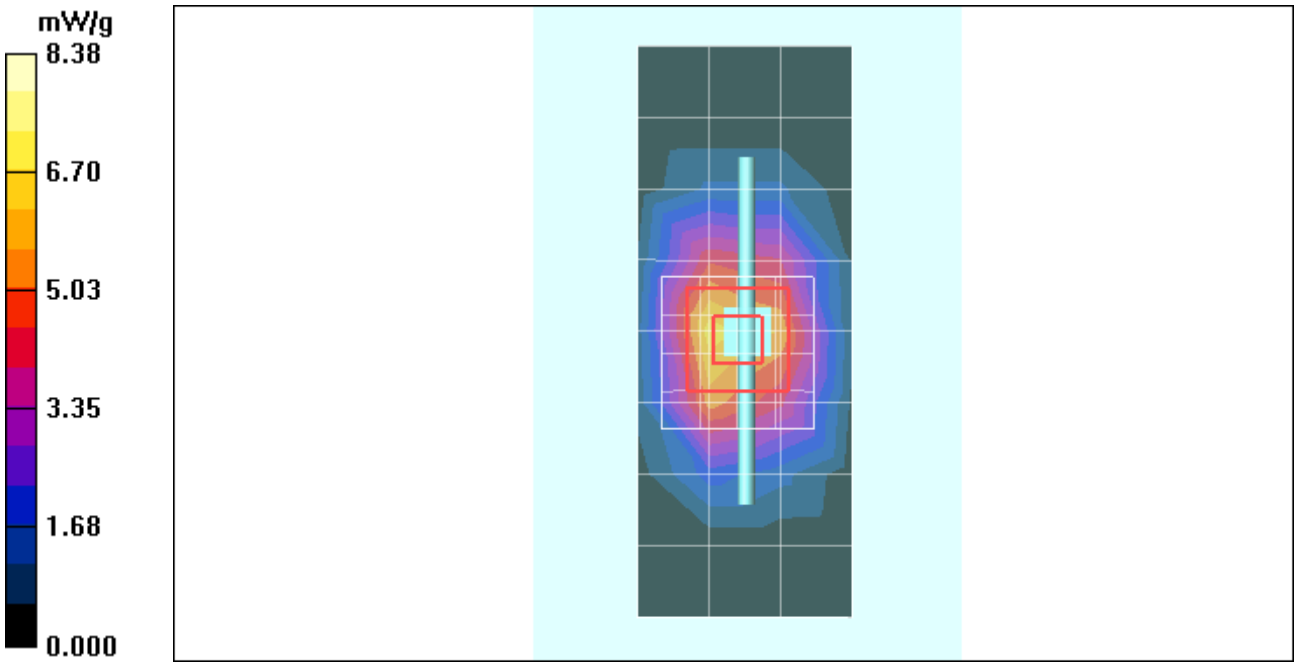
DASY4 Configuration:

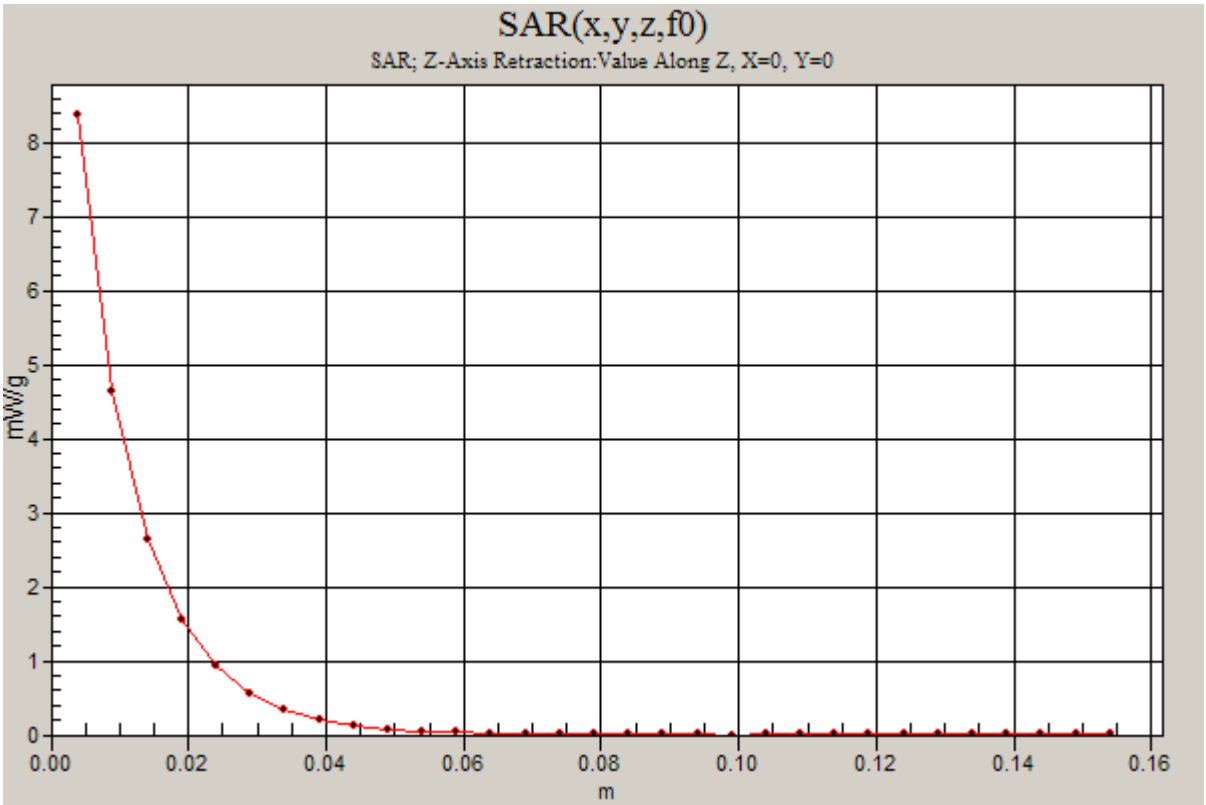
- Probe: ES3DV3 - SN3183; ConvF(5.05, 5.05, 5.05); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1):
easurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 6.52 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 79.1 V/m; Power Drift = -0.035 dB; Peak SAR (extrapolated) = 13.8 W/kg
SAR(1 g) = 7.47 mW/g; SAR(10 g) = 3.93 mW/g; Maximum value of SAR (measured) = 8.31 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 8.38 mW/g


mW/g
8.38
6.70
5.03
3.35
1.68
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/11/2011 6:44:07 AM

Test Laboratory: Motorola - Mar-11-2011 1800 MHz

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 281TR; FCC ID: IHDP56LS2
Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 281TR; Input Power = 200 mW
Sim.Temp@meas = 20.0□C; Sim.Temp@SPC = 20.0□C; Room Temp @ SPC = 20.4□C
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 1800 MHz; σ = 1.36 mho/m; ε_r = 38.5; ρ = 1000 kg/m^3

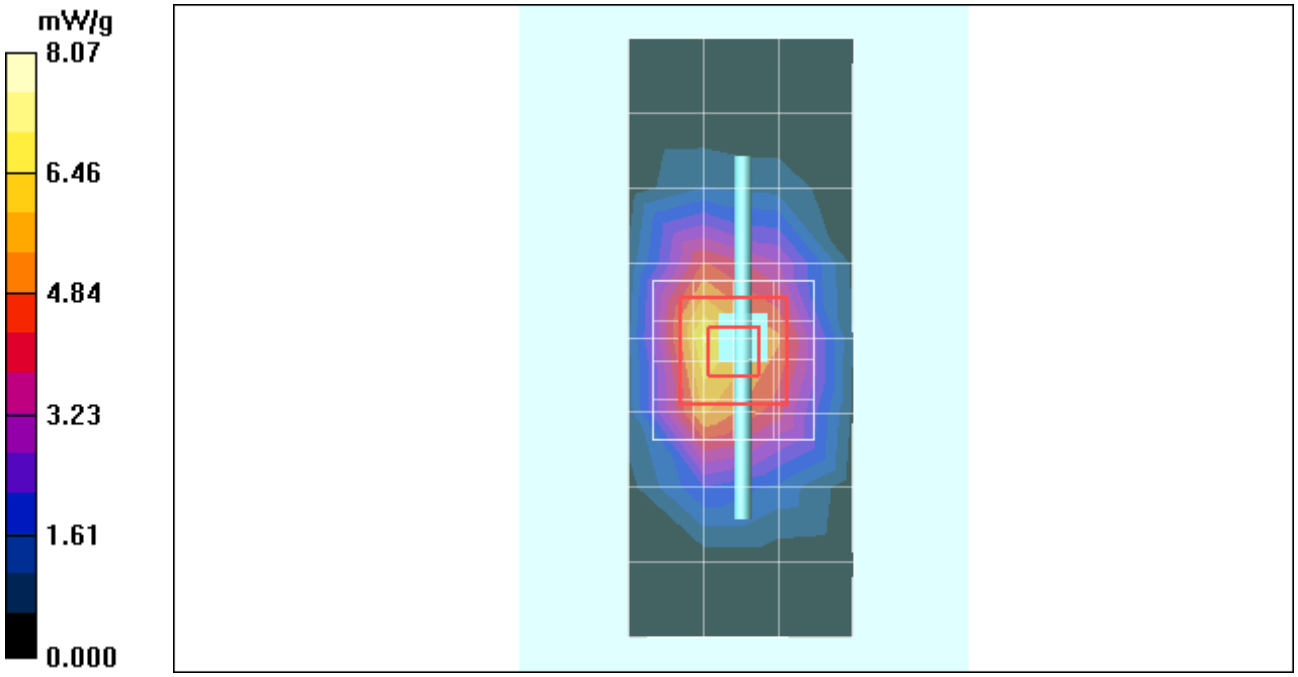
DASY4 Configuration:

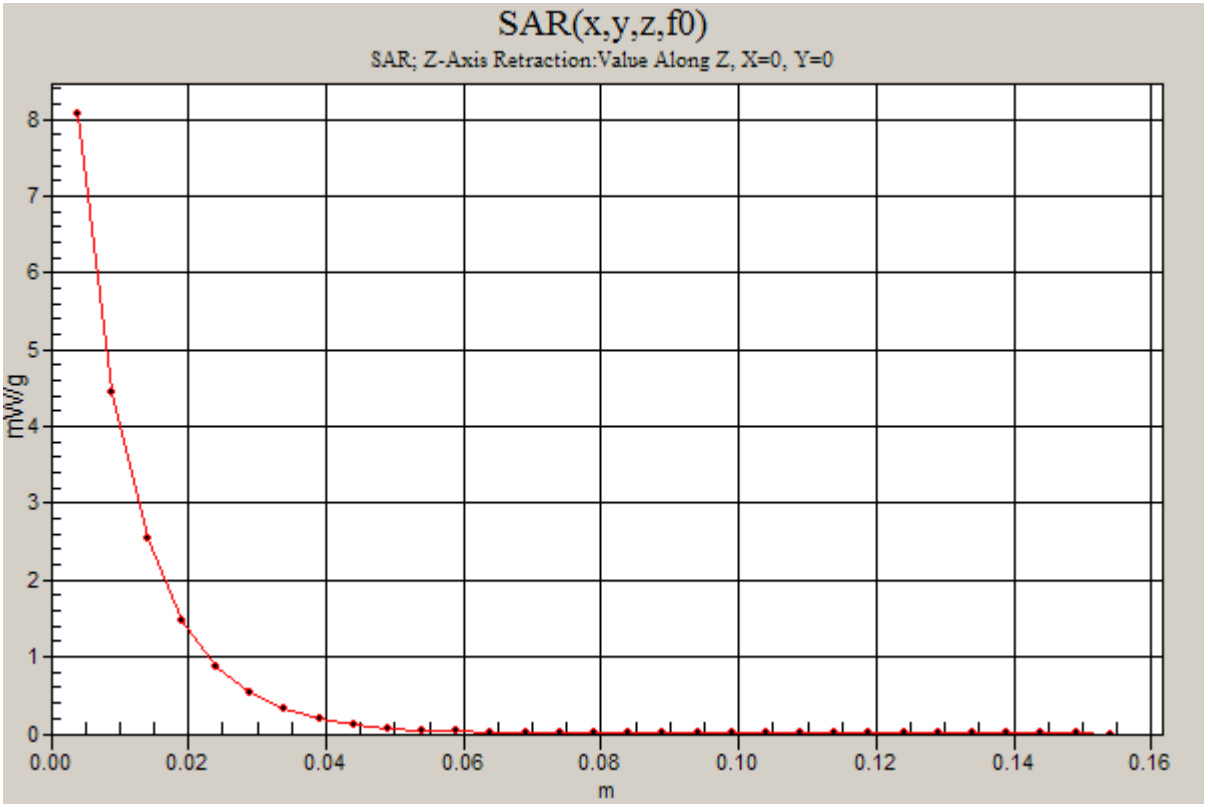
- Probe: ES3DV3 - SN3183; ConvF(5.05, 5.05, 5.05); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 6.59 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 76.9 V/m; Power Drift = -0.019 dB; Peak SAR (extrapolated) = 13.4 W/kg
SAR(1 g) = 7.27 mW/g; SAR(10 g) = 3.81 mW/g; Maximum value of SAR (measured) = 8.12 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 8.07 mW/g


mW/g
8.07
6.46
4.84
3.23
1.61
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 2/25/2011 3:22:15 PM

Test Laboratory: Motorola - Feb-25-2011 1900 MHz

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN: 524TR; FCC ID: IHDP56LS2
Procedure Notes: 1900 MHz System Performance Check; Dipole Sn# 524TR; Input Power = 200 mW
Sim.Temp@meas = 19.1□C; Sim.Temp@SPC = 19.1□C; Room Temp @ SPC = 20.2□C
Communication System: CW - Dipole; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 1900 MHz; σ = 1.43 mho/m; ε_r = 39.1; ρ = 1000 kg/m^3

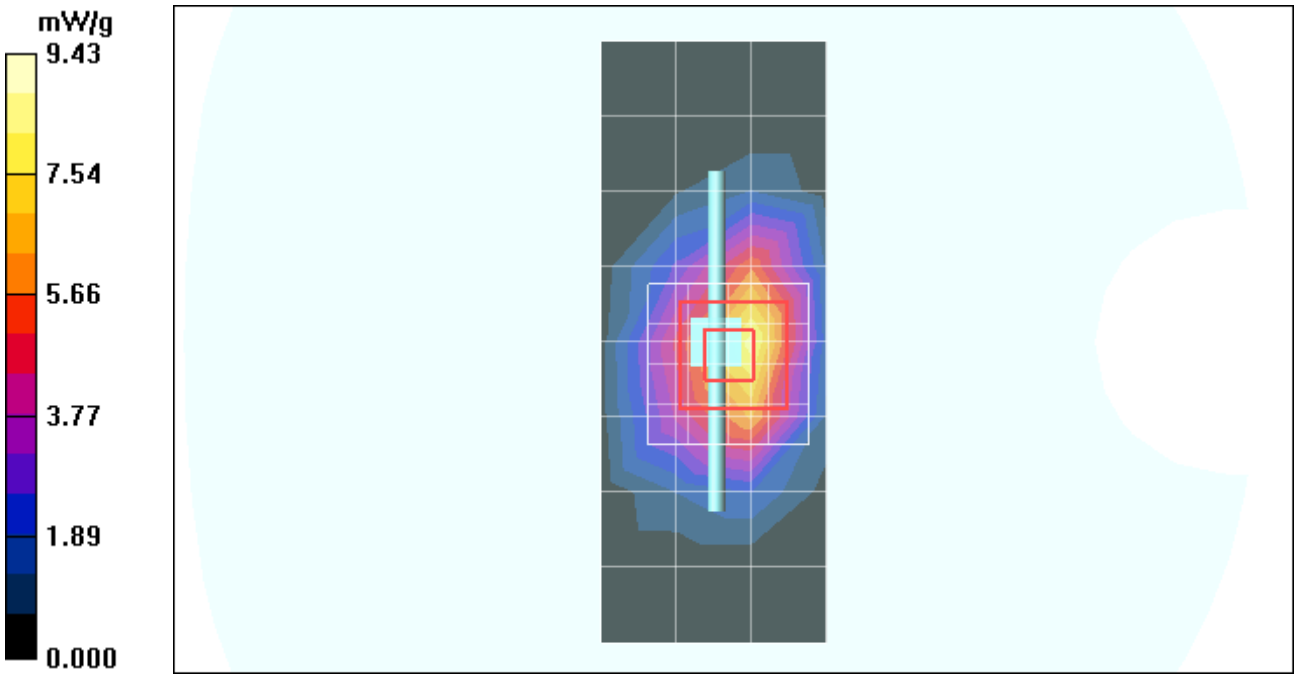
DASY4 Configuration:

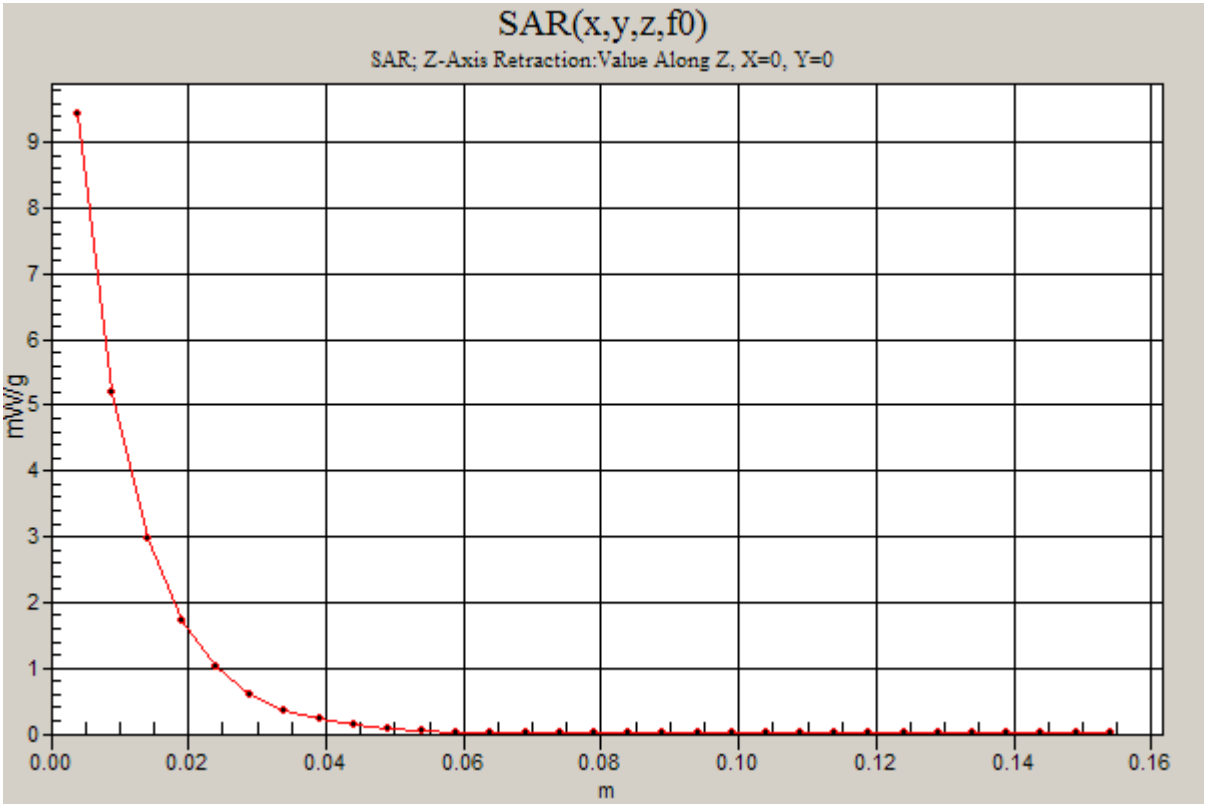
- Probe: ES3DV3 - SN3124; ConvF(4.89, 4.89, 4.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 8.53 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 80.3 V/m; Power Drift = -0.099 dB; Peak SAR (extrapolated) = 15.3 W/kg
SAR(1 g) = 8.35 mW/g; SAR(10 g) = 4.34 mW/g; Maximum value of SAR (measured) = 9.35 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 9.43 mW/g


mW/g
9.43
7.54
5.66
3.77
1.89
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/1/2011 12:21:05 PM

Test Laboratory: Motorola - Mar-01-2011 2450 MHz

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 766; FCC ID: IHDP56LS2
Procedure Notes: 2450 MHz System Performance Check; Dipole Sn# 766; Input Power = 200 mW
Sim.Temp@meas = 20.2*C; Sim.Temp@SPC = 19.5*C; Room Temp @ SPC = 20.2*C
Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 2450 MHz; σ = 1.86 mho/m; ε_r = 35.8; ρ = 1000 kg/m^3

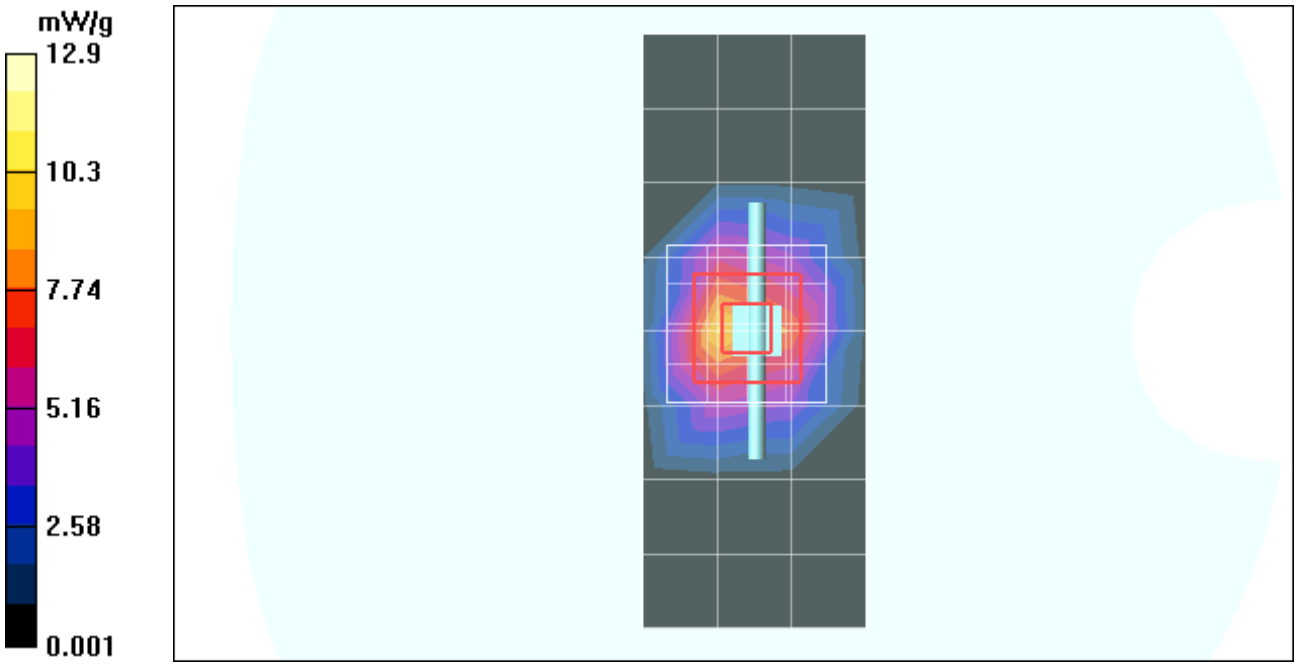
DASY4 Configuration:

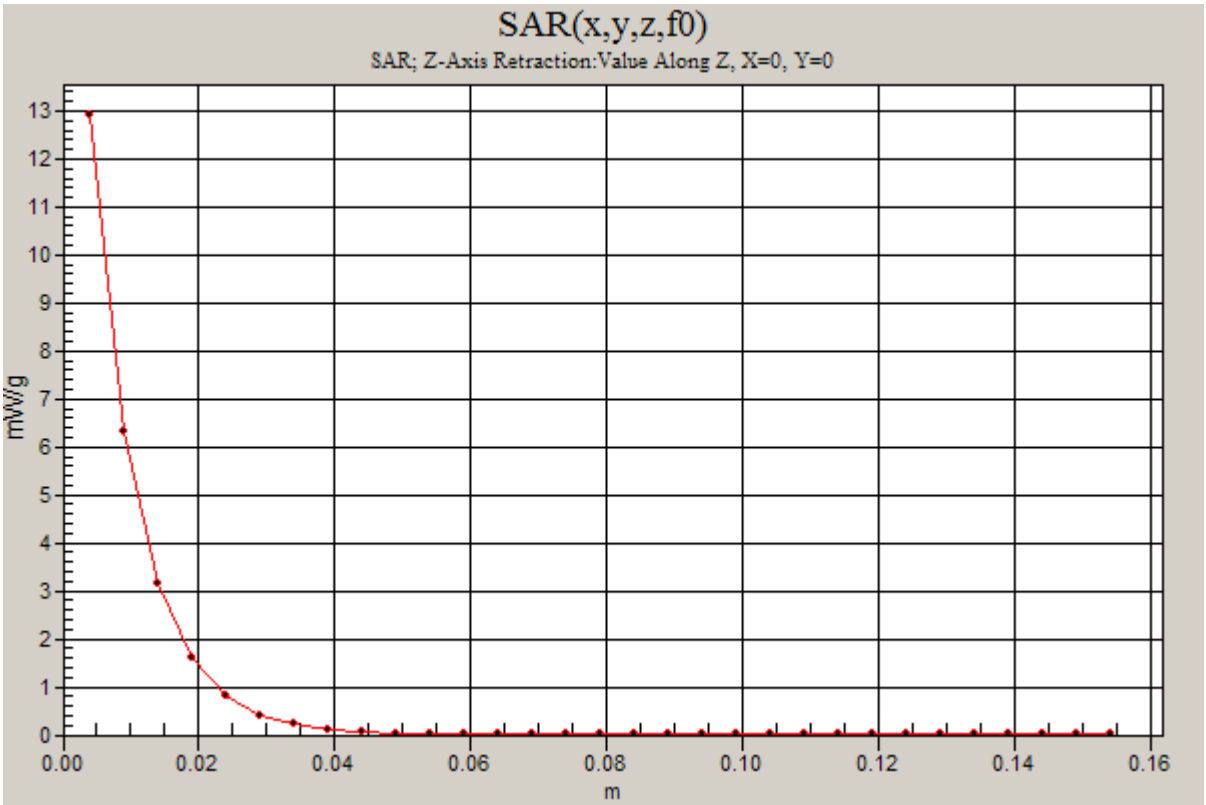
- Probe: ES3DV3 - SN3124; ConvF(4.35, 4.35, 4.35); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 9.72 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 84.7 V/m; Power Drift = -0.006 dB; Peak SAR (extrapolated) = 23.7 W/kg
SAR(1 g) = 11.3 mW/g; SAR(10 g) = 5.23 mW/g; Maximum value of SAR (measured) = 12.9 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm


mW/g
12.9
10.3
7.74
5.16
2.58
0.001


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0
1
2
3
4
5
6
7
8
9
10
11
12
13
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/2/2011 11:03:56 AM

Test Laboratory: Motorola - Mar-02-2011 2450 MHz

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 766; FCC ID: IHDP56LS2
Procedure Notes: 2450 MHz System Performance Check; Dipole Sn# 766; Input Power = 200 mW
Sim.Temp@meas = 20.3*C; Sim.Temp@SPC = 20.3*C; Room Temp @ SPC = 20.5*C
Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 2450 MHz; σ = 1.87 mho/m; ε_r = 35.4; ρ = 1000 kg/m^3

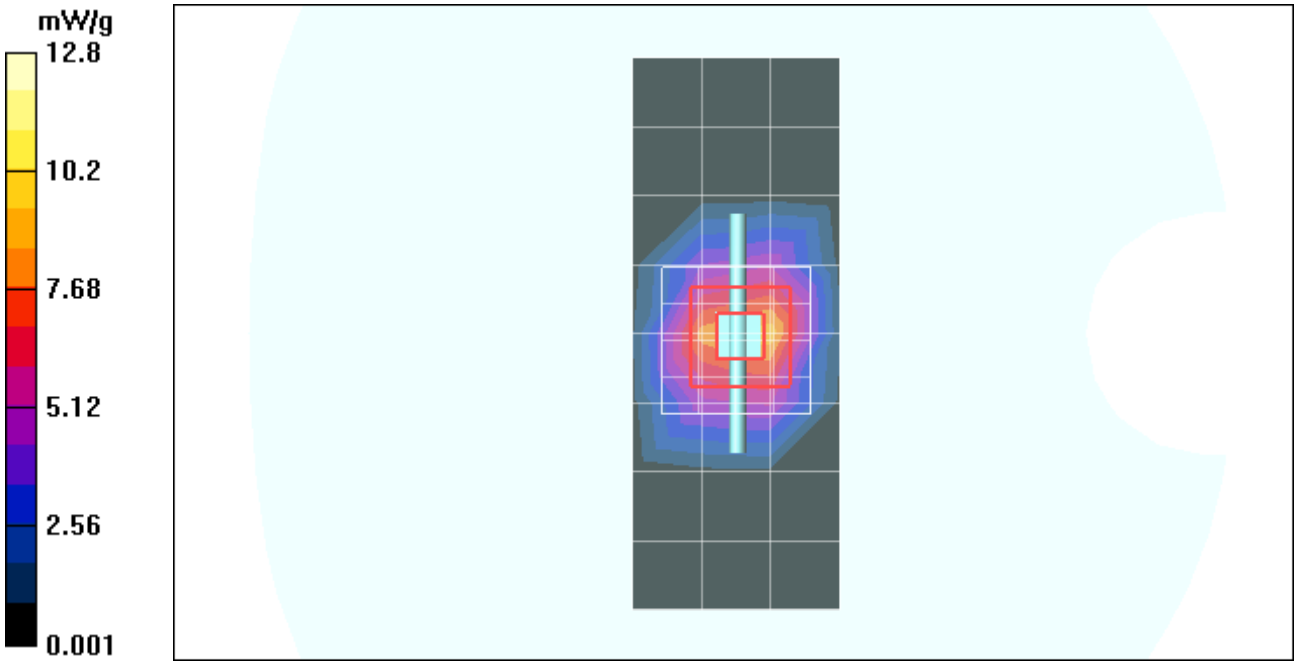
DASY4 Configuration:

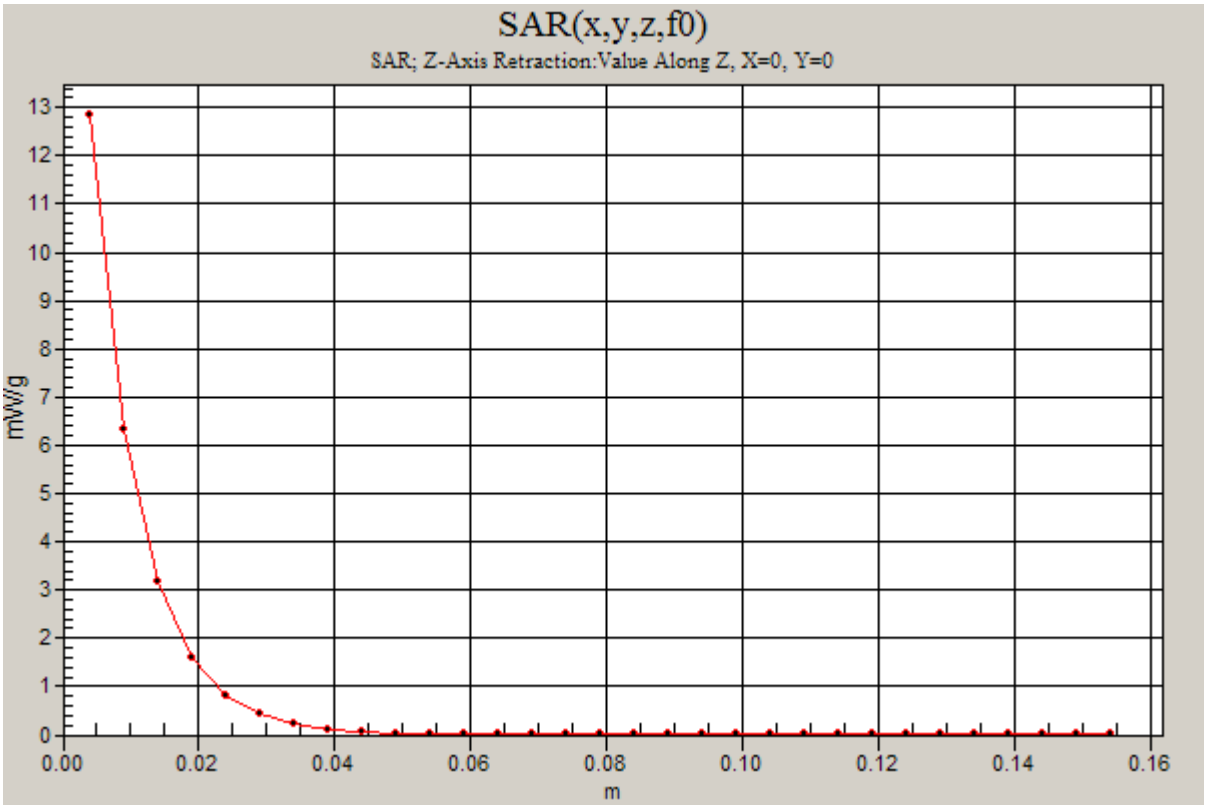
- Probe: ES3DV3 - SN3124; ConvF(4.35, 4.35, 4.35); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 9.20 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 85.2 V/m; Power Drift = -0.024 dB; Peak SAR (extrapolated) = 23.4 W/kg
SAR(1 g) = 11.3 mW/g; SAR(10 g) = 5.23 mW/g; Maximum value of SAR (measured) = 12.9 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 12.8 mW/g


mW/g
12.8
10.2
7.68
5.12
2.56
0.001


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/4/2011 10:59:10 AM

Test Laboratory: Motorola - Mar-04-2011 2450 MHz

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 766; FCC ID: IHDP56LS2
Procedure Notes: 2450 MHz System Performance Check; Dipole Sn# 766; Input Power = 200 mW
Sim.Temp@meas = 19.8*C; Sim.Temp@SPC = 19.8*C; Room Temp @ SPC = 20.3*C
Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 2450 MHz; σ = 1.85 mho/m; ε_r = 35.6; ρ = 1000 kg/m^3

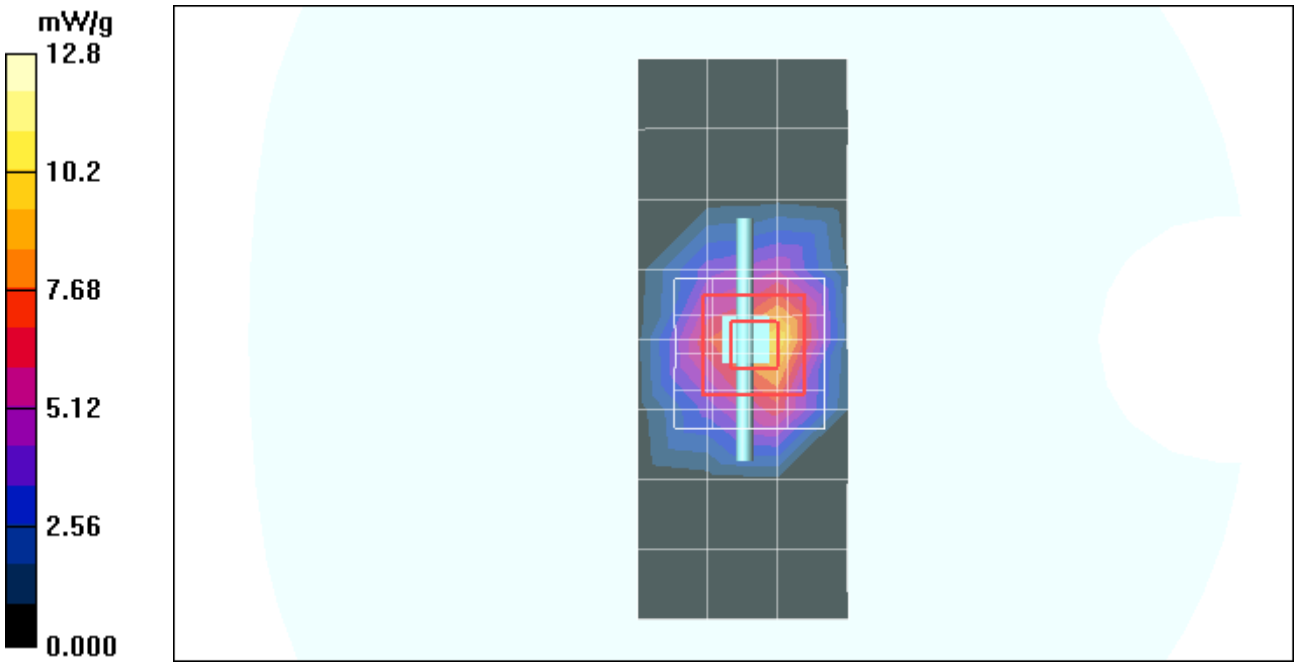
DASY4 Configuration:

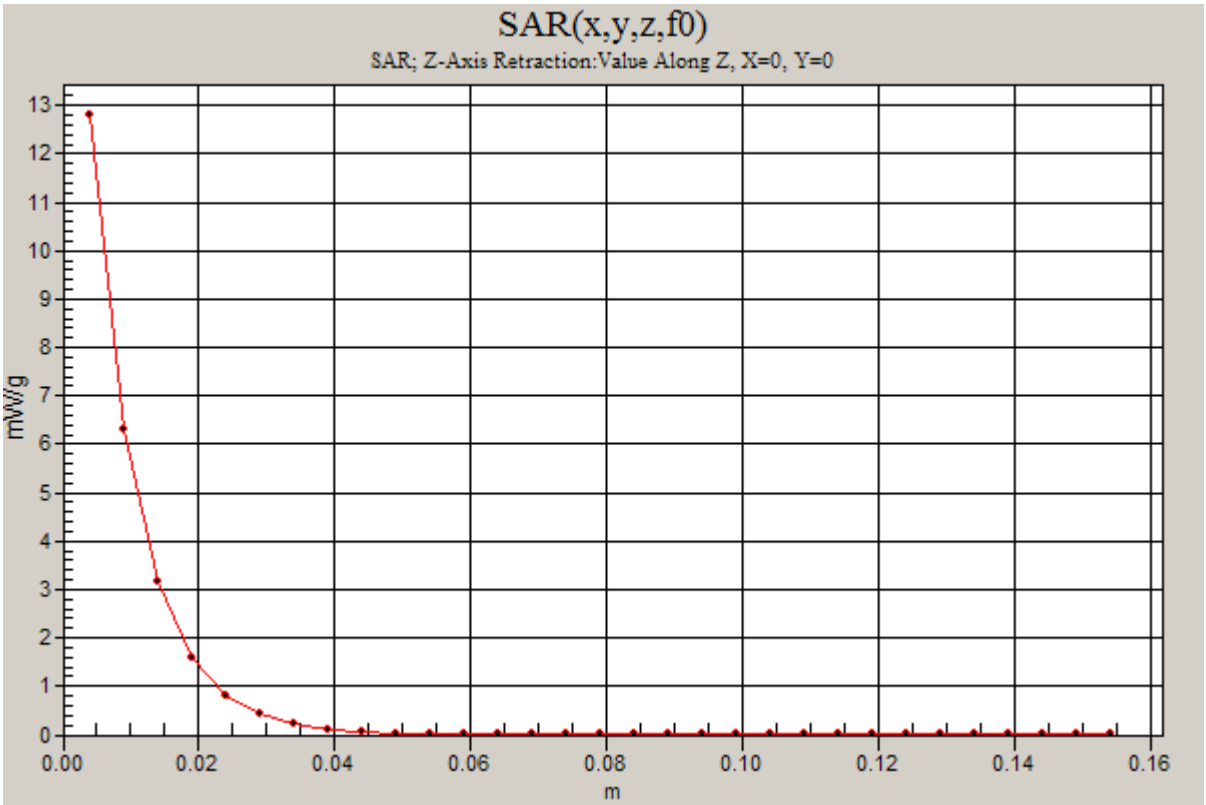
- Probe: ES3DV3 - SN3124; ConvF(4.35, 4.35, 4.35); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 10.3 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 84.4 V/m; Power Drift = 0.005 dB; Peak SAR (extrapolated) = 23.0 W/kg
SAR(1 g) = 11.2 mW/g; SAR(10 g) = 5.19 mW/g; Maximum value of SAR (measured) = 12.6 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 12.8 mW/g


mW/g
12.8
10.2
7.68
5.12
2.56
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Date/Time: 3/11/2011 2:25:40 PM

Test Laboratory: Motorola - Mar-11-2011 2450 MHz

DUT: HAC Dipole 2450 MHz; Type: CD2450V3; Serial: 766; FCC ID: IHDP56LS2
Procedure Notes: 2450 MHz System Performance Check; Dipole Sn# 766; Input Power = 200 mW
Sim.Temp@meas = 20.2*C; Sim.Temp@SPC = 20.2*C; Room Temp @ SPC = 20.1*C
Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 2450 MHz; σ = 1.89 mho/m; ε_r = 36.3; ρ = 1000 kg/m^3

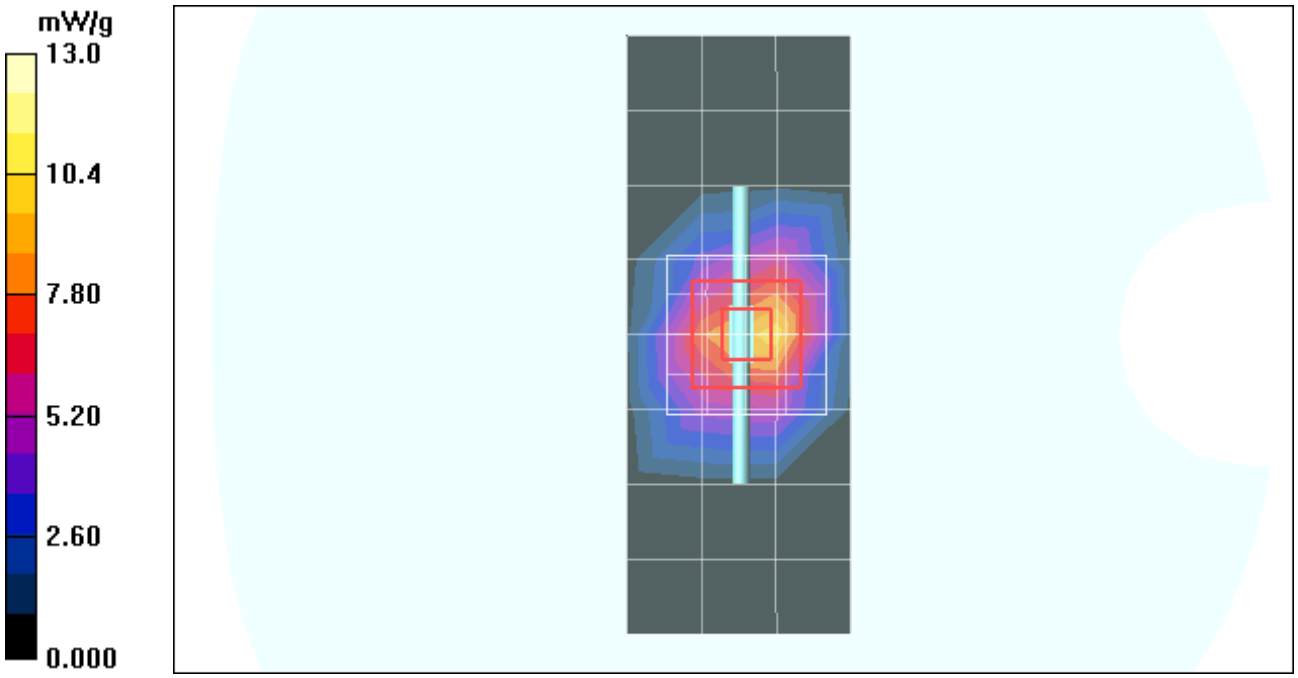
DASY4 Configuration:

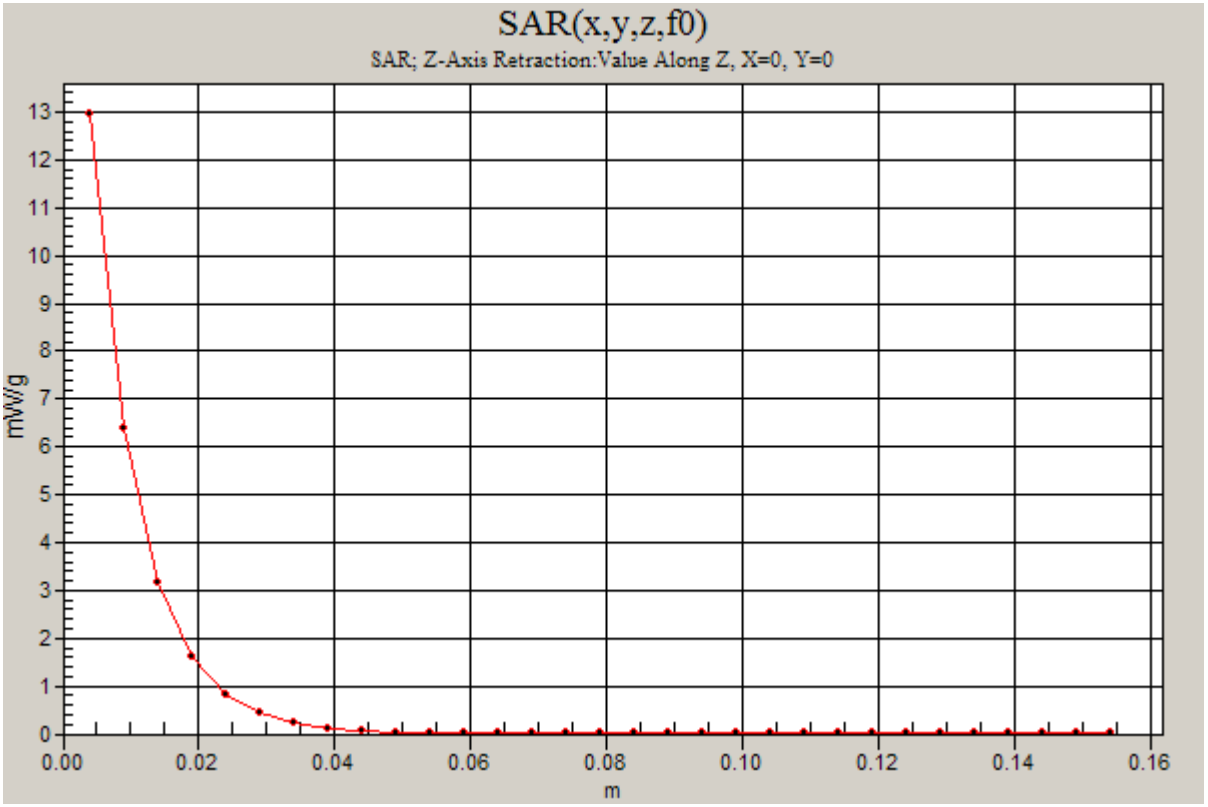
- Probe: ES3DV3 - SN3183; ConvF(4.49, 4.49, 4.49); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Glycol, SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1139;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x9x1):
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 10.2 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 84.1 V/m; Power Drift = -0.047 dB; Peak SAR (extrapolated) = 23.6 W/kg
SAR(1 g) = 11.4 mW/g; SAR(10 g) = 5.3 mW/g; Maximum value of SAR (measured) = 12.9 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):
Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 13.0 mW/g


mW/g
13.0
10.4
7.80
5.20
2.60
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
m
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

Test Laboratory: Motorola 5200 MHz System Performance Check

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1088;
Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -19.45 dB Sim.Temp@SPC = 20.5C Room Temp @ SPC = 20.8C
Communication System: CW - Dipole; Frequency: 5200 MHz; Communication System Channel Number: 15; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: f = 5200 MHz; σ = 4.94 mho/m; ε_r = 34.4; ρ = 1000 kg/m^3

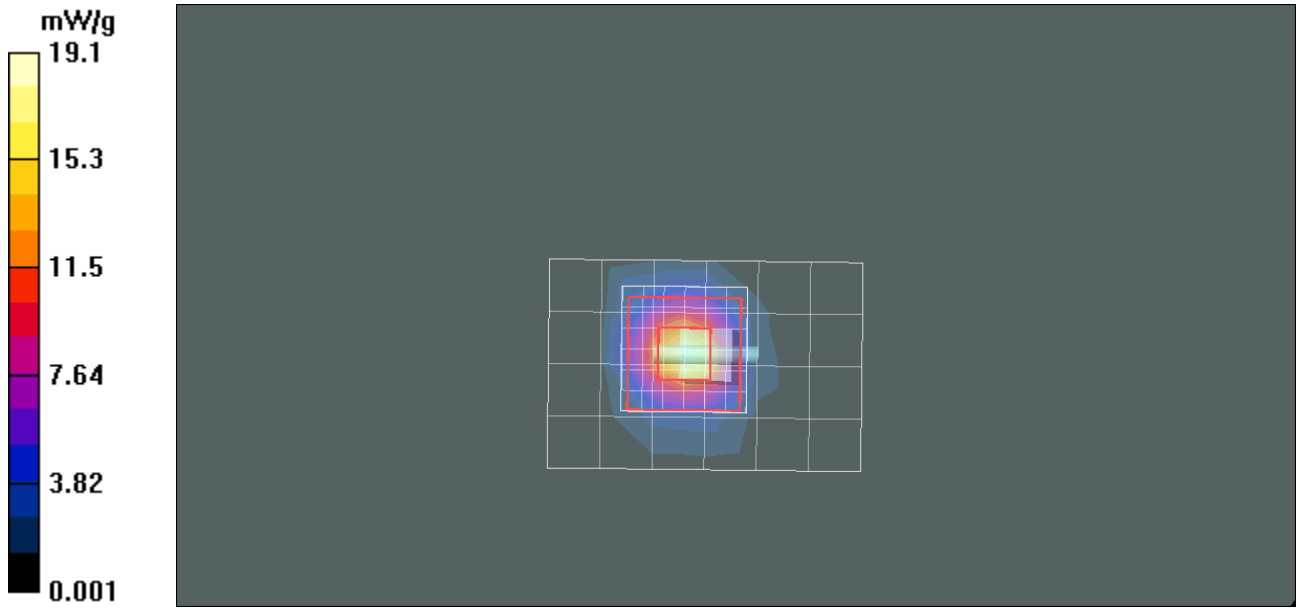
DASY4 Configuration:

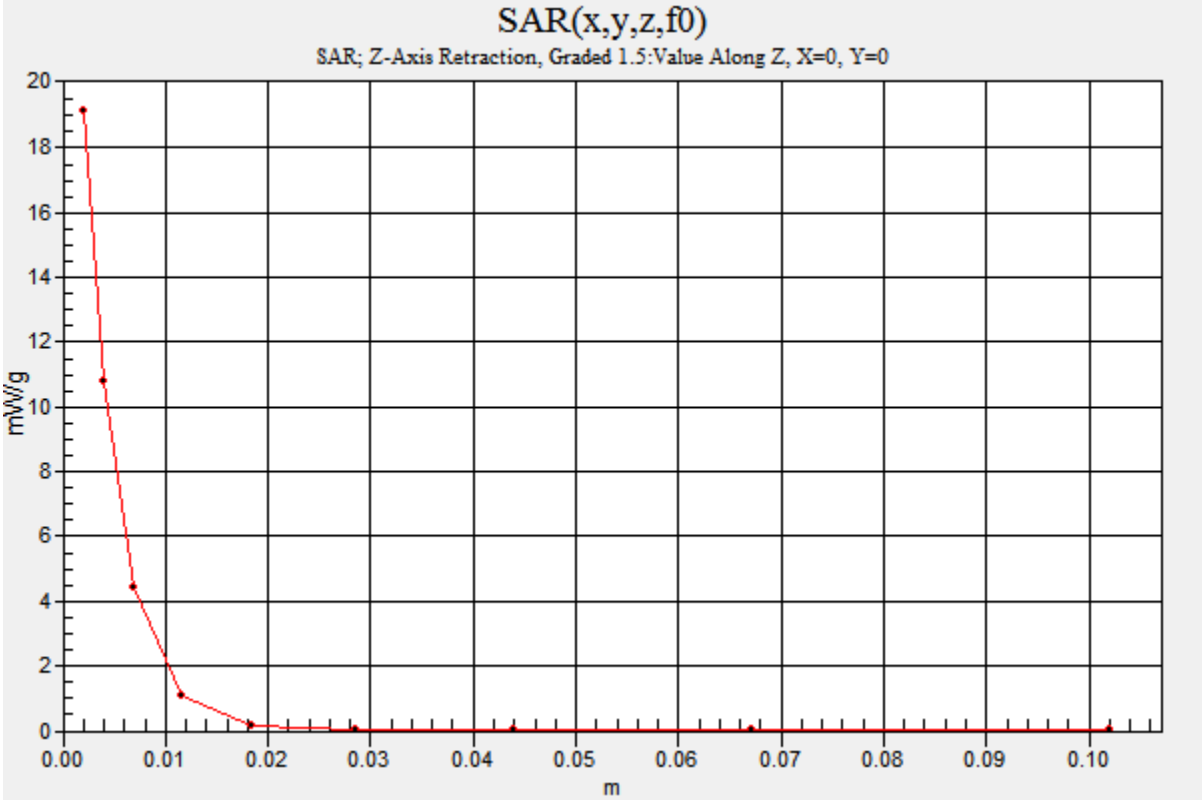
- Probe: EX3DV4 - SN3730; ConvF(4.67, 4.67, 4.67); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 15.2 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 62.4 V/m; Power Drift = -0.103 dB
Peak SAR (extrapolated) = 36.4 W/kg
SAR(1 g) = 9.31 mW/g; SAR(10 g) = 2.65 mW/g
Maximum value of SAR (measured) = 19.4 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: dx=20mm, dy=20mm, dz=2mm
Maximum value of SAR (measured) = 19.1 mW/g




SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
m
20
18
16
14
12
10
8
6
4
2
0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10

Test Laboratory: Motorola 5200 MHz System Performance Check

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1088;
Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -19.15 dB Sim.Temp@SPC = 20.1C Room Temp @ SPC = 20.5C
Communication System: CW - Dipole; Frequency: 5200 MHz; Communication System Channel Number: 15; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: f = 5200 MHz; σ = 4.8 mho/m; ε_r = 34; ρ = 1000 kg/m^3

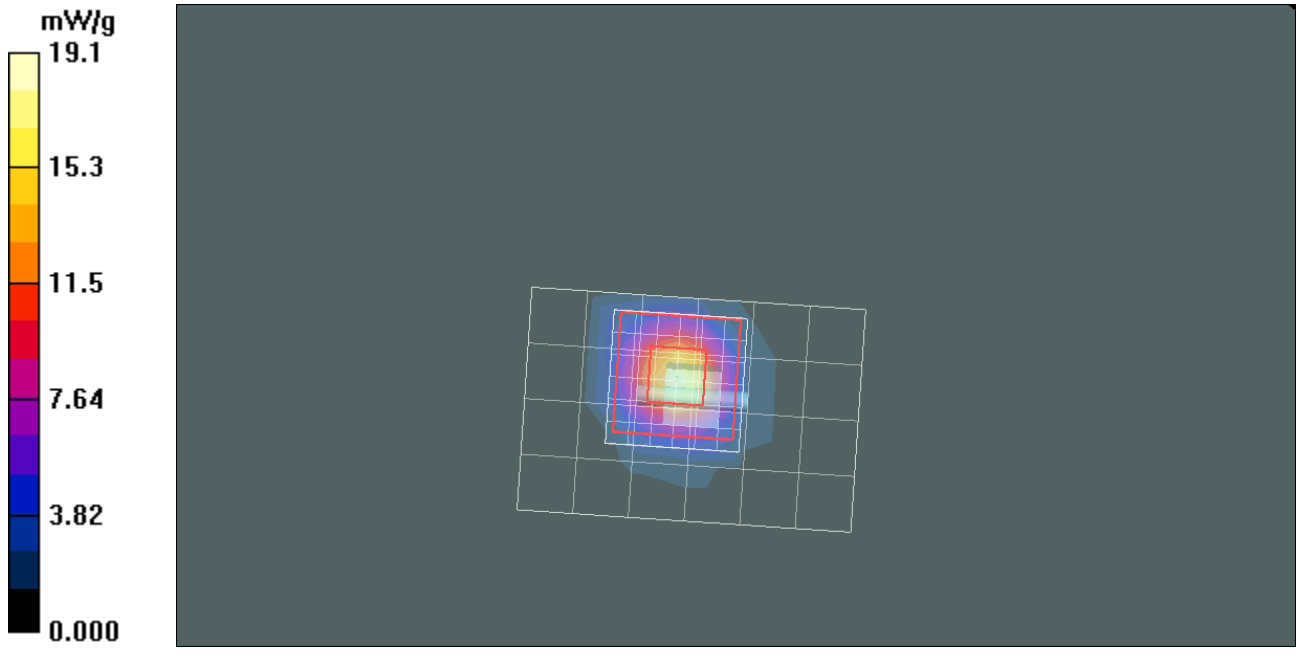
DASY4 Configuration:

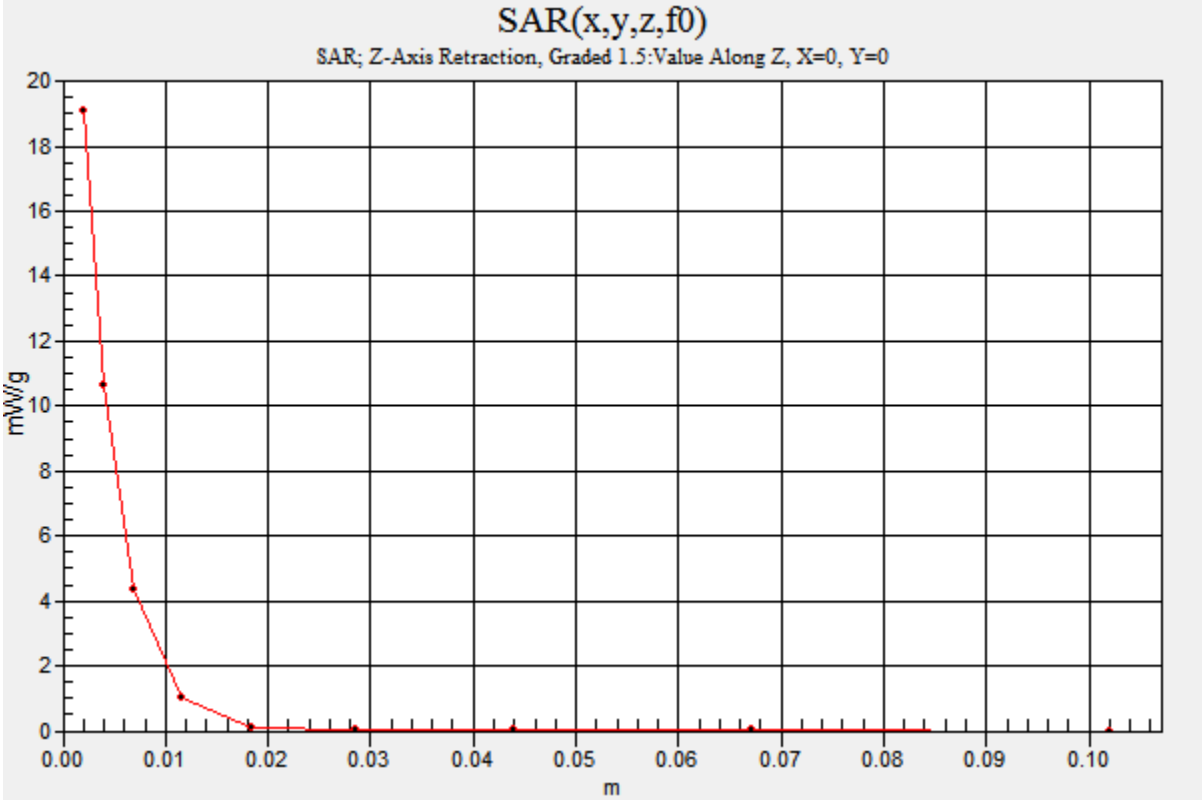
- Probe: EX3DV4 - SN3730; ConvF(4.67, 4.67, 4.67); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 13.4 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 58.4 V/m; Power Drift = 0.137 dB
Peak SAR (extrapolated) = 36.0 W/kg
SAR(1 g) = 9.12 mW/g; SAR(10 g) = 2.59 mW/g
Maximum value of SAR (measured) = 19.4 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: dx=20mm, dy=20mm, dz=2mm
Maximum value of SAR (measured) = 19.1 mW/g




SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
m
20
18
16
14
12
10
8
6
4
2
0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10

Date/Time: 3/4/2011 8:37:22 AM

Test Laboratory: Motorola - Mar-04-2011 5200 MHz

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1088; FCC ID: IHDP56LS2
Procedure Notes: 5200 MHz System Performance Check; Dipole Sn# 1088; Input Power = 100 mW
Sim.Temp@meas = 19.0*C; Sim.Temp@SPC = 19.0*C; Room Temp @ SPC = 20.5*C
Communication System: CW - Dipole; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 5200 MHz; σ = 4.75 mho/m; ε_r = 34.2; ρ = 1000 kg/m^3

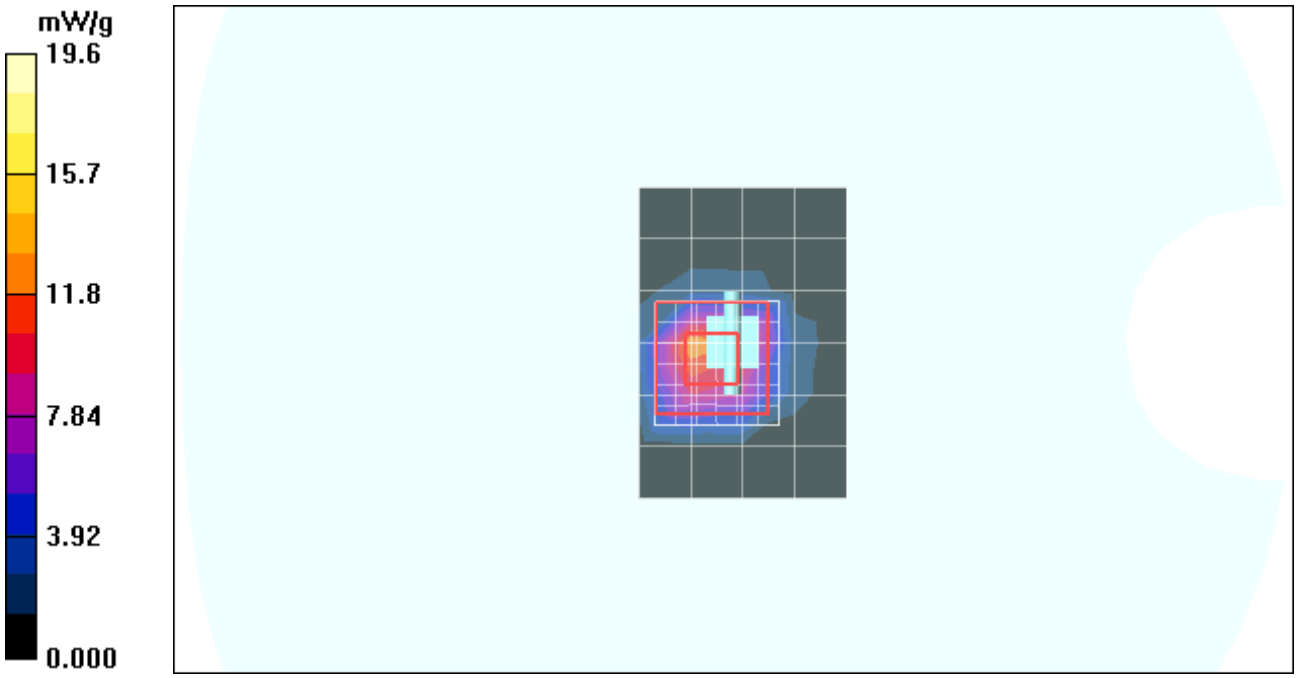
DASY4 Configuration:

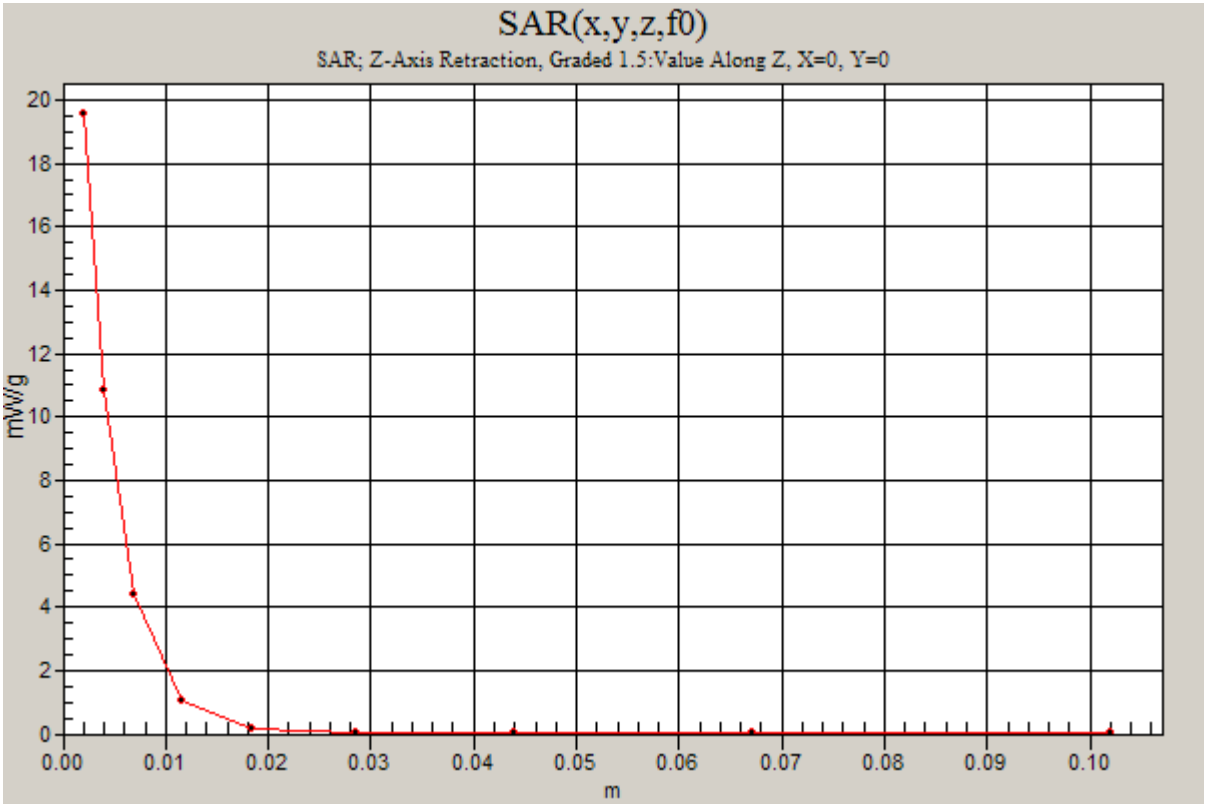
- Probe: EX3DV4 - SN3730; ConvF(4.67, 4.67, 4.67); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1):
Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 13.0 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 59.1 V/m; Power Drift = 0.099 dB; Peak SAR (extrapolated) = 36.6 W/kg
SAR(1 g) = 9.3 mW/g; SAR(10 g) = 2.64 mW/g; Maximum value of SAR (measured) = 19.6 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9):
Measurement grid: dx=20mm, dy=20mm, dz=2mm


mW/g
19.6
15.7
11.8
7.84
3.92
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
20
18
16
14
12
10
8
6
4
2
0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
m

Date/Time: 3/7/2011 7:27:54 AM

Test Laboratory: Motorola - Mar-07-2011 5200 MHz

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1088; FCC ID: IHDP56LS2
Procedure Notes: 5200 MHz System Performance Check; Dipole Sn# 1088; Input Power = 100 mW
Sim.Temp@meas = 19.7*C; Sim.Temp@SPC = 19.7*C; Room Temp @ SPC = 20.5*C
Communication System: CW - Dipole; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 5200 MHz; σ = 4.77 mho/m; ε_r = 33.5; ρ = 1000 kg/m^3

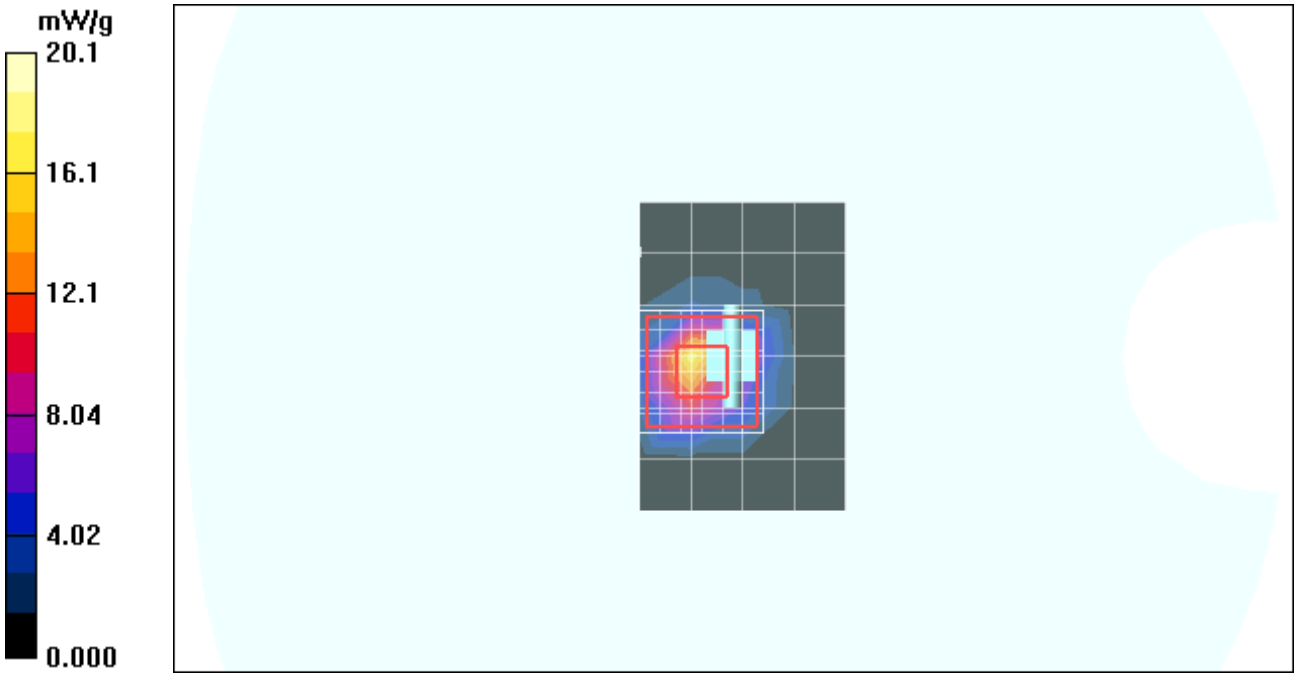
DASY4 Configuration:

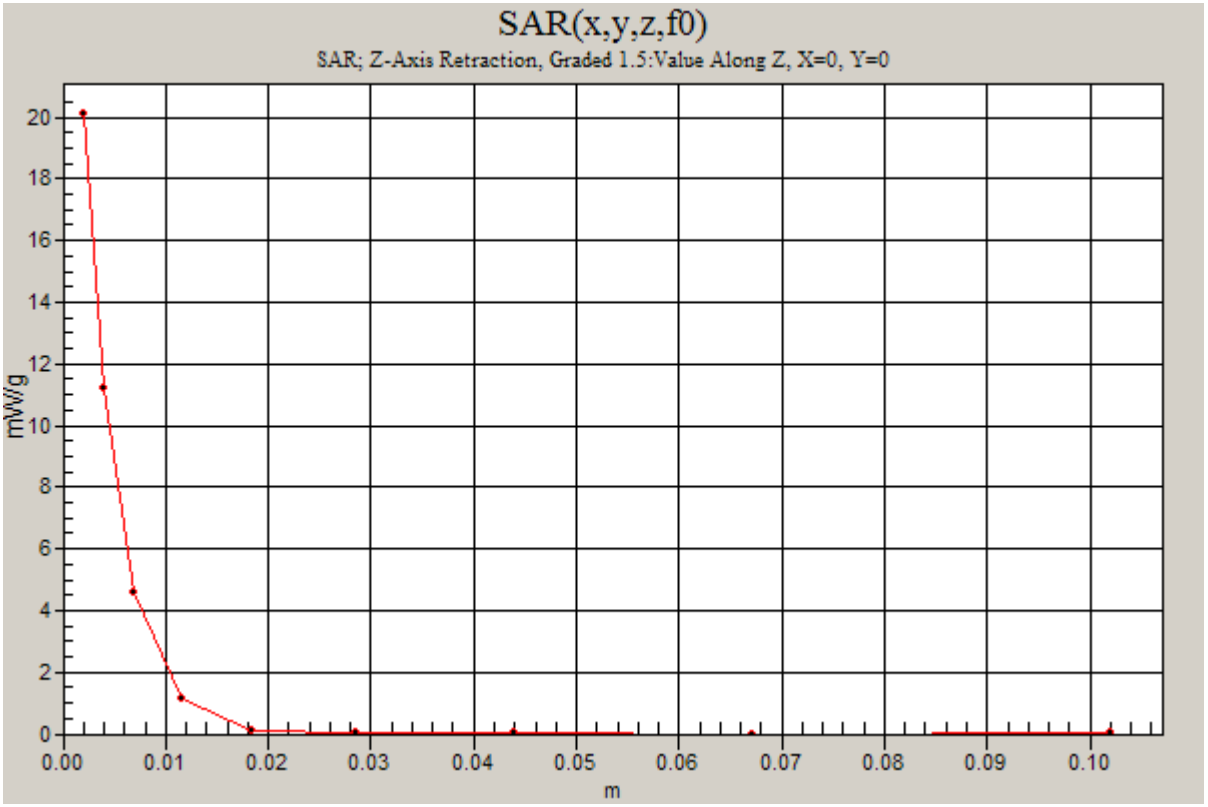
- Probe: EX3DV4 - SN3730; ConvF(4.67, 4.67, 4.67); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1):
Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 17.1 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 52.9 V/m; Power Drift = 0.116 dB; Peak SAR (extrapolated) = 35.2 W/kg
SAR(1 g) = 9.28 mW/g; SAR(10 g) = 2.66 mW/g; Maximum value of SAR (measured) = 19.3 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9):
Measurement grid: dx=20mm, dy=20mm, dz=2mm; Maximum value of SAR (measured) = 20.1 mW/g


mW/g
20.1
16.1
12.1
8.04
4.02
0.000


SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
20
18
16
14
12
10
8
6
4
2
0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
m

Test Laboratory: Motorola 5200 MHz System Performance Check

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1088;
Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -18.80 dB Sim.Temp@SPC = 19.6C Room Temp @ SPC = 20.6C
Communication System: CW - Dipole; Frequency: 5200 MHz; Communication System Channel Number: 15; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: f = 5200 MHz; σ = 4.77 mho/m; ε_r = 33.5; ρ = 1000 kg/m^3

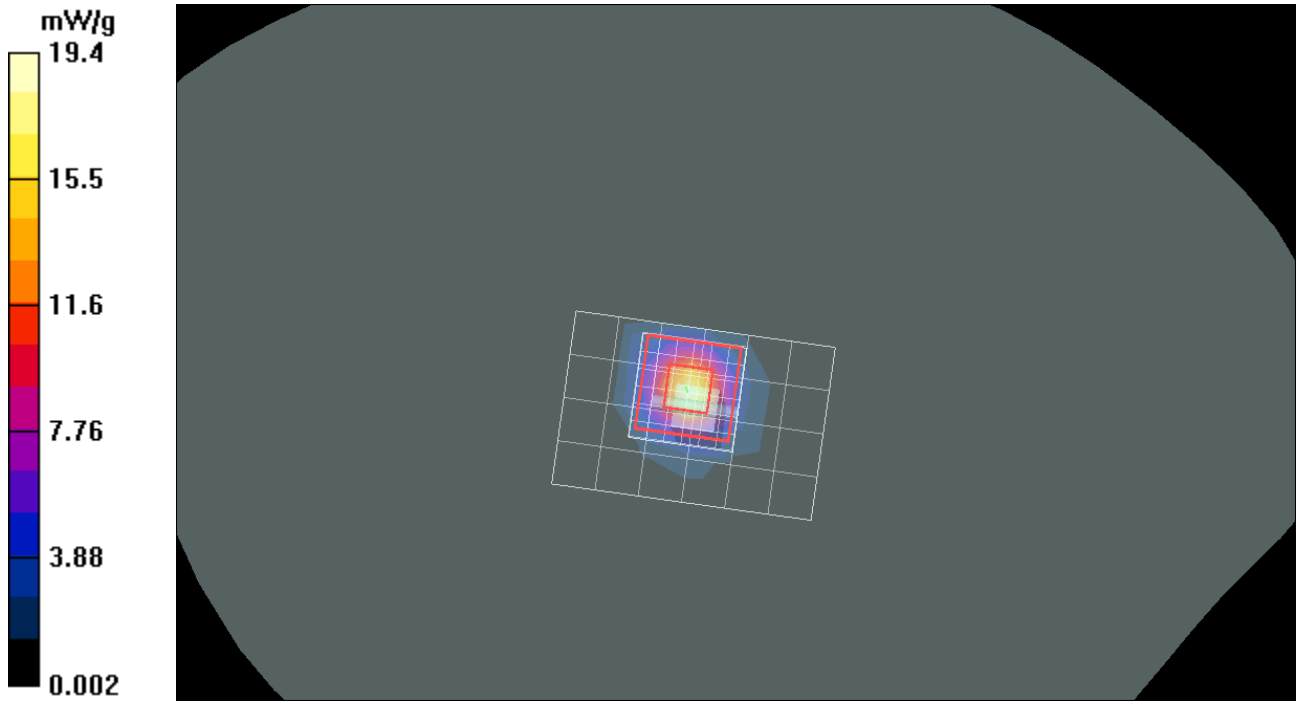
DASY4 Configuration:

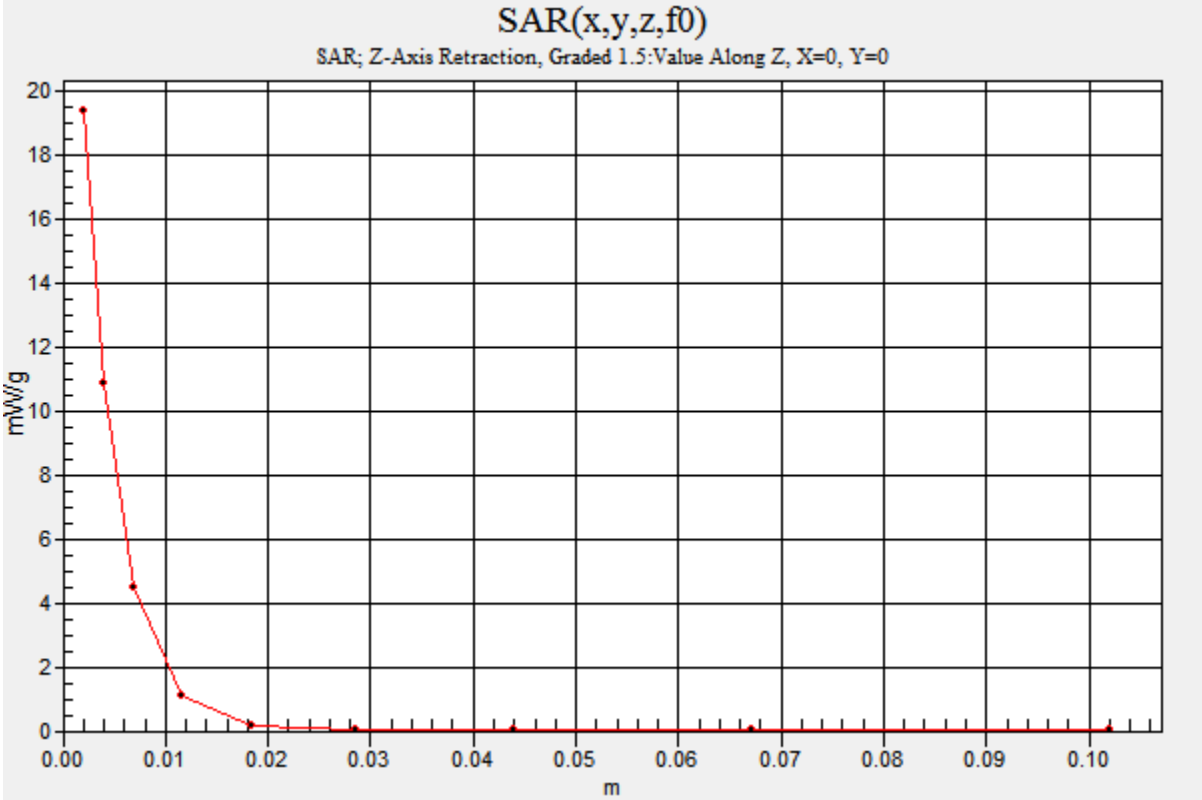
- Probe: EX3DV4 - SN3730; ConvF(4.67, 4.67, 4.67); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 14.4 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 61.9 V/m; Power Drift = 0.060 dB
Peak SAR (extrapolated) = 35.6 W/kg
SAR(1 g) = 9.2 mW/g; SAR(10 g) = 2.62 mW/g
Maximum value of SAR (measured) = 19.4 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: dx=20mm, dy=20mm, dz=2mm




SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
m
0
2
4
6
8
10
12
14
16
18
20
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10

Date/Time: 3/9/2011 6:52:17 AM

Test Laboratory: Motorola - Mar-09-2011 5200 MHz

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1088; FCC ID: IHDP56LS2
Procedure Notes: 5200 MHz System Performance Check; Dipole Sn# 1088; Input Power = 100 mW
Sim.Temp@meas = 19.7*C; Sim.Temp@SPC = 19.7*C; Room Temp @ SPC = 20.7*C
Communication System: CW - Dipole; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 5200 MHz; σ = 4.79 mho/m; ε_r = 33.5; ρ = 1000 kg/m^3

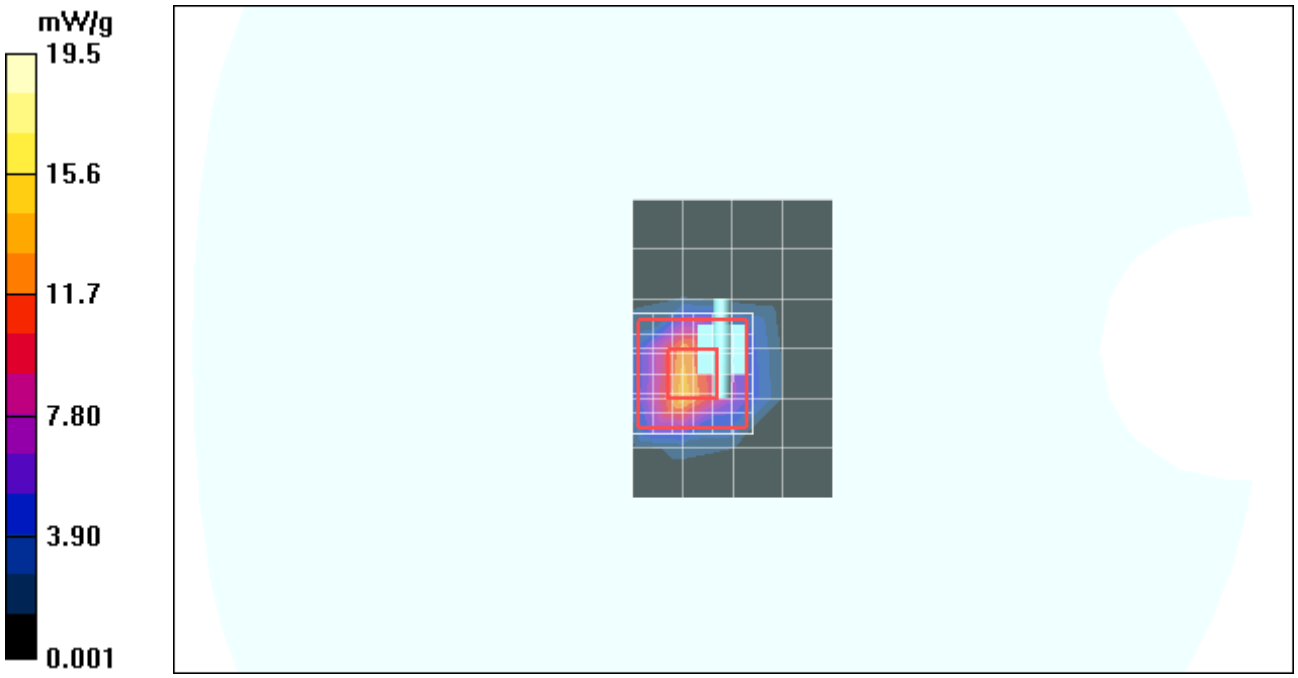
DASY4 Configuration:

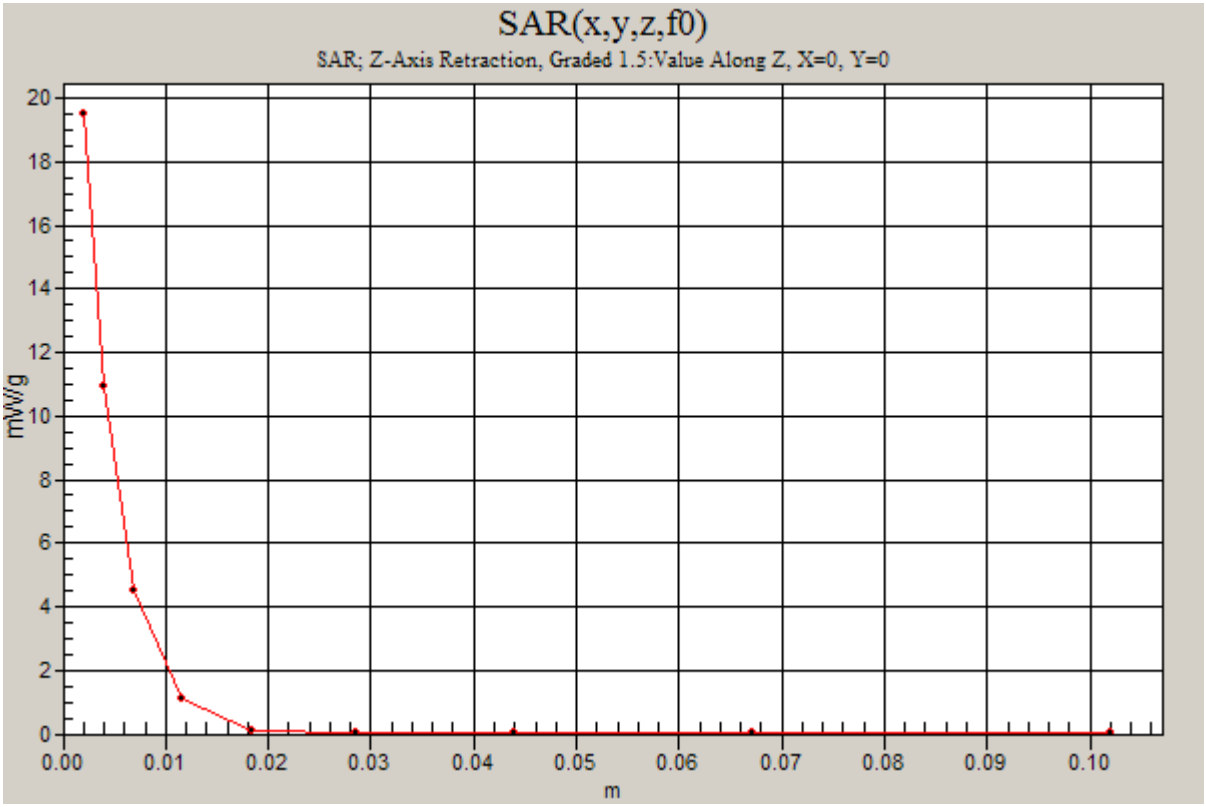
- Probe: EX3DV4 - SN3730; ConvF(4.67, 4.67, 4.67); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1):
Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 14.1 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 46.1 V/m; Power Drift = 0.170 dB; Peak SAR (extrapolated) = 35.5 W/kg
SAR(1 g) = 9.25 mW/g; SAR(10 g) = 2.64 mW/g; Maximum value of SAR (measured) = 19.5 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9):
Measurement grid: dx=20mm, dy=20mm, dz=2mm


mW/g
19.5
15.6
11.7
7.80
3.90
0.001


SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
20
18
16
14
12
10
8
6
4
2
0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
m

Test Laboratory: Motorola 5200 MHz System Performance Check

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1088;
Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -18.80 dB Sim.Temp@SPC = 19.7C Room Temp @ SPC = 20.6C
Communication System: CW - Dipole; Frequency: 5200 MHz; Communication System Channel Number: 15; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: f = 5200 MHz; σ = 4.86 mho/m; ε_r = 34.3; ρ = 1000 kg/m^3

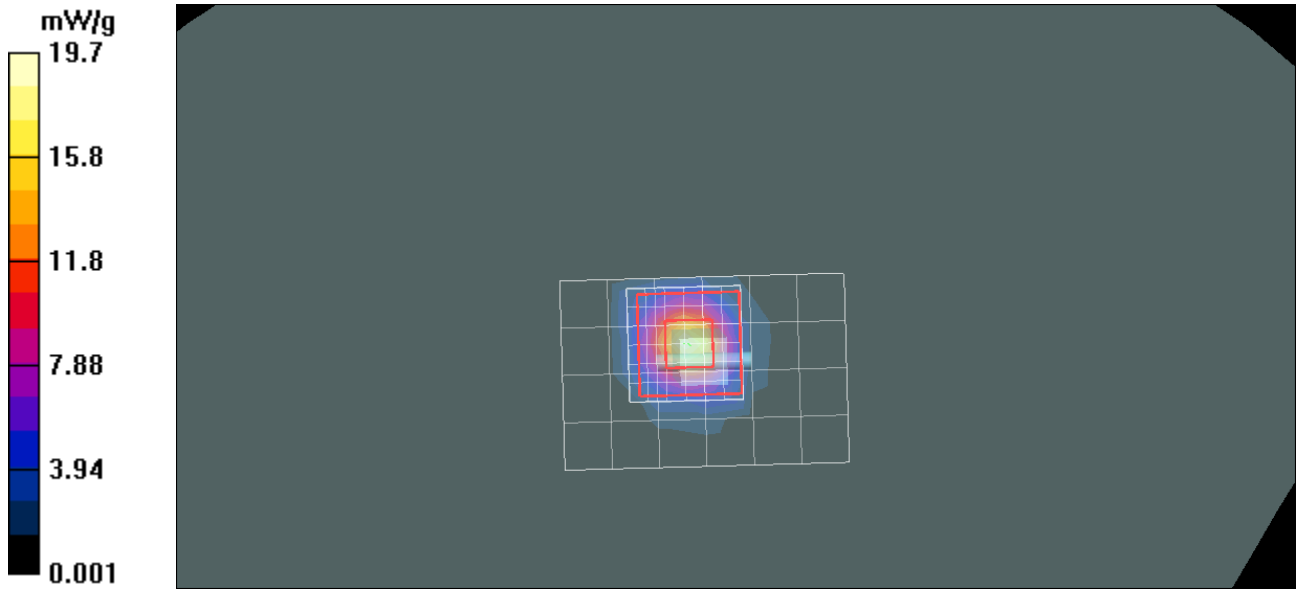
DASY4 Configuration:

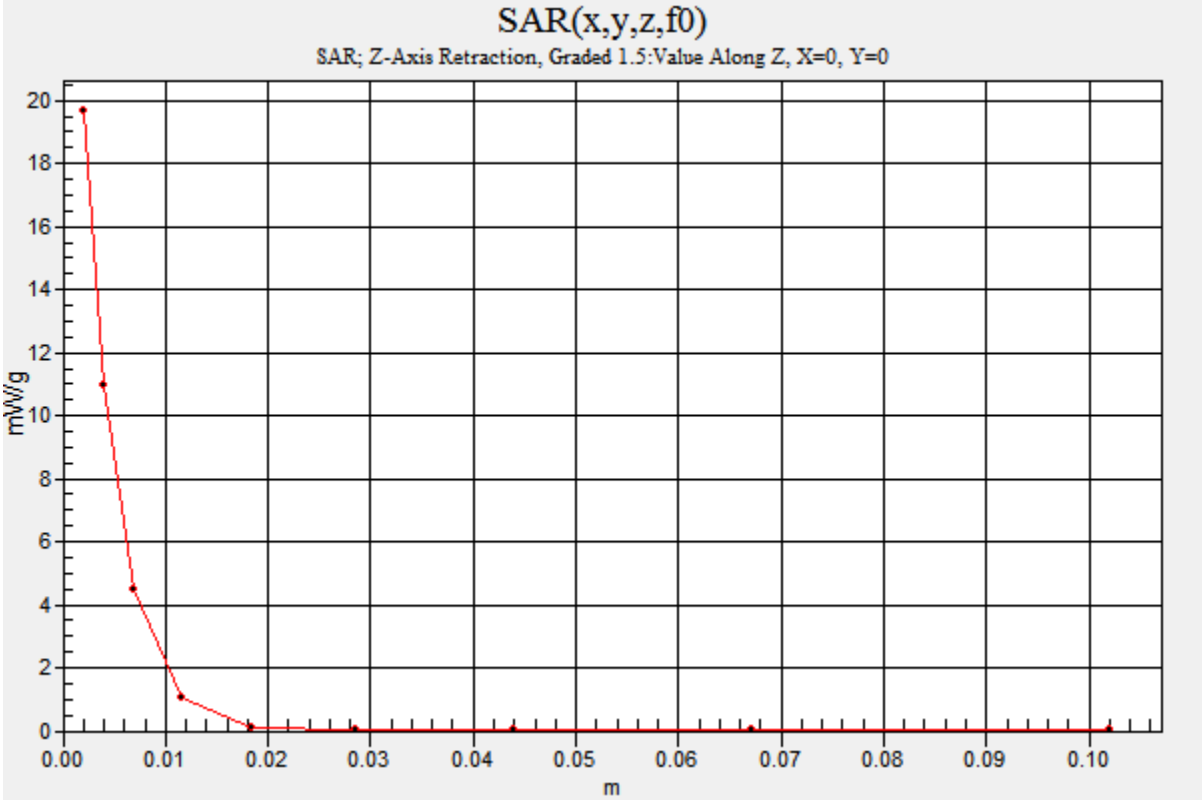
- Probe: EX3DV4 - SN3730; ConvF(4.67, 4.67, 4.67); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 13.5 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 57.8 V/m; Power Drift = 0.058 dB
Peak SAR (extrapolated) = 36.3 W/kg
SAR(1 g) = 9.26 mW/g; SAR(10 g) = 2.62 mW/g
Maximum value of SAR (measured) = 19.6 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: dx=20mm, dy=20mm, dz=2mm
Maximum value of SAR (measured) = 19.7 mW/g




SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
20
18
16
14
12
10
8
6
4
2
0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
m

Date/Time: 3/11/2011 6:55:01 AM

Test Laboratory: Motorola - Mar-11-2011 5200 MHz

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1088; FCC ID: IHDP56LS2
Procedure Notes: 5200 MHz System Performance Check; Dipole Sn# 1088; Input Power = 100 mW
Sim.Temp@meas = 19.3*C; Sim.Temp@SPC = 19.3*C; Room Temp @ SPC = 20.3*C
Communication System: CW - Dipole; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 5200 MHz; σ = 4.82 mho/m; ε_r = 34.2; ρ = 1000 kg/m^3

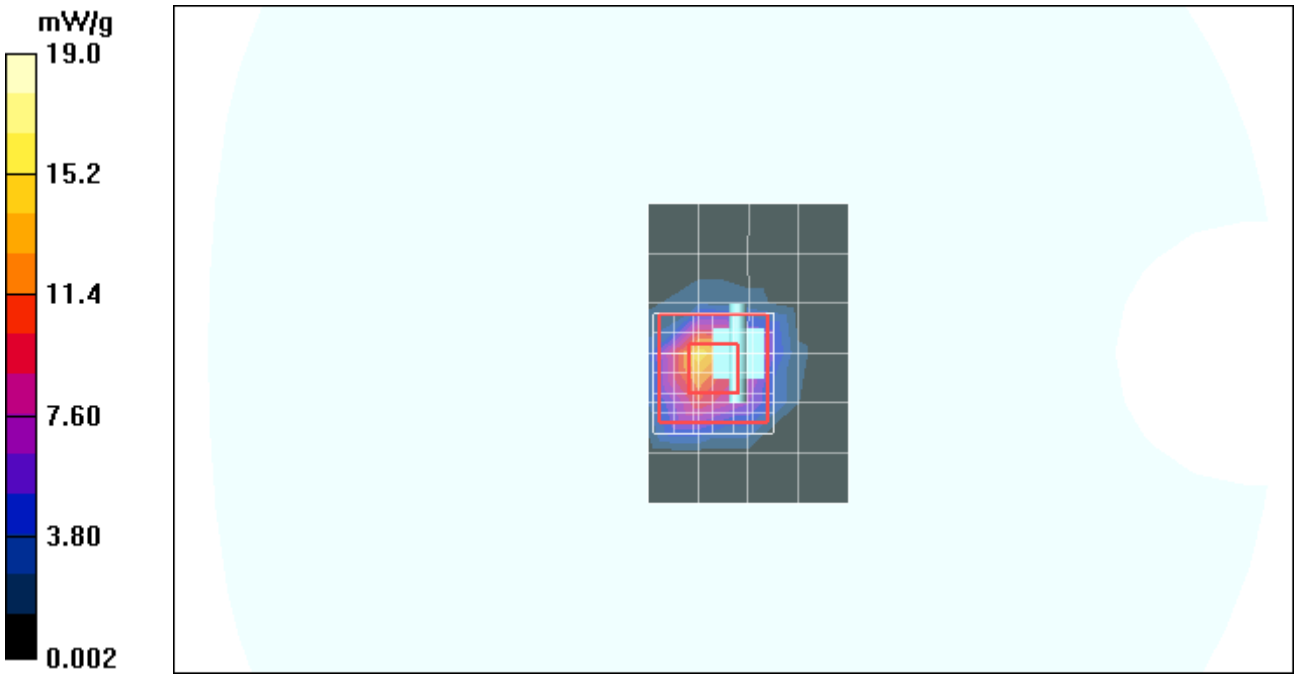
DASY4 Configuration:

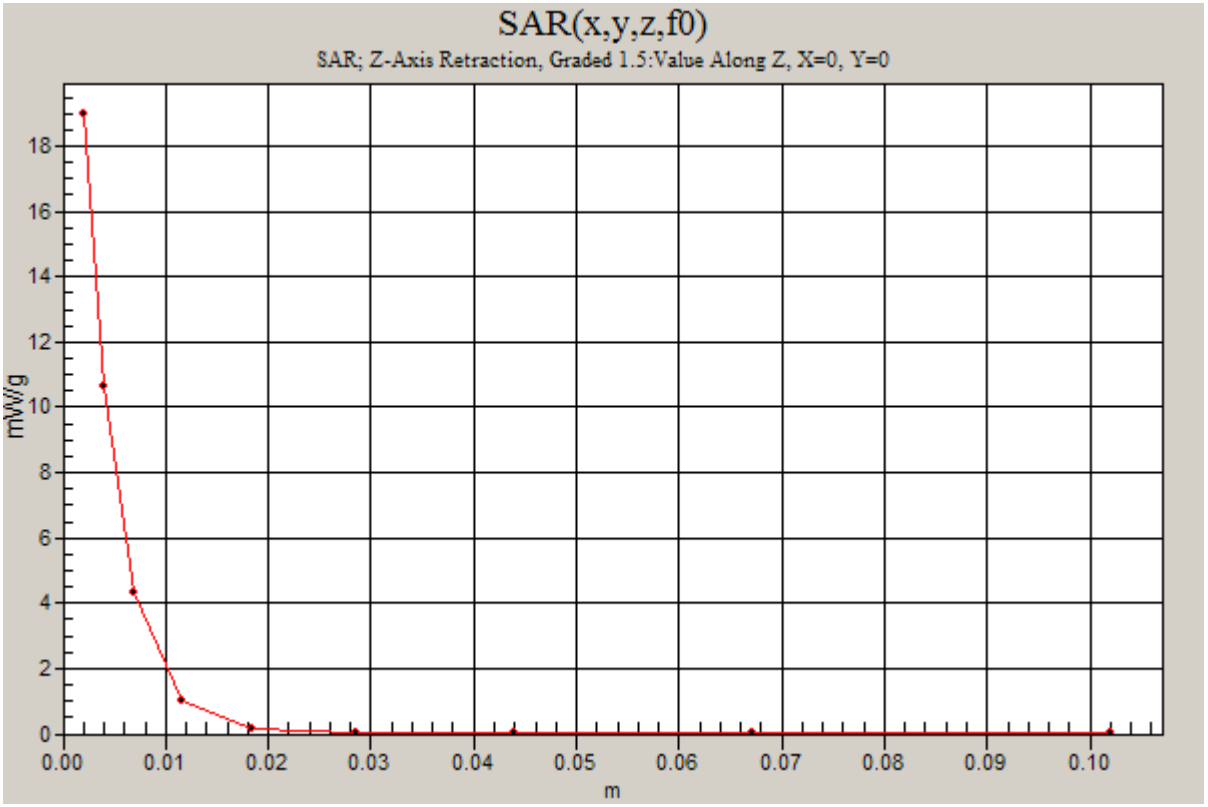
- Probe: EX3DV4 - SN3730; ConvF(4.67, 4.67, 4.67); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1):
Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 15.1 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 54.1 V/m; Power Drift = 0.159 dB; Peak SAR (extrapolated) = 35.3 W/kg
SAR(1 g) = 9.09 mW/g; SAR(10 g) = 2.59 mW/g; Maximum value of SAR (measured) = 19.0 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9):
Measurement grid: dx=20mm, dy=20mm, dz=2mm


mW/g
19.0
15.2
11.4
7.60
3.80
0.002


SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
18
16
14
12
10
8
6
4
2
0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
m

Test Laboratory: Motorola 5800 System Performance Check

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1088;
Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -20.6 dB Sim.Temp@SPC = 19.2*C Room Temp @ SPC = 20.7*C
Communication System: CW - Dipole; Frequency: 5800 MHz; Communication System Channel Number: 16; Duty Cycle: 1:1
Medium: VALIDATION Only; Medium parameters used: f = 5800 MHz; σ = 5.44 mho/m; ε_r = 33.1; ρ = 1000 kg/m^3

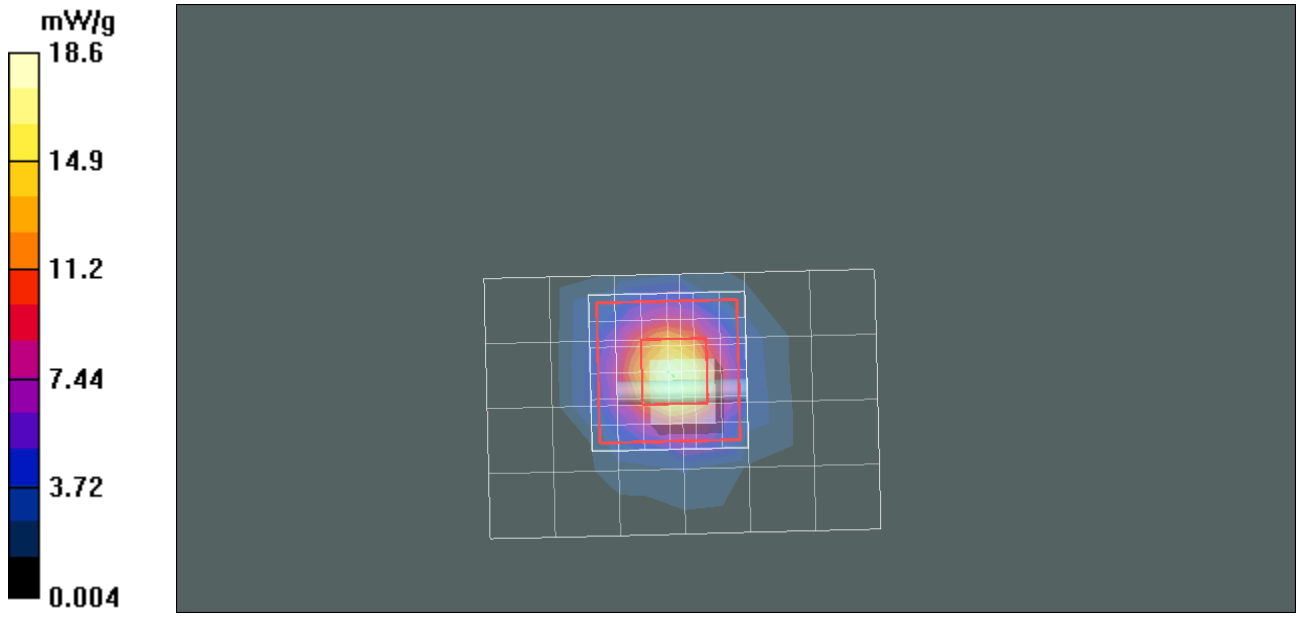
DASY4 Configuration:

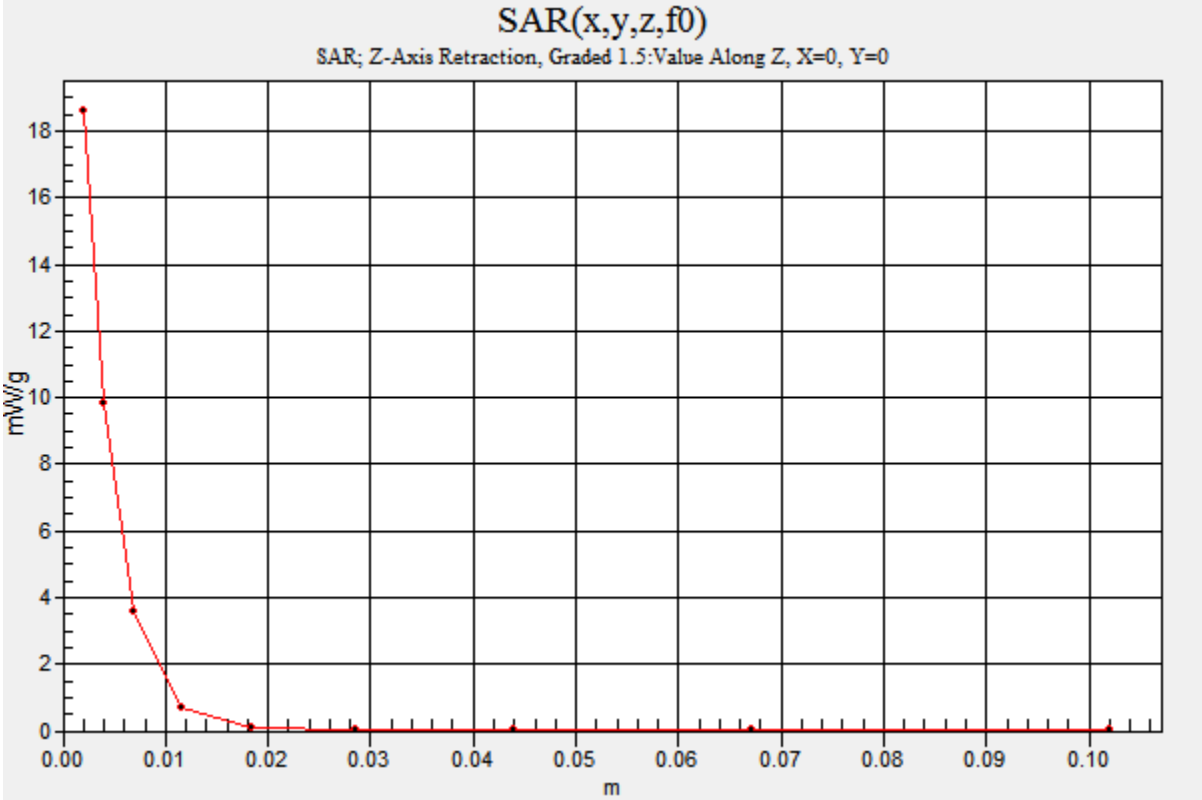
- Probe: EX3DV4 - SN3730; ConvF(4.06, 4.06, 4.06); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 14.5 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 61.3 V/m; Power Drift = 0.050 dB
Peak SAR (extrapolated) = 36.2 W/kg
SAR(1 g) = 8.87 mW/g; SAR(10 g) = 2.52 mW/g
Maximum value of SAR (measured) = 18.5 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: dx=20mm, dy=20mm, dz=2mm
Maximum value of SAR (measured) = 18.6 mW/g




SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
18
16
14
12
10
8
6
4
2
0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
m

Date/Time: 3/6/2011 8:02:22 AM

Test Laboratory: Motorola - Mar-06-2011 5800 MHz

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1088; FCC ID: IHDP56LS2
Procedure Notes: 5800 MHz System Performance Check; Dipole Sn# 1088; Input Power = 100 mW
Sim.Temp@meas = 20.5□C; Sim.Temp@SPC = 20.5□C; Room Temp @ SPC = 20.7□C
Communication System: CW - Dipole; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 5800 MHz; σ = 5.35 mho/m; ε_r = 32.6; ρ = 1000 kg/m^3

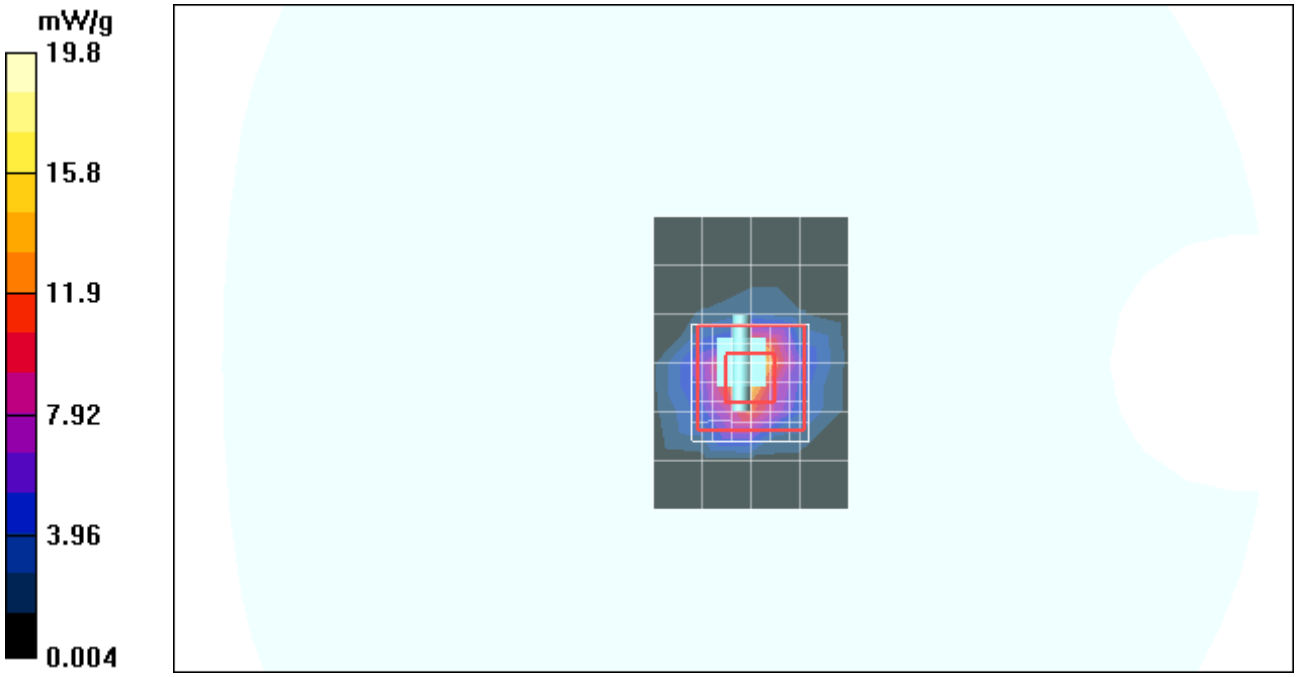
DASY4 Configuration:

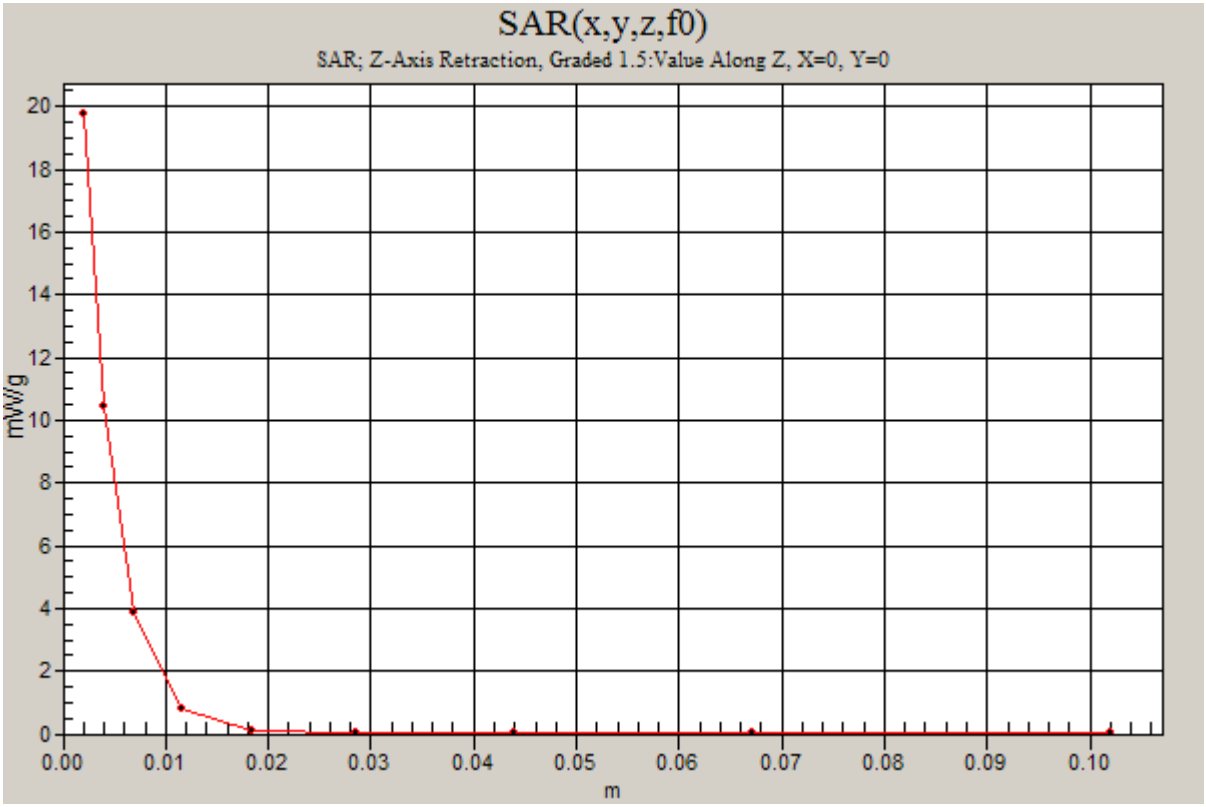
- Probe: EX3DV4 - SN3730; ConvF(4.06, 4.06, 4.06); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1):
Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 17.3 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 60.9 V/m; Power Drift = -0.089 dB; Peak SAR (extrapolated) = 38.1 W/kg
SAR(1 g) = 9.23 mW/g; SAR(10 g) = 2.64 mW/g; Maximum value of SAR (measured) = 19.5 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9):
Measurement grid: dx=20mm, dy=20mm, dz=2mm; Maximum value of SAR (measured) = 19.8 mW/g


mW/g
19.8
15.8
11.9
7.92
3.96
0.004


SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
m
0
2
4
6
8
10
12
14
16
18
20
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10

Date/Time: 3/7/2011 8:09:54 AM

Test Laboratory: Motorola - Mar-07-2011 5800 MHz

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1088; FCC ID: IHDP56LS2
Procedure Notes: 5800 MHz System Performance Check; Dipole Sn# 1088; Input Power = 100 mW
Sim.Temp@meas = 19.7*C; Sim.Temp@SPC = 19.7*C; Room Temp @ SPC = 20.4*C
Communication System: CW - Dipole; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 5800 MHz; σ = 5.43 mho/m; ε_r = 32.4; ρ = 1000 kg/m^3

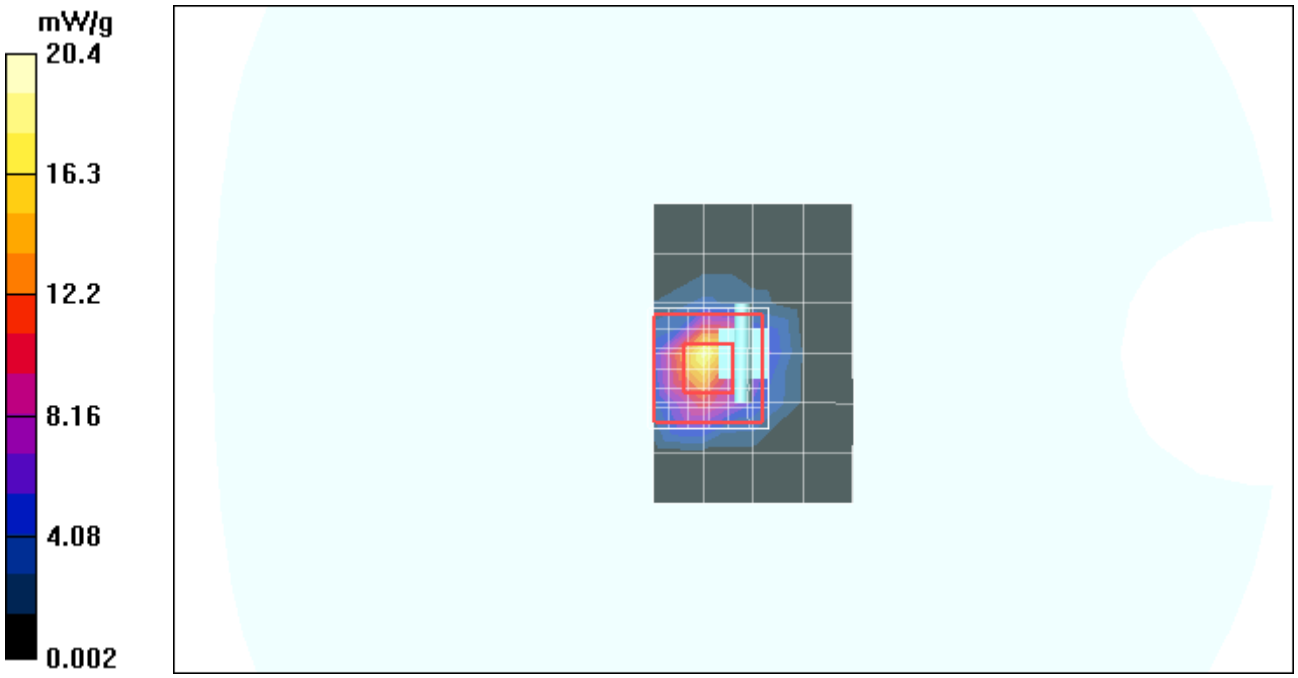
DASY4 Configuration:

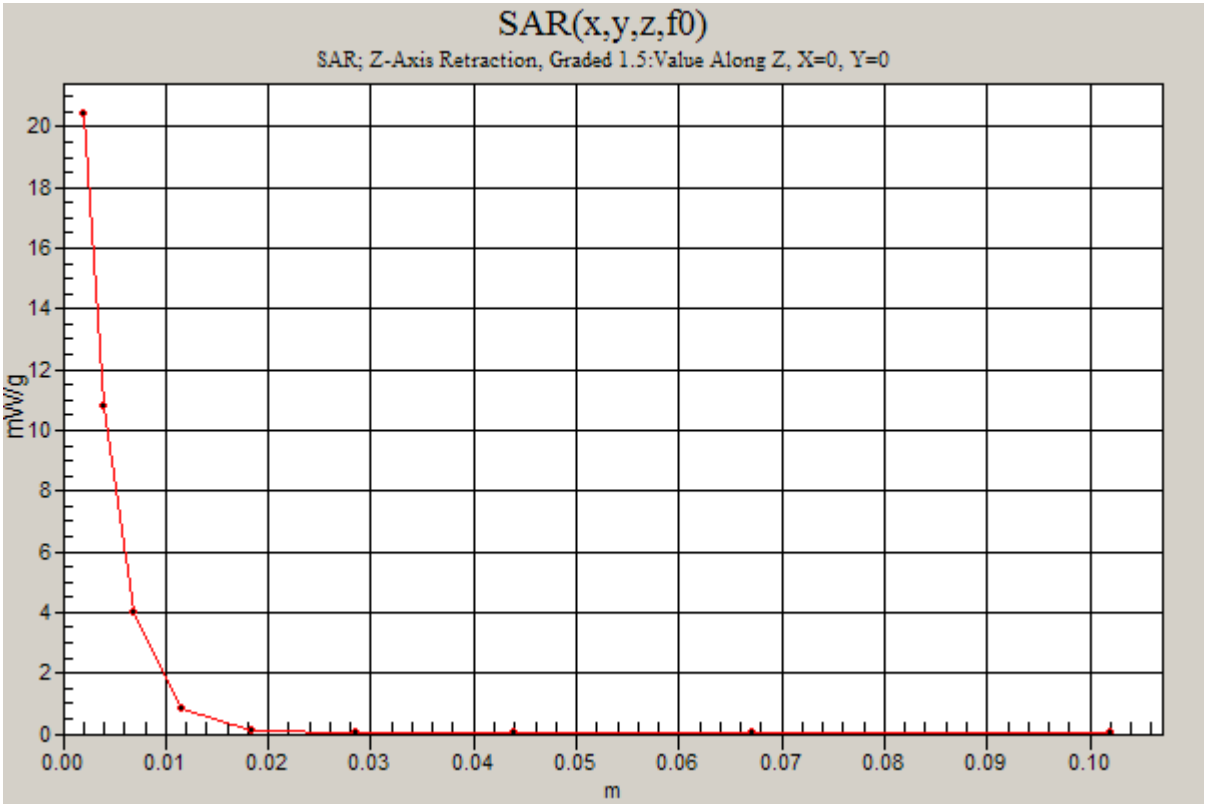
- Probe: EX3DV4 - SN3730; ConvF(4.06, 4.06, 4.06); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1):
Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 18.5 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 49.0 V/m; Power Drift = 0.187 dB; Peak SAR (extrapolated) = 39.4 W/kg
SAR(1 g) = 9.42 mW/g; SAR(10 g) = 2.67 mW/g; Maximum value of SAR (measured) = 20.4 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9):
Measurement grid: dx=20mm, dy=20mm, dz=2mm


mW/g
20.4
16.3
12.2
8.16
4.08
0.002


SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
20
18
16
14
12
10
8
6
4
2
0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10
m

Date/Time: 3/10/2011 7:35:25 AM

Test Laboratory: Motorola - Mar-10-2011 5800 MHz

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1088; FCC ID: IHDP56LS2
Procedure Notes: 5800 MHz System Performance Check; Dipole Sn# 1088; Input Power = 100 mW
Sim.Temp@meas = 19.7*C; Sim.Temp@SPC = 19.7*C; Room Temp @ SPC = 20.6*C
Communication System: CW - Dipole; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: VALIDATION Only
Medium parameters used: f = 5800 MHz; σ = 5.54 mho/m; ε_r = 33.2; ρ = 1000 kg/m^3

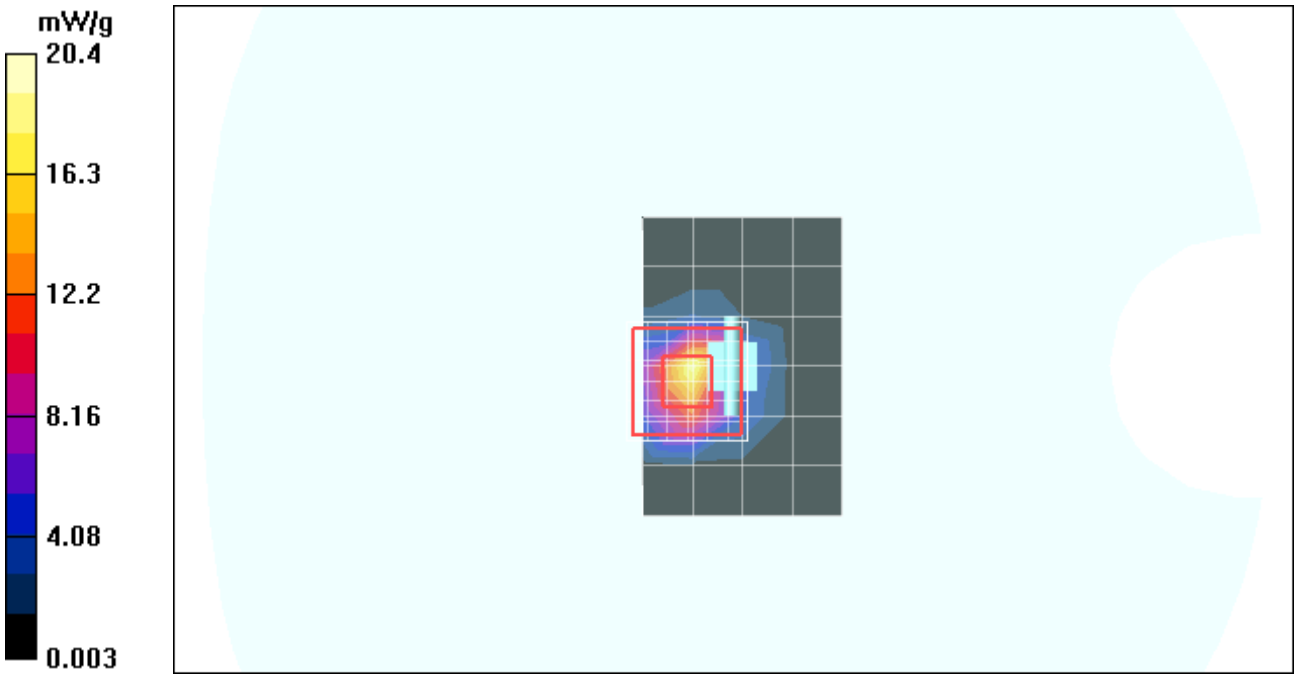
DASY4 Configuration:

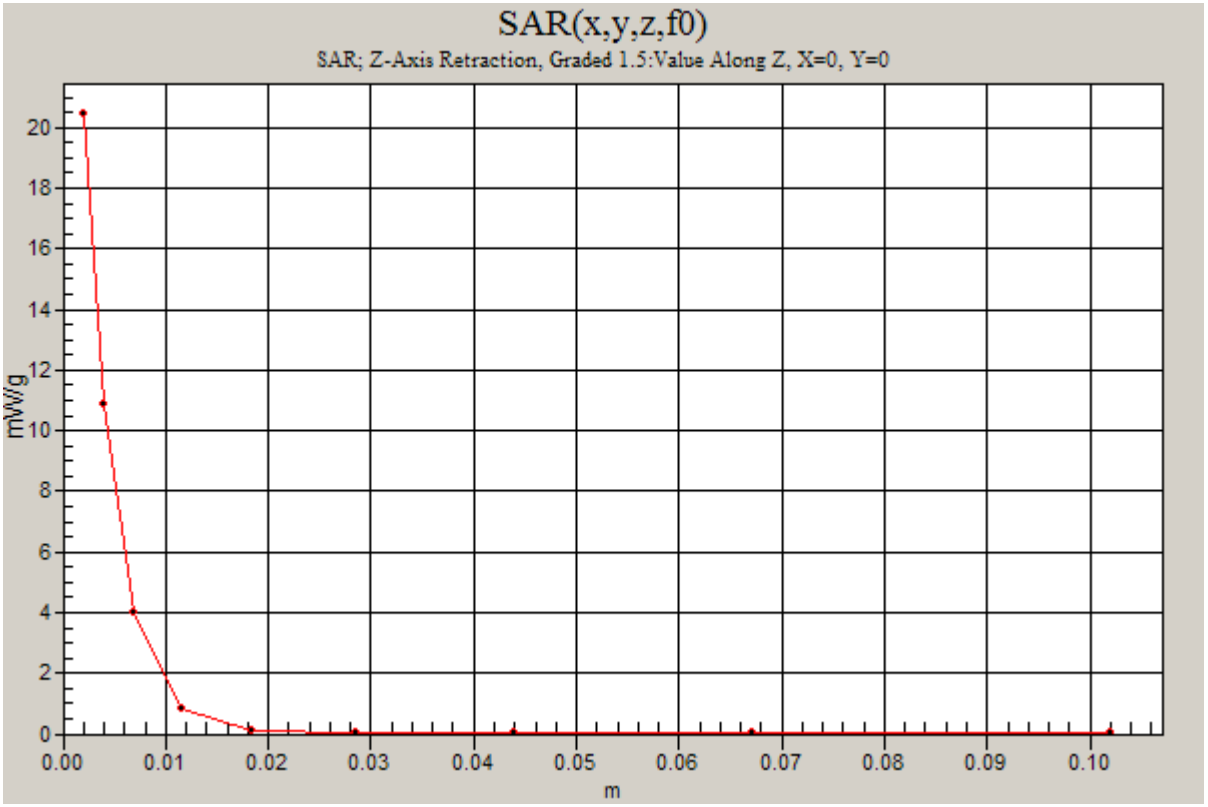
- Probe: EX3DV4 - SN3730; ConvF(4.06, 4.06, 4.06); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x7x1):
Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 18.5 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 40.7 V/m; Power Drift = 0.142 dB; Peak SAR (extrapolated) = 40.8 W/kg
SAR(1 g) = 9.68 mW/g; SAR(10 g) = 2.73 mW/g; Maximum value of SAR (measured) = 21.0 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9):
Measurement grid: dx=20mm, dy=20mm, dz=2mm; Maximum value of SAR (measured) = 20.4 mW/g


mW/g
20.4
16.3
12.2
8.16
4.08
0.003


SAR(x,y,z,f0)
SAR; Z-Axis Retraction, Graded 1.5:Value Along Z, X=0, Y=0
mW/g
m
0
2
4
6
8
10
12
14
16
18
20
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0.08
0.09
0.10

Appendix 2

SAR distribution plots for Phantom Head Adjacent Use

Date/Time: 2/27/2011 4:10:17 AM

Test Laboratory: Motorola - GSM 850 Cheek

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: 5; Antenna Position: Internal; Accessory Model #: N/A
Battery Model #: SNN5893A; DEVICE POSITION: Cheek
Communication System: GSM 850; Frequency: 836.6 MHz; Channel Number: 190; Duty Cycle: 1:8.3

Medium: Low Freq Head
Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 40.7; ρ = 1000 kg/m^3

DASY4 Configuration:

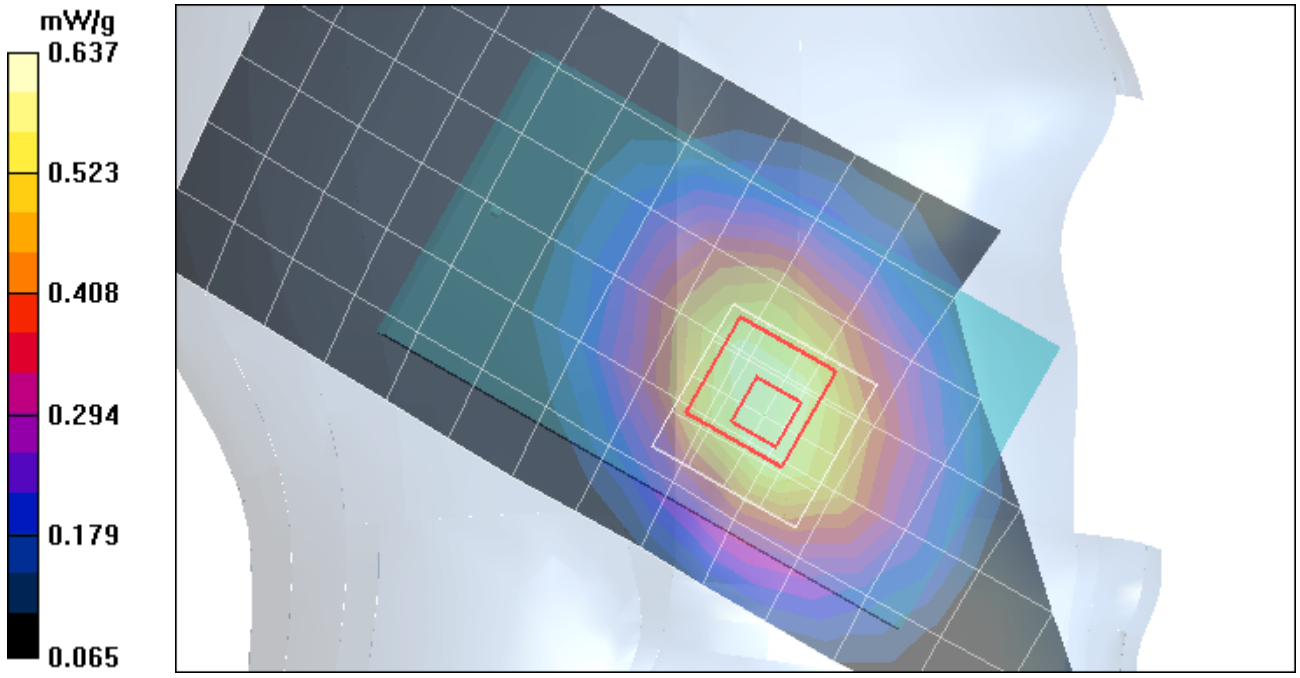
- Probe: ES3DV3 - SN3124; ConvF(5.89, 5.89, 5.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.602 mW/g

Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.2 V/m; Power Drift = -0.059 dB; Peak SAR (extrapolated) = 0.780 W/kg
SAR(1 g) = 0.596 mW/g; SAR(10 g) = 0.434 mW/g; Maximum value of SAR (measured) = 0.637 mW/g



Date/Time: 2/27/2011 8:11:08 AM

Test Laboratory: Motorola - WCDMA 850 Cheek

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: All Up Bits; Antenna Position: Internal; Accessory Model #: N/A
Battery Model #: SNN5865A; DEVICE POSITION: Cheek
Communication System: WCDMA 850; Frequency: 836 MHz; Channel Number: 4180; Duty Cycle: 1:1

Medium: Low Freq Head
Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 40.7; ρ = 1000 kg/m^3

DASY4 Configuration:

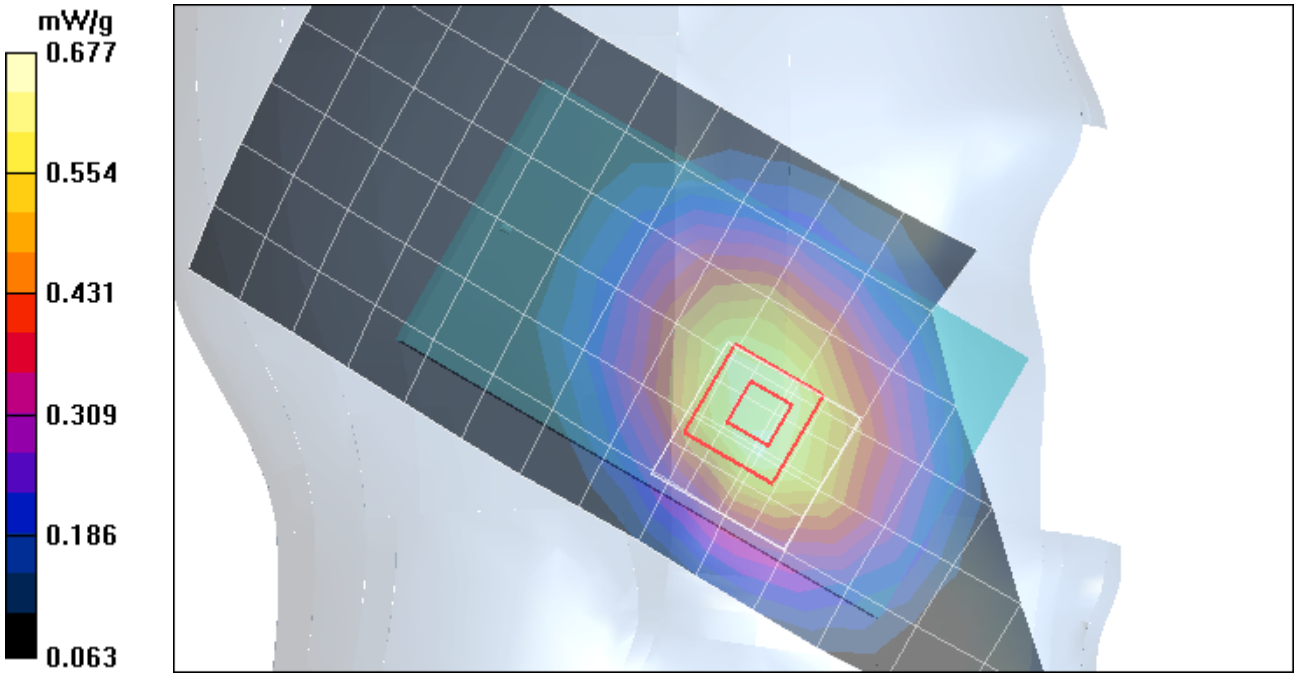
- Probe: ES3DV3 - SN3124; ConvF(5.89, 5.89, 5.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.647 mW/g

Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.6 V/m; Power Drift = 0.124 dB; Peak SAR (extrapolated) = 0.852 W/kg
SAR(1 g) = 0.649 mW/g; SAR(10 g) = 0.472 mW/g; Maximum value of SAR (measured) = 0.677 mW/g



Date/Time: 2/25/2011 1:57:36 PM

Test Laboratory: Motorola - GSM 1900 Cheek

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: 0; Antenna Position: Internal; Accessory Model #: N/A
Battery Model #: SNN5865A; DEVICE POSITION: Cheek
Communication System: GSM 1900; Frequency: 1880 MHz; Channel Number: 661; Duty Cycle: 1:8.3

Medium: 1950 Glycol Head
Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3

DASY4 Configuration:

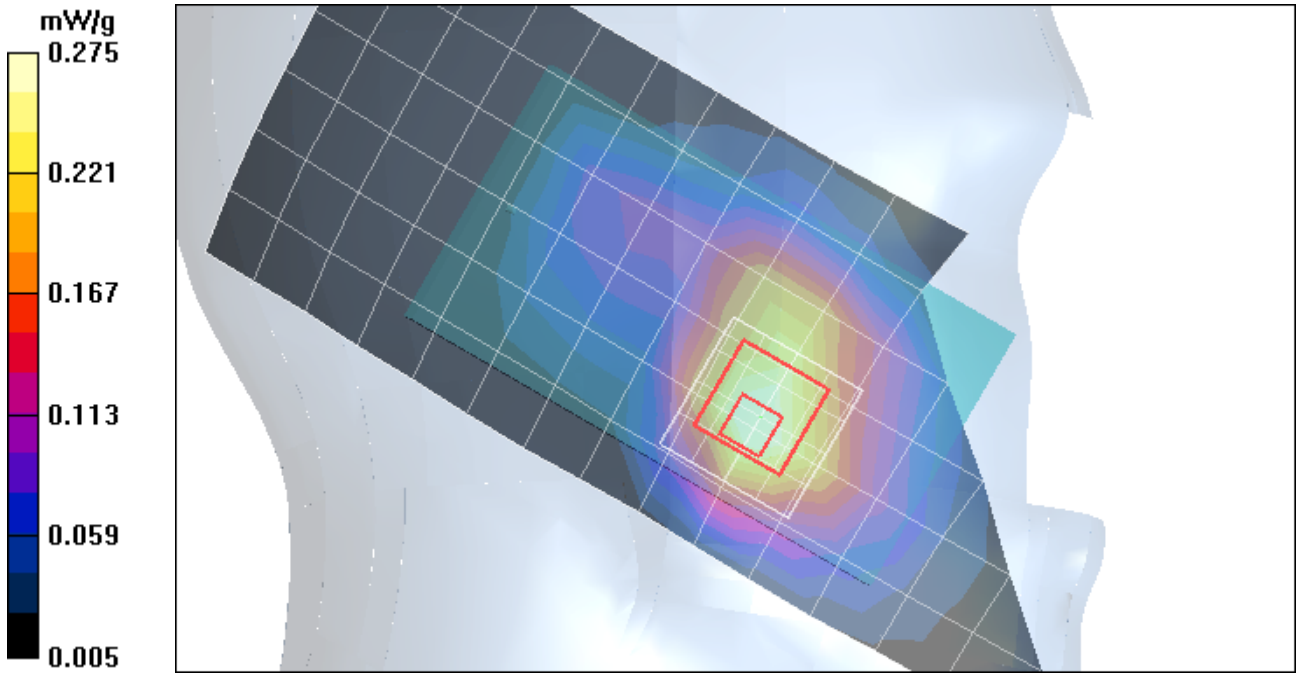
- Probe: ES3DV3 - SN3124; ConvF(4.89, 4.89, 4.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.300 mW/g

Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.3 V/m; Power Drift = -0.408 dB; Peak SAR (extrapolated) = 0.371 W/kg
SAR(1 g) = 0.257 mW/g; SAR(10 g) = 0.164 mW/g; Maximum value of SAR (measured) = 0.275 mW/g



Date/Time: 2/26/2011 10:25:53 AM

Test Laboratory: Motorola - WCDMA 1900 Cheek

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: All Up Bits; Antenna Position: Internal; Accessory Model #: N/A
Battery Model #: SNN5865A; DEVICE POSITION: Cheek
Communication System: WCDMA 1900; Frequency: 1907.5 MHz; Channel Number: 9538; Duty Cycle: 1:1

Medium: 1950 Glycol Head
Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3

DASY4 Configuration:

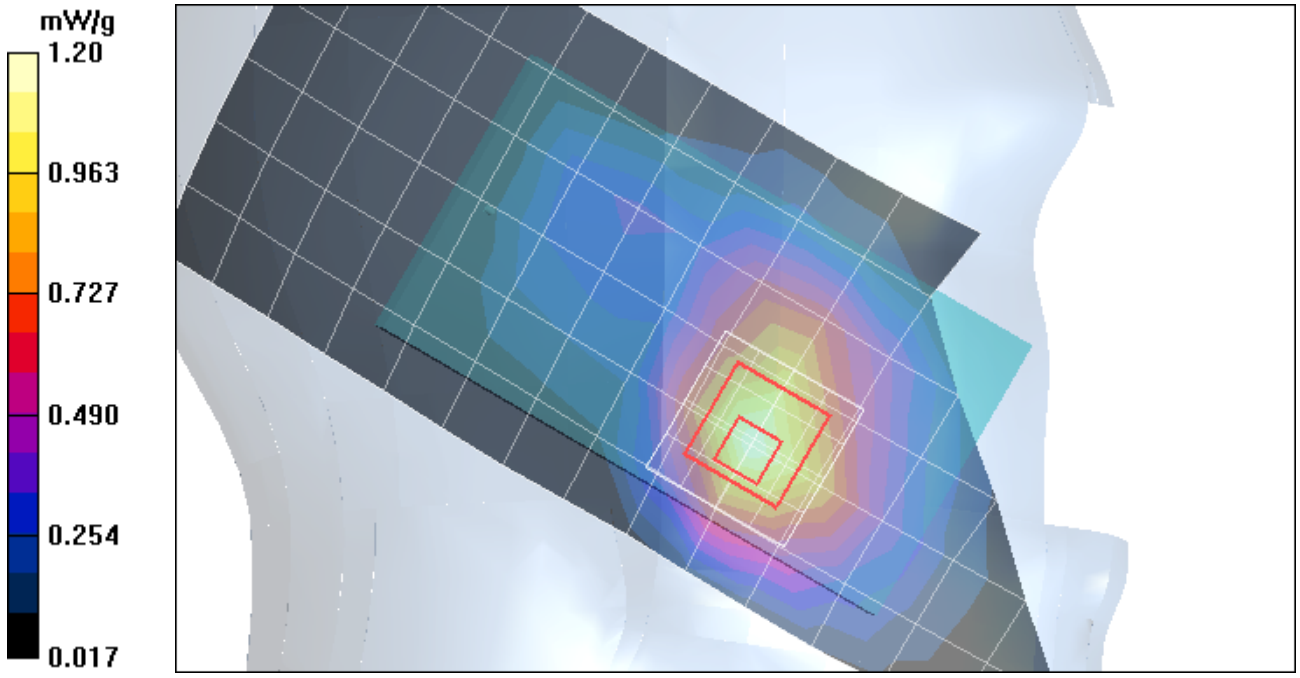
- Probe: ES3DV3 - SN3124; ConvF(4.89, 4.89, 4.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 1.21 mW/g

Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.4 V/m; Power Drift = -0.044 dB; Peak SAR (extrapolated) = 1.65 W/kg
SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.704 mW/g; Maximum value of SAR (measured) = 1.20 mW/g



Date/Time: 3/1/2011 2:03:59 PM

Test Laboratory: Motorola - Wi-Fi 2.45 GHz Cheek

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: N/A; Antenna Position: Internal; Accessory Model #: N/A
Battery Model #: SNN5893A; DEVICE POSITION: Cheek
Device Mode: 802.11b mode, 1 Mbps data rate
Communication System: Wi-Fi 2450; Frequency: 2437 MHz; Channel Number: 6; Duty Cycle: 1:1

Medium: 2450 Glycol Head
Medium parameters used: f = 2450 MHz; σ = 1.86 mho/m; ε_r = 35.8; ρ = 1000 kg/m^3

DASY4 Configuration:

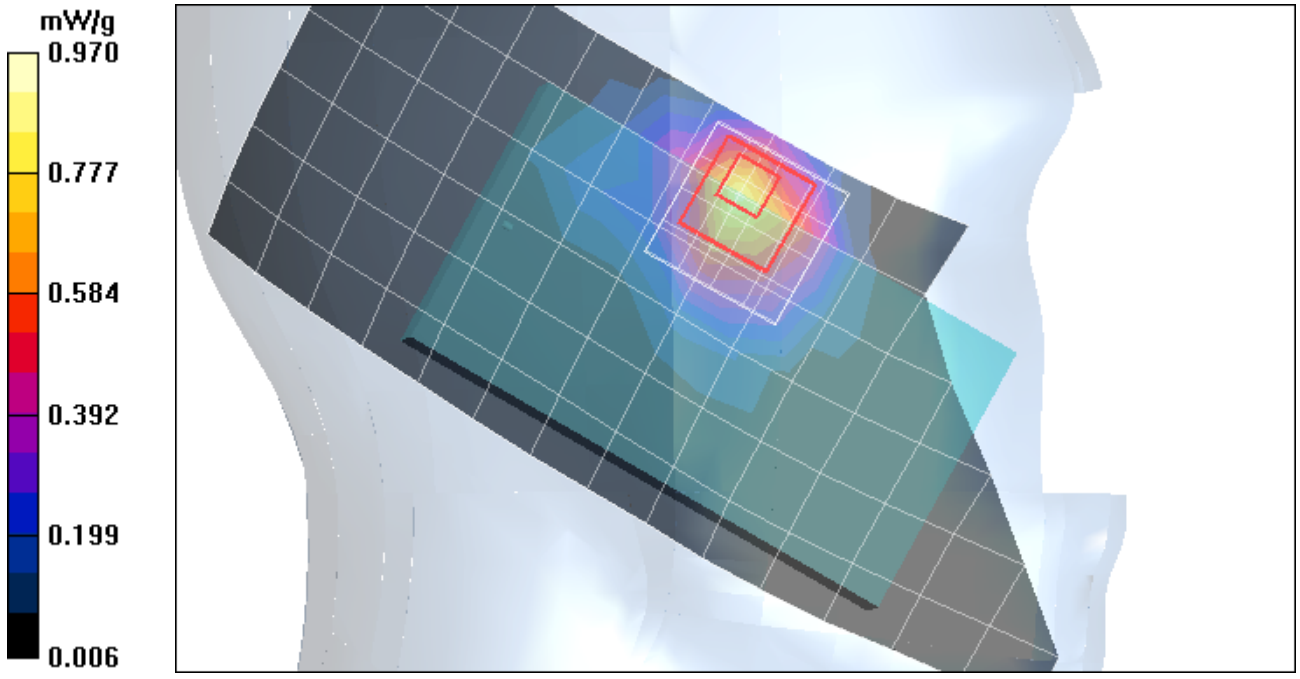
- Probe: ES3DV3 - SN3124; ConvF(4.35, 4.35, 4.35); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.877 mW/g

Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.1 V/m; Power Drift = -0.200 dB; Peak SAR (extrapolated) = 2.07 W/kg
SAR(1 g) = 0.890 mW/g; SAR(10 g) = 0.416 mW/g; Maximum value of SAR (measured) = 0.970 mW/g



Test Laboratory: Motorola Wi-Fi 5.21 GHz Cheek

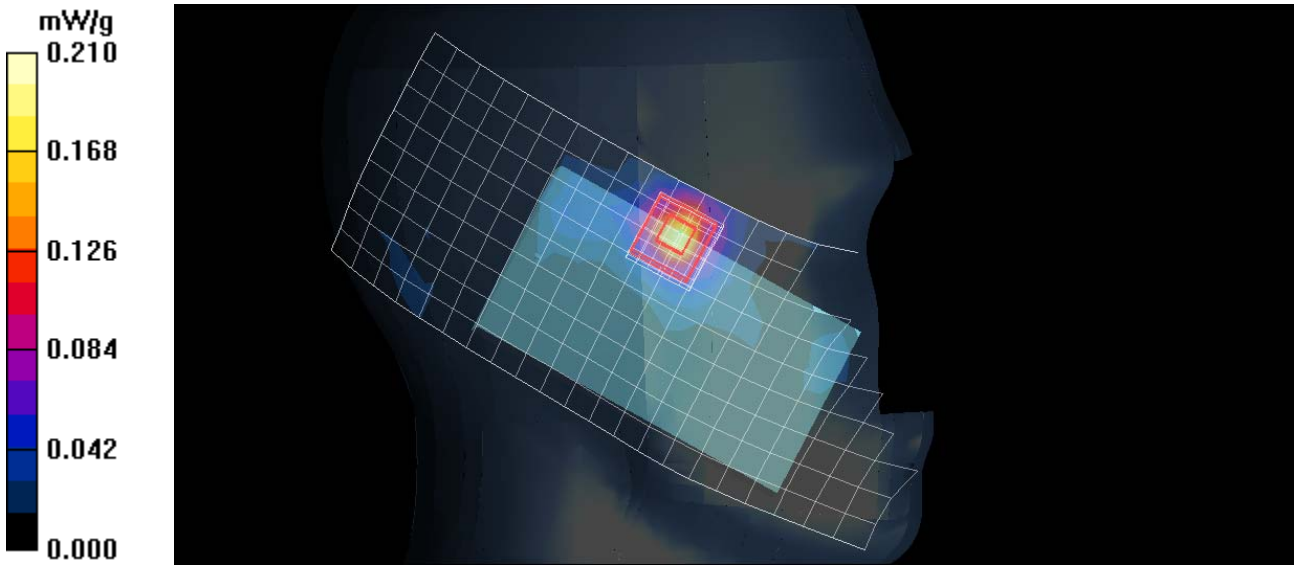
DUT: Serial: TA0140008Z; FCC ID: IHDP56LS2
Procedure Notes: 802.11a 6Mbps Battery Model #: SNN5893A DEVICE POSITION: cheek touch
Communication System: 5210MHz Band - 802.11a; Frequency: 5180 MHz; Communication System Channel Number: 36; Duty Cycle: 1:1
Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: f = 5210 MHz; σ = 4.95 mho/m; ε_r = 34.4; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: EX3DV4 - SN3730; ConvF(4.67, 4.67, 4.67); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.167 mW/g

Left Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.53 V/m; Power Drift = -0.580 dB
Peak SAR (extrapolated) = 0.427 W/kg
SAR(1 g) = 0.109 mW/g; SAR(10 g) = 0.036 mW/g
Maximum value of SAR (measured) = 0.210 mW/g



Test Laboratory: Motorola Wi-Fi 5.785 GHz Cheek

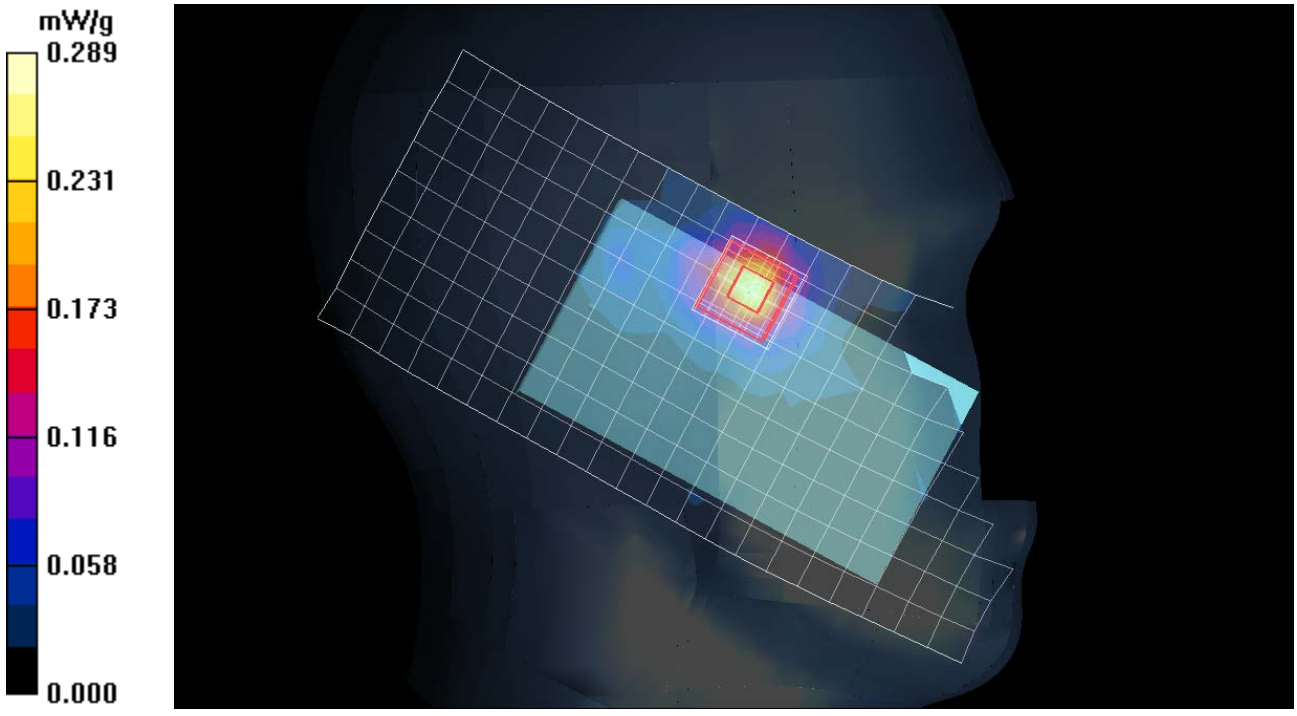
DUT: Serial: TA0140008Z; FCC ID: IHDP56LS2
Procedure Notes: 802.11a 6Mbps Battery Model #: SNN5893A DEVICE POSITION= CHEEK
Communication System: 5785MHz Band - 802.11a; Frequency: 5745 MHz; Communication System Channel Number: 149; Duty Cycle: 1:1
Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: f = 5785 MHz; σ = 5.43 mho/m; ε_r = 33.1; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: EX3DV4 - SN3730; ConvF(4.06, 4.06, 4.06); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.284 mW/g

Left Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.81 V/m; Power Drift = -0.474 dB
Peak SAR (extrapolated) = 0.466 W/kg
SAR(1 g) = 0.128 mW/g; SAR(10 g) = 0.044 mW/g
Maximum value of SAR (measured) = 0.289 mW/g



Date/Time: 2/27/2011 4:28:11 AM

Test Laboratory: Motorola - GSM 850 Tilt

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: 5; Antenna Position: Internal; Accessory Model #: N/A
Battery Model #: SNN5893A; DEVICE POSITION: Tilt
Communication System: GSM 850; Frequency: 836.6 MHz; Channel Number: 190; Duty Cycle: 1:8.3

Medium: Low Freq Head
Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 40.7; ρ = 1000 kg/m^3

DASY4 Configuration:

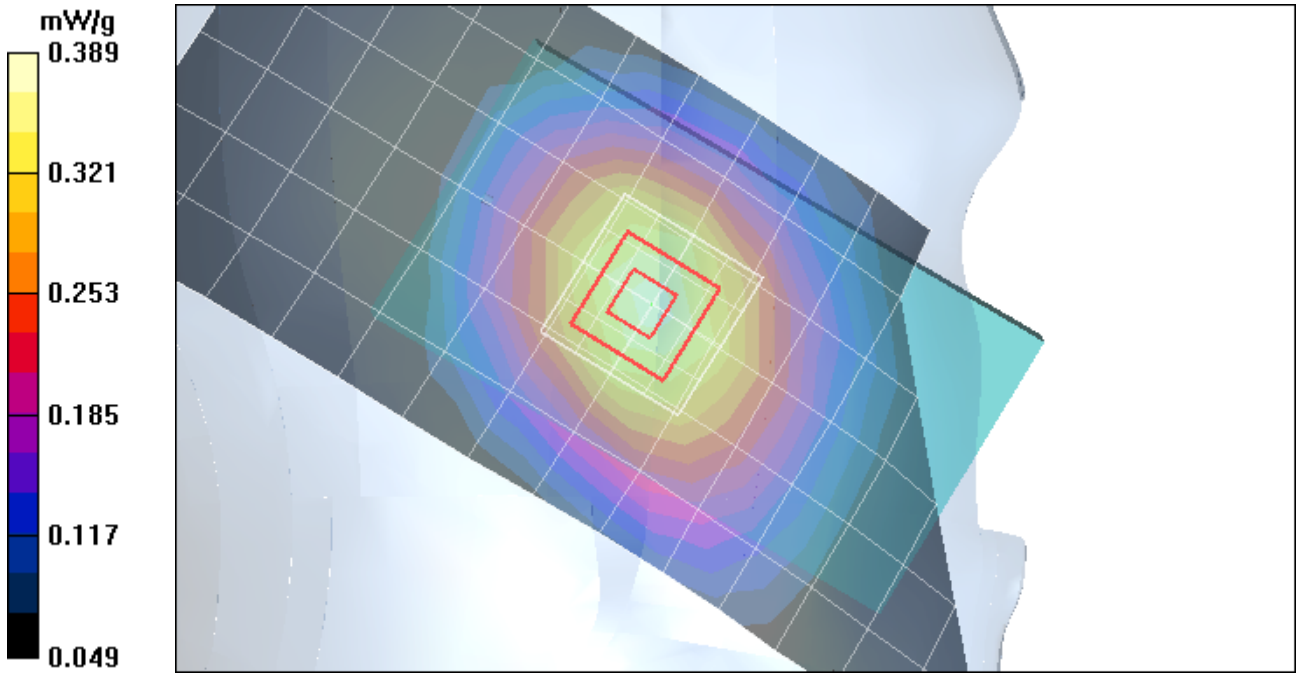
- Probe: ES3DV3 - SN3124; ConvF(5.89, 5.89, 5.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.388 mW/g

Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.0 V/m; Power Drift = 0.004 dB; Peak SAR (extrapolated) = 0.464 W/kg
SAR(1 g) = 0.366 mW/g; SAR(10 g) = 0.272 mW/g; Maximum value of SAR (measured) = 0.389 mW/g



Date/Time: 2/27/2011 7:10:56 AM

Test Laboratory: Motorola WCDMA 850 - 15 Degree Tilt

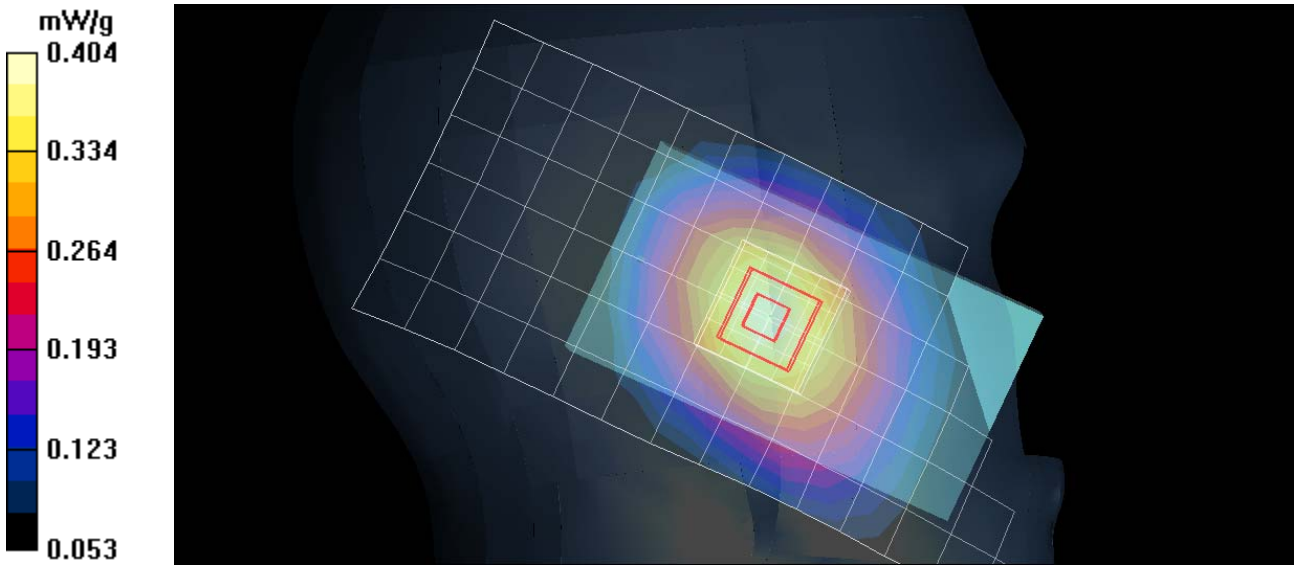
DUT: Serial: TA014000R5; FCC ID: IHDP56LS1
Procedure Notes: Pwr Step: ALL UP BITS Battery Model #: SNN5893A DEVICE POSITION = 15 Degree TILT
Communication System: 3G-WCDMA 850; Frequency: 836 MHz; Communication System Channel Number: 4180;
Duty Cycle: 1:1
Medium: Low Freq Head; Medium parameters used: f = 835 MHz; σ = 0.91 mho/m; ε_r = 40.7; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.89, 5.89, 5.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.404 mW/g

Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.3 V/m; Power Drift = 0.098 dB
Peak SAR (extrapolated) = 0.476 W/kg
SAR(1 g) = 0.381 mW/g; SAR(10 g) = 0.286 mW/g



Test Laboratory: Motorola - GSM 1900 15 Degree Tilt

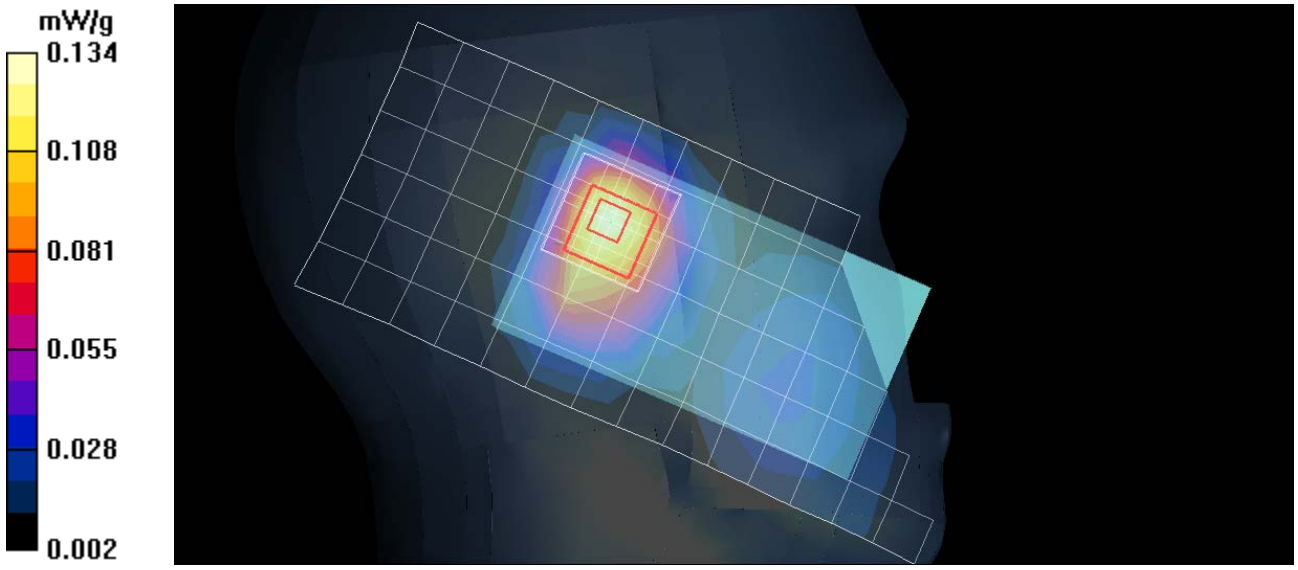
DUT: Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: 0 Battery Model #: SNN5893A DEVICE POSITION = 15 Degree TILT
Communication System: GSM 1900; Frequency: 1880 MHz; Communication System Channel Number: 661; Duty Cycle: 1:8.3
Medium: 1950 Glycol Head; Medium parameters used: f = 1880 MHz; σ = 1.42 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.89, 4.89, 4.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.137 mW/g

Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.36 V/m; Power Drift = -0.030 dB
Peak SAR (extrapolated) = 0.194 W/kg
SAR(1 g) = 0.125 mW/g; SAR(10 g) = 0.077 mW/g
Maximum value of SAR (measured) = 0.134 mW/g



Date/Time: 2/26/2011 8:37:31 AM

Test Laboratory: Motorola WCDMA 1900 - 15 Degree Tilt

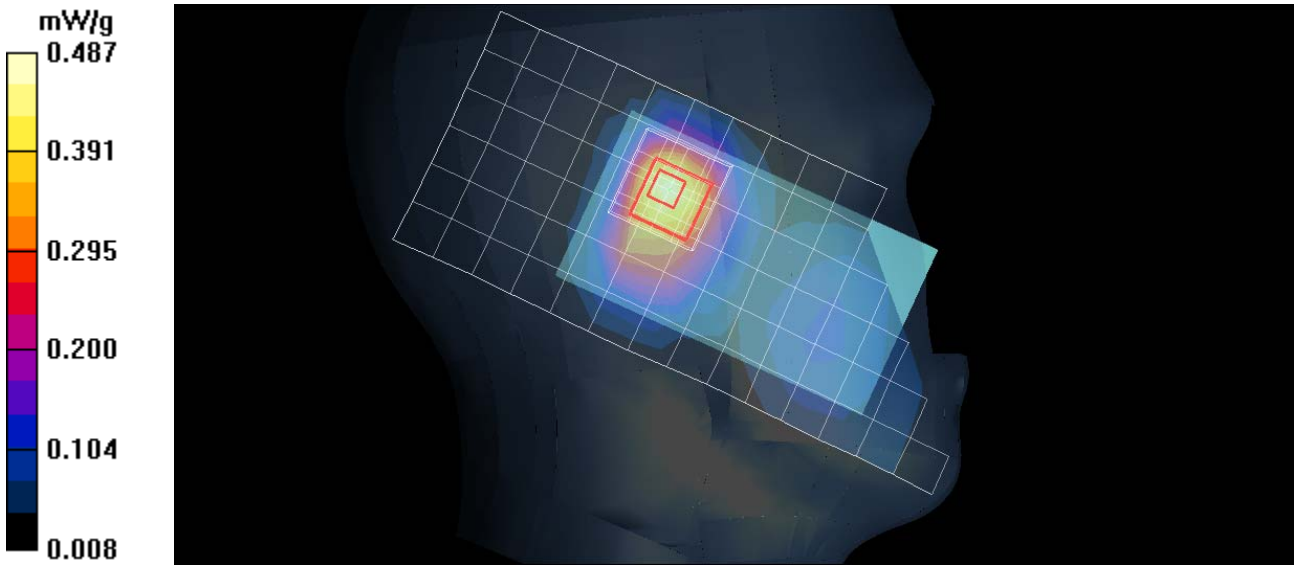
DUT: Serial: TA014000R5; FCC ID: IHDP56LS1
Procedure Notes: Pwr Step: ALL UP BITS Battery Model #: SNN5893A DEVICE POSITION =15 Degree TILT Communication System: 3G/WCDMA 1900; Frequency: 1880 MHz; Communication System Channel Number: 9400; Duty Cycle: 1:1
Medium: 1950 Glycol Head; Medium parameters used: f = 1880 MHz; σ = 1.4 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.89, 4.89, 4.89); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.460 mW/g

Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.2 V/m; Power Drift = 0.024 dB
Peak SAR (extrapolated) = 0.690 W/kg
SAR(1 g) = 0.450 mW/g; SAR(10 g) = 0.278 mW/g
Maximum value of SAR (measured) = 0.487 mW/g



Date/Time: 3/1/2011 1:09:48 PM

Test Laboratory: Motorola - Wi-Fi 2.45 GHz Tilt

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: N/A; Antenna Position: Internal; Accessory Model #: N/A
Battery Model #: SNN5893A; DEVICE POSITION: Tilt
Device Mode: 802.11b mode, 1 Mbps data rate
Communication System: Wi-Fi 2450; Frequency: 2412 MHz; Channel Number: 1; Duty Cycle: 1:1

Medium: 2450 Glycol Head
Medium parameters used: f = 2450 MHz; σ = 1.86 mho/m; ε_r = 35.8; ρ = 1000 kg/m^3

DASY4 Configuration:

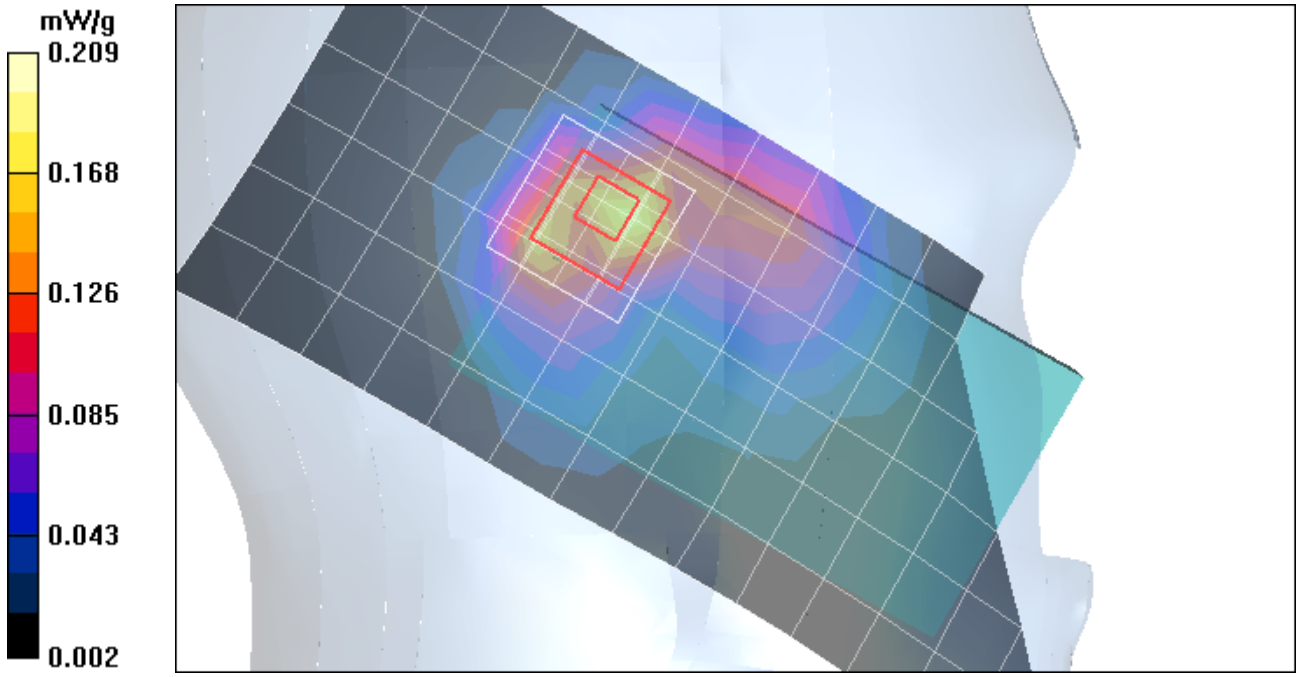
- Probe: ES3DV3 - SN3124; ConvF(4.35, 4.35, 4.35); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#4 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1250;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.181 mW/g

Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.4 V/m; Power Drift = 0.229 dB; Peak SAR (extrapolated) = 0.345 W/kg
SAR(1 g) = 0.189 mW/g; SAR(10 g) = 0.100 mW/g; Maximum value of SAR (measured) = 0.209 mW/g



Test Laboratory: Motorola Wi-Fi 5.21 GHz 15 Degree Tilt

DUT: Serial: TA0140008Z; FCC ID: IHDP56LS2
Procedure Notes: 802.11a, 6Mbps Battery Model #: SNN5893A DEVICE POSITION = 15 Degree TILTED
Communication System: 5210MHz Band - 802.11a; Frequency: 5180 MHz; Communication System Channel Number: 36; Duty Cycle: 1:1
Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: f = 5210 MHz; σ = 4.81 mho/m; ε_r = 34; ρ = 1000 kg/m^3

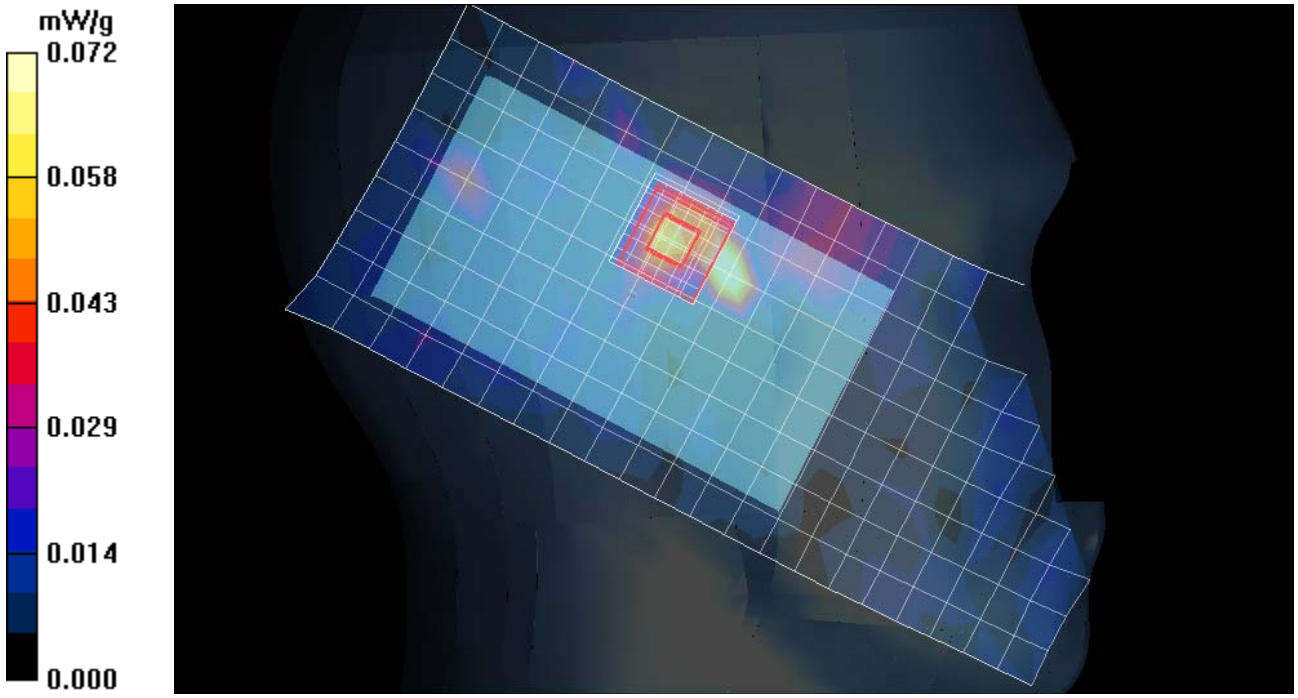
DASY4 Configuration:

- Probe: EX3DV4 - SN3730; ConvF(4.67, 4.67, 4.67); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.091 mW/g

Left Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.64 V/m; Power Drift = -0.055 dB
Peak SAR (extrapolated) = 0.147 W/kg
SAR(1 g) = 0.041 mW/g; SAR(10 g) = 0.019 mW/g

Maximum value of SAR (measured) = 0.072 mW/g



Test Laboratory: Motorola Wi-Fi 5.785 GHz 15 Degree Tilt

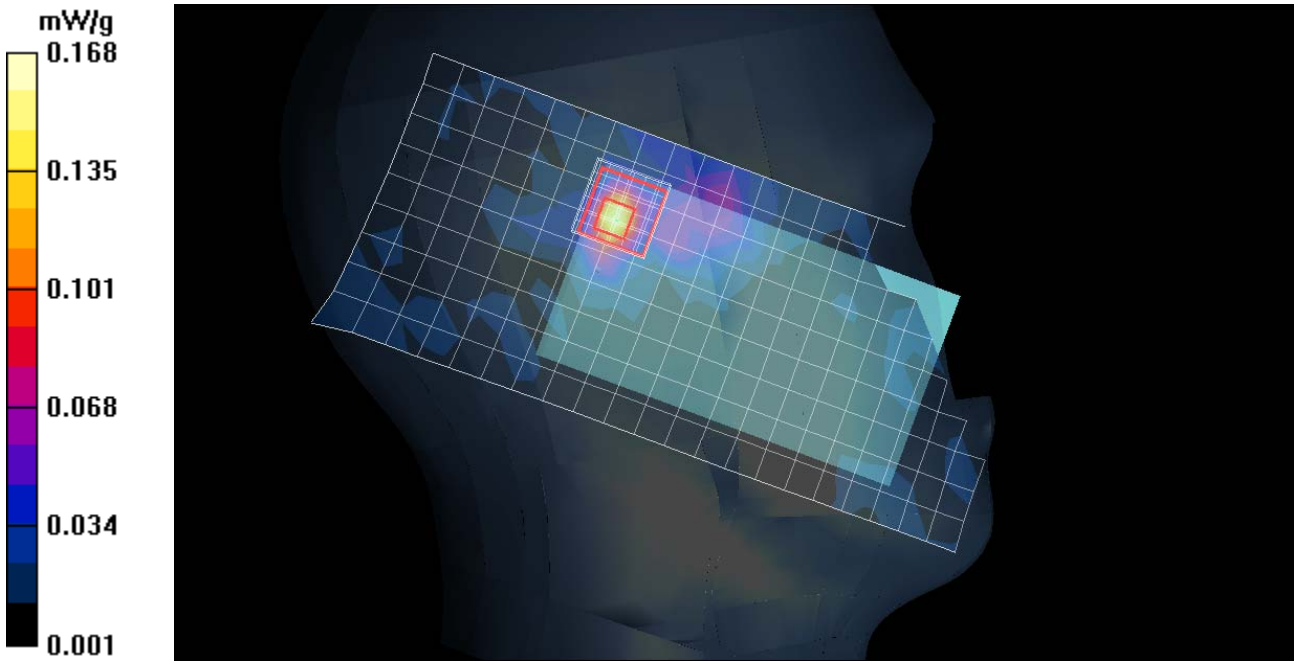
DUT: Serial: TA0140008Z; FCC ID: IHDP56LS2
Procedure Notes: 802.11a, 6 Mbps Battery Model #: SNN5893A DEVICE POSITION: 15 Degree TILT
Communication System: 5785MHz Band - 802.11a; Frequency: 5745 MHz; Communication System Channel Number: 149; Duty Cycle: 1:1
Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: f = 5785 MHz; σ = 5.43 mho/m; ε_r = 33.1; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: EX3DV4 - SN3730; ConvF(4.06, 4.06, 4.06); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.153 mW/g

Left Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 5.01 V/m; Power Drift = -0.321 dB
Peak SAR (extrapolated) = 0.302 W/kg
SAR(1 g) = 0.082 mW/g; SAR(10 g) = 0.025 mW/g
Maximum value of SAR (measured) = 0.168 mW/g



Appendix 3

SAR distribution plots for Body Worn Configuration

Date/Time: 2/26/2011 2:10:00 AM

Test Laboratory: Motorola - GSM 850 Body-Worn

Serial: TA014000R5; FCC ID: IHDP56LS2

Procedure Notes: Pwr Step: 5; Antenna Position: Internal; Battery Model #: SNN5865A
Device Position: Body Worn, Back of Phone 25 mm from Phantom
Communication System: GPRS 850; Frequency: 836.6 MHz; Channel Number: 190; Duty Cycle: 1:4.15

Medium: Low Freq Body
Medium parameters used: f = 835 MHz; σ = 0.99 mho/m; ε_r = 53.7; ρ = 1000 kg/m^3

DASY4 Configuration:

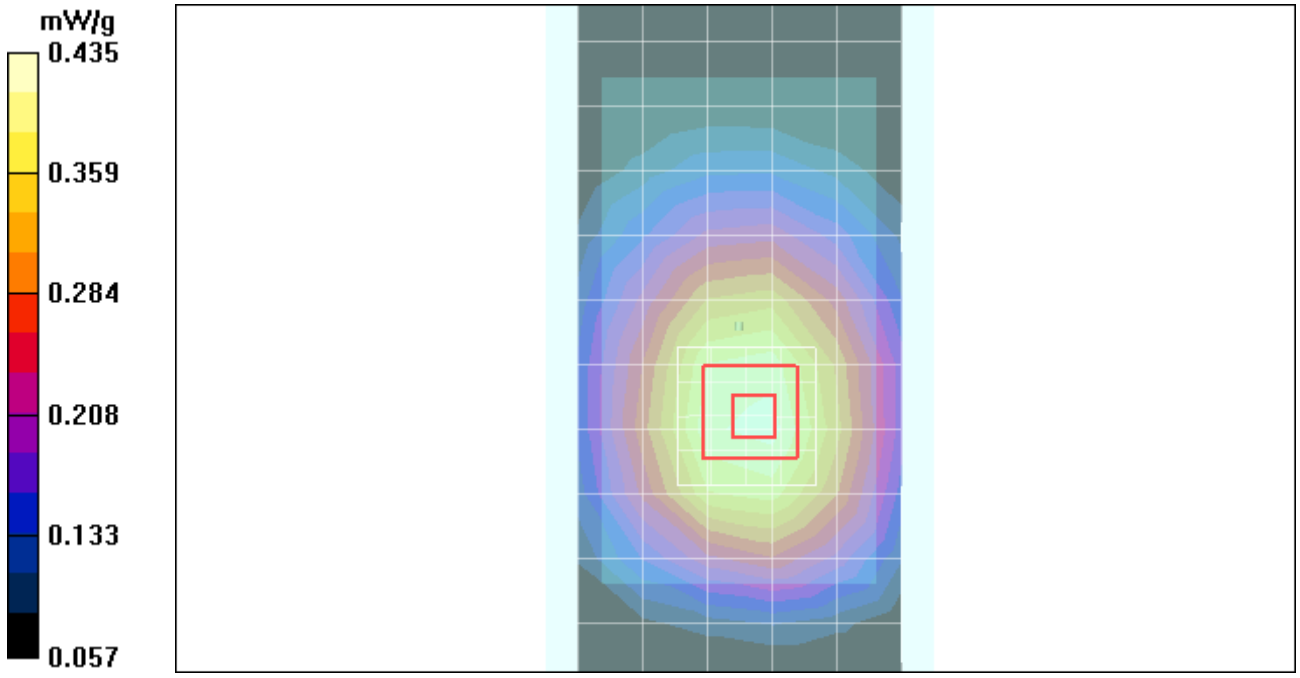
- Probe: ES3DV3 - SN3124; ConvF(5.86, 5.86, 5.86); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R4 : Sect.2, Amy Twin, Rev.3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Full Body (15mm) (18x8x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.423 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.7 V/m; Power Drift = -0.231 dB; Peak SAR (extrapolated) = 0.533 W/kg
SAR(1 g) = 0.415 mW/g; SAR(10 g) = 0.308 mW/g; Maximum value of SAR (measured) = 0.435 mW/g



Date/Time: 2/25/2011 9:24:13 PM

Test Laboratory: Motorola - WCDMA 850 Body-Worn

Serial: TA014000R5; FCC ID: IHDP56LS2

Procedure Notes: Pwr Step: All Up Bits; Antenna Position: Internal; Battery Model #: SNN5893A
Device Position: Body Worn, Back of Phone 25 mm from Phantom
Communication System: WCDMA 850; Frequency: 836 MHz; Channel Number: 4180; Duty Cycle: 1:1

Medium: Low Freq Body
Medium parameters used: f = 835 MHz; σ = 0.99 mho/m; ε_r = 53.7; ρ = 1000 kg/m^3

DASY4 Configuration:

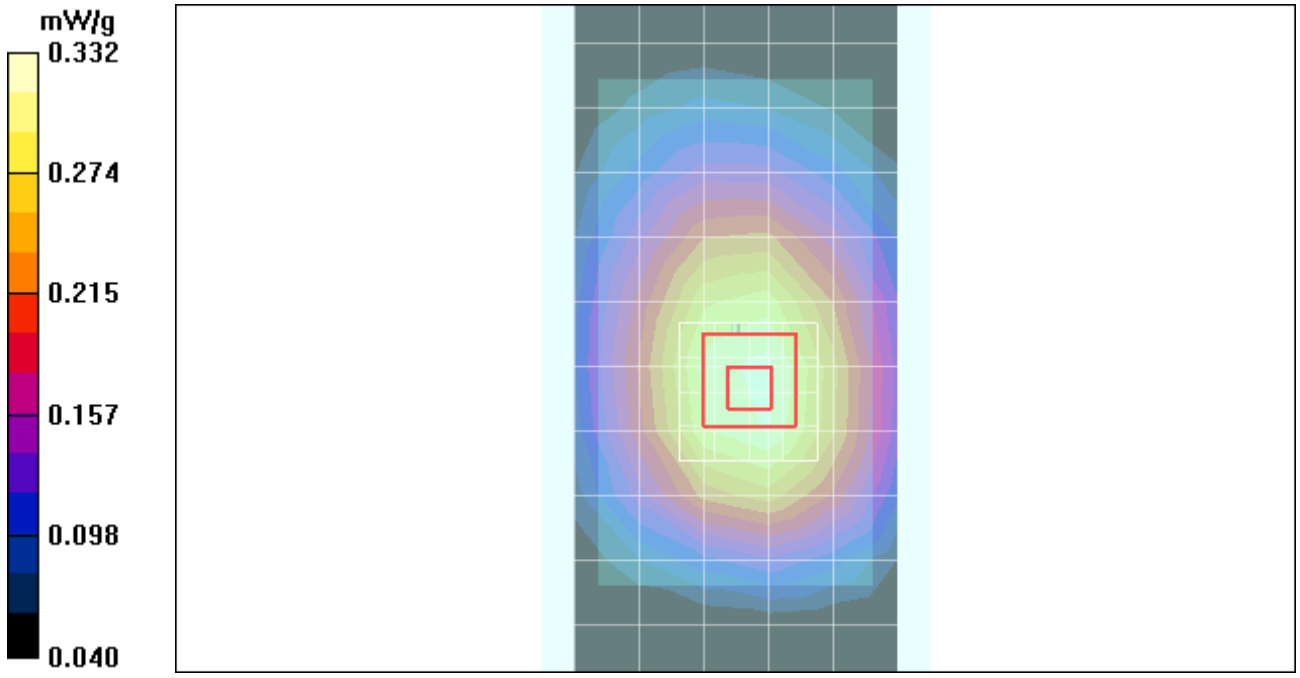
- Probe: ES3DV3 - SN3124; ConvF(5.86, 5.86, 5.86); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R4 : Sect.2, Amy Twin, Rev.3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Full Body (15mm) (18x8x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.321 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.3 V/m; Power Drift = -0.002 dB; Peak SAR (extrapolated) = 0.406 W/kg
SAR(1 g) = 0.315 mW/g; SAR(10 g) = 0.233 mW/g; Maximum value of SAR (measured) = 0.332 mW/g



Date/Time: 2/25/2011 3:42:56 PM

Test Laboratory: Motorola - GSM 1900 Body-Worn

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: 0; Antenna Position: Internal; Battery Model #: SNN5893A
Device Position: Body Worn, Back of Phone 25 mm from Phantom
Communication System: GPRS 1900; Frequency: 1880 MHz; Channel Number: 661; Duty Cycle: 1:4.15

Medium: Regular Glycol Body 1750/1880
Medium parameters used: f = 1880 MHz; σ = 1.59 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3

DASY4 Configuration:

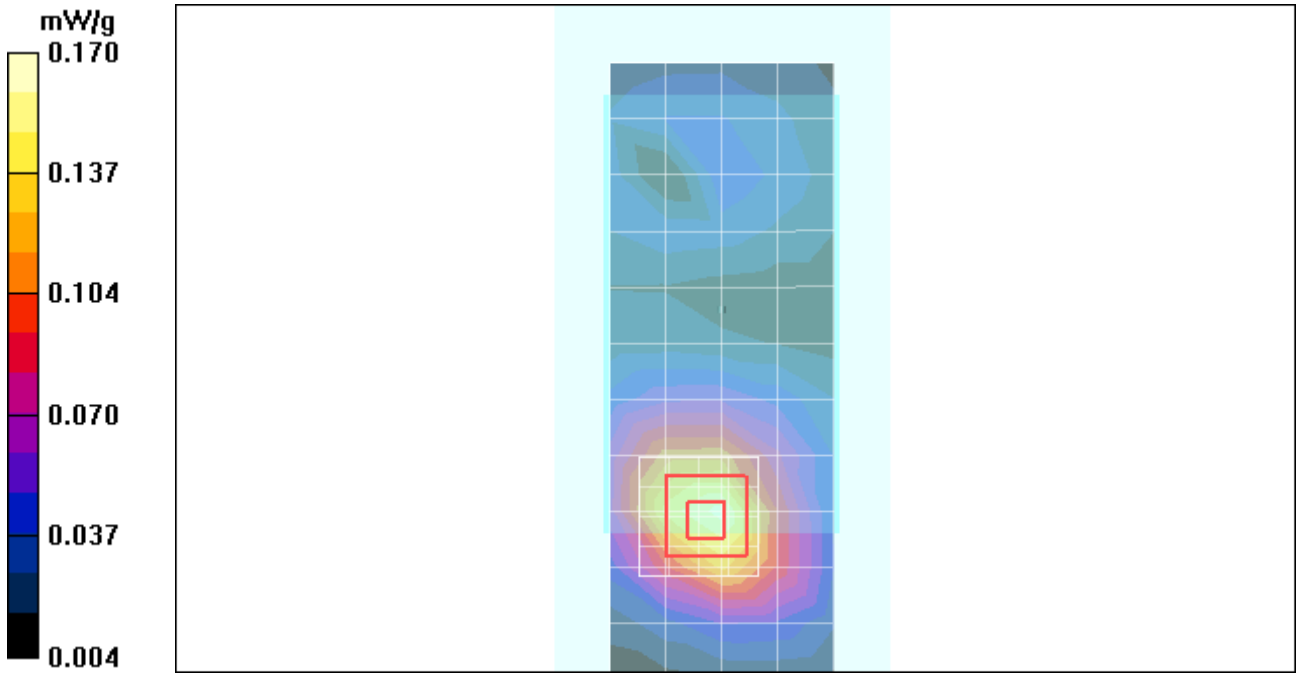
- Probe: ES3DV3 - SN3124; ConvF(4.76, 4.76, 4.76); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R4 : Sect.1, Amy Twin, Rev.3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (13x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.165 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.1 V/m; Power Drift = -0.058 dB; Peak SAR (extrapolated) = 0.239 W/kg
SAR(1 g) = 0.157 mW/g; SAR(10 g) = 0.097 mW/g; Maximum value of SAR (measured) = 0.170 mW/g



Date/Time: 2/25/2011 6:02:25 PM

Test Laboratory: Motorola - WCDMA 1900 Body-Worn

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: All Up Bits; Antenna Position: Internal; Battery Model #: SNN5865A
Device Position: Body Worn, Back of Phone 25 mm from Phantom
Communication System: WCDMA 1900; Frequency: 1880 MHz; Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880
Medium parameters used: f = 1880 MHz; σ = 1.59 mho/m; ε_r = 51.6; ρ = 1000 kg/m^3

DASY4 Configuration:

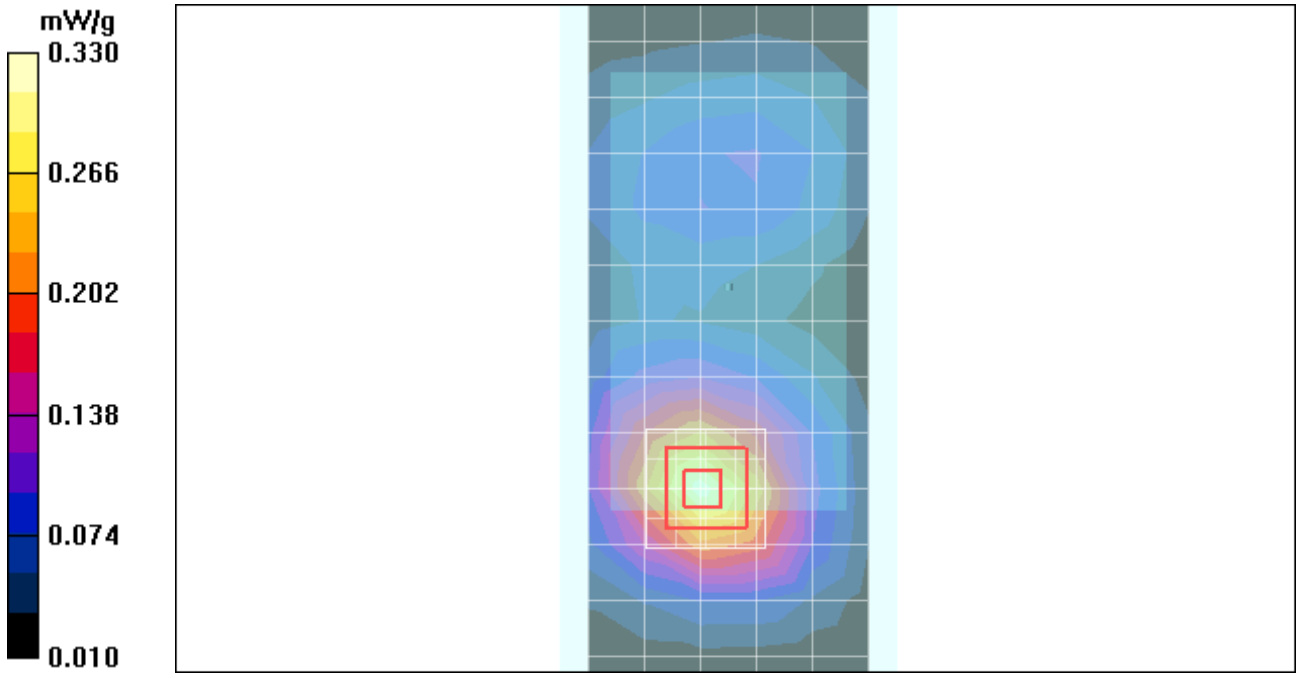
- Probe: ES3DV3 - SN3124; ConvF(4.76, 4.76, 4.76); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R4 : Sect.1, Amy Twin, Rev.3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Full Body (15mm) (18x8x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.326 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.0 V/m; Power Drift = -0.036 dB; Peak SAR (extrapolated) = 0.456 W/kg
SAR(1 g) = 0.303 mW/g; SAR(10 g) = 0.189 mW/g; Maximum value of SAR (measured) = 0.330 mW/g



Date/Time: 3/2/2011 6:01:35 PM

Test Laboratory: Motorola - Wi-Fi 2.45 Ghz Body-Worn

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: N/A; Antenna Position: Internal; Battery Model #: SNN5893A
Device Position: Body Worn, Back of Phone 25 mm from Phantom
Device Mode: 802.11b mode, 5.5 Mbps data rate
Communication System: Wi-Fi 2450; Frequency: 2462 MHz; Channel Number: 11; Duty Cycle: 1:1

Medium: 2450 Glycol Body
Medium parameters used: f = 2450 MHz; σ = 2.02 mho/m; ε_r = 48.2; ρ = 1000 kg/m^3

DASY4 Configuration:

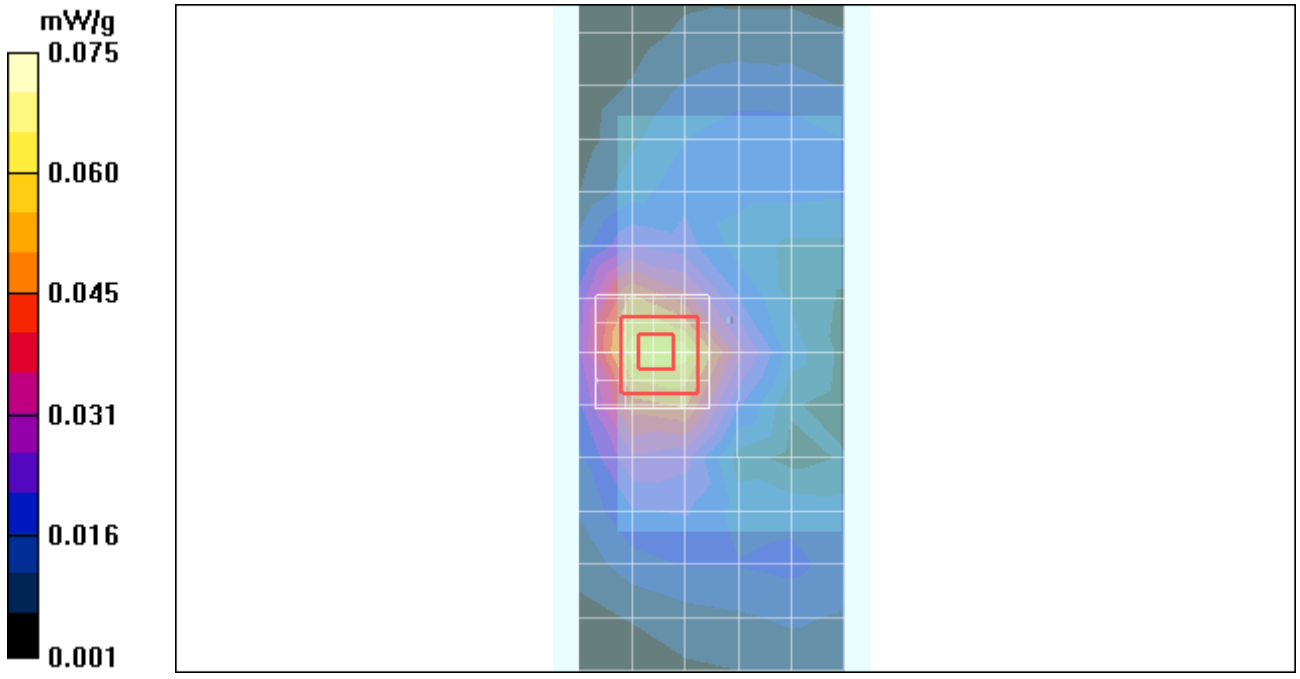
- Probe: ES3DV3 - SN3124; ConvF(4.19, 4.19, 4.19); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R4 : Sect.1, Amy Twin, Rev.3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Full Body (15mm) (18x8x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.059 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.55 V/m; Power Drift = -0.155 dB; Peak SAR (extrapolated) = 0.106 W/kg
SAR(1 g) = 0.059 mW/g; SAR(10 g) = 0.033 mW/g; Maximum value of SAR (measured) = 0.064 mW/g



Test Laboratory: Motorola Wi-Fi 5.21 GHz Body Worn

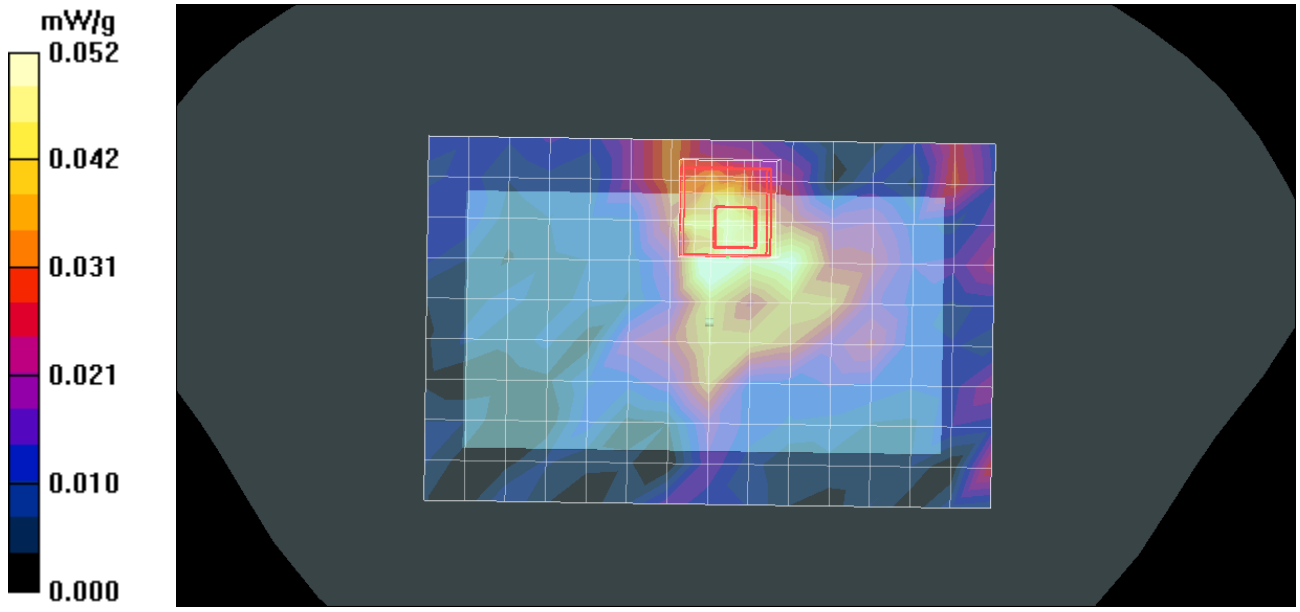
DUT: Serial: TA0140008Z; FCC ID: IHDP56LS2
Procedure Notes: 802.11a 6 Mbps Battery Model #:SNN5893A Accessory Model # = BACK OF PHONE 25 MM FROM PHANTOM
Communication System: 5210MHz Band - 802.11a; Frequency: 5240 MHz; Communication System Channel Number: 48; Duty Cycle: 1:1
Medium: 5-6 GHz SPEAG Tissue BODY; Medium parameters used: f = 5210 MHz; σ = 5.71 mho/m; ε_r = 45.9; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: EX3DV4 - SN3730; ConvF(4.07, 4.07, 4.07); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R#3 5Ghz BODY SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1106;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Phone Area Scan - Normal Body (10mm) (15x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.068 mW/g

SAM Phone Against Flat Section/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.77 V/m; Power Drift = 0.187 dB
Peak SAR (extrapolated) = 0.182 W/kg
SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.012 mW/g
Maximum value of SAR (measured) = 0.052 mW/g



Test Laboratory: Motorola Wi-Fi 5.785 GHz Body Worn

DUT: Serial: TA0140008Z; FCC ID: IHDP56LS2
Procedure Notes: 802.11a, 12 Mbps Battery Model #: SNN5893A Accessory Model # = BACK OF PHONE 25 MM FROM PHANTOM

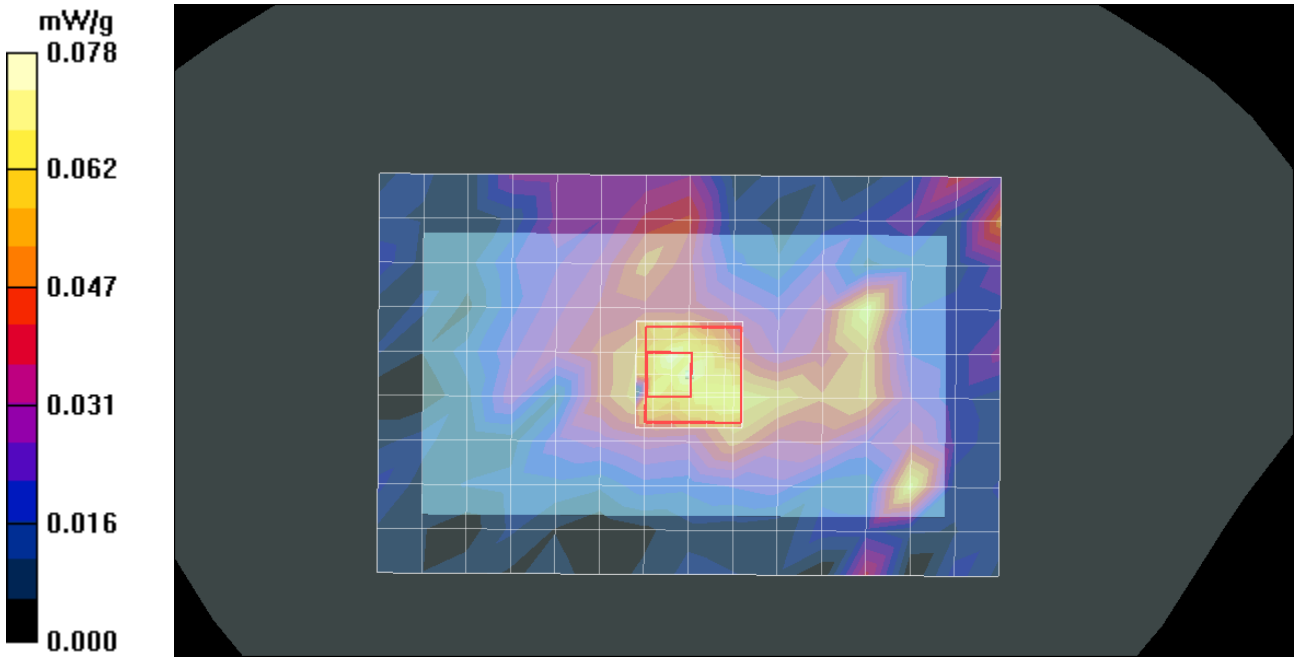
Communication System: 5785MHz Band - 802.11a; Frequency: 5745 MHz; Communication System Channel Number: 149; Duty Cycle: 1:1
Medium: 5-6 GHz SPEAG Tissue BODY; Medium parameters used: f = 5785 MHz; σ = 6.5 mho/m; ε_r = 44.2; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: EX3DV4 - SN3730; ConvF(3.53, 3.53, 3.53); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R#3 5Ghz BODY SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1106;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Phone Area Scan - Normal Body (10mm) (15x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.068 mW/g

SAM Phone Against Flat Section/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.72 V/m; Power Drift = -0.114 dB
Peak SAR (extrapolated) = 0.509 W/kg
SAR(1 g) = 0.047 mW/g; SAR(10 g) = 0.019 mW/g
Maximum value of SAR (measured) = 0.078 mW/g



Appendix 4

SAR distribution plots for Mobile Hotspot Configuration

Test Laboratory: Motorola GSM 850 Mobile Hotspot

DUT: Serial: 356381040017539; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: 05 Test Position = GPRS CLASS 10, BACK OF Phone 10MM FROM PHANTOM
Communication System: GPRS 850 - Class 10; Frequency: 824.2 MHzFrequency: 836.6 MHz; Communication System Channel Number: 128

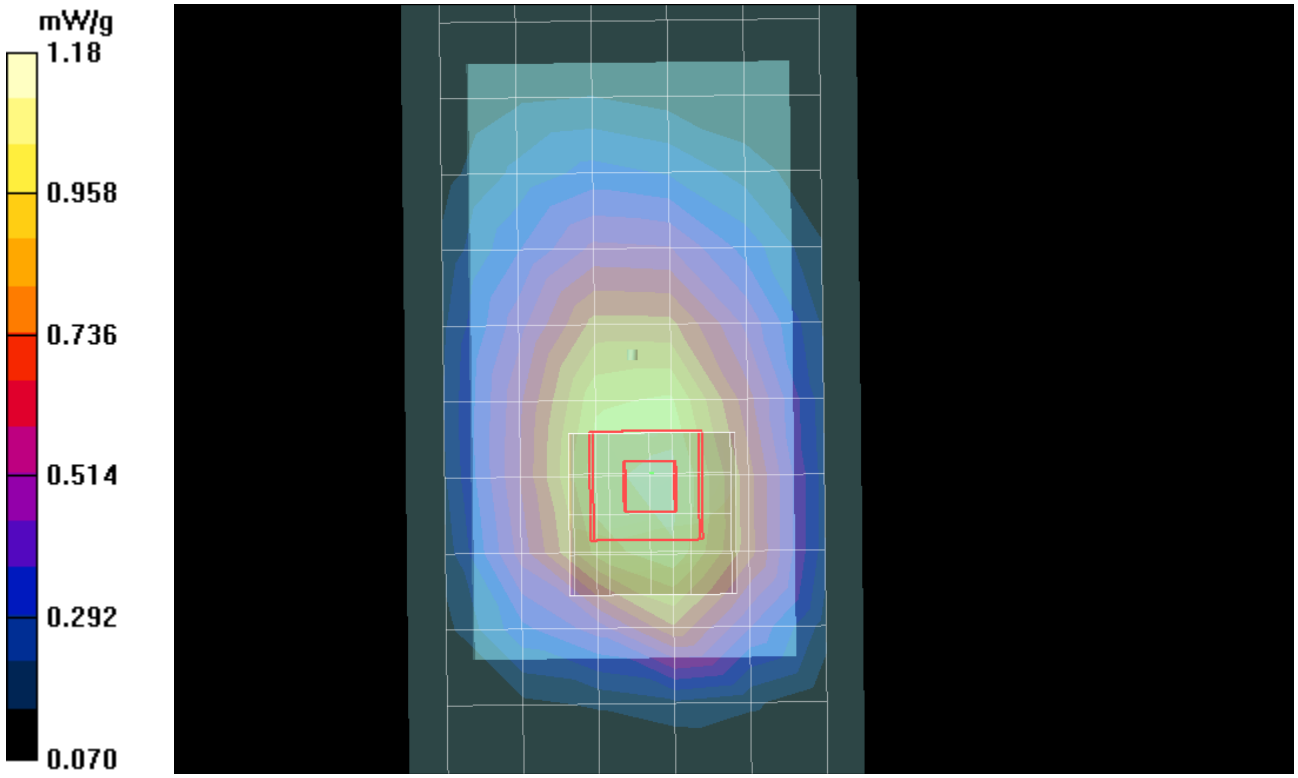
Medium: Low Freq Body; Medium parameters used: f = 835 MHz; σ = 0.99 mho/m; ε_r = 53.2; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3183; ConvF(6.15, 6.15, 6.15); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R1_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Full Body (15mm) (18x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.07 mW/g

Amy Twin Phone Template/MID CH: 5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 34.1 V/m; Power Drift = -0.129 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.794 mW/g
Maximum value of SAR (measured) = 1.18 mW/g



Date/Time: 3/4/2011 12:20:52 PM

Test Laboratory: Motorola - WCDMA 850 Mobile Hotspot

Serial: 356381040017539; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: All up Bits; Antenna Position: Internal; Battery Model #: SNN5865A
Device Position: Body Worn, Back of Phone 10 mm from Phantom
Communication System: WCDMA 850; Frequency: 826.4 MHz; Channel Number: 4132; Duty Cycle: 1:1

Medium: Low Freq Body
Medium parameters used: f = 835 MHz; σ = 0.99 mho/m; ε_r = 53.3; ρ = 1000 kg/m^3

DASY4 Configuration:

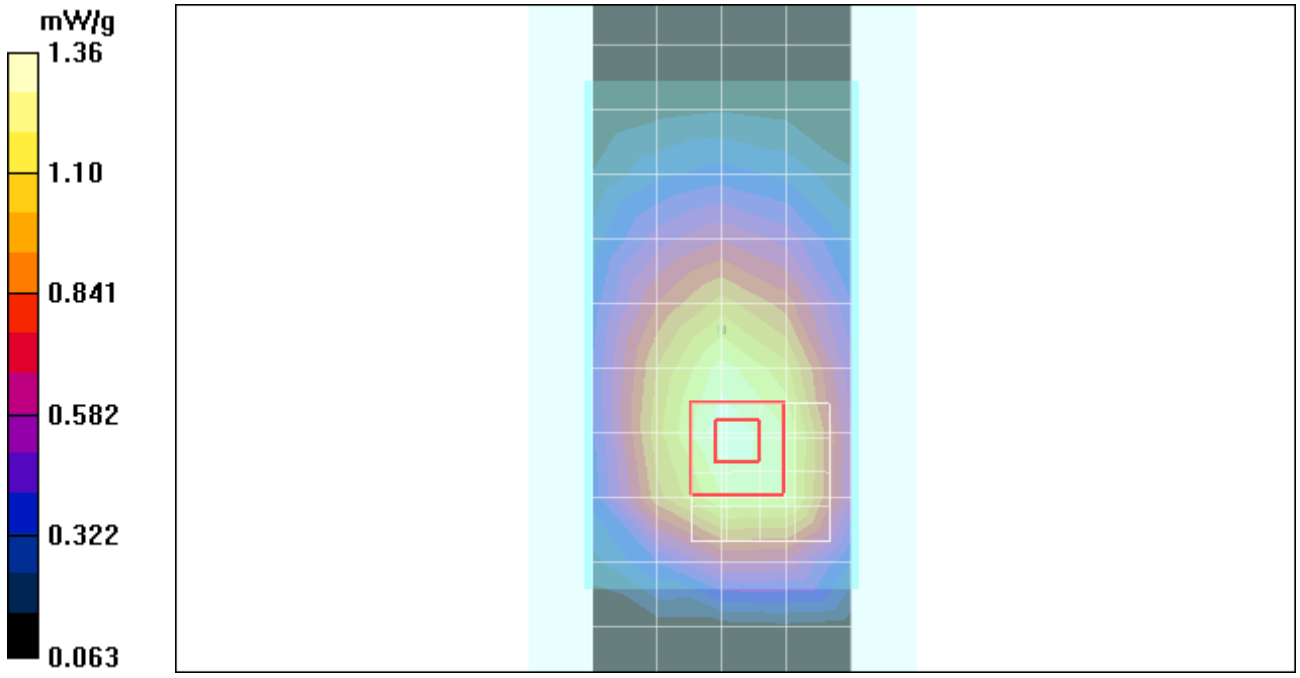
- Probe: ES3DV3 - SN3183; ConvF(6.15, 6.15, 6.15); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 1.35 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 37.0 V/m; Power Drift = 0.045 dB; Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 1.3 mW/g; SAR(10 g) = 0.923 mW/g; Maximum value of SAR (measured) = 1.36 mW/g



Test Laboratory: Motorola GSM 1900 Mobile Hotspot

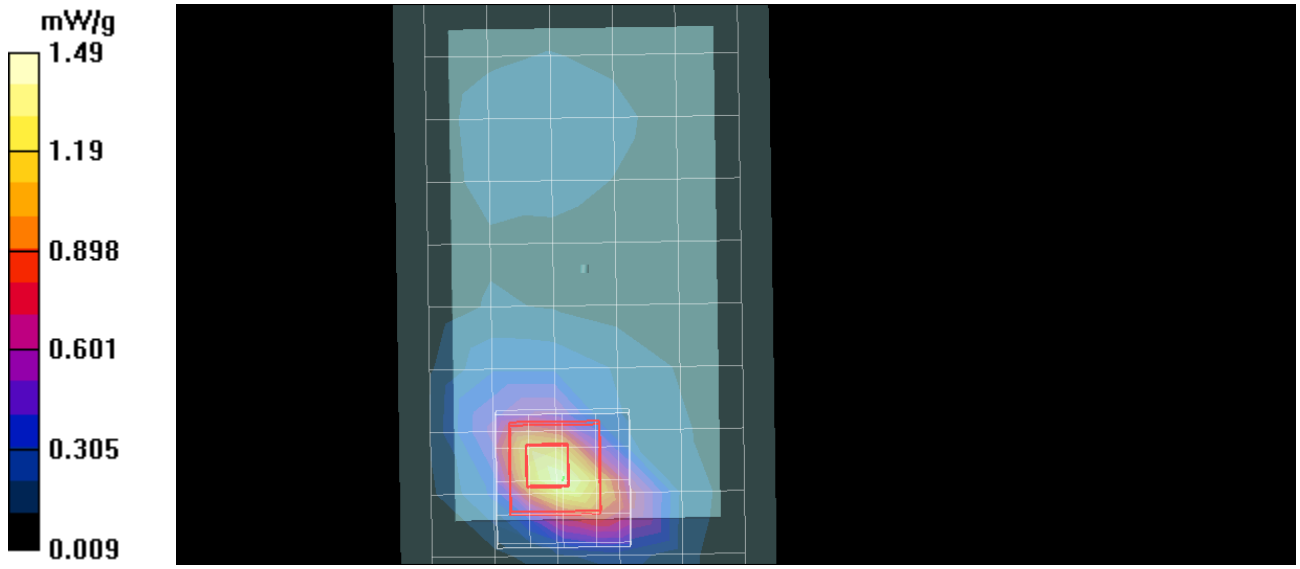
DUT: Serial: 356381040017539; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: 0 Test Position = GPRS CLASS 10, BACK OF PHONE 10MM FROM PHANTOM
Communication System: GPRS 1900 - Class 10; Frequency: 1850.2 MHz; Communication System Channel Number: 512; Duty Cycle: 1:4.15
Medium: Regular Glycol Body 1750/1880; Medium parameters used: f = 1880 MHz; σ = 1.59 mho/m; ε_r = 51.2; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3183; ConvF(4.84, 4.84, 4.84); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R1_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Full Body (15mm) (18x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.23 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.3 V/m; Power Drift = 0.108 dB
Peak SAR (extrapolated) = 3.25 W/kg
SAR(1 g) = 1.27 mW/g; SAR(10 g) = 0.656 mW/g
Maximum value of SAR (measured) = 1.49 mW/g



Date/Time: 2/27/2011 11:09:49 AM

Test Laboratory: Motorola - WCDMA 1900 Mobile Hotspot

Serial: 356381040017539; FCC ID: IHDP56LS2

Procedure Notes: Pwr Step: All Up Bits; Antenna Position: Internal; Battery Model #: SNN5865A
Device Position: Body worn, Back of Phone 10 mm from Phantom
Communication System: WCDMA 1900; Frequency: 1907.5 MHz; Channel Number: 9538; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880
Medium parameters used: f = 1880 MHz; σ = 1.57 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3

DASY4 Configuration:

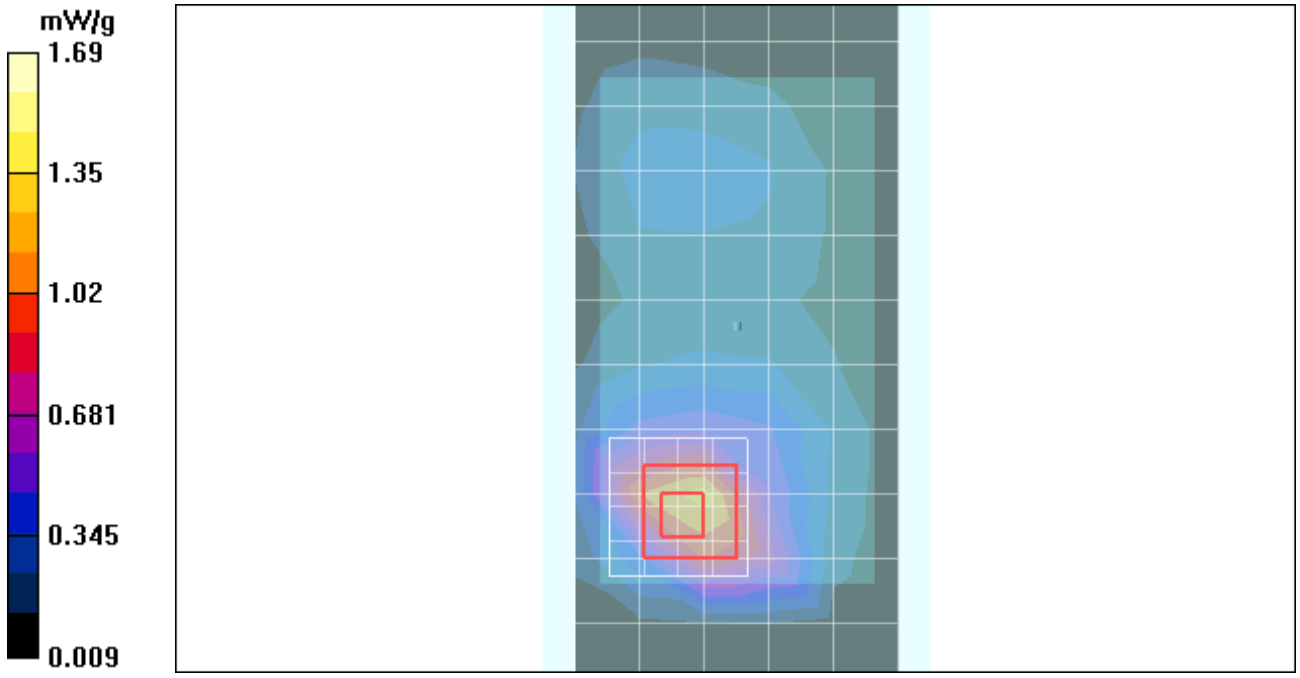
- Probe: ES3DV3 - SN3183; ConvF(4.84, 4.84, 4.84); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Full Body (15mm) (18x8x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 1.19 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.8 V/m; Power Drift = -0.008 dB; Peak SAR (extrapolated) = 2.45 W/kg
SAR(1 g) = 1.45 mW/g; SAR(10 g) = 0.751 mW/g; Maximum value of SAR (measured) = 1.69 mW/g



Date/Time: 3/4/2011 2:28:18 PM

Test Laboratory: Motorola - Wi-Fi 2.45 GHz Mobile Hotspot

Serial: TA014000R5; FCC ID: IHDP56LS2
Procedure Notes: Pwr Step: N/A; Antenna Position: Internal; Battery Model #: SNN5865A
Device Position: Body Worn, Right Edge of Phone 10 mm from Phantom
Device Mode: 802.11b mode, 5.5 Mbps data rate
Communication System: Wi-Fi 2450; Frequency: 2462 MHz; Channel Number: 11; Duty Cycle: 1:1

Medium: 2450 Glycol Body
Medium parameters used: f = 2450 MHz; σ = 2.02 mho/m; ε_r = 47.8; ρ = 1000 kg/m^3

DASY4 Configuration:

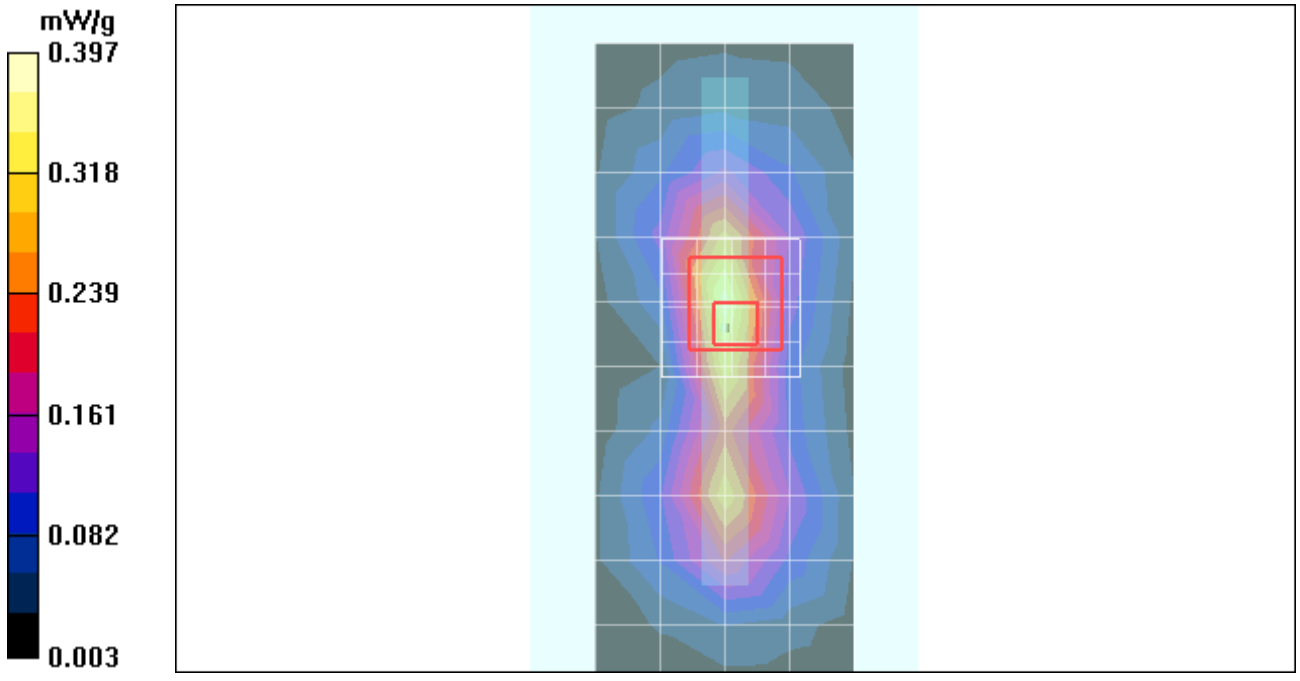
- Probe: ES3DV3 - SN3124; ConvF(4.19, 4.19, 4.19); Calibrated: 8/11/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R4 : Sect.1, Amy Twin, Rev.3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Body (15mm) (13x7x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.362 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.2 V/m; Power Drift = 0.029 dB; Peak SAR (extrapolated) = 0.700 W/kg
SAR(1 g) = 0.343 mW/g; SAR(10 g) = 0.164 mW/g; Maximum value of SAR (measured) = 0.397 mW/g



Test Laboratory: Motorola Wi-Fi 5.21 GHz Mobile Hotspot

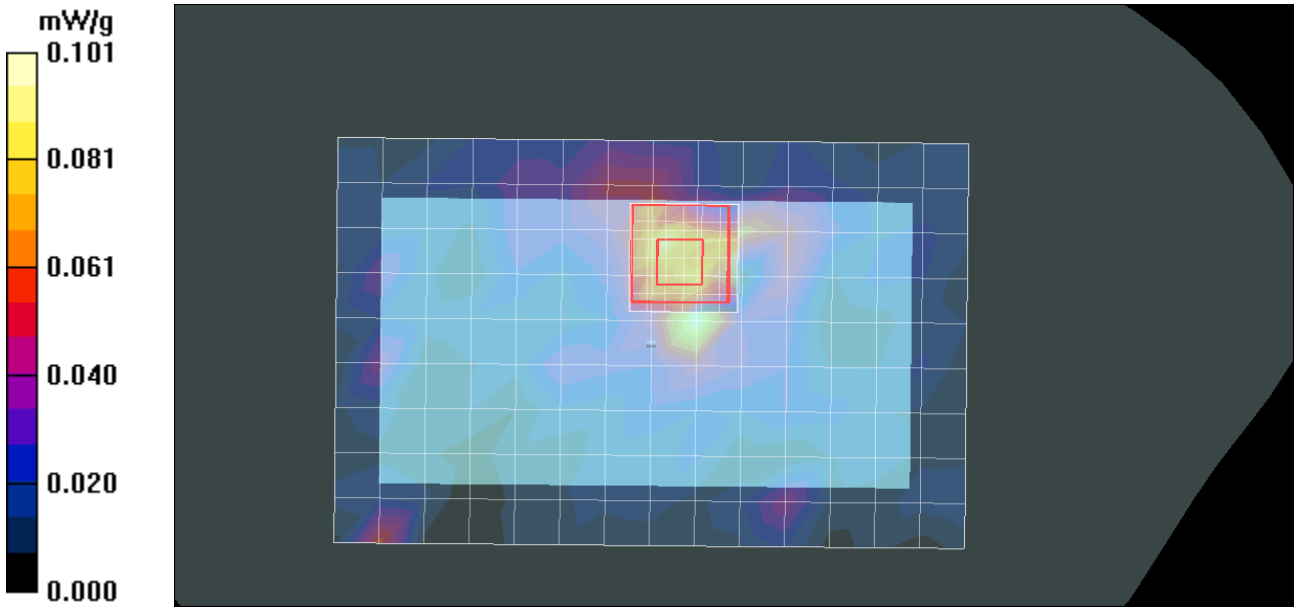
DUT: Serial: TA0140008Z; FCC ID: IHDP56LS2
Procedure Notes: 802.11a, 54 Mbps Battery Model #:SNN5893A Accessory Model # = BACK OF PHONE 10 MM FROM PHANTOM
Communication System: 5210MHz Band - 802.11a; Frequency: 5240 MHz; Communication System Channel Number: 48; Duty Cycle: 1:1
Medium: 5-6 GHz SPEAG Tissue BODY; Medium parameters used: f = 5210 MHz; σ = 5.9 mho/m; ε_r = 47.1; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: EX3DV4 - SN3730; ConvF(4.07, 4.07, 4.07); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R#3 5Ghz BODY SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1106;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Phone Area Scan - Normal Body (10mm) (15x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.099 mW/g

SAM Phone Against Flat Section/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.47 V/m; Power Drift = -0.117 dB
Peak SAR (extrapolated) = 0.586 W/kg
SAR(1 g) = 0.051 mW/g; SAR(10 g) = 0.015 mW/g
Maximum value of SAR (measured) = 0.101 mW/g



Date/Time: 3/10/2011 10:28:51 AM

Test Laboratory: Motorola - Wi-Fi 5.785 GHz Mobile Hotspot

Serial: TA0140008Z; FCC ID: IHDP56LS2

Procedure Notes: Pwr Step: N/A; Antenna Position: Internal; Battery Model #: SNN5893A
Device Position: Body Worn, Back of Phone 10 mm from Phantom
Device Mode: 802.11a mode, 6 Mbps data rate
Communication System: 5785MHz Band; Frequency: 5805 MHz; Channel Number: 161; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue BODY
Medium parameters used: f = 5785 MHz; σ = 6.76 mho/m; ε_r = 45.9; ρ = 1000 kg/m^3

DASY4 Configuration:

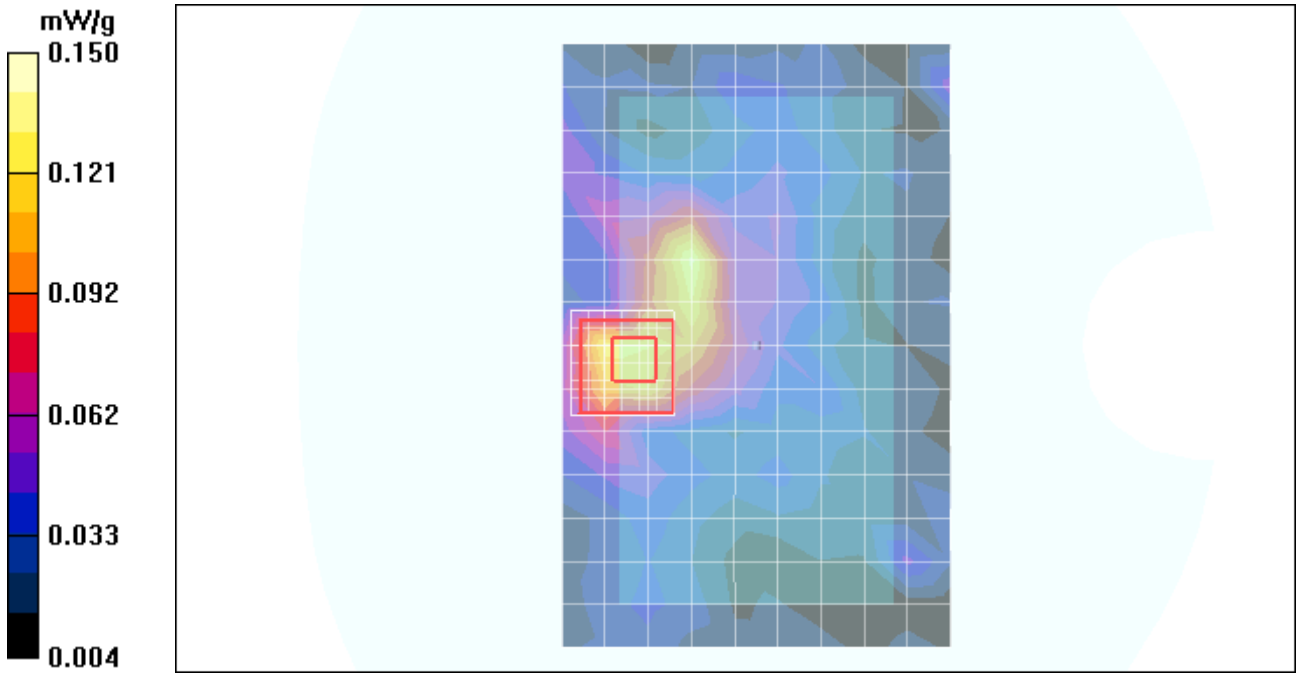
- Probe: EX3DV4 - SN3730; ConvF(3.53, 3.53, 3.53); Calibrated: 7/16/2010
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R#3 5Ghz BODY SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1106;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Phone Area Scan - Normal Body (10mm) (15x10x1):

Measurement grid: dx=10mm, dy=10mm; Maximum value of SAR (measured) = 0.134 mW/g

SAM Phone Against Flat Section/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 2.88 V/m; Power Drift = -0.163 dB; Peak SAR (extrapolated) = 0.489 W/kg
SAR(1 g) = 0.077 mW/g; SAR(10 g) = 0.028 mW/g; Maximum value of SAR (measured) = 0.199 mW/g



Appendix 5

SAR distribution plots for Simultaneous Transmission

Test Laboratory: Motorola - WCDMA 1900 + Wi-Fi 2.45 GHz Multiband Combined Left Cheek Expanded Volumetric Measurement

DASY4 Configuration for DASY4, SAM
Phone Against LEFT Head Template - Rev.10 (10Mar11)
/Left Head Template/MEGAZOOM Zoom Scan (<=3GHz):

Date/Time: 3/12/2011 6:39:09 AM
Serial: TA014000R5; FCC ID: IHDP56LS2
Communication System: Wi-Fi 2450; Frequency: 2437 MHz; Duty Cycle: 1:1

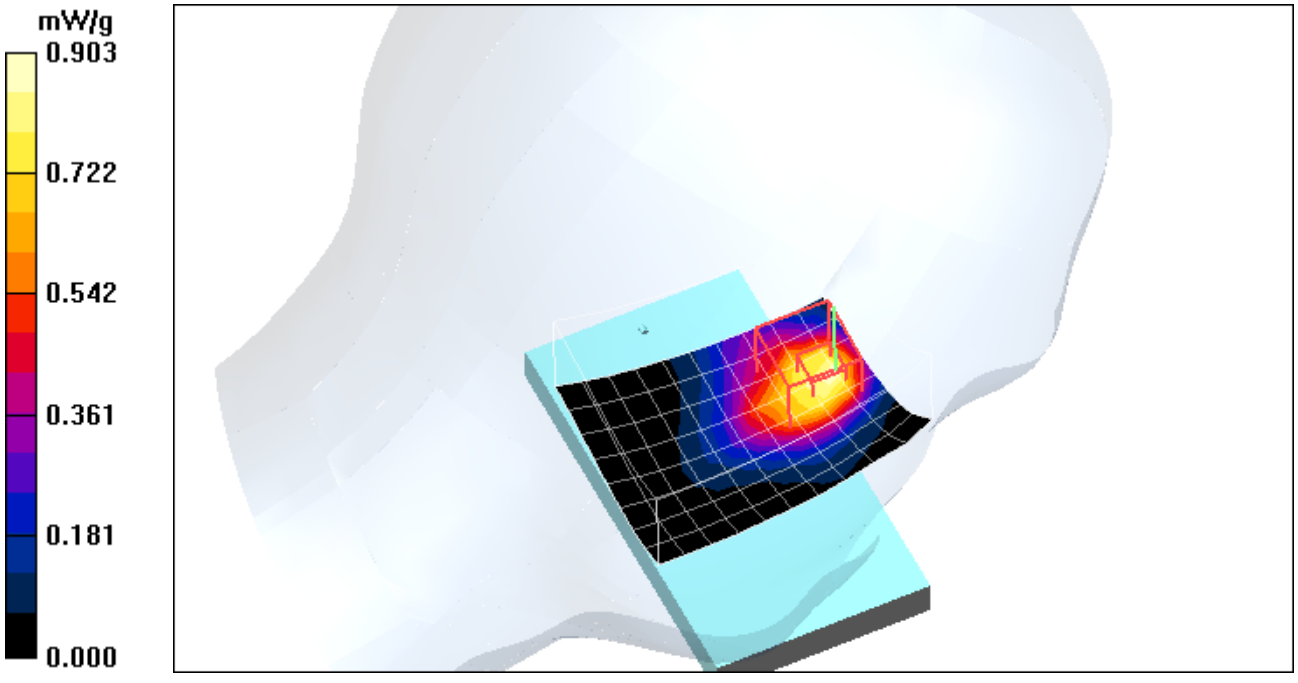
Medium: 2450 Glycol Head
Medium parameters used: f = 2450 MHz; σ = 1.89 mho/m; ε_r = 36.3; ρ = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

- Probe: ES3DV3 - SN3183; ConvF(4.49, 4.49, 4.49); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Glycol, SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1139
- Measurement SW: DASY4, V4.7 Build 80

Left Head Template/MEGAZOOM Zoom Scan (<=3GHz) (11x9x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm; Volume Outer Dimensions: x=80mm, y=64mm, z=30mm
Reference Value = 15.0 V/m; Power Drift = -0.083 dB; Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 0.847 mW/g; SAR(10 g) = 0.412 mW/g; Maximum value of SAR (measured) = 0.903 mW/g



2D Plot showing z-axis @ 0 mm layer of measurement volume

DASY4 Configuration for DASY4, SAM
Phone Against LEFT Head Template - Rev.10 (10Mar11)
/Left Head Template/MEGAZOOM Zoom Scan (<=3GHz):

Date/Time: 3/11/2011 11:16:44 AM
Serial: TA014000R5; FCC ID: IHDP56LS2
Communication System: WCDMA 1900; Frequency: 1907.5 MHz; Duty Cycle: 1:1

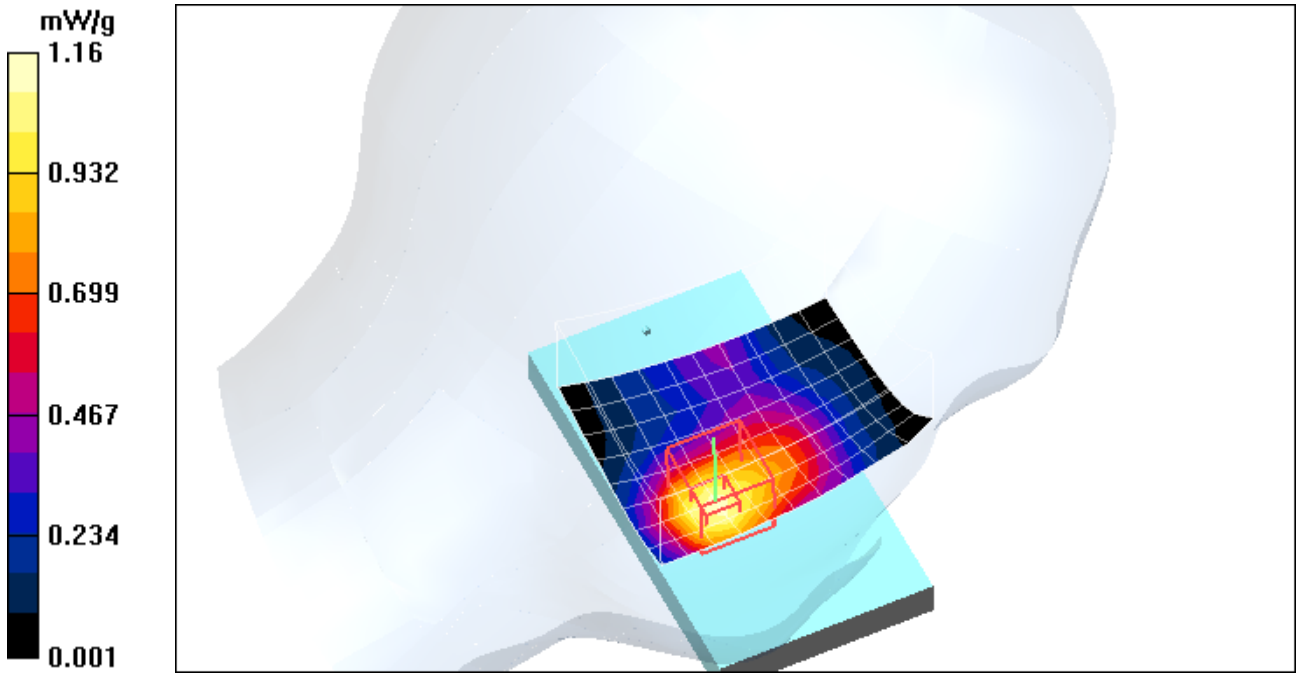
Medium: Regular Glycol Head 1750/1880
Medium parameters used: f = 1880 MHz; σ = 1.45 mho/m; ε_r = 38.1; ρ = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

- Probe: ES3DV3 - SN3183; ConvF(5.05, 5.05, 5.05); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Glycol, SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1139
- Measurement SW: DASY4, V4.7 Build 80

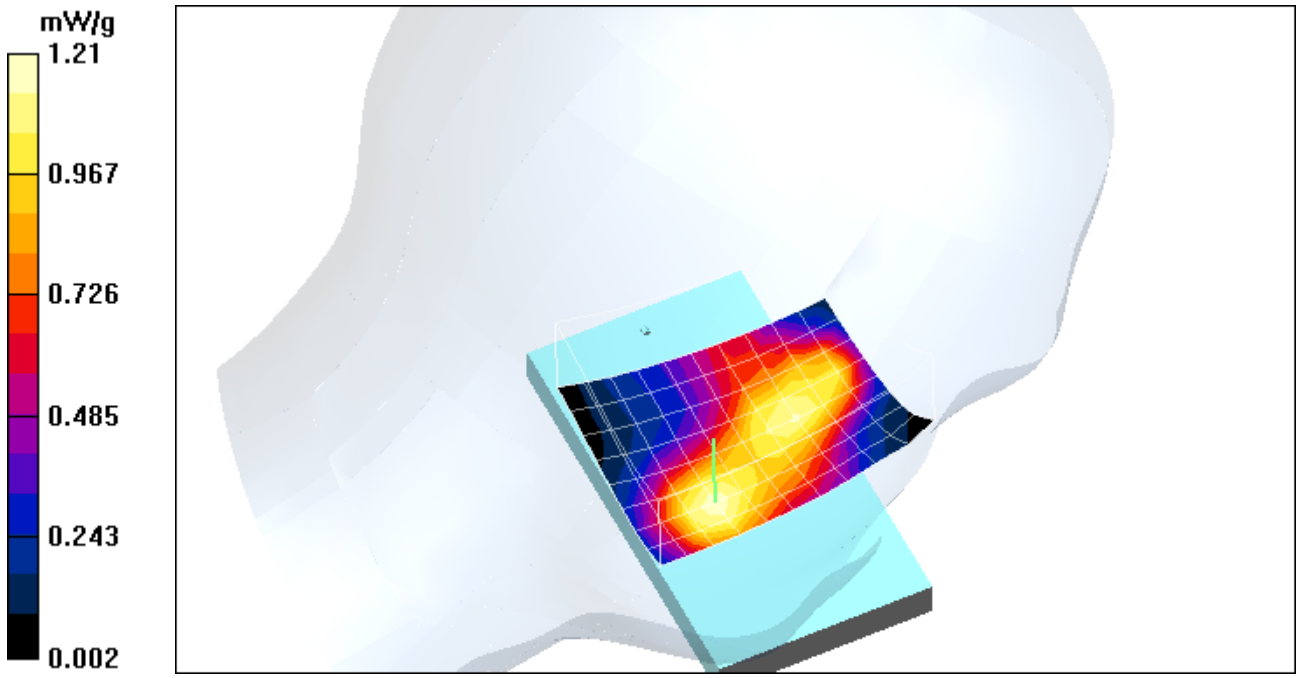
Left Head Template/MEGAZOOM Zoom Scan (<=3GHz) (11x9x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm; Volume Outer Dimensions: x=80mm, y=64mm, z=30mm
Reference Value = 26.2 V/m; Power Drift = 0.048 dB; Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 1.08 mW/g; SAR(10 g) = 0.658 mW/g; Maximum value of SAR (measured) = 1.16 mW/g



2D Plot showing z-axis @ 0 mm layer of measurement volume

Multi Band Result:
SAR(1 g) = 1.12 mW/g; SAR(10 g) = 0.689 mW/g
Maximum value of SAR (measured) = 1.21 mW/g



2D Plot showing z-axis @ 0 mm layer of measurement volume

Test Laboratory: Motorola - WCDMA 850 + Wi-Fi 2.45 GHz Multiband Combined Body Worn, Back of Phone 10 mm Expanded Volumetric Measurement

DASY4 Configuration for DASY4, Amy Twin
Phone Against Body Template - Rev.10 (10Mar11-B)
/Amy Twin Phone Template/MegaZoom Zoom Scan (<=3GHz):

Date/Time: 3/11/2011 5:01:49 PM
Serial: TA014000R5; FCC ID: IHDP56LS2
Communication System: Wi-Fi 2450; Frequency: 2462 MHz; Duty Cycle: 1:1

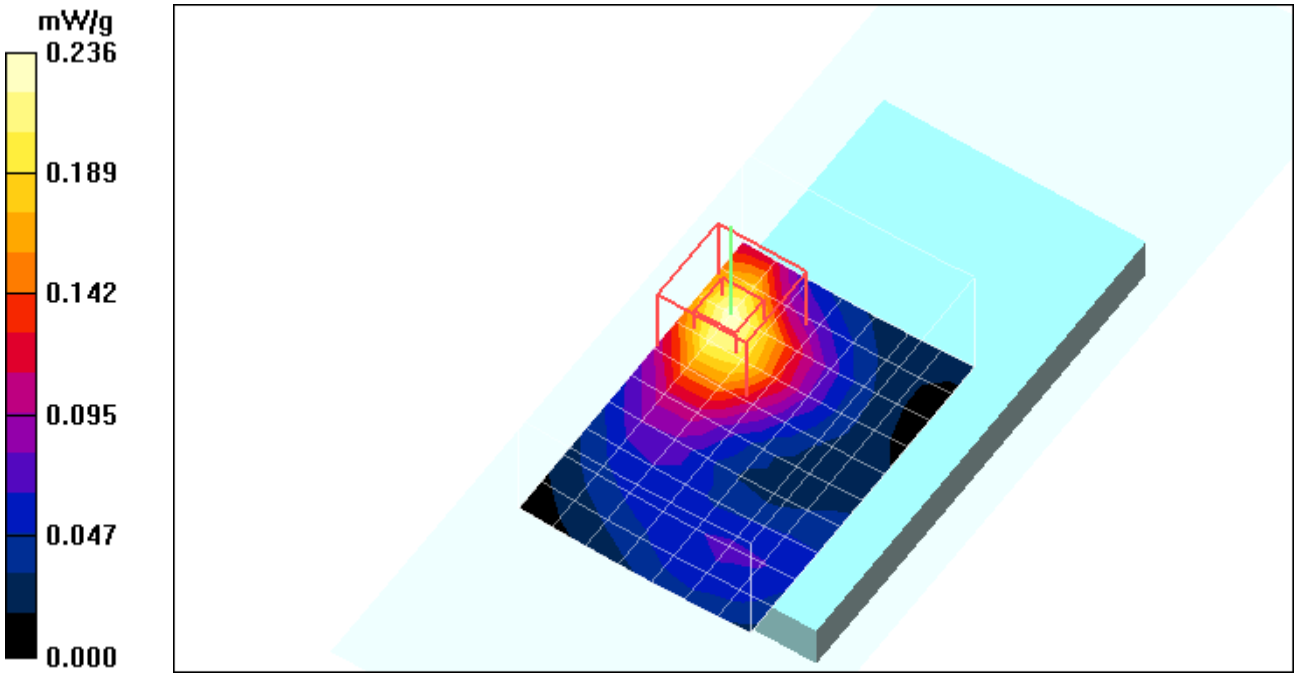
Medium: 2450 Glycol Body
Medium parameters used: f = 2450 MHz; σ = 1.97 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

- Probe: ES3DV3 - SN3183; ConvF(4.36, 4.36, 4.36); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a
- Measurement SW: DASY4, V4.7 Build 80

Amy Twin Phone Template/MegaZoom Zoom Scan (<=3GHz) (11x8x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm; Volume Outer Dimensions: x=80mm, y=56mm, z=30mm
Reference Value = 8.42 V/m; Power Drift = -0.114 dB; Peak SAR (extrapolated) = 0.420 W/kg
SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.107 mW/g; Maximum value of SAR (measured) = 0.236 mW/g



2D Plot showing z-axis @ 0 mm layer of measurement volume

DASY4 Configuration for DASY4, Amy Twin
Phone Against Body Template - Rev.10 (10Mar11-B)
/Amy Twin Phone Template/MegaZoom Zoom Scan (<=3GHz):

Date/Time: 3/11/2011 12:22:06 PM
Serial: 356381040017539; FCC ID: IHDP56LS2
Communication System: WCDMA 850; Frequency: 826.4 MHz; Duty Cycle: 1:1

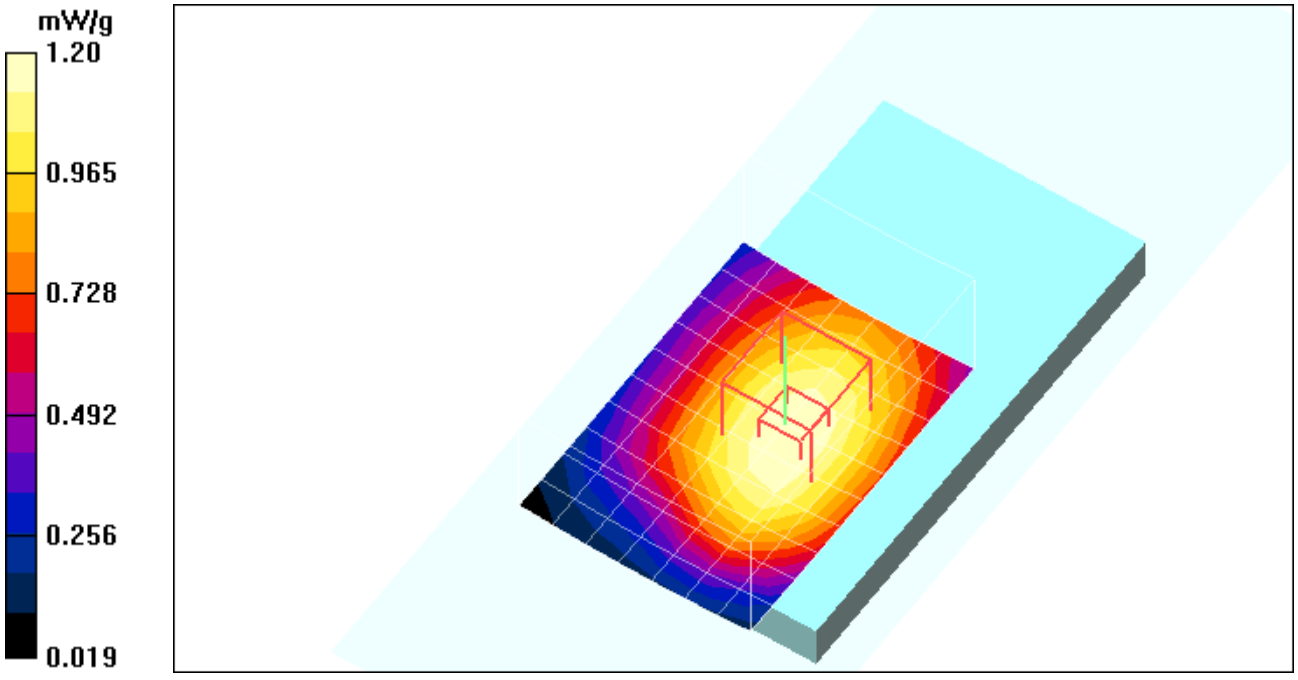
Medium: Low Freq Body
Medium parameters used: f = 835 MHz; σ = 0.99 mho/m; ε_r = 53.7; ρ = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

- Probe: ES3DV3 - SN3183; ConvF(6.15, 6.15, 6.15); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a
- Measurement SW: DASY4, V4.7 Build 80

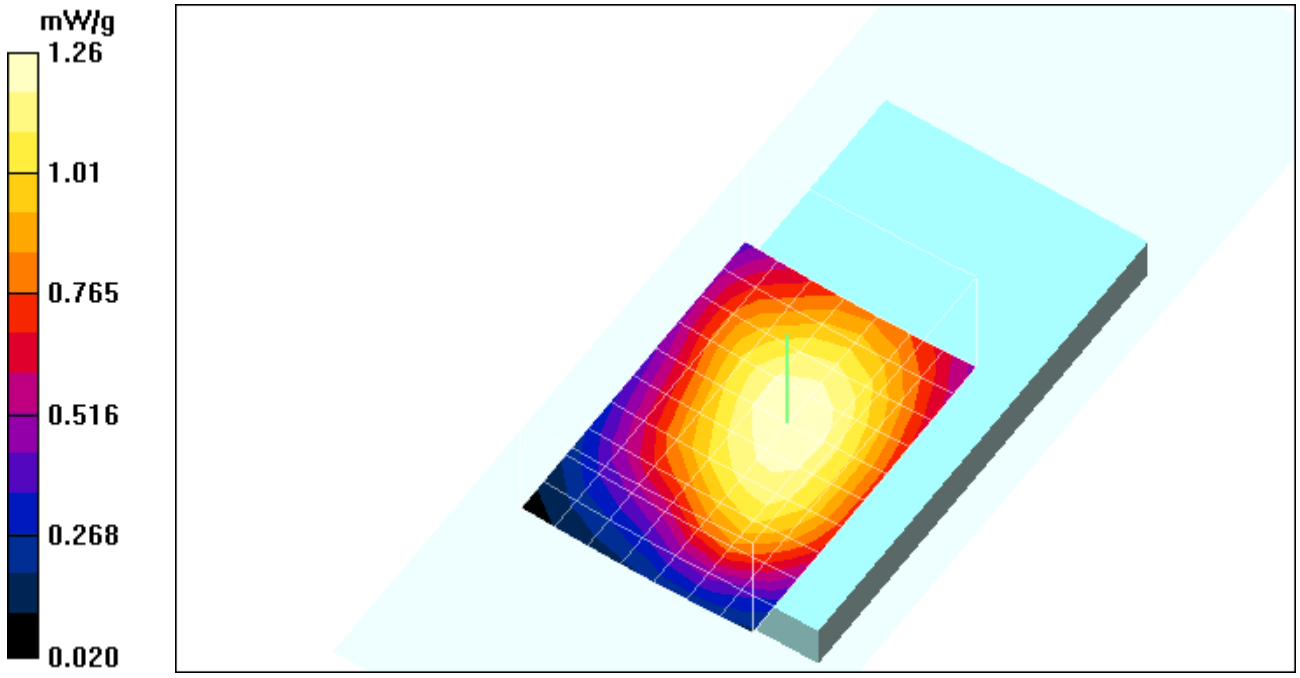
Amy Twin Phone Template/MegaZoom Zoom Scan (<=3GHz) (11x8x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm; Volume Outer Dimensions: x=80mm, y=56mm, z=30mm
Reference Value = 34.6 V/m; Power Drift = 0.012 dB; Peak SAR (extrapolated) = 1.50 W/kg
SAR(1 g) = 1.14 mW/g; SAR(10 g) = 0.845 mW/g; Maximum value of SAR (measured) = 1.20 mW/g



2D Plot showing z-axis @ 0 mm layer of measurement volume

Multi Band Result:
SAR(1 g) = 1.2 mW/g; SAR(10 g) = 0.883 mW/g
Maximum value of SAR (measured) = 1.26 mW/g



2D Plot showing z-axis @ 0 mm layer of measurement volume

Test Laboratory: Motorola - WCDMA 1900 + Wi-Fi 2.45 GHz Multiband Combined Body Worn, Back of Phone 10 mm Expanded Volumetric Measurement

DASY4 Configuration for DASY4, Amy Twin
Phone Against Body Template - Rev.10 (10Mar11-B)
/Amy Twin Phone Template/MegaZoom Zoom Scan (<=3GHz):

Date/Time: 3/11/2011 5:01:49 PM
Serial: TA014000R5; FCC ID: IHDP56LS2
Communication System: Wi-Fi 2450; Frequency: 2462 MHz; Duty Cycle: 1:1

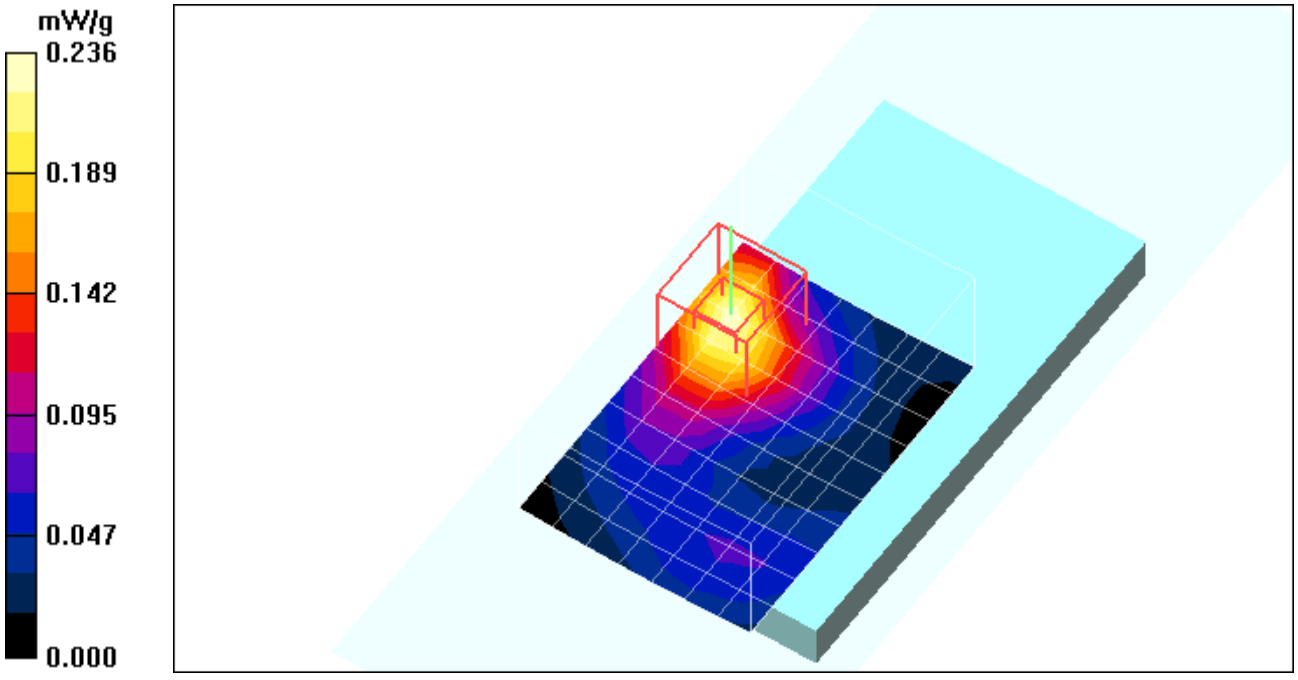
Medium: 2450 Glycol Body
Medium parameters used: f = 2450 MHz; σ = 1.97 mho/m; ε_r = 48.6; ρ = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

- Probe: ES3DV3 - SN3183; ConvF(4.36, 4.36, 4.36); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a
- Measurement SW: DASY4, V4.7 Build 80

Amy Twin Phone Template/MegaZoom Zoom Scan (<=3GHz) (11x8x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm; Volume Outer Dimensions: x=80mm, y=56mm, z=30mm
Reference Value = 8.42 V/m; Power Drift = -0.114 dB; Peak SAR (extrapolated) = 0.420 W/kg
SAR(1 g) = 0.211 mW/g; SAR(10 g) = 0.107 mW/g; Maximum value of SAR (measured) = 0.236 mW/g



2D Plot showing z-axis @ 0 mm layer of measurement volume

DASY4 Configuration for DASY4, Amy Twin
Phone Against Body Template - Rev.10 (10Mar11-B)
/Amy Twin Phone Template/MegaZoom Zoom Scan (<=3GHz):

Date/Time: 3/11/2011 9:48:34 AM
Serial: 356381040017539; FCC ID: IHDP56LS2
Communication System: WCDMA 1900; Frequency: 1907.5 MHz; Duty Cycle: 1:1

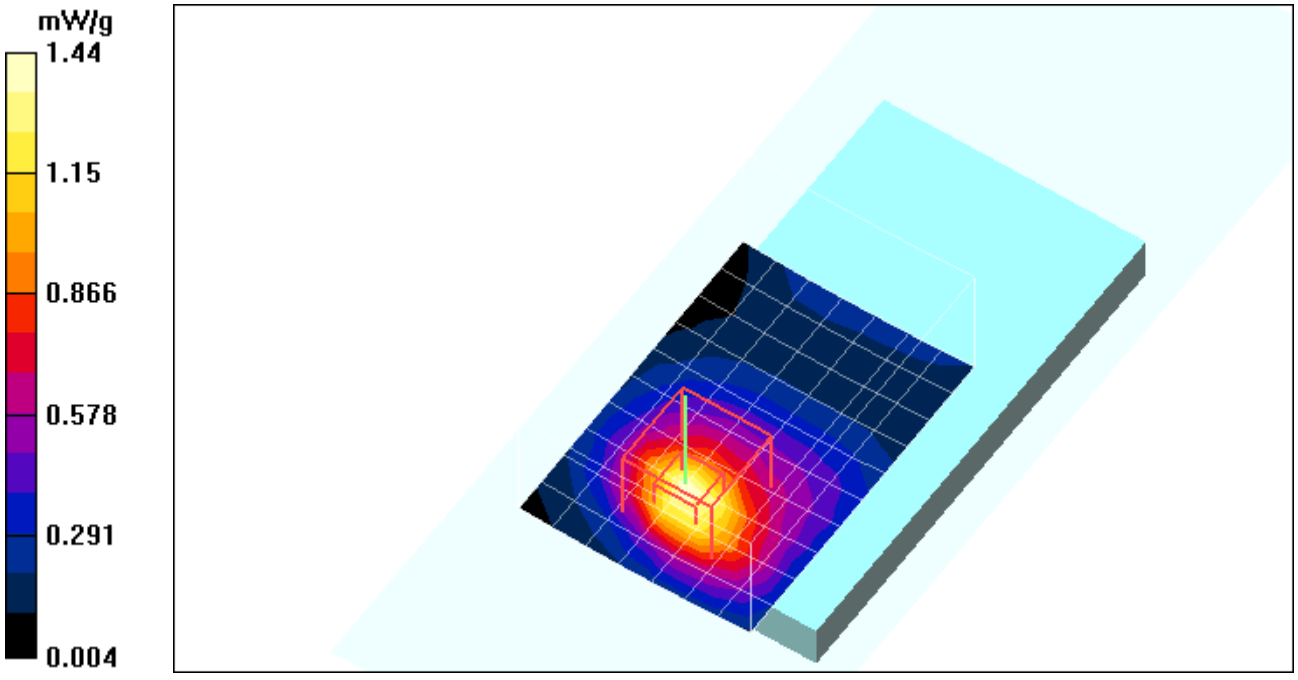
Medium: Regular Glycol Body 1750/1880
Medium parameters used: f = 1880 MHz; σ = 1.58 mho/m; ε_r = 51.9; ρ = 1000 kg/m^3

Measurement Standard: DASY4 (High Precision Assessment)

- Probe: ES3DV3 - SN3183; ConvF(4.84, 4.84, 4.84); Calibrated: 7/14/2010
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 5/18/2010
- Phantom: R1_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a
- Measurement SW: DASY4, V4.7 Build 80

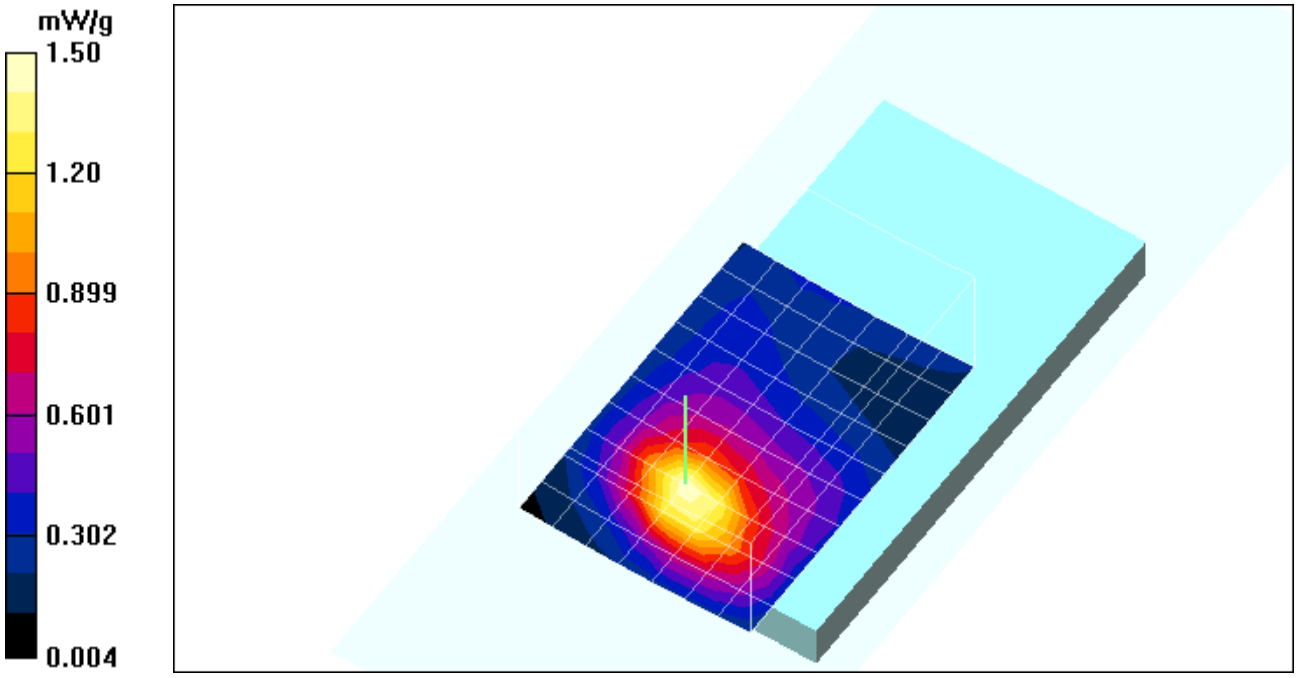
Amy Twin Phone Template/MegaZoom Zoom Scan (<=3GHz) (11x8x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm; Volume Outer Dimensions: x=80mm, y=56mm, z=30mm
Reference Value = 29.4 V/m; Power Drift = 0.035 dB; Peak SAR (extrapolated) = 2.18 W/kg
SAR(1 g) = 1.3 mW/g; SAR(10 g) = 0.688 mW/g; Maximum value of SAR (measured) = 1.44 mW/g



2D Plot showing z-axis @ 0 mm layer of measurement volume

Multi Band Result:
SAR(1 g) = 1.35 mW/g; SAR(10 g) = 0.720 mW/g
Maximum value of SAR (measured) = 1.50 mW/g



2D Plot showing z-axis @ 0 mm layer of measurement volume

Appendix 6

Probe Calibration Certificate

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

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

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

Accreditation No.: SCS 108

Client Motorola MDb

Certificate No: ES3-3124_Aug10

CALIBRATION CERTIFICATE

Object: ES3DV3 - SN:3124

Calibration procedure(s): QA CAL-01.v6, QA CAL-23.v3 and QA CAL-25.v2
Calibration procedure for dosimetric E-field probes

Calibration date: August 11, 2010

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 (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41495277	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41498087	1-Apr-10 (No. 217-01136)	Apr-11
Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
DAE4	SN: 660	20-Apr-10 (No. DAE4-660_Apr10)	Apr-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: August 14, 2010

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
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:

a) 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
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,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*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z: A, B, C* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *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 *NORMx,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 ES3DV3

SN:3124

Manufactured:	July 11, 2006
Last calibrated:	April 21, 2009
Recalibrated:	August 11, 2010

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: ES3DV3 SN:3124

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	1.26	1.33	1.34	± 10.1%
DCP (mV)[B]	92.9	96.4	96.7	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc[E] (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300.0	± 1.5%
			Y	0.00	0.00	1.00	300.0	
			Z	0.00	0.00	1.00	300.0	

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 E^2-field uncertainty inside TSL (see Pages 5 and 6).

[B] Numerical linearization parameter: uncertainty not required.

[E] Uncertainty is determined using the maximum deviation from linear response applying recatangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: ES3DV3 SN:3124

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	5.89	5.89	5.89	0.97	1.07 ± 11.0%
1810	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.89	4.89	4.89	0.49	1.54 ± 11.0%
1950	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.68	4.68	4.68	0.50	1.52 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.35	4.35	4.35	0.45	1.78 ± 11.0%

[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.

DASY/EASY - Parameters of Probe: ES3DV3 SN:3124

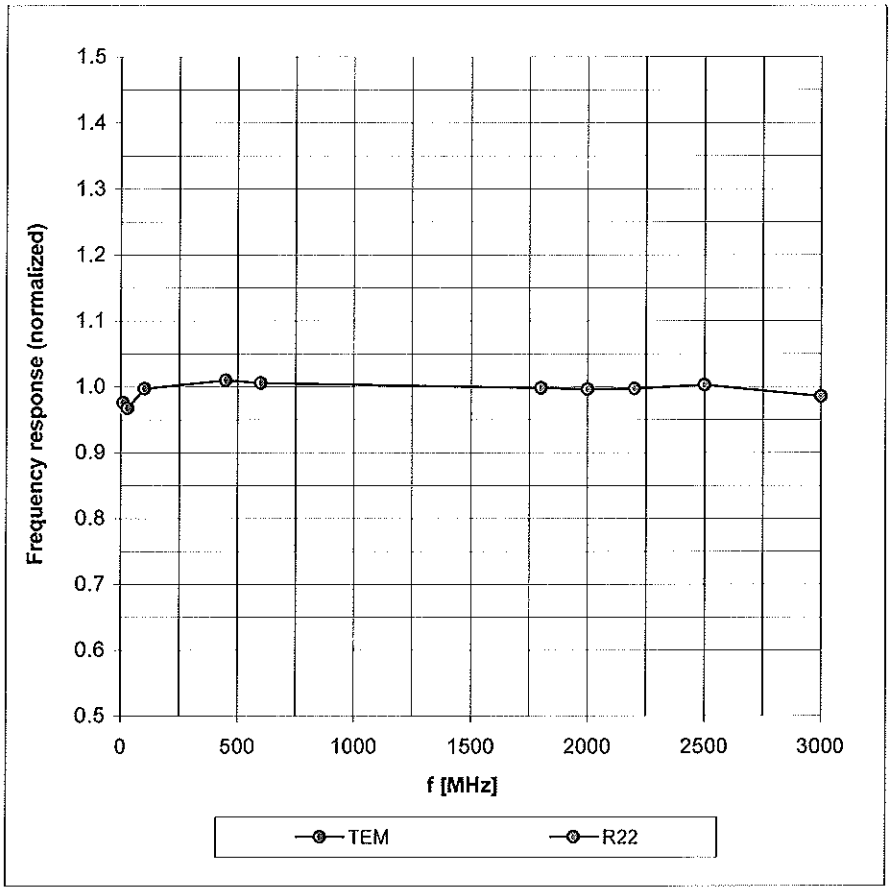
Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	5.86	5.86	5.86	0.96	1.11 ± 11.0%
1810	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.76	4.76	4.76	0.41	1.84 ± 11.0%
1950	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.78	4.78	4.78	0.32	2.33 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	4.19	4.19	4.19	0.69	1.29 ± 11.0%

[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.

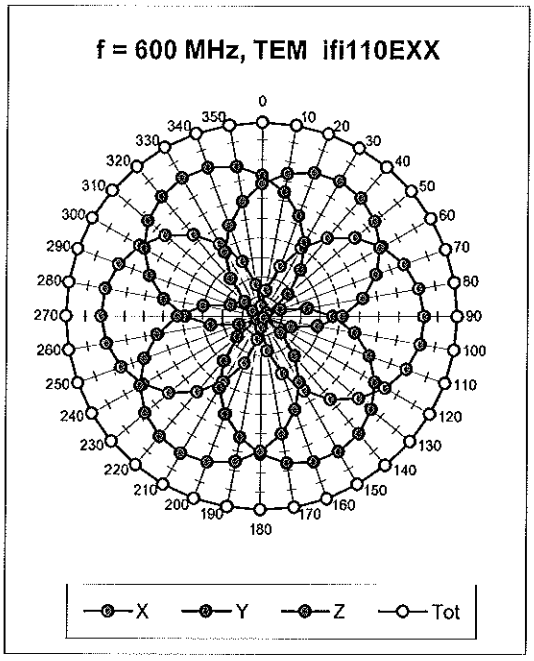
Frequency Response of E-Field

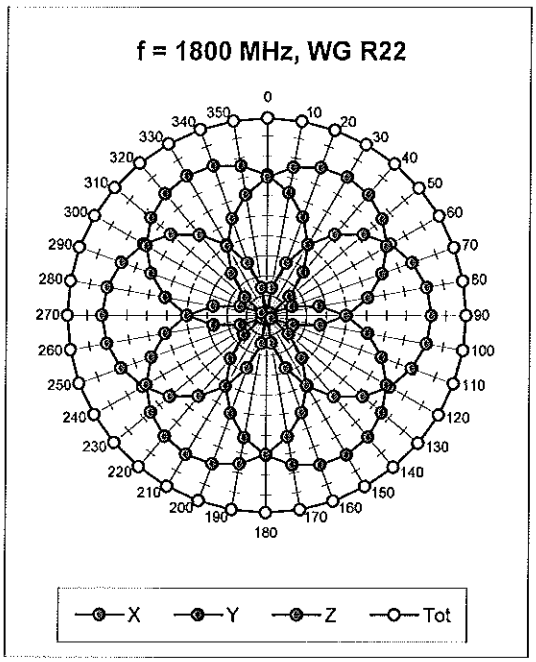
(TEM-Cell:ifi110 EXX, Waveguide: R22)

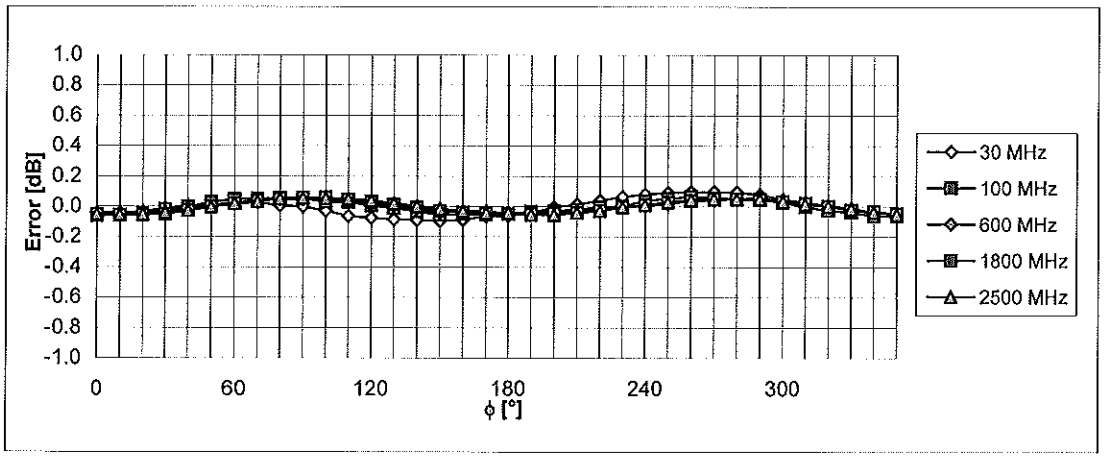


Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Receiving Pattern (ϕ), ϑ = 0°



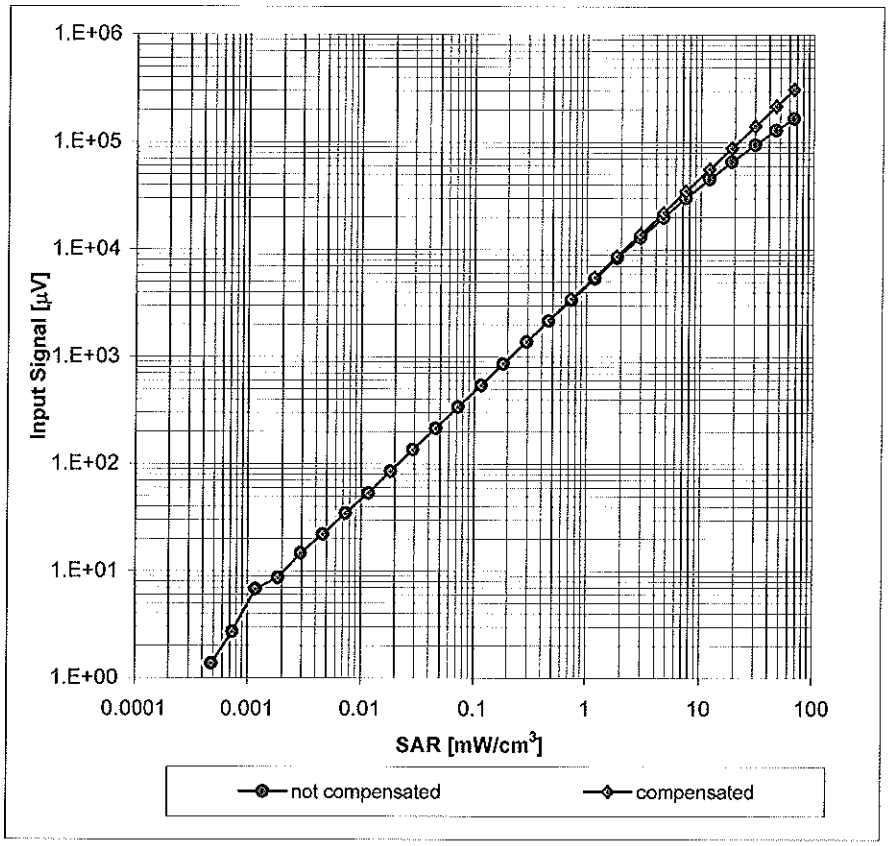


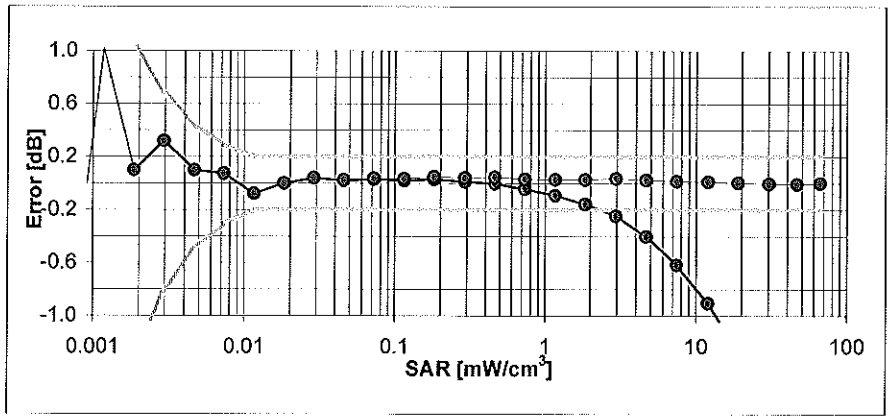


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head})

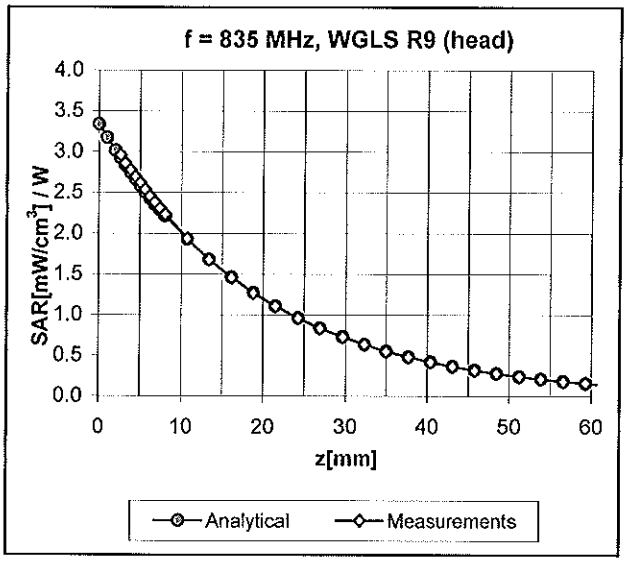
(Waveguide R22, f = 1800 MHz)

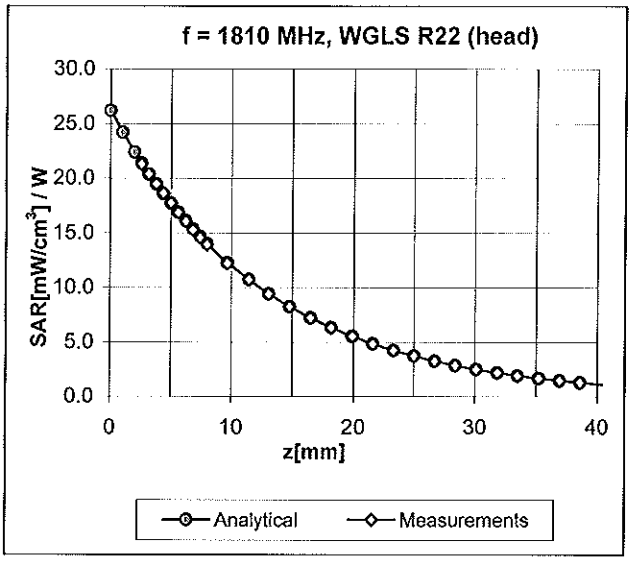




Uncertainty of Linearity Assessment: ± 0.6% (k=2)

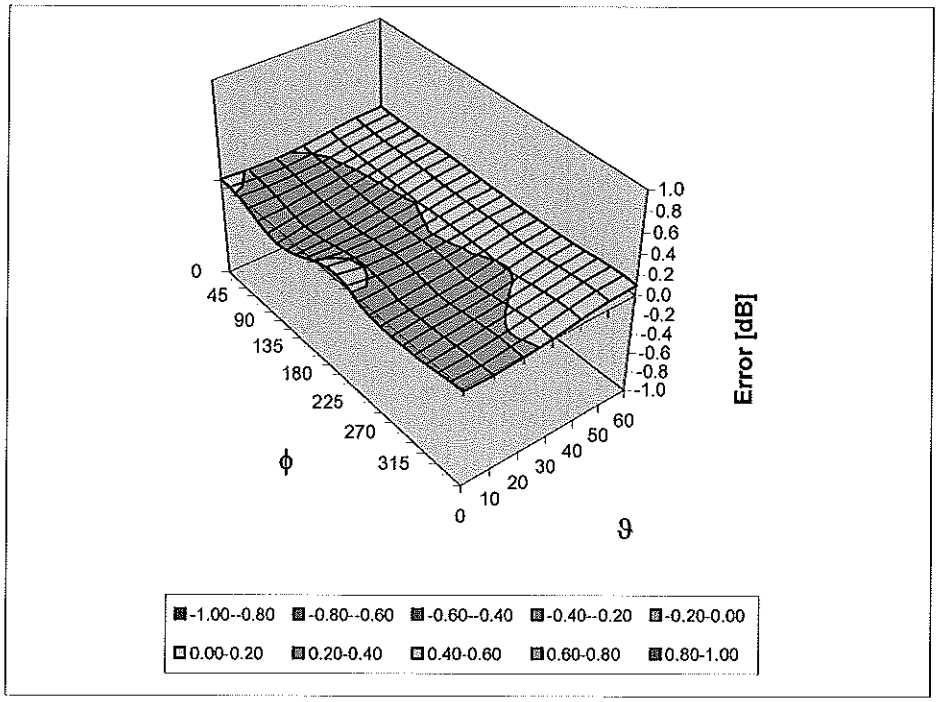
Conversion Factor Assessment





Deviation from Isotropy in HSL

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	4.0 mm
Probe Tip to Sensor X Calibration Point	2 mm
Probe Tip to Sensor Y Calibration Point	2 mm
Probe Tip to Sensor Z Calibration Point	2 mm
Recommended Measurement Distance from Surface	3 mm

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

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S Swiss Calibration Service

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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

Client Motorola MDb

Certificate No: ES3-3183_Jul10

CALIBRATION CERTIFICATE

Object: ES3DV3 - SN:3183

Calibration procedure(s): QA CAL-01.v6, QA CAL-23.v3 and QA CAL-25.v2
Calibration procedure for dosimetric E-field probes

Calibration date: July 14, 2010

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 (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41495277	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41498087	1-Apr-10 (No. 217-01136)	Apr-11
Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
DAE4	SN: 660	20-Apr-10 (No. DAE4-660_Apr10)	Apr-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 15, 2010

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

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S Swiss Calibration Service

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

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
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., ϑ = 0 is normal to probe axis

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 Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,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*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z: A, B, C* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 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 *NORMx,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 ES3DV3

SN:3183

Manufactured:	March 25, 2008
Last calibrated:	August 17, 2009
Recalibrated:	July 14, 2010

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: ES3DV3 SN:3183

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	1.21	1.15	1.07	± 10.1%
DCP (mV)[B]	88.6	86.9	89.5	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc[E] (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300.0	± 1.5%
			Y	0.00	0.00	1.00	300.0	
			Z	0.00	0.00	1.00	300.0	

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 E^2-field uncertainty inside TSL (see Pages 5 and 6).

[B] Numerical linearization parameter: uncertainty not required.

[E] Uncertainty is determined using the maximum deviation from linear response applying recatangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: ES3DV3 SN:3183

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	41.5 ± 5%	0.90 ± 5%	6.11	6.11	6.11	0.99	1.04 ± 11.0%
1810	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	5.05	5.05	5.05	0.58	1.33 ± 11.0%
1950	± 50 / ± 100	40.0 ± 5%	1.40 ± 5%	4.82	4.82	4.82	0.54	1.37 ± 11.0%
2450	± 50 / ± 100	39.2 ± 5%	1.80 ± 5%	4.49	4.49	4.49	0.44	1.70 ± 11.0%

[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.

DASY/EASY - Parameters of Probe: ES3DV3 SN:3183

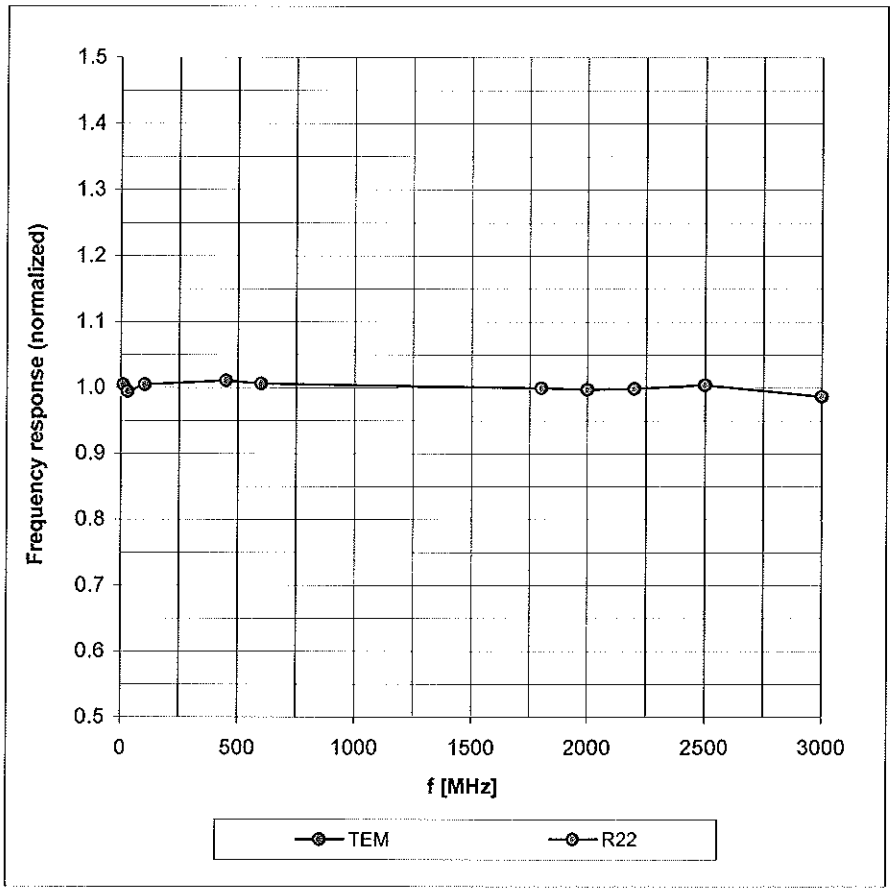
Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
835	± 50 / ± 100	55.2 ± 5%	0.97 ± 5%	6.15	6.15	6.15	0.95	1.10 ± 11.0%
1810	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.84	4.84	4.84	0.39	1.87 ± 11.0%
1950	± 50 / ± 100	53.3 ± 5%	1.52 ± 5%	4.86	4.86	4.86	0.28	2.80 ± 11.0%
2450	± 50 / ± 100	52.7 ± 5%	1.95 ± 5%	4.36	4.36	4.36	0.69	1.31 ± 11.0%

[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.

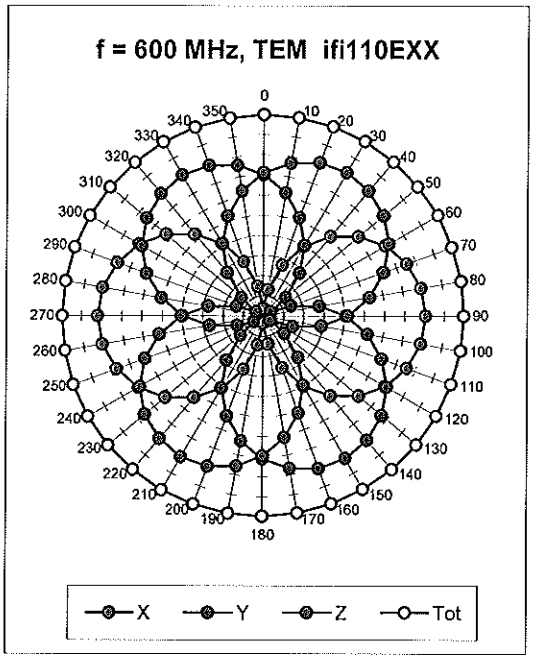
Frequency Response of E-Field

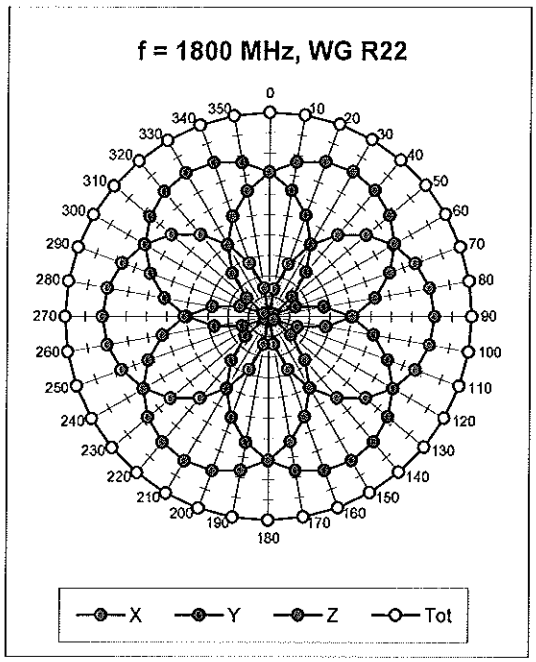
(TEM-Cell:ifi110 EXX, Waveguide: R22)

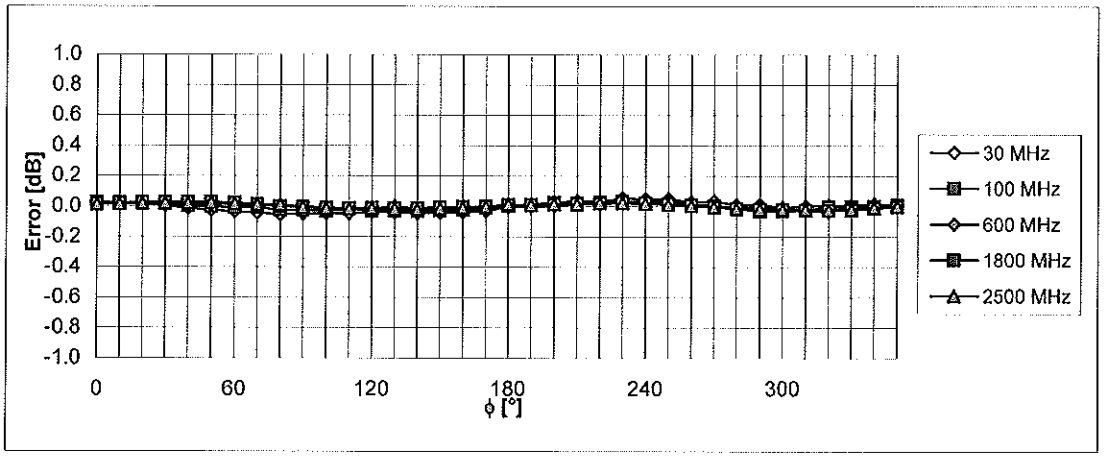


Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Receiving Pattern (ϕ), ϑ = 0°



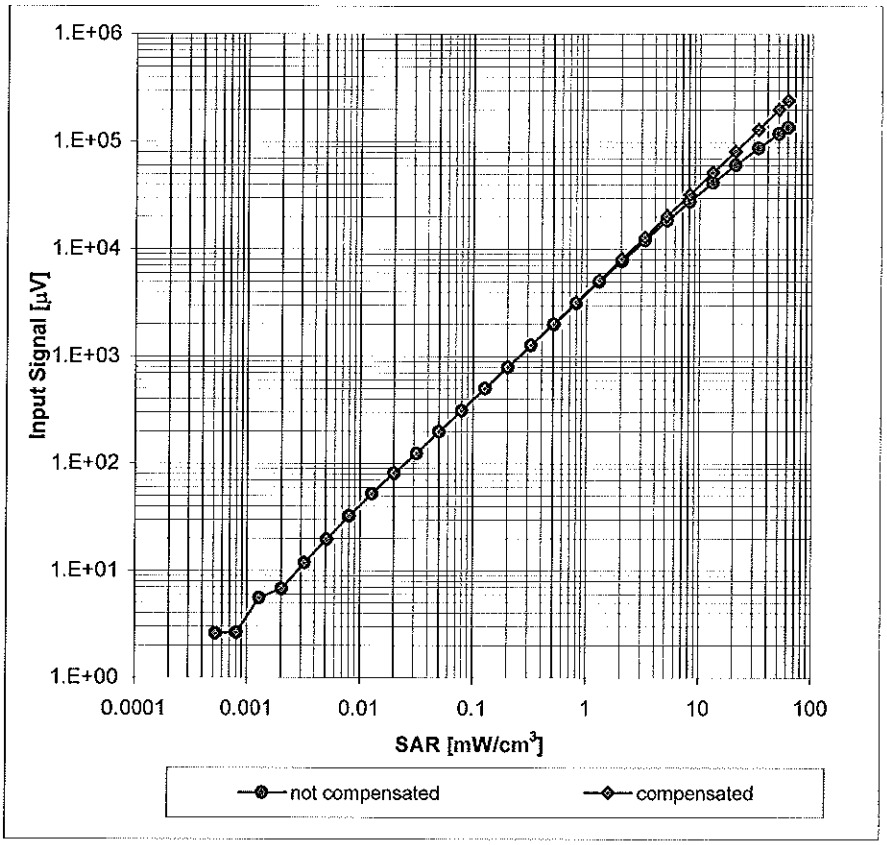


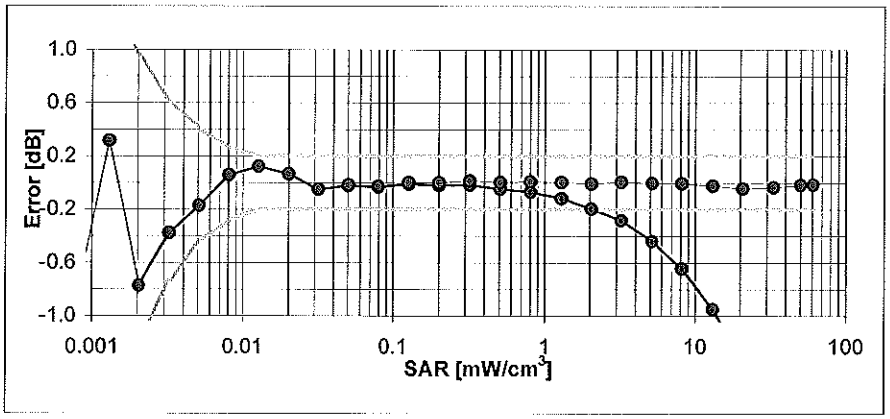


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head})

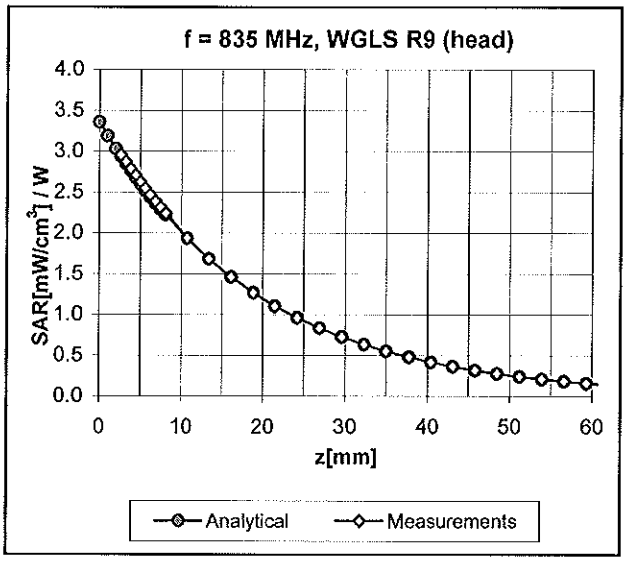
(Waveguide R22, f = 1800 MHz)

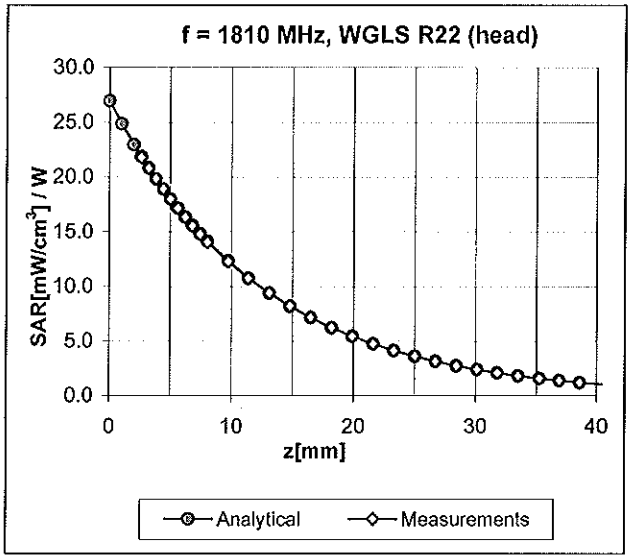




Uncertainty of Linearity Assessment: ± 0.6% (k=2)

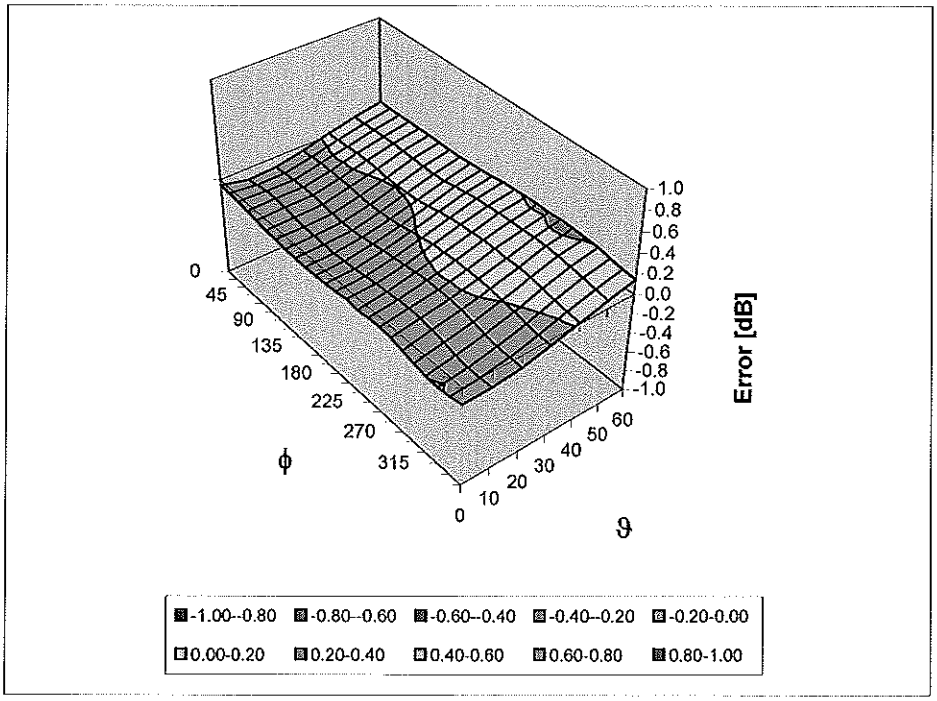
Conversion Factor Assessment





Deviation from Isotropy in HSL

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	10 mm
Tip Diameter	4.0 mm
Probe Tip to Sensor X Calibration Point	2 mm
Probe Tip to Sensor Y Calibration Point	2 mm
Probe Tip to Sensor Z Calibration Point	2 mm
Recommended Measurement Distance from Surface	3 mm

Calibration Laboratory of
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Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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

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

Accreditation No.: SCS 108

Client Motorola MDb

Certificate No: EX3-3730_Jul10/2

CALIBRATION CERTIFICATE (Replacement of No: EX3-3730_Jul10

Object	EX3DV4 - SN:3730
Calibration procedure(s)	QA CAL-01.v6, QA CAL-14.v3, QA CAL-23.v3 and QA CAL-25.v2 Calibration procedure for dosimetric E-field probes
Calibration date:	July 16, 2010

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 (Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41495277	1-Apr-10 (No. 217-01136)	Apr-11
Power sensor E4412A	MY41498087	1-Apr-10 (No. 217-01136)	Apr-11
Reference 3 dB Attenuator	SN: S5054 (3c)	30-Mar-10 (No. 217-01159)	Mar-11
Reference 20 dB Attenuator	SN: S5086 (20b)	30-Mar-10 (No. 217-01161)	Mar-11
Reference 30 dB Attenuator	SN: S5129 (30b)	30-Mar-10 (No. 217-01160)	Mar-11
Reference Probe ES3DV2	SN: 3013	30-Dec-09 (No. ES3-3013_Dec09)	Dec-10
DAE4	SN: 660	20-Apr-10 (No. DAE4-660_Apr10)	Apr-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-09)	In house check: Oct10

	Name	Function	Signature
Calibrated by:	Katja Pokovic	Technical Manager	
Approved by:	Niels Kuster	Quality Manager	

Issued: September 4, 2010

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

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

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

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
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:

a) 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
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,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*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *Ax,y,z; Bx,y,z; Cx,y,z, VRx,y,z: A, B, C* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *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 *NORMx,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 EX3DV4

SN:3730

Manufactured: October 19, 2009
Calibrated: July 16, 2010

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 SN:3730

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.41	0.53	0.50	± 10.1%
DCP (mV)[B]	87.3	92.6	93.4	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dBuV	C	VR mV	Unc[E] (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	300	± 1.5%
			Y	0.00	0.00	1.00	300	
			Z	0.00	0.00	1.00	300	

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 E^2-field uncertainty inside TSL (see Pages 5 and 6).

[B] Numerical linearization parameter: uncertainty not required.

[E] Uncertainty is determined using the maximum deviation from linear response applying recatangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 SN:3730

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth	Unc (k=2)
5200	± 50 / ± 100	36.0 ± 5%	4.66 ± 5%	4.67	4.67	4.67	0.45	1.80	± 13.1%
5300	± 50 / ± 100	35.9 ± 5%	4.76 ± 5%	4.38	4.38	4.38	0.45	1.80	± 13.1%
5600	± 50 / ± 100	35.5 ± 5%	5.07 ± 5%	4.14	4.14	4.14	0.45	1.80	± 13.1%
5800	± 50 / ± 100	35.3 ± 5%	5.27 ± 5%	4.06	4.06	4.06	0.50	1.80	± 13.1%

[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.

DASY/EASY - Parameters of Probe: EX3DV4 SN:3730

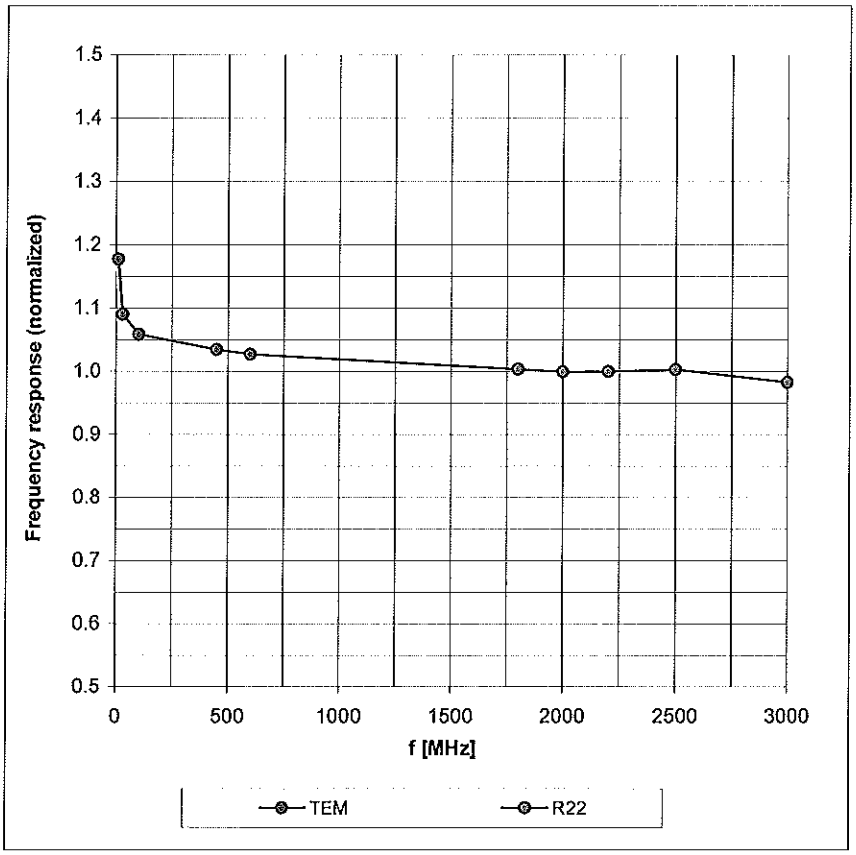
Calibration Parameter Determined in Body Tissue Simulating Media

f [MHz]	Validity [MHz][C]	Permittivity	Conductivity	ConvF X	ConvF Y	ConvF Z	Alpha	Depth Unc (k=2)
5200	± 50 / ± 100	49.0 ± 5%	5.30 ± 5%	4.07	4.07	4.07	0.50	1.90 ± 13.1%
5300	± 50 / ± 100	48.9 ± 5%	5.42 ± 5%	3.81	3.81	3.81	0.55	1.90 ± 13.1%
5600	± 50 / ± 100	48.5 ± 5%	5.77 ± 5%	3.33	3.33	3.33	0.60	1.90 ± 13.1%
5800	± 50 / ± 100	48.2 ± 5%	6.00 ± 5%	3.53	3.53	3.53	0.60	1.90 ± 13.1%

[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.

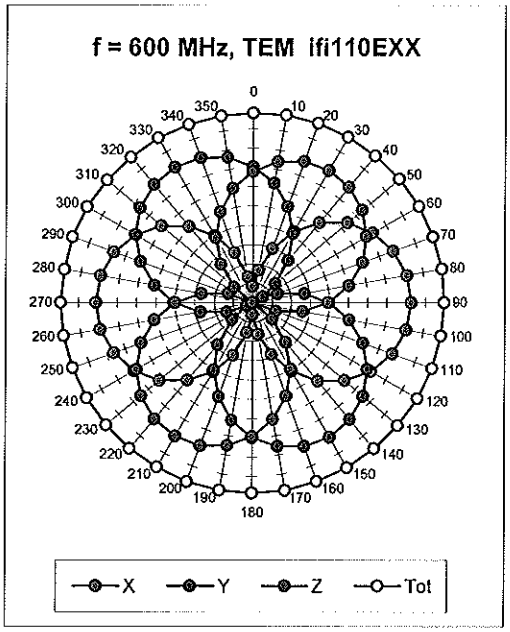
Frequency Response of E-Field

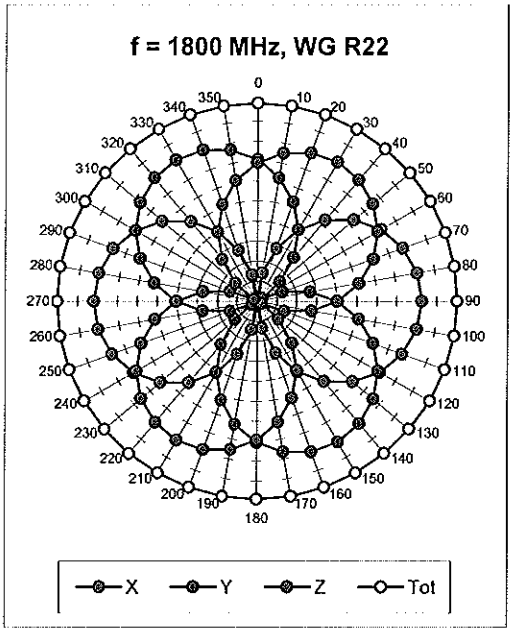
(TEM-Cell:ifi110 EXX, Waveguide: R22)

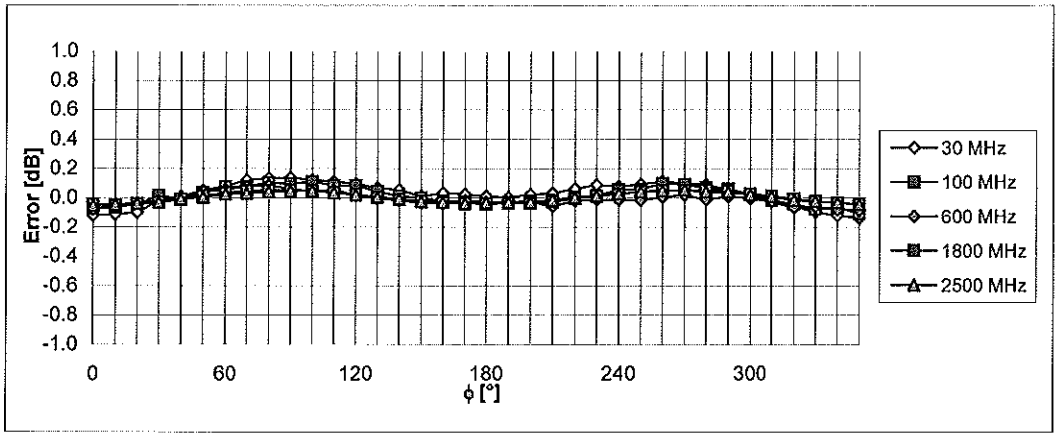


Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

Receiving Pattern (ϕ), ϑ = 0°



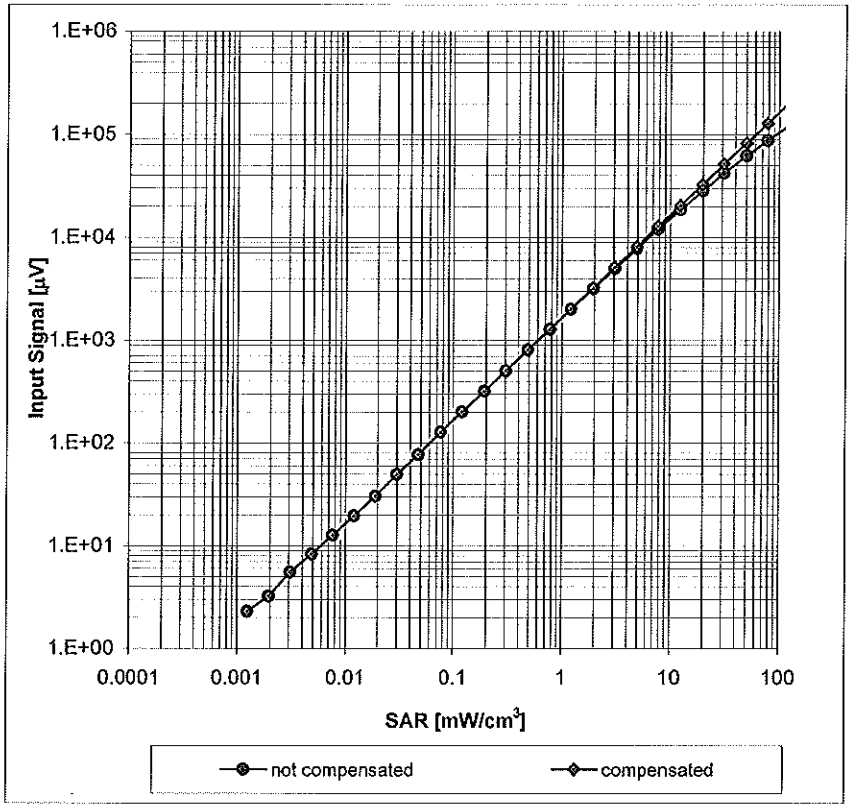


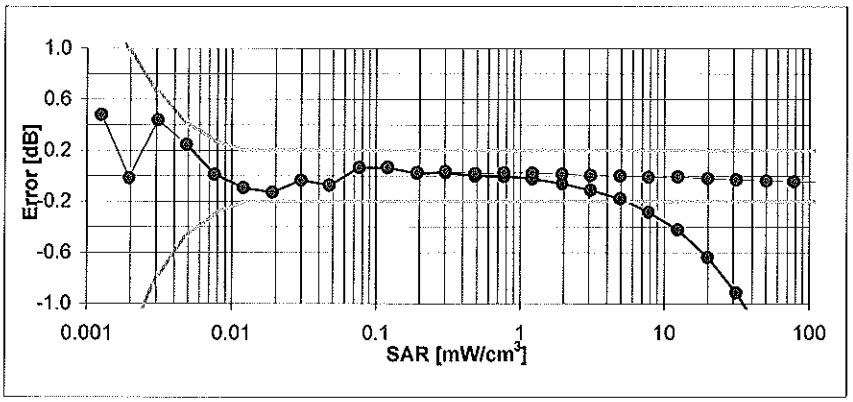


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head})

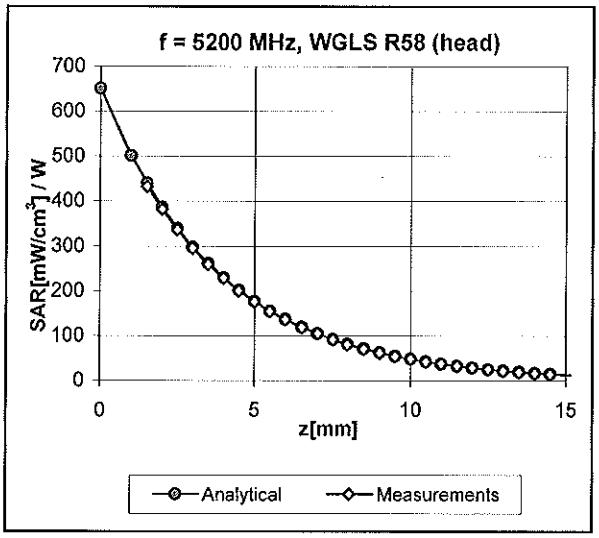
(Waveguide R22, f = 1800 MHz)

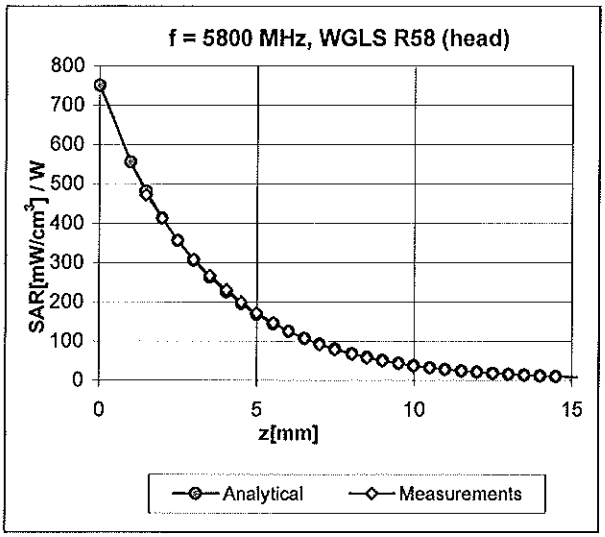




Uncertainty of Linearity Assessment: ± 0.6% (k=2)

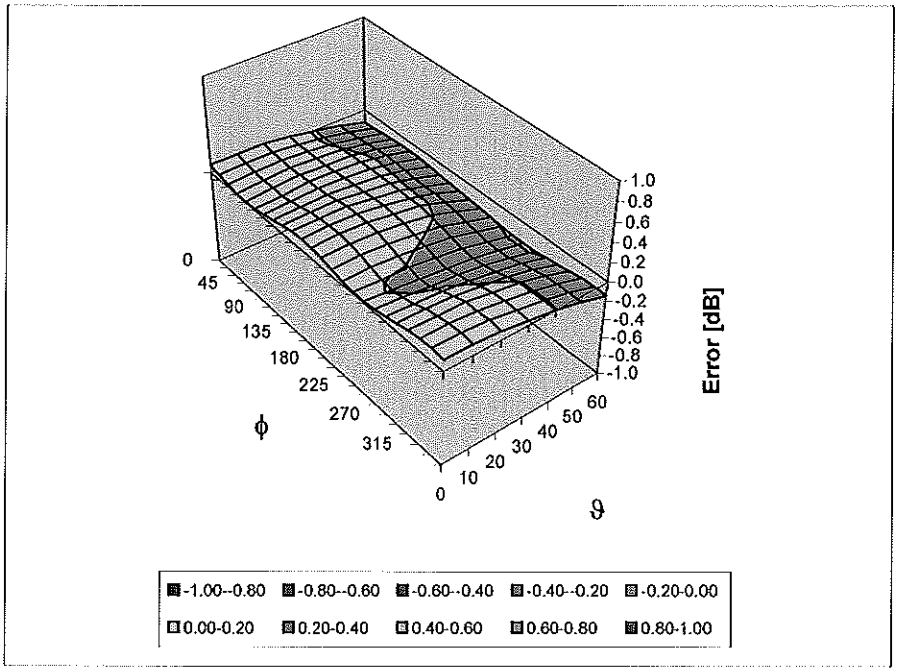
Conversion Factor Assessment





Deviation from Isotropy in HSL

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	Not applicable
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	2 mm

Appendix 7

Measurement Uncertainty Budget

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	**IEEE 1528 section**	**Tol. (± %)**	**Prob Dist**	**Div.**	**c_i (1 g)**	**c_i (10 g)**	**1 g u_i (±%)**	**10 g u_i (±%)**	**v_i**
Measurement System									
Probe Calibration	E.2.1	5.9	N	1.00	1	1	5.9	5.9	∞
Axial Isotropy	E.2.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Hemispherical Isotropy	E.2.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3	1.0	R	1.73	1	1	0.6	0.6	∞
Linearity	E.2.4	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6	0.3	N	1.00	1	1	0.3	0.3	∞
Response Time	E.2.7	1.1	R	1.73	1	1	0.6	0.6	∞
Integration Time	E.2.8	1.1	R	1.73	1	1	0.6	0.6	∞
RF Ambient Conditions - Noise	E.6.1	3.0	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1	0.0	R	1.73	1	1	0.0	0.0	∞
Probe Positioner Mech. Tolerance	E.6.2	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w.r.t Phantom	E.6.3	1.4	R	1.73	1	1	0.8	0.8	∞
Max. SAR Evaluation (ext., int., avg.)	E.5	3.4	R	1.73	1	1	2.0	2.0	∞
Test sample Related									
Test Sample Positioning	E.4.2	3.2	N	1.00	1	1	3.2	3.2	29
Device Holder Uncertainty	E.4.1	4.0	N	1.00	1	1	4.0	4.0	8
SAR drift	6.6.2	5.0	R	1.73	1	1	2.9	2.9	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity (target)	E.3.2	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (measurement)	E.3.3	3.3	N	1.00	0.64	0.43	2.1	1.4	∞
Liquid Permittivity (target)	E.3.2	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (measurement)	E.3.3	1.9	N	1.00	0.6	0.49	1.1	0.9	∞
Combined Standard Uncertainty			RSS				11.1	10.8	411
Expanded Uncertainty (95% CONFIDENCE LEVEL)			*k*=2				22.2	21.6	