Appendix 1

SAR distribution comparisons for System Accuracy Verifications

System Accuracy Verification Measurements for Head SAR Measurements

Date/Time: 3/29/2012 10:36:53 AM

Test Laboratory:MOTOROLA - Mar-29-2012 835 MHz Head

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:421TR; FCC ID:IHDT56NH3
Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 421TR; Input Power = 200 mW;
Sim.Temp@meas = 21.5; Sim.Temp@SPC = 21.5; Room Temp @ SPC = 22.2
Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ;
Medium parameters used: f = 835 MHz; σ = 0.92 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(5.65, 5.65, 5.65); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1407;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Z-Axis Retraction (1x1x31):

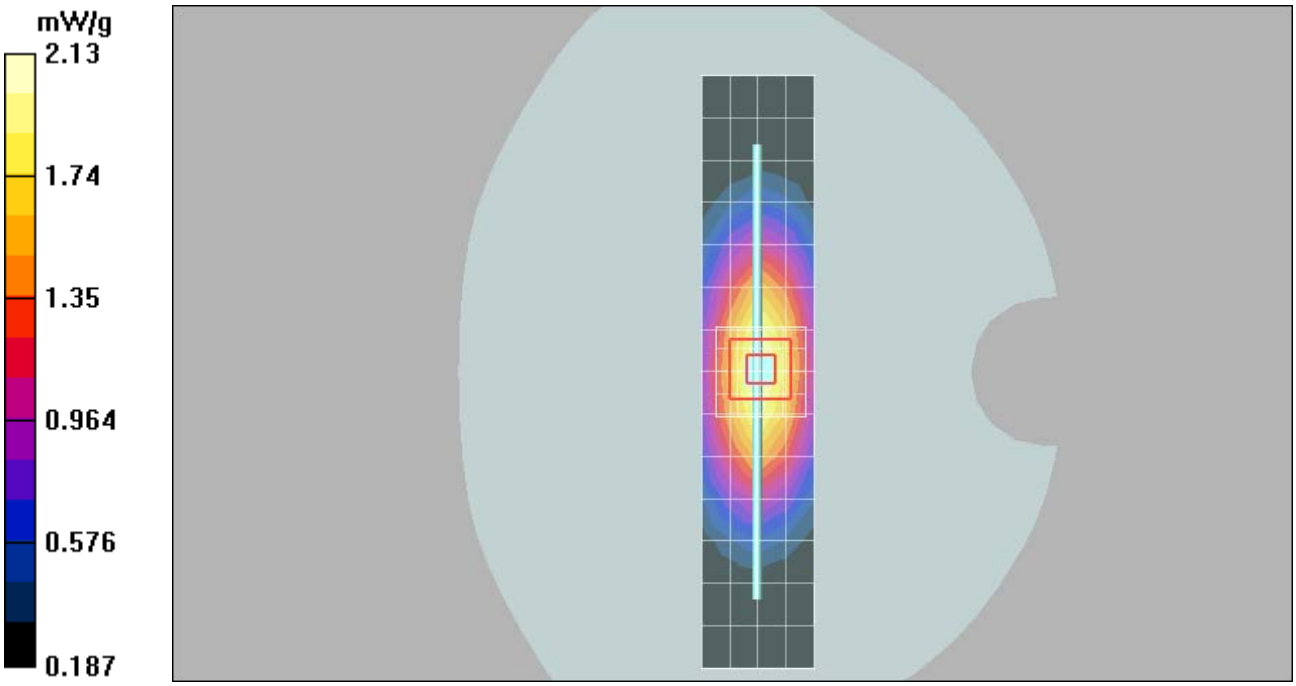
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.13 mW/g

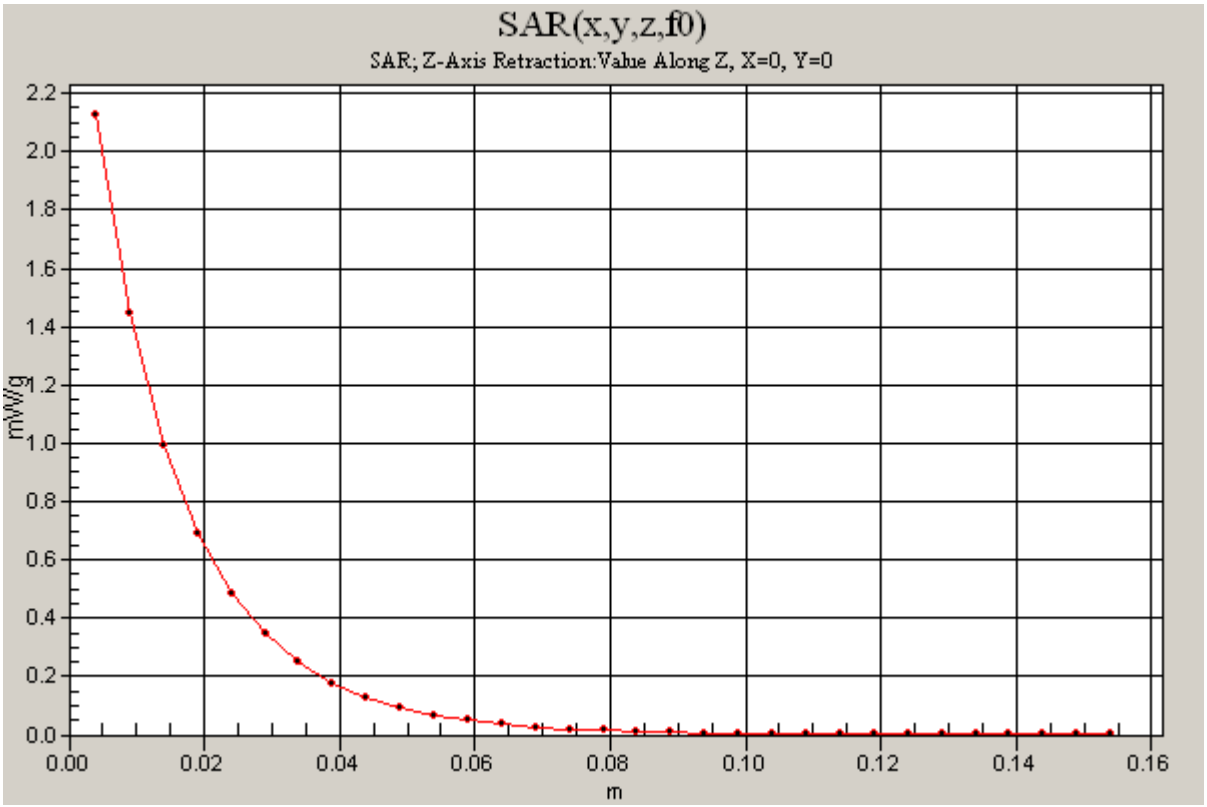
Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: dx=10mm, dy=15mm

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 49.3 V/m; Power Drift = -0.078 dB
Peak SAR (extrapolated) = 2.84 W/kg
SAR(1 g) = 1.96 mW/g; SAR(10 g) = 1.29 mW/g


mW/g
2.13
1.74
1.35
0.964
0.576
0.187


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: 3/30/2012 11:37:58 AM

Test Laboratory:MOTOROLA - Mar-30-2012 835 MHz Head

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:421TR; FCC ID:IHDT56NH3

Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 421TR; Input Power = 200 mW;
Sim.Temp@meas = 21.2; Sim.Temp@SPC = 21.2; Room Temp @ SPC = 22.2
Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ;
Medium parameters used: f = 835 MHz; σ = 0.92 mho/m; ε_r = 41.9; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(5.65, 5.65, 5.65); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1407;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Z-Axis Retraction (1x1x31):

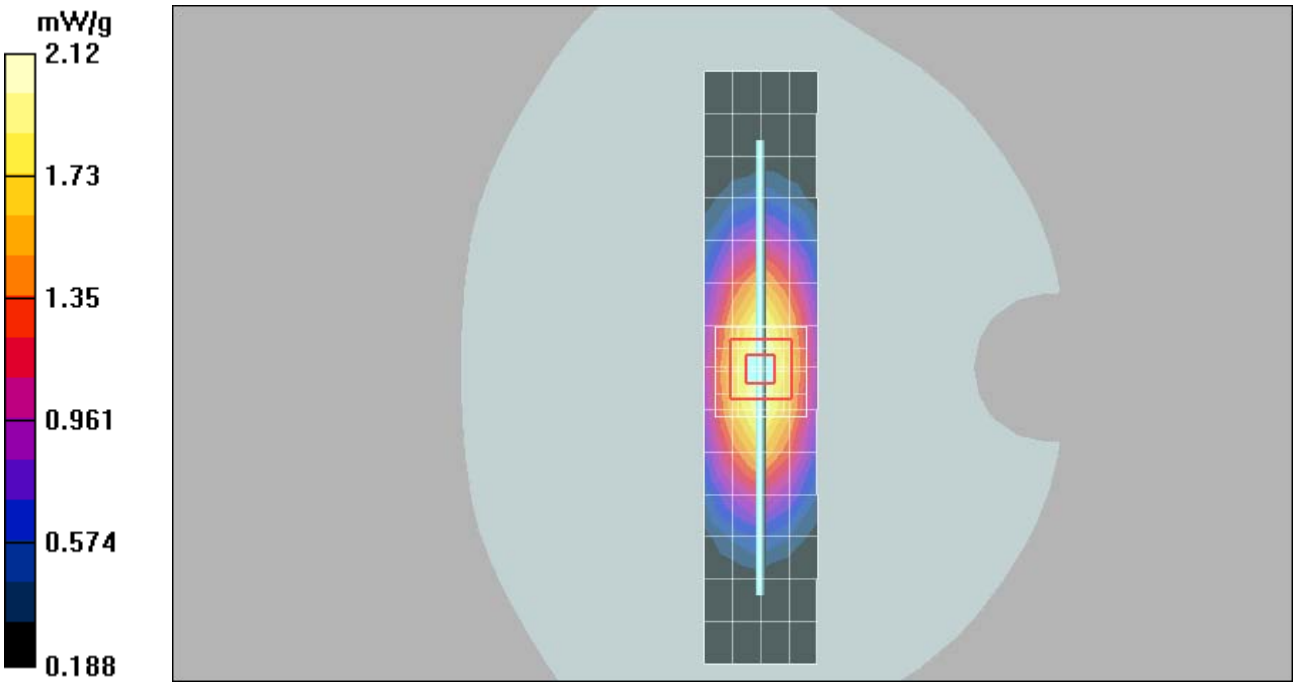
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.15 mW/g

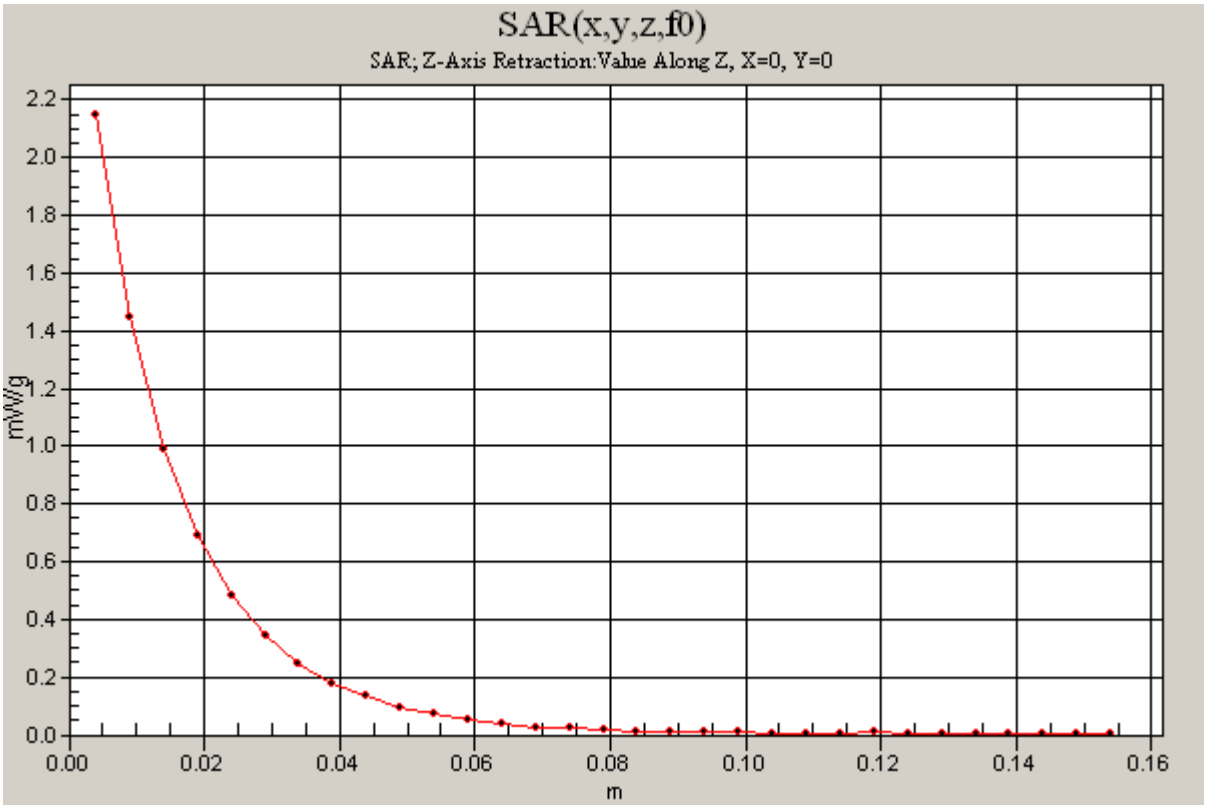
Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: dx=10mm, dy=15mm

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 49.8 V/m; Power Drift = -0.112 dB
Peak SAR (extrapolated) = 2.84 W/kg
SAR(1 g) = 1.95 mW/g; SAR(10 g) = 1.28 mW/g
Maximum value of SAR (measured) = 2.12 mW/g


mW/g
2.12
1.73
1.35
0.961
0.574
0.188


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: 3/28/2012 5:31:00 PM

Test Laboratory:MOTOROLA - Mar-28-2012 1800 MHz Head

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d128; FCC ID:IHDT56NH3
Procedure Notes: 1800MHz System Performance Check; Dipole Sn# 2d128; Input Power =200mW; Sim.Temp@meas = 21.7; Sim.Temp@SPC = 21.3; Room Temp @ SPC = 22
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ;
Medium parameters used: f = 1800 MHz; σ = 1.36 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.88, 4.88, 4.88); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

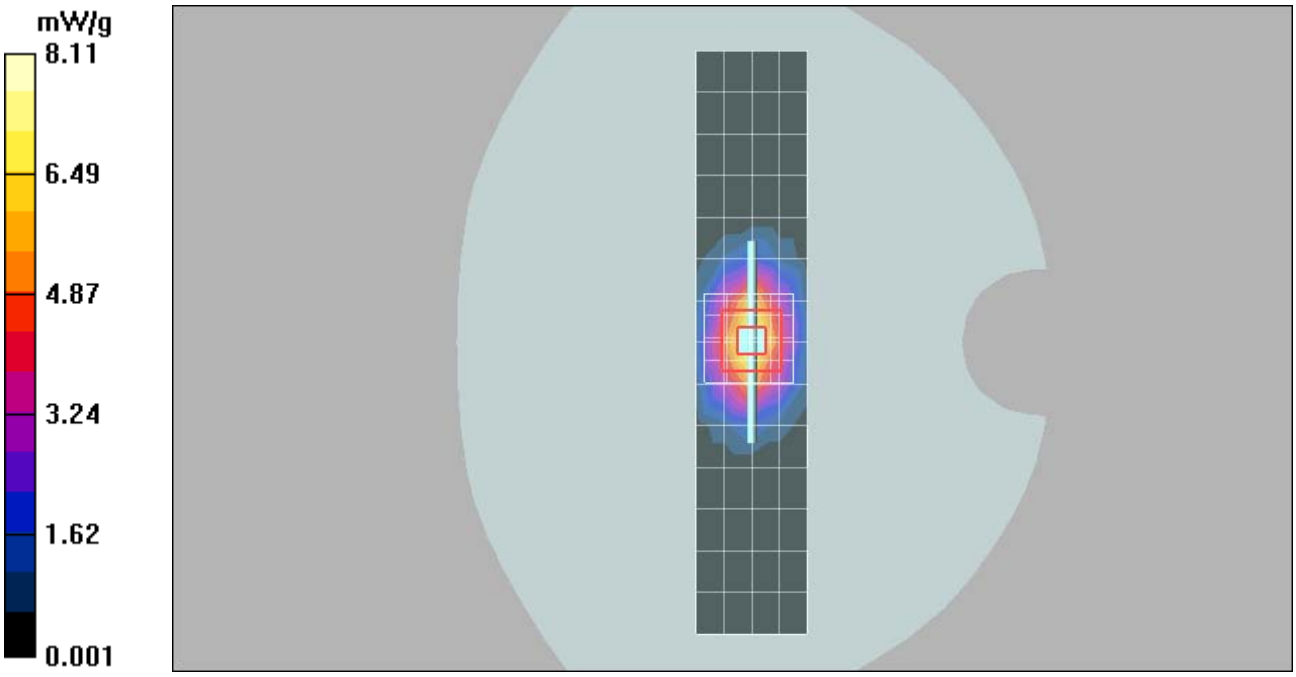
Measurement grid: dx=10mm, dy=15mm
Maximum value of SAR (measured) = 8.05 mW/g

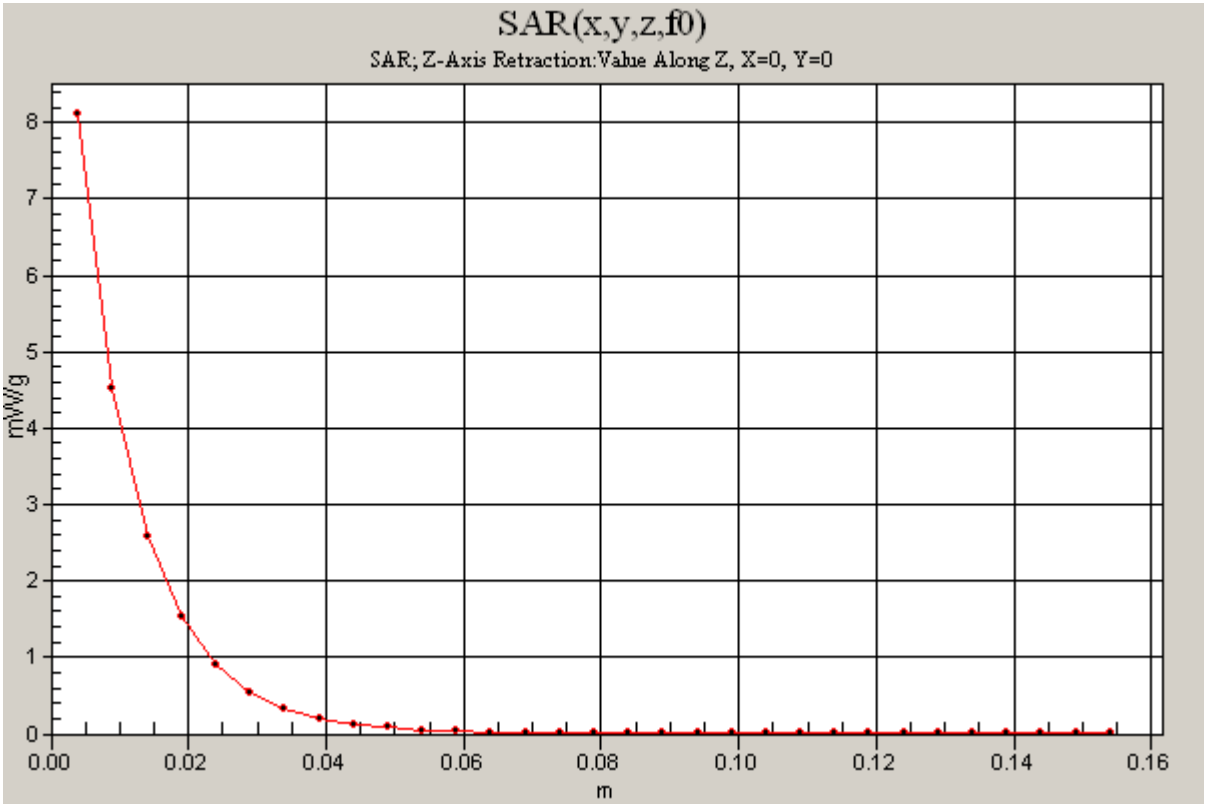
Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 77.9 V/m; Power Drift = 0.030 dB
Peak SAR (extrapolated) = 13.3 W/kg
SAR(1 g) = 7.25 mW/g; SAR(10 g) = 3.8 mW/g
Maximum value of SAR (measured) = 8.11 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: dx=20mm, dy=20mm, dz=5mm


mW/g
8.11
6.49
4.87
3.24
1.62
0.001


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
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
m

Date/Time: 3/30/2012 8:28:43 PM

Test Laboratory:MOTOROLA - Mar-30-2012 1800 MHz Head

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d128; FCC ID:IHDT56NH3
Procedure Notes: 1800MHz System Performance Check; Dipole Sn# 2d128; Input Power =200mW; Sim.Temp@meas = 21.6; Sim.Temp@SPC = 21.6; Room Temp @ SPC = 21.7
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ;
Medium parameters used: f = 1800 MHz; σ = 1.38 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.88, 4.88, 4.88); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

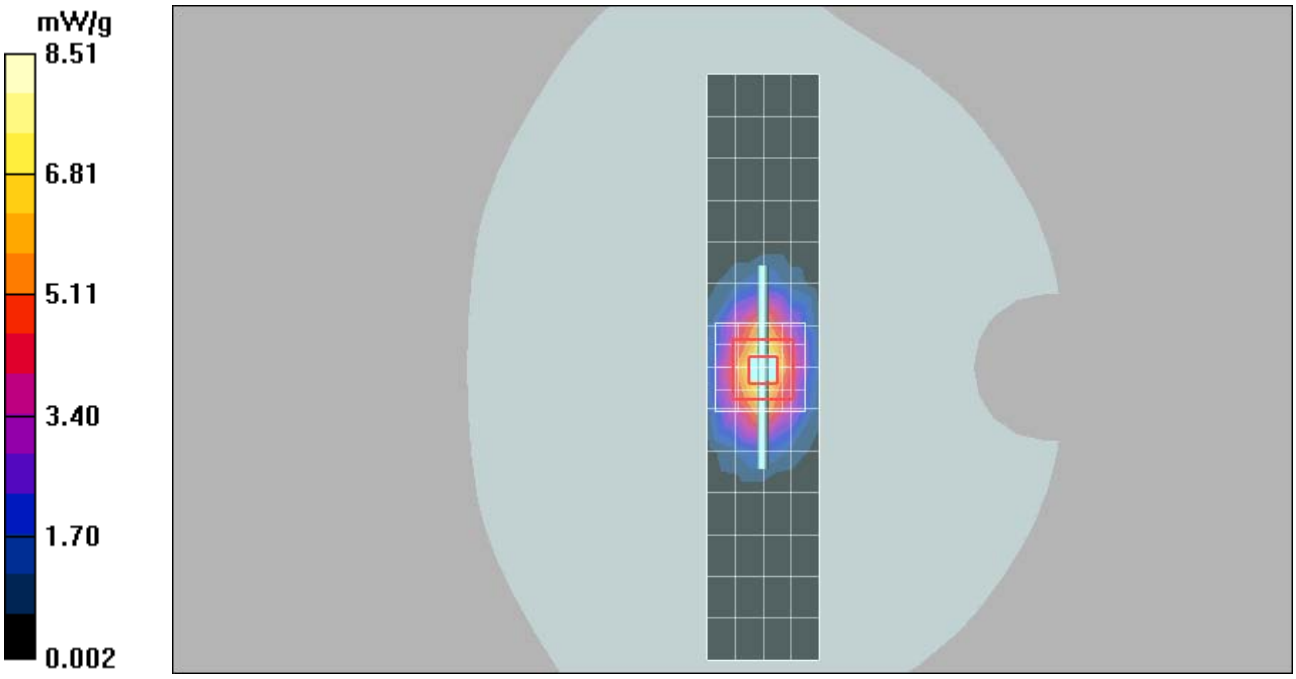
Measurement grid: dx=10mm, dy=15mm
Maximum value of SAR (measured) = 8.40 mW/g

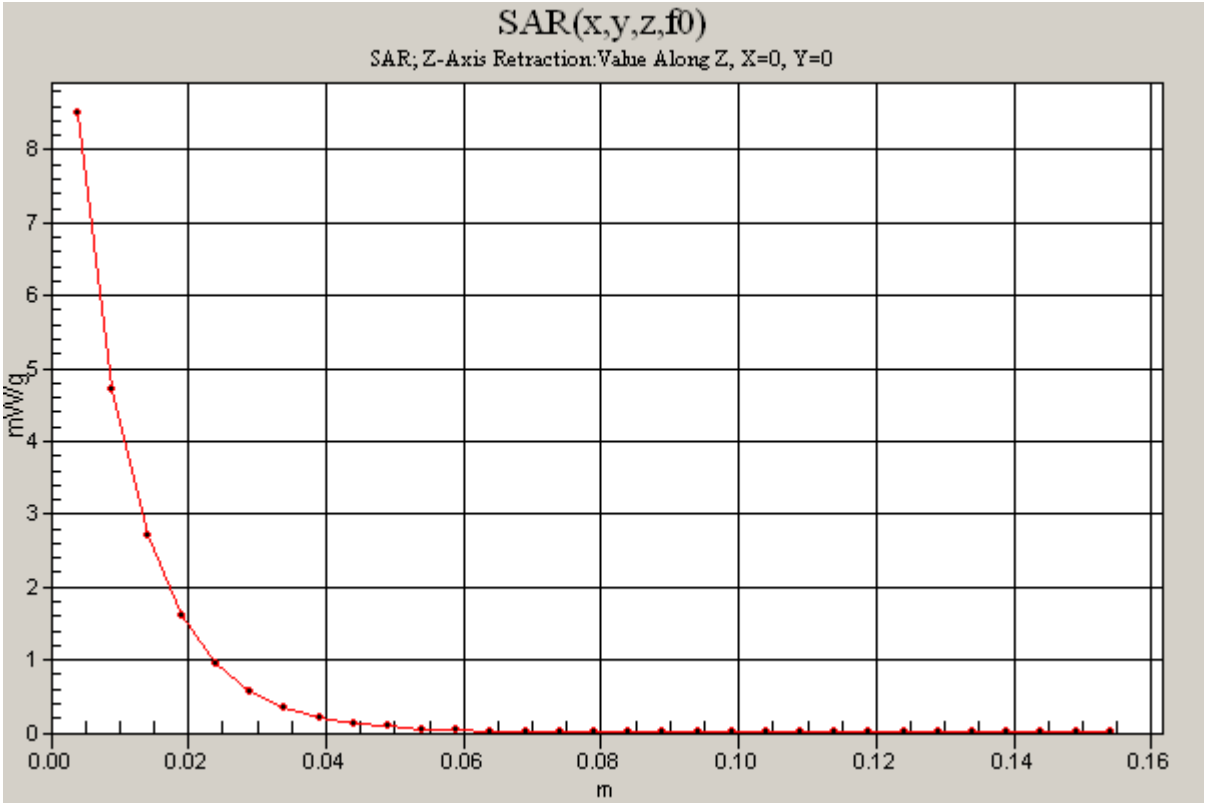
Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 78.6 V/m; Power Drift = 0.063 dB
Peak SAR (extrapolated) = 13.7 W/kg
SAR(1 g) = 7.5 mW/g; SAR(10 g) = 3.95 mW/g
Maximum value of SAR (measured) = 8.38 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.51 mW/g


mW/g
8.51
6.81
5.11
3.40
1.70
0.002


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: 4/1/2012 3:39:03 PM

Test Laboratory:MOTOROLA - Apr-1-2012 1800 MHz Head

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d128; FCC ID:IHDT56NH3
Procedure Notes: 1800MHz System Performance Check; Dipole Sn# 2d128; Input Power =200mW; Sim.Temp@meas = 21.6; Sim.Temp@SPC = 21.5; Room Temp @ SPC = 22
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ;
Medium parameters used: f = 1800 MHz; σ = 1.39 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.88, 4.88, 4.88); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

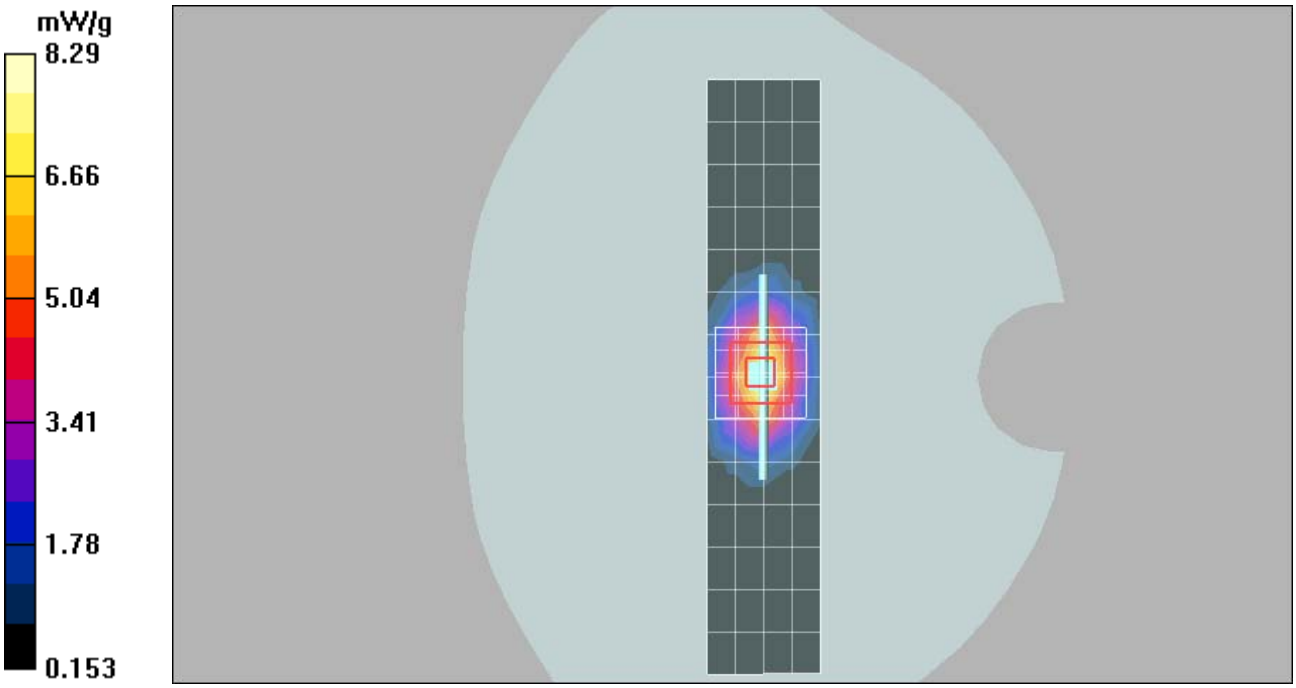
Measurement grid: dx=10mm, dy=15mm
Maximum value of SAR (measured) = 8.21 mW/g

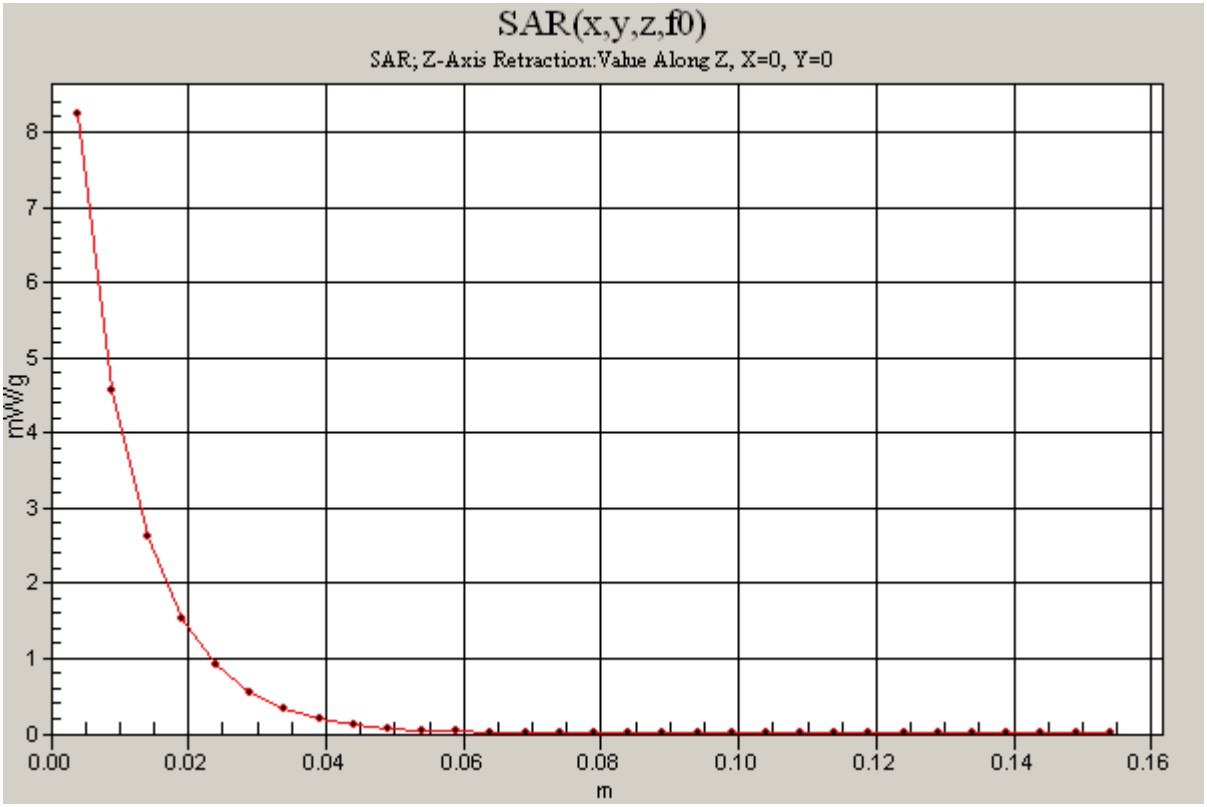
Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.24 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 77.5 V/m; Power Drift = 0.081 dB
Peak SAR (extrapolated) = 13.6 W/kg
SAR(1 g) = 7.35 mW/g; SAR(10 g) = 3.84 mW/g
Maximum value of SAR (measured) = 8.29 mW/g


mW/g
8.29
6.66
5.04
3.41
1.78
0.153


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
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
m

Date/Time: 4/13/2012 3:41:53 PM

Test Laboratory:MOTOROLA - Apr-13-2012 1800 MHz Head

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d128; FCC ID:IHDT56NH3
Procedure Notes: 1800MHz System Performance Check; Dipole Sn# 2d128; Input Power =200mW; Sim.Temp@meas = 21.8; Sim.Temp@SPC = 21.6; Room Temp @ SPC = 21.3
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ;
Medium parameters used: f = 1800 MHz; σ = 1.38 mho/m; ε_r = 38.7; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.88, 4.88, 4.88); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Z-Axis Retraction (1x1x31):

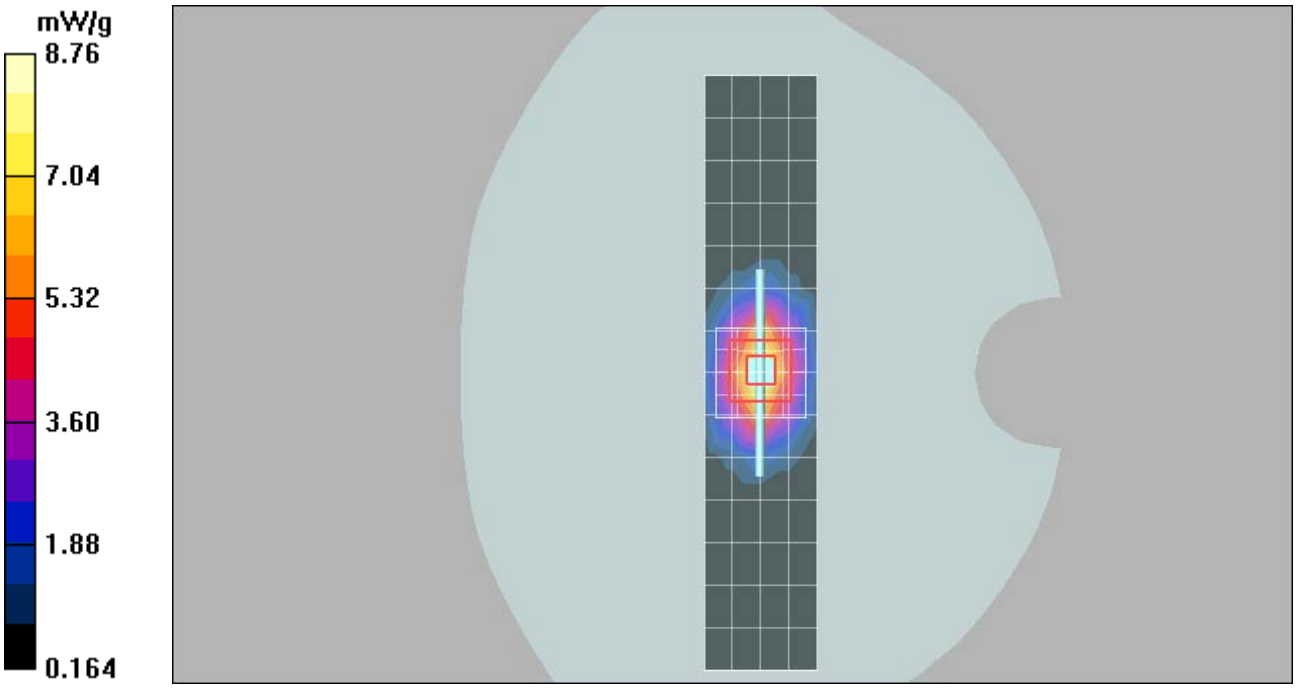
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.75 mW/g

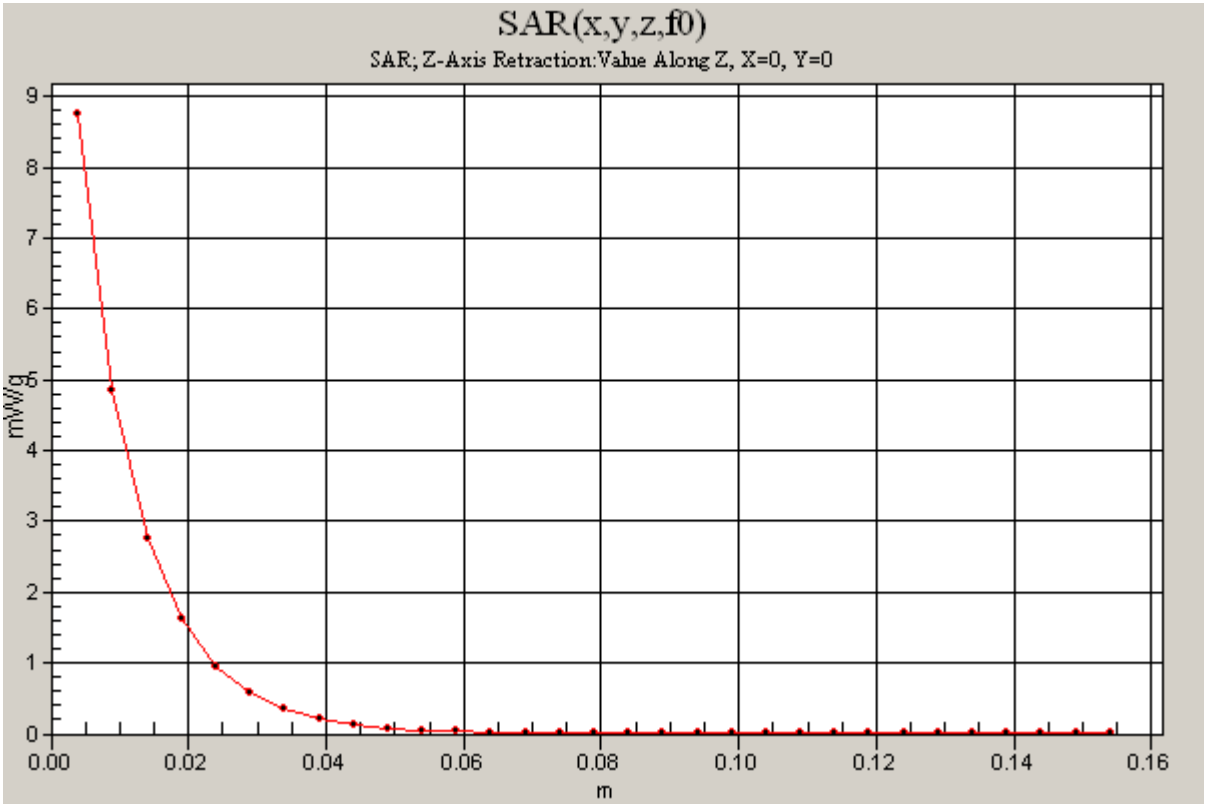
Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: dx=10mm, dy=15mm
Maximum value of SAR (measured) = 8.69 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 = 0.048 dB
Peak SAR (extrapolated) = 14.3 W/kg
SAR(1 g) = 7.76 mW/g; SAR(10 g) = 4.06 mW/g
Maximum value of SAR (measured) = 8.76 mW/g


mW/g
8.76
7.04
5.32
3.60
1.88
0.164


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: 4/9/2012 10:09:07 AM

Test Laboratory:MOTOROLA - Apr-12-2012 2450 MHz Head

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:788; FCC ID:IHDT56NH3
Procedure Notes: 2450MHz System Performance Check; Dipole Sn# 788; Input Power =200mW; Sim.Temp@meas = 21.9; Sim.Temp@SPC = 21.5; Room Temp @ SPC = 21.7
Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ;
Medium parameters used: f = 2450 MHz; σ = 1.83 mho/m; ε_r = 39.4; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.29, 4.29, 4.29); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Z-Axis Retraction (1x1x31):

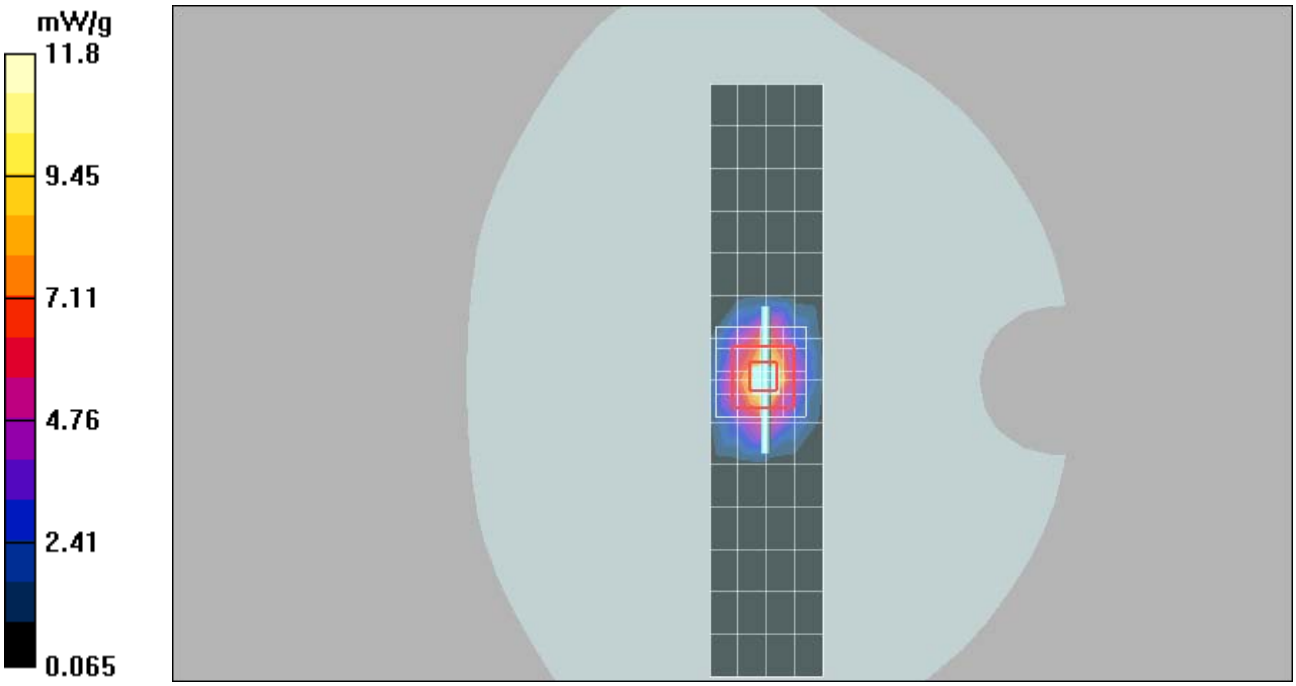
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 12.1 mW/g

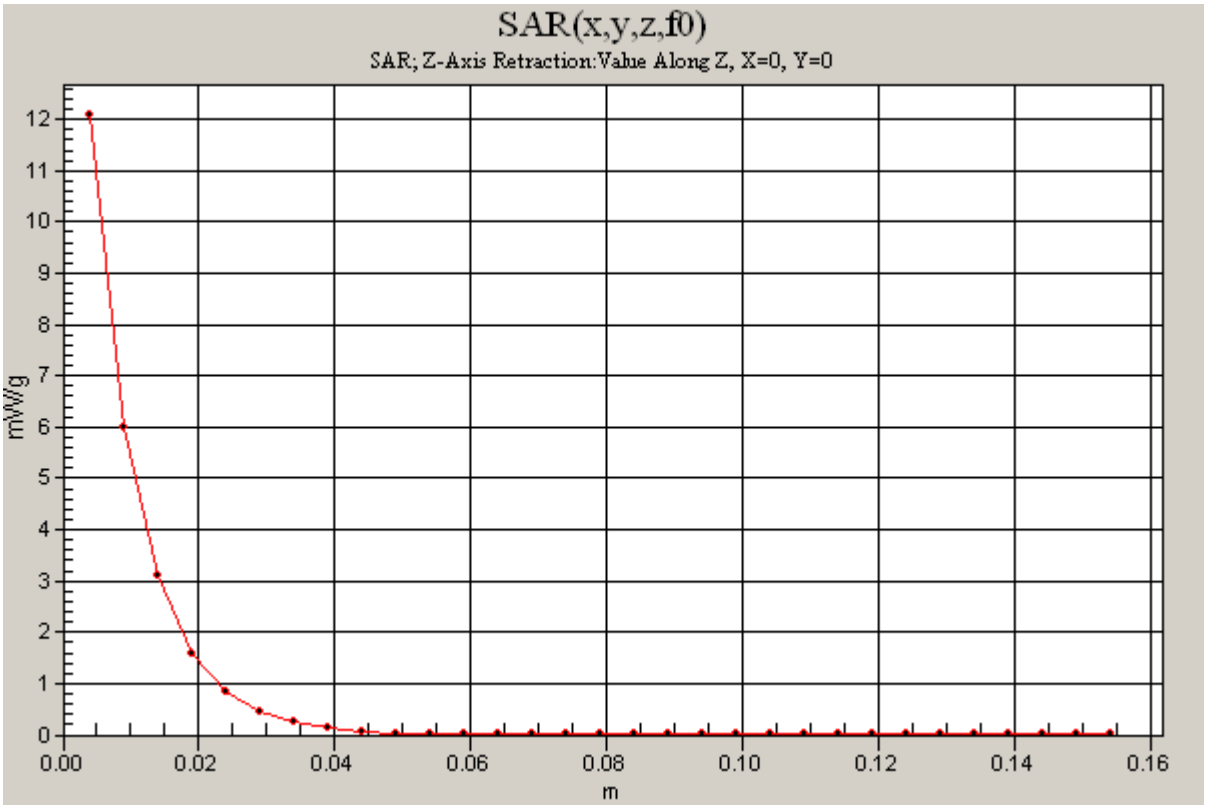
Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: dx=10mm, dy=15mm
Maximum value of SAR (measured) = 11.7 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 81.3 V/m; Power Drift = -0.075 dB
Peak SAR (extrapolated) = 21.9 W/kg
SAR(1 g) = 10.6 mW/g; SAR(10 g) = 4.93 mW/g
Maximum value of SAR (measured) = 11.8 mW/g


mW/g
11.8
9.45
7.11
4.76
2.41
0.065


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
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0.14
0.16

System Accuracy Verification Measurements for Body SAR Measurements

Date/Time: 3/31/2012 5:58:21 PM

Test Laboratory:MOTOROLA - Mar-31-2012 835 MHz Body

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:421TR; FCC ID:IHDT56NH3

Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 421TR; Input Power = 200 mW;
Sim.Temp@meas = 21.5; Sim.Temp@SPC = 21.3; Room Temp @ SPC = 21.7
Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ;
Medium parameters used: f = 835 MHz; σ = 0.97 mho/m; ε_r = 53.5; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(5.7, 5.7, 5.7); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ 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

Daily SPC Check/Z-Axis Retraction (1x1x31):

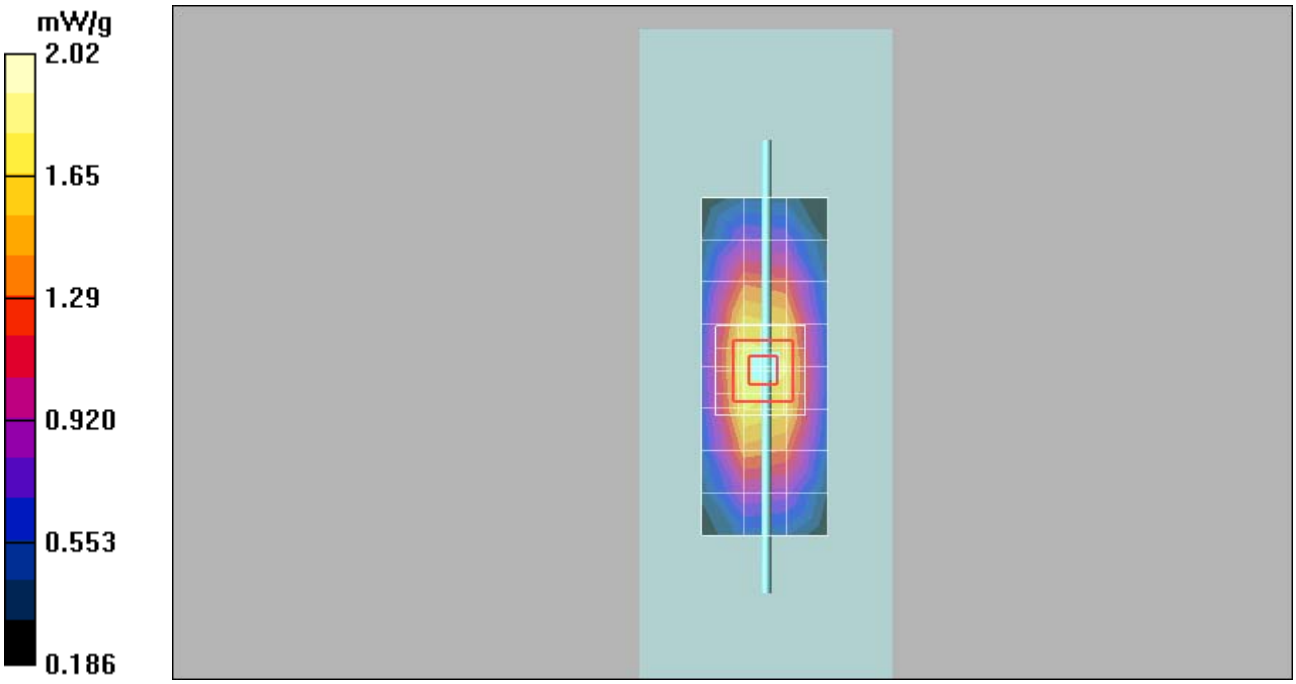
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.03 mW/g

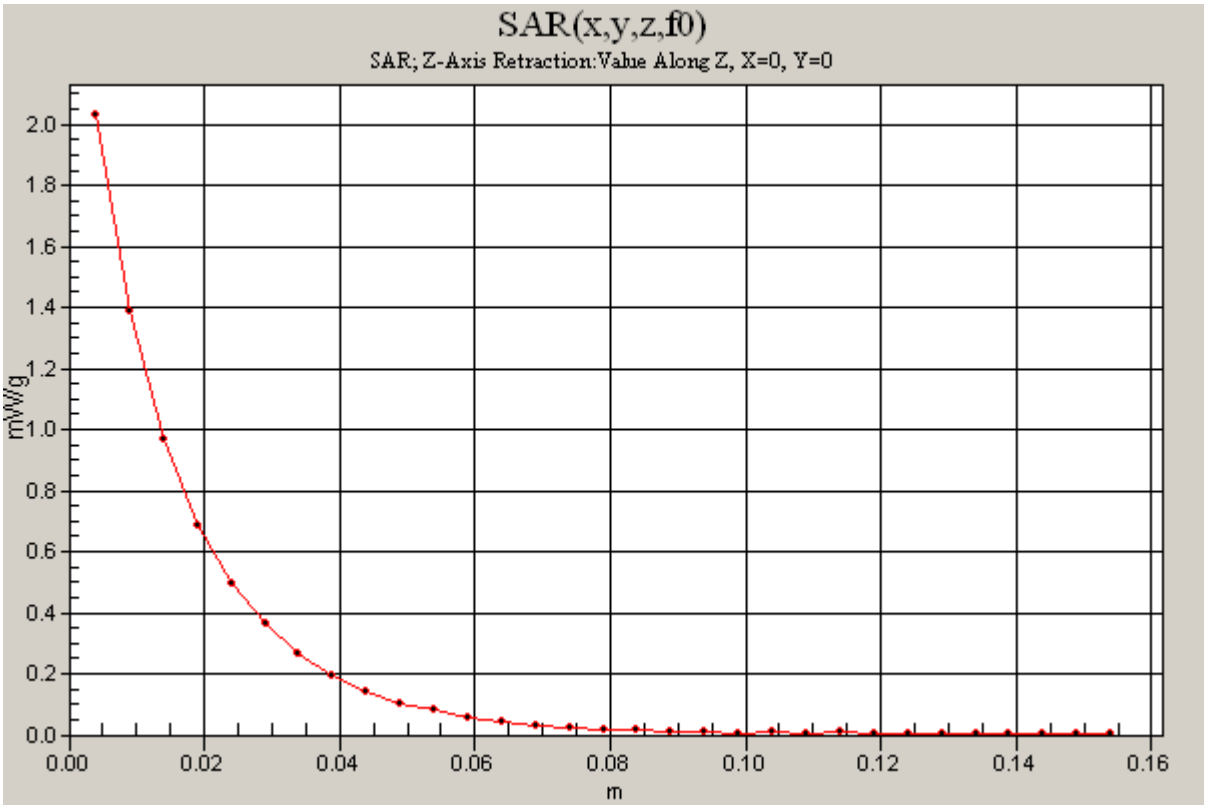
Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.76 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.2 V/m; Power Drift = 0.028 dB
Peak SAR (extrapolated) = 2.74 W/kg
SAR(1 g) = 1.88 mW/g; SAR(10 g) = 1.24 mW/g
Maximum value of SAR (measured) = 2.02 mW/g


mW/g
2.02
1.65
1.29
0.920
0.553
0.186


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: 4/19/2012 7:56:34 AM

Test Laboratory:MOTOROLA - Apr-19-2012 835 MHz Body

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:421TR; FCC ID:IHDT56NH3

Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 421TR; Input Power = 200 mW;
Sim.Temp@meas = 21.8; Sim.Temp@SPC = 21.8; Room Temp @ SPC = 21.7
Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ;
Medium parameters used: f = 835 MHz; σ = 0.96 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(5.7, 5.7, 5.7); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ 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

Daily SPC Check/Z-Axis Retraction (1x1x31):

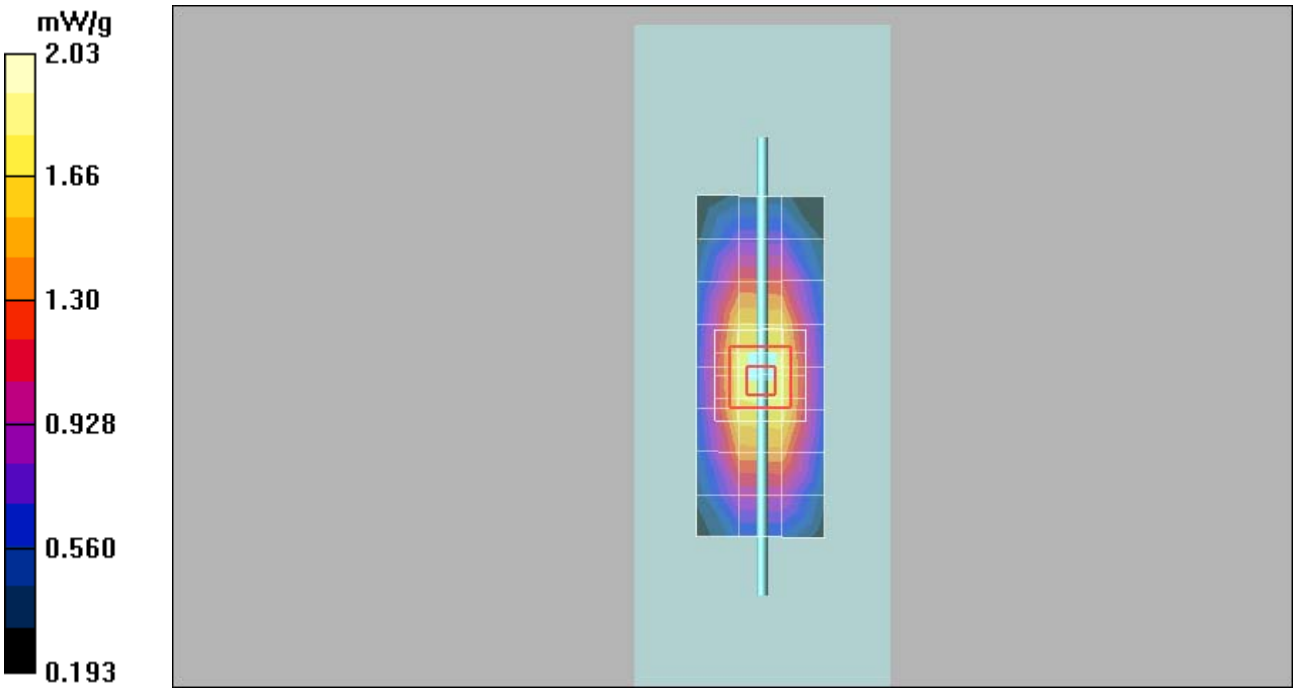
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.04 mW/g

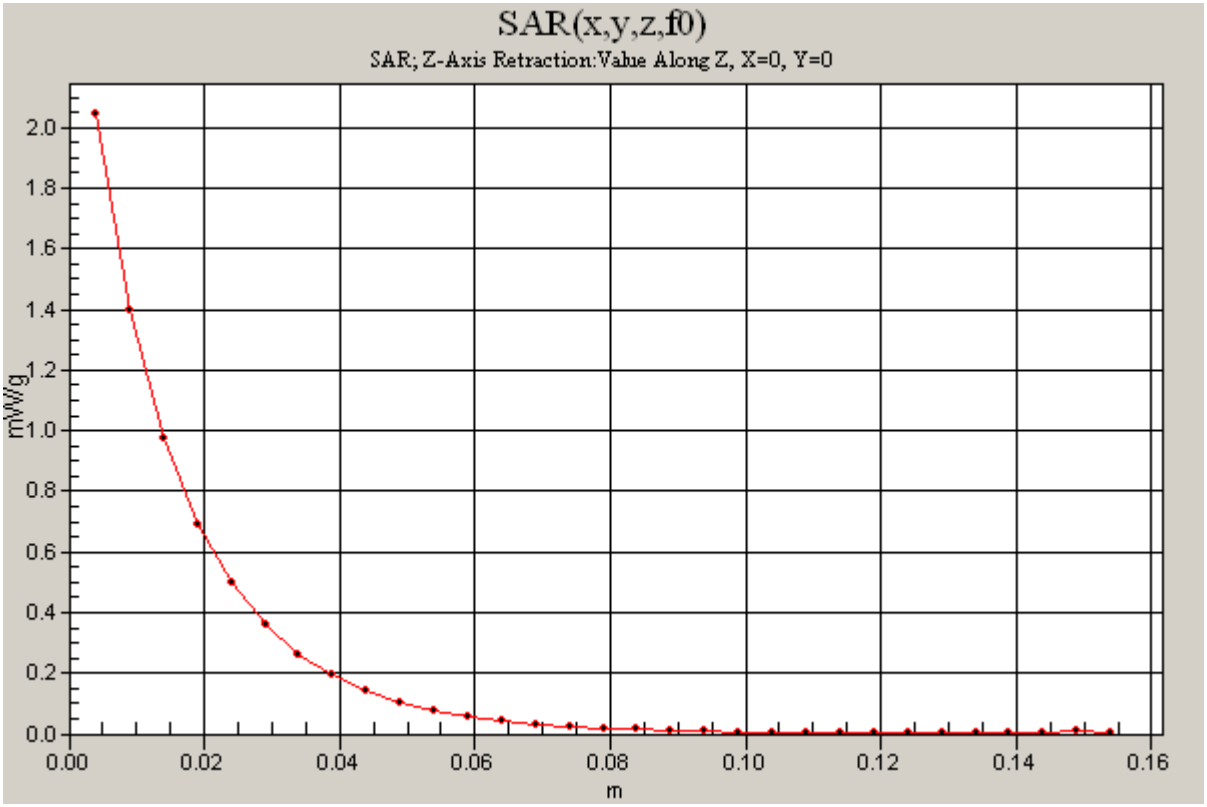
Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.71 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.4 V/m; Power Drift = 0.025 dB
Peak SAR (extrapolated) = 2.74 W/kg
SAR(1 g) = 1.87 mW/g; SAR(10 g) = 1.23 mW/g
Maximum value of SAR (measured) = 2.03 mW/g


mW/g
2.03
1.66
1.30
0.928
0.560
0.193


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: 3/31/2012 7:05:26 PM

Test Laboratory:MOTOROLA - Mar-31-2012 1800 MHz Body

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d128; FCC ID:IHDT56NH3
Procedure Notes: 1800MHz System Performance Check; Dipole Sn# 2d128; Input Power =200mW; Sim.Temp@meas = 21.7; Sim.Temp@SPC = 21.3; Room Temp @ SPC = 21.7
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ;
Medium parameters used: f = 1800 MHz; σ = 1.48 mho/m; ε_r = 51.3; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.72, 4.72, 4.72); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ 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/Z-Axis Retraction (1x1x31):

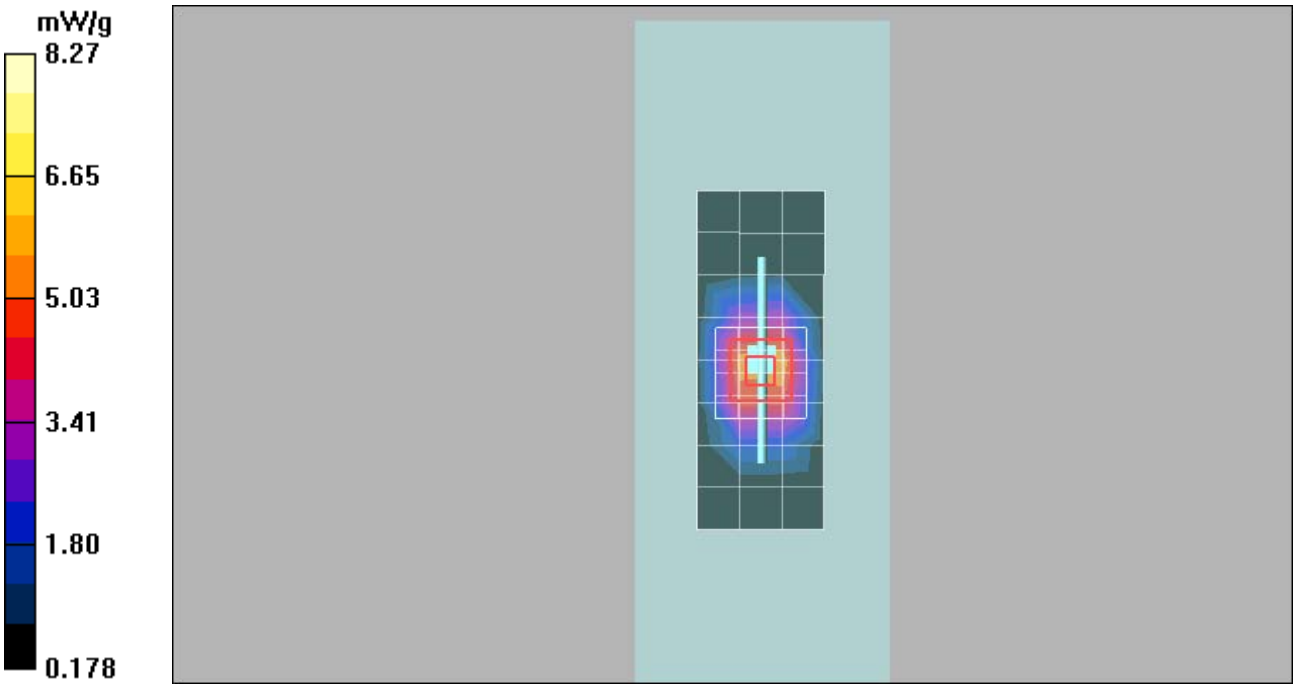
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.33 mW/g

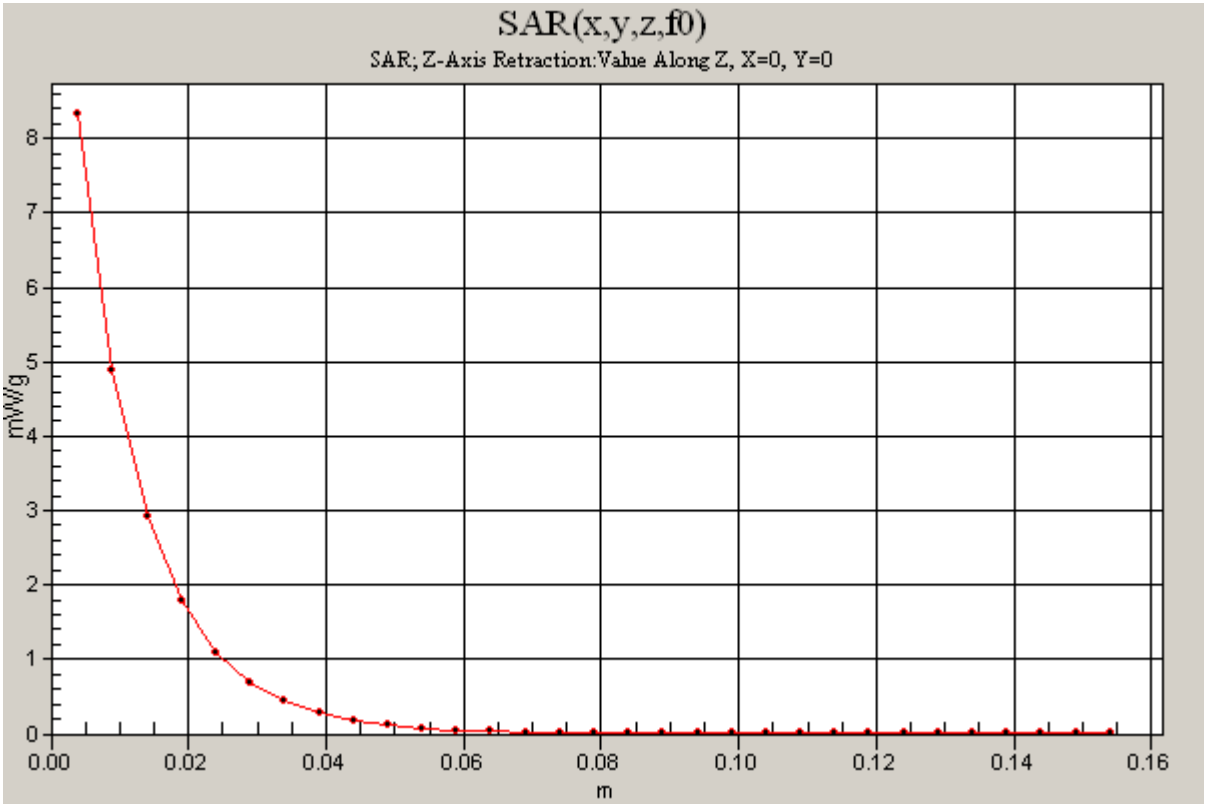
Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.65 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 75.2 V/m; Power Drift = 0.095 dB
Peak SAR (extrapolated) = 12.8 W/kg
SAR(1 g) = 7.32 mW/g; SAR(10 g) = 3.88 mW/g
Maximum value of SAR (measured) = 8.27 mW/g


mW/g
8.27
6.65
5.03
3.41
1.80
0.178


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
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
m

Date/Time: 4/2/2012 11:20:10 AM

Test Laboratory:MOTOROLA - Apr-2-2012 1800 MHz Body

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d128; FCC ID:IHDT56NH3
Procedure Notes: 1800MHz System Performance Check; Dipole Sn# 2d128; Input Power =200mW; Sim.Temp@meas = 21.9; Sim.Temp@SPC = 21.8; Room Temp @ SPC = 21.7
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ;
Medium parameters used: f = 1800 MHz; σ = 1.5 mho/m; ε_r = 51.4; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.72, 4.72, 4.72); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ 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/Z-Axis Retraction (1x1x31):

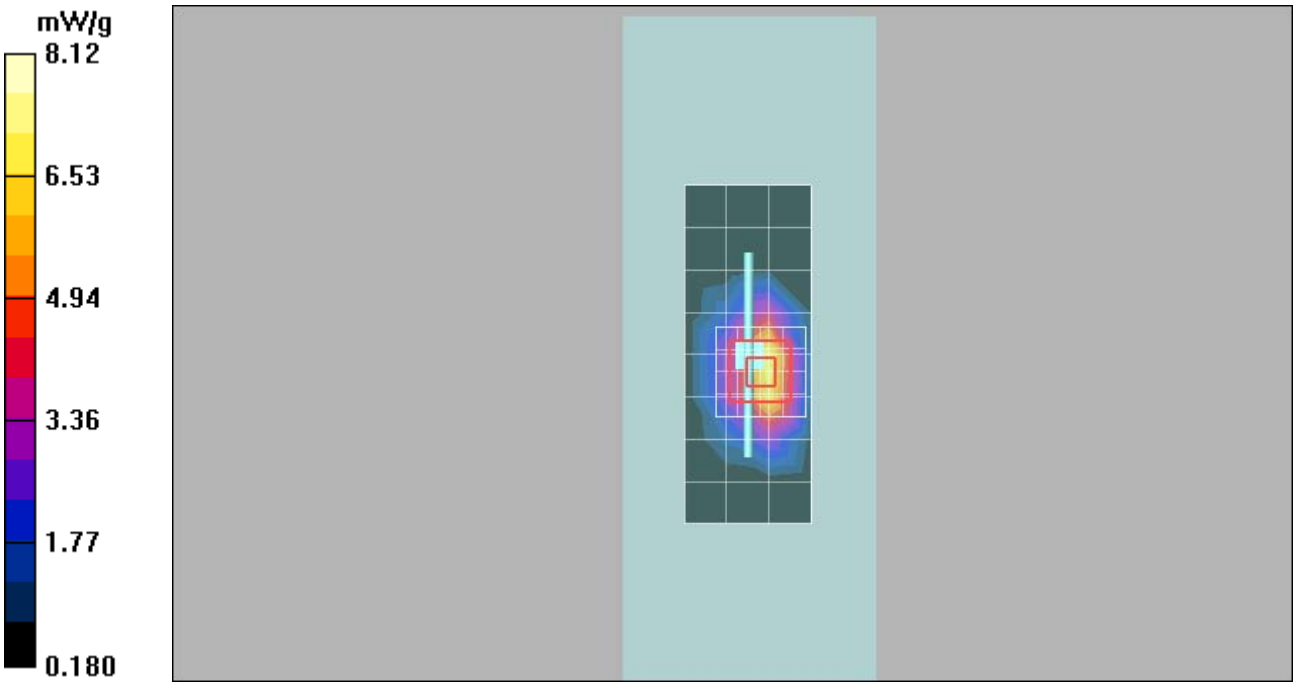
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.15 mW/g

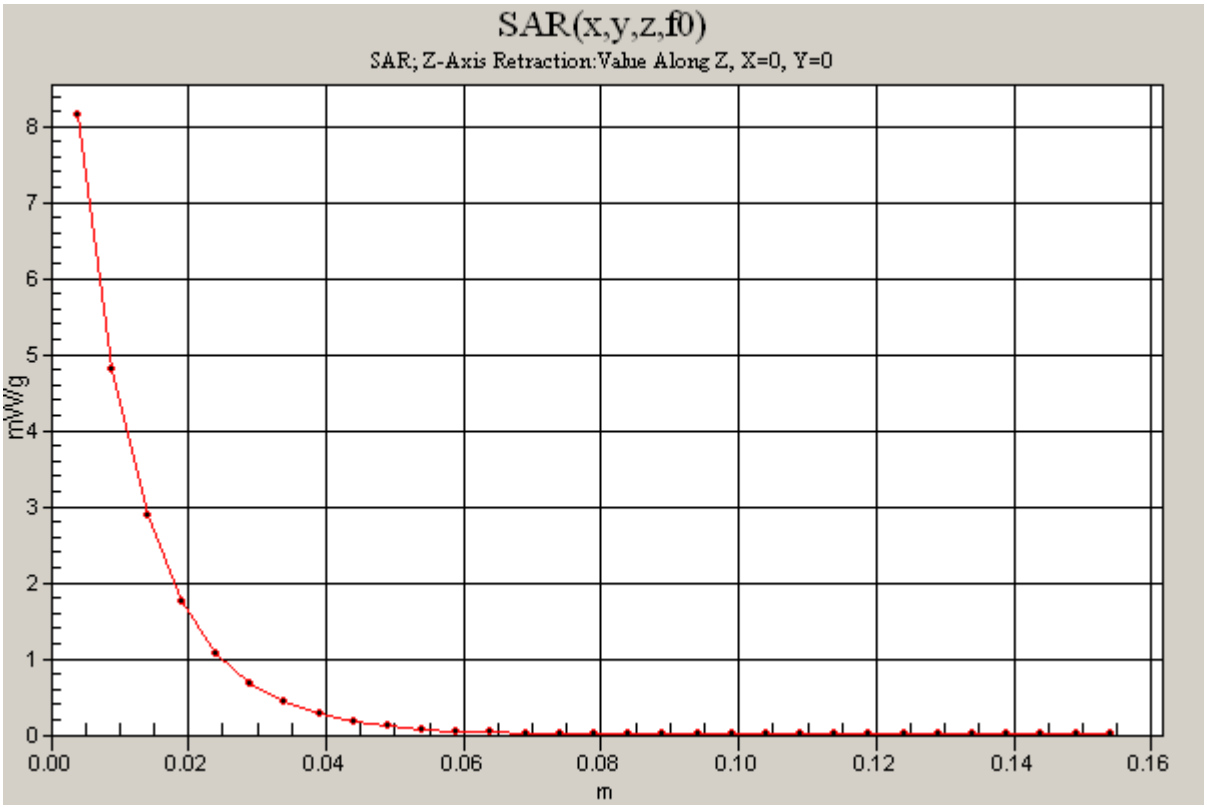
Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 7.17 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 69.5 V/m; Power Drift = 0.187 dB
Peak SAR (extrapolated) = 12.5 W/kg
SAR(1 g) = 7.19 mW/g; SAR(10 g) = 3.82 mW/g
Maximum value of SAR (measured) = 8.12 mW/g


mW/g
8.12
6.53
4.94
3.36
1.77
0.180


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: 4/17/2012 10:23:12 AM

Test Laboratory:MOTOROLA - Apr-17-2012 1800 MHz Body

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d128; FCC ID:IHDT56NH3
Procedure Notes: 1800MHz System Performance Check; Dipole Sn# 2d128; Input Power =200mW; Sim.Temp@meas = 20.5; Sim.Temp@SPC = 20.7; Room Temp @ SPC = 21.7
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ;
Medium parameters used: f = 1800 MHz; σ = 1.5 mho/m; ε_r = 51.5; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.72, 4.72, 4.72); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ 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

Daily SPC Check/Z-Axis Retraction (1x1x31):

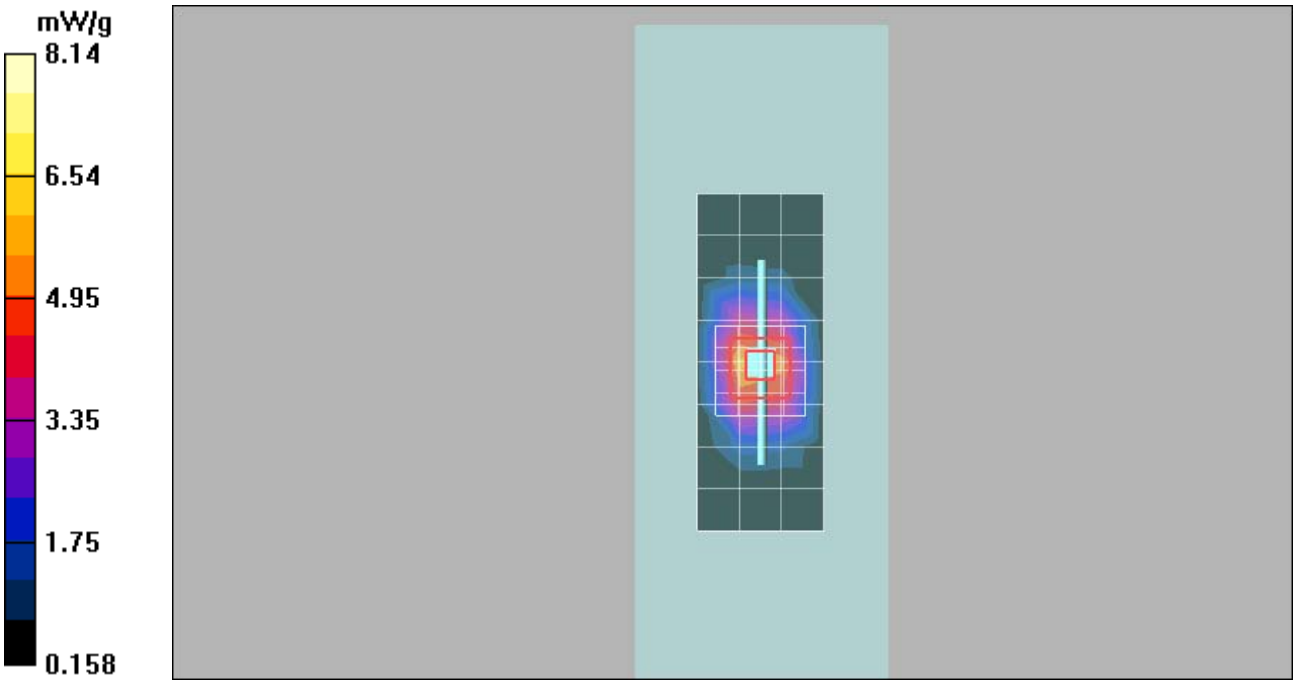
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.23 mW/g

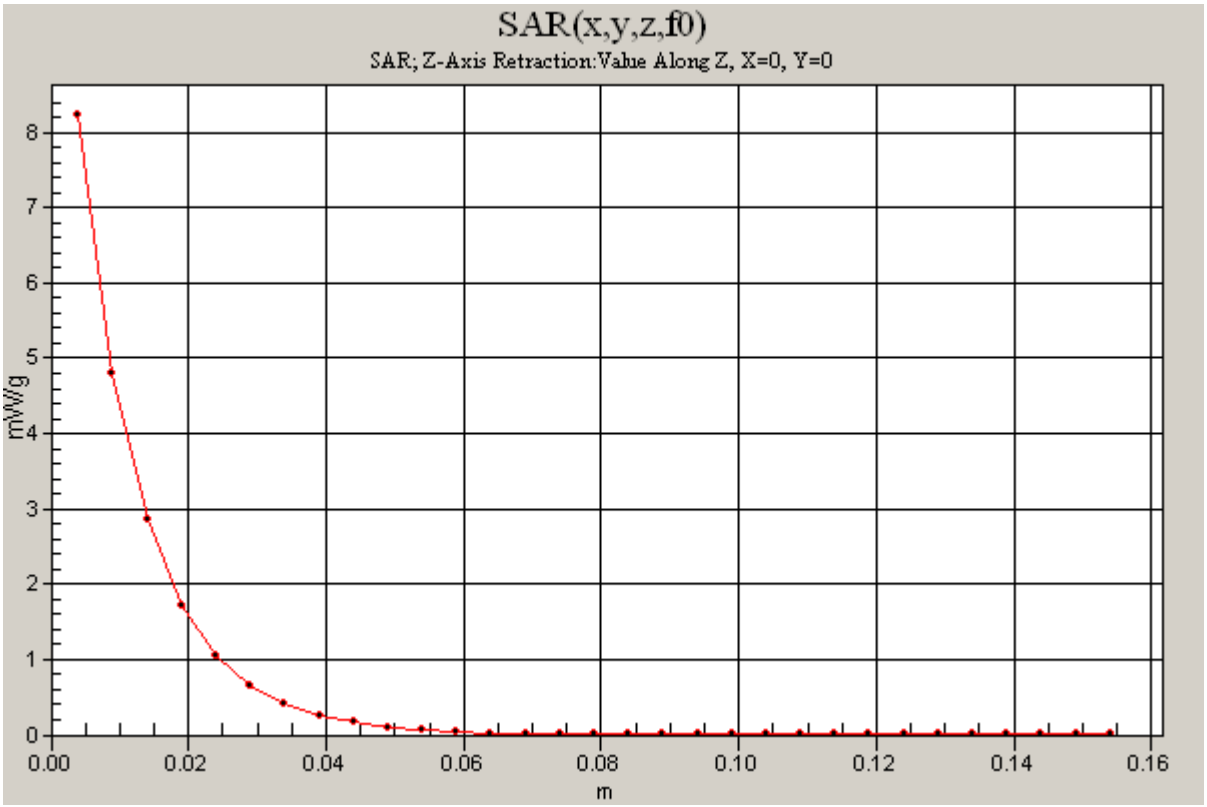
Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.71 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 74.9 V/m; Power Drift = 0.081 dB
Peak SAR (extrapolated) = 12.7 W/kg
SAR(1 g) = 7.23 mW/g; SAR(10 g) = 3.81 mW/g
Maximum value of SAR (measured) = 8.14 mW/g


mW/g
8.14
6.54
4.95
3.35
1.75
0.158


SAR(x,y,z,f0)
SAR; Z-Axis Retraction:Value Along Z, X=0, Y=0
mW/g
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
m

Date/Time: 4/18/2012 4:02:28 PM

Test Laboratory:MOTOROLA - Apr-18-2012 1800 MHz Body

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d128; FCC ID:IHDT56NH3
Procedure Notes: 1800MHz System Performance Check; Dipole Sn# 2d128; Input Power =200mW; Sim.Temp@meas = 20.5; Sim.Temp@SPC = 20.7; Room Temp @ SPC = 21.7
Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ;
Medium parameters used: f = 1800 MHz; σ = 1.5 mho/m; ε_r = 51.4; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.72, 4.72, 4.72); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ 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

Daily SPC Check/Z-Axis Retraction (1x1x31):

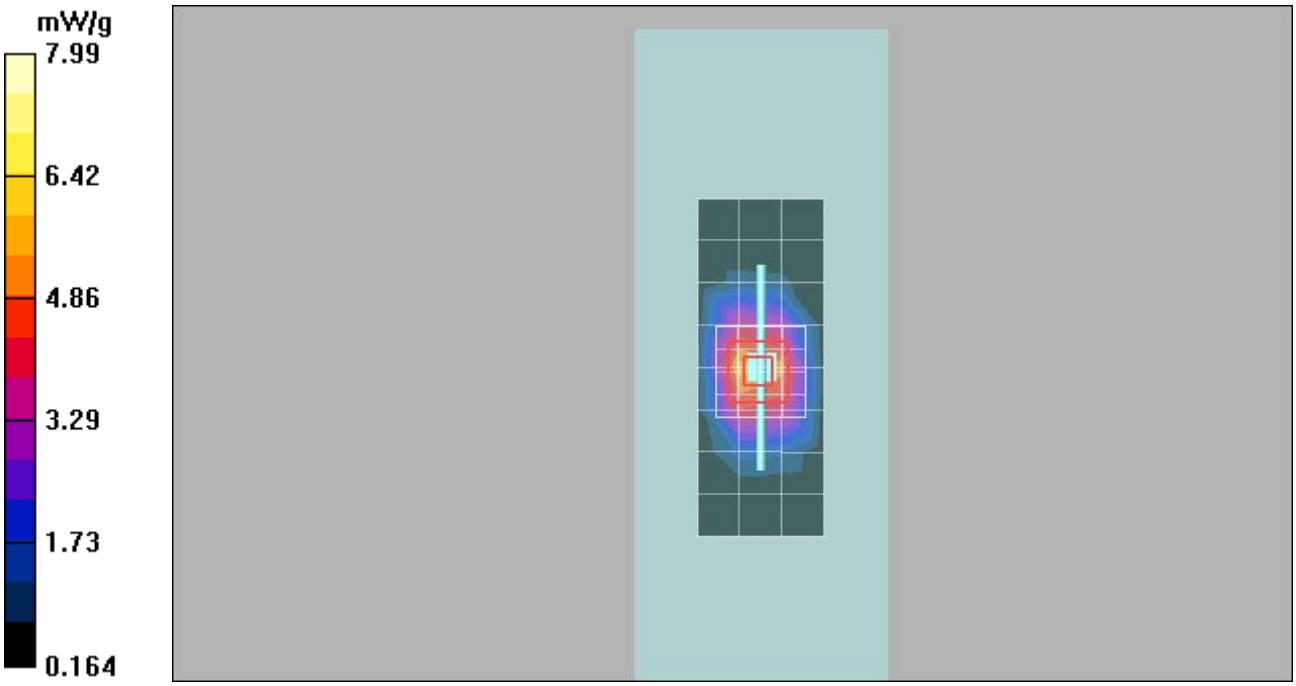
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.05 mW/g

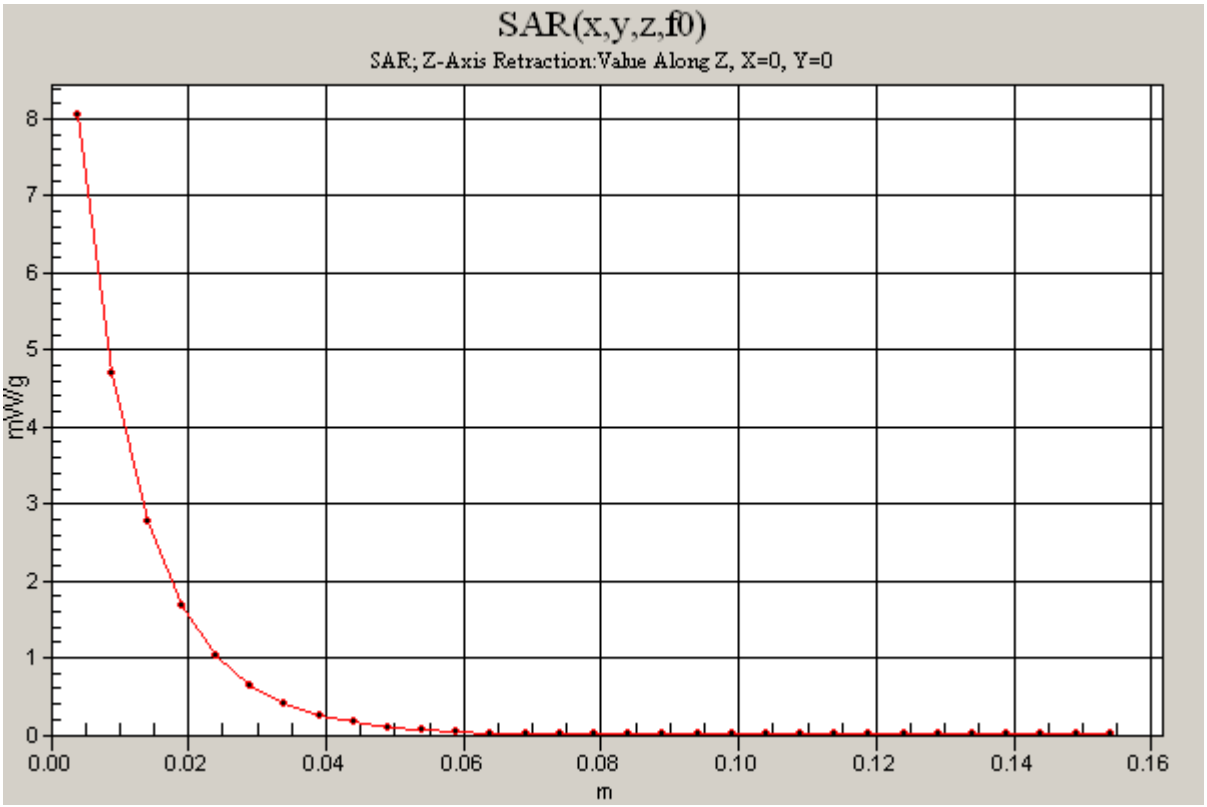
Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.68 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 73.9 V/m; Power Drift = 0.101 dB
Peak SAR (extrapolated) = 12.4 W/kg
SAR(1 g) = 7.08 mW/g; SAR(10 g) = 3.73 mW/g
Maximum value of SAR (measured) = 7.99 mW/g


mW/g
7.99
6.42
4.86
3.29
1.73
0.164


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: 4/12/2012 3:43:17 PM

Test Laboratory:MOTOROLA - Apr-12-2012 2450 MHz Body

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:788; FCC ID:IHDT56NH3
Procedure Notes: 2450MHz System Performance Check; Dipole Sn# 788; Input Power =200mW; Sim.Temp@meas = 22; Sim.Temp@SPC = 21.1; Room Temp @ SPC = 22.1
Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ;
Medium parameters used: f = 2450 MHz; σ = 1.94 mho/m; ε_r = 50.7; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.13, 4.13, 4.13); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ 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/Z-Axis Retraction (1x1x31):

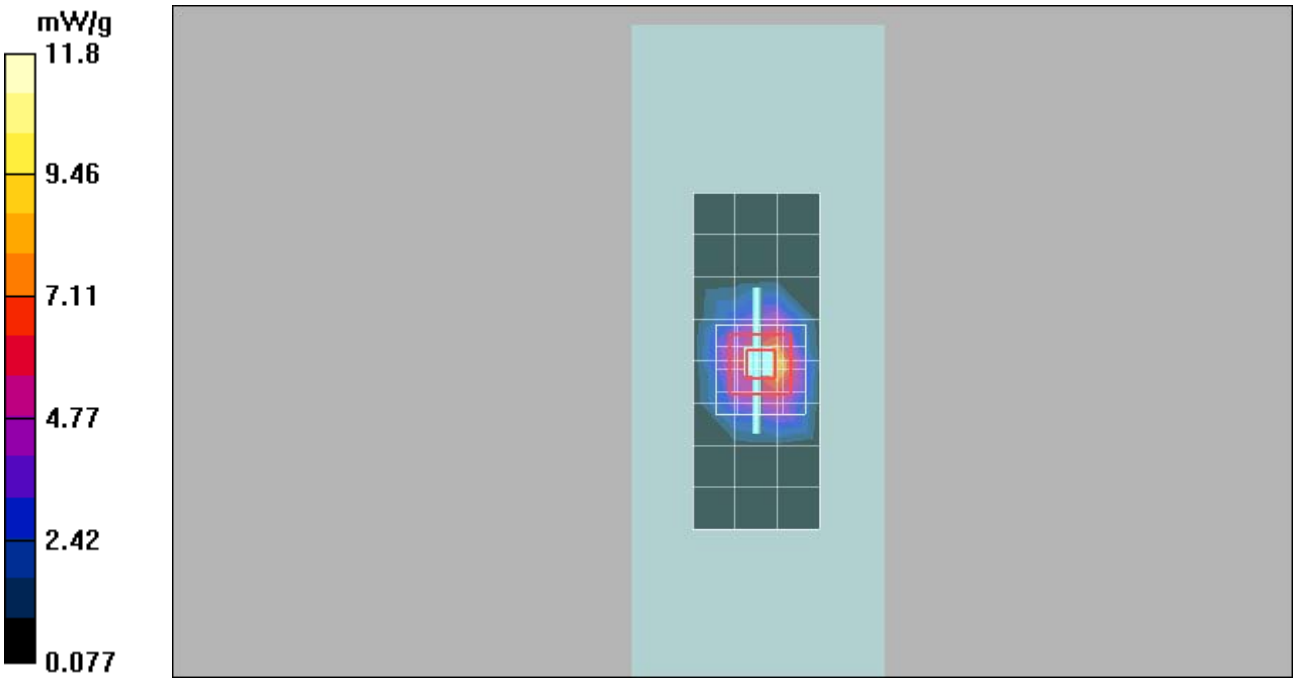
Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 11.9 mW/g

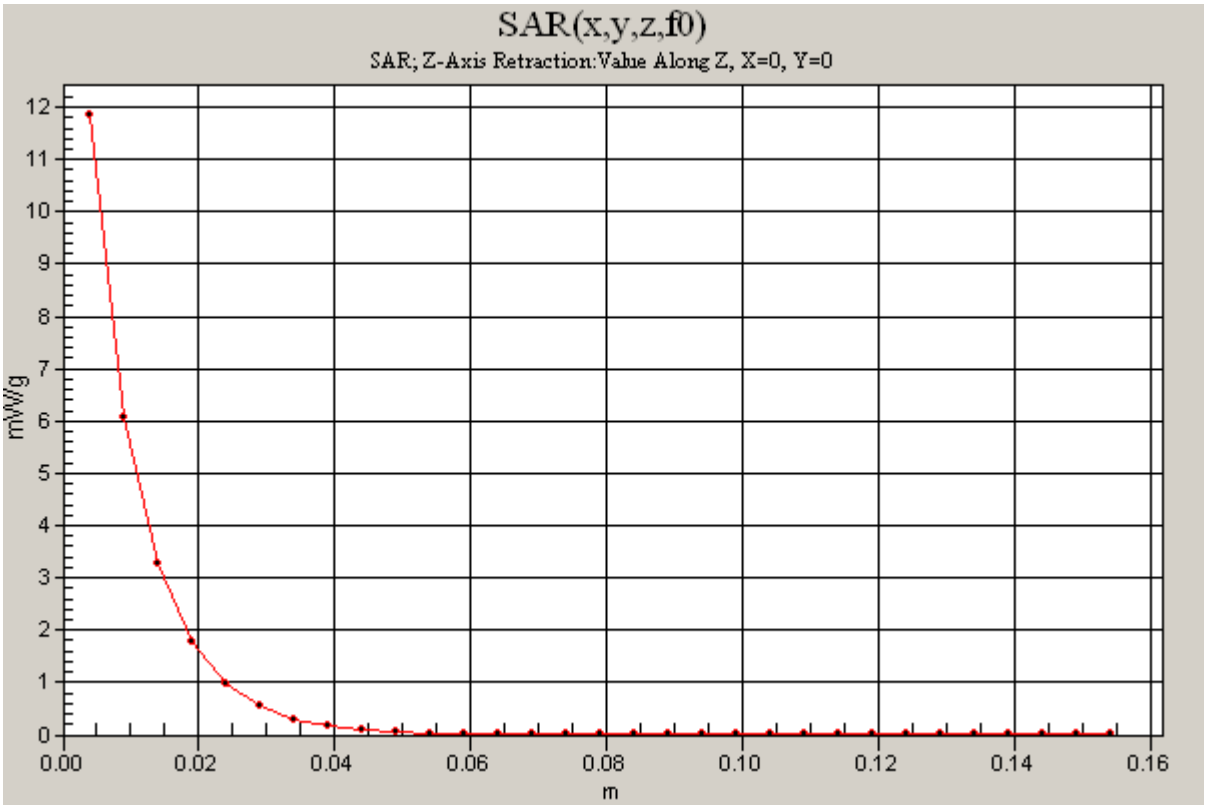
Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 8.91 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 77.6 V/m; Power Drift = 0.080 dB
Peak SAR (extrapolated) = 22.1 W/kg
SAR(1 g) = 10.5 mW/g; SAR(10 g) = 4.84 mW/g
Maximum value of SAR (measured) = 11.8 mW/g


mW/g
11.8
9.46
7.11
4.77
2.42
0.077


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

Appendix 2

SAR distribution plots for Head Adjacent Test Results

Date/Time: 3/30/2012 4:21:45 PM

Test Laboratory: MOTOROLA - GSM 850 Cheek

Serial: 352206050003182; FCC ID:IHDT56NH3
Procedure Notes: Pwr Step: 05; Antenna Position: Internal; Battery Model #: Intenal;
Device Position: Cheek
Communication System: GSM 850; Frequency: 836.6 MHz;
Communication System Channel Number: 190; Duty Cycle: 1:8.3
Medium: Low Freq Head;
Medium parameters used: f = 835 MHz; σ = 0.92 mho/m; ε_r = 41.9; ρ = 1000 kg/m^3

DASY4 Configuration:

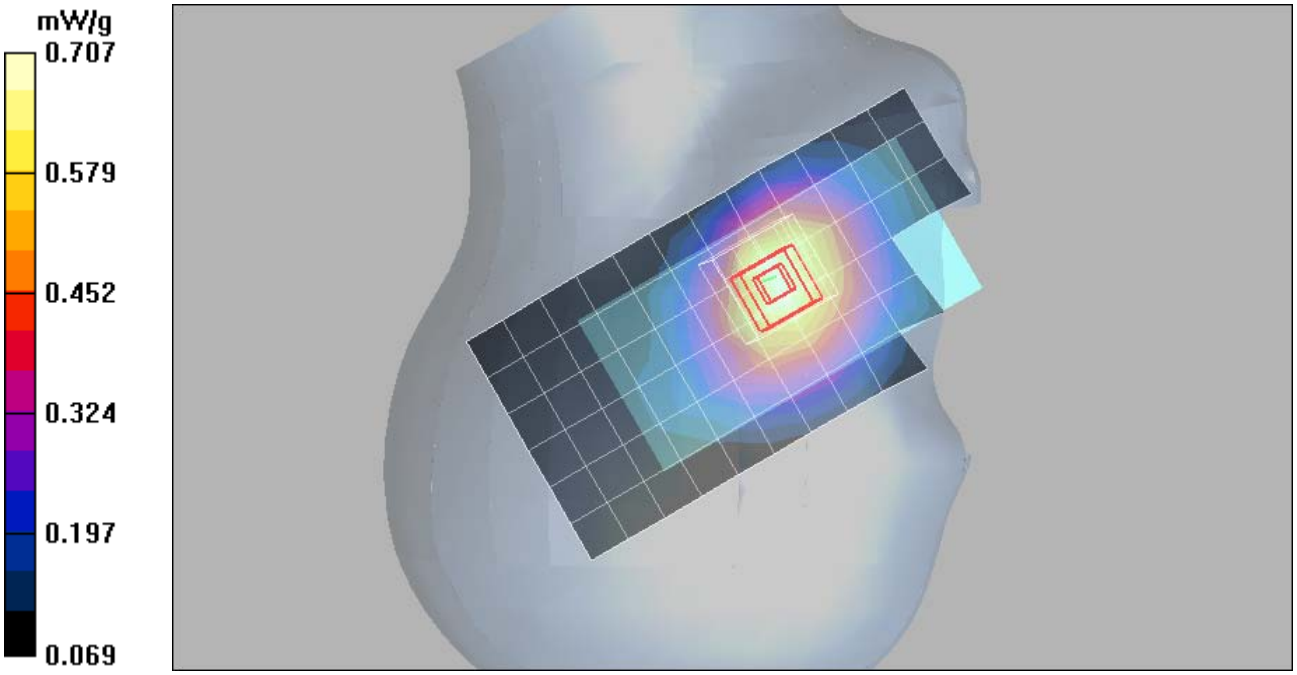
- Probe: ES3DV3 - SN3178; ConvF(5.65, 5.65, 5.65); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1407;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.692 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.5 V/m; Power Drift = -0.057 dB
Peak SAR (extrapolated) = 0.859 W/kg
SAR(1 g) = 0.674 mW/g; SAR(10 g) = 0.499 mW/g
Maximum value of SAR (measured) = 0.707 mW/g



Date/Time: 3/30/2012 5:23:11 PM

Test Laboratory: MOTOROLA - WCDMA 850 Cheek

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: All up; Antenna Position: Internal; Battery Model #: Internal; Device Position: Cheek

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 = 0.92 mho/m; ε_r = 41.9; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(5.65, 5.65, 5.65); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1407;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.520 mW/g

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

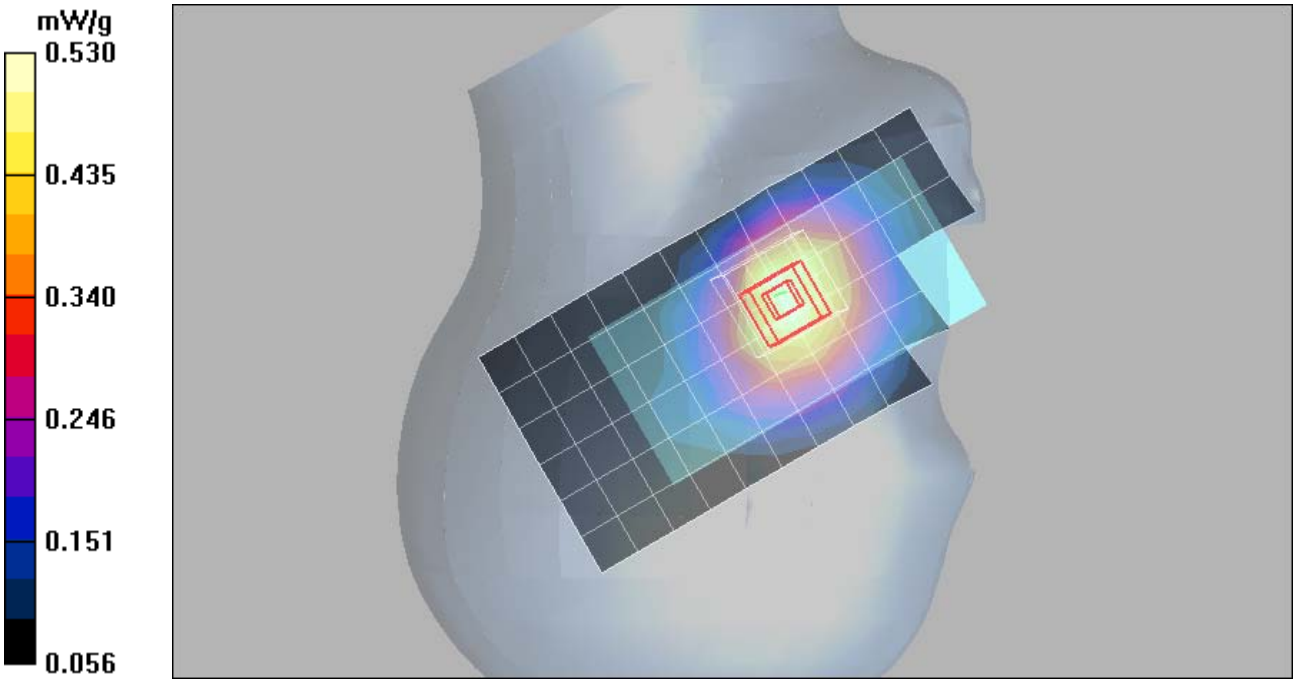
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.8 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 0.646 W/kg

SAR(1 g) = 0.505 mW/g; SAR(10 g) = 0.373 mW/g

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



Date/Time: 3/28/2012 8:15:34 PM

Test Laboratory: MOTOROLA - GSM 1900 Cheek

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: 00; Antenna Position: Internal; Battery Model #: Internal;
Device Position: Cheek
Communication System: GSM 1900; Frequency: 1880 MHz;
Communication System Channel Number: 661; Duty Cycle: 1:8.3
Medium: Regular Glycol Head 1750/1880;
Medium parameters used: f = 1880 MHz; σ = 1.45 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3

DASY4 Configuration:

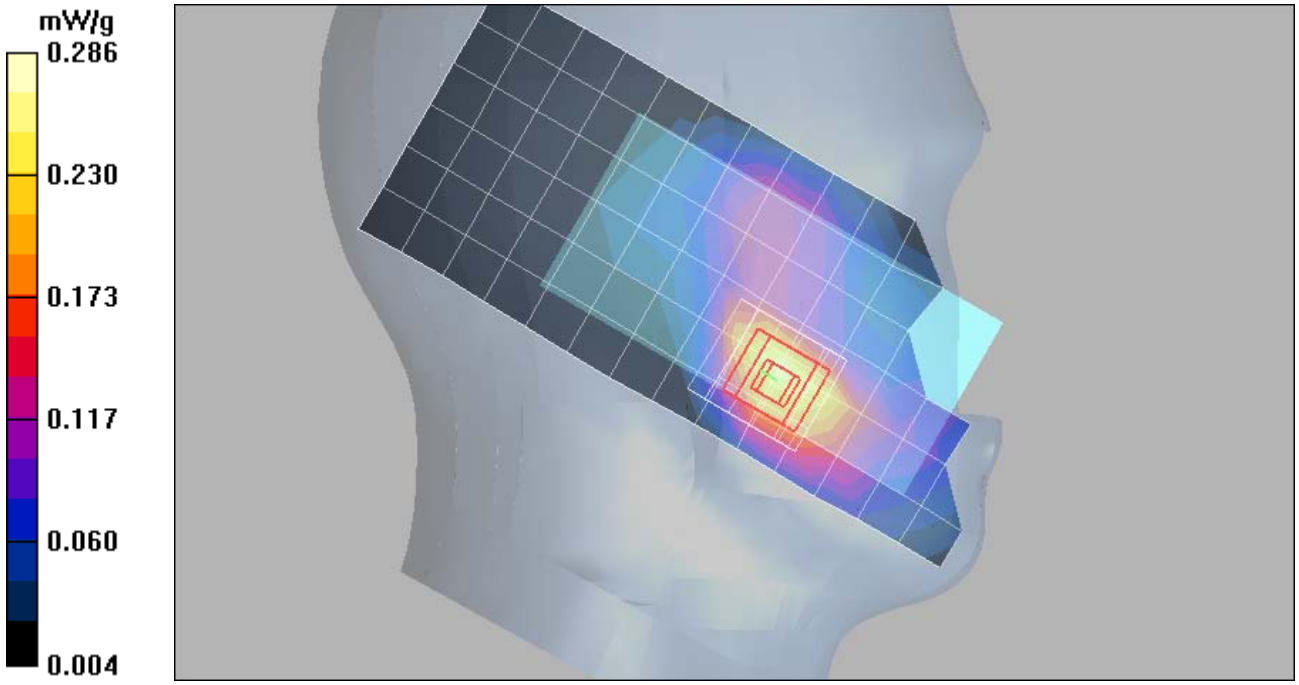
- Probe: ES3DV3 - SN3178; ConvF(4.88, 4.88, 4.88); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- Measurement SW: DASY4, V4.7 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) = 0.264 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.0 V/m; Power Drift = -0.035 dB
Peak SAR (extrapolated) = 0.407 W/kg
SAR(1 g) = 0.260 mW/g; SAR(10 g) = 0.155 mW/g
Maximum value of SAR (measured) = 0.286 mW/g



Date/Time: 4/1/2012 4:41:31 PM

Test Laboratory: MOTOROLA - WCDMA 1900 Cheek

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: All up; Antenna Position: Internal; Battery Model #: Internal; Device Position: Cheek

Communication System: 3G/WCDMA 1900; Frequency: 1880 MHz;

Communication System Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Head 1750/1880;

Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.88, 4.88, 4.88); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- 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) = 0.348 mW/g

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

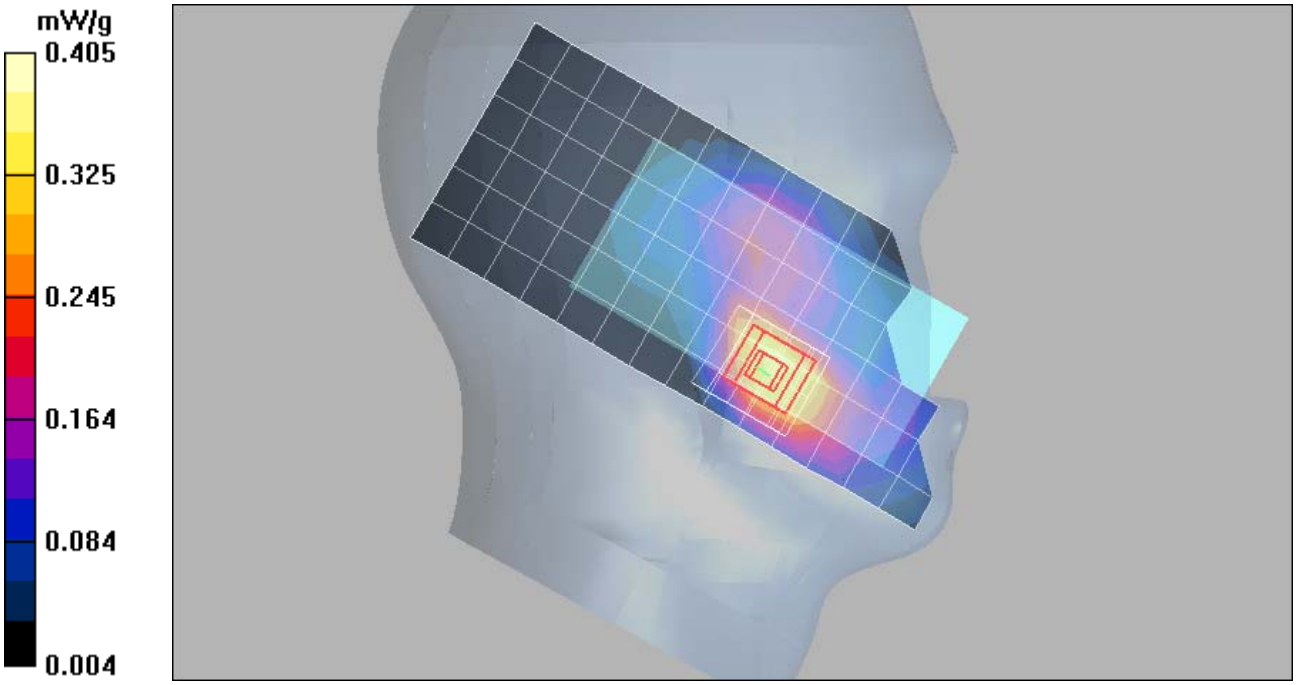
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.6 V/m; Power Drift = 0.252 dB

Peak SAR (extrapolated) = 0.602 W/kg

SAR(1 g) = 0.373 mW/g; SAR(10 g) = 0.222 mW/g

Maximum value of SAR (measured) = 0.405 mW/g



Date/Time: 4/9/2012 10:33:29 AM

Test Laboratory: MOTOROLA - WiFi 2450 Cheek

Serial: 352206050003182; FCC ID:IHDT56NH3
Procedure Notes: Pwr Step: N/A; WiFi Mode: 802.11b; Data Rate: 1Mbps;
Antenna Position: Internal; Battery Model #: Internal;
Device Position: Cheek
Communication System: Wi-Fi 2450; Frequency: 2462 MHz;
Communication System Channel Number: 11; Duty Cycle: 1:1
Medium: 2450 Glycol Head;
Medium parameters used: f = 2450 MHz; σ = 1.83 mho/m; ε_r = 39.4; ρ = 1000 kg/m^3

DASY4 Configuration:

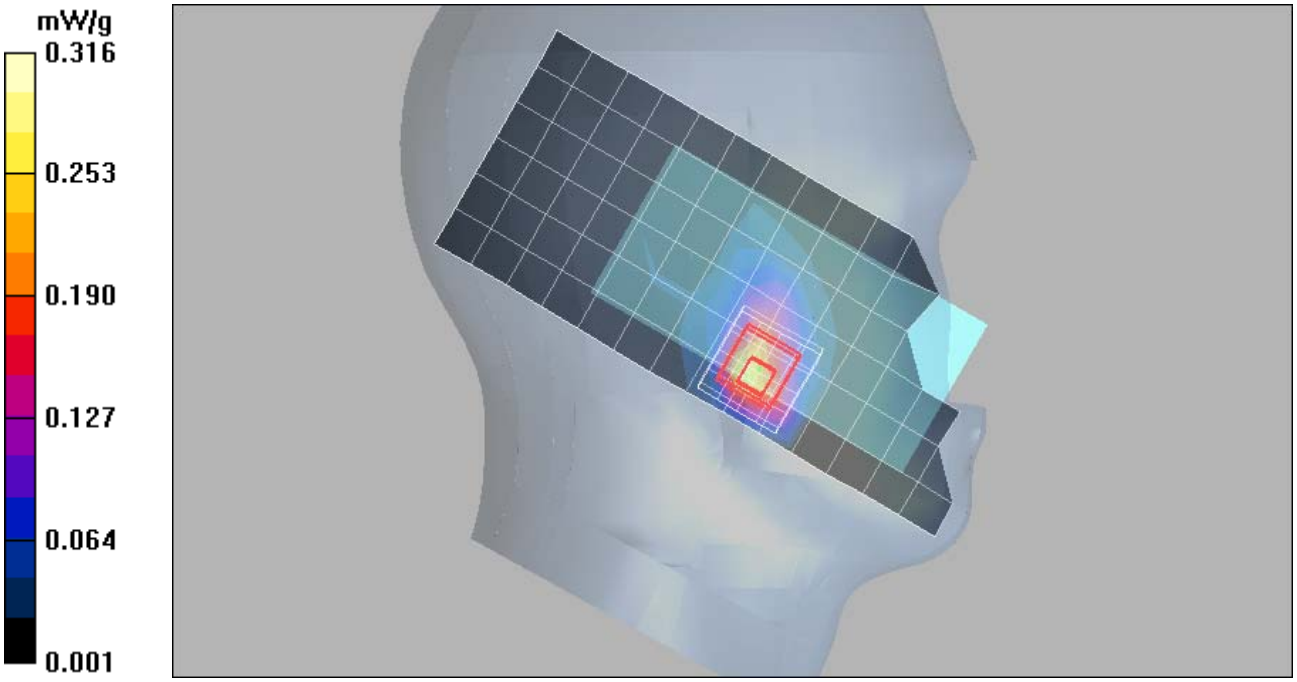
- Probe: ES3DV3 - SN3178; ConvF(4.29, 4.29, 4.29); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- Measurement SW: DASY4, V4.7 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) = 0.275 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.17 V/m; Power Drift = 0.362 dB
Peak SAR (extrapolated) = 0.665 W/kg
SAR(1 g) = 0.283 mW/g; SAR(10 g) = 0.127 mW/g
Maximum value of SAR (measured) = 0.316 mW/g



Date/Time: 3/29/2012 9:48:51 PM

Test Laboratory: MOTOROLA - GSM 850 Tilt

Serial: 352206050003182; FCC ID:IHDT56NH3
Procedure Notes: Pwr Step: 05; Antenna Position: Internal; Battery Model #: Internal;
Device Position: Tilt
Communication System: GSM 850; Frequency: 836.6 MHz;
Communication System Channel Number: 190; Duty Cycle: 1:8.3
Medium: Low Freq Head;
Medium parameters used: f = 835 MHz; σ = 0.92 mho/m; ε_r = 41.8; ρ = 1000 kg/m^3

DASY4 Configuration:

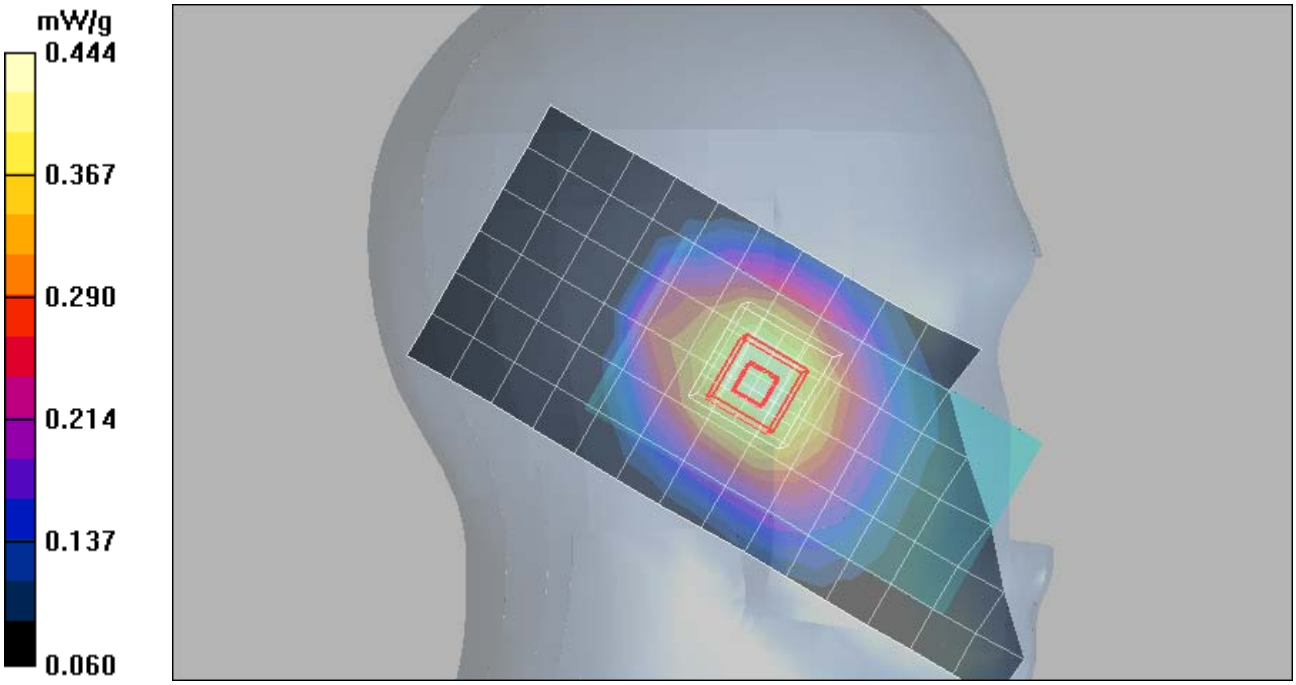
- Probe: ES3DV3 - SN3178; ConvF(5.65, 5.65, 5.65); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1407;
- Measurement SW: DASY4, V4.7 Build 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) = 0.423 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.4 V/m; Power Drift = 0.037 dB
Peak SAR (extrapolated) = 0.508 W/kg
SAR(1 g) = 0.421 mW/g; SAR(10 g) = 0.322 mW/g
Maximum value of SAR (measured) = 0.444 mW/g



Date/Time: 3/30/2012 10:04:25 PM

Test Laboratory: MOTOROLA - WCDMA 850 Tilt

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: All up; Antenna Position: Internal; Battery Model #: Internal; Device Position: 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 = 0.92 mho/m; ε_r = 41.9; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(5.65, 5.65, 5.65); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1407;
- 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:

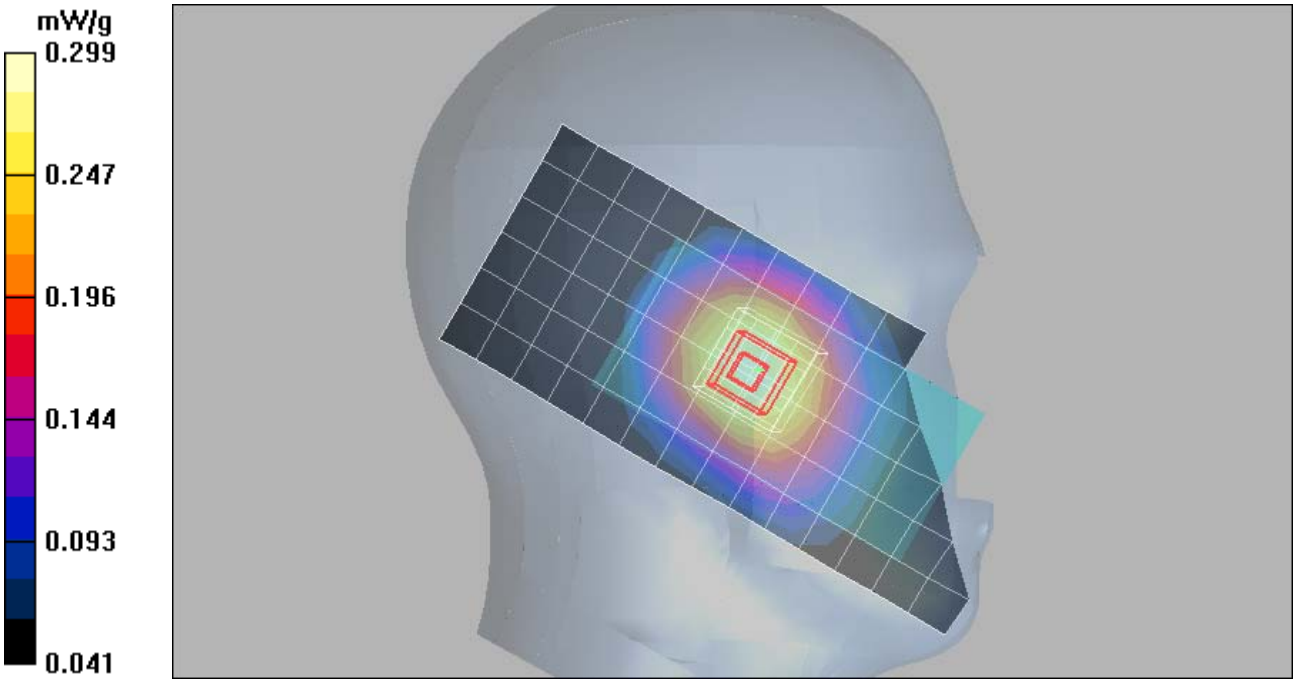
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.1 V/m; Power Drift = -0.077 dB

Peak SAR (extrapolated) = 0.346 W/kg

SAR(1 g) = 0.287 mW/g; SAR(10 g) = 0.221 mW/g

Maximum value of SAR (measured) = 0.299 mW/g



Date/Time: 3/28/2012 9:00:08 PM

Test Laboratory: MOTOROLA - GSM 1900 Tilt

Serial: 352206050003182; FCC ID:IHDT56NH3
Procedure Notes: Pwr Step: 00; Antenna Position: Internal; Battery Model #: Internal;
Device Position: Tilt
Communication System: GSM 1900; Frequency: 1880 MHz;
Communication System Channel Number: 661; Duty Cycle: 1:8.3
Medium: Regular Glycol Head 1750/1880;
Medium parameters used: f = 1880 MHz; σ = 1.45 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3

DASY4 Configuration:

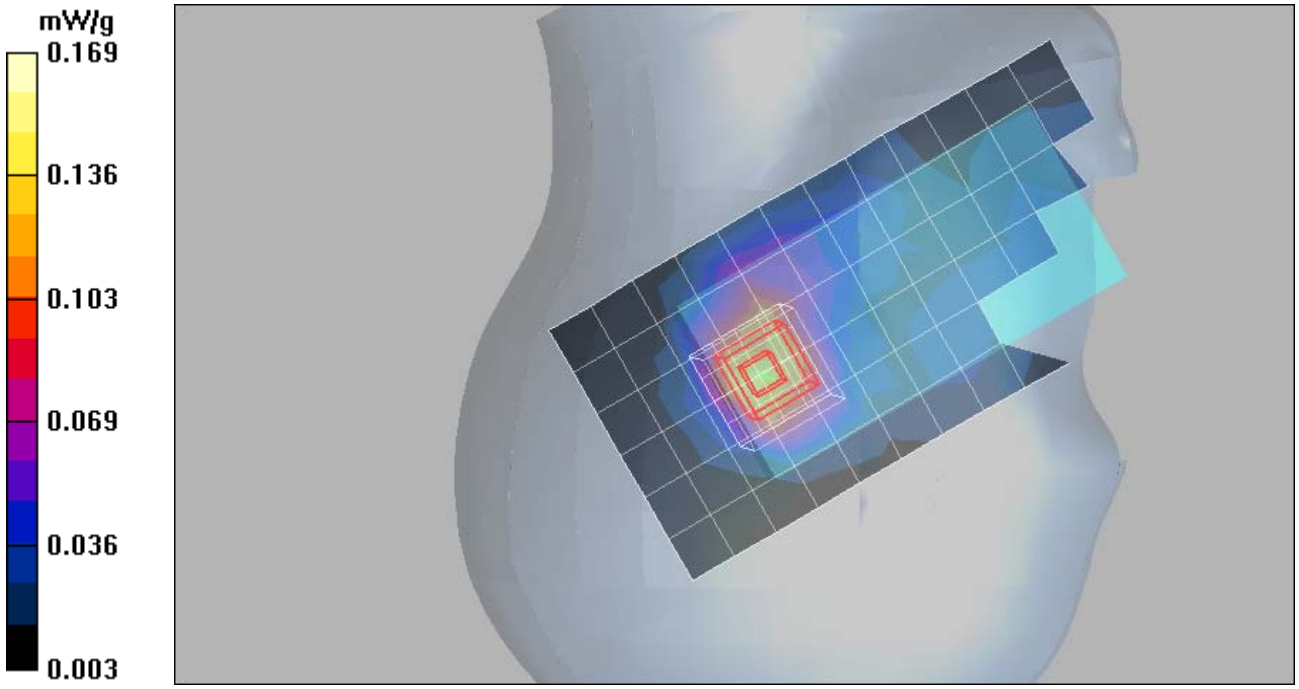
- Probe: ES3DV3 - SN3178; ConvF(4.88, 4.88, 4.88); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.149 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.96 V/m; Power Drift = 0.003 dB
Peak SAR (extrapolated) = 0.258 W/kg
SAR(1 g) = 0.153 mW/g; SAR(10 g) = 0.087 mW/g
Maximum value of SAR (measured) = 0.169 mW/g



Date/Time: 4/2/2012 10:05:05 AM

Test Laboratory: MOTOROLA - WCDMA 1900 Tilt

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: All up; Antenna Position: Internal; Battery Model #: Internal; Device Position: Tilt

Communication System: 3G/WCDMA 1900; Frequency: 1880 MHz;

Communication System Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Head 1750/1880;

Medium parameters used: f = 1880 MHz; σ = 1.46 mho/m; ε_r = 38.3; ρ = 1000 kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3178; ConvF(4.88, 4.88, 4.88); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.225 mW/g

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

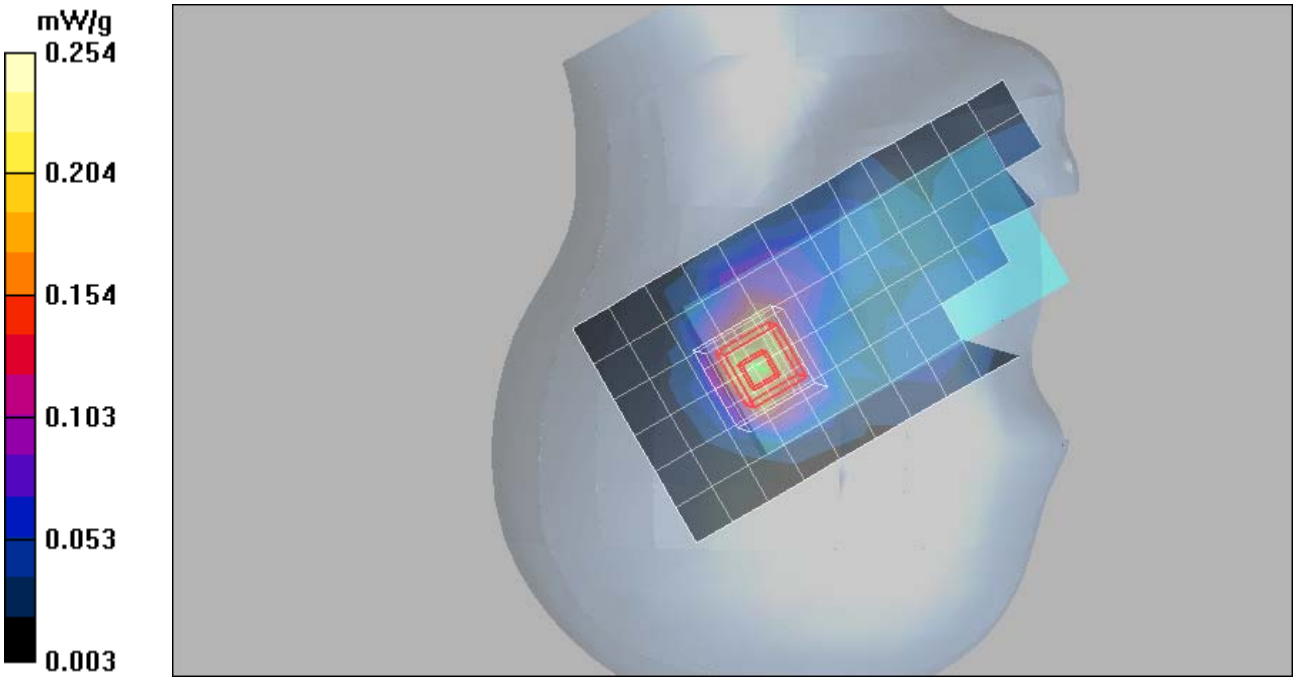
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.8 V/m; Power Drift = 0.112 dB

Peak SAR (extrapolated) = 0.386 W/kg

SAR(1 g) = 0.230 mW/g; SAR(10 g) = 0.132 mW/g

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



Date/Time: 4/9/2012 12:00:41 PM

Test Laboratory: MOTOROLA - WiFi 2450 Tilt

Serial: 352206050003182; FCC ID:IHDT56NH3
Procedure Notes: Pwr Step: N/A; WiFi Mode: 802.11b; Data Rate: 1Mbps;
Antenna Position: Internal; Battery Model #: Internal;
Device Position: Tilt
Communication System: Wi-Fi 2450; Frequency: 2462 MHz;
Communication System Channel Number: 11; Duty Cycle: 1:1
Medium: 2450 Glycol Head;
Medium parameters used: f = 2450 MHz; σ = 1.83 mho/m; ε_r = 39.4; ρ = 1000 kg/m^3

DASY4 Configuration:

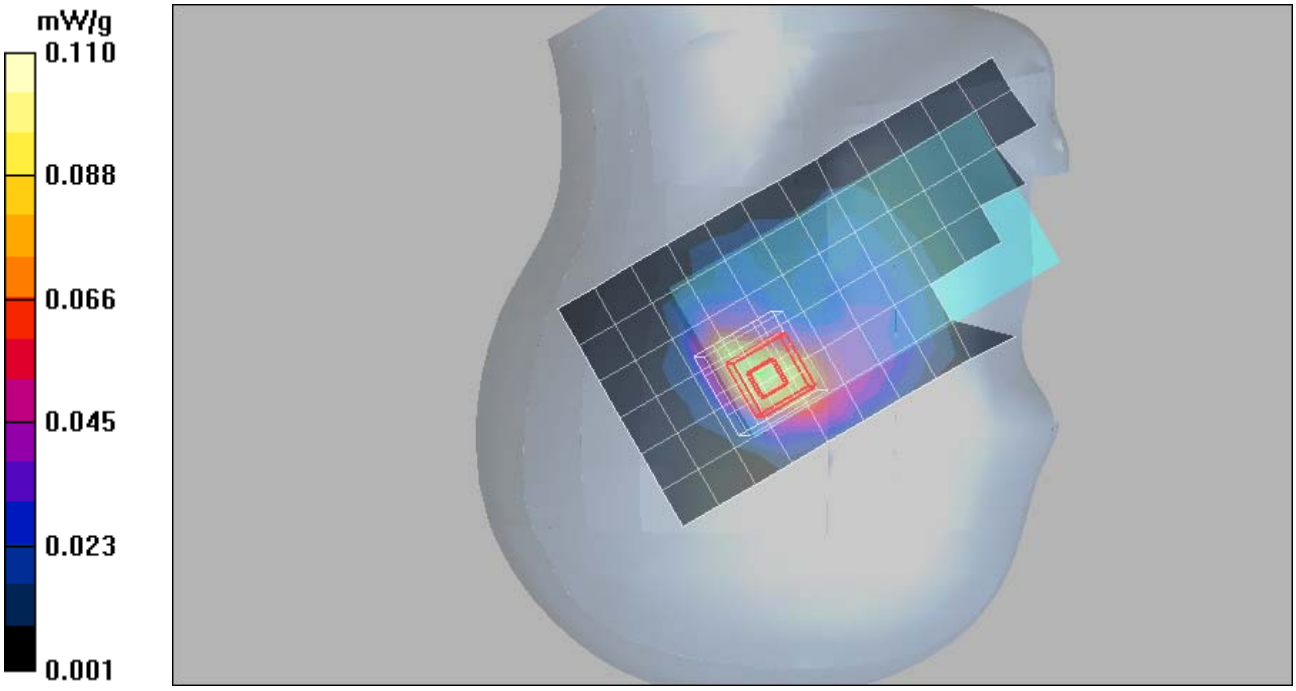
- Probe: ES3DV3 - SN3178; ConvF(4.29, 4.29, 4.29); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1160;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.093 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.25 V/m; Power Drift = 0.006 dB
Peak SAR (extrapolated) = 0.168 W/kg
SAR(1 g) = 0.096 mW/g; SAR(10 g) = 0.052 mW/g
Maximum value of SAR (measured) = 0.110 mW/g



Appendix 3

SAR distribution plots for Body Worn Test Results

Date/Time: 3/31/2012 9:41:57 PM

Test Laboratory: MOTOROLA - GSM 850 Body Worn

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: 05; Antenna Position: Internal; Battery Model #: Intenal;
Device Position: Body worn, Front of phone 25mm from phantom
Communication System: GSM 850; Frequency: 836.6 MHz;
Communication System Channel Number: 190; Duty Cycle: 1:8.3
Medium: Low Freq Body;
Medium parameters used: f = 835 MHz; σ = 0.97 mho/m; ε_r = 53.5; ρ = 1000 kg/m^3

DASY4 Configuration:

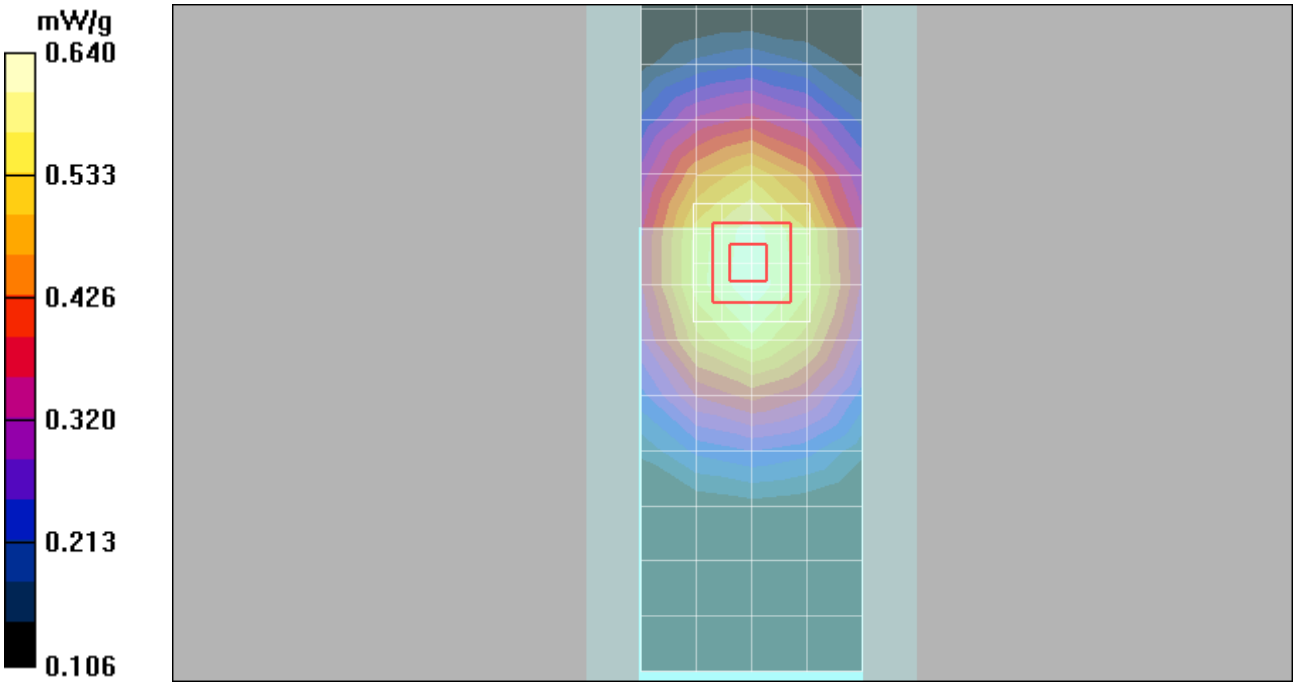
- Probe: ES3DV3 - SN3178; ConvF(5.7, 5.7, 5.7); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing 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) = 0.635 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.5 V/m; Power Drift = -0.081 dB
Peak SAR (extrapolated) = 0.767 W/kg
SAR(1 g) = 0.610 mW/g; SAR(10 g) = 0.461 mW/g
Maximum value of SAR (measured) = 0.640 mW/g



Date/Time: 4/1/2012 7:24:31 AM

Test Laboratory: MOTOROLA - WCDMA 850 Body Worn

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: All Up; Antenna Position: Internal; Battery Model #: Internal;
Device Position: Body Worn, Front of Phone 25mm from Phantom
Communication System: 3G-WCDMA 850; Frequency: 836 MHz;
Communication System Channel Number: 4180; Duty Cycle: 1:1
Medium: Low Freq Body;
Medium parameters used: f = 835 MHz; σ = 0.97 mho/m; ε_r = 53.5; ρ = 1000 kg/m^3

DASY4 Configuration:

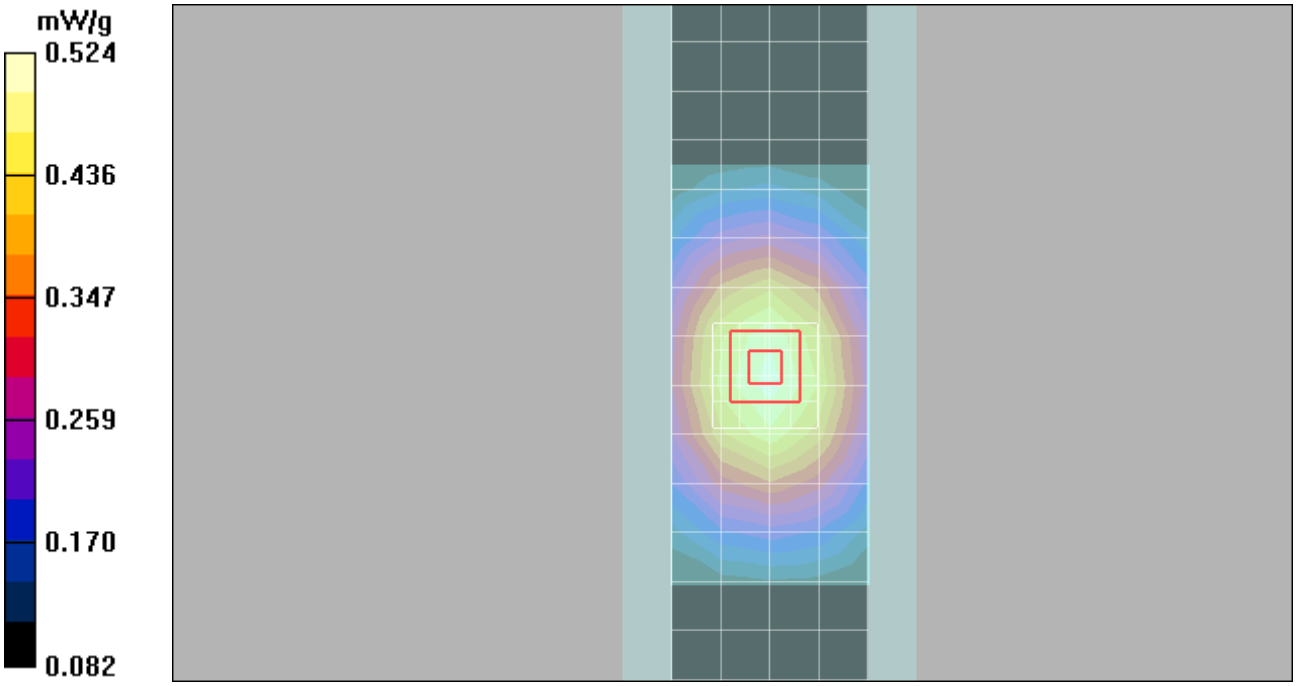
- Probe: ES3DV3 - SN3178; ConvF(5.7, 5.7, 5.7); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing 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) = 0.511 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.6 V/m; Power Drift = 0.069 dB
Peak SAR (extrapolated) = 0.624 W/kg
SAR(1 g) = 0.498 mW/g; SAR(10 g) = 0.375 mW/g
Maximum value of SAR (measured) = 0.524 mW/g



Date/Time: 3/31/2012 8:53:36 PM

Test Laboratory: MOTOROLA - GSM 1900 Body Worn

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: 00; Antenna Position: Internal; Battery Model #: Internal;
Device Position: Body Worn, Back of Phone 25mm from Phantom
Communication System: GSM 1900; Frequency: 1880 MHz;
Communication System Channel Number: 661; Duty Cycle: 1:8.3
Medium: Regular Glycol Body 1750/1880;
Medium parameters used: f = 1880 MHz; σ = 1.56 mho/m; ε_r = 51; ρ = 1000 kg/m^3

DASY4 Configuration:

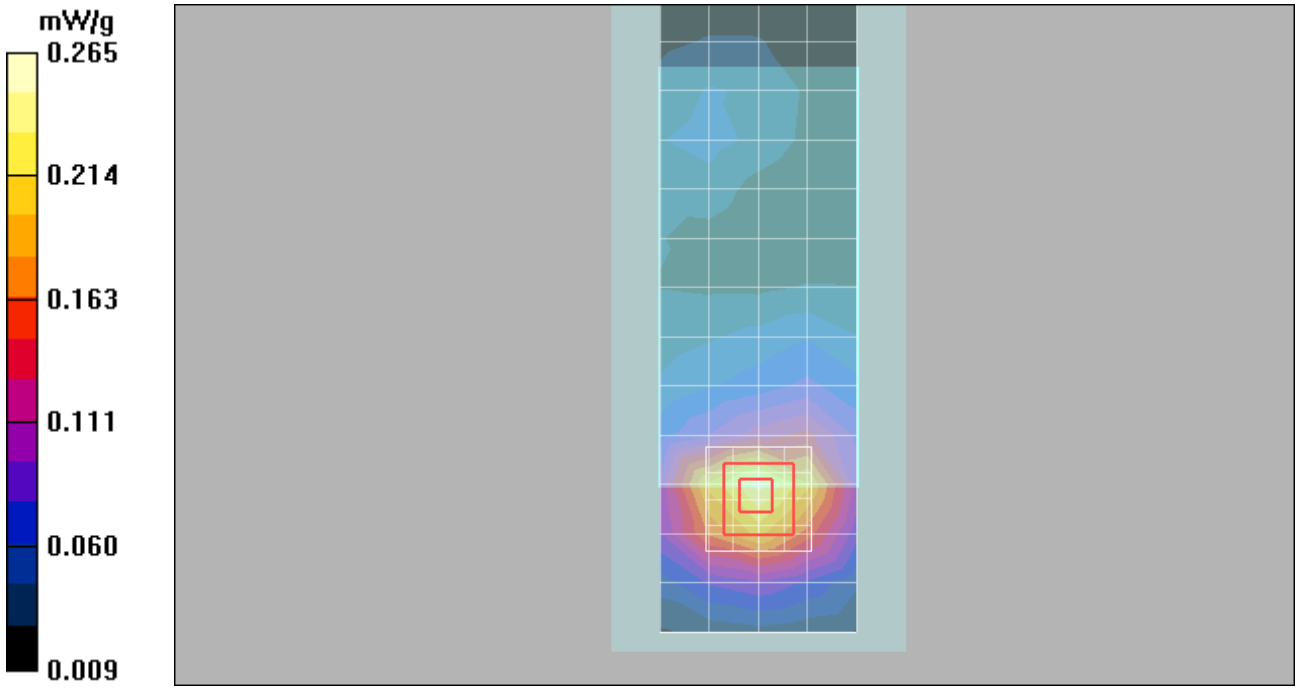
- Probe: ES3DV3 - SN3178; ConvF(4.72, 4.72, 4.72); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.257 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.6 V/m; Power Drift = 0.002 dB
Peak SAR (extrapolated) = 0.381 W/kg
SAR(1 g) = 0.244 mW/g; SAR(10 g) = 0.151 mW/g
Maximum value of SAR (measured) = 0.265 mW/g



Date/Time: 4/2/2012 12:01:32 PM

Test Laboratory: MOTOROLA - WCDMA 1900 Body Worn

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: All up; Antenna Position: Internal; Battery Model #: Internal;
Device Position: Body Worn, Back of Phone 25mm from Phantom
Communication System: 3G/WCDMA 1900; Frequency: 1880 MHz;
Communication System 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; ρ = 1000 kg/m^3

DASY4 Configuration:

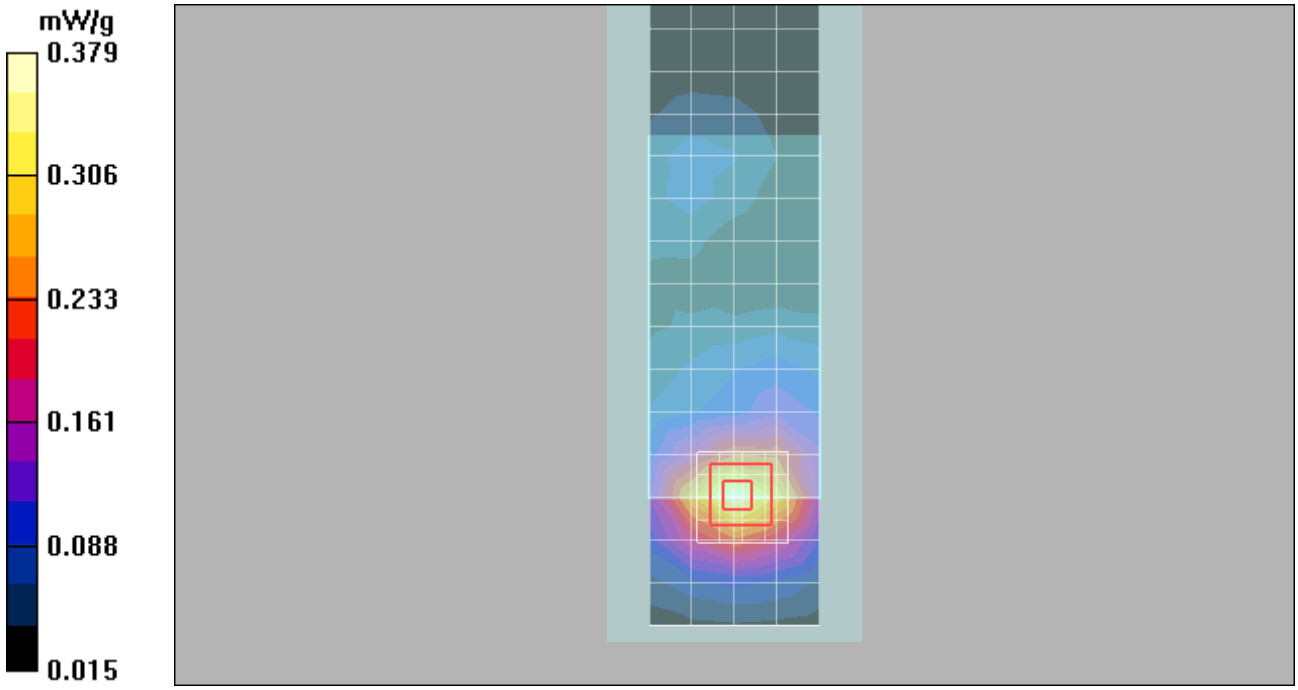
- Probe: ES3DV3 - SN3178; ConvF(4.72, 4.72, 4.72); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.383 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.6 V/m; Power Drift = 0.032 dB
Peak SAR (extrapolated) = 0.528 W/kg
SAR(1 g) = 0.351 mW/g; SAR(10 g) = 0.218 mW/g
Maximum value of SAR (measured) = 0.379 mW/g



Date/Time: 4/4/2012 11:00:23 AM

Test Laboratory: MOTOROLA - WiFi 2450 Body Worn

Serial: 352206050003182; FCC ID:IHDT56NH3
Procedure Notes: Pwr Step: N/A; WiFi Mode: 802.11b; Data Rate: 1Mbps;
Antenna Position: Internal; Battery Model #: Internal;
Device Position: Body Worn, Back of Phone 25mm from Phantom
Communication System: Wi-Fi 2450; Frequency: 2462 MHz;
Communication System Channel Number: 11; Duty Cycle: 1:1
Medium: 2450 Glycol Body;
Medium parameters used: f = 2450 MHz; σ = 2.02 mho/m; ε_r = 50.5; ρ = 1000 kg/m^3

DASY4 Configuration:

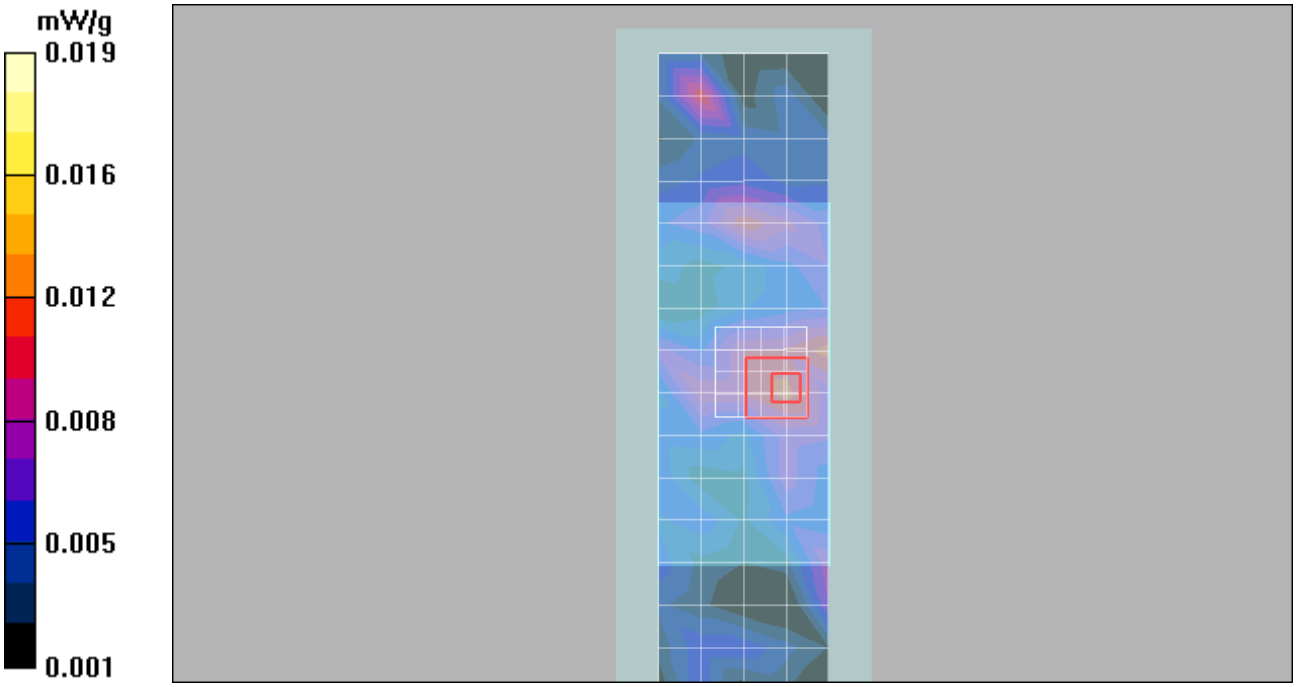
- Probe: ES3DV3 - SN3178; ConvF(4.13, 4.13, 4.13); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.011 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.35 V/m; Power Drift = -0.452 dB
Peak SAR (extrapolated) = 0.032 W/kg
SAR(1 g) = 0.0094 mW/g; SAR(10 g) = 0.00334 mW/g
Maximum value of SAR (measured) = 0.019 mW/g



Appendix 4

SAR distribution plots for Mobile Hotspot Test Results

Date/Time: 4/19/2012 9:01:54 AM

Test Laboratory: MOTOROLA - GPRS 850 Mobile Hotspot

Serial: 352205050010585; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: 05; Antenna Position: Internal; Battery Model #: Internal;
Device Position: Body Worn, Front of Phone 10mm from Phantom
Communication System: GPRS 850 - Class 12; Frequency: 836.6 MHz;
Communication System Channel Number: 190; Duty Cycle: 1:2.075
Medium: Low Freq Body;
Medium parameters used: f = 835 MHz; σ = 0.96 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3

DASY4 Configuration:

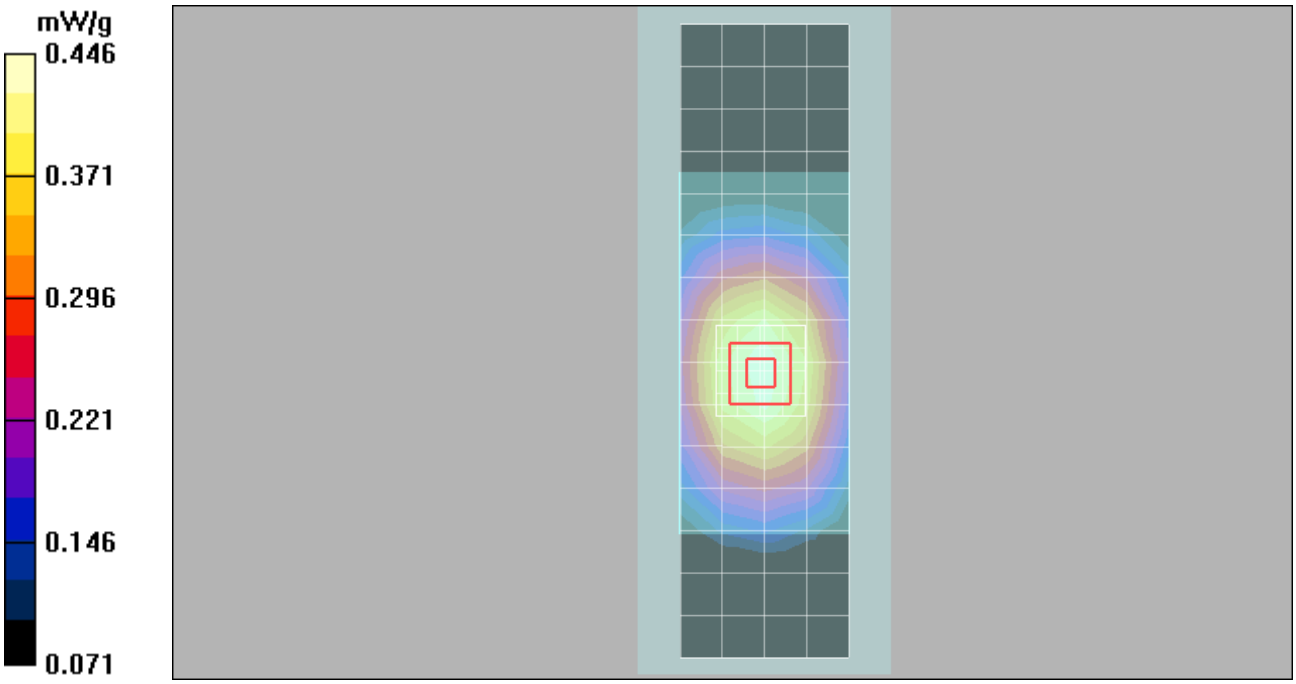
- Probe: ES3DV3 - SN3178; ConvF(5.7, 5.7, 5.7); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing 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) = 0.446 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.8 V/m; Power Drift = -0.035 dB
Peak SAR (extrapolated) = 0.517 W/kg
SAR(1 g) = 0.426 mW/g; SAR(10 g) = 0.326 mW/g



Date/Time: 4/19/2012 2:50:54 PM

Test Laboratory: MOTOROLA - WCDMA 850 Mobile Hotspot

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: All up; Antenna Position: Internal; Battery Model #: Internal; Device Position: Body Worn, Back of Phone 10mm from Phantom
Communication System: 3G-WCDMA 850; Frequency: 836 MHz;
Communication System Channel Number: 4180; Duty Cycle: 1:1
Medium: Low Freq Body;
Medium parameters used: f = 835 MHz; σ = 0.96 mho/m; ε_r = 53.1; ρ = 1000 kg/m^3

DASY4 Configuration:

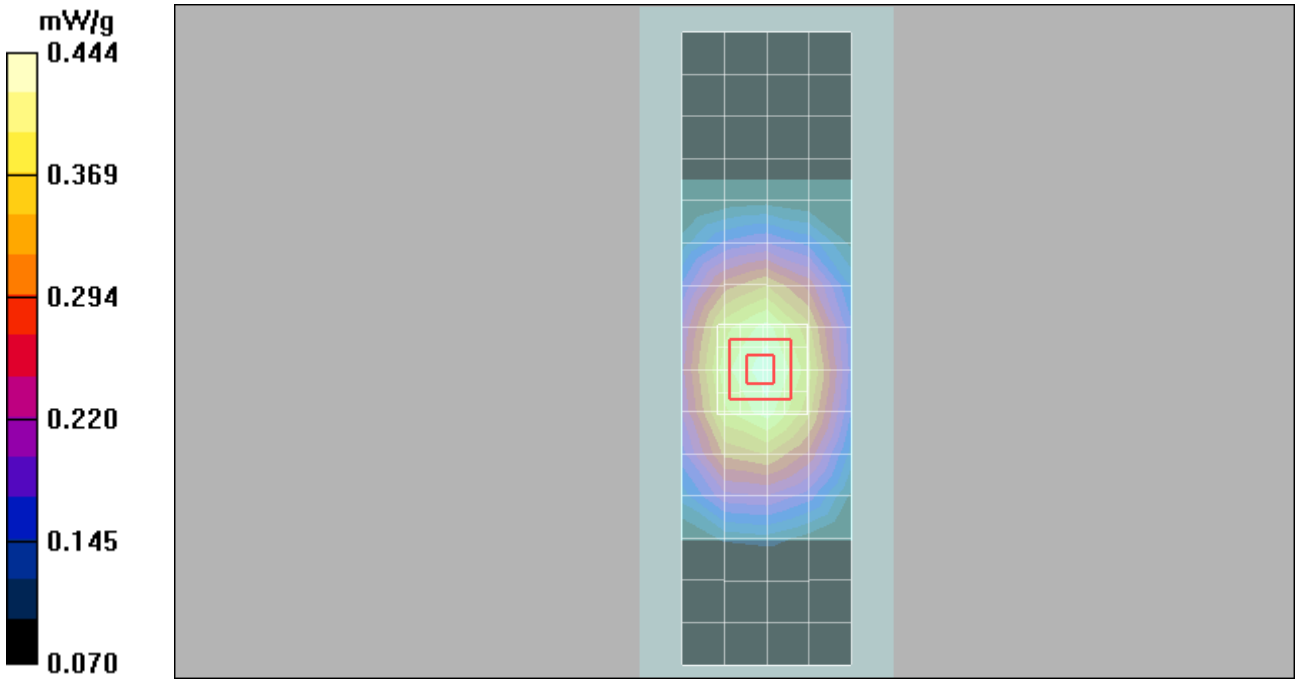
- Probe: ES3DV3 - SN3178; ConvF(5.7, 5.7, 5.7); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing 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) = 0.438 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.2 V/m; Power Drift = 0.062 dB
Peak SAR (extrapolated) = 0.516 W/kg
SAR(1 g) = 0.423 mW/g; SAR(10 g) = 0.322 mW/g
Maximum value of SAR (measured) = 0.444 mW/g



Date/Time: 4/18/2012 4:19:59 PM

Test Laboratory: MOTOROLA - GPRS 1900 Mobile Hotspot

Serial: 352205050010585; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: 00; Antenna Position: Internal; Battery Model #: Internal;
Device Position: Body Worn, Bottom edge of Phone 10mm from Phantom
Communication System: GPRS 1900 - Class 12; Frequency: 1880 MHz;
Communication System Channel Number: 661; Duty Cycle: 1:2.075
Medium: Regular Glycol Body 1750/1880;
Medium parameters used: f = 1880 MHz; σ = 1.59 mho/m; ε_r = 51.1; ρ = 1000 kg/m^3

DASY4 Configuration:

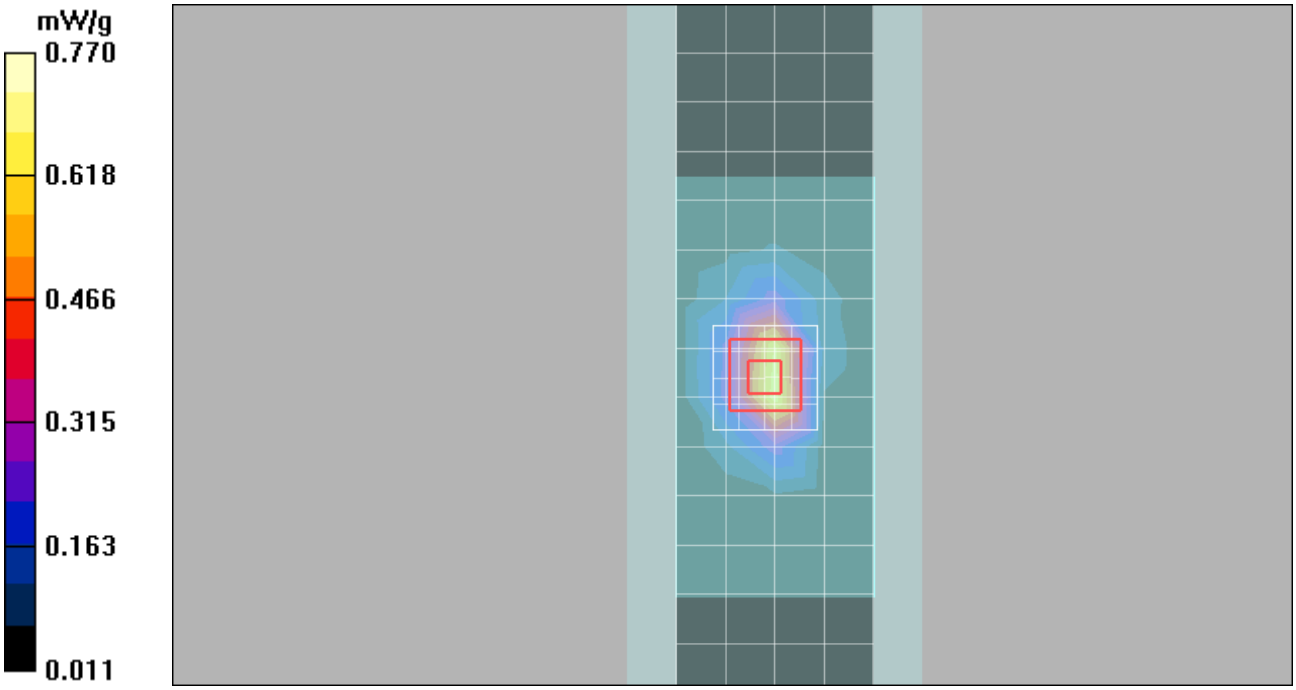
- Probe: ES3DV3 - SN3178; ConvF(4.72, 4.72, 4.72); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; 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) = 0.664 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.7 V/m; Power Drift = -0.084 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.673 mW/g; SAR(10 g) = 0.340 mW/g
Maximum value of SAR (measured) = 0.770 mW/g



Date/Time: 4/17/2012 11:00:55 AM

Test Laboratory: MOTOROLA - WCDMA 1900 Mobile Hotspot

Serial: 352206050003182; FCC ID:IHDT56NH3
Procedure Notes: Pwr Step: All up; Antenna Position: Internal; Battery Model #: Internal;
Device Position: Body Worn, Bottom edge of Phone 10mm from Phantom
Communication System: 3G/WCDMA 1900; Frequency: 1880 MHz;
Communication System 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 = 51.2; ρ = 1000 kg/m^3

DASY4 Configuration:

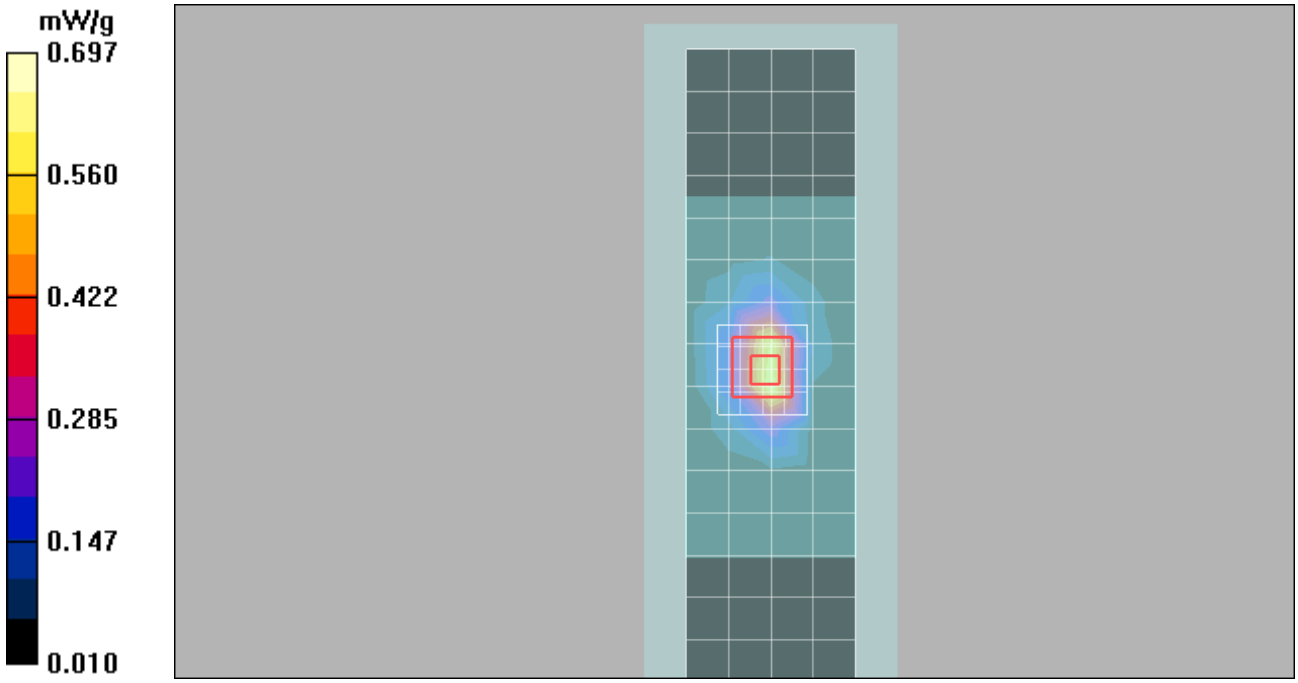
- Probe: ES3DV3 - SN3178; ConvF(4.72, 4.72, 4.72); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; 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) = 0.613 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.8 V/m; Power Drift = -0.045 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.611 mW/g; SAR(10 g) = 0.307 mW/g
Maximum value of SAR (measured) = 0.697 mW/g



Date/Time: 4/6/2012 8:01:43 AM

Test Laboratory: MOTOROLA - WiFi 2450 Mobile Hotspot

Serial: 352206050003182; FCC ID:IHDT56NH3

Procedure Notes: Pwr Step: N/A; WiFi Mode: 802.11b; Data Rate: 1Mbps;
Antenna Position: Internal; Battery Model #: Internal;
Device Position: Body Worn, Left edge of Phone 10mm from Phantom
Communication System: Wi-Fi 2450; Frequency: 2412 MHz;
Communication System Channel Number: 1; Duty Cycle: 1:1
Medium: 2450 Glycol Body;
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 50.2; ρ = 1000 kg/m^3

DASY4 Configuration:

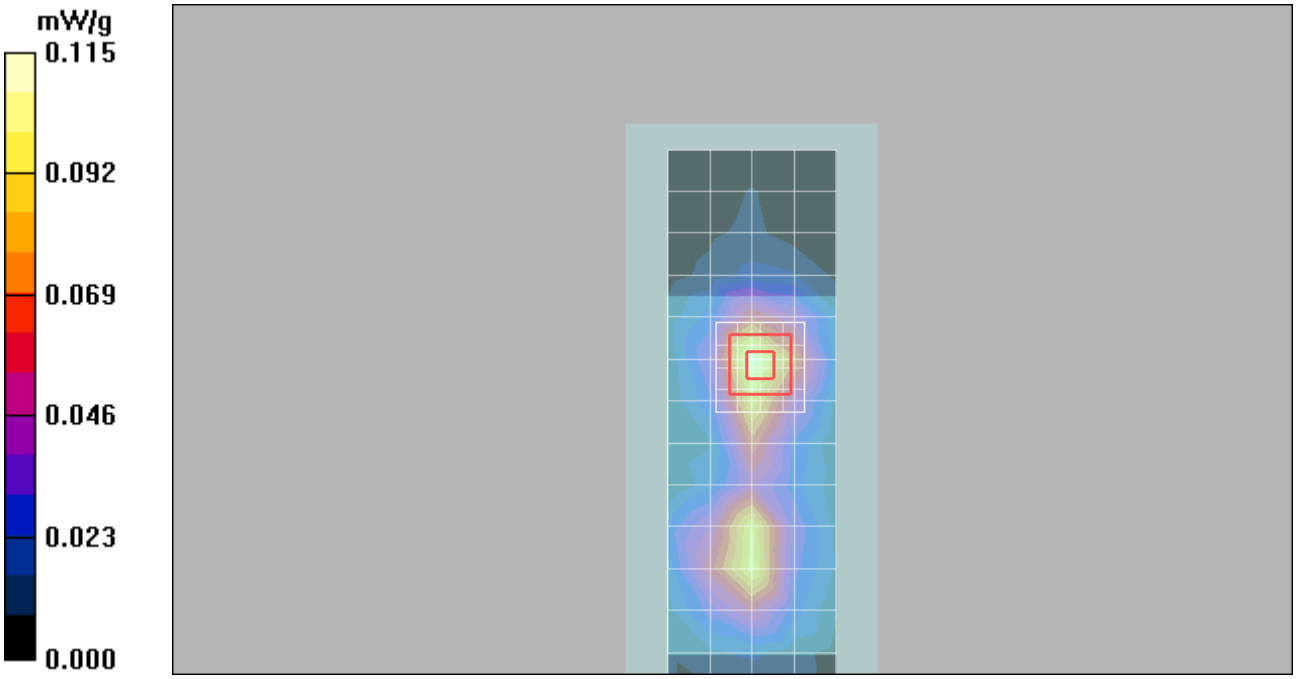
- Probe: ES3DV3 - SN3178; ConvF(4.13, 4.13, 4.13); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.112 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.17 V/m; Power Drift = 0.109 dB
Peak SAR (extrapolated) = 0.177 W/kg
SAR(1 g) = 0.104 mW/g; SAR(10 g) = 0.057 mW/g
Maximum value of SAR (measured) = 0.115 mW/g



Date/Time: 4/4/2012 11:28:16 AM

Test Laboratory: MOTOROLA - WiFi 2450 Mobile Hotspot

Serial: 352206050003182; FCC ID:IHDT56NH3
Procedure Notes: Pwr Step: N/A; WiFi Mode: 802.11b; Data Rate: 1Mbps;
Antenna Position: Internal; Battery Model #: Internal;
Device Position: Body Worn, Back of Phone 10mm from Phantom
Communication System: Wi-Fi 2450; Frequency: 2462 MHz;
Communication System Channel Number: 11; Duty Cycle: 1:1
Medium: 2450 Glycol Body;
Medium parameters used: f = 2450 MHz; σ = 2.02 mho/m; ε_r = 50.5; ρ = 1000 kg/m^3

DASY4 Configuration:

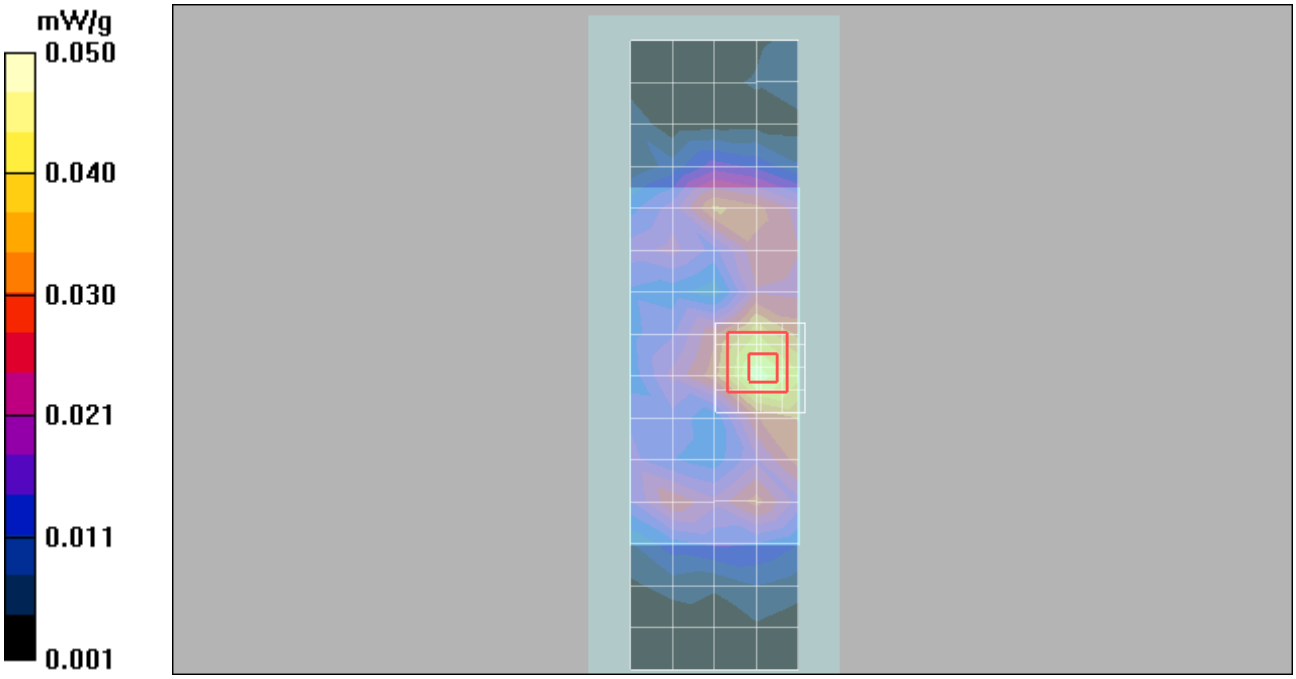
- Probe: ES3DV3 - SN3178; ConvF(4.13, 4.13, 4.13); Calibrated: 1/11/2012
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn437; Calibrated: 2/9/2012
- Phantom: R11_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

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

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.046 mW/g

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

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.17 V/m; Power Drift = 0.283 dB
Peak SAR (extrapolated) = 0.097 W/kg
SAR(1 g) = 0.044 mW/g; SAR(10 g) = 0.024 mW/g
Maximum value of SAR (measured) = 0.050 mW/g



Appendix 5

Measurement Uncertainty Budget

Uncertainty Budget for Device Under Test, for 735 MHz to 3 GHz

a	*b*	*c*	*d*	*e = f(d,k)*	*f*	*g*	*h = c x f / e*	*i = c x g / e*	*k*
Uncertainty Component	Description IEEE1528(2003) / IEC62209-1(2005)	**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 [ES3DV3]	E.2.1 / 7.2.1	6.0	N	1.00	1	1	6.0	6.0	∞
Axial Isotropy	E.2.2 / 7.2.1.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Hemispherical Isotropy	E.2.2 / 7.2.1.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3 / 7.2.1.5	1.0	R	1.73	1	1	0.6	0.6	∞
Linearity	E.2.4 / 7.2.1.3	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5 / 7.2.1.4	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6 / 7.2.1.6	0.3	N	1.00	1	1	0.3	0.3	∞
Response Time	E.2.7 / 7.2.1.7	1.1	R	1.73	1	1	0.6	0.6	∞
Integration Time	E.2.8 / 7.2.1.8	1.1	R	1.73	1	1	0.6	0.6	∞
RF Ambient Conditions - Noise	E.6.1 / 7.2.3.6	3.0	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1 / 7.2.3.6	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mech. Tolerance	E.6.2 / 7.2.2.1	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w.r.t Phantom	E.6.3 / 7.2.2.3	1.4	R	1.73	1	1	0.8	0.8	∞
Max. SAR Evaluation (ext., int., avg.)	E.5 / 7.2.4	3.4	R	1.73	1	1	2.0	2.0	∞
Test sample Related									
Test Sample Positioning	E.4.2 / 7.2.2.4	3.4	N	1.00	1	1	3.4	3.4	79
Device Holder Uncertainty	E.4.1 / 7.2.2.4.2	4.5	N	1.00	1	1	4.5	4.5	11
SAR drift	6.6.2 / 7.2.3.5	0.0	R	1.73	1	1	0.0	0.0	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1 / 7.2.2.2	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity (target)	E.3.2 / 7.2.3.3	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (measurement)	E.3.3 / 7.2.3.3	2.5	N	1.00	0.64	0.43	1.6	1.1	6
Liquid Permittivity (target)	E.3.2 / 7.2.3.4	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (measurement)	E.3.2 / 7.2.3.4	2.3	N	1.00	0.6	0.49	1.4	1.1	6
Combined Standard Uncertainty			RSS				11	11	372
Expanded Uncertainty (95% CONFIDENCE LEVEL)			*k*=2				22	22	

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
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 Beijing**

Certificate No: ES3-3178_Jan12

CALIBRATION CERTIFICATE

Object: ES3DV3 - SN:3178

Calibration procedure(s): QA CAL-01.v8, QA CAL-23.v4, QA CAL-25.v4
Calibration procedure for dosimetric E-field probes

Calibration date: January 11, 2012

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	31-Mar-11 (No. 217-01372)	Apr-12
Power sensor E4412A	MY41498087	31-Mar-11 (No. 217-01372)	Apr-12
Reference 3 dB Attenuator	SN: S5054 (3c)	29-Mar-11 (No. 217-01369)	Apr-12
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Reference 30 dB Attenuator	SN: S5129 (30b)	29-Mar-11 (No. 217-01370)	Apr-12
Reference Probe ES3DV2	SN: 3013	29-Dec-11 (No. ES3-3013_Dec11)	Dec-12
DAE4	SN: 654	3-May-11 (No. DAE4-654_May11)	May-12
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-11)	In house check: Apr-13
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-11)	In house check: Oct-12

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

Issued: January 12, 2012

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

S Schweizerischer Kalibrierdienst
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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

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 affect 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.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *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:3178

Manufactured: January 23, 2008
Calibrated: January 11, 2012

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3178

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	1.31	1.24	1.36	± 10.1 %
DCP (mV)[B]	101.4	94.9	101.0	

Modulation Calibration Parameters

UID	Communication System Name	PAR		A dB	B dB	C dB	VR mV	Unc[E] (k=2)
10000	CW	0.00	X	0.00	0.00	1.00	111.2	±2.2 %
			Y	0.00	0.00	1.00	114.8	
			Z	0.00	0.00	1.00	112.7	

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 max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3178

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	41.9	0.89	5.85	5.85	5.85	0.25	2.03	± 12.0 %
835	41.5	0.90	5.65	5.65	5.65	0.27	1.99	± 12.0 %
1810	40.0	1.40	4.88	4.88	4.88	0.80	1.19	± 12.0 %
1950	40.0	1.40	4.69	4.69	4.69	0.73	1.23	± 12.0 %
2450	39.2	1.80	4.29	4.29	4.29	0.80	1.26	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

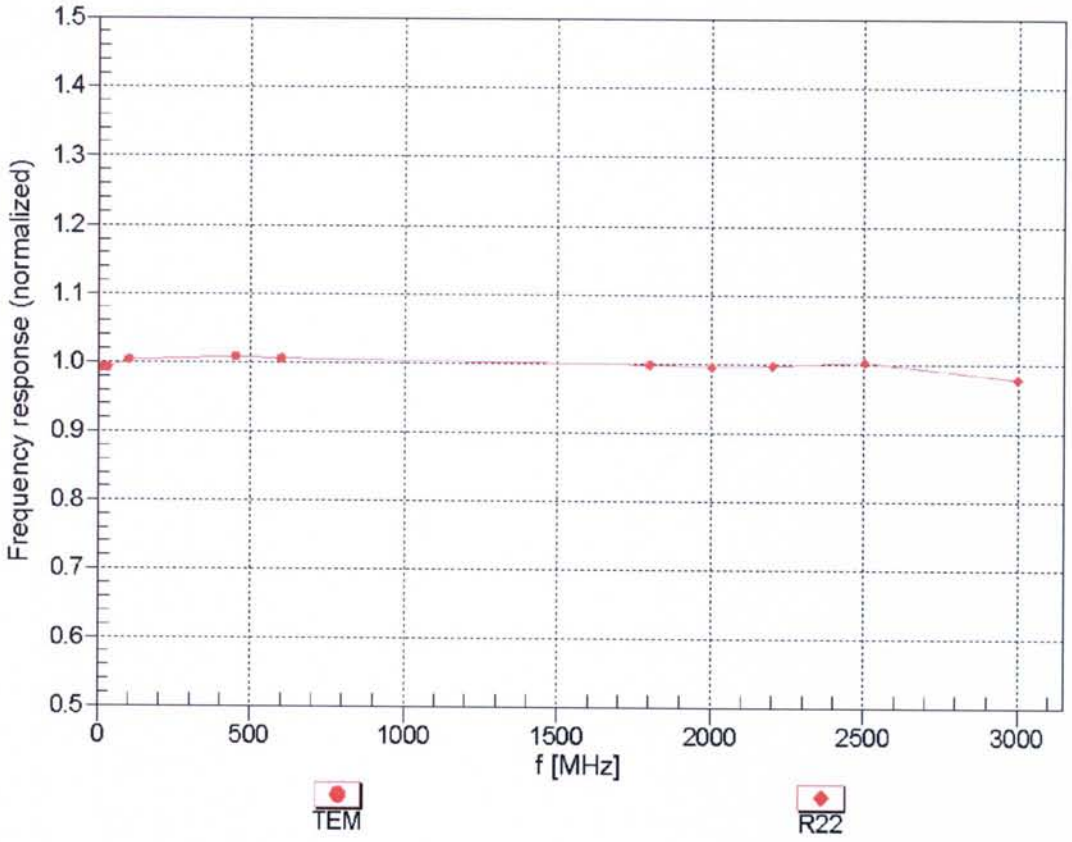
DASY/EASY - Parameters of Probe: ES3DV3 - SN:3178

Calibration Parameter Determined in Body Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha	Depth (mm)	Unct. (k=2)
750	55.5	0.96	5.73	5.73	5.73	0.29	1.89	± 12.0 %
835	55.2	0.97	5.70	5.70	5.70	0.57	1.34	± 12.0 %
1810	53.3	1.52	4.72	4.72	4.72	0.66	1.53	± 12.0 %
1950	53.3	1.52	4.64	4.64	4.64	0.46	1.77	± 12.0 %
2450	52.7	1.95	4.13	4.13	4.13	0.68	1.13	± 12.0 %

[C] Frequency validity of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

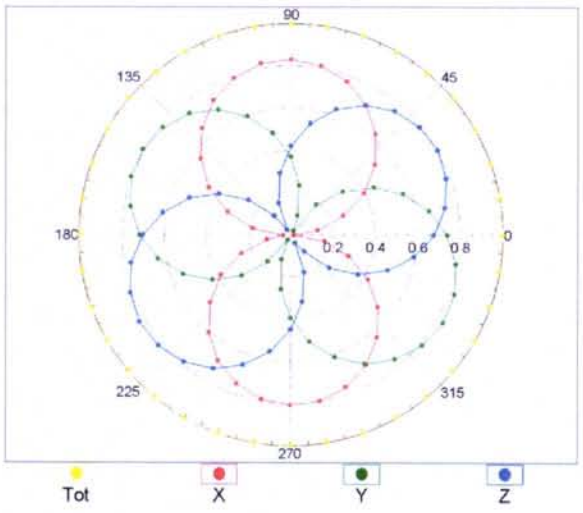
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



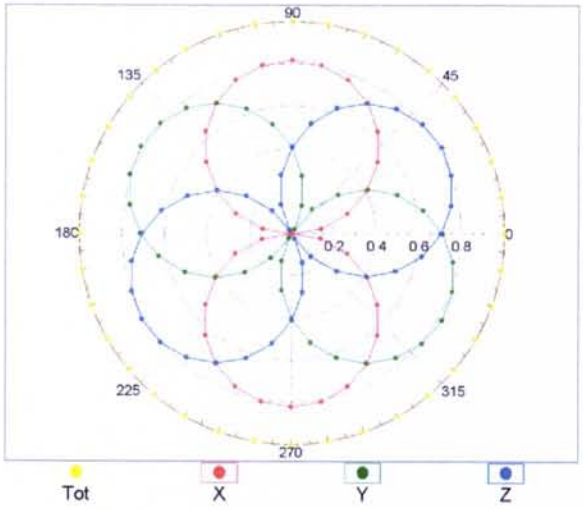
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

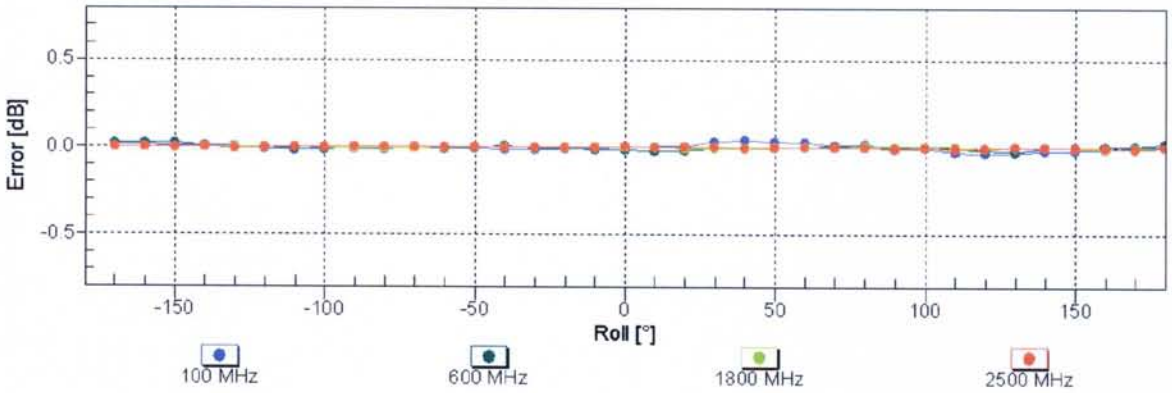
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



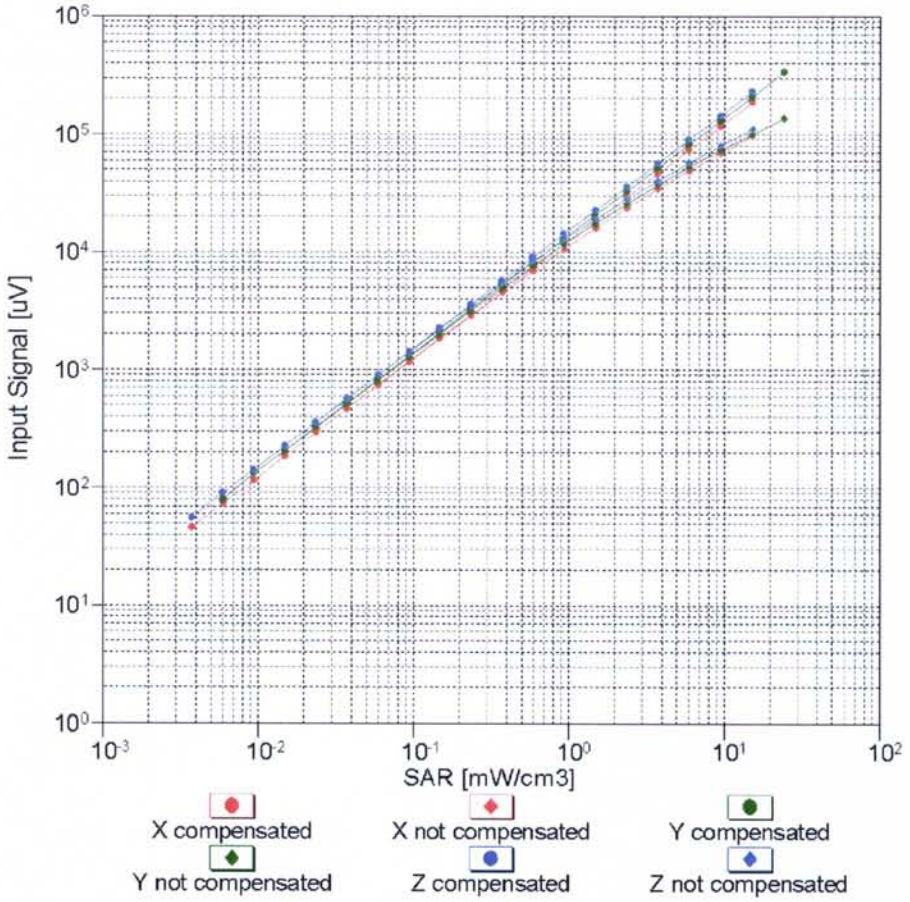
f=1800 MHz,R22

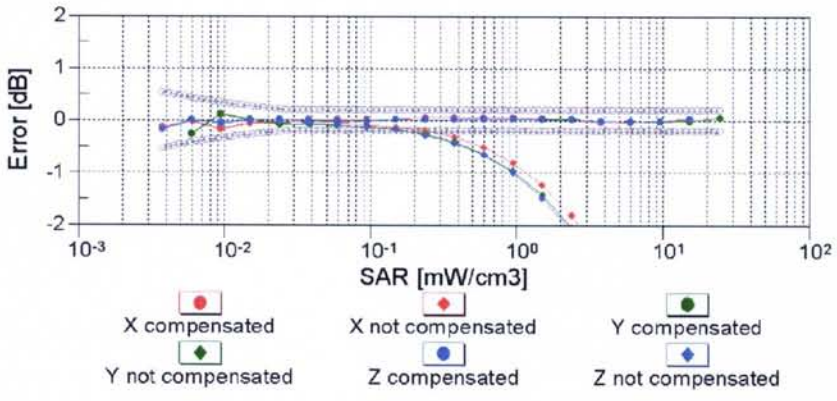




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head})
(TEM cell , f = 900 MHz)

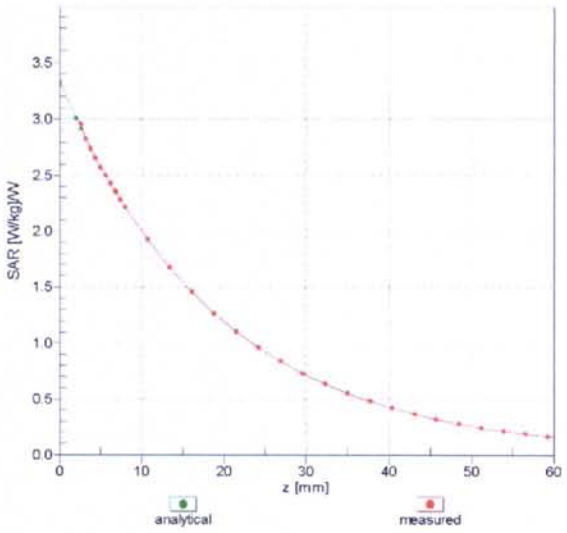




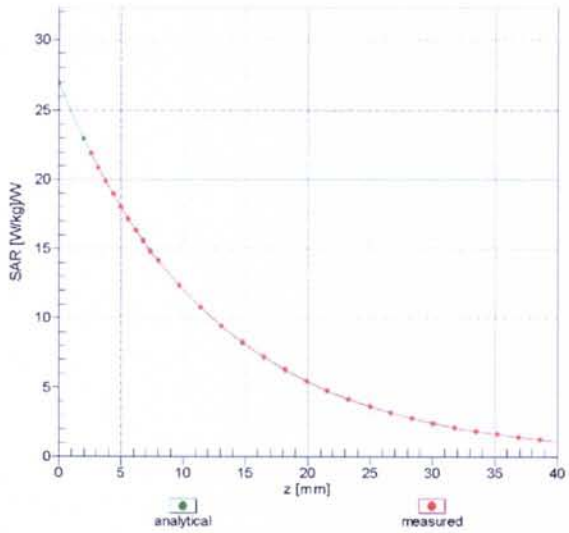
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment

f = 835 MHz,WGLS R9 (H_convF)

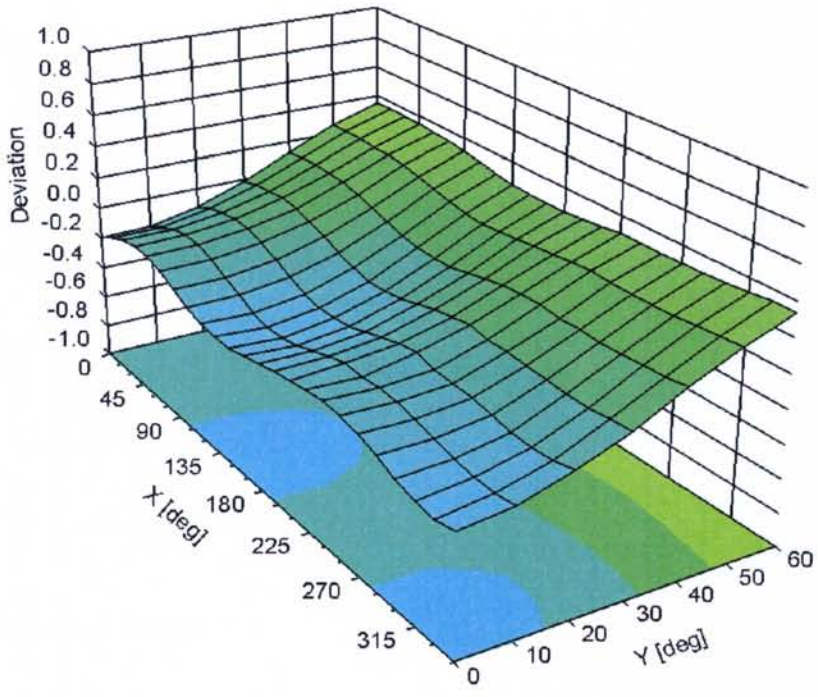


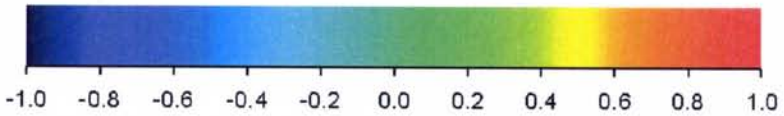
f = 1810 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





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

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3178

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 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

Appendix 7

Dipole Characterization 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
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 Beijing**

Certificate No: D835V2-421_Apr11

CALIBRATION CERTIFICATE

Object: D835V2 - SN: 421

Calibration procedure(s): QA CAL-05.v8
Calibration procedure for dipole validation kits

Calibration date: April 04, 2011

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 EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: 5086 (20g)	29-Mar-11 (No. 217-01368)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	30-Apr-10 (No. ES3-3205_Apr10)	Apr-11
DAE4	SN: 601	10-Jun-10 (No. DAE4-601_Jun10)	Jun-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Dimce Iliev	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 5, 2011

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

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

c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.6.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V4.9	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.6 ± 6 %	0.88 mho/m ± 6 %
Head TSL temperature during test	(21.7 ± 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.31 mW / g
SAR normalized	normalized to 1W	9.24 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**9.34 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.51 mW / g
SAR normalized	normalized to 1W	6.04 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**6.10 mW /g ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.1 ± 6 %	0.99 mho/m ± 6 %
Body TSL temperature during test	(22.0 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.49 mW / g
SAR normalized	normalized to 1W	10.0 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**9.76 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.63 mW / g
SAR normalized	normalized to 1W	6.52 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**6.43 mW / g ± 16.5 % (k=2)**

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	53.3 Ω + 0.7 jΩ
Return Loss	- 29.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.0 Ω - 1.0 jΩ
Return Loss	- 36.7 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.424 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Design Modification by End User

The dipole has been modified with Teflon Rings (TR) placed within identified markings close to the end of each dipole arm. Calibration has been performed with TR attached to the dipole.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	August 24, 2000

DASY5 Validation Report for Head TSL

Date/Time: 04.04.2011 10:09:12

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:421

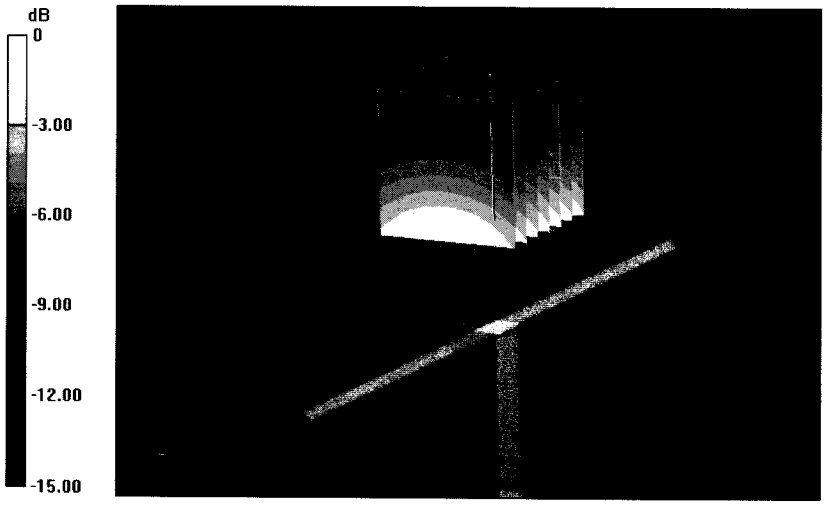
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: HSL900
Medium parameters used: f = 835 MHz; σ = 0.88 mho/m; ε_r = 40.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.03, 6.03, 6.03); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.4 Build (2829)

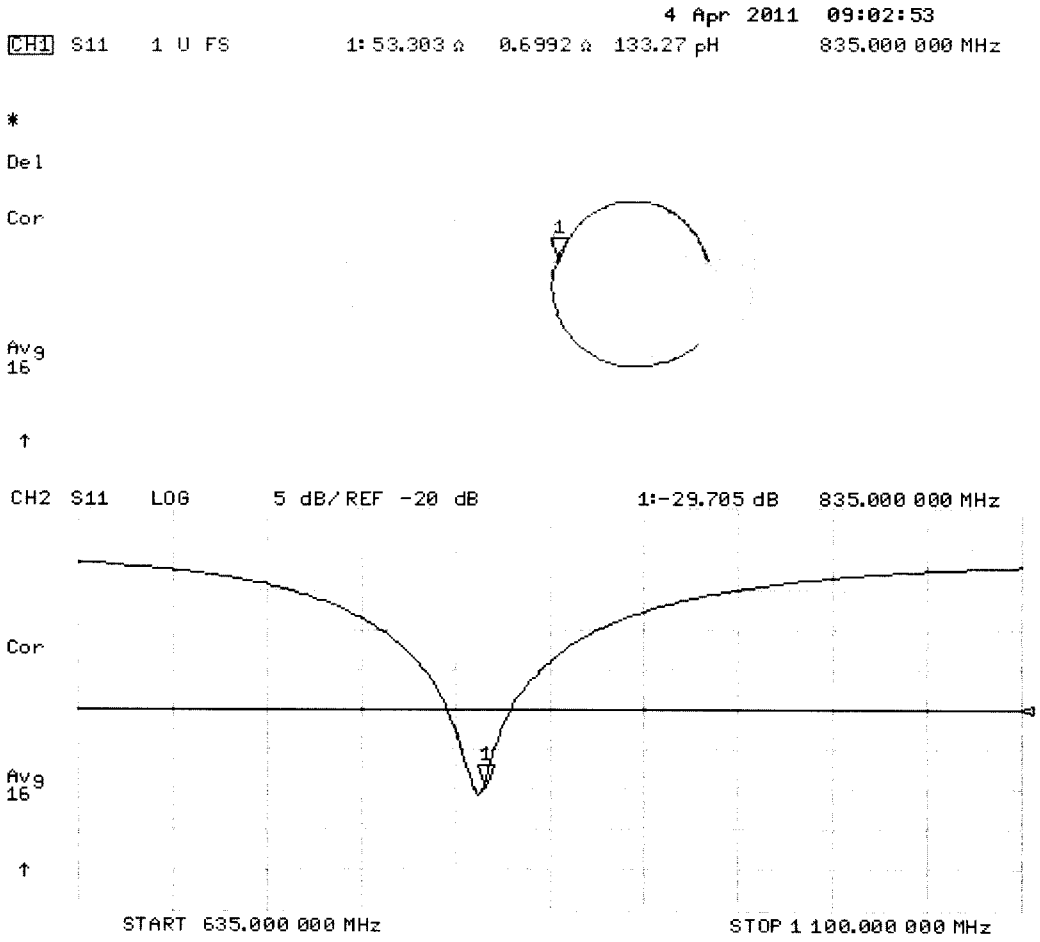
Pin=250 mW /d=15mm/Zoom Scan (7x7x7) /Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.966 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.449 W/kg
SAR(1 g) = 2.31 mW/g; SAR(10 g) = 1.51 mW/g
Maximum value of SAR (measured) = 2.699 mW/g



0 dB = 2.700mW/g

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date/Time: 04.04.2011 13:48:48

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:421

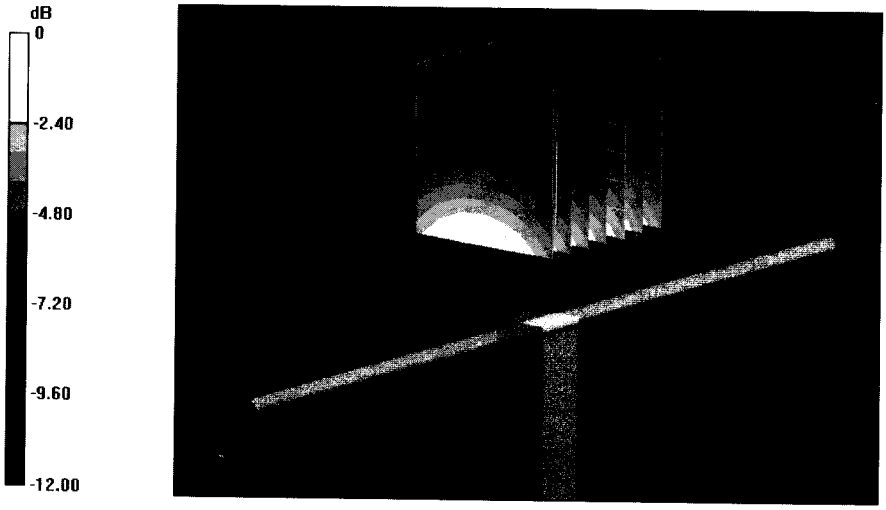
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: MSL900
Medium parameters used: f = 835 MHz; σ = 0.99 mho/m; ε_r = 54.1; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.86, 5.86, 5.86); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.4 Build (2829)

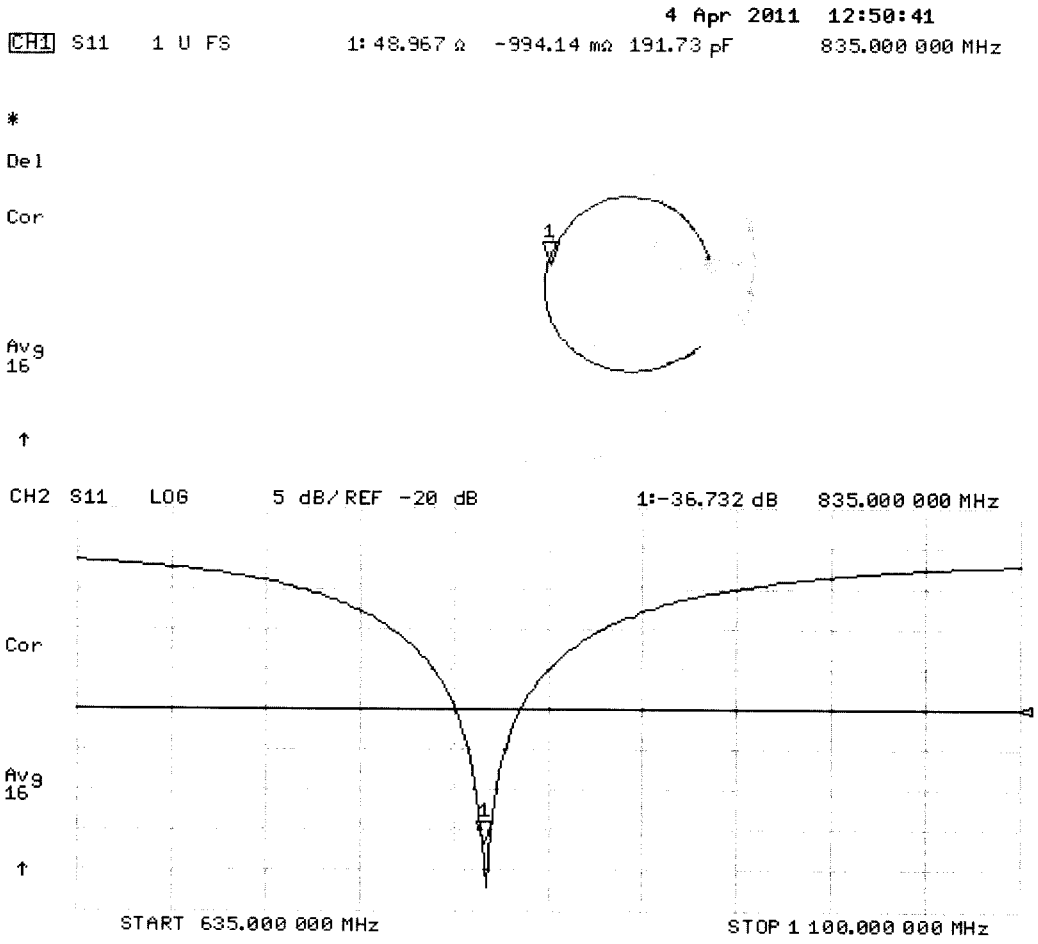
Pin=250 mW /d=15mm/Zoom Scan (7x7x7) /Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 55.878 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.683 W/kg
SAR(1 g) = 2.49 mW/g; SAR(10 g) = 1.63 mW/g
Maximum value of SAR (measured) = 2.902 mW/g



0 dB = 2.900mW/g

Impedance Measurement Plot for Body TSL



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

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
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Accreditation No.: SCS 108

Client **Motorola Beijing**

Certificate No: D1800V2-2d128_Apr11

CALIBRATION CERTIFICATE

Object	D1800V2 - SN: 2d128
Calibration procedure(s)	QA CAL-05.v8 Calibration procedure for dipole validation kits
Calibration date:	April 6, 2011

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 EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: 5086 (20g)	29-Mar-11 (No. 217-01368)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	30-Apr-10 (No. ES3-3205_Apr10)	Apr-11
DAE4	SN: 601	10-Jun-10 (No. DAE4-601_Jun10)	Jun-11

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	4-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Mike Meili	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 6, 2011

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
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

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

c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.6.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1800 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	39.1 ± 6 %	1.36 mho/m ± 6 %
Head TSL temperature during test	(21.5 ± 0.2) °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.85 mW / g
SAR normalized	normalized to 1W	39.4 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**39.9 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.16 mW / g
SAR normalized	normalized to 1W	20.6 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**20.8 mW /g ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.3 ± 6 %	1.47 mho/m ± 6 %
Body TSL temperature during test	(21.8 ± 0.2) °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.58 mW / g
SAR normalized	normalized to 1W	38.3 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**38.8 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.08 mW / g
SAR normalized	normalized to 1W	20.3 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**20.4 mW / g ± 16.5 % (k=2)**

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	48.6 Ω - 2.7 jΩ
Return Loss	- 30.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	44.7 Ω - 3.3 jΩ
Return Loss	- 23.7 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.210 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	July 27, 2005

DASY5 Validation Report for Head TSL

Date/Time: 05.04.2011 11:30:22

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d128

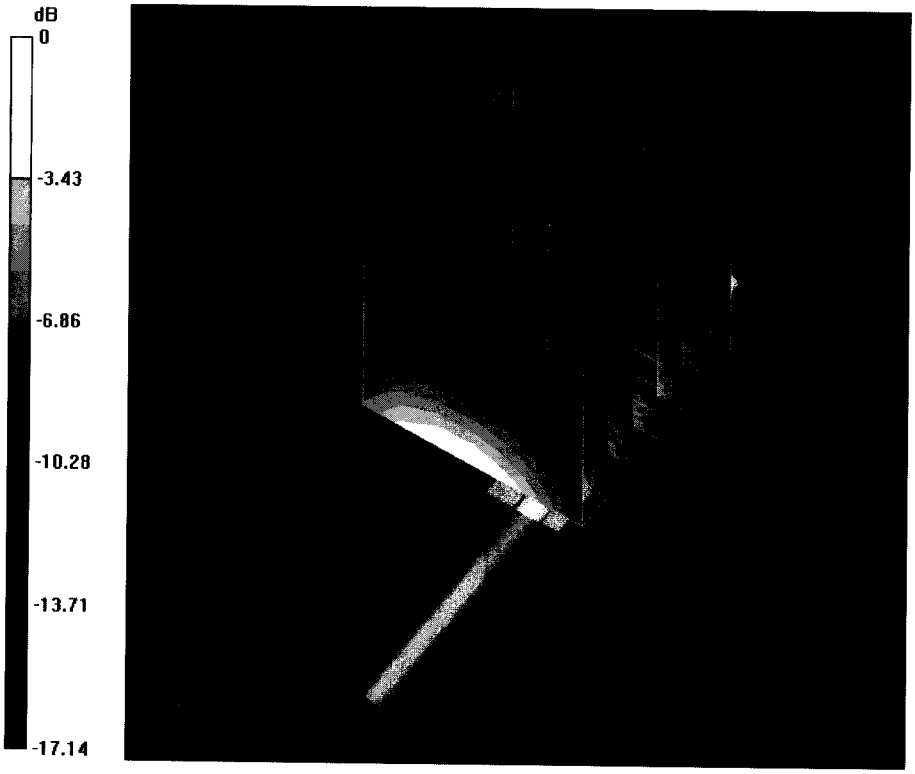
Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: HSL U12 BB
Medium parameters used: f = 1800 MHz; σ = 1.36 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(5.05, 5.05, 5.05); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.4 Build (2829)

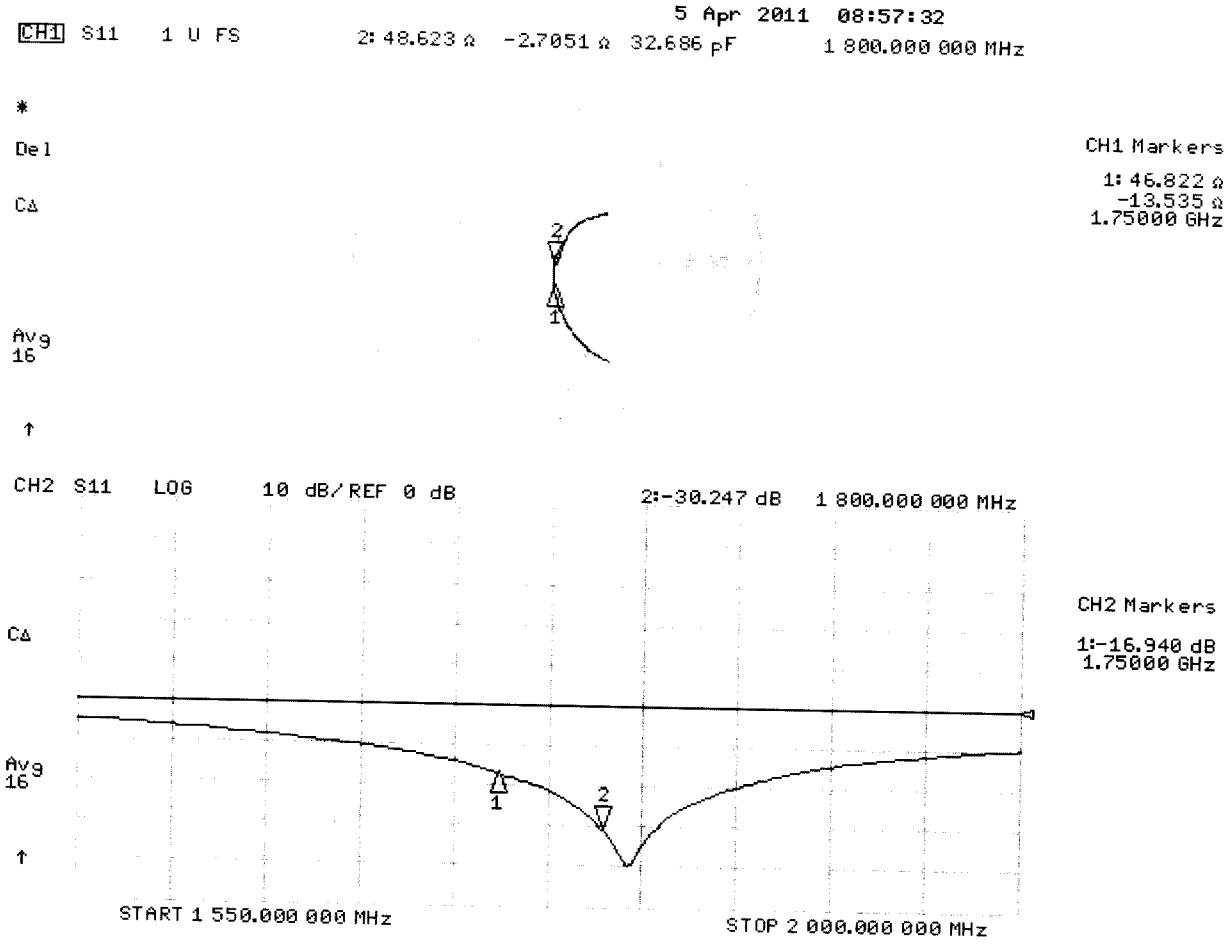
Head / d=10mm, Pin=250 mW / Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 98.381 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 17.979 W/kg
SAR(1 g) = 9.85 mW/g; SAR(10 g) = 5.16 mW/g
Maximum value of SAR (measured) = 12.263 mW/g



0 dB = 12.260mW/g

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date/Time: 06.04.2011 11:16:27

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2d128

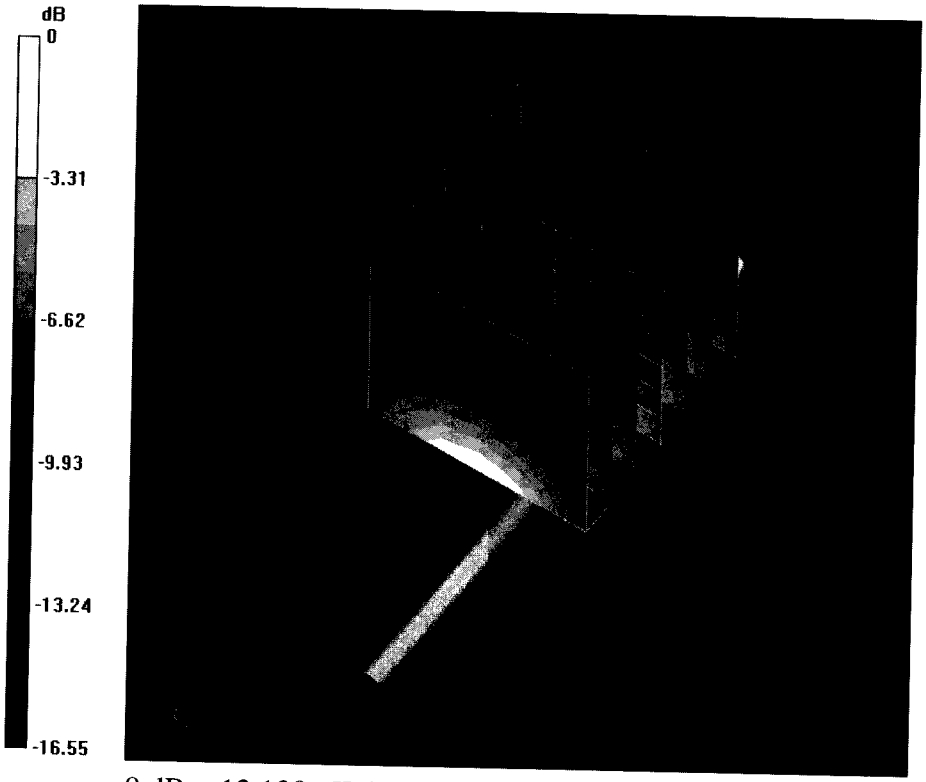
Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1
Medium: MSL U12 BB
Medium parameters used: f = 1800 MHz; σ = 1.47 mho/m; ε_r = 51.3; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.74, 4.74, 4.74); Calibrated: 30.04.2010
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 10.06.2010
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- Measurement SW: DASY52, V52.6.2 Build (424)
- Postprocessing SW: SEMCAD X, V14.4.4 Build (2829)

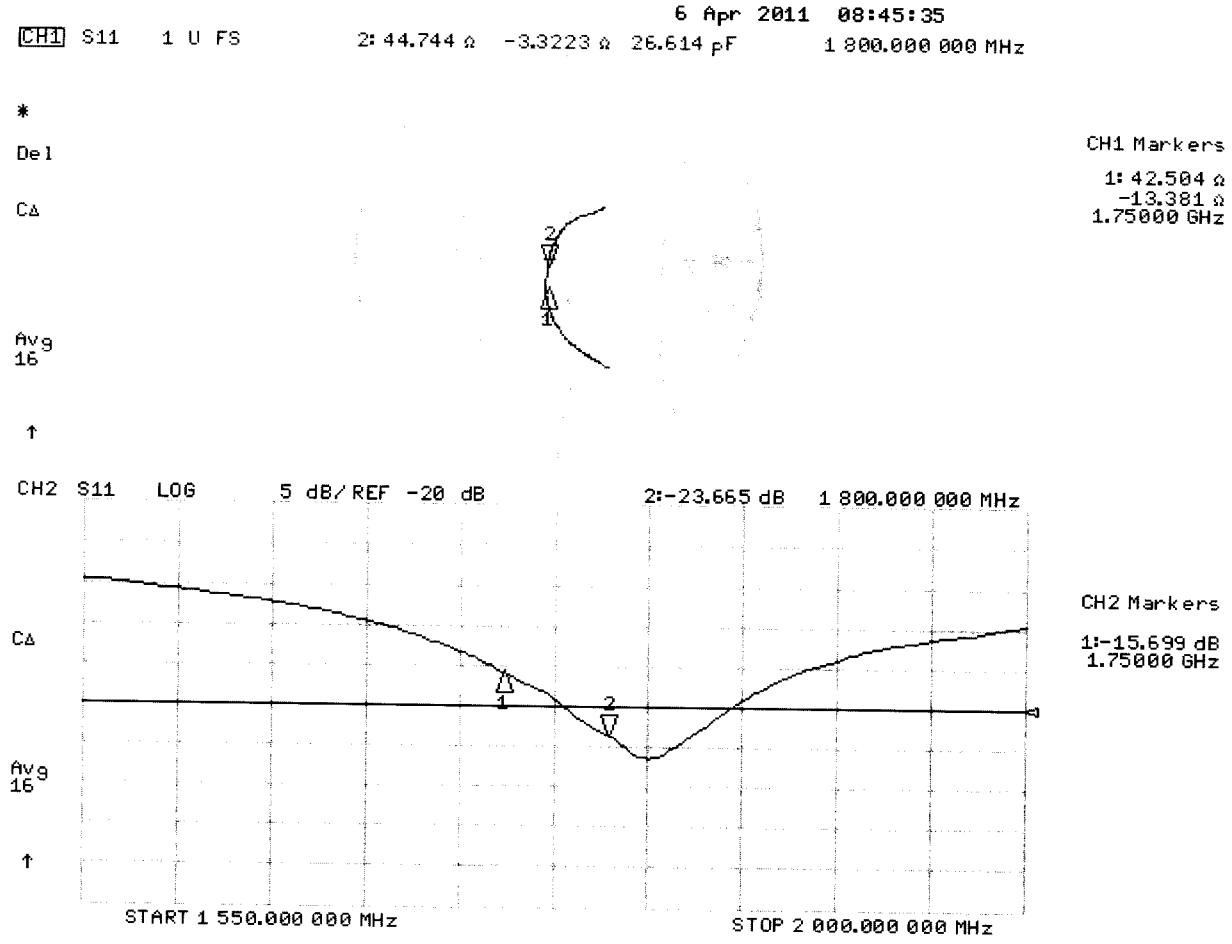
Body / d=10mm, Pin=250 mW / Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.624 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 16.489 W/kg
SAR(1 g) = 9.58 mW/g; SAR(10 g) = 5.08 mW/g
Maximum value of SAR (measured) = 12.121 mW/g



0 dB = 12.120mW/g

Impedance Measurement Plot for Body TSL



Calibration Laboratory of
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Zeughausstrasse 43, 8004 Zurich, Switzerland

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Accreditation No.: SCS 108

Client **Motorola Beijing**

Certificate No: D2450V2-788_Jul11

CALIBRATION CERTIFICATE

Object: D2450V2 - SN: 788

Calibration procedure(s): QA CAL-05.v8
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: July 12, 2011

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 EPM-442A	GB37480704	06-Oct-10 (No. 217-01266)	Oct-11
Power sensor HP 8481A	US37292783	06-Oct-10 (No. 217-01266)	Oct-11
Reference 20 dB Attenuator	SN: S5086 (20b)	29-Mar-11 (No. 217-01367)	Apr-12
Type-N mismatch combination	SN: 5047.2 / 06327	29-Mar-11 (No. 217-01371)	Apr-12
Reference Probe ES3DV3	SN: 3205	29-Apr-11 (No. ES3-3205_Apr11)	Apr-12
DAE4	SN: 601	04-Jul-11 (No. DAE4-601_Jul11)	Jul-12

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-09)	In house check: Oct-11
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

	Name	Function	Signature
Calibrated by:	Dimce Iliev	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 12, 2011

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

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Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

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
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.6.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.9 ± 6 %	1.85 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	14.0 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**55.2 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.49 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**25.8 mW /g ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.7 ± 6 %	2.00 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.0 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**51.2 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.02 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**23.9 mW / g ± 16.5 % (k=2)**

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	55.0 Ω + 4.3 jΩ
Return Loss	- 24.1 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.9 Ω + 5.6 jΩ
Return Loss	- 25.0 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.155 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	January 24, 2006

Date: 7/12/2011

Test Laboratory: SPEAG

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 788

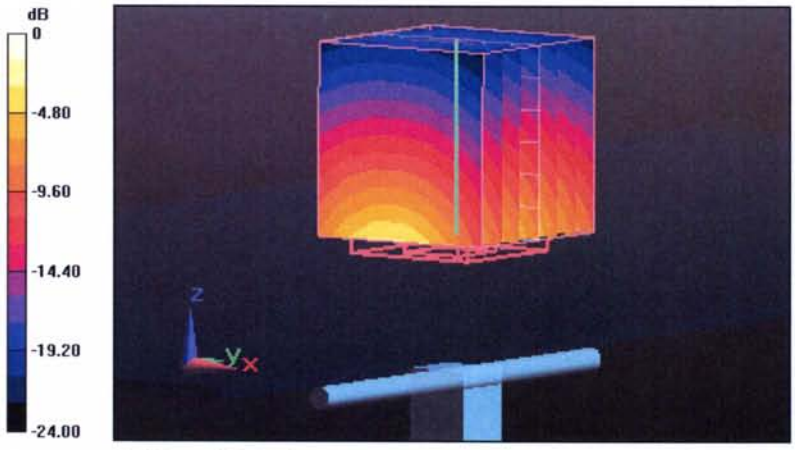
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: HBBL 1900-3800V3
Medium parameters used: f = 2450 MHz; σ = 1.85 mho/m; ε_r = 38.9; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.45, 4.45, 4.45); Calibrated: 4/29/2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 7/4/2011
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- Measurement SW: DASY52, Version 52.6 (2)
- SEMCAD X Version 14.4.5 (3634)

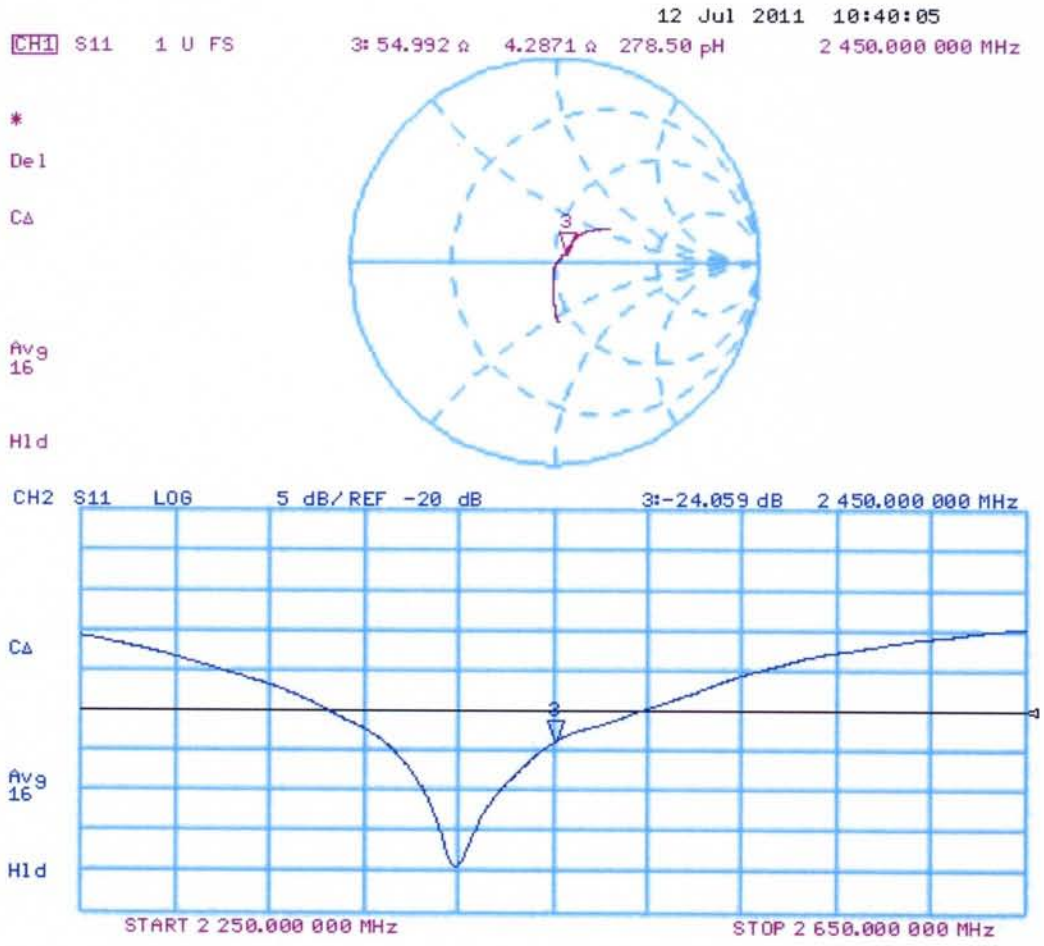
Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 102.3 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 28.847 W/kg
SAR(1 g) = 14 mW/g; SAR(10 g) = 6.49 mW/g
Maximum value of SAR (measured) = 17.898 mW/g



0 dB = 17.900mW/g

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 12.07.2011

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 788

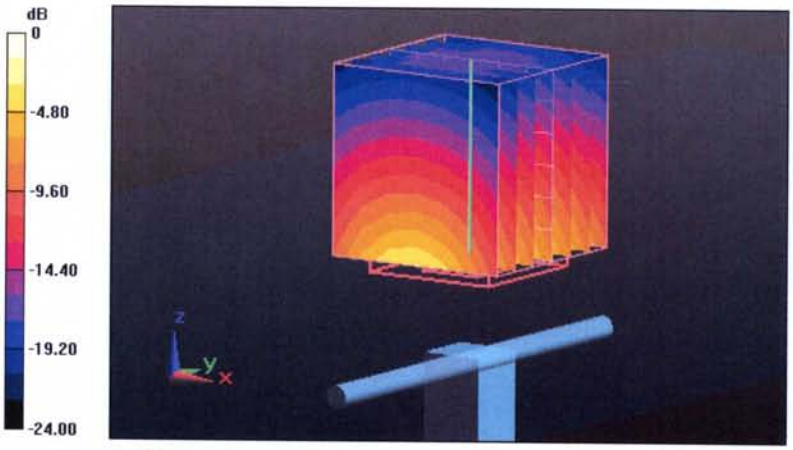
Communication System: CW; Frequency: 2450 MHz
Medium parameters used: f = 2450 MHz; σ = 2 mho/m; ε_r = 51.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(4.26, 4.26, 4.26); Calibrated: 29.04.2011
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 5.0 (back); Type: QD000P50AA; Serial: 1002
- DASY52 52.6.2(482); SEMCAD X 14.4.5(3634)

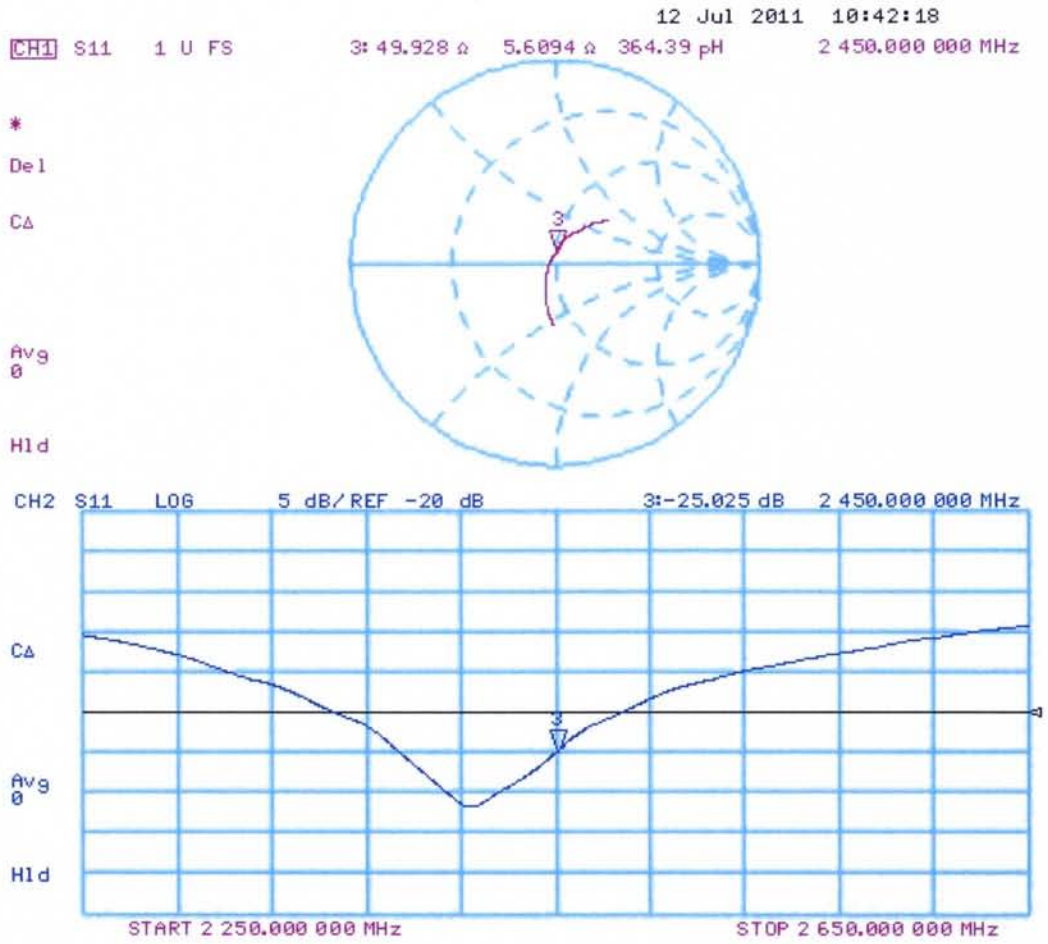
Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 96.028 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 26.823 W/kg
SAR(1 g) = 13 mW/g; SAR(10 g) = 6.02 mW/g
Maximum value of SAR (measured) = 17.108 mW/g



0 dB = 17.110mW/g

Impedance Measurement Plot for Body TSL



END OF REPORT