

Appendix 1

SAR distribution comparisons for System Accuracy Verifications

System Accuracy Verification Measurements for Head SAR Measurements

Test Laboratory: Motorola Mobility - 835MHz Head System Performance Check

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4D128;

Procedure Notes: Input Power = 200 mW Refl.Pwr = -30.12 dB

Sim.Temp@meas = 18.6 Sim.Temp@SPC = 18.6 Room Temp @ SPC = 21.7

Communication System: _CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 835$ MHz; $\sigma = 0.92$ mho/m; $\epsilon_r = 40.7$; $\rho = 1000$

kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(6.08, 6.08, 6.08); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Sugar SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1156;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, SAM - System Performance Check Template, Rev.2 (12-Sept-11)/Daily SPC Check/Dipole

Area Scan (5x15x1): Measurement grid: dx=10mm, dy=15mm

Maximum value of SAR (measured) = 2.12 mW/g

DASY5, SAM - System Performance Check Template, Rev.2 (12-Sept-11)/Daily SPC Check/0-

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

Reference Value = 48.400 V/m; Power Drift = -0.04 dB

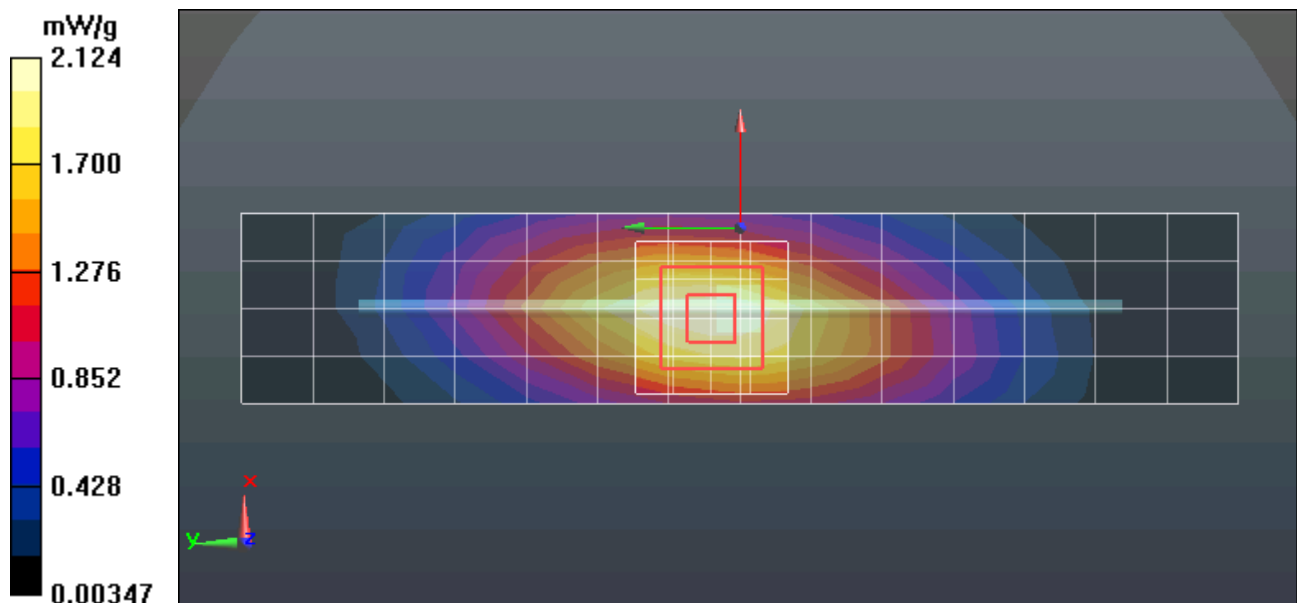
Peak SAR (extrapolated) = 3.039 mW/g

SAR(1 g) = 2.01 mW/g; SAR(10 g) = 1.31 mW/g

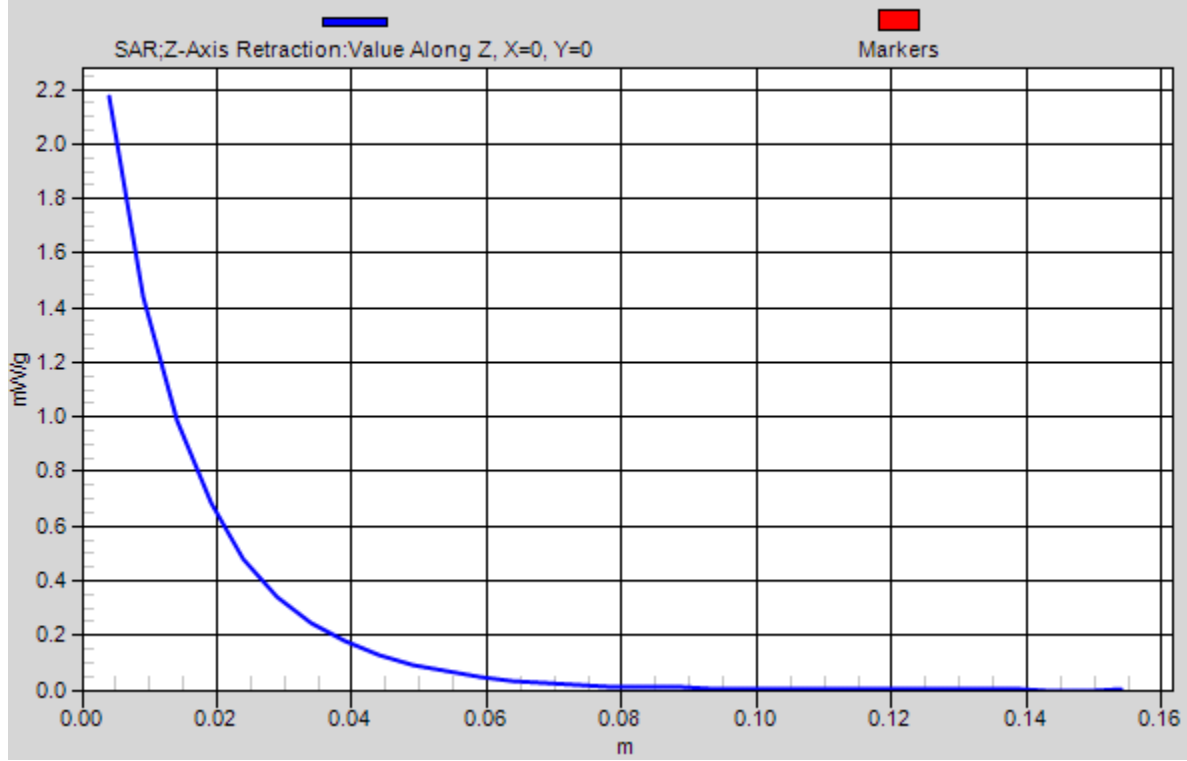
Maximum value of SAR (measured) = 2.17 mW/g

DASY5, SAM - System Performance Check Template, Rev.2 (12-Sept-11)/Daily SPC Check/Z-Axis

Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm



SAR(x,y,z,f0)



Test Laboratory: Motorola Mobility - 1800MHz Head System Performance Check

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:259tr;

Procedure Notes: Input Power = 200 mW Refl. Pwr = -26.5 dB

Sim.Temp@meas = 18.7 Sim.Temp@SPC =18.7 Room Temp @ SPC = 20.8

Communication System: _CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 1800$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$

kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC

Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 6.16 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-

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

Reference Value = 80.122 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 13.944 mW/g

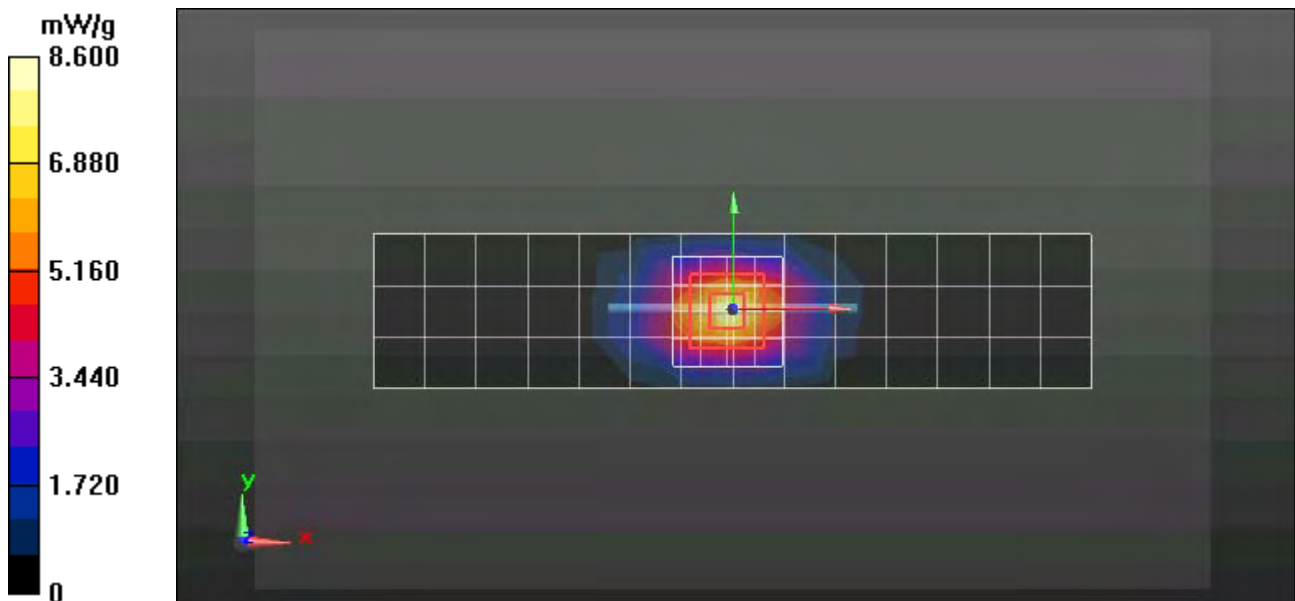
SAR(1 g) = 7.63 mW/g; SAR(10 g) = 4.01 mW/g

Maximum value of SAR (measured) = 8.58 mW/g

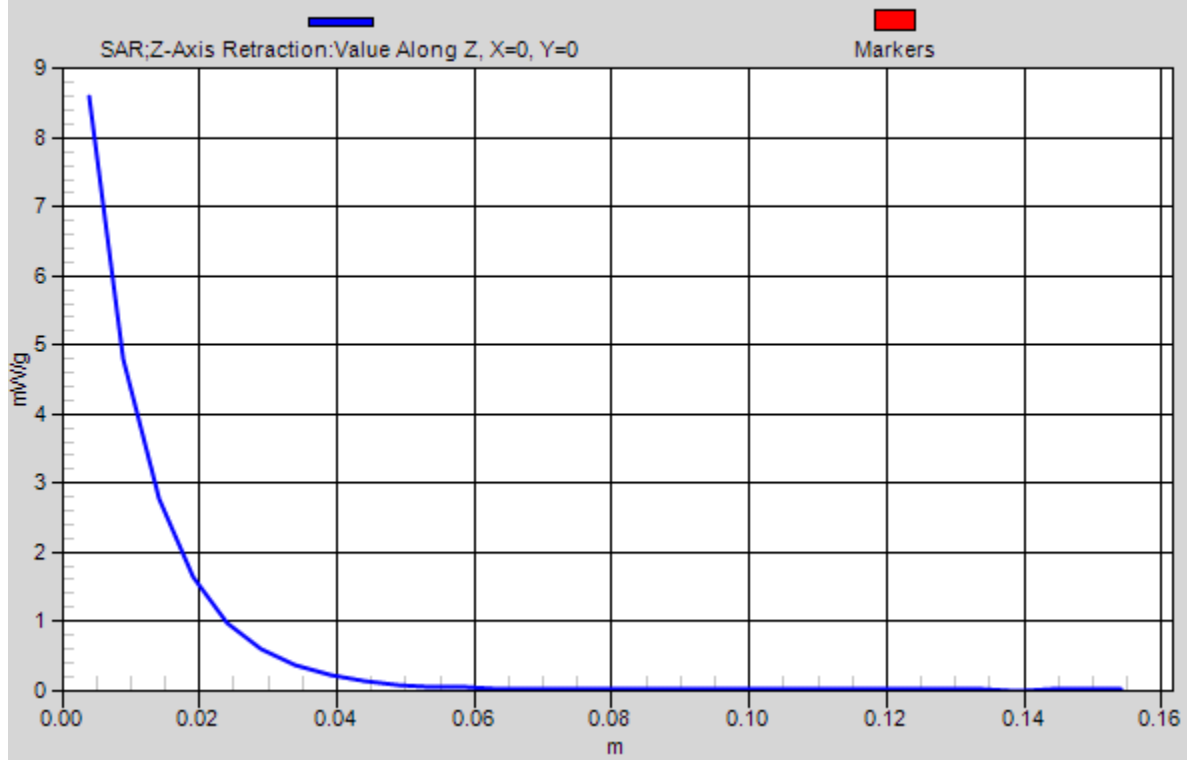
DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-

Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 8.60 mW/g



SAR(x,y,z,f0)



Test Laboratory: Motorola Mobility - 1800MHz Head System Performance Check

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:259tr;

Procedure Notes: Input Power = 200 mW Refl.Pwr = -26.15 dB

Sim.Temp@meas = 18.4°C Sim.Temp@SPC = 18.4°C Room Temp @ SPC = 21.1°C

Communication System: _CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 1800$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC

Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 5.99 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-

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

Reference Value = 77.560 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 13.790 mW/g

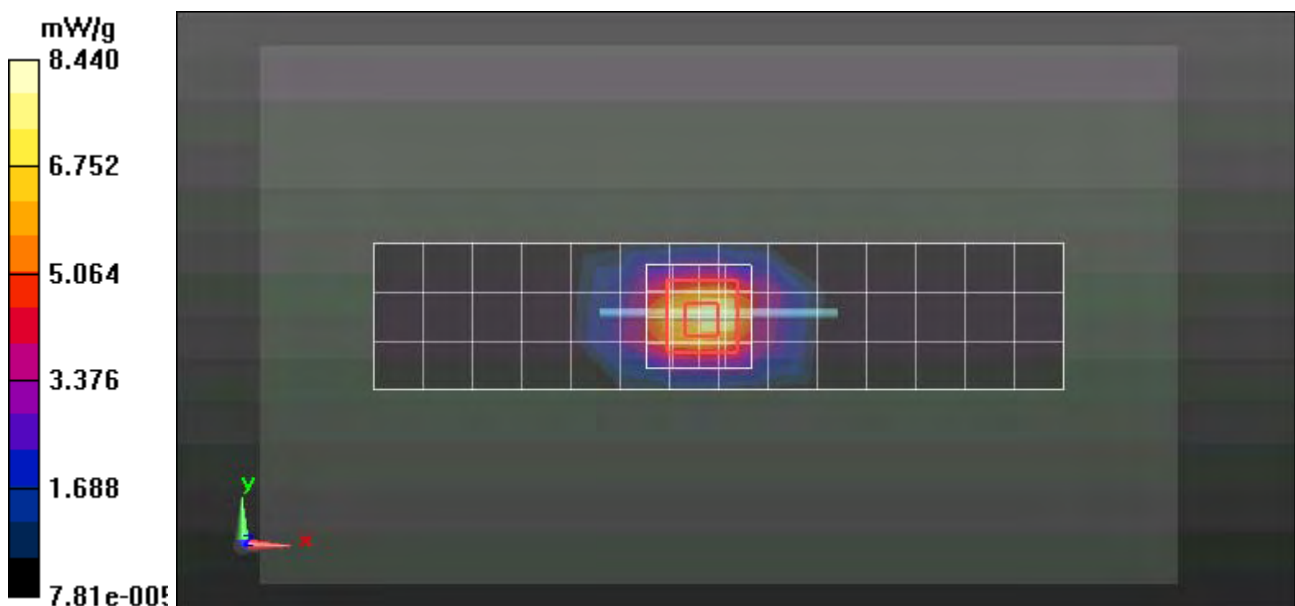
SAR(1 g) = 7.54 mW/g; SAR(10 g) = 3.97 mW/g

Maximum value of SAR (measured) = 8.45 mW/g

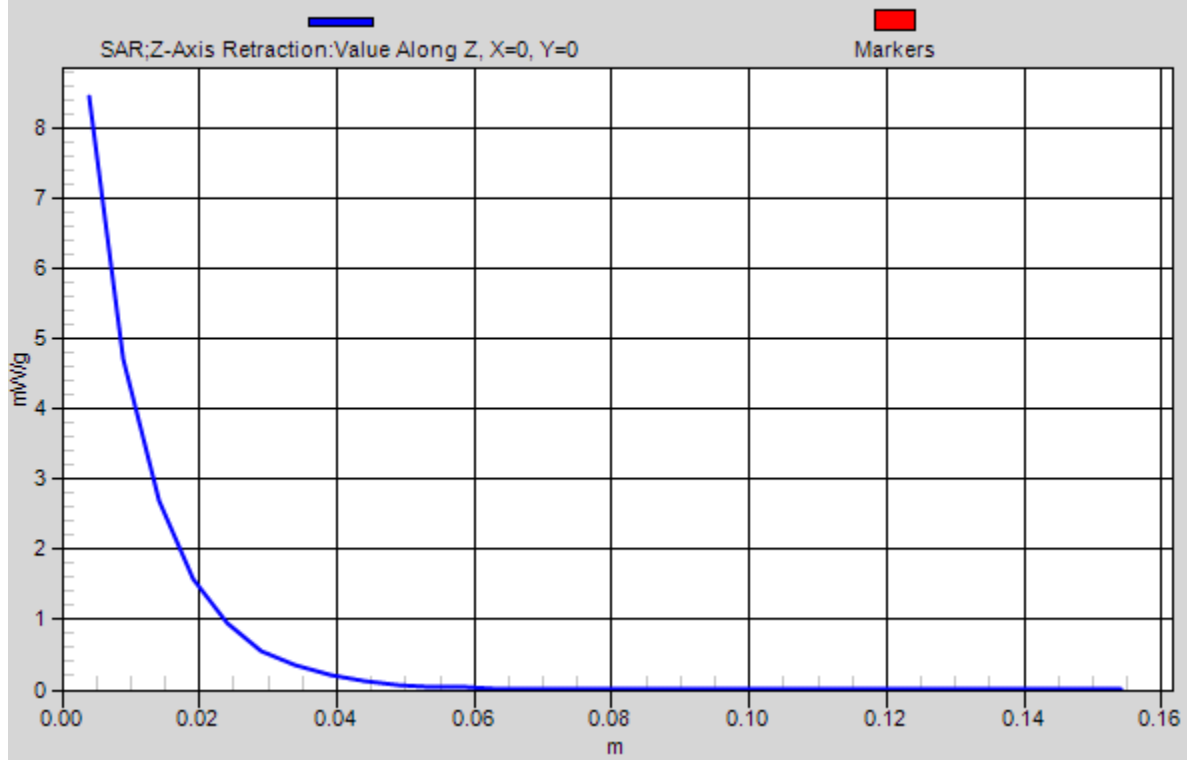
DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-

Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 8.44 mW/g



SAR(x,y,z,f0)



Test Laboratory: Motorola Mobility - 1800 MHz System Performance Check

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:259tr;

Procedure Notes: Input Power = 200 mW Refl.Pwr = -26.80 dB

Sim.Temp@meas = 18.7C Sim.Temp@SPC = 18.7C Room Temp @ SPC = 21.1C

Communication System: _CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 1800$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$

kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC

Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 6.39 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-

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

Reference Value = 79.414 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 13.731 mW/g

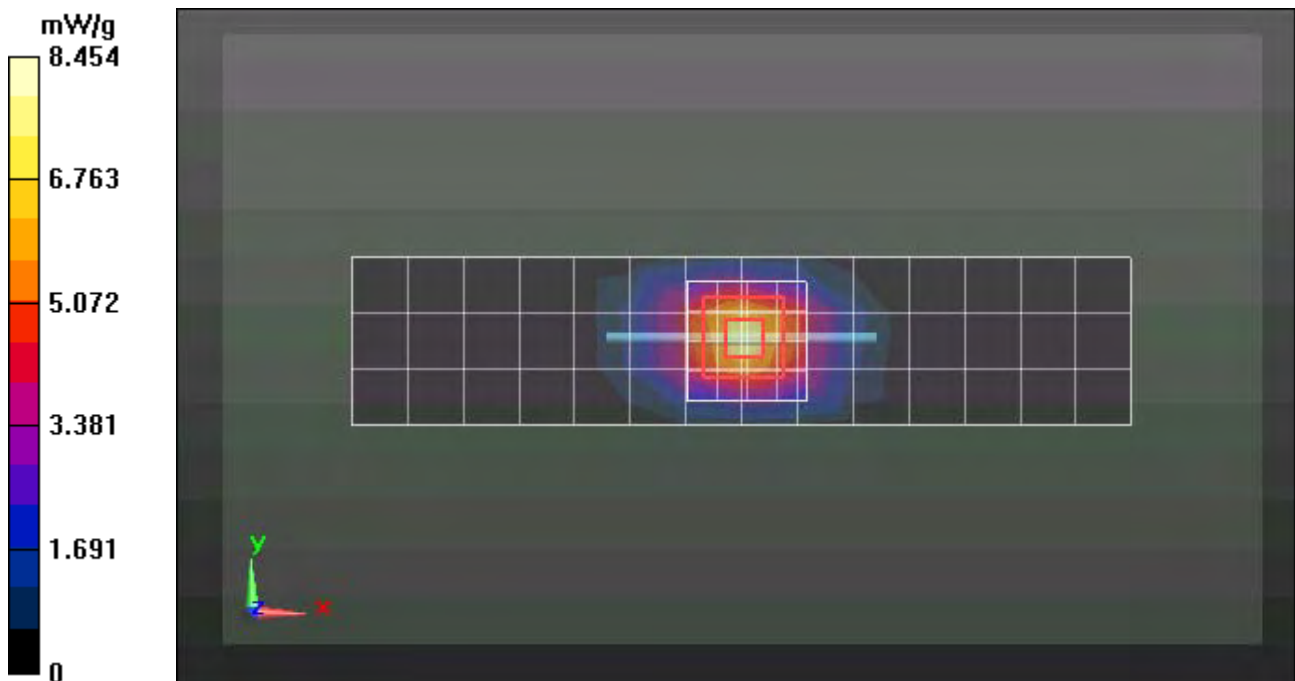
SAR(1 g) = 7.54 mW/g; SAR(10 g) = 3.97 mW/g

Maximum value of SAR (measured) = 8.47 mW/g

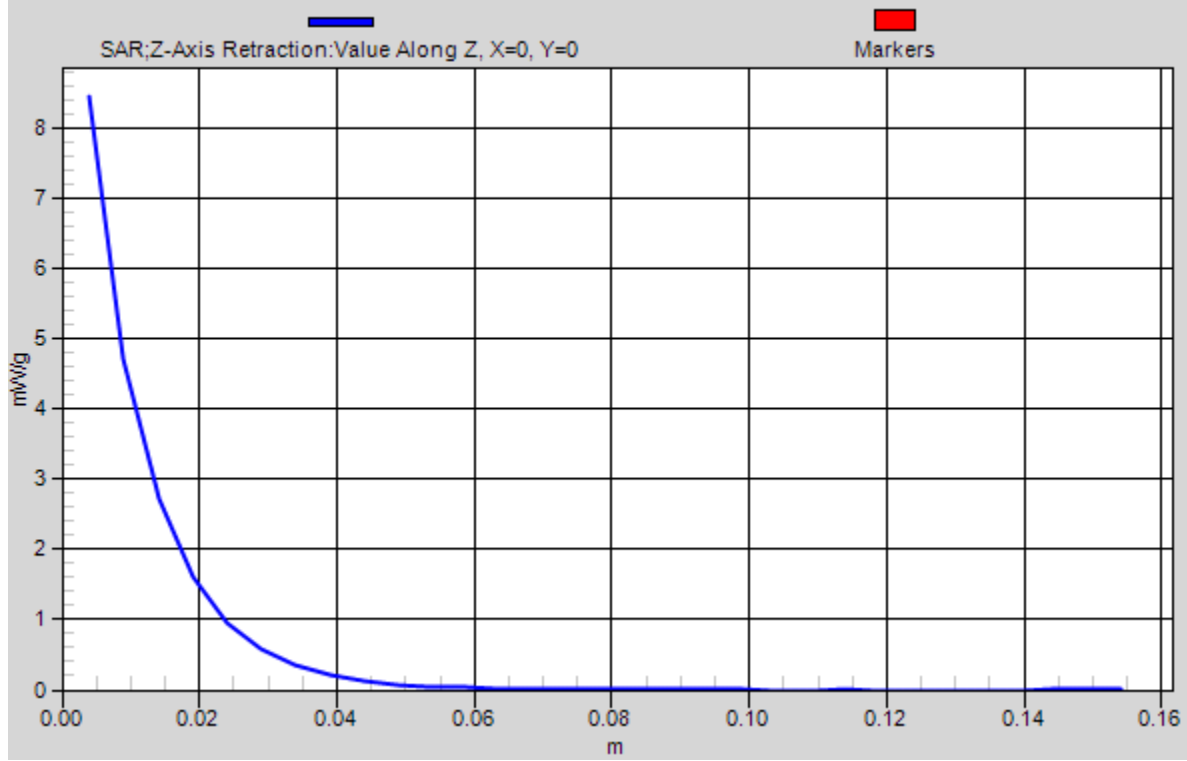
DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-

Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 8.45 mW/g



SAR(x,y,z,f0)



Test Laboratory: Motorola Mobility - 2450 MHz Head System Performance Check

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:863;

Procedure Notes: PM1 Power = 200 mW Refl.Pwr PM3 = -26.30 dB

Sim.Temp@meas = 20.0C Sim.Temp@SPC = 19.8C Room Temp @ SPC = 21.1C

Communication System: _CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.88$ mho/m; $\epsilon_r = 37.3$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.4, 4.4, 4.4); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1319;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, SAM - System Performance Check Template, Rev.2 (12-Sept-11)/Daily SPC Check/Dipole Area Scan (41x141x1): Measurement grid: dx=10mm, dy=15mm

Maximum value of SAR (interpolated) = 14.0 mW/g

DASY5, SAM - System Performance Check Template, Rev.2 (12-Sept-11)/Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 76.439 V/m; Power Drift = 0.04 dB

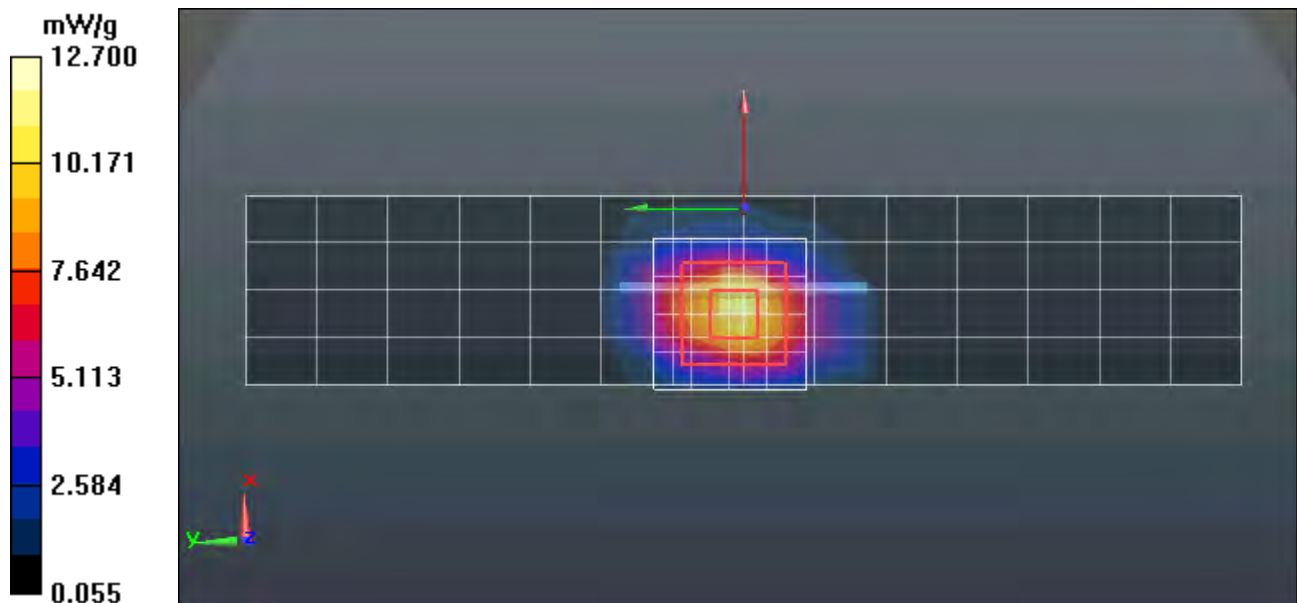
Peak SAR (extrapolated) = 24.538 mW/g

SAR(1 g) = 11.2 mW/g; SAR(10 g) = 5.09 mW/g

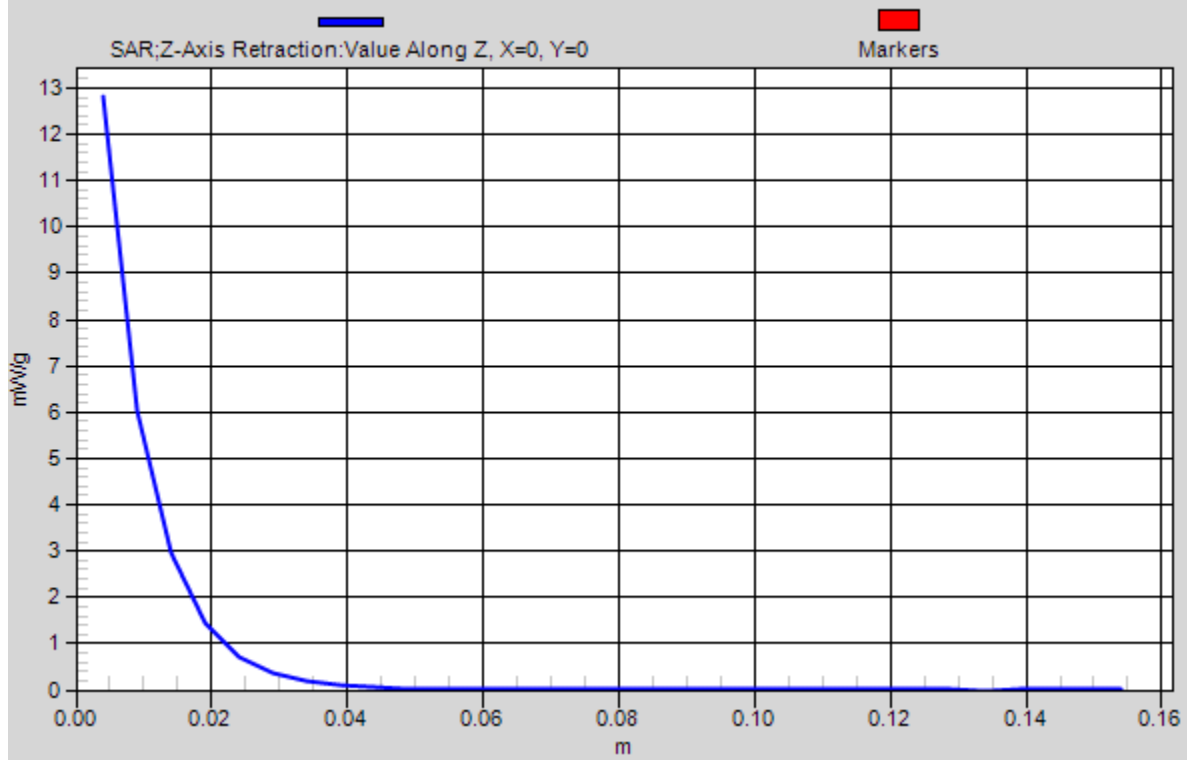
Maximum value of SAR (measured) = 12.7 mW/g

DASY5, SAM - System Performance Check Template, Rev.2 (12-Sept-11)/Daily SPC Check/Z-Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 12.8 mW/g



SAR(x,y,z,f0)



System Accuracy Verification Measurements for Body SAR Measurements

Test Laboratory: Motorola Mobility - 835MHz System Performance Check

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4D128;

Procedure Notes: Input Power =200 mW Refl.Pwr = -19.8 dB

Sim.Temp@meas =19.2 Sim.Temp@SPC = 19.2 Room Temp @ SPC = 20.8

Communication System: _CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 54.4$; $\rho = 1000$

kg/m^3

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(6.04, 6.04, 6.04); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC

Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.99 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-

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

Reference Value = 47.368 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.009 mW/g

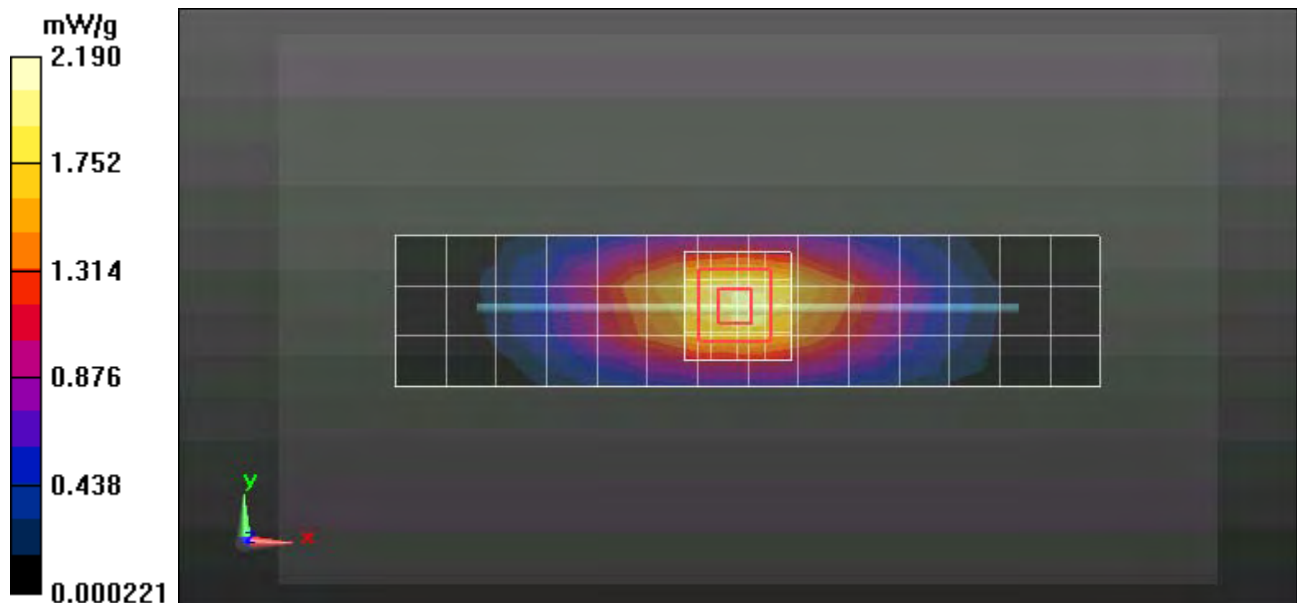
SAR(1 g) = 2.03 mW/g; SAR(10 g) = 1.33 mW/g

Maximum value of SAR (measured) = 2.20 mW/g

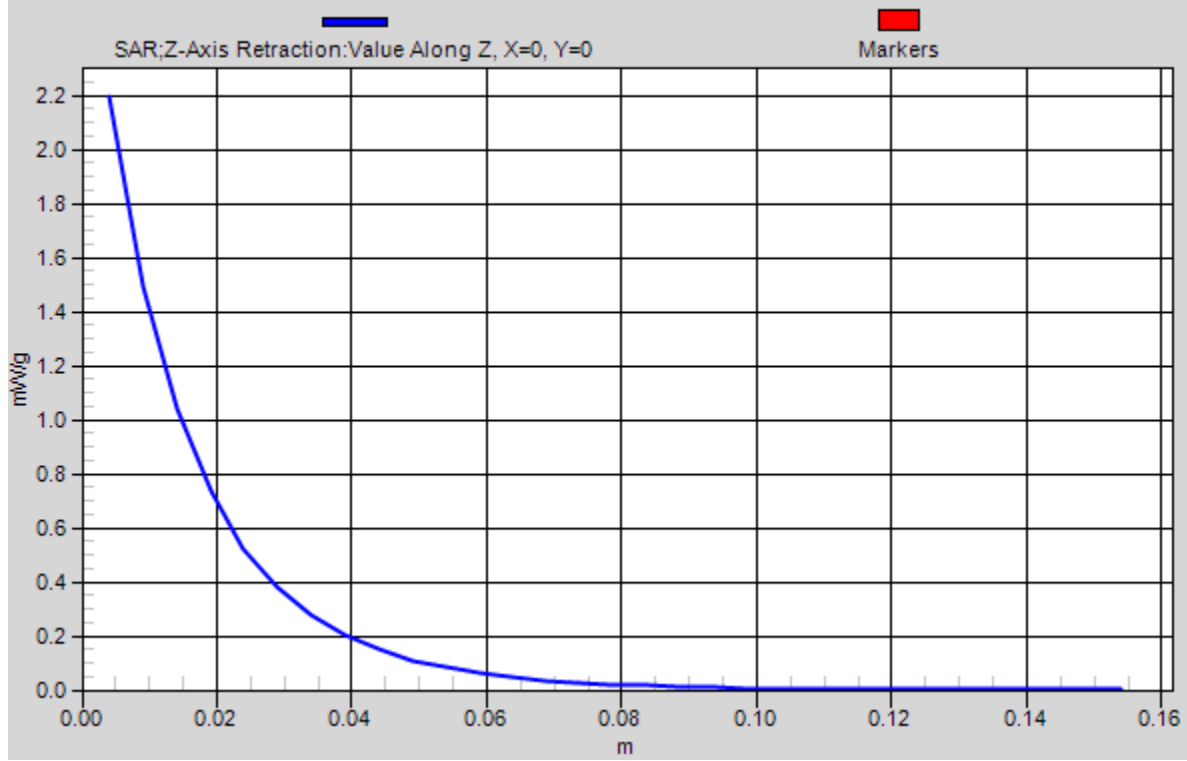
DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-

Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 2.19 mW/g



SAR(x,y,z,f0)



Test Laboratory: Motorola Mobility - 1800MHz System Performance Check

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:259tr;

Procedure Notes: Input Power =200 mW Refl.Pwr PM3 = -19.4 dB

Sim.Temp@meas =18.8 Sim.Temp@SPC = 18.8 Room Temp @ SPC = 20.8

Communication System: CW; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 1800$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$

kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.69, 4.69, 4.69); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC

Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 7.70 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-

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

Reference Value = 74.151 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 13.637 mW/g

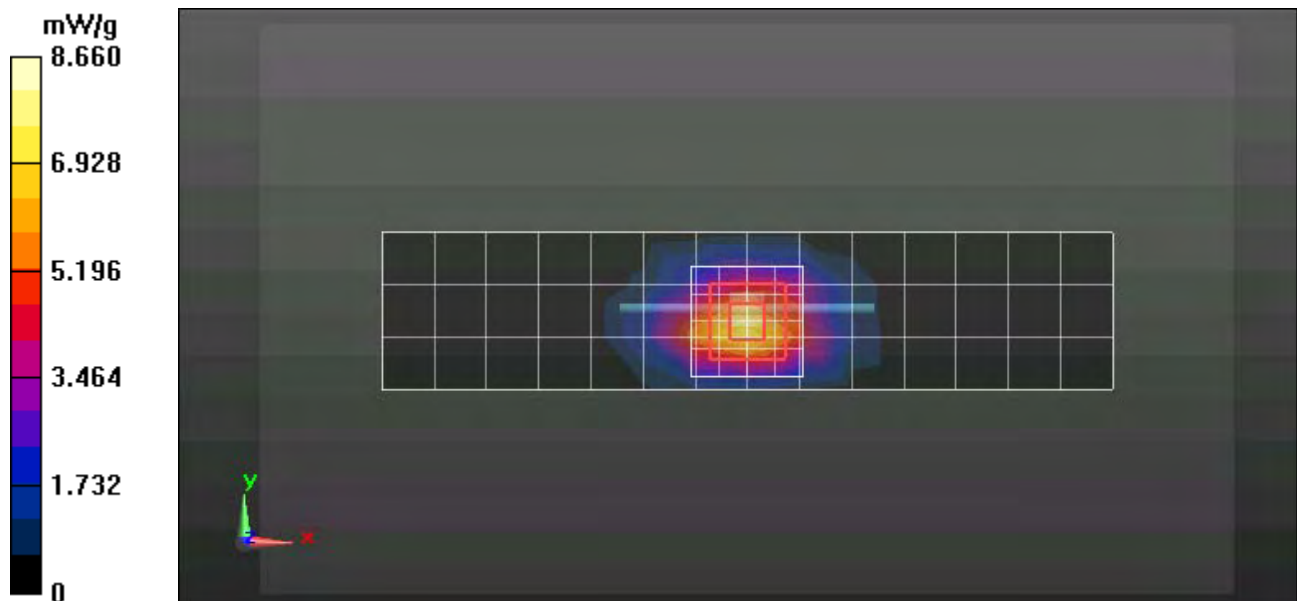
SAR(1 g) = 7.69 mW/g; SAR(10 g) = 4.1 mW/g

Maximum value of SAR (measured) = 8.67 mW/g

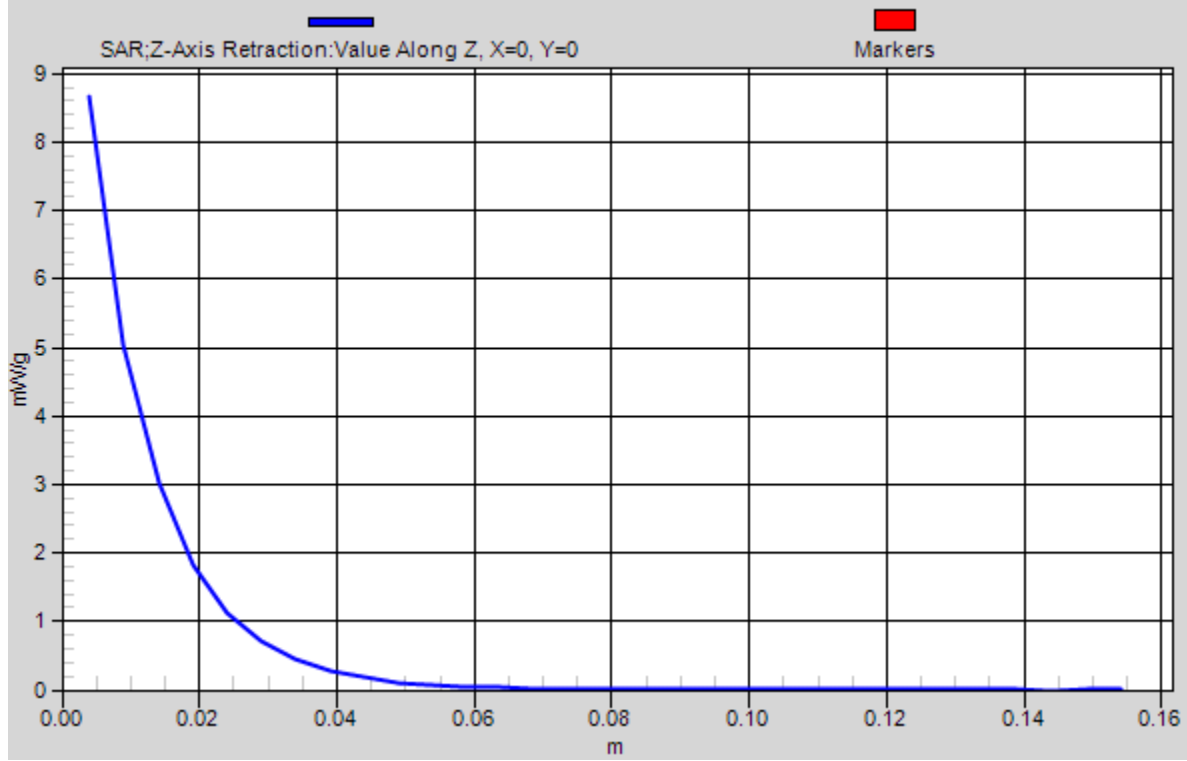
DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-

Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 8.66 mW/g



SAR(x,y,z,f0)



Test Laboratory: Motorola Mobility - 1800MHz System Performance Check

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:259tr;

Procedure Notes: Input Power = 200 mW Refl.Pwr = -23.35 dB

Sim.Temp@meas = 18.75°C Sim.Temp@SPC = 18.75°C Room Temp @ SPC = 21.55°C

Communication System: _CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 1800$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.69, 4.69, 4.69); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC

Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 6.55 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-

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

Reference Value = 77.449 V/m; Power Drift = -0.03 dB

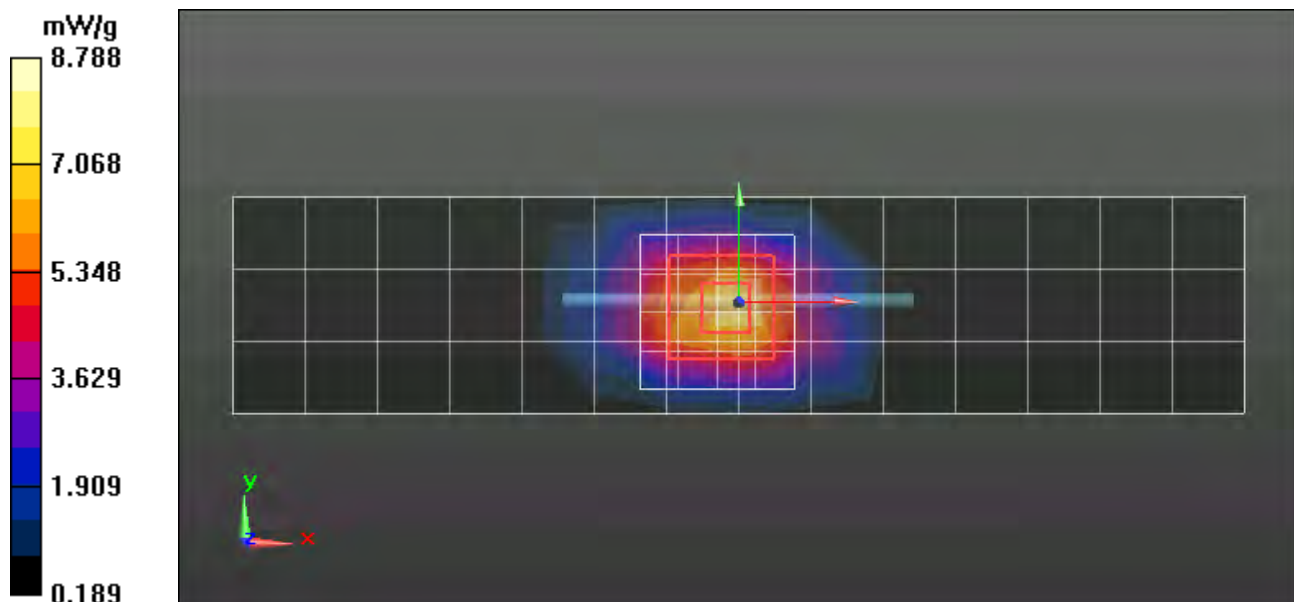
Peak SAR (extrapolated) = 13.939 mW/g

SAR(1 g) = 7.84 mW/g; SAR(10 g) = 4.17 mW/g

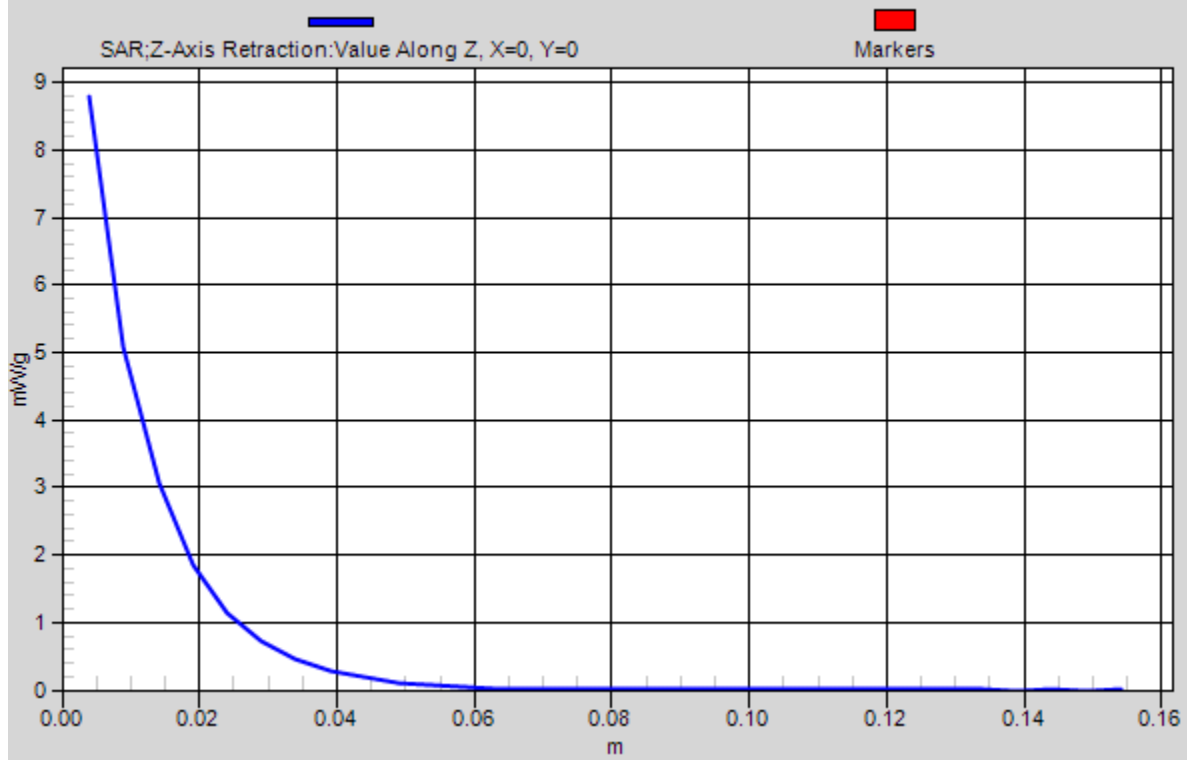
Maximum value of SAR (measured) = 8.79 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-

Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm



SAR(x,y,z,f0)



Test Laboratory: Motorola Mobility - 1800MHz System Performance Check

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:259tr;

Procedure Notes: InputPower =200 mW Refl.Pwr = -19.38 dB

Sim.Temp@meas = 19.3 Sim.Temp@SPC = 19.3 Room Temp @ SPC = 20.8

Communication System: _CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 1800$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 52.7$; $\rho = 1000$

kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.69, 4.69, 4.69); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC

Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 7.00 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-

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

Reference Value = 77.342 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 13.576 mW/g

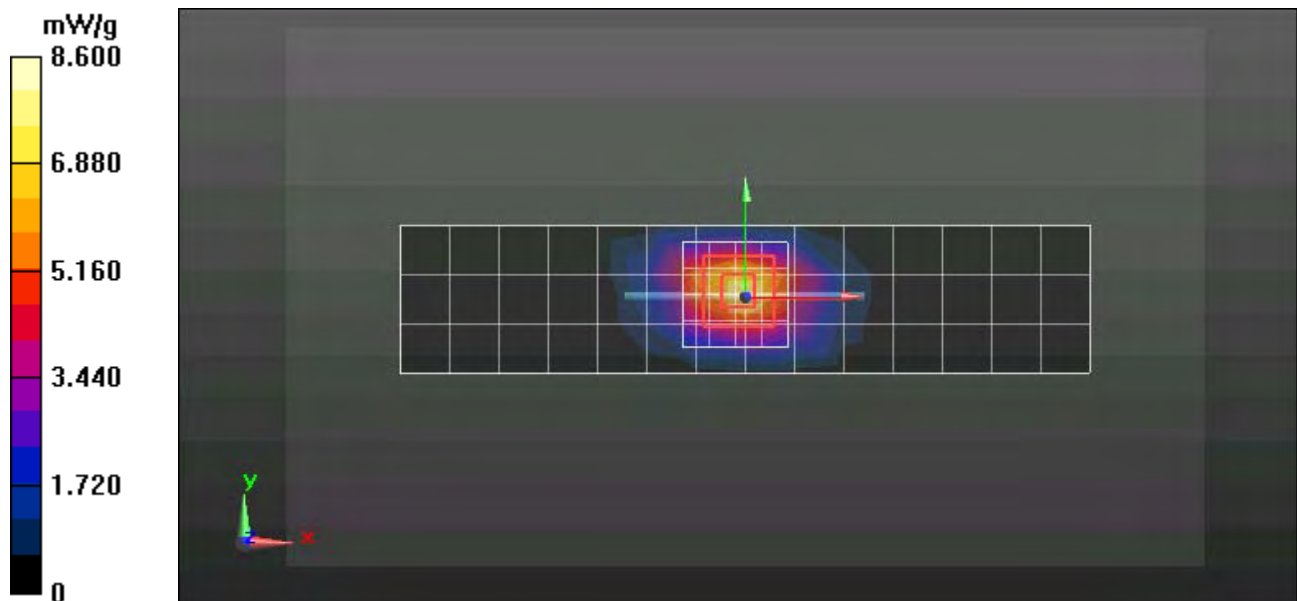
SAR(1 g) = 7.65 mW/g; SAR(10 g) = 4.08 mW/g

Maximum value of SAR (measured) = 8.58 mW/g

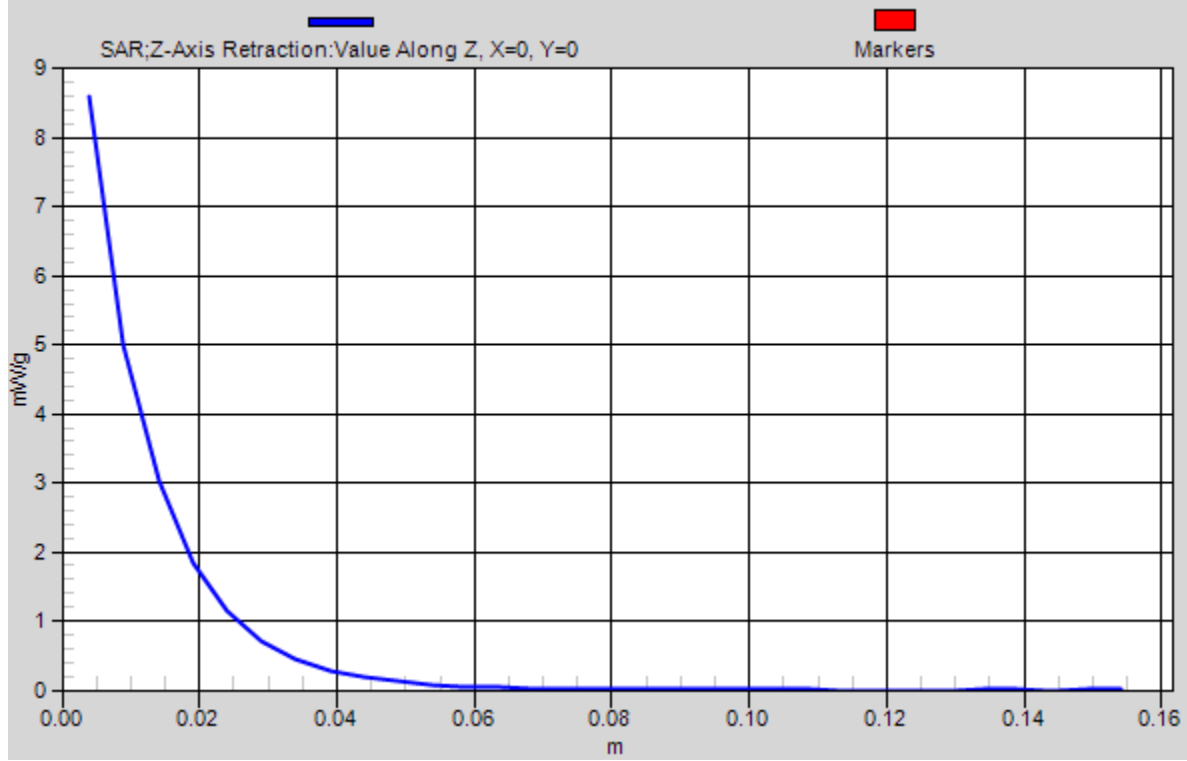
DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-

Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 8.60 mW/g



SAR(x,y,z,f0)



Test Laboratory: Motorola Mobility - 1800MHz System Performance Check

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:259tr;

Procedure Notes: Input Power =200 mW Refl.Pwr = -19.24 dB

Sim.Temp@meas = 19.0 Sim.Temp@SPC = 19.0 Room Temp @ SPC = 20.7

Communication System: _CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 1800$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 52.1$; $\rho = 1000$

kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.69, 4.69, 4.69); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC

Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 6.83 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-

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

Reference Value = 77.023 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 13.521 mW/g

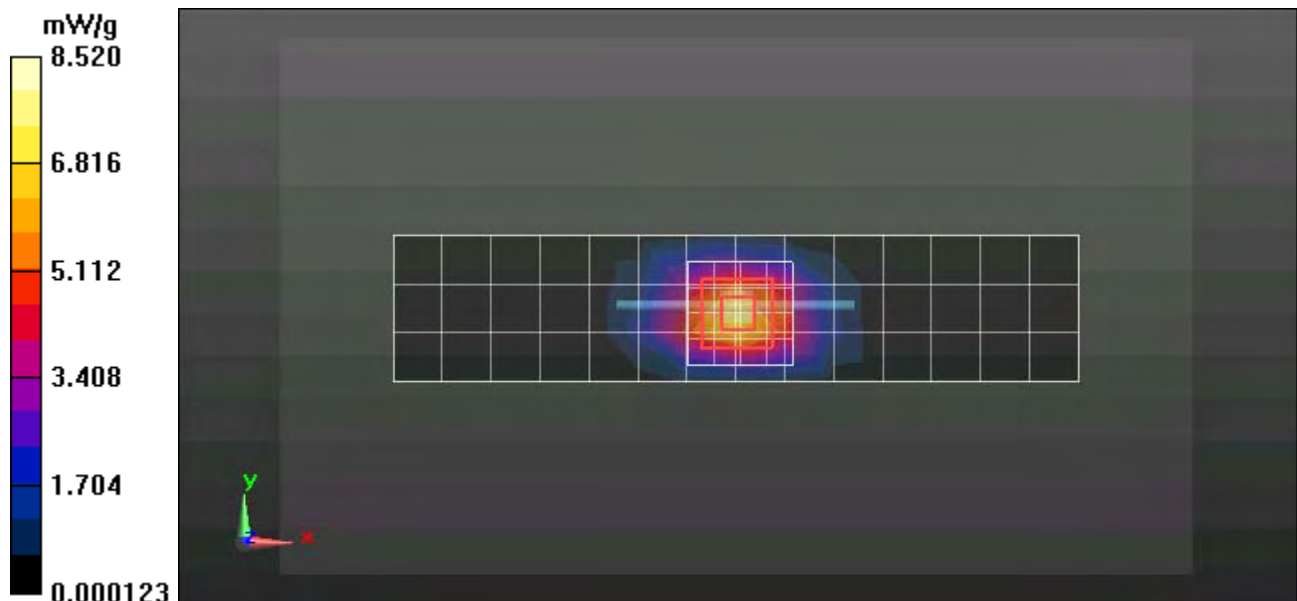
SAR(1 g) = 7.62 mW/g; SAR(10 g) = 4.05 mW/g

Maximum value of SAR (measured) = 8.57 mW/g

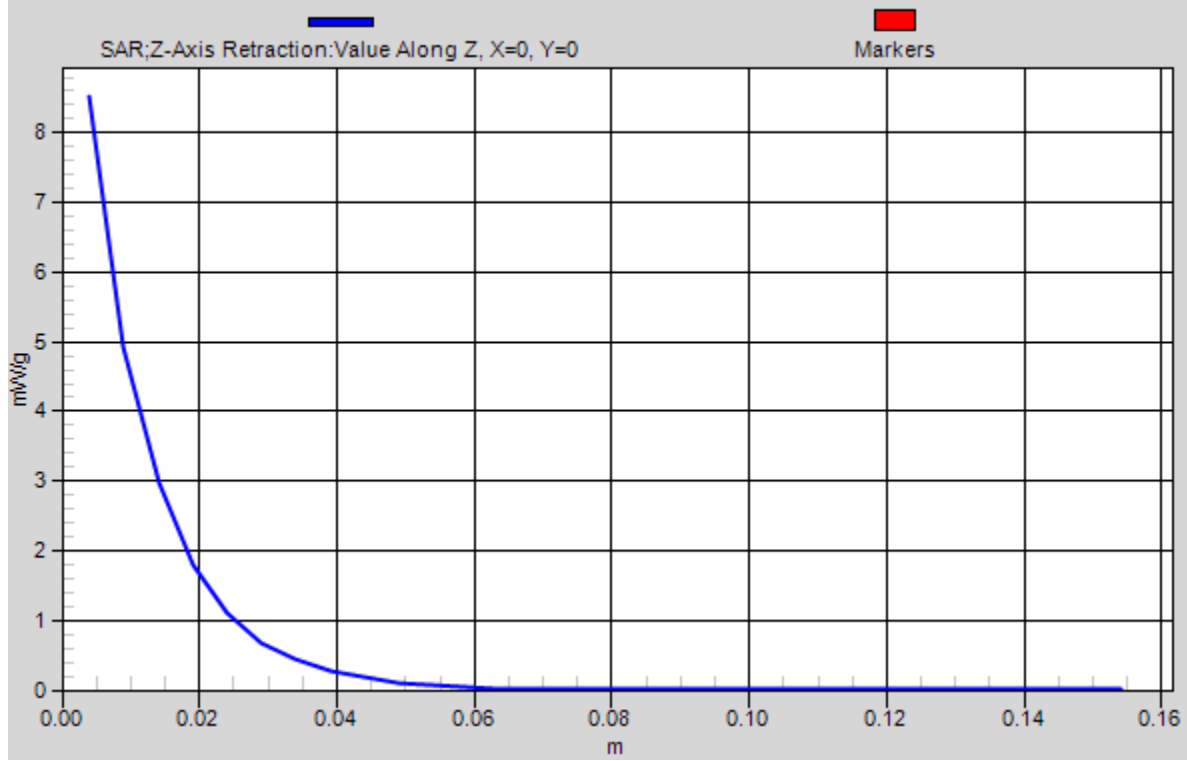
DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-

Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 8.52 mW/g



SAR(x,y,z,f0)



Test Laboratory: Motorola Mobility - 1800MHz System Performance Check

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:2D191;

Procedure Notes: Input Power = 200 mW Refl.Pwr = -21.45 dB

Sim.Temp@meas = 18.7C Sim.Temp@SPC = 18.7C Room Temp @ SPC = 20.6C

Communication System: _CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 1800$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.3$; $\rho = 1000$

kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3284; ConvF(5.28, 5.28, 5.28); Calibrated: 1/10/2012;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1310; Calibrated: 1/11/2012
- Phantom: R#4, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC

Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 6.77 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-

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

Reference Value = 74.062 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 12.378 mW/g

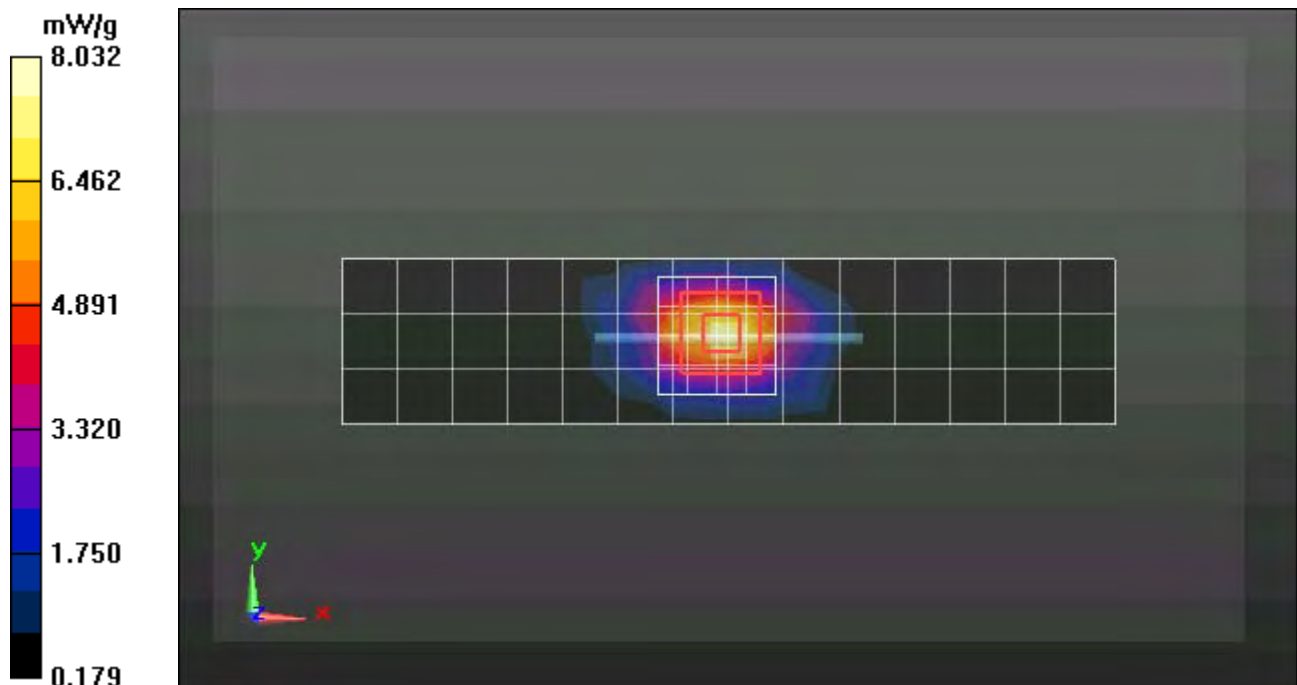
SAR(1 g) = 7.17 mW/g; SAR(10 g) = 3.83 mW/g

Maximum value of SAR (measured) = 8.03 mW/g

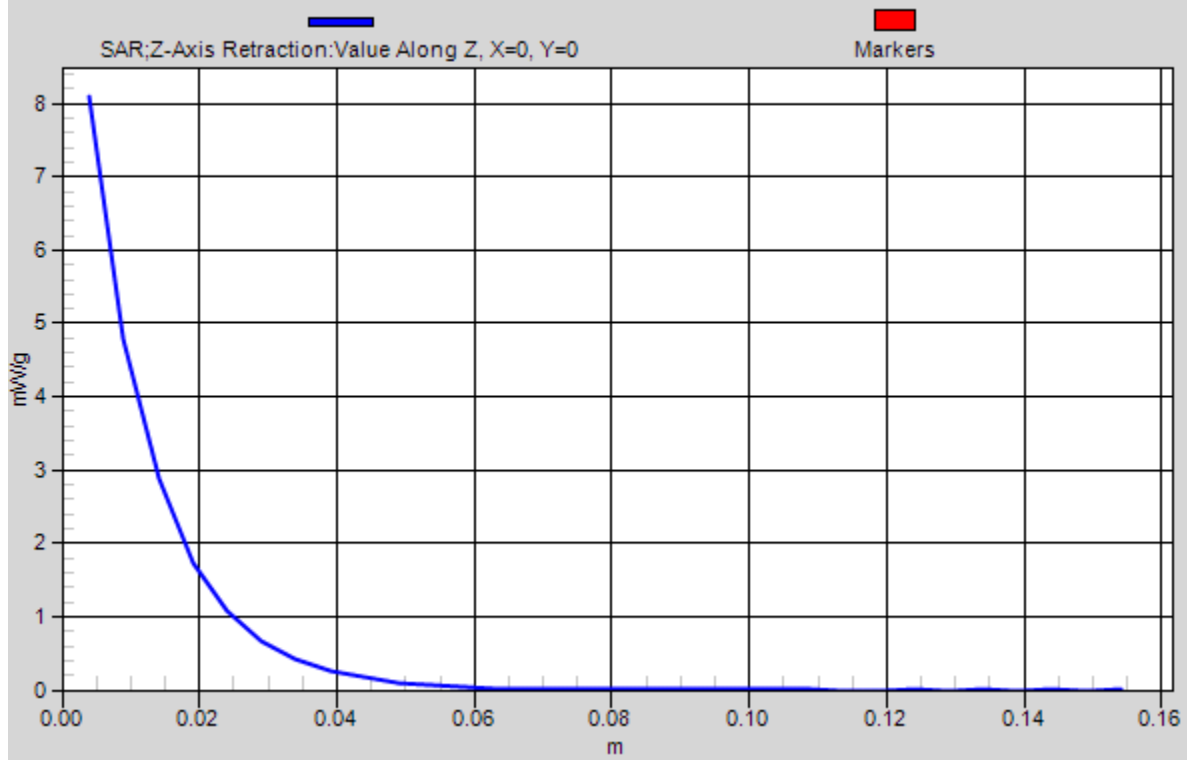
DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-

Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 8.09 mW/g



SAR(x,y,z,f0)



Test Laboratory: Motorola Mobility - 2450 MHz System Performance Check

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:863;

Procedure Notes: Input Power = 200 mW Refl.Pwr = -20.75 dB

Sim.Temp@meas = 18.9C Sim.Temp@SPC = 18.9C Room Temp @ SPC = 21.6C

Communication System: _CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 2450$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 50.8$; $\rho = 1000$

kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.21, 4.21, 4.21); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC

Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 8.17 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-

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

Reference Value = 79.608 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 24.706 mW/g

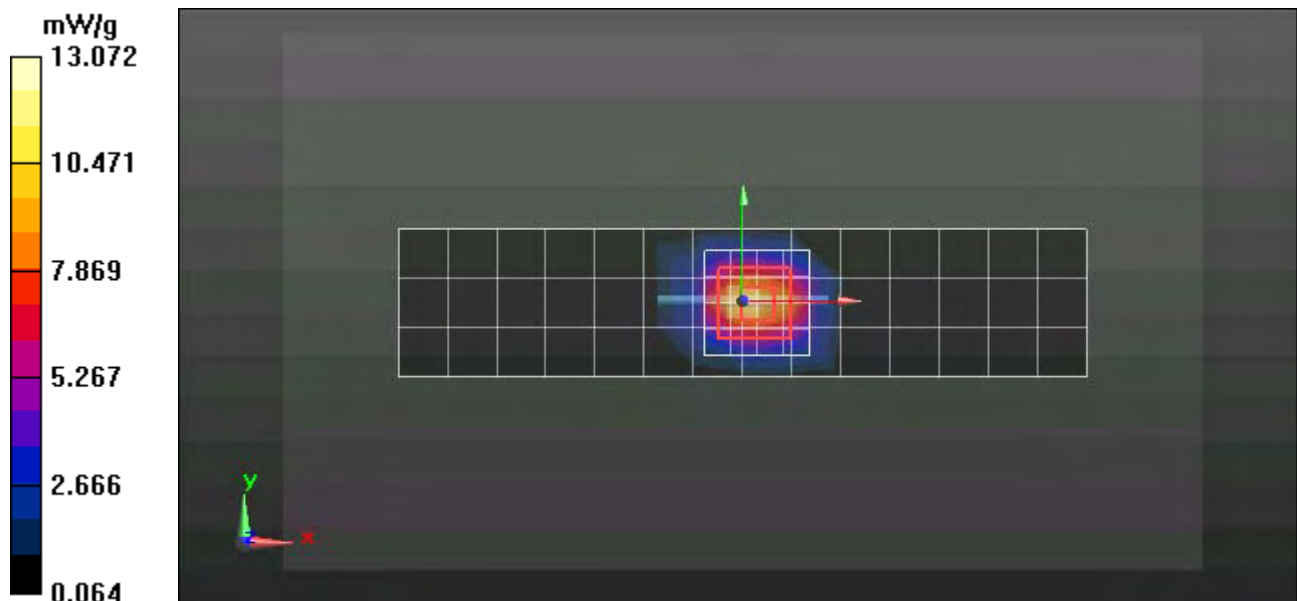
SAR(1 g) = 11.5 mW/g; SAR(10 g) = 5.19 mW/g

Maximum value of SAR (measured) = 13.1 mW/g

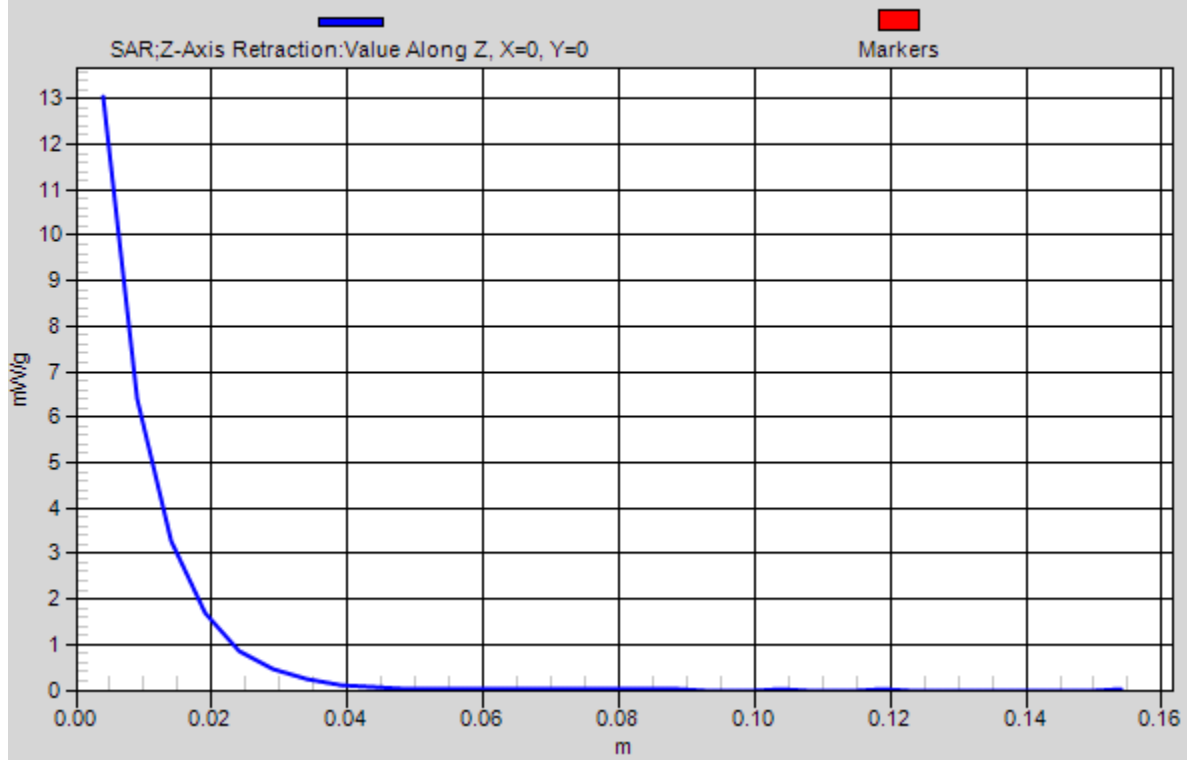
DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-

Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 13.0 mW/g



SAR(x,y,z,f0)



Appendix 2

SAR distribution plots for Head Adjacent Test Results

Test Laboratory: Motorola Mobility - WCDMA 1700 Cheek

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: ALL BITS UP Battery Model #: BF6X SNN5879A DEVICE POSITION: CHEEK
Communication System: _WCDMA; Frequency: 1732 MHz; Communication System Channel Number: 1413; Duty Cycle: 1:1

Medium: 1730 Glycol Head; Medium parameters used: $f = 1730$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1319;
- ; SEMCAD X Version 14.6.5 (6469)

Left Head Template/Area Scan - Normal (15mm) (61x161x1):

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

Maximum value of SAR (interpolated) = 0.609 mW/g

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

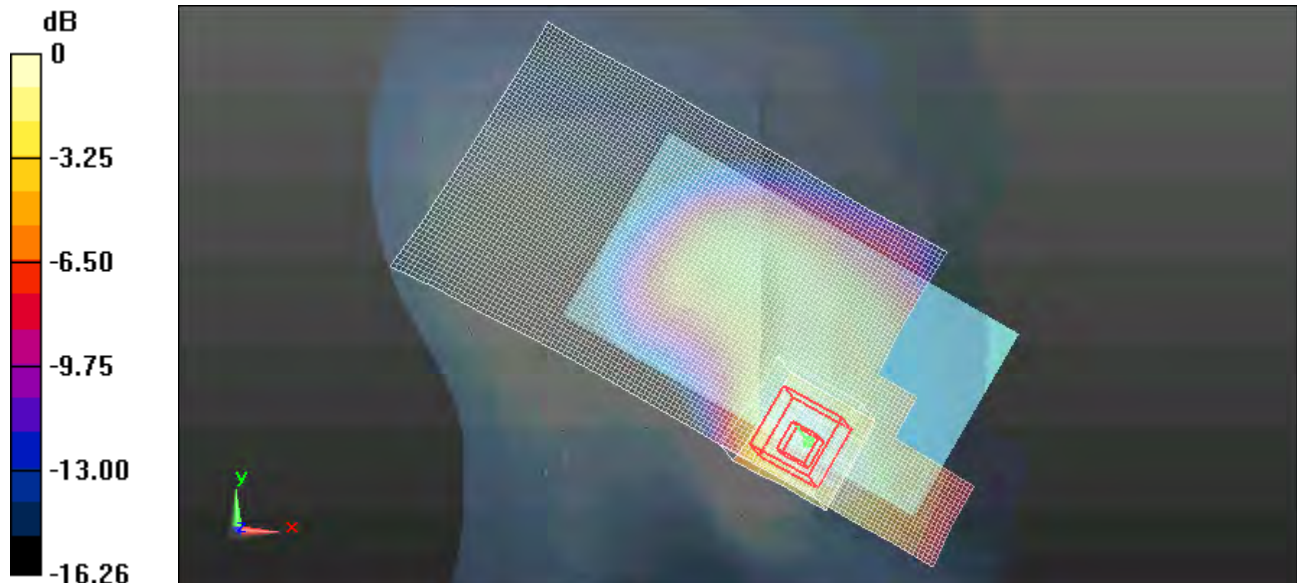
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.226 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.857 mW/g

SAR(1 g) = 0.548 mW/g; SAR(10 g) = 0.334 mW/g

Maximum value of SAR (measured) = 0.585 mW/g



0 dB = 0.585 mW/g = -4.66 dB mW/g

Test Laboratory: Motorola Mobility - GSM 1900 Cheek

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: 0 Battery Model #: SNN5879A DEVICE POSITION: CHEEK

Communication System: _GSM; Frequency: 1880 MHz; Communication System Channel Number: 661; Duty Cycle: 1:8.30042

Medium: Regular Glycol Head 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1319;
- ; SEMCAD X Version 14.6.5 (6469)

Left Head Template/Area Scan - Normal (15mm) (61x161x1):

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

Maximum value of SAR (interpolated) = 0.264 mW/g

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

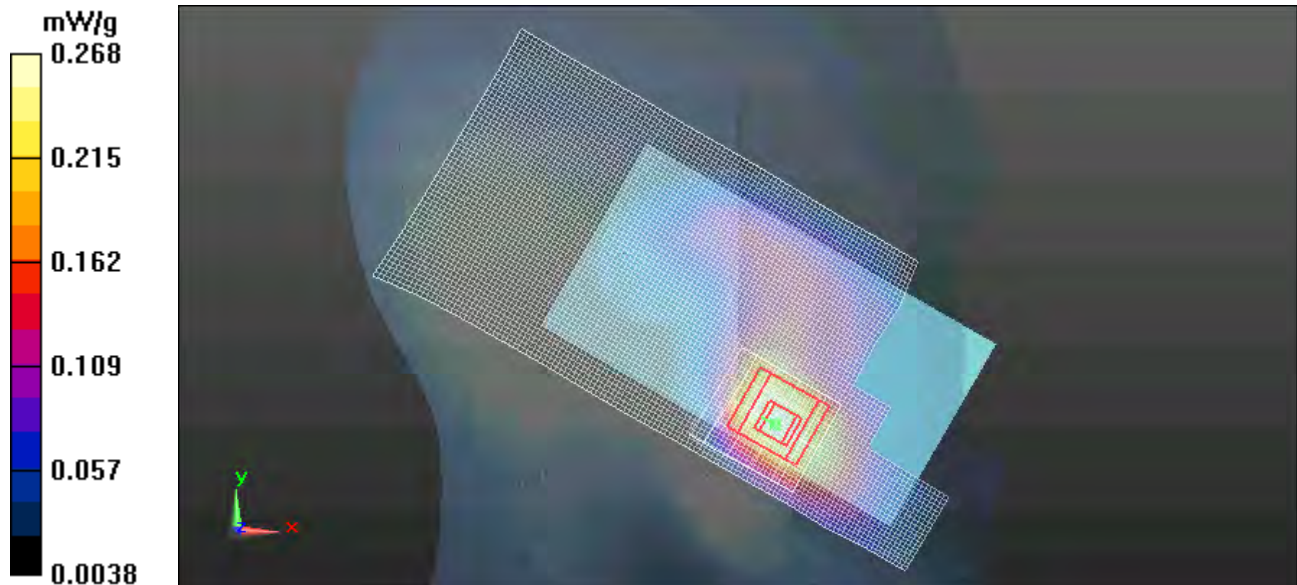
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.967 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 0.398 mW/g

SAR(1 g) = 0.245 mW/g; SAR(10 g) = 0.149 mW/g

Maximum value of SAR (measured) = 0.268 mW/g



Test Laboratory: Motorola Mobility - WCDMA 1900 Cheek

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: ALL UP; Battery Model #: SNN5879A DEVICE POSITION: CHEEK

Communication System: _WCDMA; Frequency: 1880 MHz; Communication System Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Head 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1319;
- ; SEMCAD X Version 14.6.5 (6469)

Left Head Template/Area Scan - Normal (15mm) (61x161x1):

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

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

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

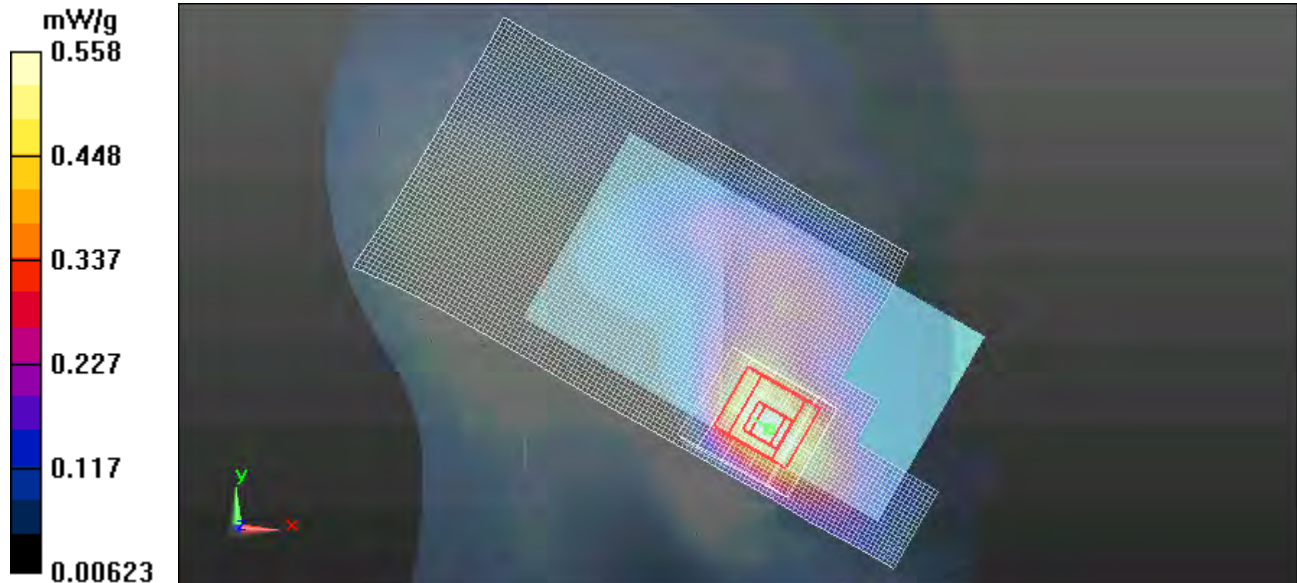
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.589 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.820 mW/g

SAR(1 g) = 0.509 mW/g; SAR(10 g) = 0.307 mW/g

Maximum value of SAR (measured) = 0.558 mW/g



Test Laboratory: Motorola Mobility - 2450 MHz Cheek

Serial: 364PNG06MN; FCC ID: IHDT56NQ2

Procedure Notes: Battery Model #: BF6X SNN5879A DEVICE POSITION: CHEEK; Wi-Fi 802.11b Data Rate = 1M / Power Level = 23 / Duty Cycle = 97

Communication System: _Wi-Fi 2450MHz; Frequency: 2412 MHz; Communication System Channel Number: 1; Duty Cycle: 1:1

Medium: 2450 Diacetin Head; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.87$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.4, 4.4, 4.4); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1319;
- ; SEMCAD X Version 14.6.5 (6469)

Left Head Template/Area Scan - Normal (15mm) (61x161x1):

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

Maximum value of SAR (interpolated) = 0.412 mW/g

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

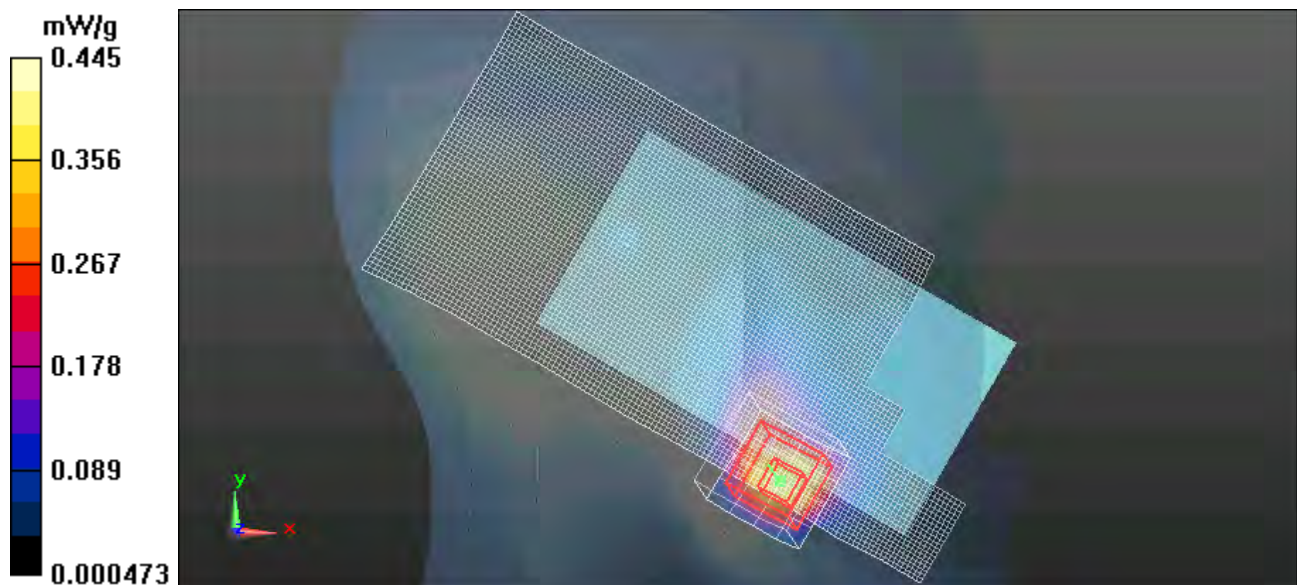
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.290 V/m; Power Drift = -0.30 dB

Peak SAR (extrapolated) = 0.799 mW/g

SAR(1 g) = 0.387 mW/g; SAR(10 g) = 0.186 mW/g

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



Test Laboratory: Motorola Mobility - iDEN 800 Cheek

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Battery Model #: SNN5879A DEVICE POSITION: CHEEK

Communication System: _iDEN 1:3 or 2:6; Frequency: 815.51 MHz; Communication System Channel Number: 2;

Duty Cycle: 1:2.99985

Medium: iDEN Sugar Head; Medium parameters used: $f = 815 \text{ MHz}$; $\sigma = 0.9 \text{ mho/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(6.08, 6.08, 6.08); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Sugar SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1156;
- ; SEMCAD X Version 14.6.5 (6469)

Right Head Template/Area Scan - Normal (15mm) (61x161x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.416 mW/g

Right Head Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (6x7x7)/Cube 0:

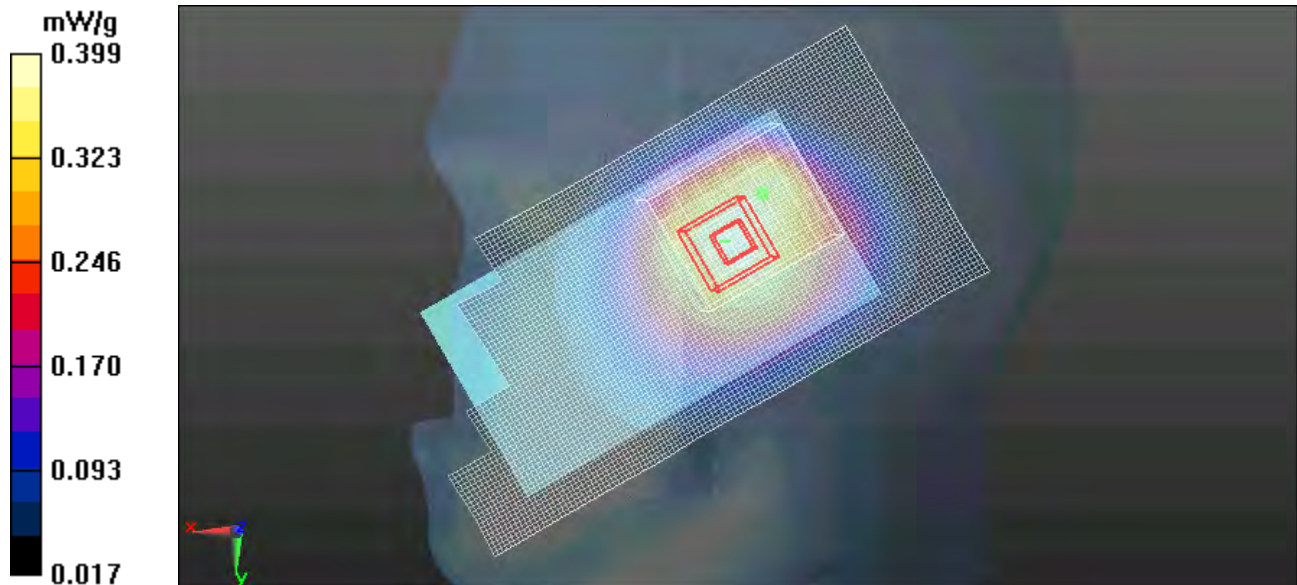
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.387 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.538 mW/g

SAR(1 g) = 0.374 mW/g; SAR(10 g) = 0.279 mW/g

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



Test Laboratory: Motorola Mobility - WCDMA 1700 Tilt

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: ALL BITS UP; Battery Model #: BF6X SNN5879A DEVICE POSITION: TILT

Communication System: _WCDMA; Frequency: 1732 MHz; Communication System Channel Number: 1413; Duty Cycle: 1:1

Medium: 1730 Glycol Head; Medium parameters used: $f = 1730$ MHz; $\sigma = 1.4$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1319;
- ; SEMCAD X Version 14.6.5 (6469)

Left Head Template/Area Scan - Normal (15mm) (61x161x1):

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

Maximum value of SAR (interpolated) = 0.340 mW/g

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

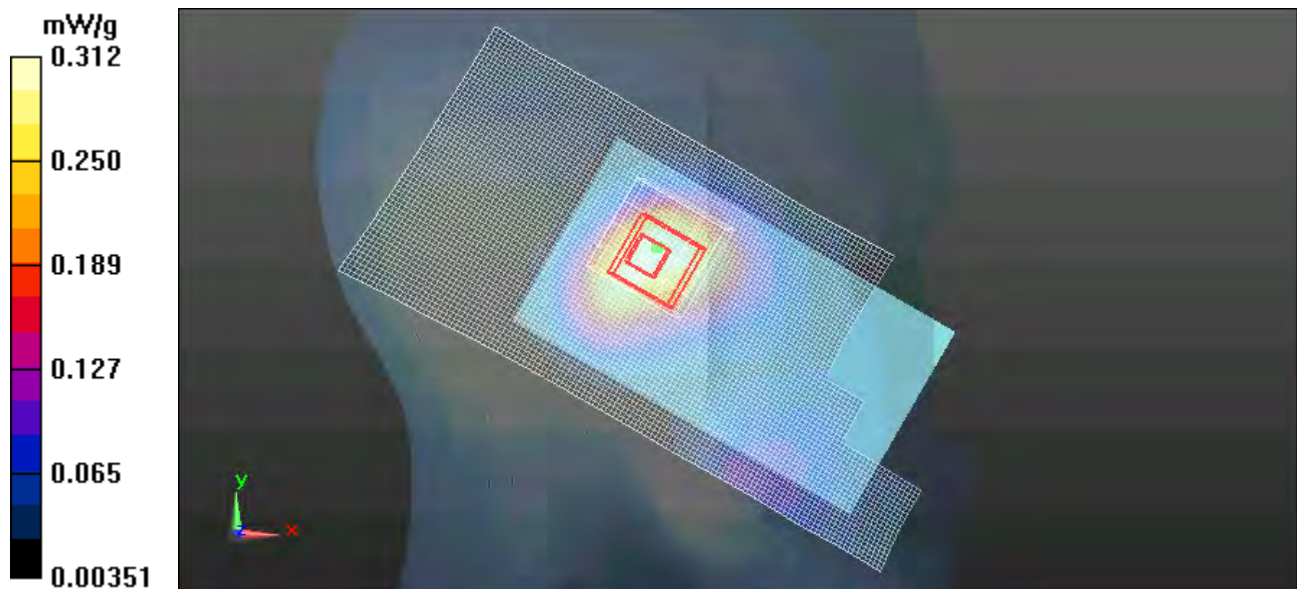
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.020 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.436 mW/g

SAR(1 g) = 0.292 mW/g; SAR(10 g) = 0.188 mW/g

Maximum value of SAR (measured) = 0.312 mW/g



Test Laboratory: Motorola Mobility - GSM 1900 15 Degree Tilt

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: 0 Battery Model #: SNN5879A DEVICE POSITION: Tilt

Communication System: _GSM; Frequency: 1880 MHz; Communication System Channel Number: 661; Duty Cycle: 1:8.30042

Medium: Regular Glycol Head 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1319;
- ; SEMCAD X Version 14.6.5 (6469)

Left Head Template/Area Scan - Normal (15mm) (61x161x1):

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

Maximum value of SAR (interpolated) = 0.115 mW/g

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

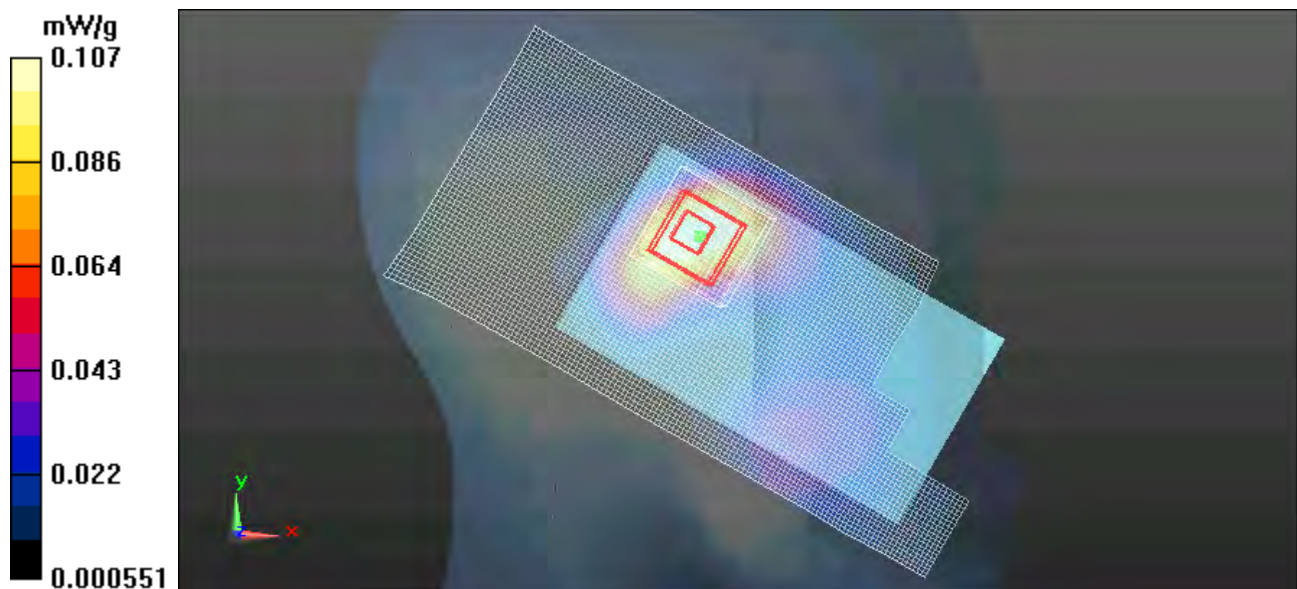
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.911 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.157 mW/g

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.063 mW/g

Maximum value of SAR (measured) = 0.107 mW/g



Test Laboratory: Motorola Mobility - 2450 MHz Tilt 15 Degree Tilt

Type: Phone; Serial: 364PNG06MN; FCC ID: IHDT56NQ2

Procedure Notes: Battery Model #: BF6X SNN5879A DEVICE POSITION: Tilt; Wi-Fi 802.11b Data Rate = 1M / Power Level = 23 / Duty Cycle = 97

Communication System: _Wi-Fi 2450MHz; Frequency: 2412 MHz; Communication System Channel Number: 1; Duty Cycle: 1:1

Medium: 2450 Diacetin Head; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.87$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.4, 4.4, 4.4); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1319;
- ; SEMCAD X Version 14.6.5 (6469)

Left Head Template/Area Scan - Normal (15mm) (61x161x1):

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

Maximum value of SAR (interpolated) = 0.0757 mW/g

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

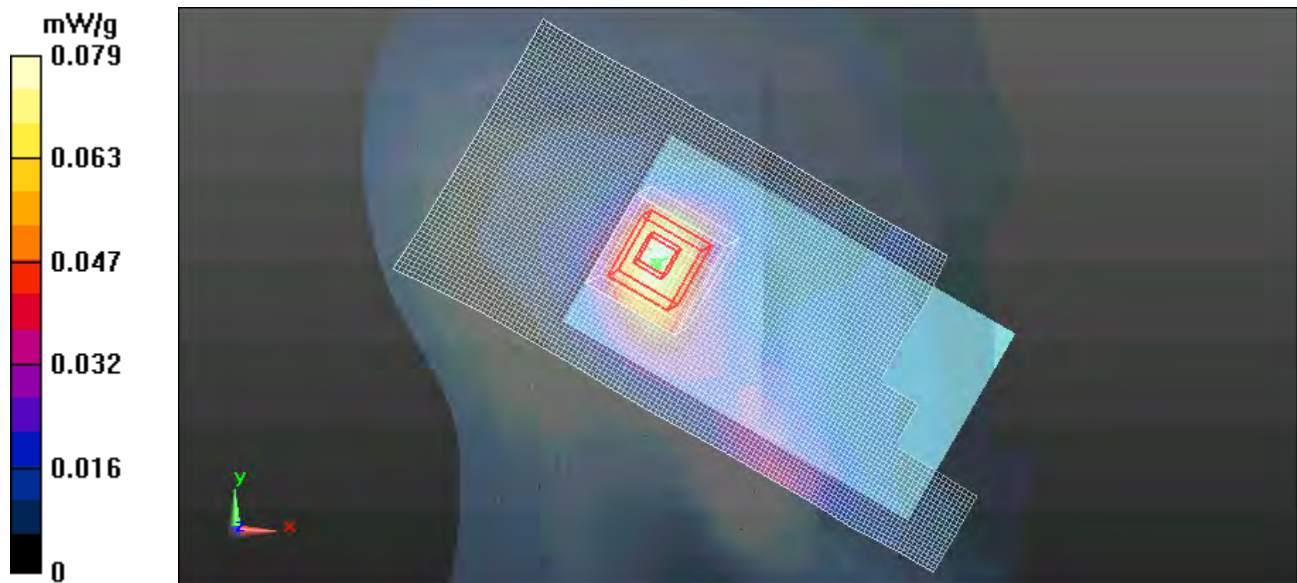
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.105 V/m; Power Drift = 0.25 dB

Peak SAR (extrapolated) = 0.138 mW/g

SAR(1 g) = 0.073 mW/g; SAR(10 g) = 0.038 mW/g

Maximum value of SAR (measured) = 0.0790 mW/g



Test Laboratory: Motorola Mobility - iDEN 800 15 Degree Tilt

Serial: 364PNG06MN; FCCID: IHDT56NQ2

Procedure Notes: Battery Model #: SNN5879A DEVICE POSITION: Tilt

Communication System: _iDEN 1:3 or 2:6; Frequency: 815.51 MHz; Communication System Channel Number: 2;
Duty Cycle: 1:2.99985

Medium: iDEN Sugar Head; Medium parameters used: $f = 815 \text{ MHz}$; $\sigma = 0.9 \text{ mho/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(6.08, 6.08, 6.08); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Sugar SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1156;
- ; SEMCAD X Version 14.6.5 (6469)

Right Head Template/Area Scan - Normal (15mm) (61x161x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 0.309 mW/g

Right Head Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (6x7x7)/Cube 0:

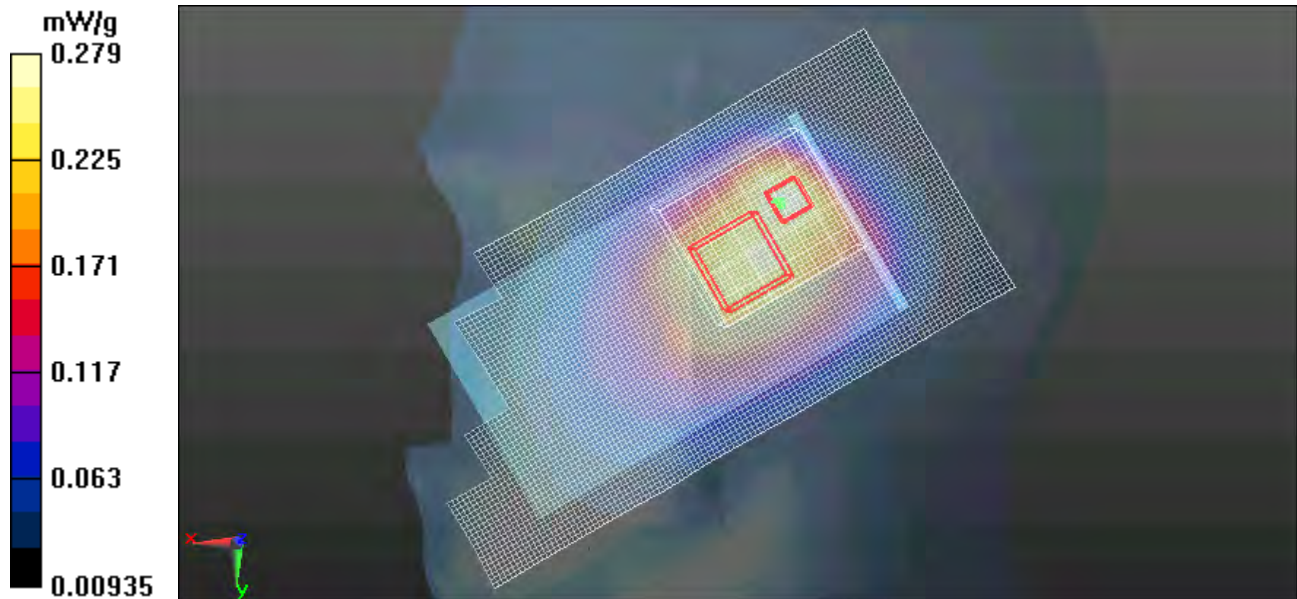
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.716 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.484 mW/g

SAR(1 g) = 0.259 mW/g; SAR(10 g) = 0.179 mW/g

Maximum value of SAR (measured) = 0.279 mW/g



Test Laboratory: Motorola Mobility - WCDMA 1900 15 Degree Tilt

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: ALL UP Battery Model #: SNN5879A DEVICE POSITION: Tilt

Communication System: _WCDMA; Frequency: 1880 MHz; Communication System Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Head 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1319;
- ; SEMCAD X Version 14.6.5 (6469)

Right Head Template/Area Scan - Normal (15mm) (61x161x1):

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

Maximum value of SAR (interpolated) = 0.271 mW/g

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

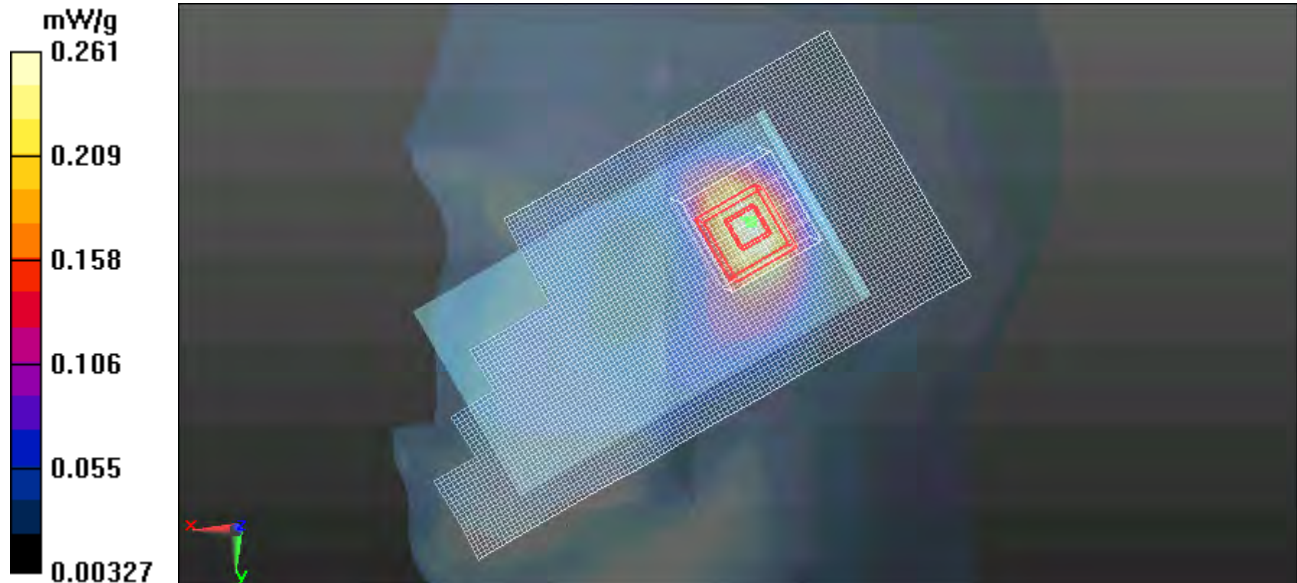
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.094 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.391 mW/g

SAR(1 g) = 0.238 mW/g; SAR(10 g) = 0.137 mW/g

Maximum value of SAR (measured) = 0.261 mW/g



Appendix 3

SAR distribution plots for Dispatch/Push-To-Talk Test Results

Test Laboratory: Motorola Mobility - iDEN 800 Push-To-Talk

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Battery Model #: SNN5879A Test Configuration: PUSH TO TALK, FRONT OF PHONE 25MM FROM FLAT PHANTOM

Communication System: _iDEN 1:6; Frequency: 815.51 MHz; Communication System Channel Number: 2; Duty Cycle: 1:6.00067

Medium: iDEN Sugar Head; Medium parameters used: $f = 815 \text{ MHz}$; $\sigma = 0.9 \text{ mho/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(6.08, 6.08, 6.08); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Sugar SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1156;
- ; SEMCAD X Version 14.6.5 (6469)

SAM Phone Against Flat Section/Area Scan - Normal Body (15mm) (121x61x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

SAM Phone Against Flat Section/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (6x6x7)/Cube 0:

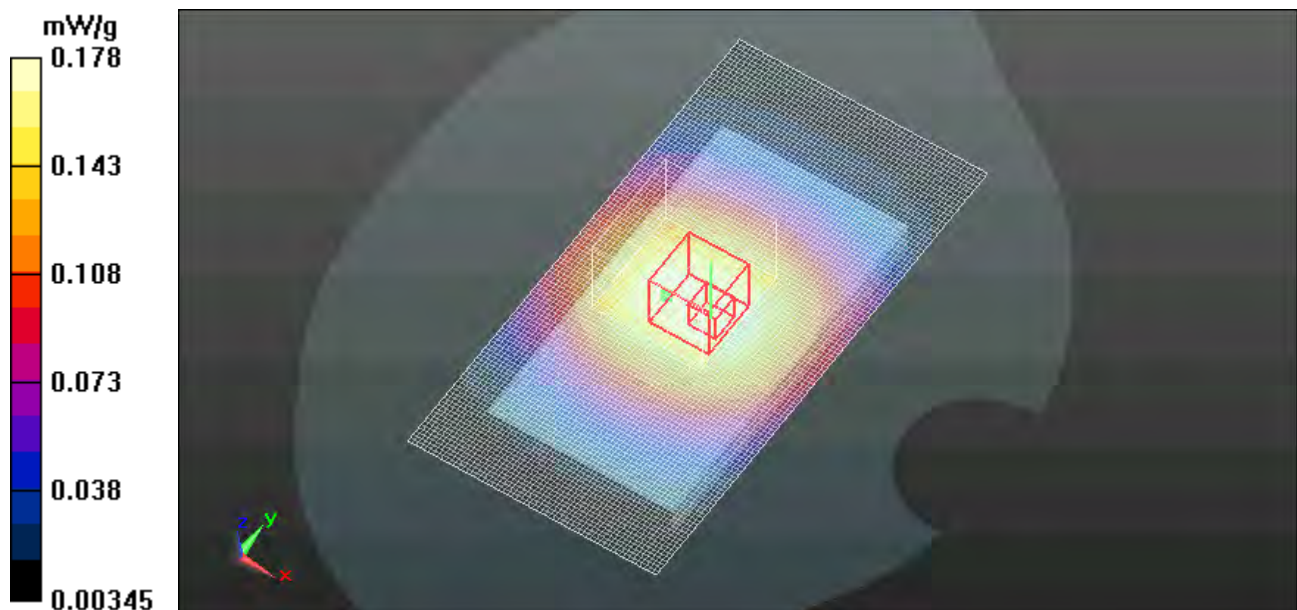
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.574 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.227 mW/g

SAR(1 g) = 0.167 mW/g; SAR(10 g) = 0.125 mW/g

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



Test Laboratory: Motorola Mobility - WCDMA 1700 Push-To-Talk Position

Serial: 364PNG06MN ; DUT Notes: FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: ALL UP Battery Model #:BF6X SNN5879A Test Configuration: FRONT OF PHONE
25MM FROM FLAT PHANTOM WITH HEAD SIMULANT

Communication System: _WCDMA; Frequency: 1732 MHz; Communication System Channel Number: 1413; Duty Cycle: 1:1

Medium: 1730 Glycol Head; Medium parameters used: $f = 1730$ MHz; $\sigma = 1.41$ mho/m; $\epsilon_r = 39.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

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

Maximum value of SAR (interpolated) = 0.294 mW/g

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

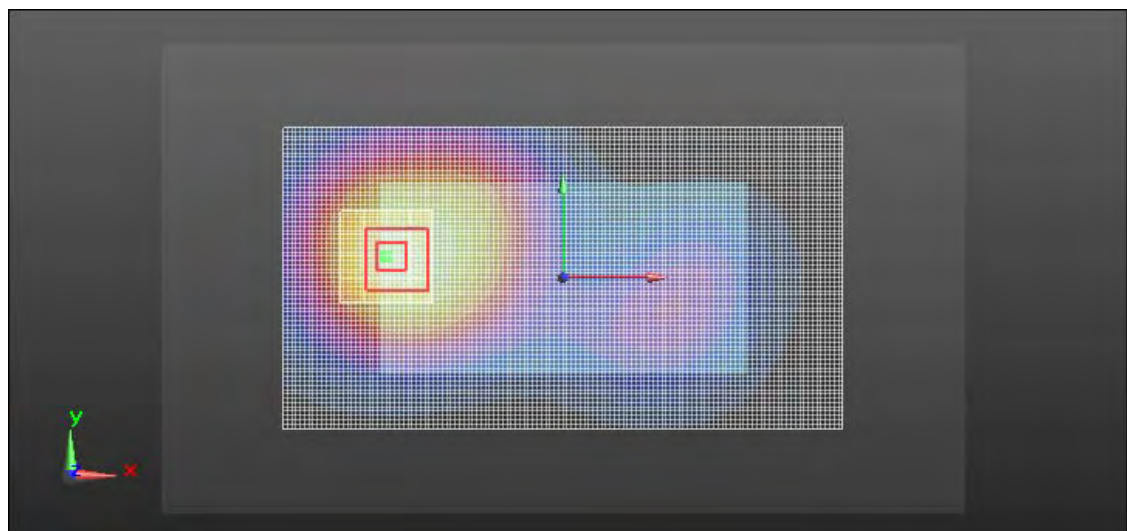
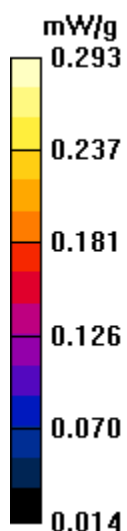
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.884 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 0.420 mW/g

SAR(1 g) = 0.273 mW/g; SAR(10 g) = 0.177 mW/g

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



Test Laboratory: Motorola Mobility - GSM 1900 Push-To-Talk Position

DUT: Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: 0 Battery Model #: BF6X SNN5879A Test Configuration: GPRS Class 12 (4 Uplots)
FRONT OF PHONE 25MM FROM FLAT PHANTOM WITH HEAD SIMULANT

Communication System: _GPRS Class 12; Frequency: 1880 MHz; Communication System Channel Number: 661;
Duty Cycle: 1:2.07491

Medium: Regular Glycol Head 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.1$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

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

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

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

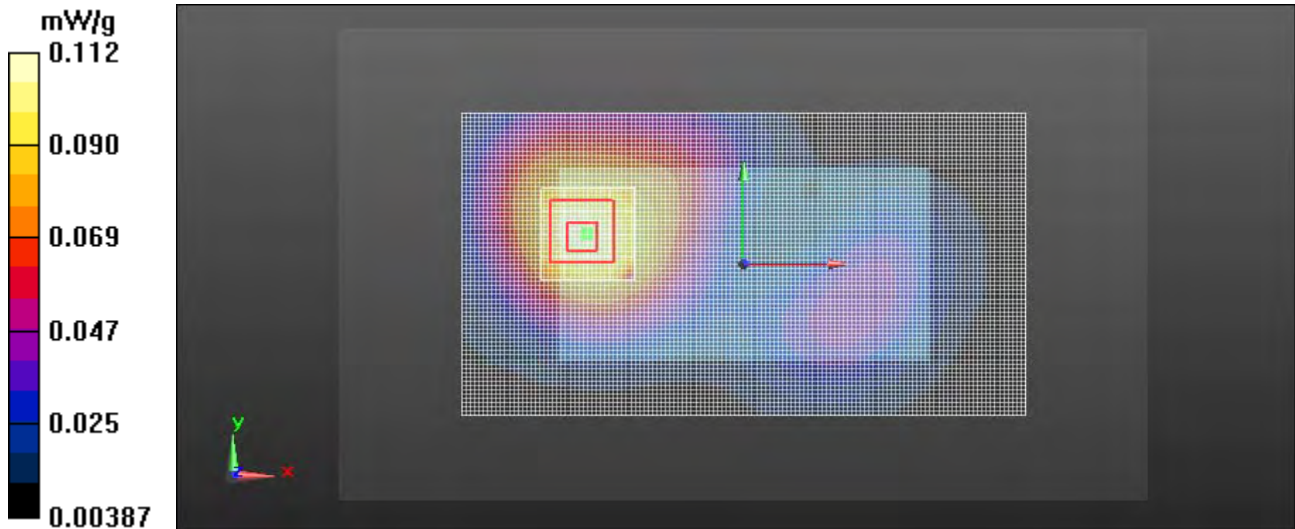
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.344 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.168 mW/g

SAR(1 g) = 0.104 mW/g; SAR(10 g) = 0.066 mW/g

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



Test Laboratory: Motorola Mobility - WCDMA 1900 Push-To-Talk Position

DUT: Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: ALWAYS UP Battery Model #: BF6X SNN5879A Test Configuration: FRONT OF PHONE 25MM FROM FLAT PHANTOM WITH HEAD SIMULANT

Communication System: _WCDMA; Frequency: 1880 MHz; Communication System Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Head 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.1$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(5.03, 5.03, 5.03); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

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

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

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

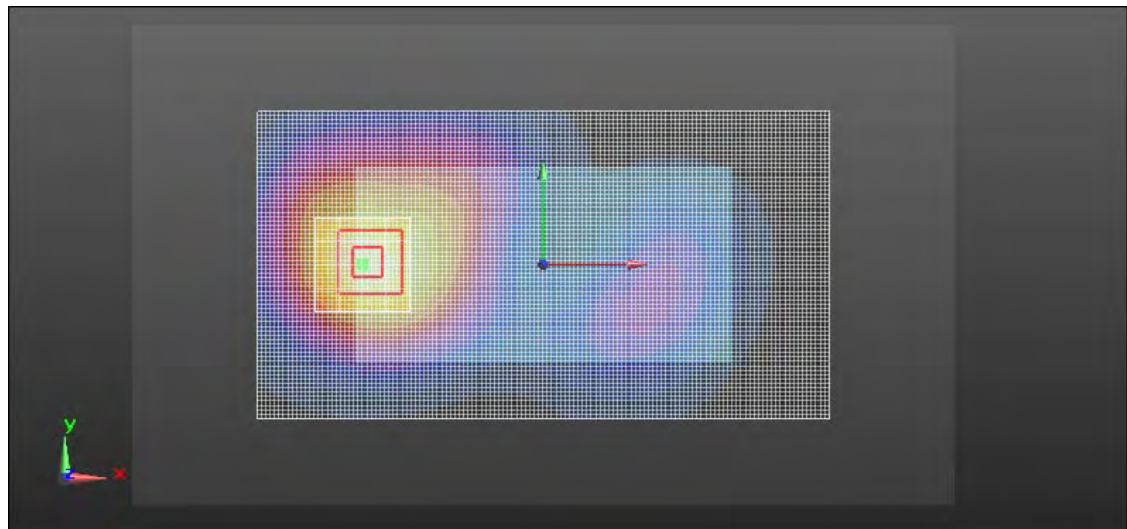
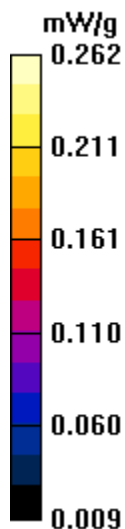
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.788 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.388 mW/g

SAR(1 g) = 0.244 mW/g; SAR(10 g) = 0.154 mW/g

Maximum value of SAR (measured) = 0.262 mW/g



Test Laboratory: Motorola Mobility - 2450 MHz Push-To-Talk

Serial: 364PNG06MN; FCC ID: IHDT56NQ2

Procedure Notes: Battery Model #: BF6X SNN5879A DEVICE POSITION: PUSH TO TALK, FRONT OF PHONE
25MM FROM FLAT PHANTOM; Wi-Fi 802.11b Data Rate = 1M / Power Level = 23 / Duty Cycle = 97

Communication System: _Wi-Fi 2450MHz; Frequency: 2412 MHz; Communication System Channel Number: 1; Duty Cycle: 1:1

Medium: 2450 Diacetin Head; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.87$ mho/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.4, 4.4, 4.4); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.2 (24-Feb-12); Type: SAM v4.0; Serial: TP-1319;
- ; SEMCAD X Version 14.6.5 (6469)

SAM Phone Against Flat Section/Area Scan - Normal Body (15mm) (121x61x1):

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

Maximum value of SAR (interpolated) = 0.0517 mW/g

SAM Phone Against Flat Section/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

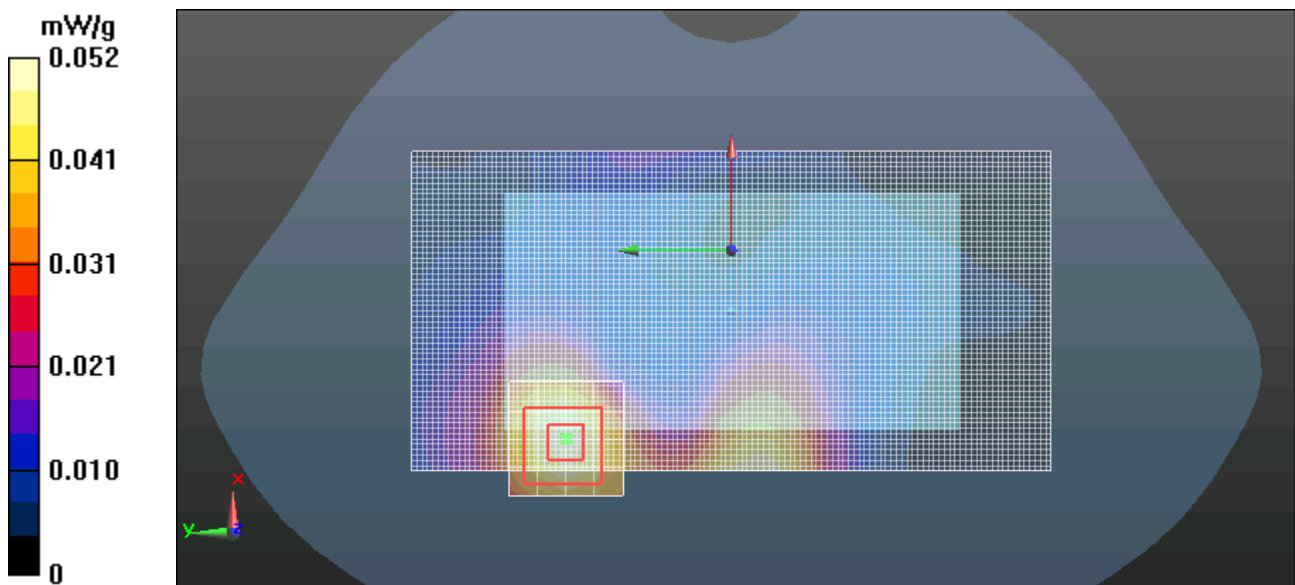
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.198 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.090 mW/g

SAR(1 g) = 0.048 mW/g; SAR(10 g) = 0.026 mW/g

Maximum value of SAR (measured) = 0.0515 mW/g



Appendix 4

SAR distribution plots for Body Worn Test Results

Test Laboratory: Motorola Mobility - GSM 1900 Body Worn

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: 0 Battery Model #: BF6X SNN5879A Device Configuration: BODY WORN, FRONT OF PHONE 25MM FROM PHANTOM

Communication System: _GPRS Class 12; Frequency: 1880 MHz; Communication System Channel Number: 661; Duty Cycle: 1:2.07491

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.69, 4.69, 4.69); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

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

Maximum value of SAR (interpolated) = 0.130 mW/g

Triple Flat Phone Template/5x5x7 Zoom Scan (<=3GHz) (6x6x7)/Cube 0:

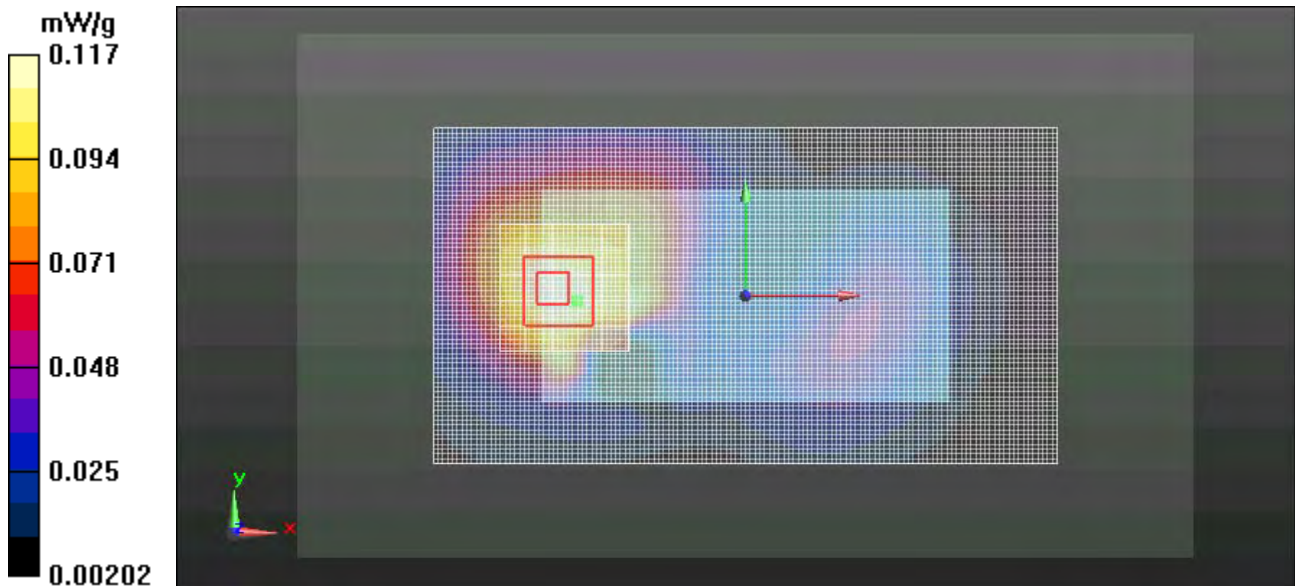
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.924 V/m; Power Drift = 0.25 dB

Peak SAR (extrapolated) = 0.169 mW/g

SAR(1 g) = 0.110 mW/g; SAR(10 g) = 0.071 mW/g

Maximum value of SAR (measured) = 0.117 mW/g



Test Laboratory: Motorola Mobility - iDEN Body Worn

Serial: 364PNG06MN ; FCC ID: INDT56NQ2

Procedure Notes: Battery Model #: BF6X SNN5879A DEVICE POSITION : PACKET DATA MODE BODY WORN, BACK OF PHONE 25MM FROM PHANTOM

Communication System: _iDEN Data; Frequency: 815.51 MHz; Communication System Channel Number: 2; Duty Cycle: 1:1.50003

Medium: iDEN Sugar Body; Medium parameters used: $f = 815 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 54.6$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(6.04, 6.04, 6.04); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Triple Flat Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (6x6x7)/Cube 0:

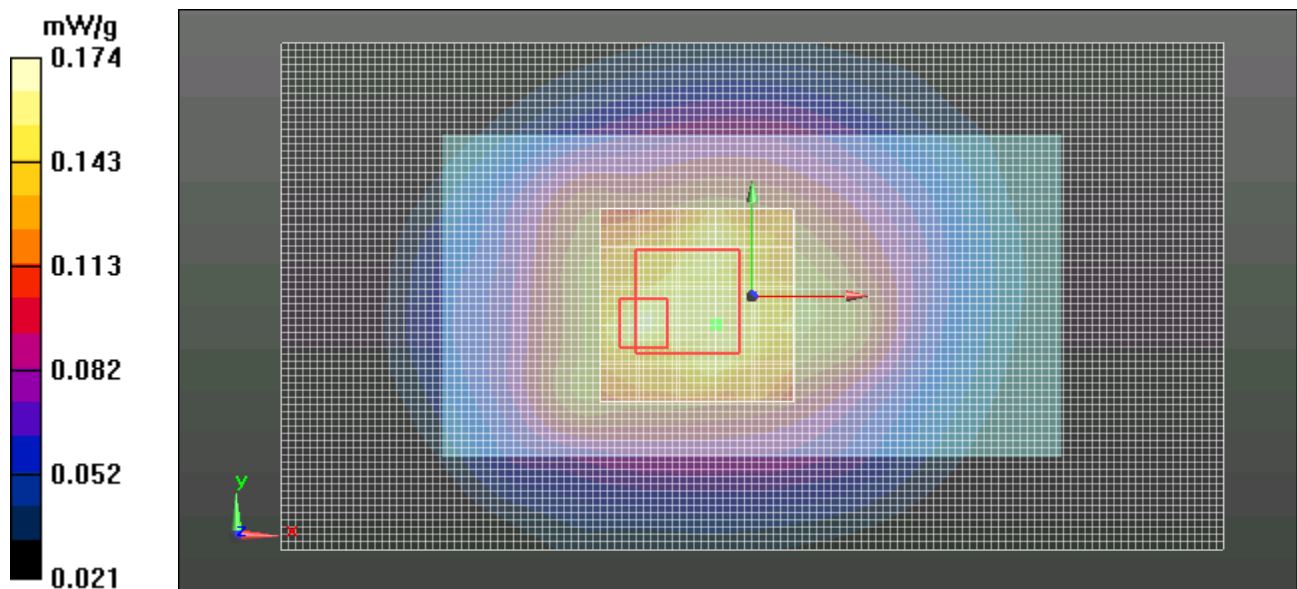
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.758 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.246 mW/g

SAR(1 g) = 0.151 mW/g; SAR(10 g) = 0.111 mW/g

Maximum value of SAR (measured) = 0.174 mW/g



Test Laboratory: Motorola Mobility - WCDMA 1700 Body Worn

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: ALL BITS UP Battery Model #: BF6X SNN5879A Device Position: BODY WORN, BACK OF PHONE 25MM FROM PHANTOM

Communication System: _WCDMA; Frequency: 1732 MHz; Communication System Channel Number: 1413; Duty Cycle: 1:1

Medium: 1730 Glycol Body; Medium parameters used: $f = 1730$ MHz; $\sigma = 1.51$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.69, 4.69, 4.69); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

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

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

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

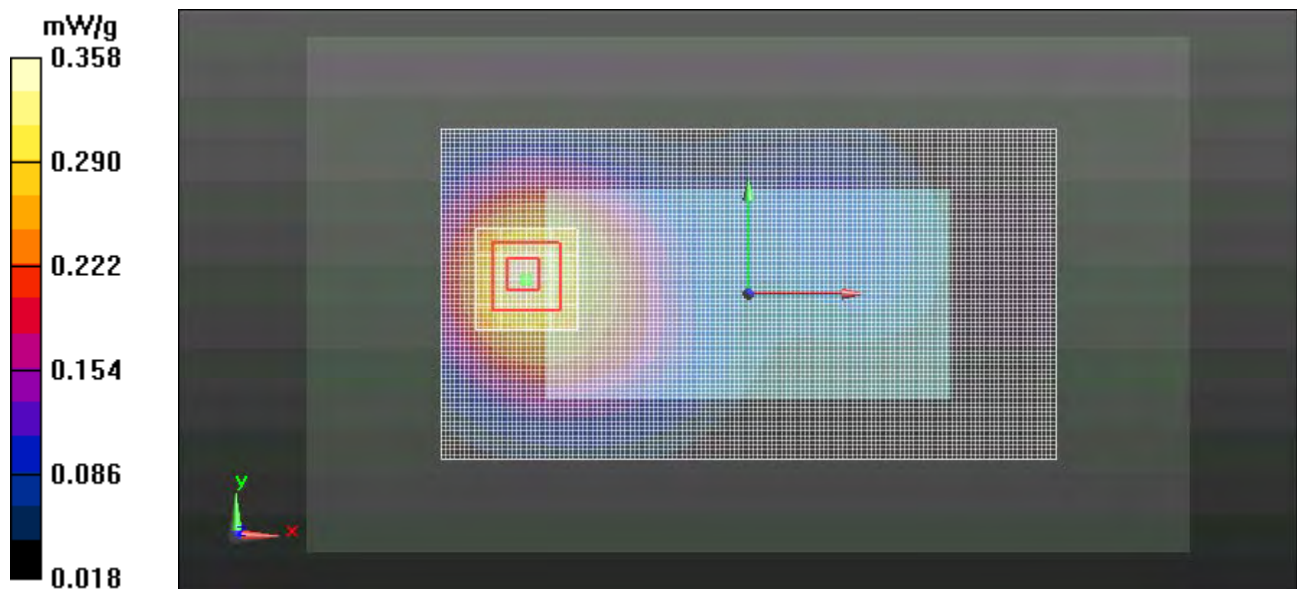
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.365 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.503 mW/g

SAR(1 g) = 0.334 mW/g; SAR(10 g) = 0.216 mW/g

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



Test Laboratory: Motorola Mobility - WCDMA 1900 Body Worn

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: ALL UP Battery Model #:BF6X SNN5879A Device Position: BODY WORN, BACK OF PHONE 25MM FROM PHANTOM

Communication System: _WCDMA; Frequency: 1880 MHz; Communication System Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 51.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.69, 4.69, 4.69); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

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

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

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

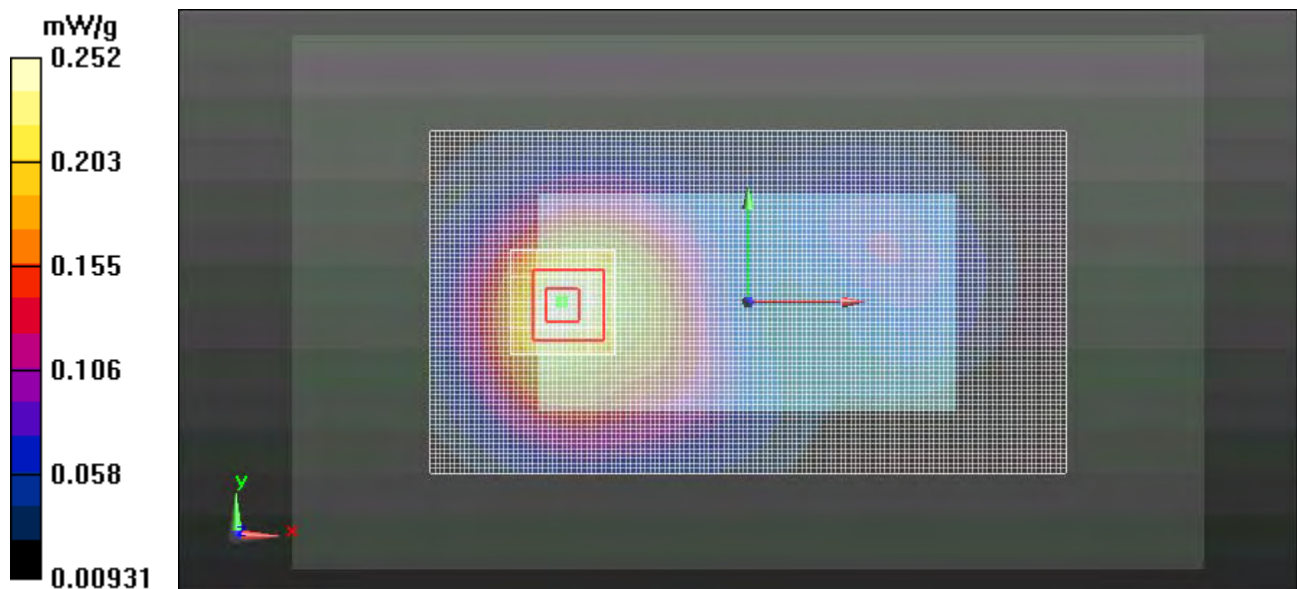
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.270 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.366 mW/g

SAR(1 g) = 0.235 mW/g; SAR(10 g) = 0.150 mW/g

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



Test Laboratory: Motorola Mobility - 2450 MHz Body Worn

Serial: 364PNG06MN; FCC ID: IHDT56NQ2

Procedure Notes: Battery Model #: BF6X SNN5879A Test Configuration: BODY WORN, BACK OF PHONE 25MM FROM PHANTOM; Wi-Fi 802.11b Data Rate = 1M / Power Level = 23 / Duty Cycle = 97

Communication System: _Wi-Fi 2450MHz; Frequency: 2437 MHz; Communication System Channel Number: 6; Duty Cycle: 1:1

Medium: 2450 Glycol Body; Medium parameters used: $f = 2450$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 50.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.21, 4.21, 4.21); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

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

Maximum value of SAR (interpolated) = 0.110 mW/g

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

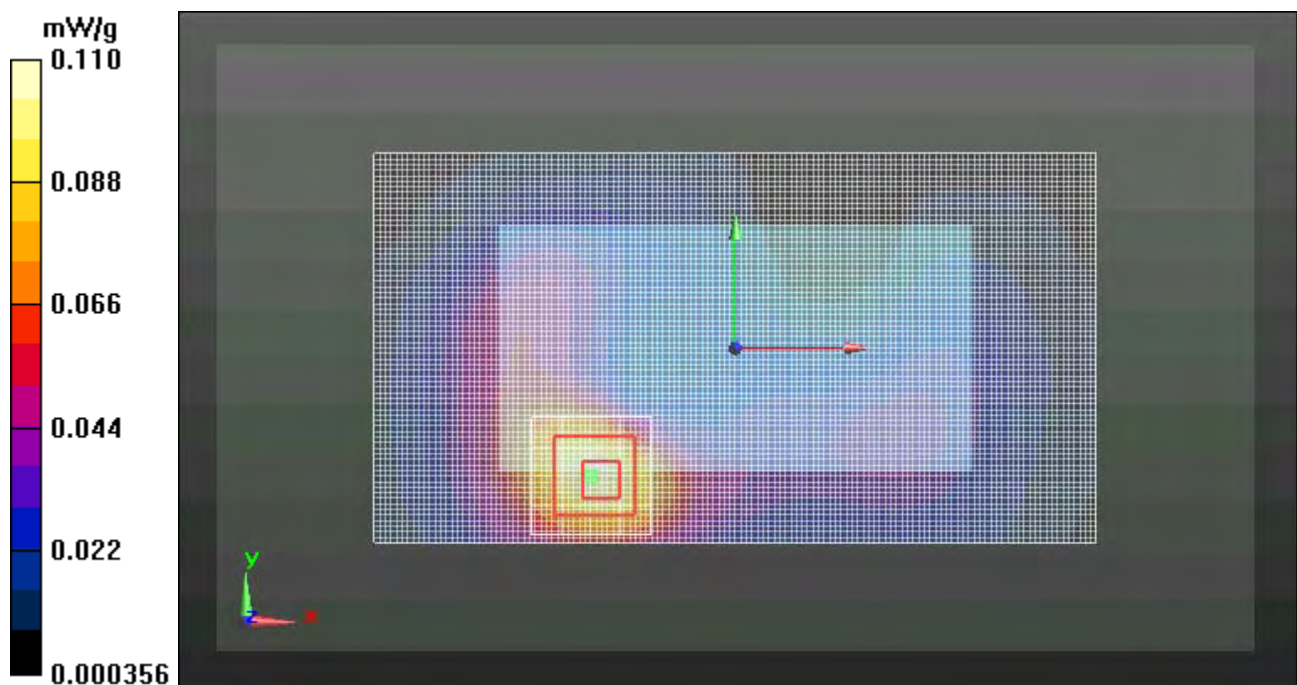
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.089 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.193 mW/g

SAR(1 g) = 0.102 mW/g; SAR(10 g) = 0.056 mW/g

Maximum value of SAR (measured) = 0.110 mW/g



Appendix 5

SAR distribution plots for Mobile Hotspot Test Results

Test Laboratory: Motorola Mobility - WCDMA 1700 Mobile Hotspot

Serial: 364PNG06MN; FCC ID: INDT56NQ2

Procedure Notes: Pwr Step: ALWAYS UP Battery Model #: BF6X SNN5879A Test Configuration: MOBILE HOTSPOT, BOTTOM EDGE OF PHONE 10MM FROM PHANTOM

Communication System: _WCDMA; Frequency: 1732 MHz; Communication System Channel Number: 1413; Duty Cycle: 1:1

Medium: 1730 Glycol Body; Medium parameters used: $f = 1730$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 52.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.69, 4.69, 4.69); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

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

Maximum value of SAR (interpolated) = 1.19 mW/g

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

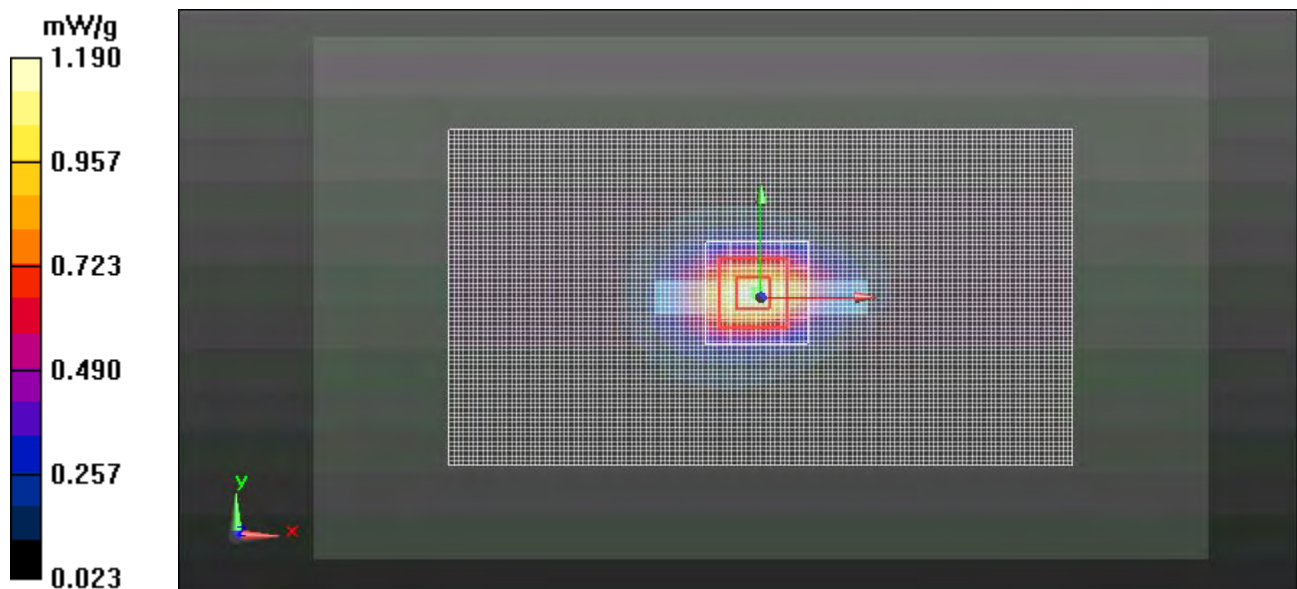
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.052 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.773 mW/g

SAR(1 g) = 1.06 mW/g; SAR(10 g) = 0.578 mW/g

Maximum value of SAR (measured) = 1.19 mW/g



Test Laboratory: Motorola Mobility - GSM 1900 Mobile Hotspot

Serial: 364PNG06MN ; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: 0 Battery Model #: BF6X SNN5879A Test Configuration: GPRS Class 12 (4 Uplots)
MOBILE HOTSPOT, BOTTOM EDGE OF PHONE 10MM FROM PHANTOM

Communication System: _GPRS Class 12; Frequency: 1880 MHz; Communication System Channel Number: 661;
Duty Cycle: 1:2.07491

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.69, 4.69, 4.69); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

TRIPLE Flat Phone Template/Area Scan - Normal Body (15mm) (131x61x1):

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

Maximum value of SAR (interpolated) = 0.905 mW/g

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

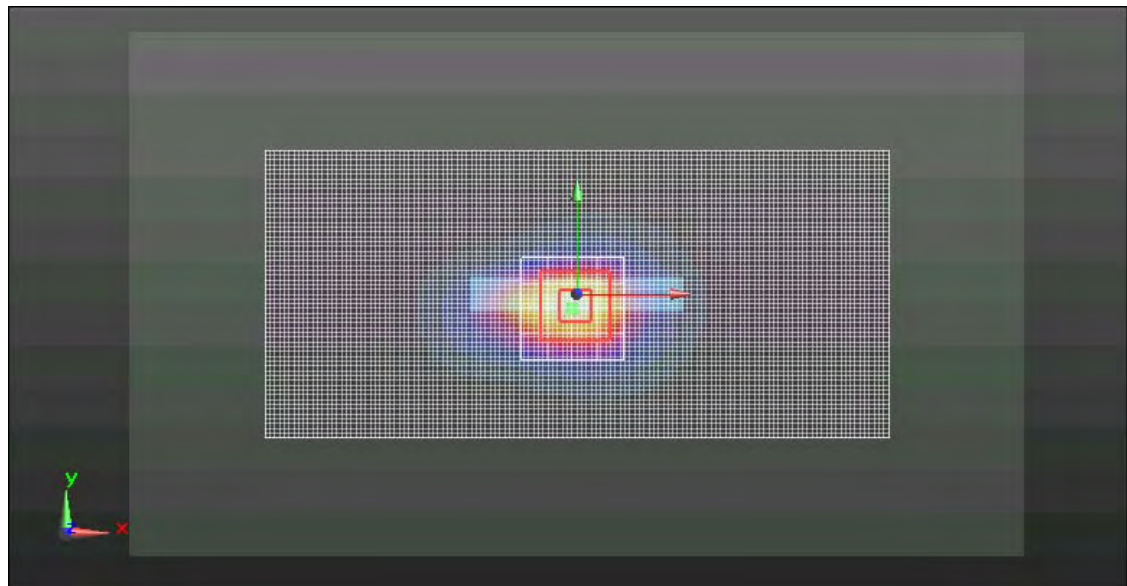
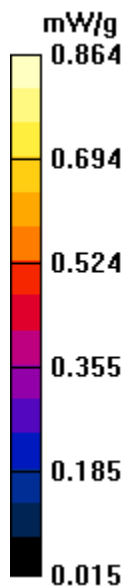
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.780 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.343 mW/g

SAR(1 g) = 0.776 mW/g; SAR(10 g) = 0.423 mW/g

Maximum value of SAR (measured) = 0.864 mW/g



Test Laboratory: Motorola Mobility - WCDMA 1900 Mobile Hotspot

Serial: 364PNG06MN; FCC ID: IHDT56NQ2

Procedure Notes: Pwr Step: ALL UP BITS Battery Model #: BF6X SNN5879A Test configuration: MOBILE HOTSPOT, BOTTOM EDGE OF PHONE 10MM FROM PHANTOM

Communication System: _WCDMA; Frequency: 1880 MHz; Communication System Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 52.2$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3284; ConvF(5.28, 5.28, 5.28); Calibrated: 1/10/2012;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1310; Calibrated: 1/11/2012
- Phantom: R#4, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

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

Maximum value of SAR (interpolated) = 0.891 mW/g

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

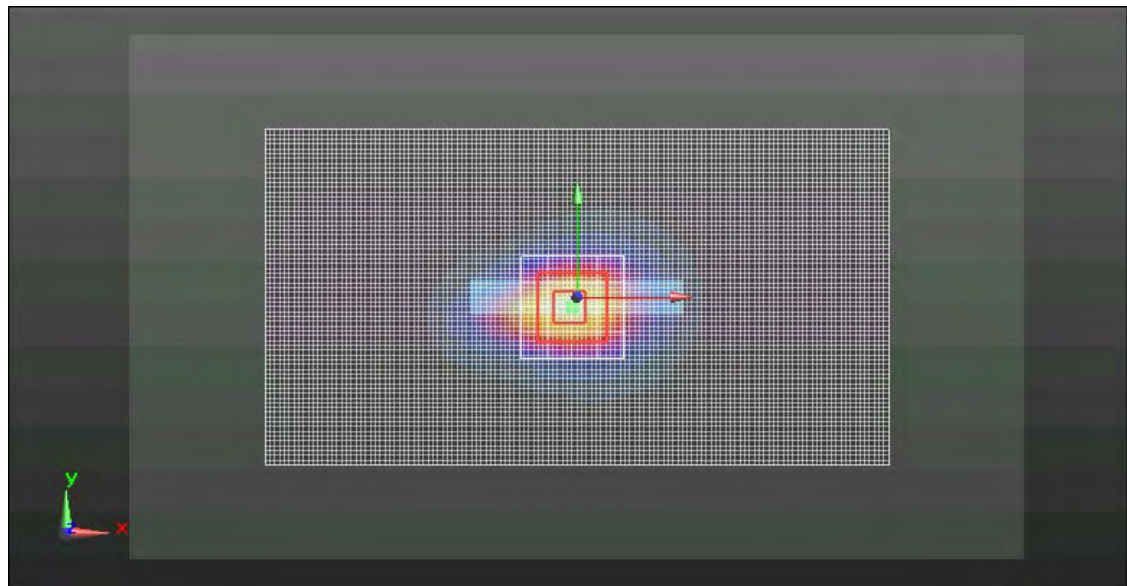
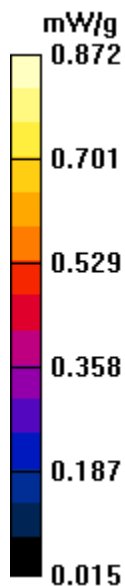
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.732 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.322 mW/g

SAR(1 g) = 0.781 mW/g; SAR(10 g) = 0.429 mW/g

Maximum value of SAR (measured) = 0.872 mW/g



Test Laboratory: Motorola Mobility - 2450 MHz Mobile Hotspot

Serial: 364PNG06MN; FCC ID: IHDT56NQ2

Procedure Notes: Battery Model #: BF6X SNN5879A Test Configuration: Mobile Hotspot Position, Left Edge of Phone 10mm from Phantom Wi-Fi 802.11b Data Rate = 1M / Power Level = 23 / Duty Cycle = 97

Communication System: _Wi-Fi 2450MHz; Frequency: 2462 MHz; Communication System Channel Number: 11; Duty Cycle: 1:1

Medium: 2450 Glycol Body; Medium parameters used: $f = 2450$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 50.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.21, 4.21, 4.21); Calibrated: 8/23/2011;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.4); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.6.5 (6469)

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (131x71x1):

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

Maximum value of SAR (interpolated) = 0.591 mW/g

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

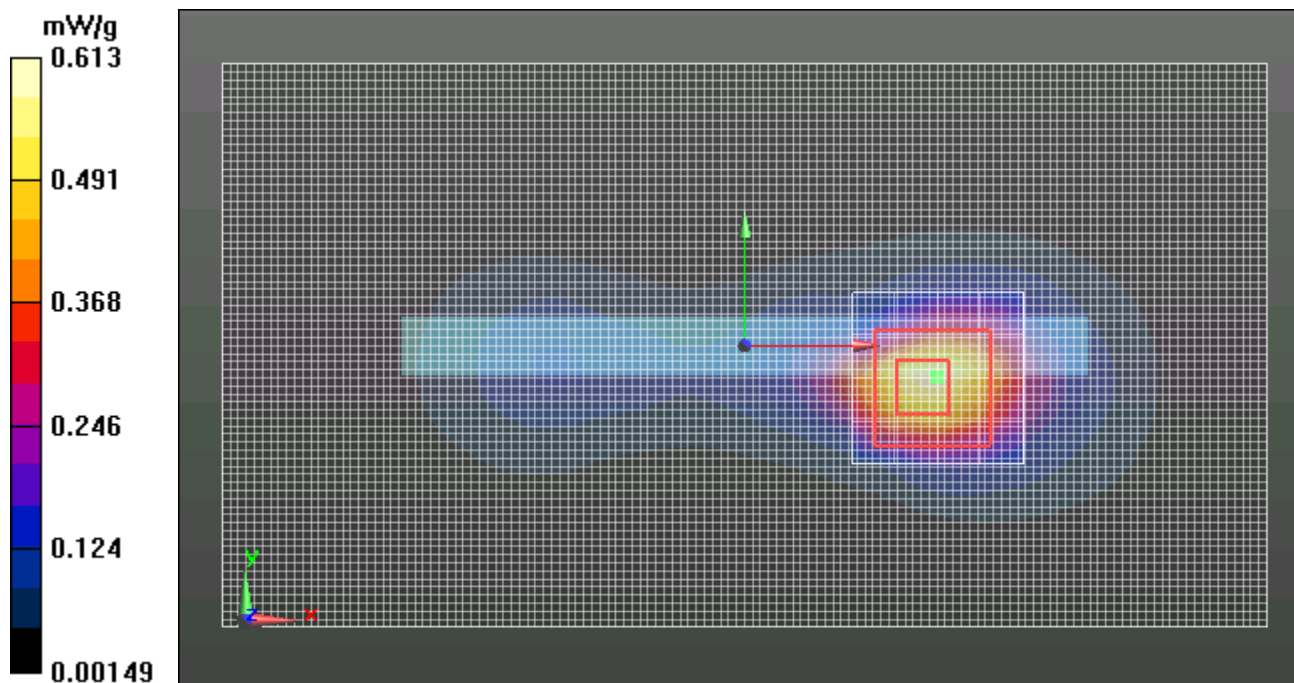
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.482 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.192 mW/g

SAR(1 g) = 0.557 mW/g; SAR(10 g) = 0.255 mW/g

Maximum value of SAR (measured) = 0.613 mW/g



Appendix 6

Measurement Uncertainty Budget

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

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	$e = f(d,k)$	<i>f</i>	<i>g</i>	$h = c \times f / e$	$i = c \times g / e$	<i>k</i>
Uncertainty Component	Description IEEE1528(2003) / IEC62209-1(2005)	Tol. (± %)	Prob Dist	Div.	<i>c_i</i> (1 g)	<i>c_i</i> (10 g)	1 g <i>u_i</i> (±%)	10 g <i>u_i</i> (±%)	<i>v_i</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)			<i>k</i> =2				22	22	

Appendix 7

Probe Calibration Certificate



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

Accreditation No.: **SCS 108**

Client **Motorola MDB**

Certificate No: **ES3-3124_Aug11**

CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3124**

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

Calibration date: **August 23, 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 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-10 (No. ES3-3013_Dec10)	Dec-11
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 Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-10)	In house check: Oct-11

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

Issued: August 23, 2011

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: SCS 108

The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
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:

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

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z} = NORM_{x,y,z} * frequency_response** (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep 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
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; VR_{x,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 NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.

Probe ES3DV3

SN:3124

Manufactured: July 11, 2006
Calibrated: August 23, 2011

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

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

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V/m})^2$) ^A	1.26	1.30	1.30	$\pm 10.1 \%$
DCP (mV) ^B	100.9	98.2	100.9	

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	116.0	$\pm 2.7 \%$
			Y	0.00	0.00	1.00	109.7	
			Z	0.00	0.00	1.00	115.4	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of NormX,Y,Z do not affect the E²-field uncertainty inside TSL (see 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:3124

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	6.26	6.26	6.26	1.00	1.00	± 12.0 %
835	41.5	0.90	6.08	6.08	6.08	1.00	1.00	± 12.0 %
1810	40.0	1.40	5.03	5.03	5.03	1.00	1.12	± 12.0 %
1950	40.0	1.40	4.83	4.83	4.83	1.00	1.12	± 12.0 %
2450	39.2	1.80	4.40	4.40	4.40	1.00	1.12	± 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:3124

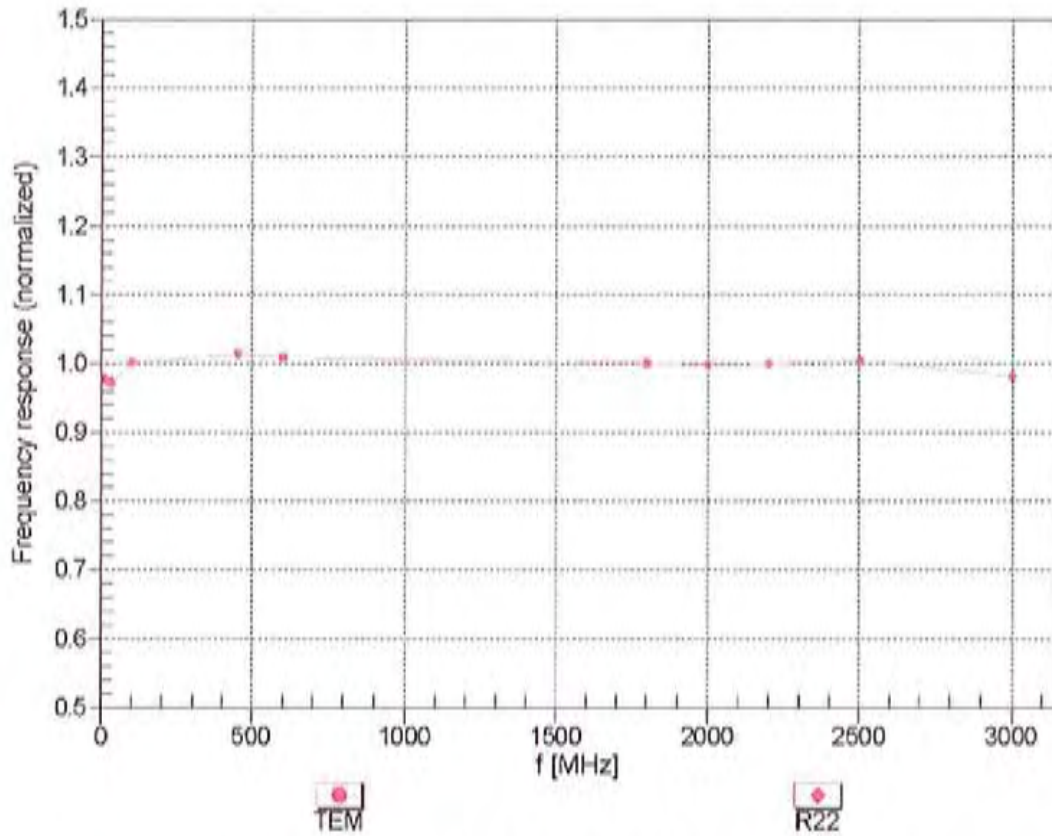
Calibration Parameter Determined in Body Tissue Simulating Media

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	6.09	6.09	6.09	1.00	1.00	± 12.0 %
835	55.2	0.97	6.04	6.04	6.04	1.00	1.00	± 12.0 %
1810	53.3	1.52	4.69	4.69	4.69	1.00	1.18	± 12.0 %
1950	53.3	1.52	4.70	4.70	4.70	1.00	1.16	± 12.0 %
2450	52.7	1.95	4.21	4.21	4.21	1.00	1.00	± 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.

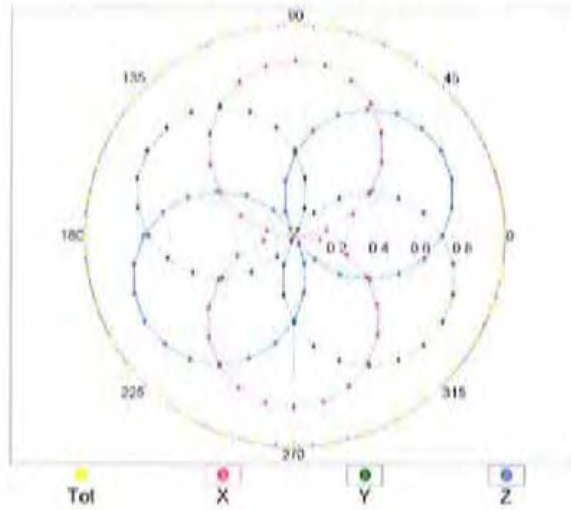
Frequency Response of E-Field (TEM-Cell: ifi110 EXX, Waveguide: R22)



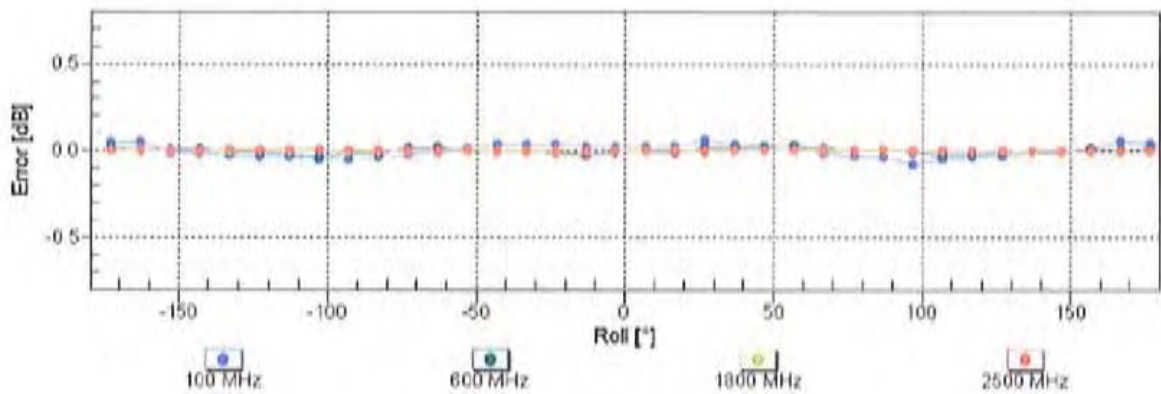
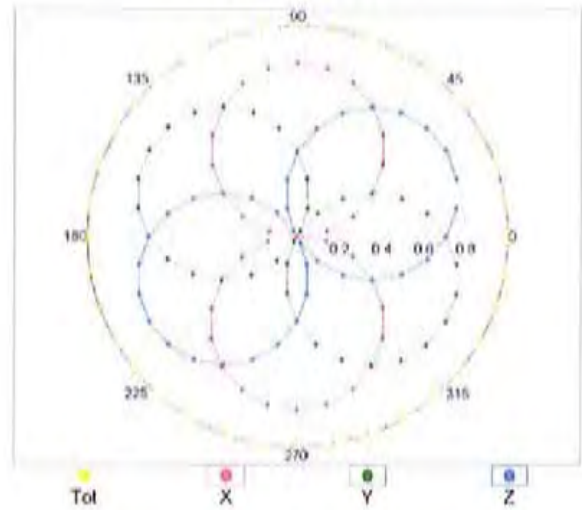
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ (k=2)

Receiving Pattern (ϕ), $\vartheta = 0^\circ$

f=600 MHz,TEM

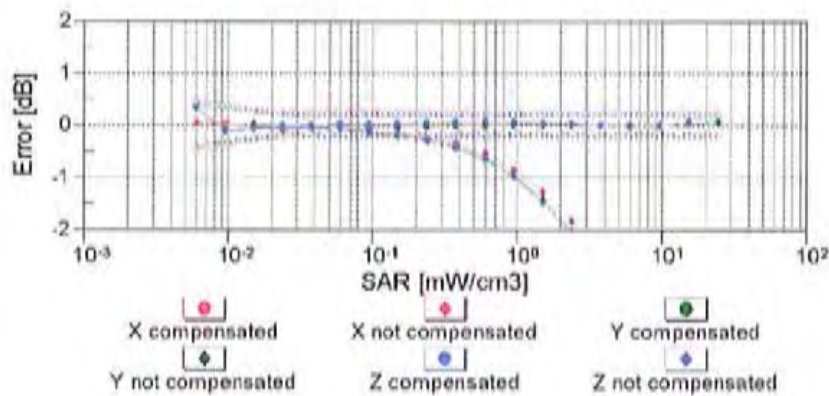
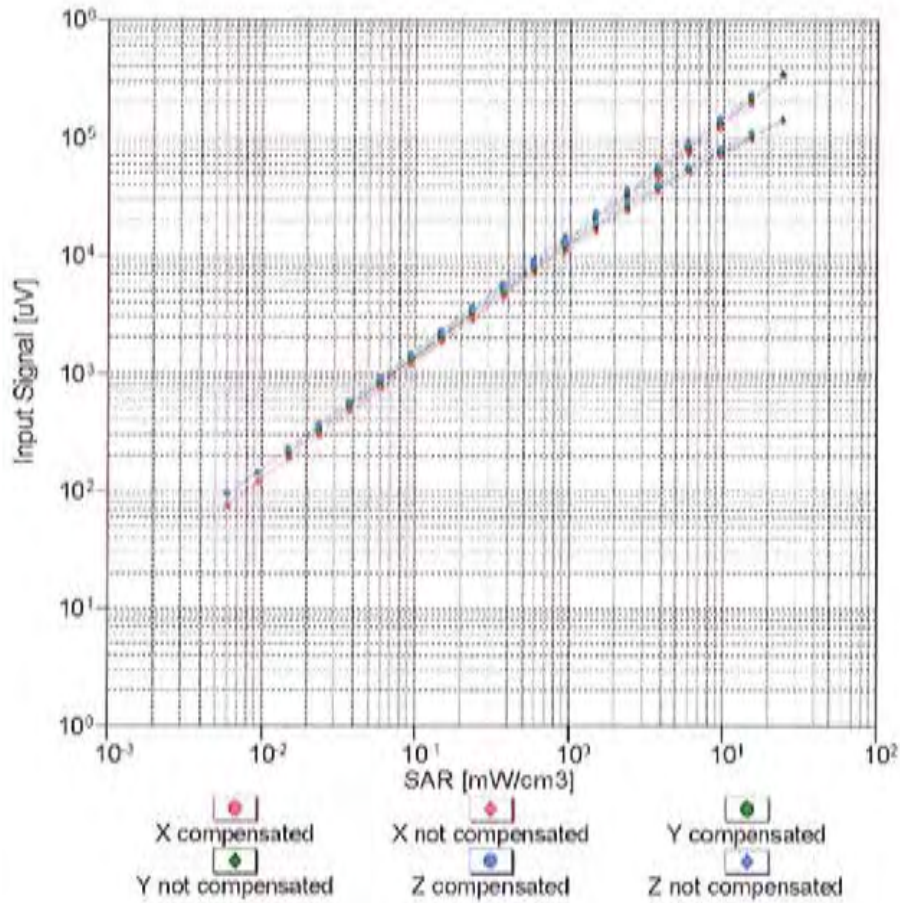


f=1800 MHz,R22



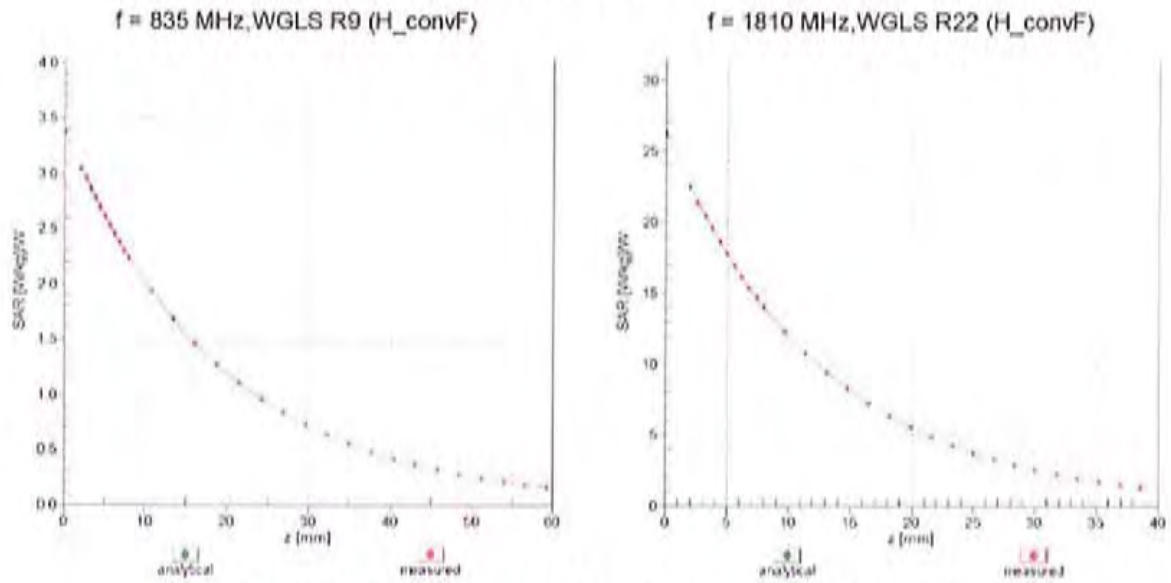
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

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



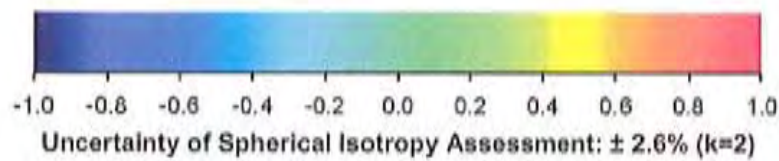
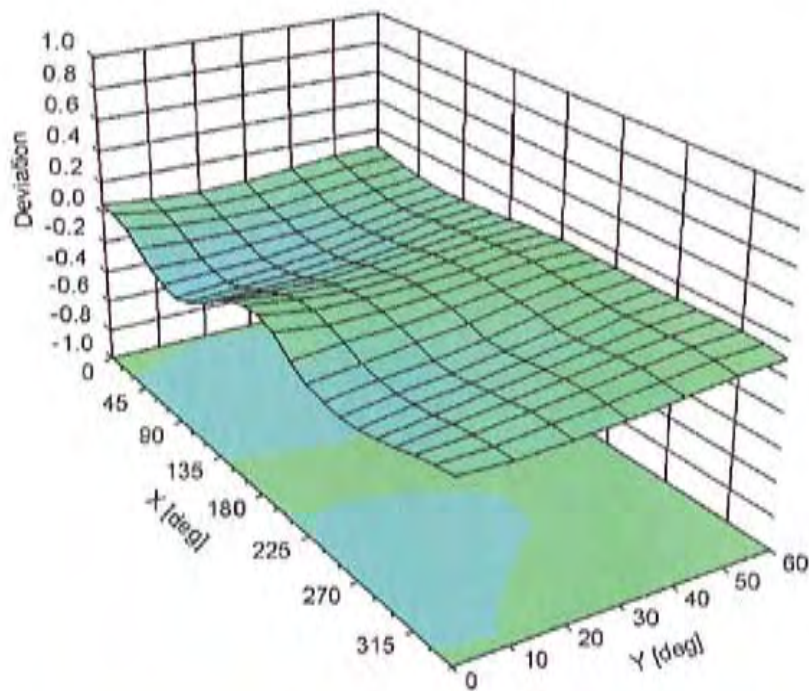
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, θ), f = 900 MHz



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

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



Accredited by the Swiss Accreditation Service (SAS)
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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Client **Motorola MDb**

Certificate No: **ES3-3284_Jan12**

CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3284**

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 10, 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

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

Issued: January 10, 2012

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 108**

Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis

Calibration is Performed According to the Following Standards:

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

Methods Applied and Interpretation of Parameters:

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

Probe ES3DV3

SN:3284

Manufactured: June 7, 2010
Calibrated: January 10, 2012

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

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3284

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	1.24	1.22	1.10	± 10.1 %
DCP (mV) ^B	104.0	99.5	102.4	

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	109.4	±2.5 %
			Y	0.00	0.00	1.00	110.9	
			Z	0.00	0.00	1.00	105.7	

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:3284

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	6.44	6.44	6.44	0.80	1.20	± 12.0 %
835	41.5	0.90	6.18	6.18	6.18	0.80	1.18	± 12.0 %
1810	40.0	1.40	5.33	5.33	5.33	0.80	1.22	± 12.0 %
1950	40.0	1.40	5.08	5.08	5.08	0.80	1.24	± 12.0 %
2450	39.2	1.80	4.56	4.56	4.56	0.80	1.25	± 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:3284

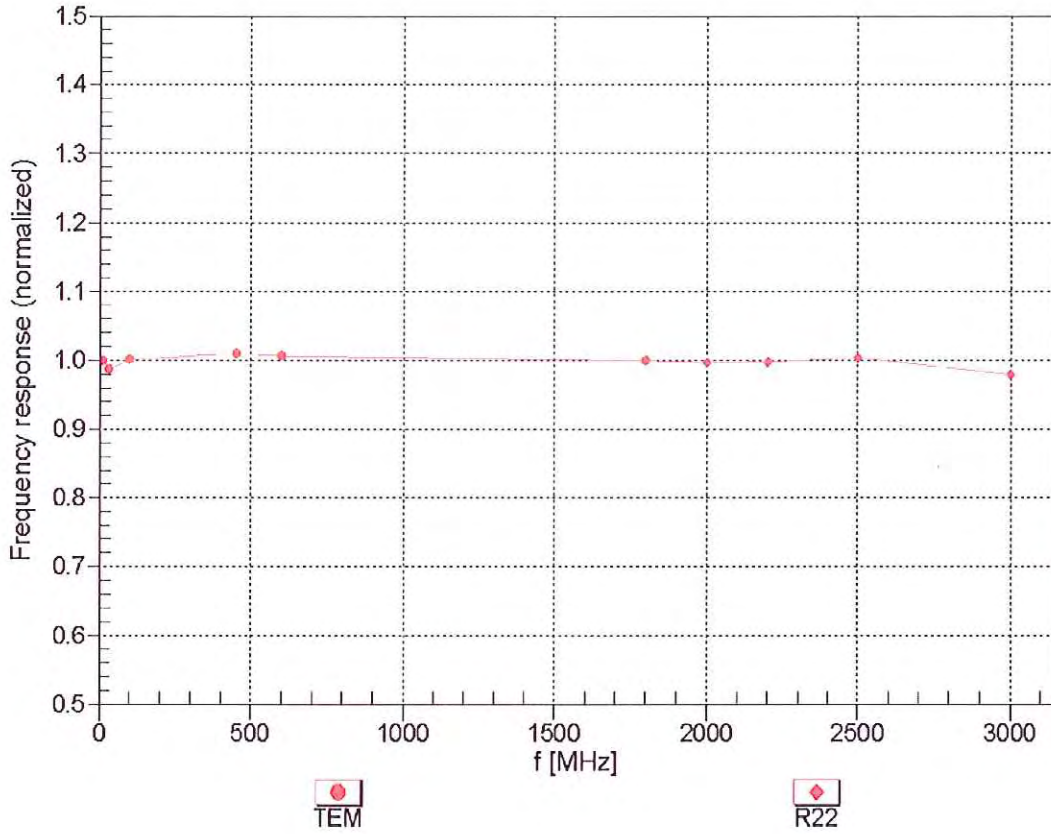
Calibration Parameter Determined in Body Tissue Simulating Media

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	6.36	6.36	6.36	0.80	1.00	± 12.0 %
835	55.2	0.97	6.28	6.28	6.28	0.80	1.00	± 12.0 %
1810	53.3	1.52	5.28	5.28	5.28	0.80	1.40	± 12.0 %
1950	53.3	1.52	5.20	5.20	5.20	0.69	1.49	± 12.0 %
2450	52.7	1.95	4.56	4.56	4.56	0.80	1.00	± 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.

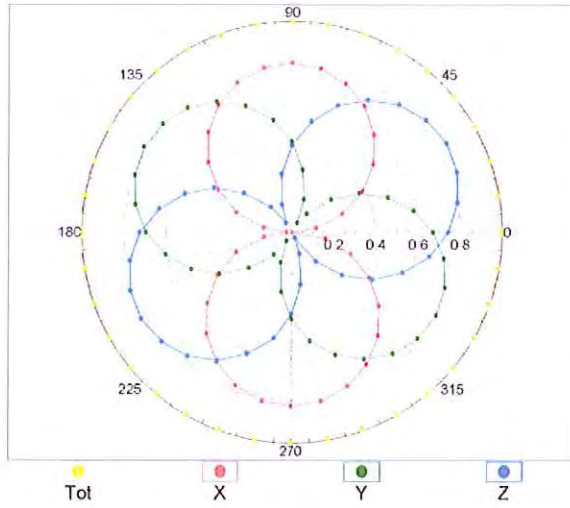
Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



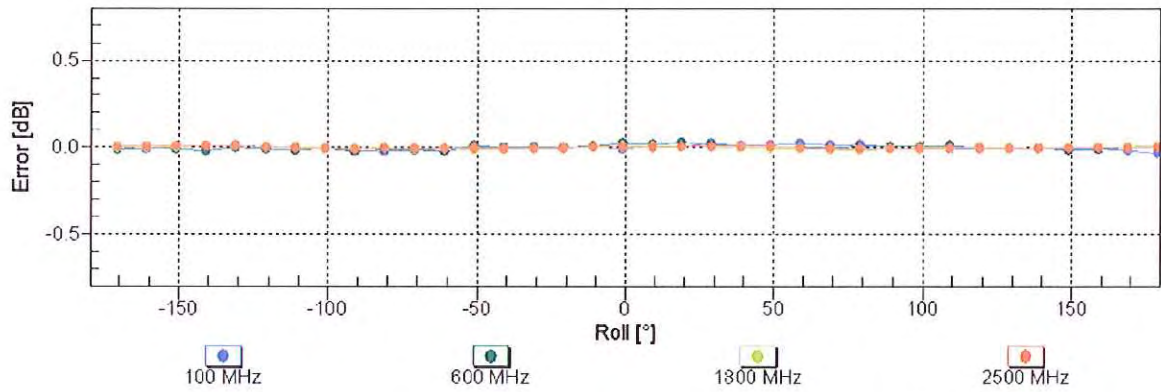
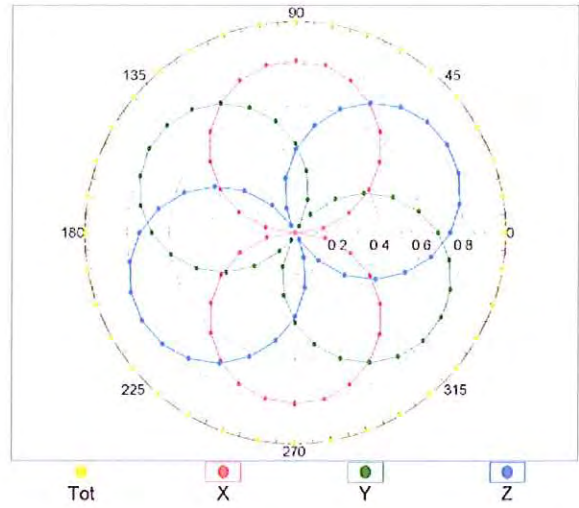
Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ (k=2)

Receiving Pattern (ϕ), $\vartheta = 0^\circ$

f=600 MHz, TEM

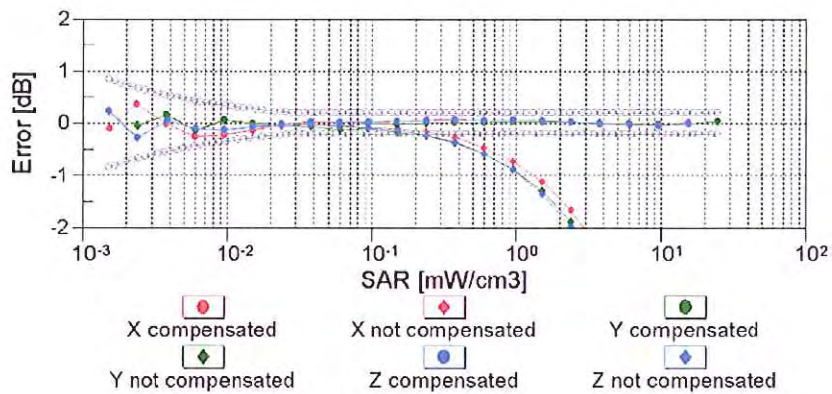
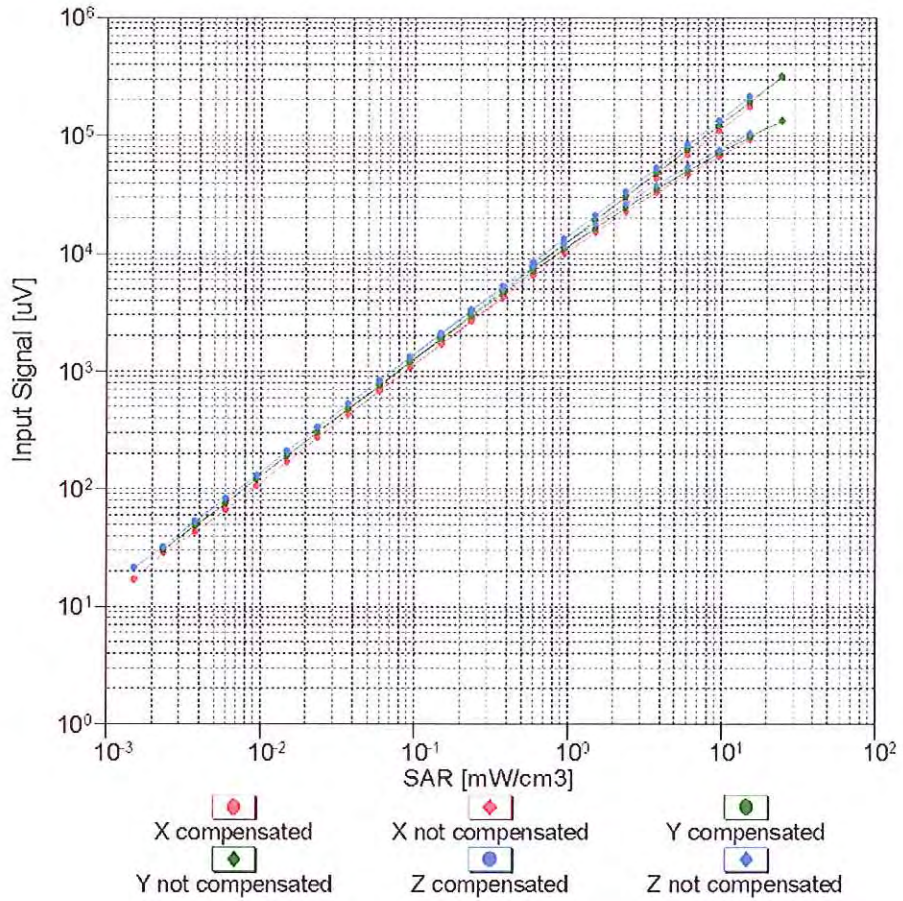


f=1800 MHz, R22



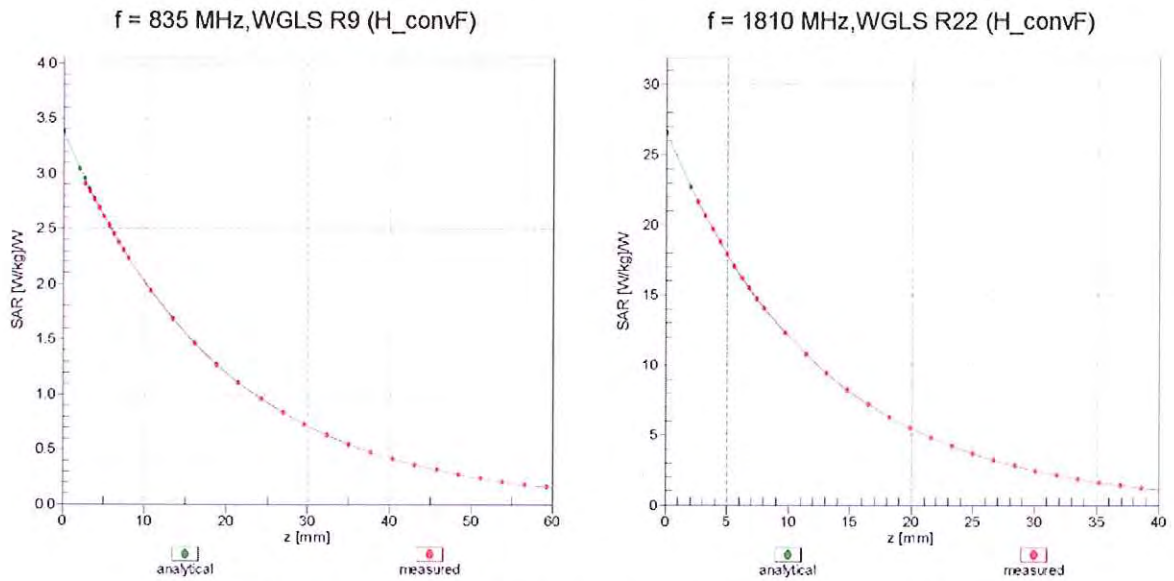
Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ (k=2)

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



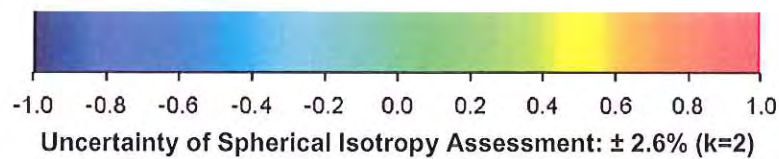
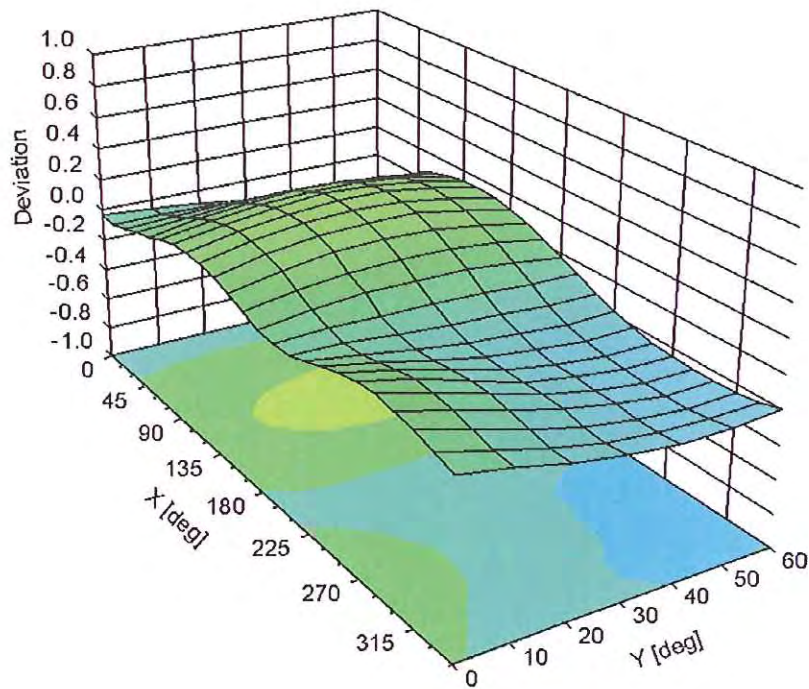
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz



DASY/EASY - Parameters of Probe: ES3DV3 - SN:3284

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