
APPENDIX A: SYSTEM CHECKING SCANS

Date: 2015.05.25.

Test Laboratory: SMQ SAR Test

SystemPerformanceCheck-D835 Head

DUT: Dipole 835 MHz D835V2; Type: D835V2;

Communication System: CW; Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.89 \text{ mho/m}$; $\epsilon_r = 41.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3203; ConvF(6.55, 6.55, 6.55); Calibrated: 2014.12.19.;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn876; Calibrated: 2015.03.09.
- Phantom: SAM 1; Type: QD000P40CC; Serial: TP:1504
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Head/Dipole835/Area Scan (61x131x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 53.222 V/m ; Power Drift = 0.00 dB

Fast SAR: SAR(1 g) = 2.33 mW/g ; SAR(10 g) = 1.53 mW/g

Maximum value of SAR (interpolated) = 2.52 W/kg

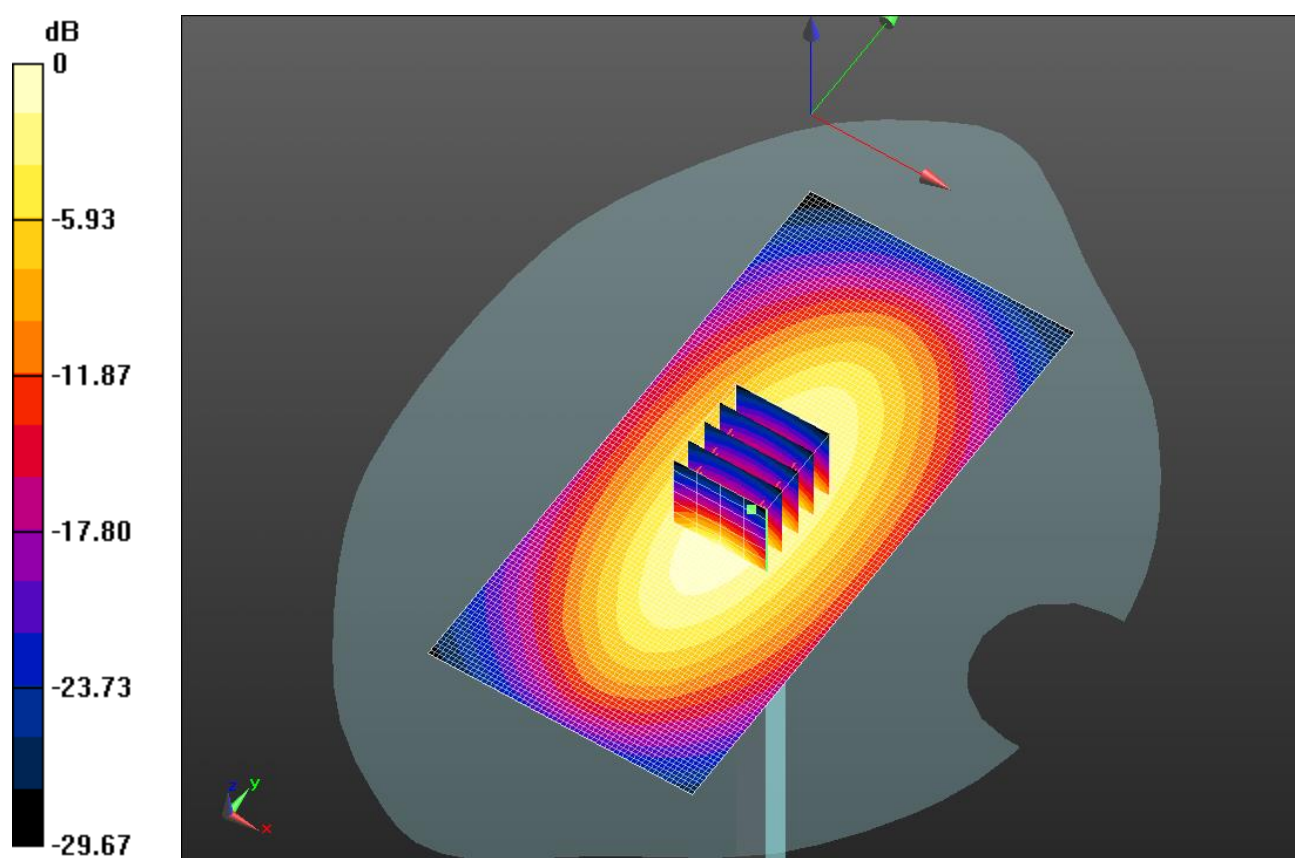
Head/Dipole835/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 53.222 V/m ; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 3.557 mW/g

SAR(1 g) = 2.33 mW/g ; SAR(10 g) = 1.51 mW/g

Maximum value of SAR (measured) = 2.52 W/kg



0 dB = 2.52 W/kg = 8.02 dB W/kg

Date: 2015.05.25.

Test Laboratory: SMQ SAR Test

SystemPerformanceCheck-D835 Body

DUT: Dipole 835 MHz D835V2; Type: D835V2;

Communication System: CW; Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.96 \text{ mho/m}$; $\epsilon_r = 55.87$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3203; ConvF(6.2, 6.2, 6.2); Calibrated: 2014.12.19.;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn876; Calibrated: 2015.03.09.
- Phantom: SAM 1; Type: QD000P40CC; Serial: TP:1504
- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Body/Dipole835/Area Scan (61x131x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Reference Value = 55.902 V/m ; Power Drift = -0.52 dB

Fast SAR: SAR(1 g) = 2.55 mW/g ; SAR(10 g) = 1.67 mW/g

Maximum value of SAR (interpolated) = 2.76 W/kg

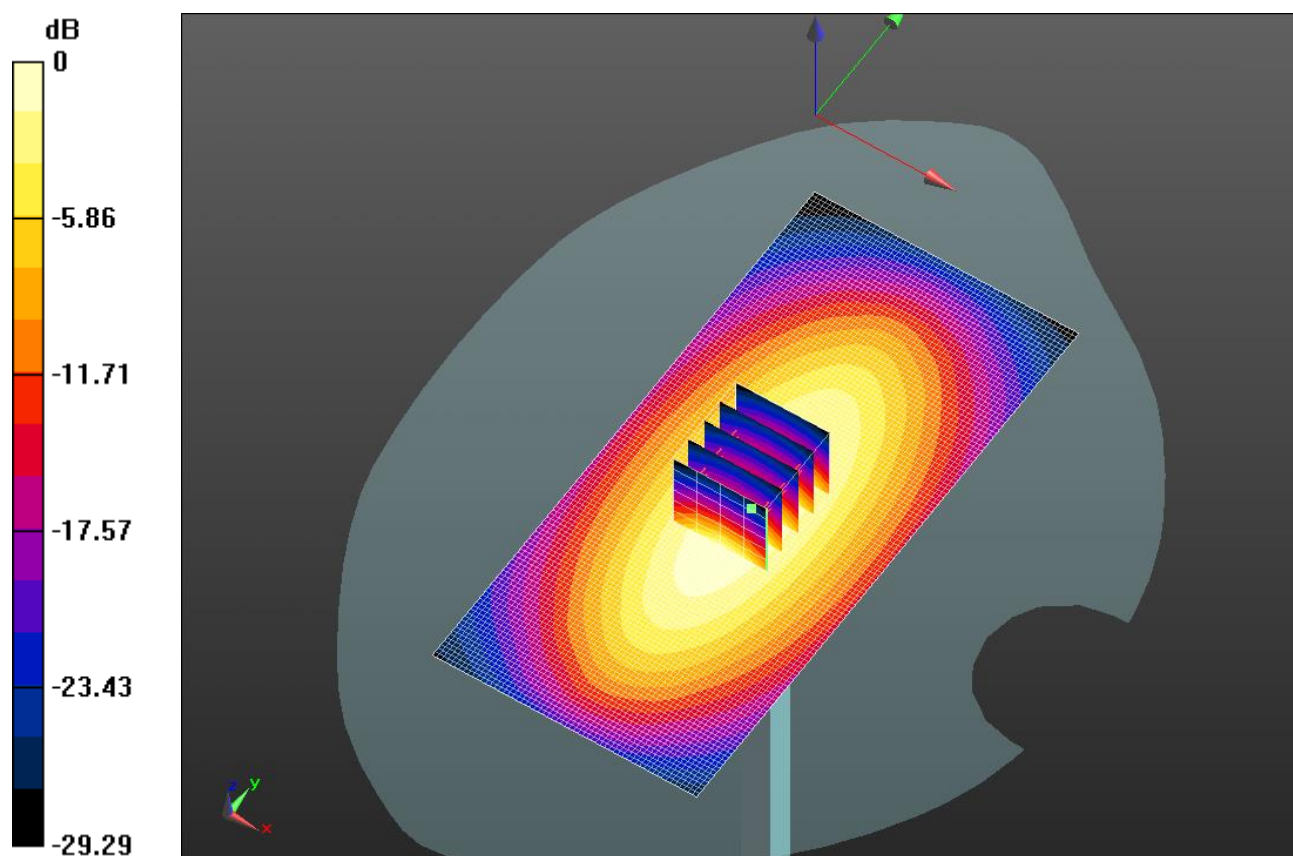
Body/Dipole835/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 55.902 V/m ; Power Drift = -0.52 dB

Peak SAR (extrapolated) = 3.791 mW/g

SAR(1 g) = 2.48 mW/g ; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.69 W/kg



0 dB = 2.76 W/kg = 8.82 dB W/kg

Date: 2015.05.27

Test Laboratory: SMQ SAR Test

SystemPerformanceCheck-D1900-Head

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2;

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.45$ mho/m; $\epsilon_r = 39.75$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: Ex3DV4- SN3881; ConvF(8.09, 8.09, 8.09); Calibrated: 2014.07.22.;

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- Sensor-Surface: 4mm (Mechanical Surface Detection)
 - Electronics: DAE4 Sn876; Calibrated: 2015.03.09.
 - Phantom: SAM 1; Type: QD000P40CC; Serial: TP:1504
 - Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Head/Dipole1900/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 86.469 V/m; Power Drift = 0.07 dB

Fast SAR: SAR(1 g) = 10.1 mW/g; SAR(10 g) = 4.9 mW/g

Maximum value of SAR (interpolated) = 11.9 W/kg

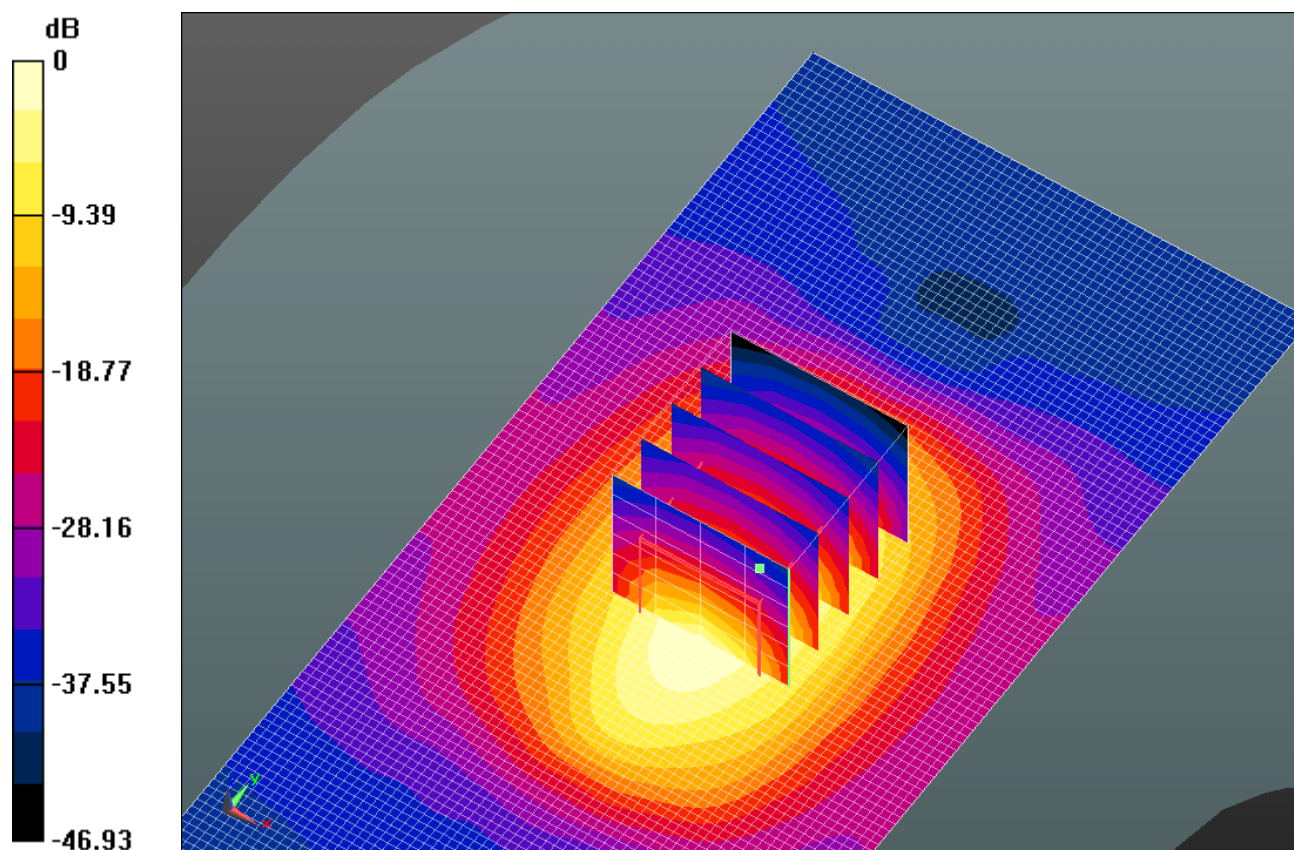
Head/Dipole1900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 86.469 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 19.751 mW/g

SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5 mW/g

Maximum value of SAR (measured) = 11.6 W/kg



0 dB = 11.9 W/kg = 21.50 dB W/kg

Date: 2015.05.27.

Test Laboratory: SMQ SAR Test

SystemPerformanceCheck-D1900-Body

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2;

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 51.05$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN3881; ConvF(8.25, 8.25, 8.25); Calibrated: 2014.07.22.;
- Sensor-Surface: 4mm (Mechanical Surface Detection)

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- Electronics: DAE4 Sn876; Calibrated: 2015.03.09.
 - Phantom: SAM 1; Type: QD000P40CC; Serial: TP:1504
 - Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Body/Dipole1900 2/Area Scan (61x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 87.274 V/m; Power Drift = 0.08 dB

Fast SAR: SAR(1 g) = 11 mW/g; SAR(10 g) = 5.35 mW/g

Maximum value of SAR (interpolated) = 12.9 W/kg

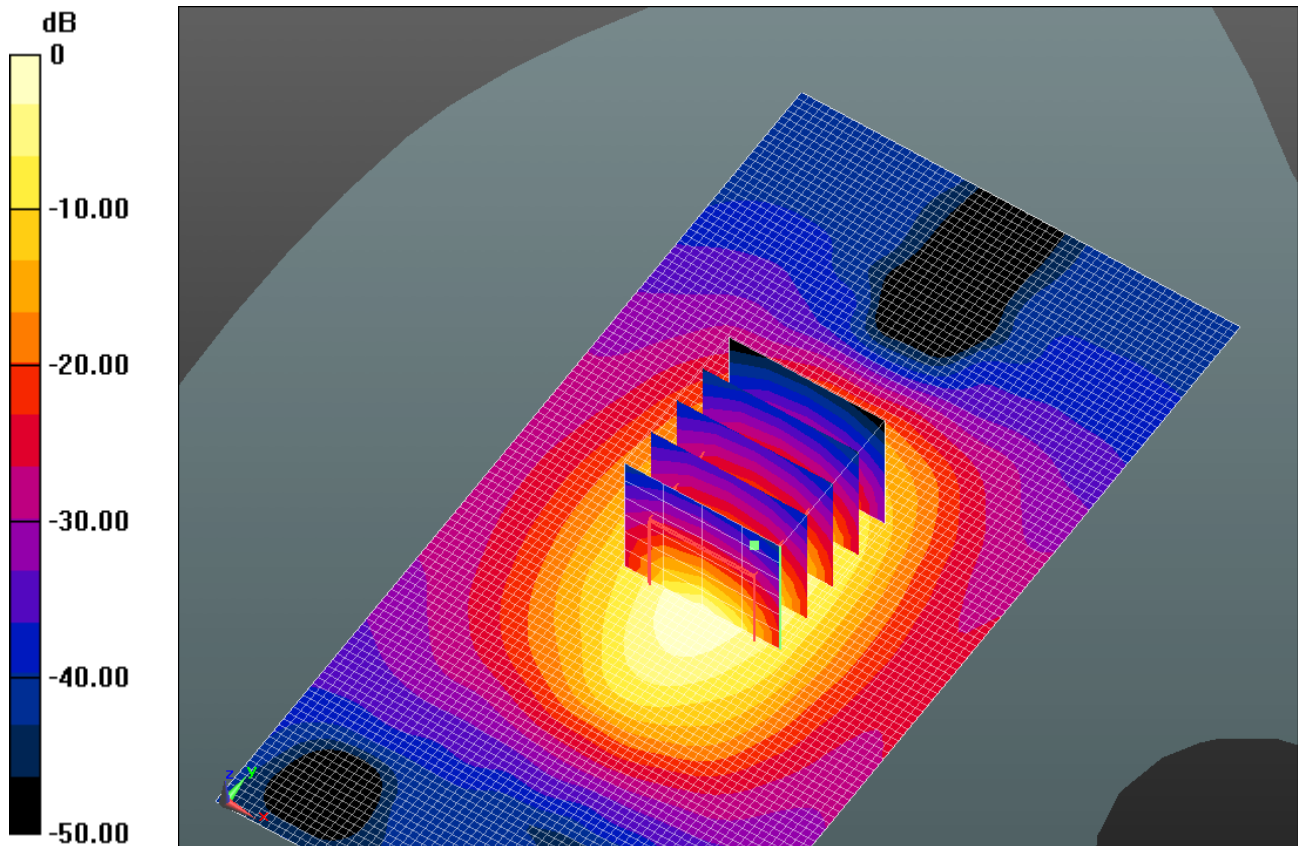
Body/Dipole1900 2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 87.274 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 21.346 mW/g

SAR(1 g) = 11.1 mW/g; SAR(10 g) = 5.51 mW/g

Maximum value of SAR (measured) = 12.6 W/kg



$$0 \text{ dB} = 12.9 \text{ W/kg} = 22.24 \text{ dB W/kg}$$

SystemPerformanceCheck-D2450-Head

Date: 2015.05.28.

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 – SN:818

Communication System: CW; Communication System Band: Not Specified; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.85$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3203; ConvF(4.55, 4.55, 4.55); Calibrated: 2014.12.19.;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn876; Calibrated: 2015.03.09.
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx
- Measurement SW: DASYS2, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Configuration/d=10mm, Pin=250mW, dist=3.4mm (ES-Probe)/Area

Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm

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

Configuration/d=10mm, Pin=250mW, dist=3.4mm (ES-Probe)/Zoom

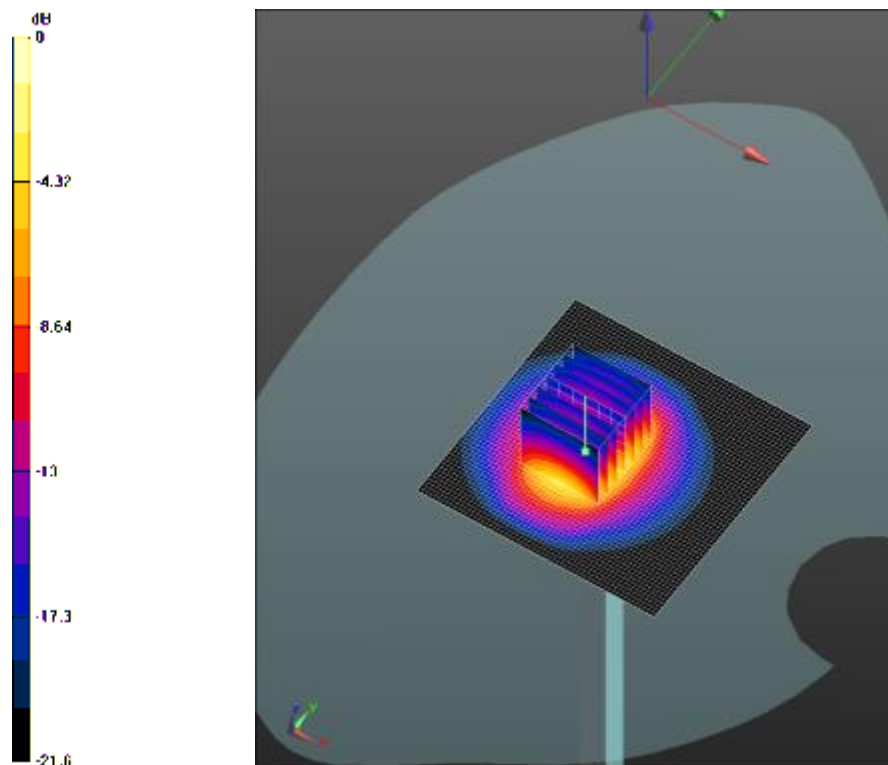
Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 94.2 V/m; Power Drift = 0.103 dB

Peak SAR (extrapolated) = 26.3 W/kg

SAR(1 g) = 13.3 mW/g; SAR(10 g) = 6.29 mW/g

Maximum value of SAR (measured) = 16.5 mW/g



Date: 2015.05.28.

Test Laboratory: SMQ SAR Test

SystemPerformanceCheck-D2450-Body

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2;

Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 2.02$ mho/m; $\epsilon_r = 50.71$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: ES3DV3 - SN3203; ConvF(4.55, 4.55, 4.55); Calibrated: 2014.12.19.;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn876; Calibrated: 2015.03.09.
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:xxxx

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- Measurement SW: DASY52, Version 52.8 (2); SEMCAD X Version 14.6.6 (6824)

Body/Dipole2450/Area Scan (91x161x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 92.292 V/m; Power Drift = 0.01 dB

Fast SAR: SAR(1 g) = 14.1mW/g; SAR(10 g) = 6.22 mW/g

Maximum value of SAR (interpolated) = 17.3 W/kg

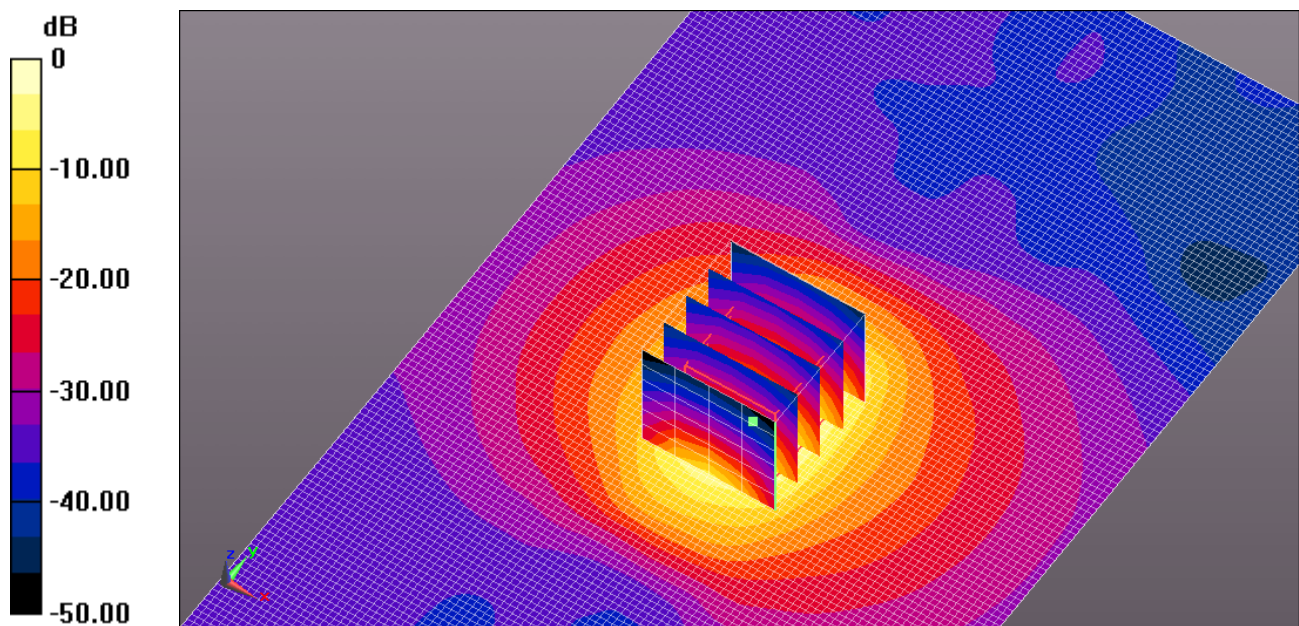
Body/Dipole2450/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 92.292 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 33.353 mW/g

SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.29 mW/g

Maximum value of SAR (measured) = 16.9 W/kg



0 dB = 17.3 W/kg = 24.78 dB W/kg