

APPENDIX A: SYSTEM CHECKING SCANS

SystemPerformanceCheck-D750 for Head

Date: 2019.08.11.

DUT: Dipole 750MHz D750V3; Type SN: 1103;

Communication System: CW; Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 750$ MHz; $\sigma = 0.88$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(9.70,9.70,9.70); Calibrated: 2020.06.16.;

Electronics: DAE4 Sn876; Calibrated: 2020.03.03.

Head/Dipole750 2/Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 49.533 V/m; Power Drift = -0.07 dB

Fast SAR: SAR(1 g) = 2.06 mW/g; SAR(10 g) = 1.37 mW/g

Maximum value of SAR (interpolated) = 2.22 W/kg

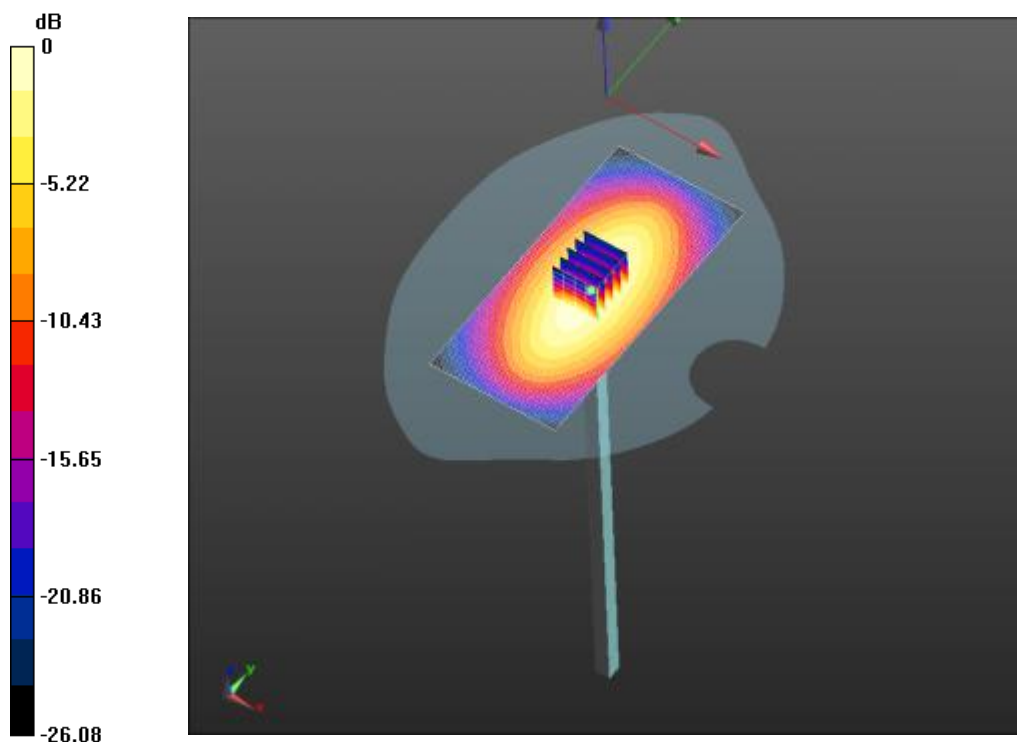
Head/Dipole750 2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 49.533 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 3.017 mW/g

SAR(1 g) = 2.04 mW/g; SAR(10 g) = 1.34 mW/g

Maximum value of SAR (measured) = 2.20 W/kg



$$0 \text{ dB} = 2.22 \text{ W/kg} = 6.94 \text{ dB W/kg}$$

SystemPerformanceCheck-D835MHz for Head

Date: 2019.08.12.

DUT: Dipole 835 MHz D835V2; Type: D835V2 SN: 4d141;

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

Medium parameters used: $f = 835$ MHz; $\sigma = 0.93$ mho/m; $\epsilon_r = 42.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASYS Configuration: Probe: EX3DV4 - SN3881; ConvF(9.43, 9.43, 9.43); Calibrated: 2020.06.16.; Electronics: DAE4 Sn876; Calibrated: 2020.03.03.

Head/Dipole835/Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 50.047 V/m; Power Drift = -0.02 dB

Fast SAR: SAR(1 g) = 2.31 mW/g; SAR(10 g) = 1.41 mW/g

Maximum value of SAR (interpolated) = 2.28 W/kg

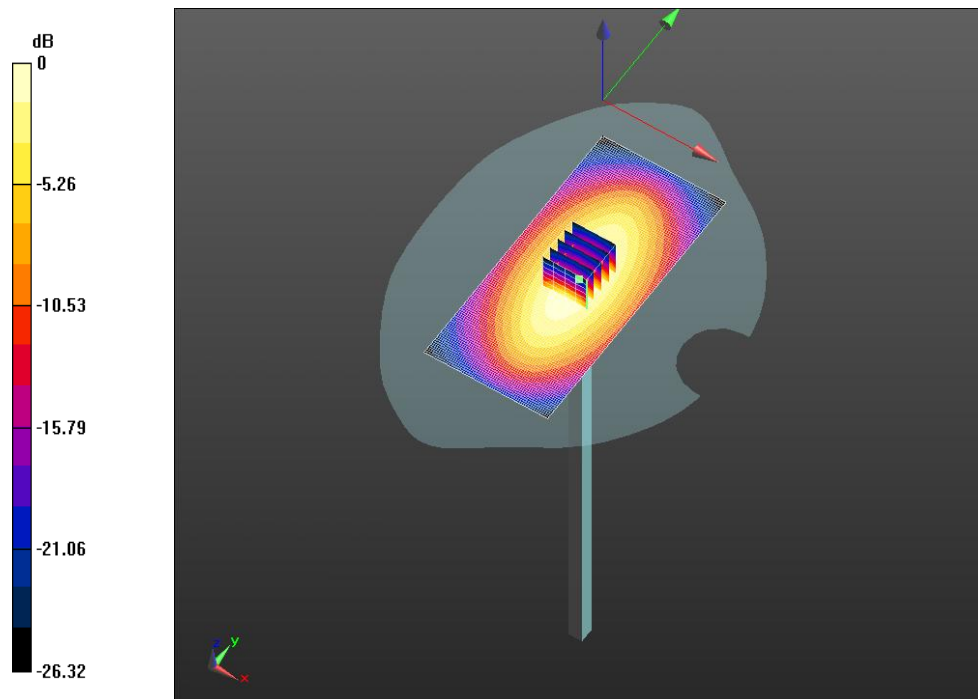
Head/Dipole835/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.047 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.120 mW/g

SAR(1 g) = 2.31 mW/g; SAR(10 g) = 1.51 mW/g

Maximum value of SAR (measured) = 2.28 W/kg



$$0 \text{ dB} = 2.28 \text{ W/kg} = 7.16 \text{ dB W/kg}$$

SystemPerformanceCheck-D1750 for Head

Date: 2018.08.13.

DUT: Dipole 1750 MHz D1750V2; Type: D1750V2 SN:1108;

Communication System: CW; Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.40$ mho/m; $\epsilon_r = 39.72$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASYS Configuration: Probe: EX3DV4 - SN3881; ConvF(8.14, 8.14, 8.14); Calibrated: 2020.06.16.; Electronics: DAE4 Sn876; Calibrated: 2020.03.03.

Head/Dipole1750 /Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 82.933 V/m; Power Drift = 0.05 dB

Fast SAR: SAR(1 g) = 9.1 mW/g; SAR(10 g) = 4.88 mW/g

Maximum value of SAR (interpolated) = 10.4 W/kg

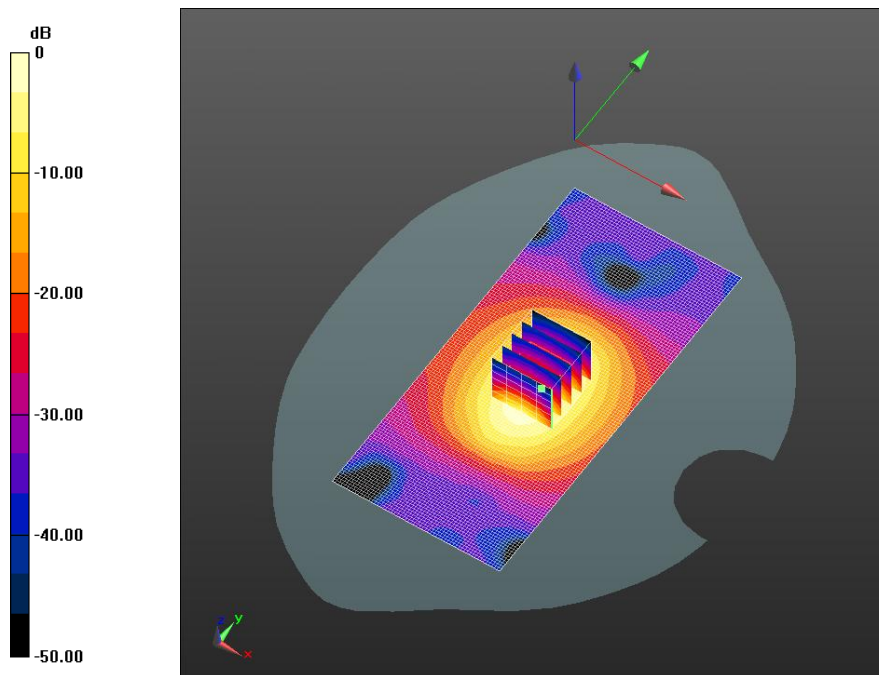
Head/Dipole1750 /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 82.933 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 16.726 mW/g

SAR(1 g) = 9.01 mW/g; SAR(10 g) = 4.7 mW/g

Maximum value of SAR (measured) = 10.0 W/kg



0 dB = 10.4 W/kg = 20.34 dB W/kg

SystemPerformanceCheck-D1900 for Head

Date: 2019.08.14.

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2 SN:5d162;

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.43$ mho/m; $\epsilon_r = 39.65$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(7.92,7.92,7.92); Calibrated: 2020.06.16.;

Electronics: DAE4 Sn876; Calibrated: 2020.03.03.

Head/Dipole1900 5/Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 84.175 V/m; Power Drift = 0.03 dB

Fast SAR: SAR(1 g) = 9.33 mW/g; SAR(10 g) = 5.01 mW/g

Maximum value of SAR (interpolated) = 10.7 W/kg

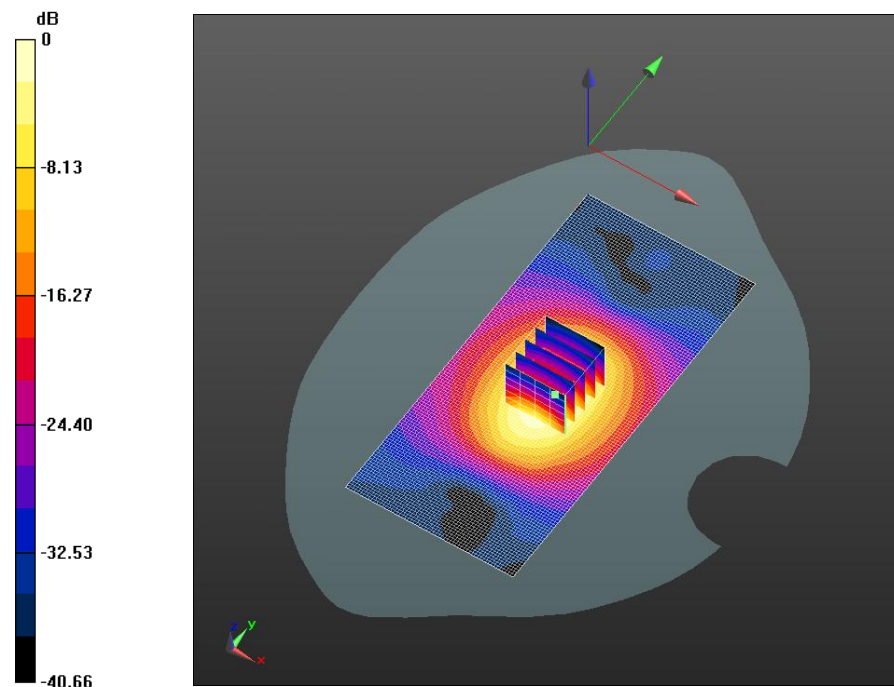
Head/Dipole1900 5/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 84.175 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 17.108 mW/g

SAR(1 g) = 9.23 mW/g; SAR(10 g) = 4.82 mW/g

Maximum value of SAR (measured) = 10.2 W/kg



$$0 \text{ dB} = 10.7 \text{ W/kg} = 20.55 \text{ dB W/kg}$$

SystemPerformanceCheck-D2300 for Head

Date: 2019.08.15.

DUT: Dipole 2300 MHz D2300V2; Type: D2300V2 SN:818;

Communication System: CW; Communication System Band: D2300 (2300.0 MHz); Frequency: 2300 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2300$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 38.45$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(7.72,7.72,7.72); Calibrated: 2020.06.16.;

Electronics: DAE4 Sn876; Calibrated: 2020.03.03.

Head/Dipole2300/Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 84.317 V/m; Power Drift = 0.05 dB

Fast SAR: SAR(1 g) = 12.8 mW/g; SAR(10 g) = 5.69 mW/g

Maximum value of SAR (interpolated) = 17.4 W/kg

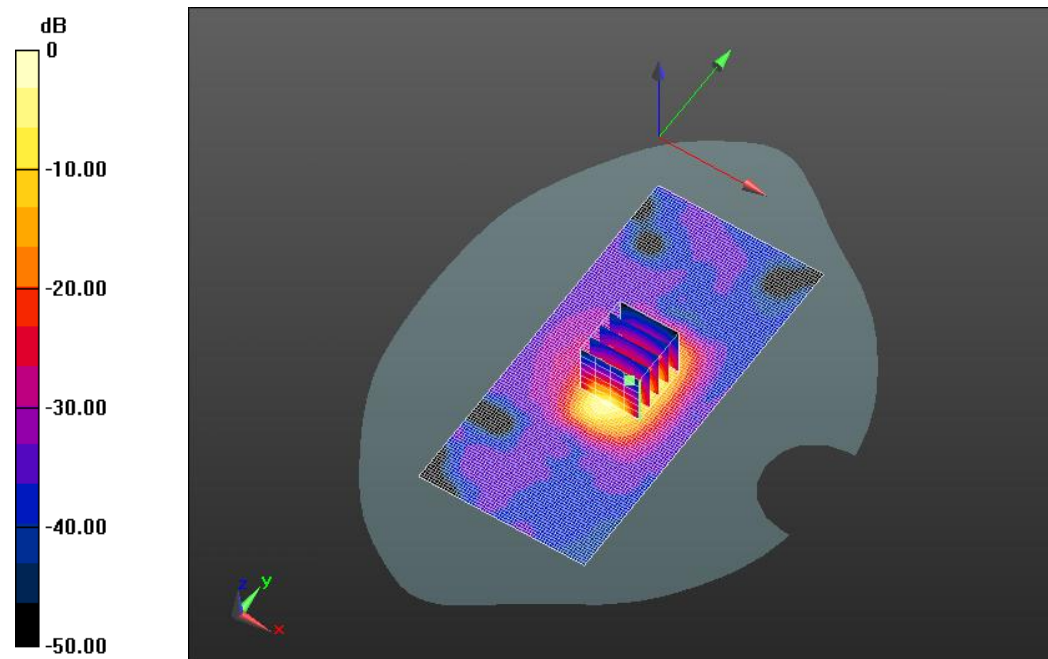
Head/Dipole2300/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 84.317 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 28.853 mW/g

SAR(1 g) = 12.3 mW/g; SAR(10 g) = 5.99 mW/g

Maximum value of SAR (measured) = 13.1 W/kg



0 dB = 17.4 W/kg = 24.79 dB W/kg

SystemPerformanceCheck-D2450 for Head

Date: 2019.08.15.

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

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.76$ mho/m; $\epsilon_r = 37.97$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(7.49,7.49,7.49); Calibrated: 2020.06.16.;

Electronics: DAE4 Sn876; Calibrated: 2020.03.03.

Head/Dipole2450/Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 84.117 V/m; Power Drift = 0.05 dB

Fast SAR: SAR(1 g) = 12.8 mW/g; SAR(10 g) = 6.69 mW/g

Maximum value of SAR (interpolated) = 17.4 W/kg

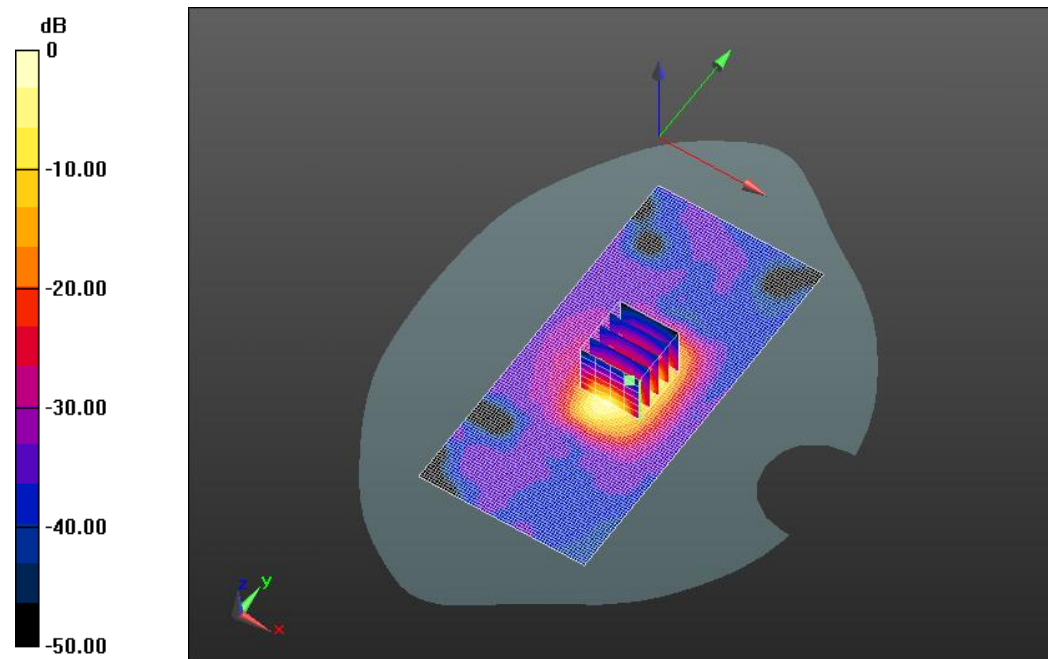
Head/Dipole2450/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 84.117 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 28.853 mW/g

SAR(1 g) = 12.6 mW/g; SAR(10 g) = 6.65 mW/g

Maximum value of SAR (measured) = 13.3 W/kg



0 dB = 17.4 W/kg = 24.79 dB W/kg

SystemPerformanceCheck-D2600 for Head

Date: 2018.08.16

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2 SN:1074;

Communication System: CW; Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2480$ MHz; $\sigma = 1.88$ mho/m; $\epsilon_r = 37.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(7.30,7.30,7.30); Calibrated: 2020.06.16.;

Electronics: DAE4 Sn876; Calibrated: 2020.03.03.

Head/Dipole2600MHz/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 85.009 V/m; Power Drift = 0.14 dB

Fast SAR: SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.46 mW/g

Maximum value of SAR (interpolated) = 15.3 W/kg

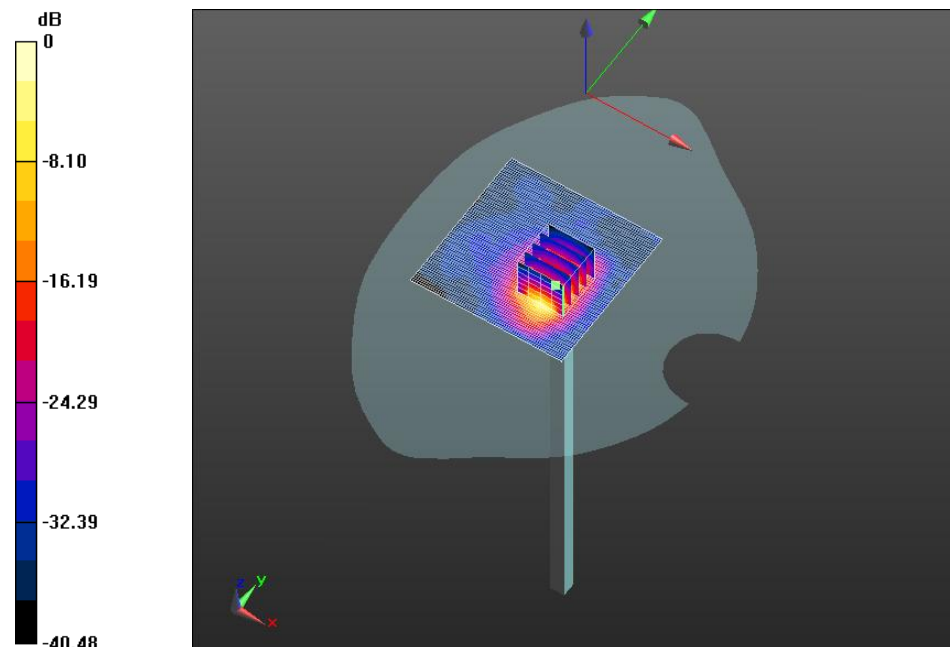
Head/Dipole2600MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 85.009 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 36.748 mW/g

SAR(1 g) = 13.7 mW/g; SAR(10 g) = 6.25 mW/g

Maximum value of SAR (measured) = 15.6 W/kg



$$0 \text{ dB} = 15.3 \text{ W/kg} = 23.70 \text{ dB W/kg}$$

SystemPerformanceCheck-D5GHz for Head

Date: 2020.08.17.

DUT: Dipole 5GHz D5GHzV2; Type: D5GHzV2 SN: 1185;

Communication System: CW; Communication System Band: D5GHz (5000.0 – 6000.0 MHz); Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.64$ mho/m; $\epsilon_r = 36.69$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASYS Configuration: Probe: EX3DV4 - SN3881; ConvF(5.29, 5.29, 5.29); Calibrated: 2020.06.16.; Electronics: Electronics: DAE4 Sn876; Calibrated: 2020.03.03.

Head5.25/5.25G /Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 52.69 V/m; Power Drift = 0.02 dB

Fast SAR: SAR(1 g) = 8.51 mW/g; SAR(10 g) = 2.33 mW/g

Maximum value of SAR (interpolated) = 10.71 W/kg

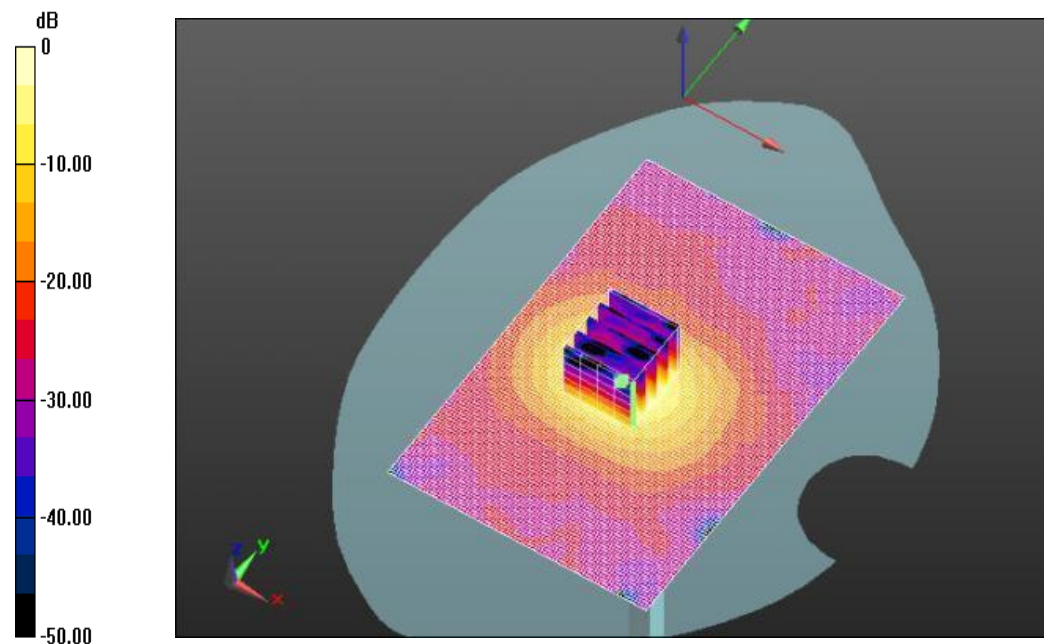
Head5.25/5.25G /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 52.69 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 21.628 mW/g

SAR(1 g) = 8.05 mW/g; SAR(10 g) = 2.22 mW/g

Maximum value of SAR (measured) = 10.29 W/kg



0 dB = 9.71 W/kg = 18.80 dB W/kg

SystemPerformanceCheck-D5GHz for Head

Date: 2020.08.17.

DUT: Dipole 5GHz D5GHzV2; Type: D5GHzV2 SN: 1185;

Communication System: CW; Communication System Band: D5GHz (5000.0 – 6000.0 MHz); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.10$ mho/m; $\epsilon_r = 36.7$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASYS Configuration: Probe: EX3DV4 - SN3881; ConvF(4.70, 4.70, 4.70); Calibrated: 2020.06.16.; Electronics: Electronics: DAE4 Sn876; Calibrated: 2020.03.03.

Head5.6/5.6G /Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 67.52 V/m; Power Drift = -0.01 dB

Fast SAR: SAR(1 g) = 8.14 mW/g; SAR(10 g) = 2.66 mW/g

Maximum value of SAR (interpolated) = 12.14 W/kg

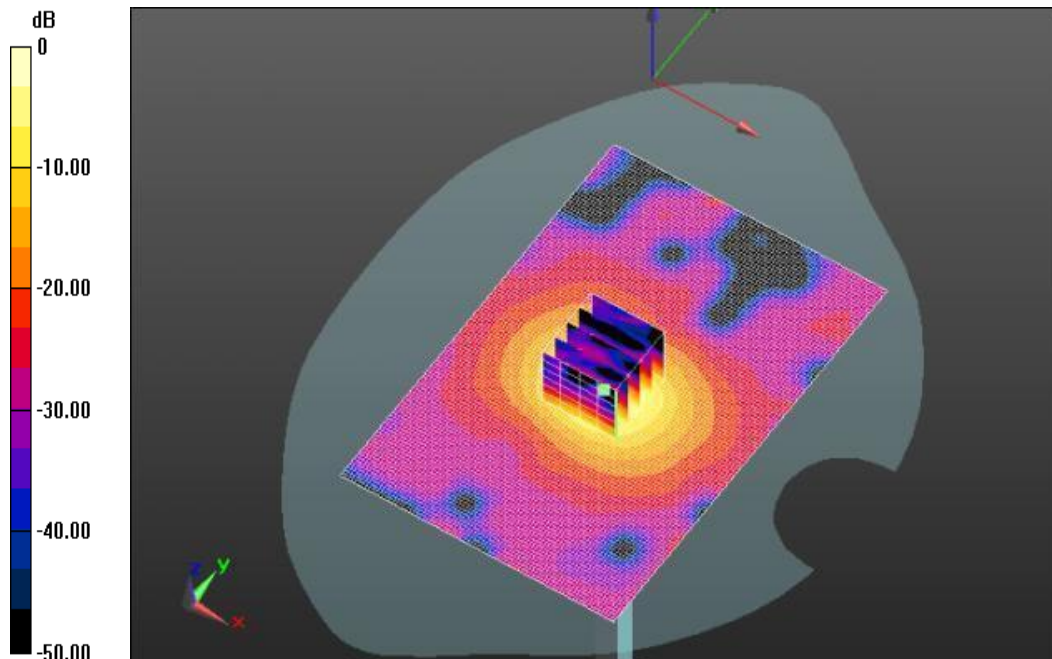
Head5.6/5.6G /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 67.52 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 22.355 mW/g

SAR(1 g) = 8.29 mW/g; SAR(10 g) = 2.44 mW/g

Maximum value of SAR (measured) = 12.33 W/kg



0 dB = 12.14 W/kg = 24.22 dB W/kg

SystemPerformanceCheck-D5GHz for Head

Date: 2020.08.17.

DUT: Dipole 5GHz D5GHzV2; Type: D5GHzV2 SN: 1185;

Communication System: CW; Communication System Band: D5GHz (5000.0 – 6000.0 MHz); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5750$ MHz; $\sigma = 5.21$ mho/m; $\epsilon_r = 35.19$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

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

DASYS Configuration: Probe: EX3DV4 - SN3881; ConvF(4.78, 4.78, 4.78); Calibrated: 2020.06.16.; Electronics: Electronics: DAE4 Sn876; Calibrated: 2020.03.03.

Head5.75/5.75G /Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 65.22 V/m; Power Drift = -0.01 dB

Fast SAR: SAR(1 g) = 8.10 mW/g; SAR(10 g) = 2.42 mW/g

Maximum value of SAR (interpolated) = 12.15 W/kg

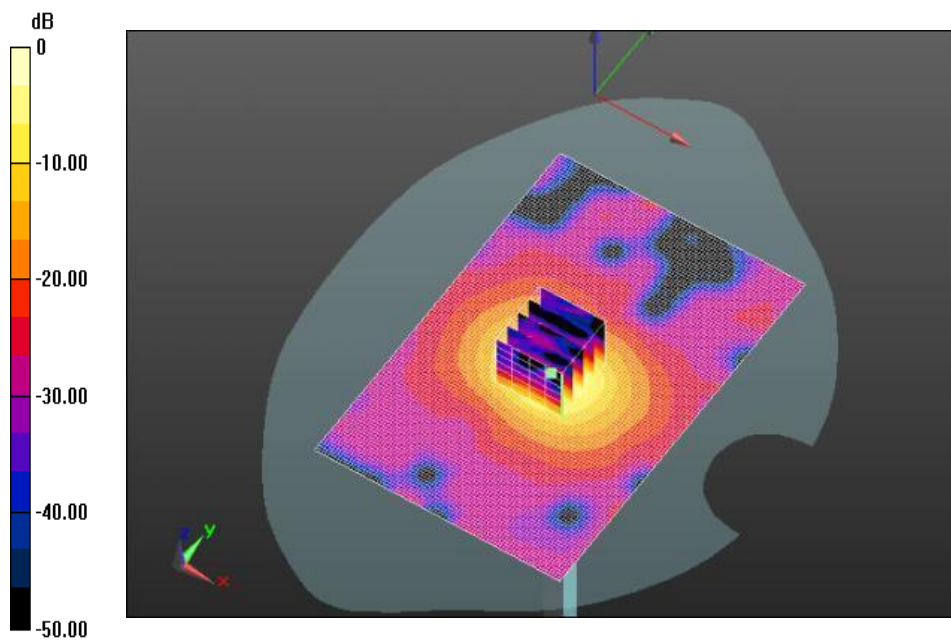
Head5.75/5.75G /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 65.22 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 22.355 mW/g

SAR(1 g) = 8.23mW/g; SAR(10 g) = 2.32 mW/g

Maximum value of SAR (measured) = 12.39 W/kg



0 dB = 12.15 W/kg = 24.14 dB W/kg