

## **APPENDIX A: SYSTEM CHECKING SCANS**

## SystemPerformanceCheck-D750 for Head

Date: 2018.09.05.

### Medium: HSL750

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

Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.84$  mho/m;  $\epsilon_r = 41.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(9.73, 9.73, 9.73); Calibrated: 2018.07.14.;

Electronics: DAE4 Sn876; Calibrated: 2018.03.22.

**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

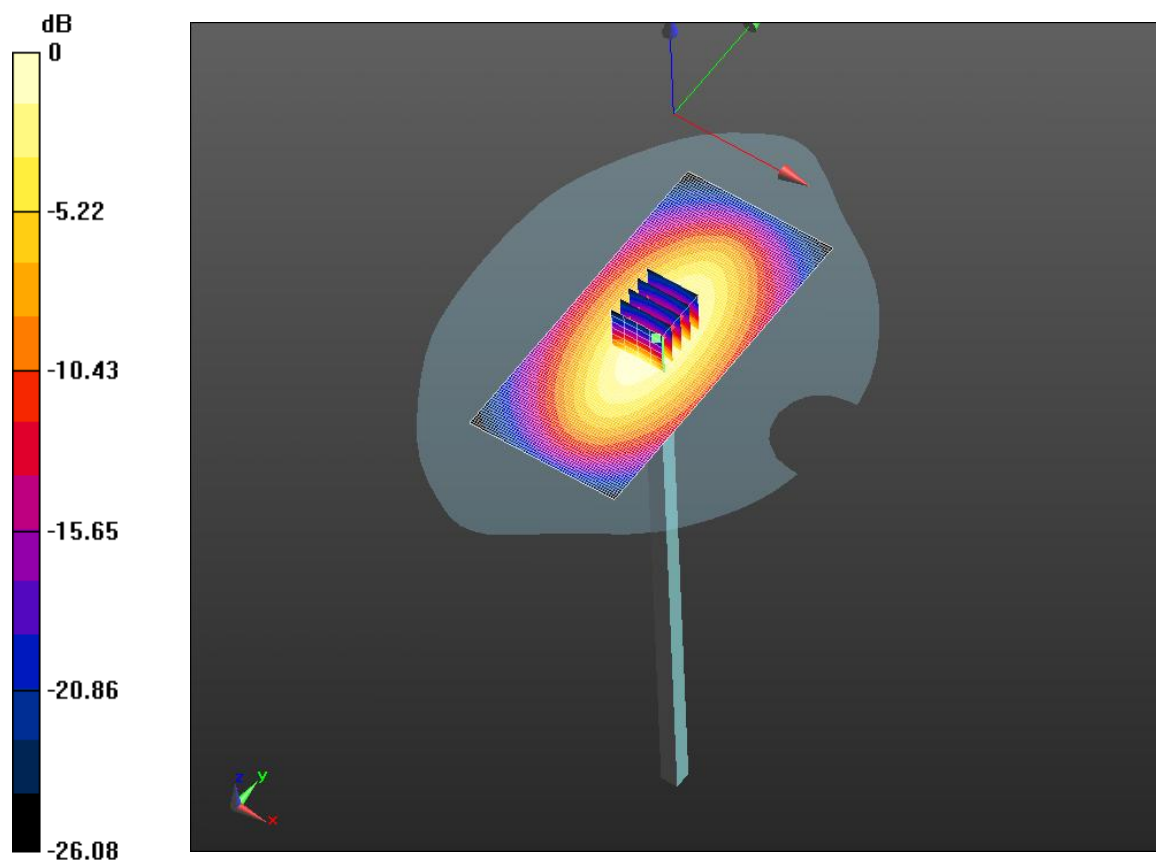
**Head/Dipole750 2/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

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 dB = 2.22 W/kg = 6.94 dB W/kg

## SystemPerformanceCheck-D750 for Body

Date: 2018.09.05.

### Medium: MSL750

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

Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.93$  mho/m;  $\epsilon_r = 54.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(9.73, 9.73, 9.73); Calibrated: 2018.07.14.;

Electronics: DAE4 Sn876; Calibrated: 2018.03.22.

**Body/Dipole835 6/Area Scan (61x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 48.689 V/m; Power Drift = 0.01 dB

**Fast SAR: SAR(1 g) = 2.12 mW/g; SAR(10 g) = 1.42 mW/g**

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

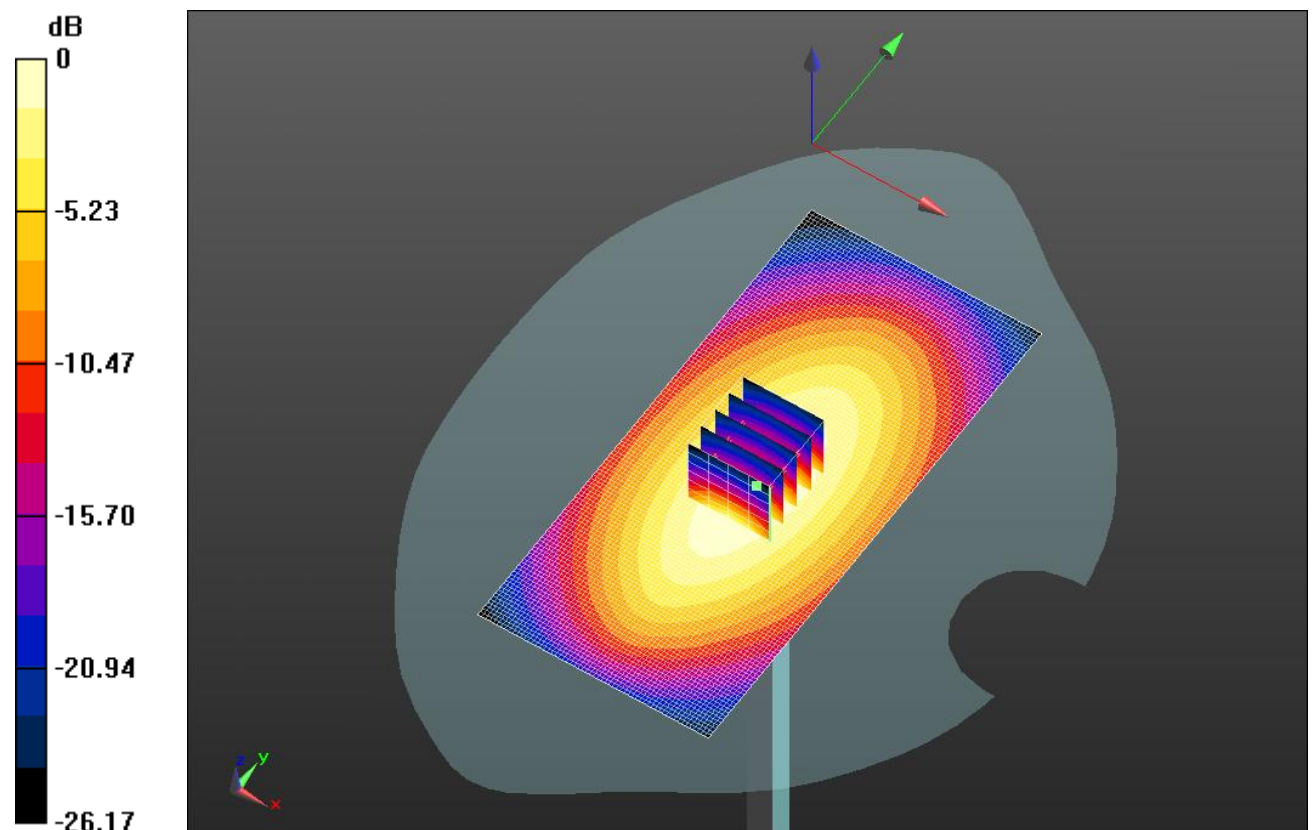
**Body/Dipole835 6/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 48.689 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.865 mW/g

**SAR(1 g) = 2.14 mW/g; SAR(10 g) = 1.53 mW/g**

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



0 dB = 2.28 W/kg = 7.14 dB W/kg

## SystemPerformanceCheck-D835 for Head

Date: 2018.09.06.

### Medium: HSL835

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

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(9.47, 9.47, 9.47); Calibrated: 2018.07.14.;

Electronics: DAE4 Sn876; Calibrated: 2018.03.22.

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

Reference Value = 54.453 V/m; Power Drift = -0.11 dB

**Fast SAR: SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.62 mW/g**

Maximum value of SAR (interpolated) = 2.61 W/kg

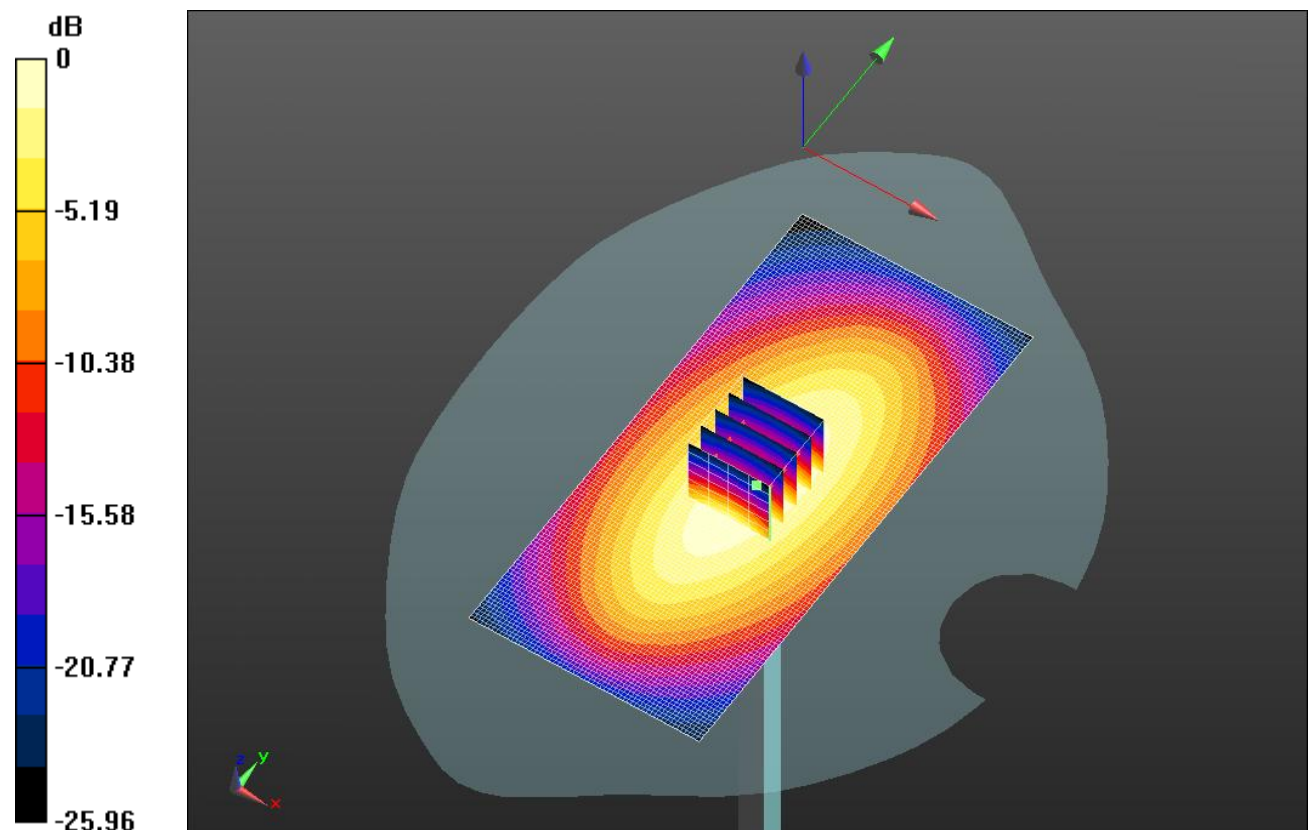
**Head/Dipole835/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.453 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 3.753 mW/g

**SAR(1 g) = 2.45 mW/g; SAR(10 g) = 1.58 mW/g**

Maximum value of SAR (measured) = 2.64 W/kg



0 dB = 2.61 W/kg = 8.33 dB W/kg

## SystemPerformanceCheck-D835 for Body

Date: 2018.09.06.

### Medium: MSL835

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

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 55.87$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(9.57, 9.57, 9.57); Calibrated: 2018.07.14.;

Electronics: DAE4 Sn876; Calibrated: 2018.03.22.

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

Reference Value = 48.690 V/m; Power Drift = -0.11 dB

**Fast SAR: SAR(1 g) = 2.19 mW/g; SAR(10 g) = 1.5 mW/g**

Maximum value of SAR (interpolated) = 2.24 W/kg

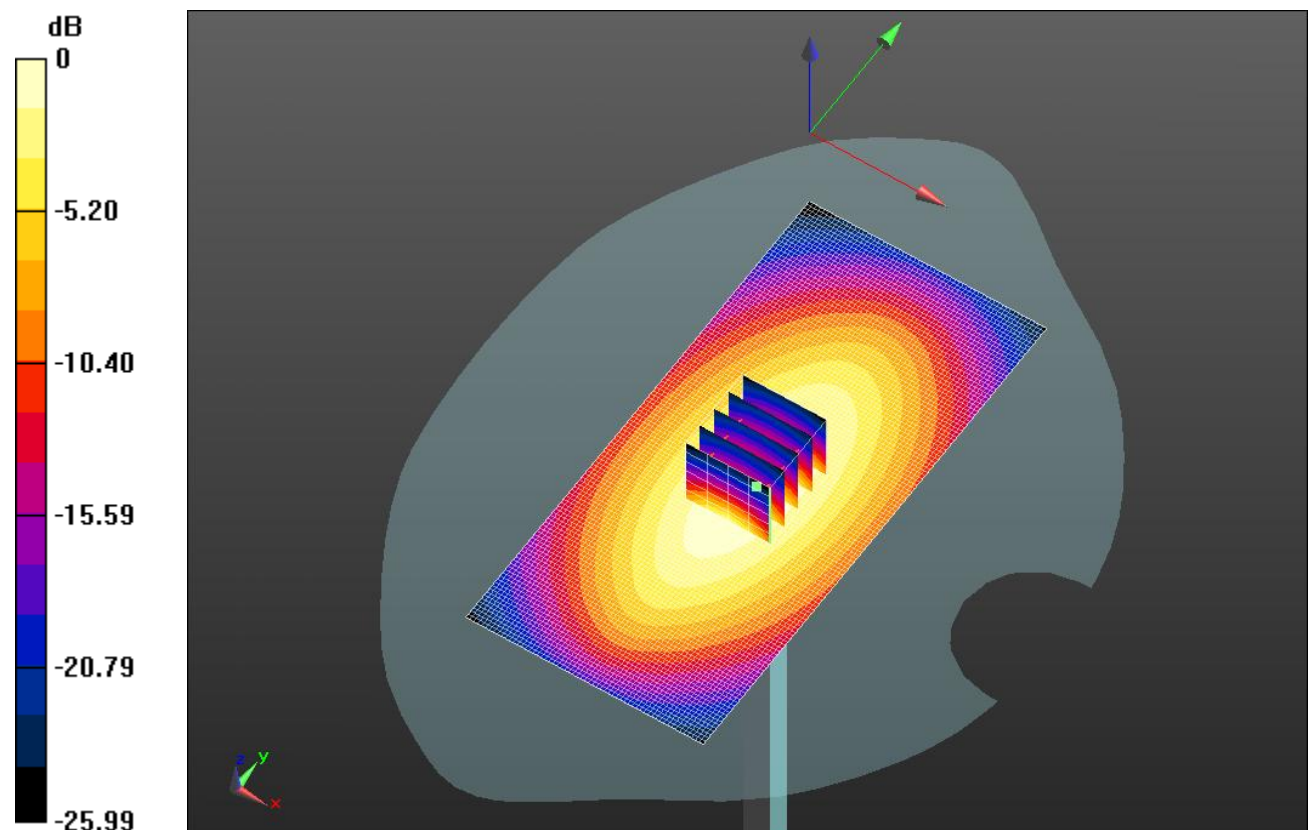
**Body/Dipole835/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 48.690 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 2.789 mW/g

**SAR(1 g) = 2.18 mW/g; SAR(10 g) = 1.59 mW/g**

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



0 dB = 2.24 W/kg = 7.01 dB W/kg

## SystemPerformanceCheck-D1900 for Head

Date: 2018.09.07.

### Medium: HSL1900

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/m<sup>3</sup>

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(7.92, 7.92, 7.92); Calibrated: 2018.07.14.;

Electronics: DAE4 Sn876; Calibrated: 2018.03.22.

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

Reference Value = 88.035 V/m; Power Drift = -0.07 dB

**Fast SAR: SAR(1 g) = 10.1 mW/g; SAR(10 g) = 5.45 mW/g**

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

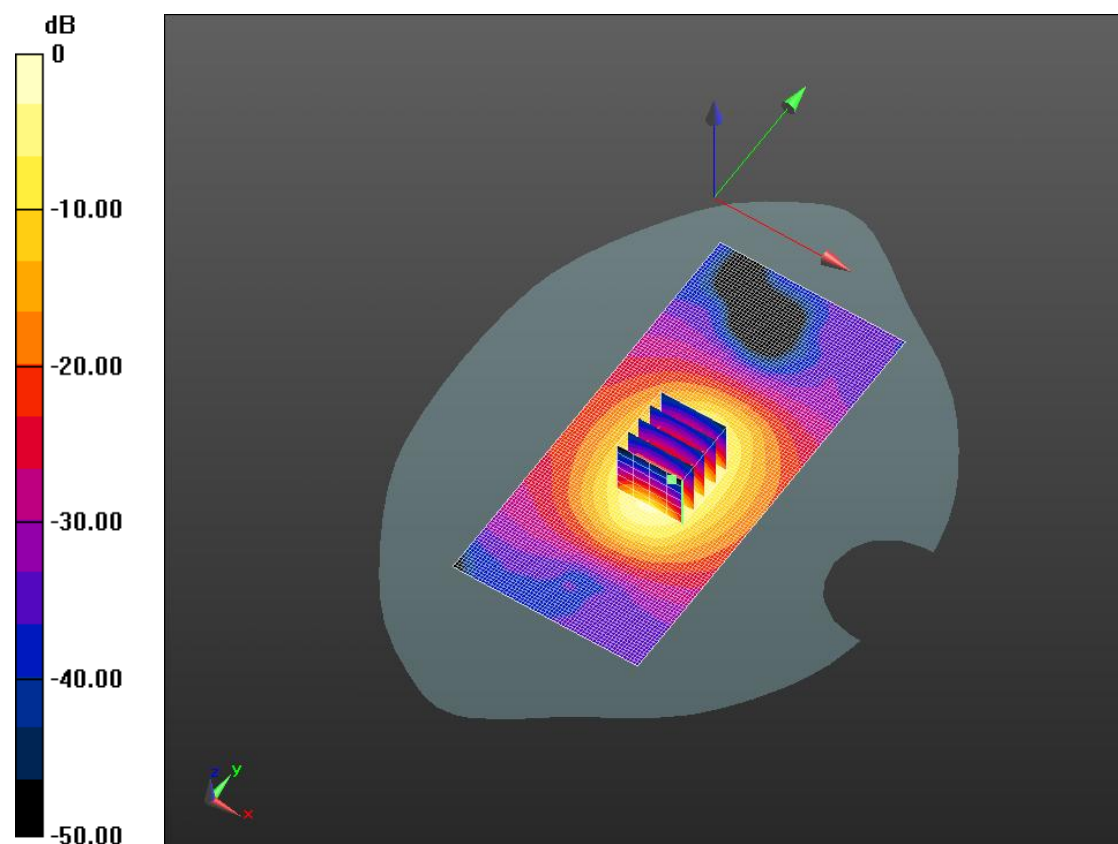
**Head/Dipole1900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 88.035 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 18.284 mW/g

**SAR(1 g) = 9.89 mW/g; SAR(10 g) = 5.17 mW/g**

Maximum value of SAR (measured) = 11.0 W/kg



0 dB = 11.6 W/kg = 21.29 dB W/kg

## SystemPerformanceCheck-D1900 for Body

Date: 2018.09.07.

**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;  $\sigma = 1.54$  mho/m;  $\epsilon_r = 54.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(7.64, 7.64, 7.64); Calibrated: 2018.07.14.;

Electronics: DAE4 Sn876; Calibrated: 2018.03.22.

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

Reference Value = 88.213 V/m; Power Drift = 0.03 dB

**Fast SAR: SAR(1 g) = 10.23 mW/g; SAR(10 g) = 5.49 mW/g**

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

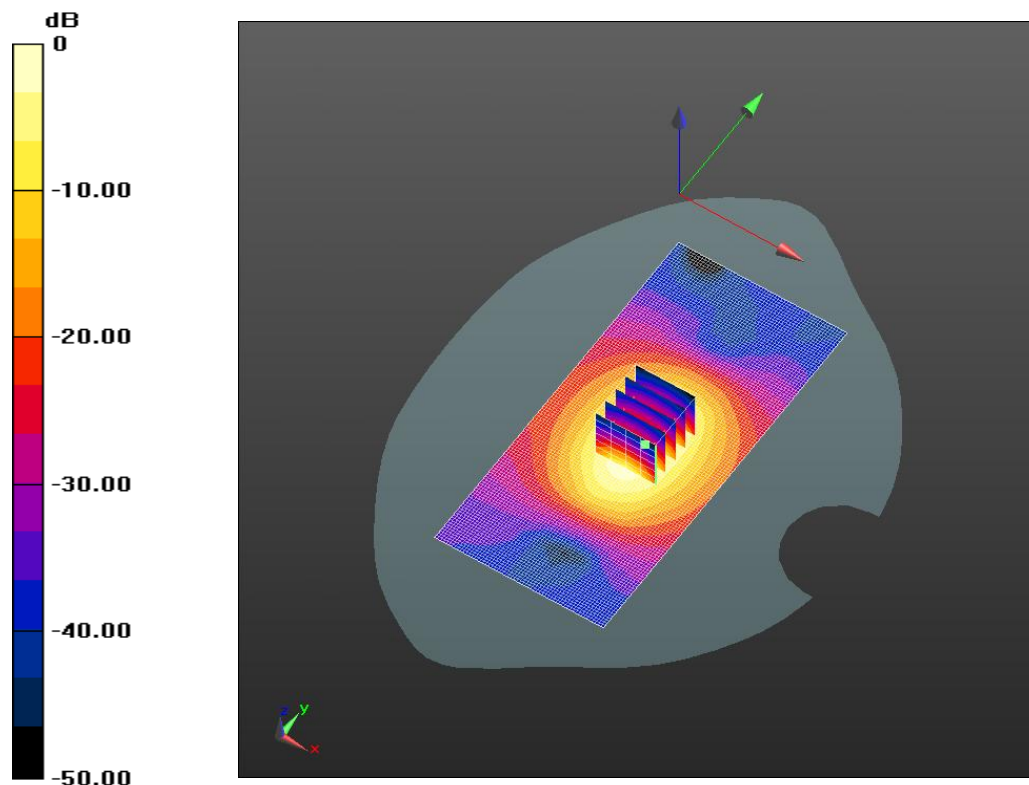
**Body/Dipole1900 /Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 88.213 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 18.814 mW/g

**SAR(1 g) = 10.21 mW/g; SAR(10 g) = 5.32 mW/g**

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



0 dB = 11.7 W/kg = 21.37 dB W/kg

## SystemPerformanceCheck-D750 for Body

Date: 2018.11.01.

### Medium: MSL750

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

Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.93$  mho/m;  $\epsilon_r = 54.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(9.73, 9.73, 9.73); Calibrated: 2018.07.14.;

Electronics: DAE4 Sn876; Calibrated: 2018.03.22.

**Body/Dipole835 6/Area Scan (61x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 47.611 V/m; Power Drift = 0.01 dB

**Fast SAR: SAR(1 g) = 2.10 mW/g; SAR(10 g) = 1.41 mW/g**

Maximum value of SAR (interpolated) = 2.24 W/kg

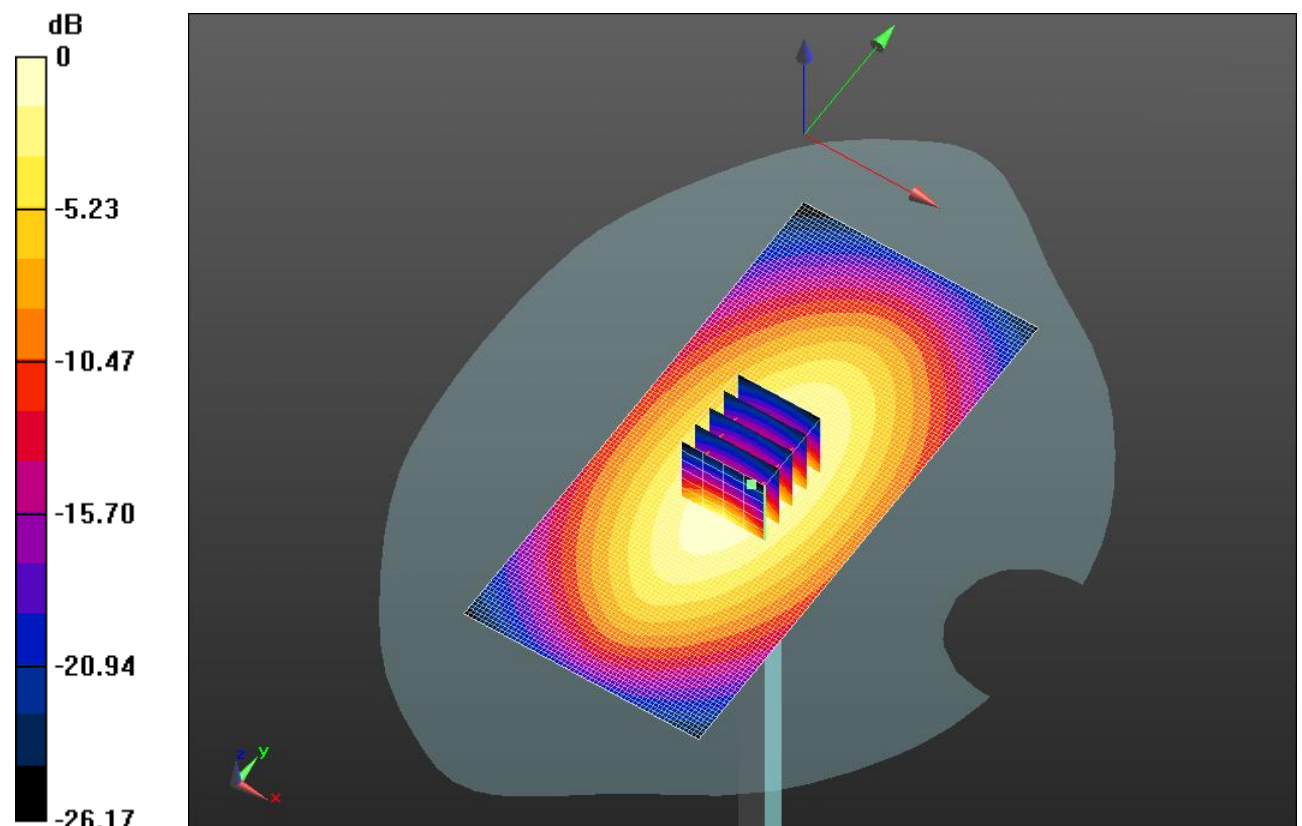
**Body/Dipole835 6/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 47.611 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.865 mW/g

**SAR(1 g) = 2.16 mW/g; SAR(10 g) = 1.54 mW/g**

Maximum value of SAR (measured) = 2.24 W/kg



0 dB = 2.24 W/kg = 7.11 dB W/kg



## SystemPerformanceCheck-D835 for Body

Date: 2018.11.01.

### Medium: MSL835

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

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.92$  mho/m;  $\epsilon_r = 55.81$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(9.57, 9.57, 9.57); Calibrated: 2018.07.14.;

Electronics: DAE4 Sn876; Calibrated: 2018.03.22.

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

Reference Value = 48.330 V/m; Power Drift = -0.11 dB

**Fast SAR: SAR(1 g) = 2.11 mW/g; SAR(10 g) = 1.44 mW/g**

Maximum value of SAR (interpolated) = 2.21 W/kg

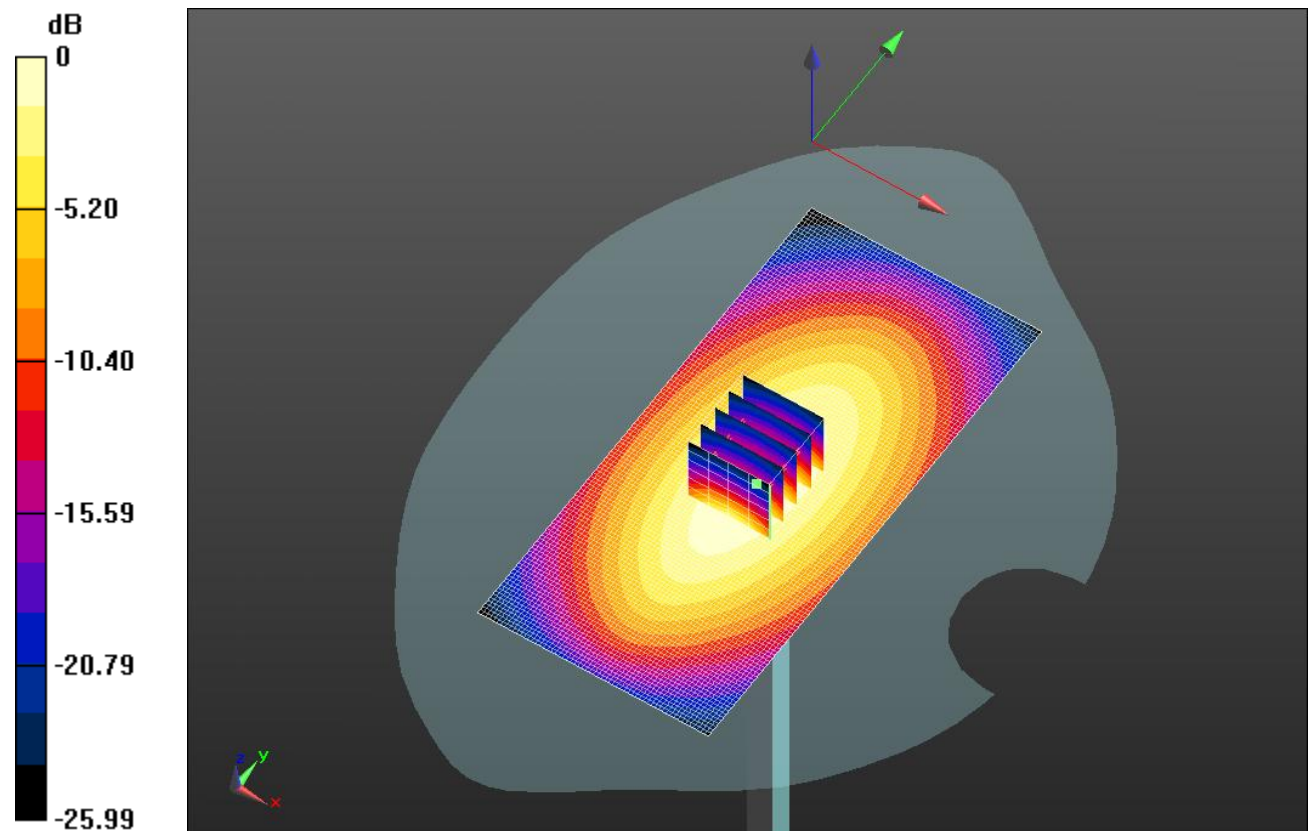
**Body/Dipole835/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 48.330 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 2.789 mW/g

**SAR(1 g) = 2.21 mW/g; SAR(10 g) = 1.49 mW/g**

Maximum value of SAR (measured) = 2.21 W/kg



0 dB = 2.21 W/kg = 6.98 dB W/kg

## SystemPerformanceCheck-D1900 for Body

Date: 2018.11.01.

**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;  $\sigma = 1.51$  mho/m;  $\epsilon_r = 54.22$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY5 Configuration: Probe: EX3DV4 - SN3881; ConvF(7.64, 7.64, 7.64); Calibrated: 2018.07.14.;

Electronics: DAE4 Sn876; Calibrated: 2018.03.22.

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

Reference Value = 88.789 V/m; Power Drift = 0.03 dB

**Fast SAR: SAR(1 g) = 10.20 mW/g; SAR(10 g) = 5.44 mW/g**

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

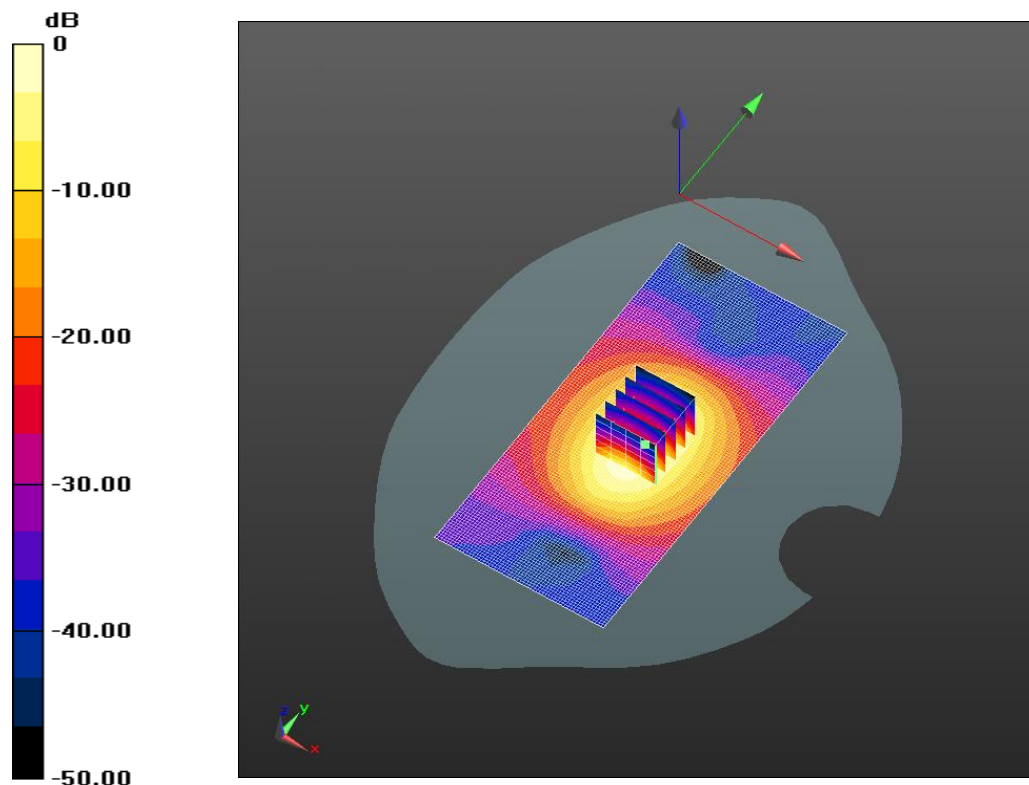
**Body/Dipole1900 /Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 88.789 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 18.811 mW/g

**SAR(1 g) = 10.25 mW/g; SAR(10 g) = 5.42 mW/g**

Maximum value of SAR (measured) = 11.7 W/kg



$$0 \text{ dB} = 11.7 \text{ W/kg} = 21.37 \text{ dB W/kg}$$