

# Appendix B. MEASUREMENT SCANS

## SystemPerformanceCheck-D750 for Head

Date: 2021.06.08.

### Dipole750

Communication System: UID 0, Generic GSM; Communication System Band: GSM 750 (747.0 - 763.0 MHz);  
Frequency: 755 MHz; Communication System PAR: 9.191 dB; PMF: 2.88104  
Medium parameters used (interpolated):  $f = 755$  MHz;  $\sigma = 0.904$  S/m;  $\epsilon_r = 41.79$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN7623; ConvF(10.48, 10.48, 10.48) @ 755 MHz; Calibrated: 11/6/2020
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1636; Calibrated: 11/17/2020
- Phantom: SAM3; Type: QD 000 P41 AA; Serial: 2025
- DASYS2 52.10.4(1527); SEMCAD X 14.6.14(7483)

**Configuration/Dipole 750MHz/Area Scan (61x131x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 55.04 V/m; Power Drift = 0.02 dB

**Fast SAR: SAR(1 g) = 2.05 W/kg; SAR(10 g) = 1.29 W/kg**

Maximum value of SAR (interpolated) = 2.77 W/kg

**Configuration/Dipole 750MHz/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 55.04 V/m; Power Drift = 0.02 dB

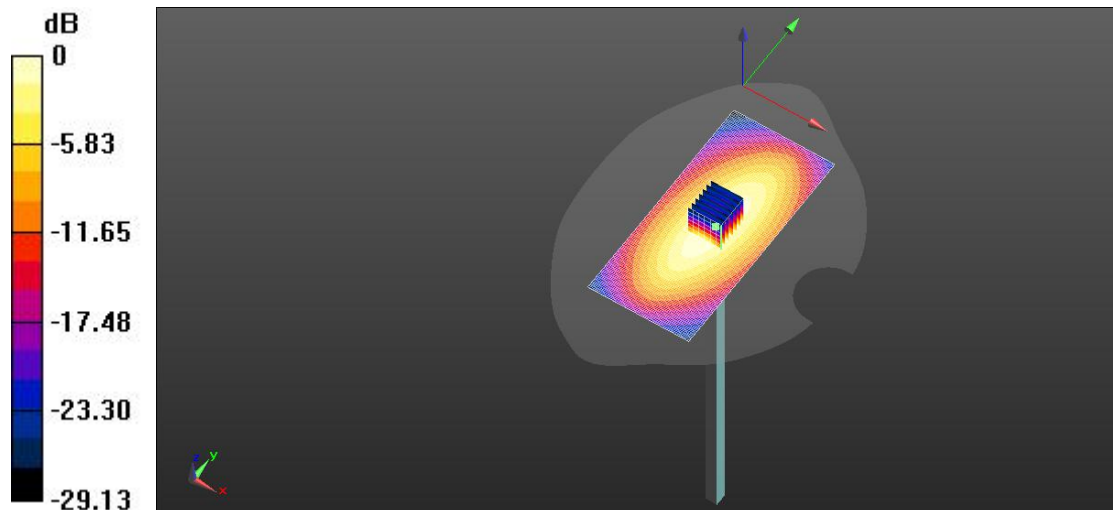
Peak SAR (extrapolated) = 4.19 W/kg

**SAR(1 g) = 2.09 W/kg; SAR(10 g) = 1.38 W/kg**

Smallest distance from peaks to all points 3 dB below = 18 mm

Ratio of SAR at M2 to SAR at M1 = 63.4%

Maximum value of SAR (measured) = 2.80 W/kg



## SystemPerformanceCheck-D835 for Head

Date: 2021.06.09.

### Dipole835V2

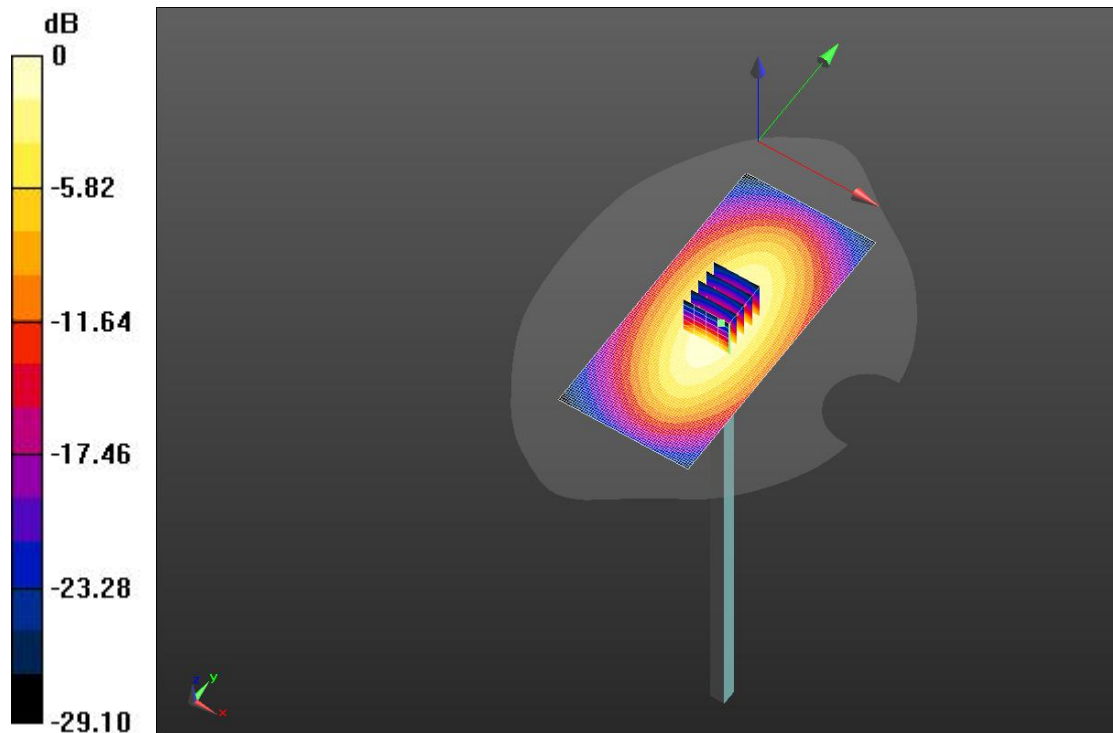
Communication System: UID 0, CW; Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.89$  S/m;  $\epsilon_r = 41.5$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN7623; ConvF(10.21, 10.21, 10.21) @ 835 MHz; Calibrated: 11/6/2020
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1636; Calibrated: 11/17/2020
- Phantom: SAM3; Type: QD 000 P41 AA; Serial: 2025
- DASYS 52.10.4(1527); SEMCAD X 14.6.14(7483)

**Head/Dipole835/Area Scan (61x131x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm  
Reference Value = 55.21 V/m; Power Drift = -0.03 dB  
**Fast SAR: SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.65 W/kg**  
Maximum value of SAR (interpolated) = 2.67 W/kg

**Head/Dipole835/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 55.21 V/m; Power Drift = -0.03 dB  
Peak SAR (extrapolated) = 3.72 W/kg  
**SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.62 W/kg**  
Smallest distance from peaks to all points 3 dB below = 20 mm  
Ratio of SAR at M2 to SAR at M1 = 66.9%  
Maximum value of SAR (measured) = 2.68 W/kg



## SystemPerformanceCheck-D1800 for Head

Date: 2021.06.10.

### Dipole1800V2

Communication System: UID 0, CW; Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 1800$  MHz;  $\sigma = 1.35$  S/m;  $\epsilon_r = 40.17$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN7623; ConvF(8.82, 8.82, 8.82) @ 1800 MHz; Calibrated: 11/6/2020
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1636; Calibrated: 11/17/2020
- Phantom: SAM3; Type: QD 000 P41 AA; Serial: 2025
- DASYS 52.10.4(1527); SEMCAD X 14.6.14(7483)

**Head/Dipole1800/Area Scan (61x131x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 90.65 V/m; Power Drift = 0.06 dB

**Fast SAR: SAR(1 g) = 10.5 W/kg; SAR(10 g) = 5.56 W/kg**

Maximum value of SAR (interpolated) = 12.2 W/kg

**Head/Dipole1800/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 90.65 V/m; Power Drift = 0.06 dB

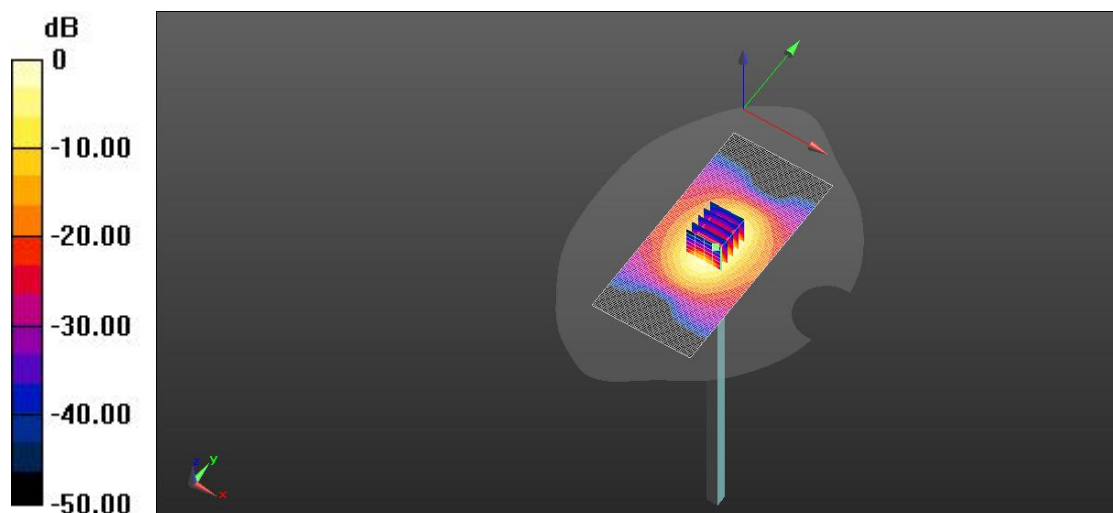
Peak SAR (extrapolated) = 18.3 W/kg

**SAR(1 g) = 9.4 W/kg; SAR(10 g) = 4.62 W/kg**

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 58.4%

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



## SystemPerformanceCheck-D1900 for Head

Date: 2021.06.11.

**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;  $\sigma = 1.45$  S/m;  $\epsilon_r = 39.75$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

- Probe: EX3DV4 - SN7623; ConvF(10.21, 10.21, 10.21) @ 836.6 MHz; Calibrated: 11/6/2020
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1636; Calibrated: 11/17/2020
- Phantom: SAM3; Type: QD 000 P41 AA; Serial: 2025
- DASYS2 52.10.4(1527); SEMCAD X 14.6.14(7483)

**Head/Dipole1900/Area Scan (91x131x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 90.45 V/m; Power Drift = 0.07 dB

**Fast SAR: SAR(1 g) = 10 W/kg; SAR(10 g) = 5.06 W/kg**

Maximum value of SAR (interpolated) = 13.0 W/kg

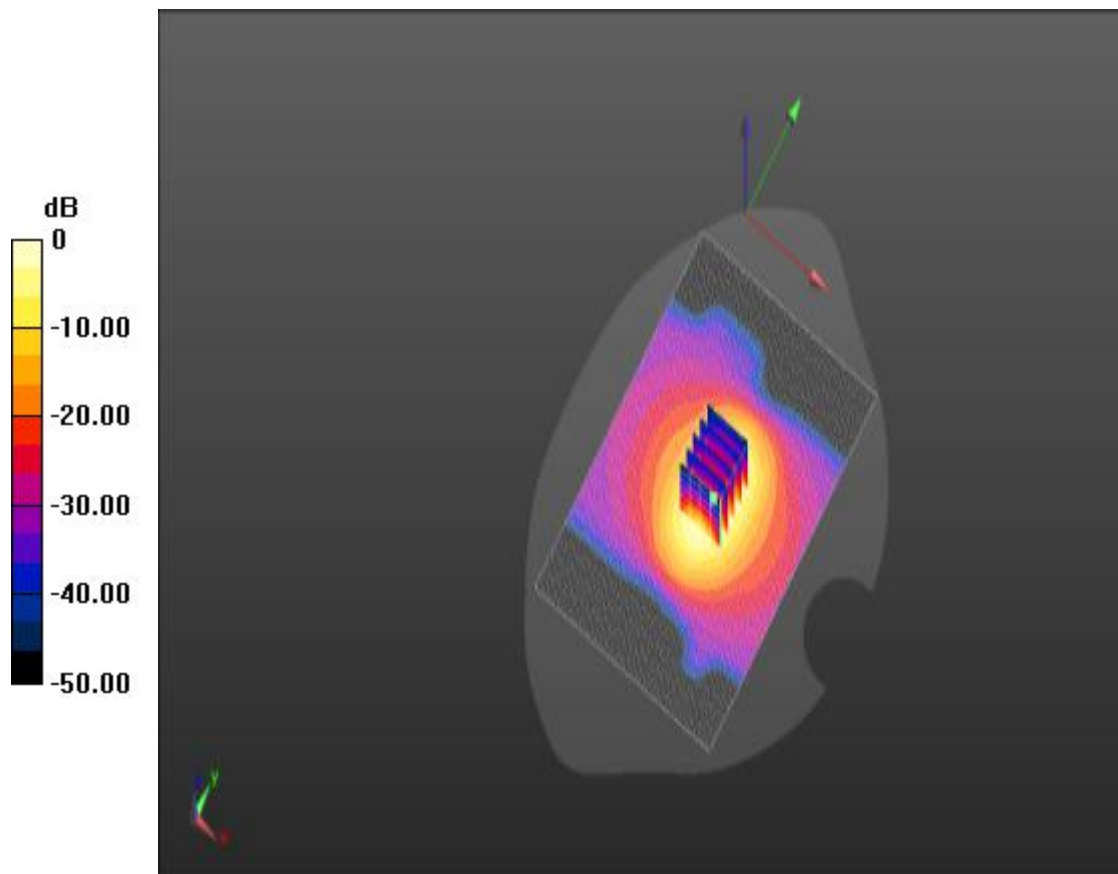
**Head/Dipole1900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 90.45 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 19.8 W/kg

**SAR(1 g) = 9.9 W/kg; SAR(10 g) = 5.05 W/kg**

Maximum value of SAR (measured) = 12.3 W/kg



0 dB = 13.0 W/kg = 11.14 dBW/kg

### SystemPerformanceCheck-D2450MHz for Head

Date: 2021.06.15.

**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;  $\sigma = 1.78$  S/m;  $\epsilon_r = 37.97$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

- Probe: EX3DV4 - SN7623; ConvF(10.21, 10.21, 10.21) @ 836.6 MHz; Calibrated: 11/6/2020
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1636; Calibrated: 11/17/2020
- Phantom: SAM3; Type: QD 000 P41 AA; Serial: 2025
- DASYS2 52.10.4(1527); SEMCAD X 14.6.14(7483)

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

Reference Value = 89.26 V/m; Power Drift = 0.07 dB

**Fast SAR: SAR(1 g) = 12.2 W/kg; SAR(10 g) = 5.45 W/kg**

Maximum value of SAR (interpolated) = 17.6 W/kg

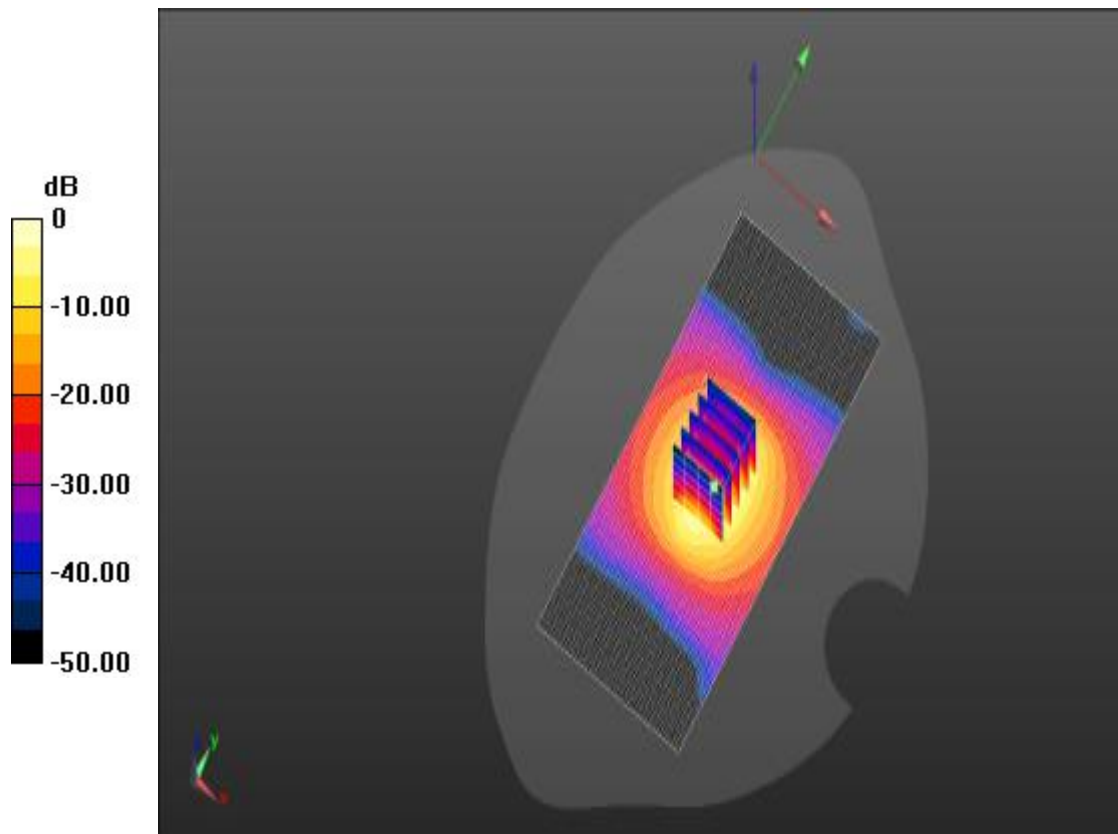
**Head/Dipole2450/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 89.26 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 29.6 W/kg

**SAR(1 g) = 12.1 W/kg; SAR(10 g) = 5.75 W/kg**

Maximum value of SAR (measured) = 16.1 W/kg



**SystemPerformanceCheck-D2600MHz for Head**

Date: 2021.06.16.

**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:  $f = 2600$  MHz;  $\sigma = 1.76$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

- Probe: EX3DV4 - SN7623; ConvF(10.21, 10.21, 10.21) @ 836.6 MHz; Calibrated: 11/6/2020
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1636; Calibrated: 11/17/2020
- Phantom: SAM3; Type: QD 000 P41 AA; Serial: 2025
- DASYS 52.10.4(1527); SEMCAD X 14.6.14(7483)

**Head/Dipole2600MHz/Area Scan (71x131x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 83.407 V/m; Power Drift = 0.14 dB

**Fast SAR: SAR(1 g) = 14.77 mW/g; SAR(10 g) = 5.92 mW/g**

Maximum value of SAR (interpolated) = 17.1 W/kg

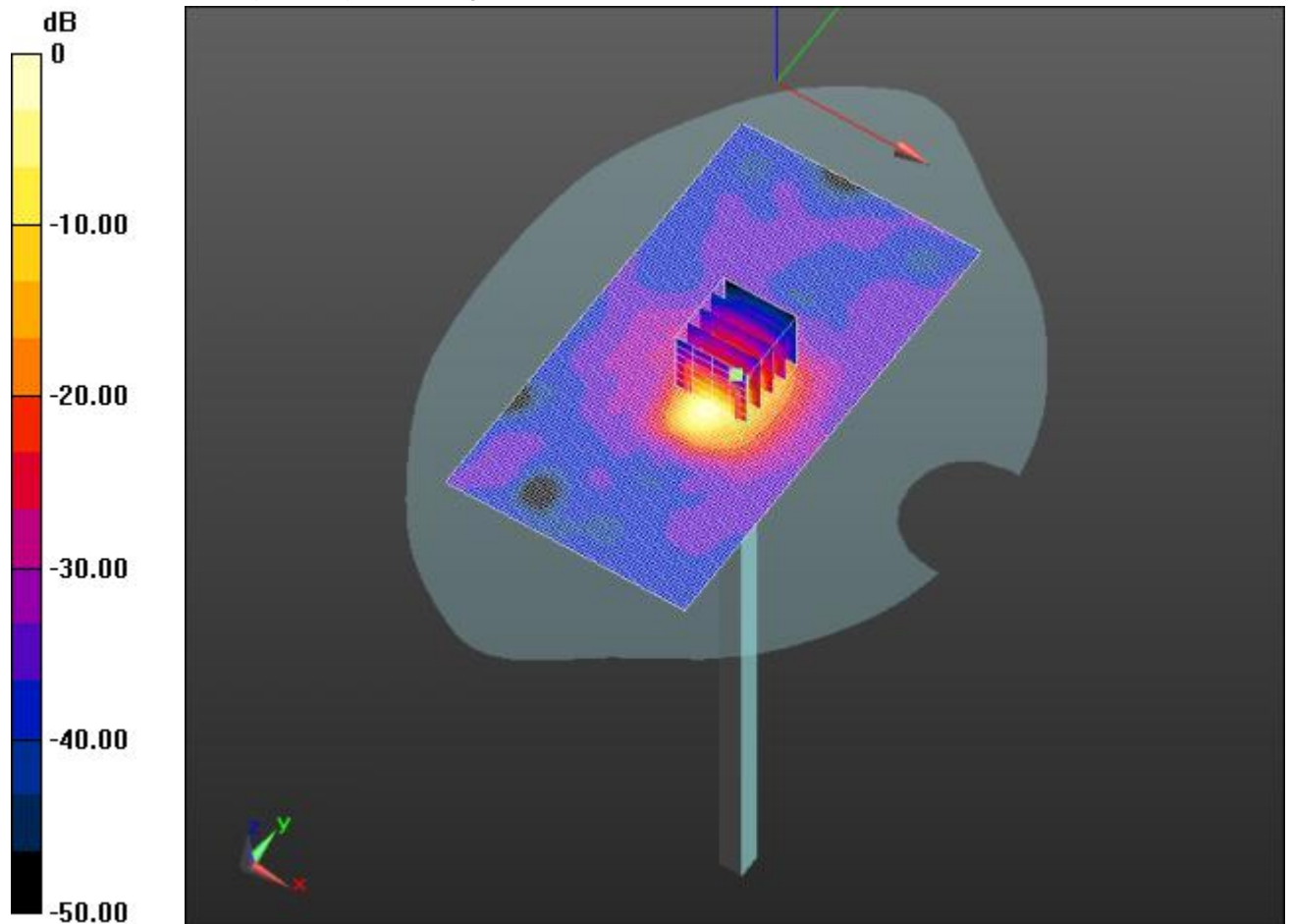
**Head/Dipole2600MHz/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 83.407 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 33.211 mW/g

**SAR(1 g) = 14.53 mW/g; SAR(10 g) = 5.95 mW/g**

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



0 dB = 17.1 W/kg = 24.66 dB W/kg