

## APPENDIX A: SYSTEM CHECKING SCANS

## 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;  $\sigma = 0.93$  S/m;  $\epsilon_r = 41.32$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

DASY Configuration:

- Probe: EX3DV4 –SN3881; ConvF(9.43, 9.43, 9.43) @ 835 MHz; Calibrated: 2021-07-23
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn876; Calibrated: 2021-03-11
- Phantom: SAM2; Type: QD 000 P41 AA;
- DASYS 52.8.8(1222) ; SEMCAD X 14.6.14(7483)

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

Reference Value = 59.90 V/m; Power Drift = 0.05 dB

**Fast SAR: SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.55 W/kg**

Maximum value of SAR (interpolated) = 3.87 W/kg

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

Reference Value = 59.90 V/m; Power Drift = 0.05 dB

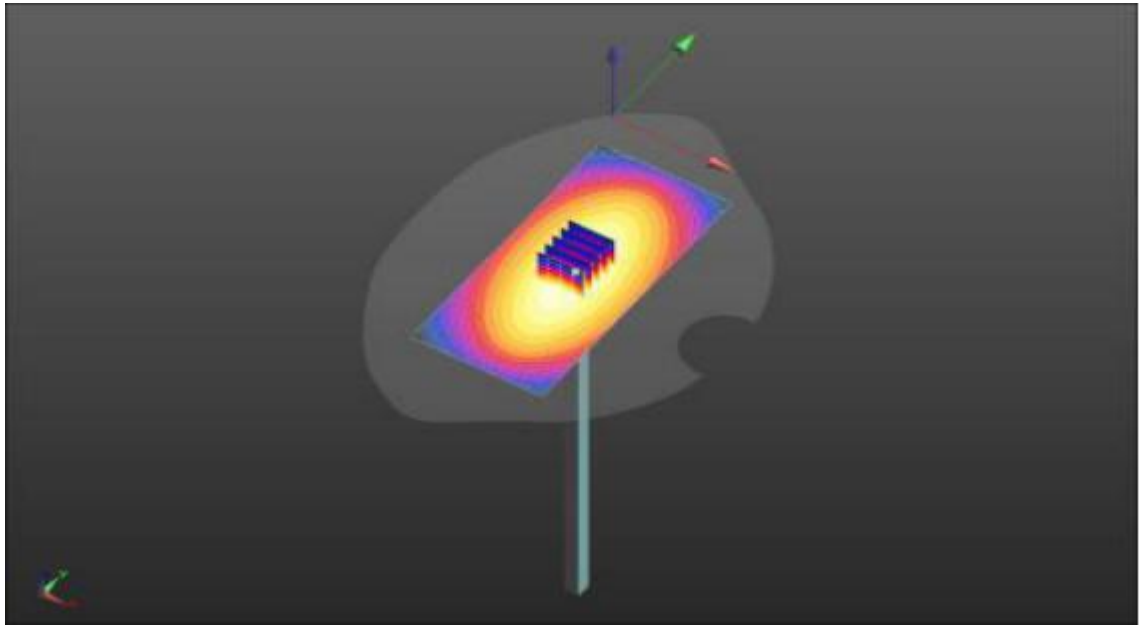
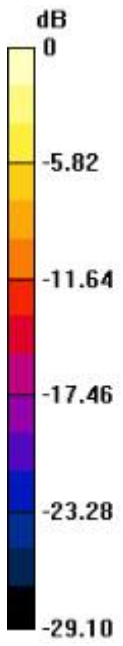
Peak SAR (extrapolated) = 3.71 W/kg

**SAR(1 g) = 2.37 W/kg; SAR(10 g) = 1.53 W/kg**

Smallest distance from peaks to all points 3 dB below = 18.1 mm

Ratio of SAR at M2 to SAR at M1 = 64.1%

Maximum value of SAR (measured) = 3.29 W/kg



0 dB = 3.87 W/kg = 5.17 dBW/kg

## Dipole900V2

Communication System: UID 0, CW; Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 900$  MHz;  $\sigma = 0.96$  S/m;  $\epsilon_r = 42.01$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

### DASY Configuration:

- Probe: EX3DV4 - SN3881; ConvF(10.21, 10.21, 10.21) @ 900 MHz; Calibrated: 2021-07-23
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn876; Calibrated: 2021-03-11
- Phantom: SAM2; Type: QD 000 P41 AA;
- DASYS5 52.8.8(1222) ; SEMCAD X 14.6.14(7483)

**Head/Dipole 900MHz 2/Area Scan (61x131x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 61.97 V/m; Power Drift = 0.03 dB

**Fast SAR: SAR(1 g) = 2.78 W/kg; SAR(10 g) = 1.77 W/kg**

Maximum value of SAR (interpolated) = 4.37 W/kg

**Head/Dipole 900MHz 2/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 61.97 V/m; Power Drift = 0.03 dB

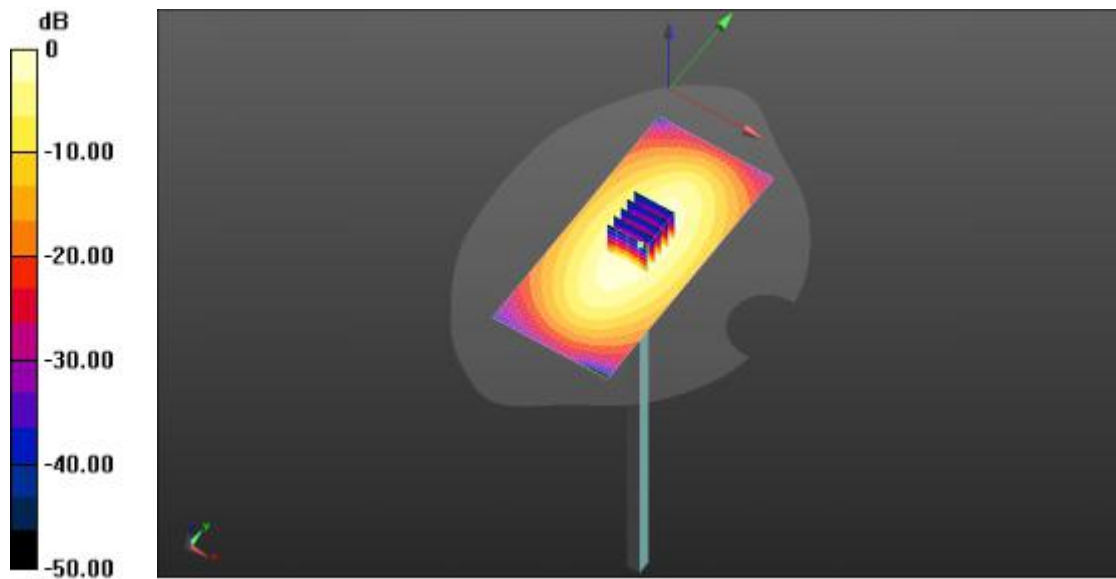
Peak SAR (extrapolated) = 4.35 W/kg

**SAR(1 g) = 2.74 W/kg; SAR(10 g) = 1.75 W/kg**

Smallest distance from peaks to all points 3 dB below = 17.0 mm

Ratio of SAR at M2 to SAR at M1 = 64.9%

Maximum value of SAR (measured) = 3.80 W/kg



0 dB = 4.37 W/kg = 5.81 dBW/kg

## Dipole 1750V2

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

Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.39$  S/m;  $\epsilon_r = 40.40$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

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

- Probe: EX3DV4 - SN3881; ConvF(8.59, 8.59, 8.59) @ 1750 MHz; Calibrated: 2021-07-23
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn876; Calibrated: 2021-03-11
- Phantom: SAM1; Type: QD 000 P41 AA;
- DASYS 52.8.8(1222) ; SEMCAD X 14.6.14(7483)

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

Reference Value = 97.15 V/m; Power Drift = -0.14 dB

**Fast SAR: SAR(1 g) = 8.88 W/g; SAR(10 g) = 4.67 W/g**

Maximum value of SAR (interpolated) = 14.06 W/kg

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

Reference Value = 97.15 V/m; Power Drift = -0.14 dB

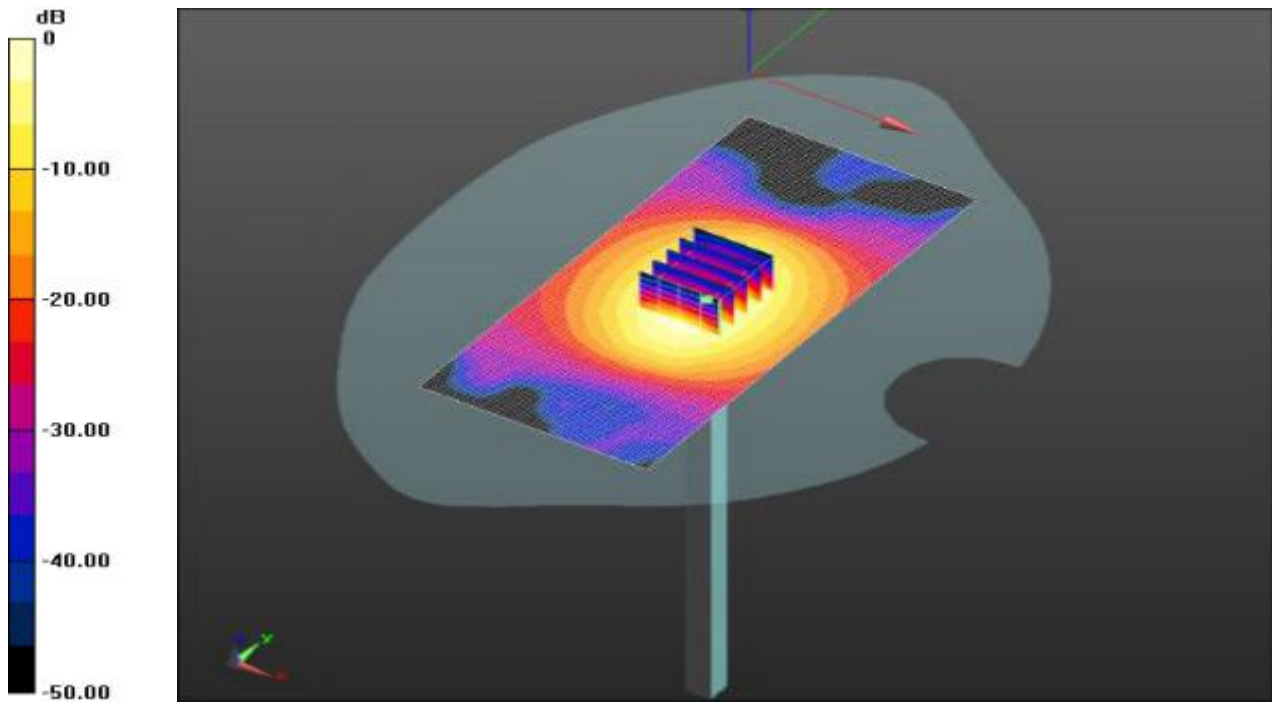
Peak SAR (extrapolated) = 16.4 W/g

**SAR(1 g) = 8.78 W/g; SAR(10 g) = 4.67 W/g**

Smallest distance from peaks to all points 3 dB below = 10.0 mm

Ratio of SAR at M2 to SAR at M1 = 53.7%

Maximum value of SAR (measured) = 13.53 W/kg



0 dB = 14.06 W/kg = 11.10 dB W/kg

## 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;  $\sigma = 1.44$  S/m;  $\epsilon_r = 40.73$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

### DASY Configuration:

- Probe: EX3DV4 - SN3881; ConvF(8.82, 8.82, 8.82) @ 1800 MHz; Calibrated: 2021-07-23
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn876; Calibrated: 2021-03-11
- Phantom: SAM1; Type: QD 000 P41 AA;
- DASYS 52.8.8(1222) ; SEMCAD X 14.6.14(7483)

**Head/Dipole1800 2/Area Scan (61x131x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 102.89 V/m; Power Drift = 0.04 dB

**Fast SAR: SAR(1 g) = 9.77 W/kg; SAR(10 g) = 5.06 W/kg**

Maximum value of SAR (interpolated) = 16.4 W/kg

**Head/Dipole1800 2/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 102.89 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 16.4 W/kg

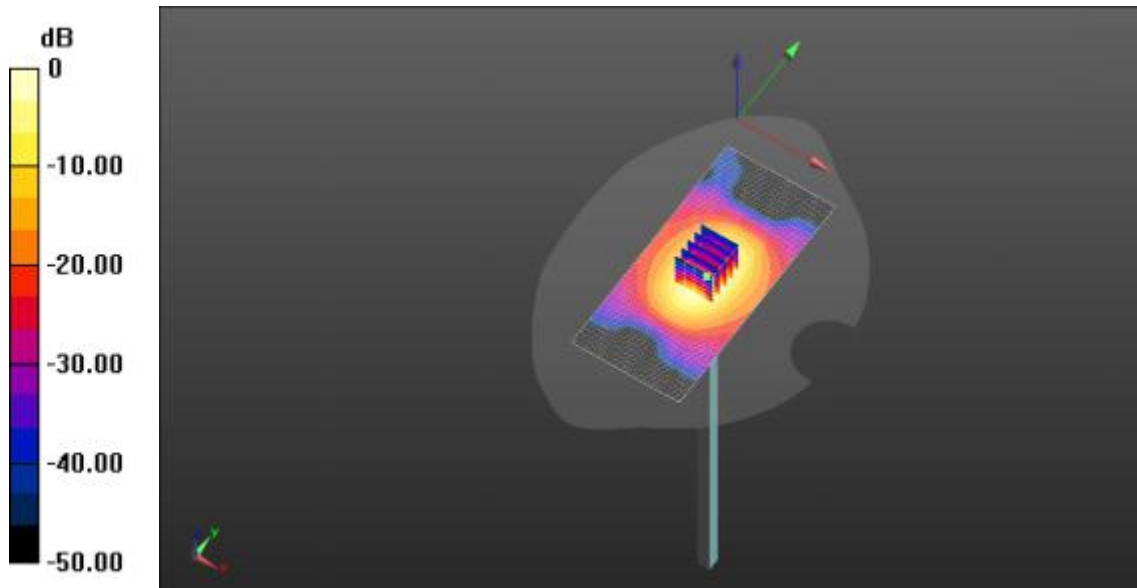
**SAR(1 g) = 9.71 W/kg; SAR(10 g) = 5.04 W/kg**

Smallest distance from peaks to all points 3 dB below = 10.0 mm

Ratio of SAR at M2 to SAR at M1 = 53.0%

Maximum value of SAR (measured) = 15.7 W/kg





0 dB = 16.4 W/kg = 12.22 dBW/kg

## Dipole1900V2

Communication System: UID 0, CW; Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.35$  S/m;  $\epsilon_r = 39.45$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

### DASY Configuration:

- Probe: EX3DV4 - SN3881; ConvF(8.59, 8.59, 8.59) @ 1900 MHz; Calibrated: 2021-07-23
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn876; Calibrated: 2021-03-11
- Phantom: SAM1; Type: QD 000 P41 AA;
- DASYS5 52.8.8(1222) ; SEMCAD X 14.6.14(7483)

**Head/Dipole1900/Area Scan (61x61x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 101.0 V/m; Power Drift = 0.09 dB

**Fast SAR: SAR(1 g) = 9.67 W/kg; SAR(10 g) = 4.91 W/kg**

Maximum value of SAR (interpolated) = 16.5 W/kg

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

Reference Value = 101.0 V/m; Power Drift = 0.09 dB

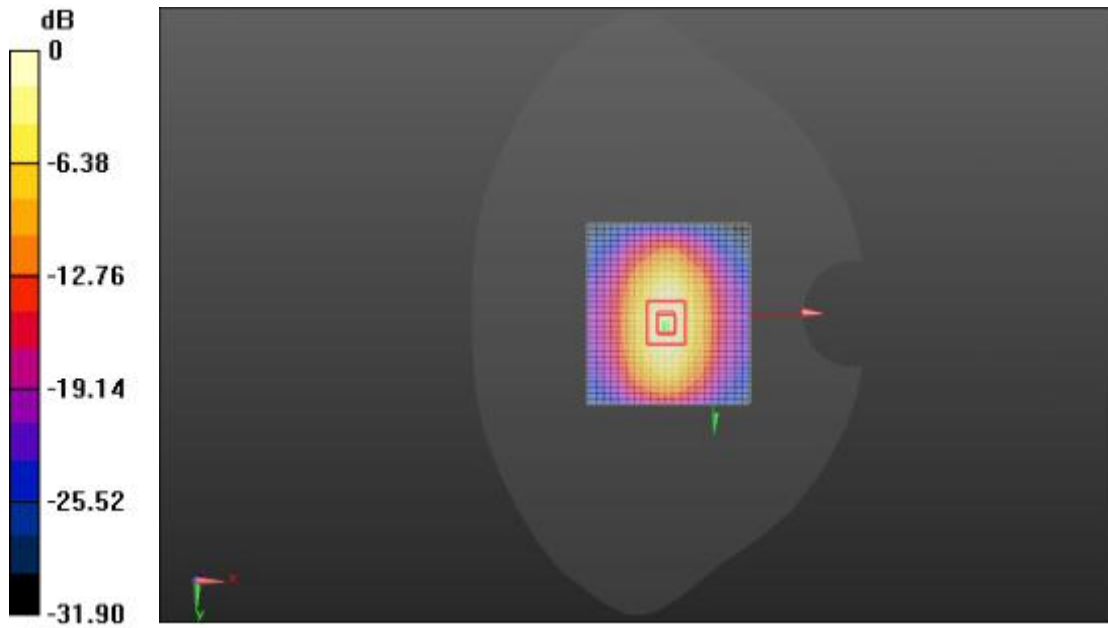
Peak SAR (extrapolated) = 18.6 W/kg

**SAR(1 g) = 9.56 W/kg; SAR(10 g) = 4.87 W/kg**

Smallest distance from peaks to all points 3 dB below = 9.9 mm

Ratio of SAR at M2 to SAR at M1 = 52.9%

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



0 dB = 16.5 W/kg = 11.88 dBW/kg

## Dipole2450V2

Communication System: UID 0, CW; Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.76$  S/m;  $\epsilon_r = 39.58$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

### DASY Configuration:

- Probe: EX3DV4 - SN3881; ConvF(8.07, 8.07, 8.07) @ 2450 MHz; Calibrated: 2021-07-23
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn876; Calibrated: 2021-03-11
- Phantom: SAM1; Type: QD 000 P41 AA;
- DASYS5 52.8.8(1222) ; SEMCAD X 14.6.14(7483)

**Head/Dipole2450/Area Scan (61x61x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 104.7 V/m; Power Drift = -0.15 dB

**Fast SAR: SAR(1 g) = 12.55 W/kg; SAR(10 g) = 5.74 W/kg**

Maximum value of SAR (interpolated) = 22.3 W/kg

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

Reference Value = 104.7 V/m; Power Drift = -0.15 dB

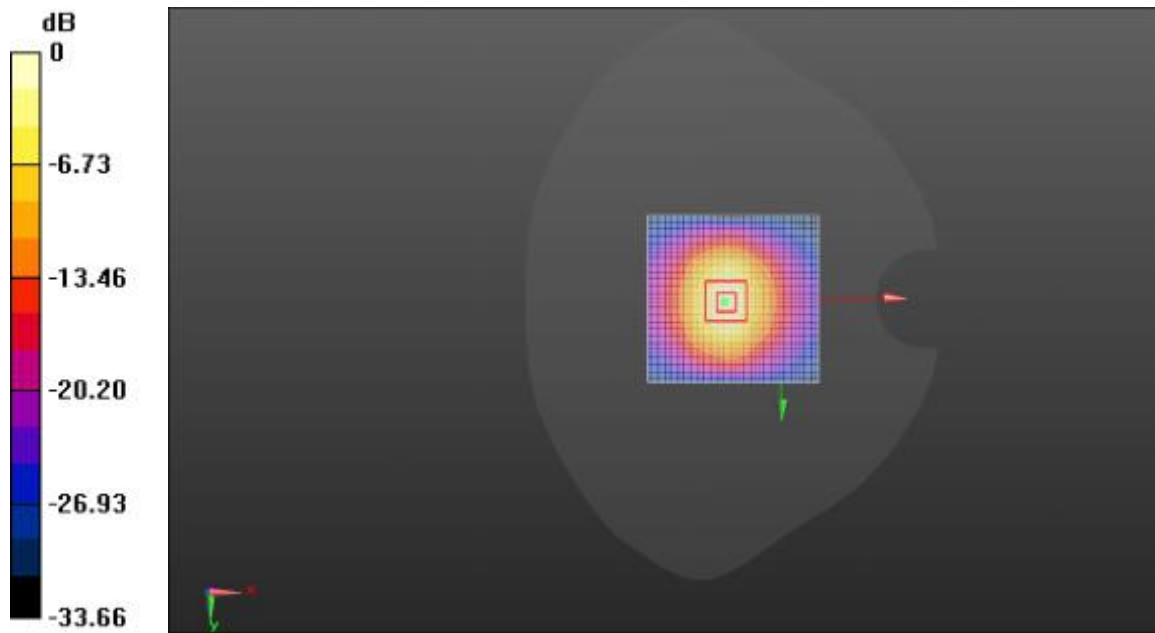
Peak SAR (extrapolated) = 26.4 W/kg

**SAR(1 g) = 12.46 W/kg; SAR(10 g) = 5.70 W/kg**

Smallest distance from peaks to all points 3 dB below = 8.8 mm

Ratio of SAR at M2 to SAR at M1 = 48.0%

Maximum value of SAR (measured) = 21.5 W/kg



0 dB = 22.3 W/kg = 13.13 dBW/kg

## Dipole2600V2

Communication System: UID 0, CW; Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz; Communication System PAR: 0 dB; PMF: 1  
Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.91$  S/m;  $\epsilon_r = 39.51$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

### DASY Configuration:

- Probe: EX3DV4 - SN3881; ConvF(7.86, 7.86, 7.86) @ 2600 MHz; Calibrated: 2021-07-23
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn876; Calibrated: 2021-03-11
- Phantom: SAM1; Type: QD 000 P41 AA;
- DASYS5 52.8.8(1222) ; SEMCAD X 14.6.14(7483)

**Head/Dipole2600MHz/Area Scan (61x61x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 101.0 V/m; Power Drift = 0.06 dB

**Fast SAR: SAR(1 g) = 13.85 W/kg; SAR(10 g) = 6.15 W/kg**

Maximum value of SAR (interpolated) = 25.6 W/kg

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

Reference Value = 101.0 V/m; Power Drift = 0.06 dB

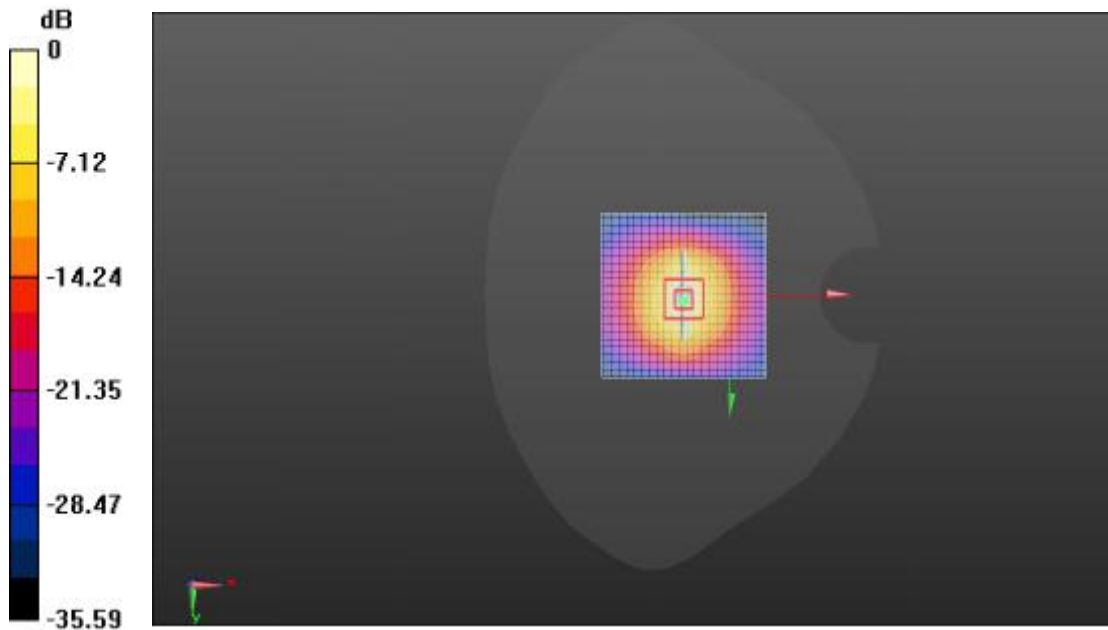
Peak SAR (extrapolated) = 30.0 W/kg

**SAR(1 g) = 13.82 W/kg; SAR(10 g) = 6.09 W/kg**

Smallest distance from peaks to all points 3 dB below = 9.3 mm

Ratio of SAR at M2 to SAR at M1 = 47.9%

Maximum value of SAR (measured) = 25.1 W/kg



0 dB = 25.6 W/kg = 14.03 dBW/kg

## Dipole 5.2GV2

Communication System: UID 0, CW (0); Communication System Band: CW5250; Frequency: 5250 MHz; Communication System PAR: 0 dB; PMF: 1.12202e-005  
Medium parameters used:  $f = 5200$  MHz;  $\sigma = 4.61$  S/m;  $\epsilon_r = 36.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

### DASY Configuration:

- Probe: EX3DV4 - SN3881; ConvF(5.5, 5.5, 5.5) @ 5250 MHz; Calibrated: 2021-07-23
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn876; Calibrated: 2021-03-11
- Phantom: SAM2; Type: QD 000 P41 AA;
- DASYS 52.8.8(1222) ; SEMCAD X 14.6.14(7483)

**Head5.3/5.250G 3/Area Scan (81x121x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 63.42 V/m; Power Drift = -0.07 dB

**Fast SAR: SAR(1 g) = 7.57 W/kg; SAR(10 g) = 2.18 W/kg**

Maximum value of SAR (interpolated) = 18.4 W/kg

**Head5.3/5.250G 3/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 63.42 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 30.7 W/kg

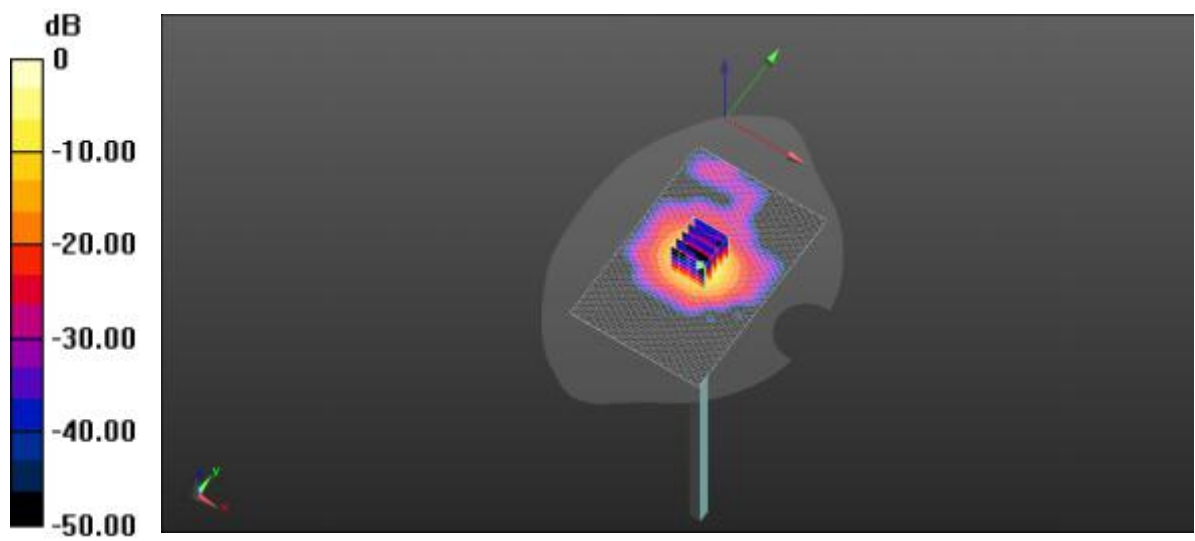
**SAR(1 g) = 7.43 W/kg; SAR(10 g) = 2.13 W/kg**

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 63.0%

Maximum value of SAR (measured) = 17.7 W/kg





0 dB = 18.4 W/kg = 12.01 dBW/kg

## Dipole 5.6GV2

Communication System: UID 0, CW (0); Communication System Band: CW5600; Frequency: 5600 MHz; Communication System PAR: 0 dB; PMF: 1.12202e-005  
Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.00$  S/m;  $\epsilon_r = 35.10$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

### DASY Configuration:

- Probe: EX3DV4 - SN3881; ConvF(4.95, 4.95, 4.95) @ 5600 MHz; Calibrated: 2021-07-23
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn876; Calibrated: 2021-03-11
- Phantom: SAM2; Type: QD 000 P41 AA;
- DASYS 52.8.8(1222) ; SEMCAD X 14.6.14(7483)

**Head5.6/5.6G 2/Area Scan (81x121x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 64.42 V/m; Power Drift = 0.09 dB

**Fast SAR: SAR(1 g) = 8.09 W/kg; SAR(10 g) = 2.28 W/kg**

Maximum value of SAR (interpolated) = 20.3 W/kg

**Head5.6/5.6G 2/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 64.42 V/m; Power Drift = 0.09 dB

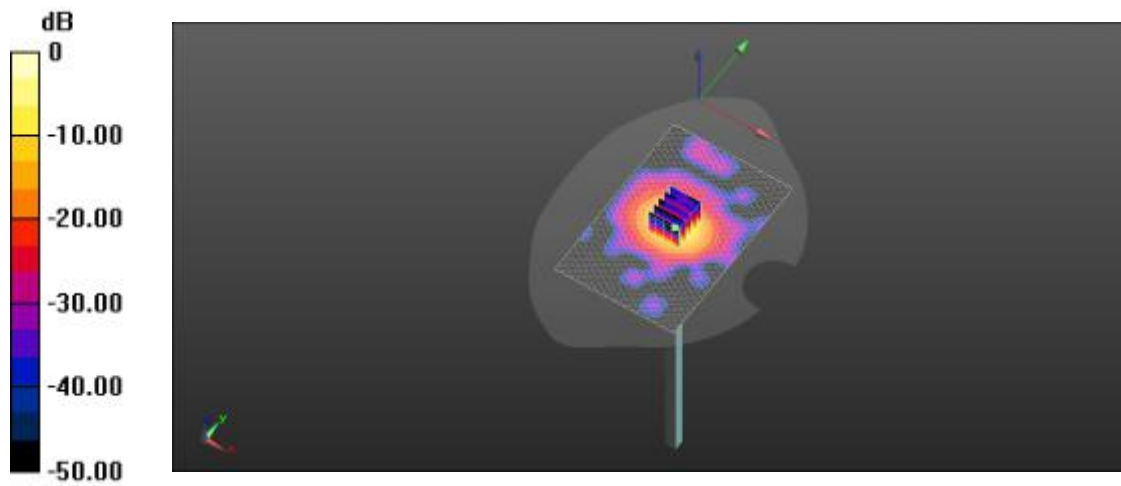
Peak SAR (extrapolated) = 36.4 W/kg

**SAR(1 g) = 8.03 W/kg; SAR(10 g) = 2.26 W/kg**

Smallest distance from peaks to all points 3 dB below = 7.3 mm

Ratio of SAR at M2 to SAR at M1 = 60.5%

Maximum value of SAR (measured) = 19.6 W/kg



0 dB = 20.3 W/kg = 13.15 dBW/kg

## Dipole 5.75GV2

Communication System: UID 0, CW (0); Communication System Band: CW5750; Frequency: 5750 MHz; Communication System PAR: 0 dB; PMF: 1.12202e-005  
Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.13$  S/m;  $\epsilon_r = 35.93$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

### DASY Configuration:

- Probe: EX3DV4 - SN3881; ConvF(4.93, 4.93, 4.93) @ 5750 MHz; Calibrated: 2021-07-23
- Sensor-Surface: 4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn876; Calibrated: 2021-03-11
- Phantom: SAM2; Type: QD 000 P41 AA;
- DASYS 52.8.8(1222) ; SEMCAD X 14.6.14(7483)

**Head5.8/5.75G 4/Area Scan (81x121x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Reference Value = 64.91 V/m; Power Drift = 0.14 dB

**Fast SAR: SAR(1 g) = 8.06 W/kg; SAR(10 g) = 2.28 W/kg**

Maximum value of SAR (interpolated) = 20.4 W/kg

**Head5.8/5.75G 4/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 64.91 V/m; Power Drift = 0.14 dB

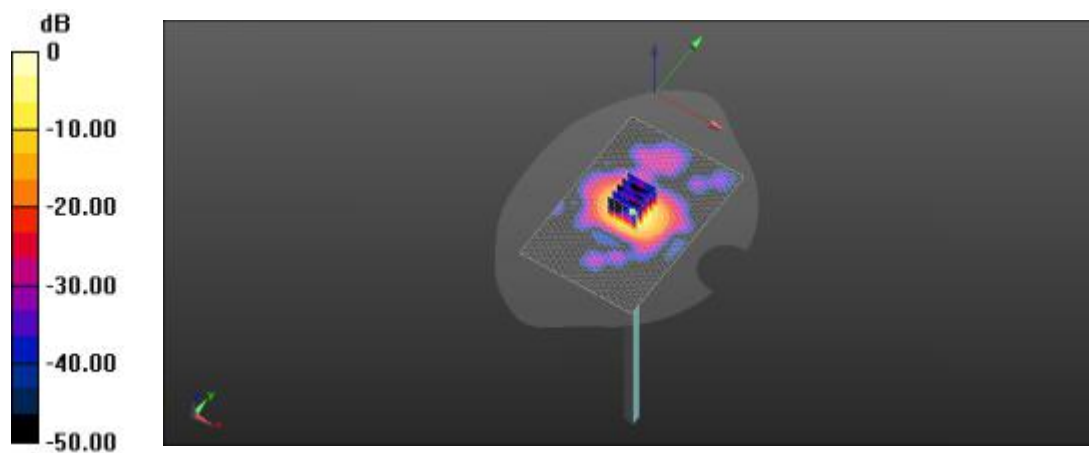
Peak SAR (extrapolated) = 37.6 W/kg

**SAR(1 g) = 7.95 W/kg; SAR(10 g) = 2.23 W/kg**

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 61.7%

Maximum value of SAR (measured) = 19.7 W/kg



0 dB = 20.4 W/kg = 12.83 dBW/kg