Test Laboratory: UL Verification Services Inc. SAR Lab E Date/Time: 7/21/2022 6:48:05 AM

# 20220721\_SystemPerformanceCheck-D2450V2 SN 706

Frequency: 2450 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C Medium parameters used: f = 2450 MHz;  $\sigma$  = 1.845 S/m;  $\epsilon_r$  = 41.088;  $\rho$  = 1000 kg/m³ Dasy Configuration:

- Area Scan Setting: Find Secondary Maximum within 2.0 dB and with a peak SAR value greater than 0.0012 W/kg
- Electronics: DAE4 Sn1377; Calibrated: 9/20/2021
- Probe: EX3DV4 SN3885; ConvF(7.39, 7.39, 7.39) @ 2450 MHz; Calibrated: 9/23/2021
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx

# Head/Pin=100 mW 2/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 7.46 W/kg

## Head/Pin=100 mW 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 65.83 V/m; Power Drift = -0.00 dB

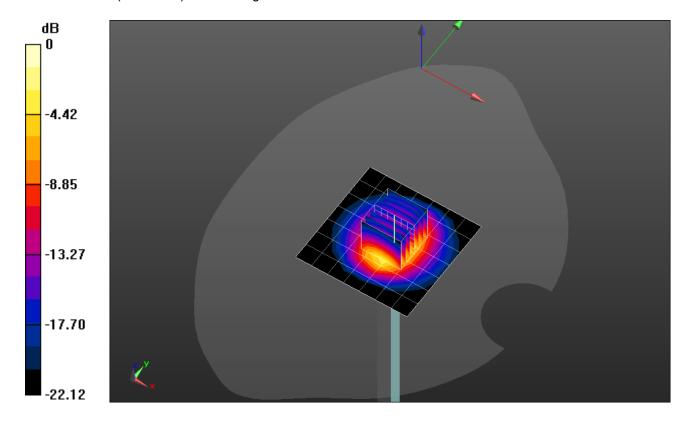
Peak SAR (extrapolated) = 12.1 W/kg

SAR(1 g) = 5.72 W/kg; SAR(10 g) = 2.64 W/kg

Smallest distance from peaks to all points 3 dB below = 10 mm

Ratio of SAR at M2 to SAR at M1 = 47.8%

Maximum value of SAR (measured) = 8.19 W/kg



# 20220725\_SystemPerformanceCheck-D2450V2 SN 706

Frequency: 2450 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C Medium parameters used: f = 2450 MHz;  $\sigma$  = 1.873 S/m;  $\epsilon_r$  = 38.434;  $\rho$  = 1000 kg/m³ Dasy Configuration:

- Area Scan Setting: Find Secondary Maximum within 2.0 dB and with a peak SAR value greater than 0.0012 W/kg
- Electronics: DAE4 Sn1377; Calibrated: 9/20/2021
- Probe: EX3DV4 SN3885; ConvF(7.39, 7.39, 7.39) @ 2450 MHz; Calibrated: 9/23/2021
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx

# Head/Pin=100 mW/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 7.63 W/kg

# Head/Pin=100 mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 65.53 V/m; Power Drift = 0.04 dB

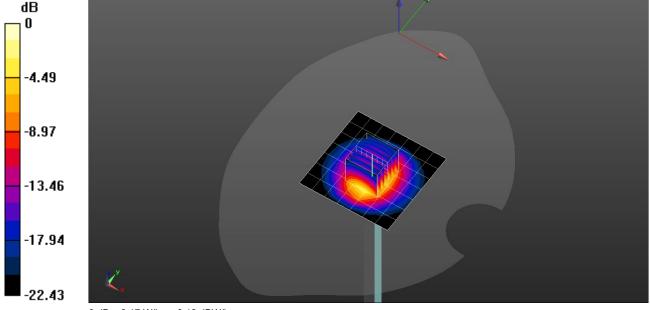
Peak SAR (extrapolated) = 12.1 W/kg

SAR(1 g) = 5.74 W/kg; SAR(10 g) = 2.65 W/kg

Smallest distance from peaks to all points 3 dB below = 9.8 mm

Ratio of SAR at M2 to SAR at M1 = 48%

Maximum value of SAR (measured) = 8.17 W/kg



0 dB = 8.17 W/kg = 9.12 dBW/kg

Frequency: 2450 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C Medium parameters used: f = 2450 MHz;  $\sigma = 1.87$  S/m;  $\epsilon_r = 38.316$ ;  $\rho = 1000$  kg/m<sup>3</sup> Dasy Configuration:

- Area Scan Setting: Find Secondary Maximum within 2.0 dB and with a peak SAR value greater than 0.0012 W/kg
- Electronics: DAE4 Sn1377; Calibrated: 9/20/2021
- Probe: EX3DV4 SN3885; ConvF(7.39, 7.39, 7.39) @ 2450 MHz; Calibrated: 9/23/2021
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx

# Head/Pin=100 mW/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 6.60 W/kg

## Head/Pin=100 mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 66.50 V/m; Power Drift = -0.14 dB

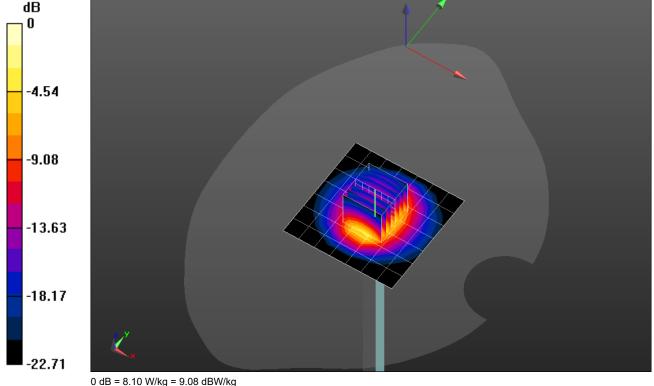
Peak SAR (extrapolated) = 12.0 W/kg

SAR(1 g) = 5.68 W/kg; SAR(10 g) = 2.61 W/kg

Smallest distance from peaks to all points 3 dB below = 9.2 mm

Ratio of SAR at M2 to SAR at M1 = 47.7%

Maximum value of SAR (measured) = 8.10 W/kg



Frequency: 5600 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C Medium parameters used: f = 5600 MHz;  $\sigma = 4.995$  S/m;  $\varepsilon_r = 36.296$ ;  $\rho = 1000$  kg/m<sup>3</sup> Dasy Configuration:

- Area Scan Setting: Find Secondary Maximum within 2.0 dB and with a peak SAR value greater than 0.0012 W/kg
- Electronics: DAE4 Sn1472; Calibrated: 1/7/2022
- Probe: EX3DV4 SN7585; ConvF(4.68, 4.68, 4.68) @ 5600 MHz; Calibrated: 4/27/2022
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx

#### Head/5.6 GHz, Pin=100mW/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (measured) = 21.4 W/kg

# Head/5.6 GHz, Pin=100mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

dz=1.4mm

Reference Value = 55.67 V/m; Power Drift = -0.19 dB

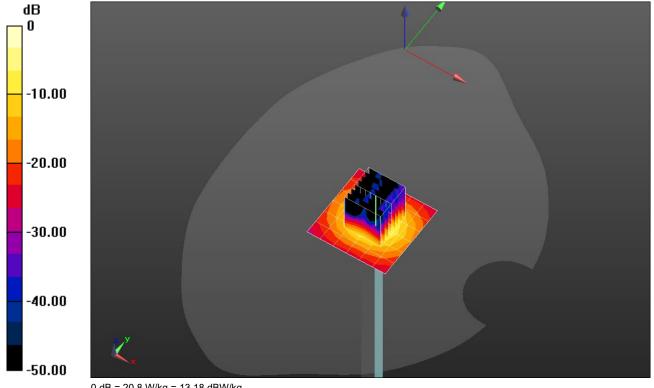
Peak SAR (extrapolated) = 39.7 W/kg

SAR(1 g) = 8.68 W/kg; SAR(10 g) = 2.48 W/kg

Smallest distance from peaks to all points 3 dB below = 7.5 mm

Ratio of SAR at M2 to SAR at M1 = 61.1%

Maximum value of SAR (measured) = 20.8 W/kg



Frequency: 5250 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C Medium parameters used: f = 5250 MHz;  $\sigma = 4.622$  S/m;  $\varepsilon_r = 36.916$ ;  $\rho = 1000$  kg/m<sup>3</sup> Dasy Configuration:

- Area Scan Setting: Find Secondary Maximum within 2.0 dB and with a peak SAR value greater than 0.0012 W/kg
- Electronics: DAE4 Sn1472; Calibrated: 1/7/2022
- Probe: EX3DV4 SN7585; ConvF(5.3, 5.3, 5.3) @ 5250 MHz; Calibrated: 4/27/2022
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx

#### Head/5.25 GHz, Pin=100mW/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (measured) = 17.4 W/kg

# Head/5.25 GHz, Pin=100mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

dz=1.4mm

Reference Value = 52.86 V/m; Power Drift = 0.05 dB

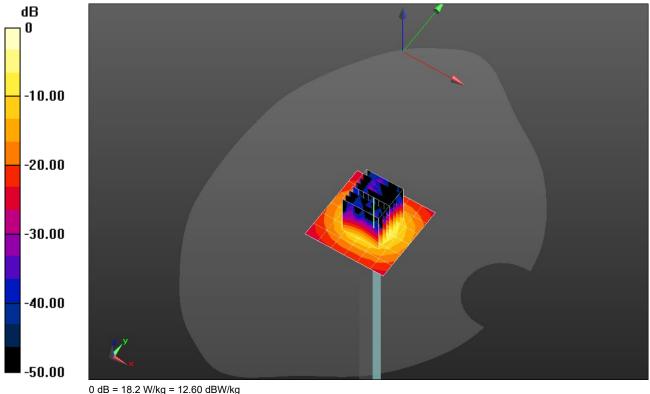
Peak SAR (extrapolated) = 32.0 W/kg

SAR(1 g) = 7.67 W/kg; SAR(10 g) = 2.23 W/kg

Smallest distance from peaks to all points 3 dB below = 6.9 mm

Ratio of SAR at M2 to SAR at M1 = 63.7%

Maximum value of SAR (measured) = 18.2 W/kg



Frequency: 5250 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C Medium parameters used: f = 5250 MHz;  $\sigma = 4.551$  S/m;  $\varepsilon_r = 34.843$ ;  $\rho = 1000$  kg/m<sup>3</sup> Dasy Configuration:

- Area Scan Setting: Find Secondary Maximum within 2.0 dB and with a peak SAR value greater than 0.0012 W/kg
- Electronics: DAE4 Sn1472; Calibrated: 1/7/2022
- Probe: EX3DV4 SN7585; ConvF(5.3, 5.3, 5.3) @ 5250 MHz; Calibrated: 4/27/2022
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx

#### Head/5.25 GHz, Pin=100mW/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (measured) = 17.2 W/kg

# Head/5.25 GHz, Pin=100mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

dz=1.4mm

Reference Value = 54.26 V/m; Power Drift = 0.08 dB

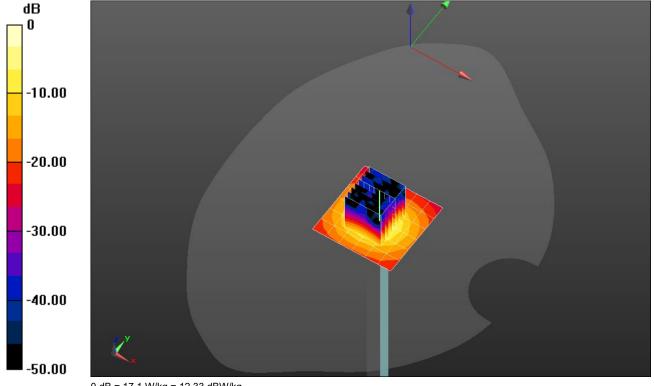
Peak SAR (extrapolated) = 30.4 W/kg

SAR(1 g) = 7.39 W/kg; SAR(10 g) = 2.17 W/kg

Smallest distance from peaks to all points 3 dB below = 7.9 mm

Ratio of SAR at M2 to SAR at M1 = 64%

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



0 dB = 17.1 W/ka = 12.33 dBW/ka

Frequency: 5600 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C Medium parameters used: f = 5600 MHz;  $\sigma = 4.903$  S/m;  $\varepsilon_r = 34.244$ ;  $\rho = 1000$  kg/m<sup>3</sup> Dasy Configuration:

- Area Scan Setting: Find Secondary Maximum within 2.0 dB and with a peak SAR value greater than 0.0012 W/kg
- Electronics: DAE4 Sn1472; Calibrated: 1/7/2022
- Probe: EX3DV4 SN7585; ConvF(4.68, 4.68, 4.68) @ 5600 MHz; Calibrated: 4/27/2022
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx

### Head/5.6 GHz, Pin=100mW/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm Maximum value of SAR (measured) = 19.3 W/kg

# Head/5.6 GHz, Pin=100mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm,

dz=1.4mm

Reference Value = 54.97 V/m; Power Drift = -0.08 dB

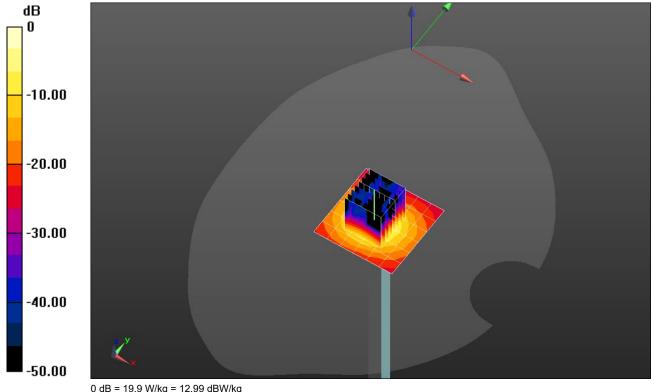
Peak SAR (extrapolated) = 37.5 W/kg

SAR(1 g) = 8.19 W/kg; SAR(10 g) = 2.35 W/kg

Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 60.6%

Maximum value of SAR (measured) = 19.9 W/kg



## 20220721 SystemPerformanceCheck-D2600V2 SN 1006

Frequency: 2600 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C Medium parameters used: f = 2600 MHz;  $\sigma = 1.946$  S/m;  $\epsilon_r = 37.16$ ;  $\rho = 1000$  kg/m<sup>3</sup> Dasy Configuration:

- Area Scan Setting: Find Secondary Maximum within 2.0 dB and with a peak SAR value greater than 0.0012 W/kg
- Electronics: DAE4 Sn1359: Calibrated: 1/7/2022
- Probe: EX3DV4 SN3991; ConvF(7.9, 7.9, 7.9) @ 2600 MHz; Calibrated: 8/20/2021
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx

# Head/Pin=100 mW/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 6.72 W/kg

## Head/Pin=100 mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 64.91 V/m; Power Drift = 0.05 dB

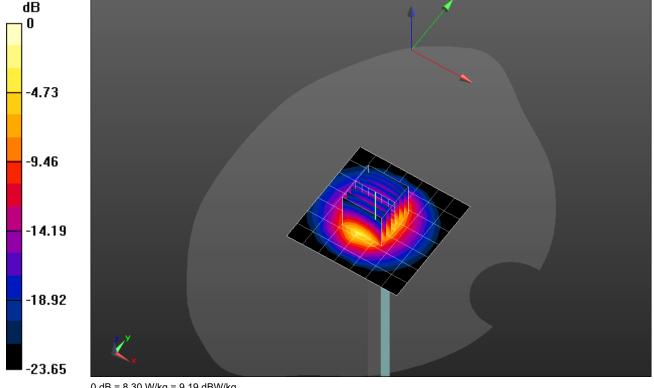
Peak SAR (extrapolated) = 12.4 W/kg

SAR(1 g) = 5.73 W/kg; SAR(10 g) = 2.55 W/kg

Smallest distance from peaks to all points 3 dB below = 9.5 mm

Ratio of SAR at M2 to SAR at M1 = 47%

Maximum value of SAR (measured) = 8.30 W/kg



0 dB = 8.30 W/kg = 9.19 dBW/kg

Frequency: 3500 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C Medium parameters used: f = 3500 MHz;  $\sigma = 2.812 \text{ S/m}$ ;  $\varepsilon_r = 37.223$ ;  $\rho = 1000 \text{ kg/m}^3$ Dasy Configuration:

- Area Scan Setting: Find Secondary Maximum within 2.0 dB and with a peak SAR value greater than 0.0012 W/kg
- Electronics: DAE4 Sn1433: Calibrated: 2/23/2022
- Probe: EX3DV4 SN3929; ConvF(6.5, 6.5, 6.5) @ 3500 MHz; Calibrated: 3/23/2022
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V8.0 (20deg probe tilt); Type: QD 000 P41 Ax; Serial: xxxx

# Head/Pin=100 mW/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 6.99 W/kg

## Head/Pin=100 mW/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4.3mm, dy=4.3mm, dz=3mm

Reference Value = 57.55 V/m; Power Drift = 0.08 dB

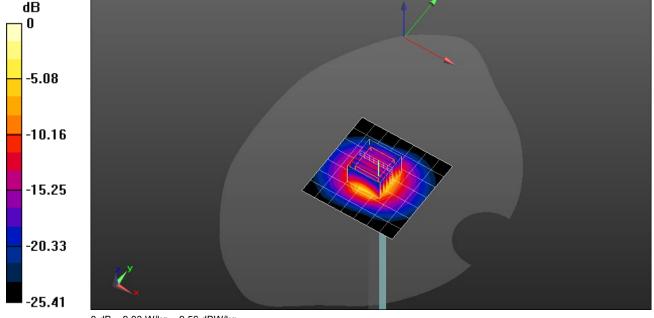
Peak SAR (extrapolated) = 15.8 W/kg

SAR(1 g) = 6.07 W/kg; SAR(10 g) = 2.33 W/kg

Smallest distance from peaks to all points 3 dB below = 8.6 mm

Ratio of SAR at M2 to SAR at M1 = 56.1%

Maximum value of SAR (measured) = 9.03 W/kg



## 20220718\_SystemPerformanceCheck-D1640V2 SN 324

Frequency: 1640 MHz; Duty Cycle: 1:1; Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C Medium parameters used: f = 1640 MHz;  $\sigma = 1.293$  S/m;  $\epsilon_r = 39.907$ ;  $\rho = 1000$  kg/m³ Dasy Configuration:

- Area Scan Setting: Find Secondary Maximum within 2.0 dB and with a peak SAR value greater than 0.0012 W/kg
- Electronics: DAE4 Sn1380; Calibrated: 8/11/2021
- Probe: EX3DV4 SN3686; ConvF(7.68, 7.68, 7.68) @ 1640 MHz; Calibrated: 1/18/2022
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx

# Head/Pin=100 mW/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 4.30 W/kg

# Head/Pin=100 mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 37.65 V/m; Power Drift = 0.15 dB

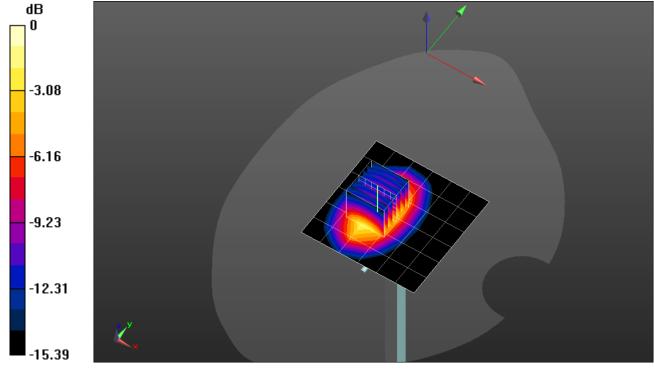
Peak SAR (extrapolated) = 6.54 W/kg

SAR(1 g) = 3.55 W/kg; SAR(10 g) = 1.94 W/kg

Smallest distance from peaks to all points 3 dB below = 11 mm

Ratio of SAR at M2 to SAR at M1 = 56.1%

Maximum value of SAR (measured) = 4.72 W/kg



0 dB = 4.72 W/kg = 6.74 dBW/kg