

## APPENDIX B: SAR DIPOLE VERIFICATION PLOTS

# ELEMENT

**DUT: Dipole 2450.000 MHz; Type: D2450V2 - SN882**

Communication System: UID: 0, CW; Frequency: 2450.000 MHz  
Medium: 2450 Head; Medium parameters used:  
 $f = 2450.000$  MHz;  $\text{cond} = 1.85$  S/m;  $\text{perm} = 39.2$ ;  $\text{density} = 1000$  kg/m<sup>3</sup>  
Phantom Section: Flat; Space: 10 mm

Test Date: 07/22/2024; Ambient Temp: 22.0°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN7558; ConvF:(7.64,7.64,7.64); 2023-09-12  
Sensor-Surface: 1.4mm (VMS + 6p)  
Electronics: DAE4 Sn1364; 2023-09-06  
Phantom: Twin-SAM V8.0; Serial: 1934  
Measurement SW: DASY Module SAR V16.2.4.2524

## 2450.0 MHz System Verification at 20.0 dBm (100 mW)

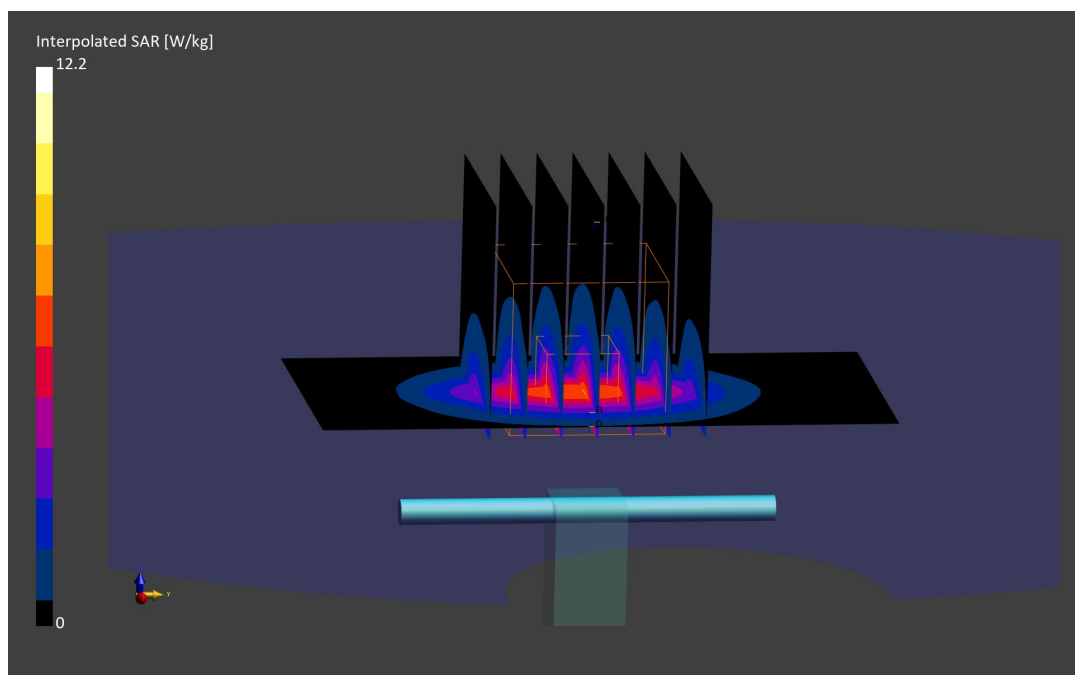
**Area Scan (40.0 x 80.0):** Measurement grid:  $dx=10.0$  mm,  $dy=10.0$  mm

**Zoom Scan (30.0 x 30.0 x 30.0):** Measurement grid:  $dx=5.0$  mm,  $dy=5.0$  mm,  $dz=1.5$  mm; Graded Ratio: 1.5

Peak SAR (extrapolated) = 12.2 W/kg

**SAR(1 g) = 5.68 W/kg; SAR(10 g) = 2.62 W/kg**

Deviation (1 g) = 7.17%; Deviation (10 g) = 5.22%



# ELEMENT

**DUT: Dipole 2450.000 MHz; Type: D2450V2 - SN882**

Communication System: UID: 0, CW; Frequency: 2450.000 MHz  
Medium: 2450 Head; Medium parameters used:  
 $f = 2450.000$  MHz;  $\text{cond} = 1.81$  S/m;  $\text{perm} = 38.3$ ;  $\text{density} = 1000$  kg/m<sup>3</sup>  
Phantom Section: Flat; Space: 10 mm

Test Date: 07/24/2024; Ambient Temp: 22.2°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7558; ConvF:(7.64,7.64,7.64); 2023-09-12  
Sensor-Surface: 1.4mm (VMS + 6p)  
Electronics: DAE4 Sn1364; 2023-09-06  
Phantom: Twin-SAM V8.0; Serial: 1934  
Measurement SW: DASY Module SAR V16.2.4.2524

## 2450.0 MHz System Verification at 20.0 dBm (100 mW)

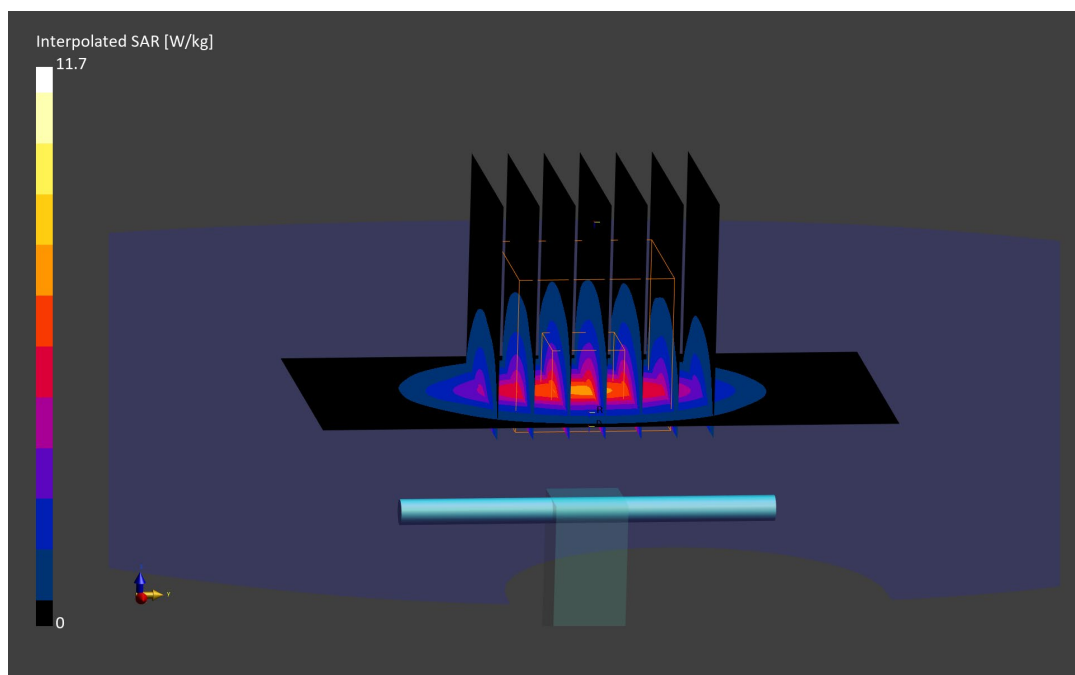
**Area Scan (40.0 x 80.0):** Measurement grid:  $dx=10.0$  mm,  $dy=10.0$  mm

**Zoom Scan (30.0 x 30.0 x 30.0):** Measurement grid:  $dx=5.0$  mm,  $dy=5.0$  mm,  $dz=1.5$  mm; Graded Ratio: 1.5

Peak SAR (extrapolated) = 11.7 W/kg

**SAR(1 g) = 5.56 W/kg; SAR(10 g) = 2.59 W/kg**

Deviation (1 g) = 4.91%; Deviation (10 g) = 4.02%



# ELEMENT

**DUT: Dipole 2450.000 MHz; Type: D2450V2 - SN882**

Communication System: UID: 0, CW; Frequency: 2450.000 MHz  
Medium: 2450 Head; Medium parameters used:  
f = 2450.000 MHz; cond = 1.83 S/m; perm = 40.0; density = 1000 kg/m<sup>3</sup>  
Phantom Section: Flat; Space: 10 mm

Test Date: 07/25/2024; Ambient Temp: 21.8°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7402; ConvF:(7.18,7.92,7.51); 2024-05-10  
Sensor-Surface: 1.4mm (VMS + 6p)  
Electronics: DAE4 Sn1502; 2024-05-08  
Phantom: Twin-SAM V5.0; Serial: 1797  
Measurement SW: DASY Module SAR V16.2.4.2524

## 2450.0 MHz System Verification at 20.0 dBm (100 mW)

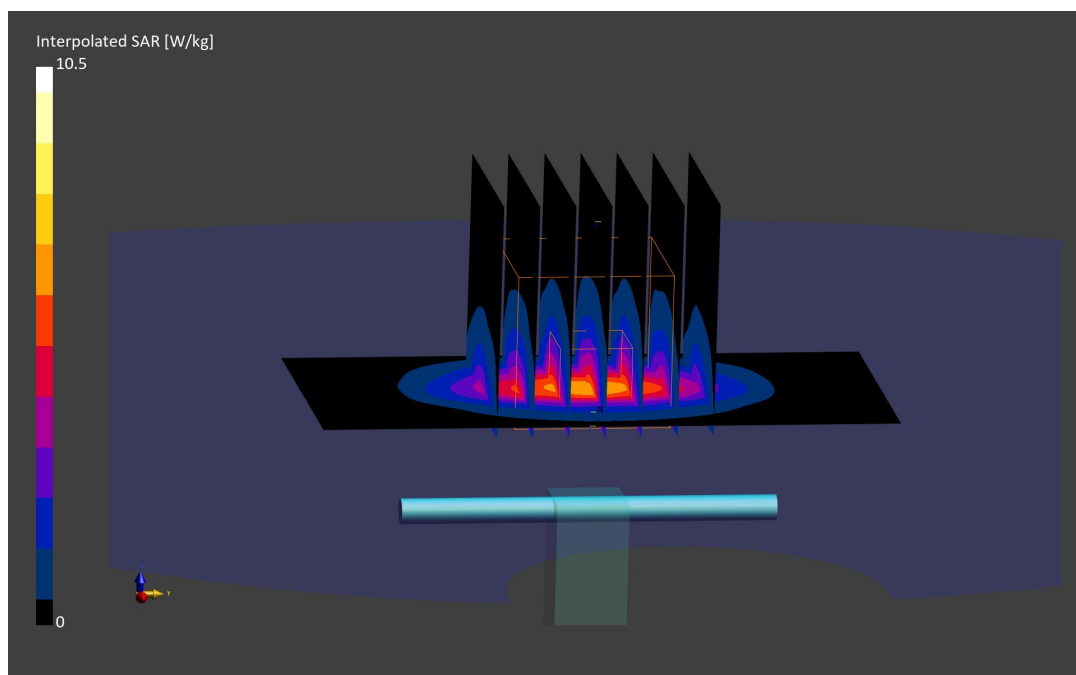
**Area Scan (40.0 x 80.0):** Measurement grid: dx=10.0 mm, dy=10.0 mm

**Zoom Scan (30.0 x 30.0 x 30.0):** Measurement grid: dx=5.0 mm, dy=5.0 mm, dz=1.5 mm; Graded Ratio: 1.5

Peak SAR (extrapolated) = 10.5 W/kg

**SAR(1 g) = 5.15 W/kg; SAR(10 g) = 2.41 W/kg**

Deviation (1 g) = -2.83%; Deviation (10 g) = -3.21%



# ELEMENT

**DUT: Dipole 5250.000 MHz; Type: D5GHzV2 - SN1237**

Communication System: UID: 0, CW; Frequency: 5250.000 MHz  
Medium: 5200-5800 Head; Medium parameters used:  
f = 5250.000 MHz; cond = 4.71 S/m; perm = 36.1; density = 1000 kg/m<sup>3</sup>  
Phantom Section: Flat; Space: 10 mm

Test Date: 07/22/2024; Ambient Temp: 19.6°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7547; ConvF:(5.32,5.32,5.32); 2023-10-23  
Sensor-Surface: 1.4mm (VMS + 6p)  
Electronics: DAE4 Sn1322; 2023-10-18  
Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 1937  
Measurement SW: DASY Module SAR V16.2.4.2524

## 5250.0 MHz System Verification at 17.0 dBm (50 mW)

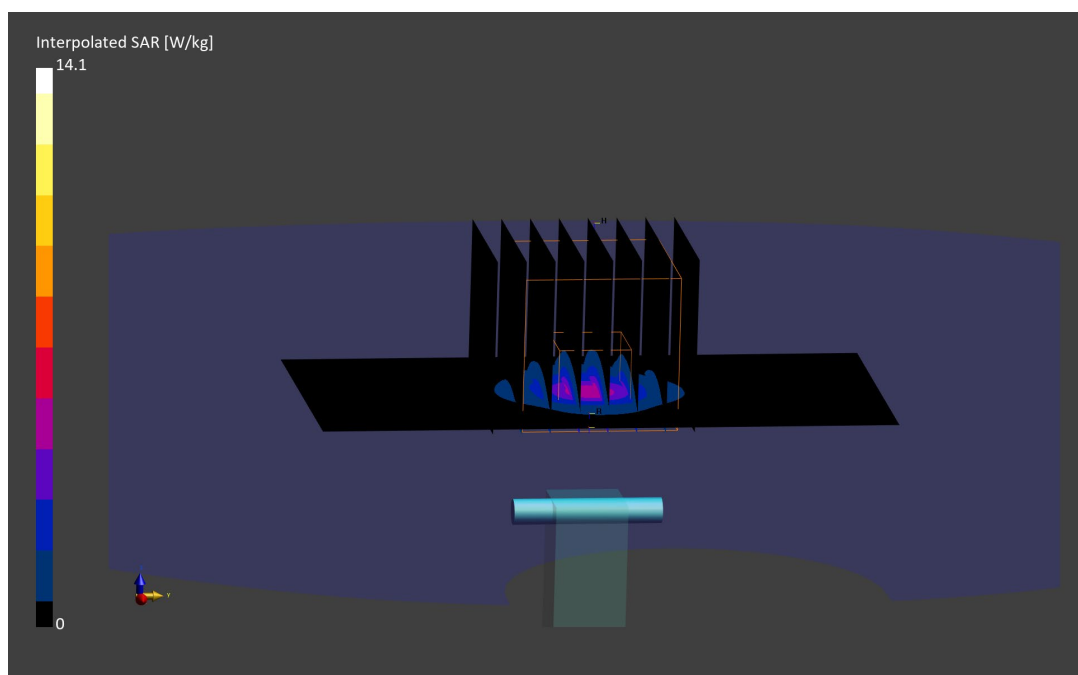
**Area Scan (40.0 x 80.0):** Measurement grid: dx=10.0 mm, dy=10.0 mm

**Zoom Scan (22.0 x 22.0 x 22.0):** Measurement grid: dx=4.0 mm, dy=4.0 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 14.1 W/kg

**SAR(1 g) = 3.75 W/kg; SAR(10 g) = 1.08 W/kg**

Deviation (1 g) = -6.37%; Deviation (10 g) = -5.68%



# ELEMENT

**DUT: Dipole 5600.000 MHz; Type: D5GHzV2 - SN1237**

Communication System: UID: 0, CW; Frequency: 5600.000 MHz  
Medium: 5200-5800 Head; Medium parameters used:  
f = 5600.000 MHz; cond = 5.11 S/m; perm = 35.5; density = 1000 kg/m<sup>3</sup>  
Phantom Section: Flat; Space: 10 mm

Test Date: 07/22/2024; Ambient Temp: 19.6°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7547; ConvF:(4.78,4.78,4.78); 2023-10-23  
Sensor-Surface: 1.4mm (VMS + 6p)  
Electronics: DAE4 Sn1322; 2023-10-18  
Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 1937  
Measurement SW: DASY Module SAR V16.2.4.2524

## 5600.0 MHz System Verification at 17.0 dBm (50 mW)

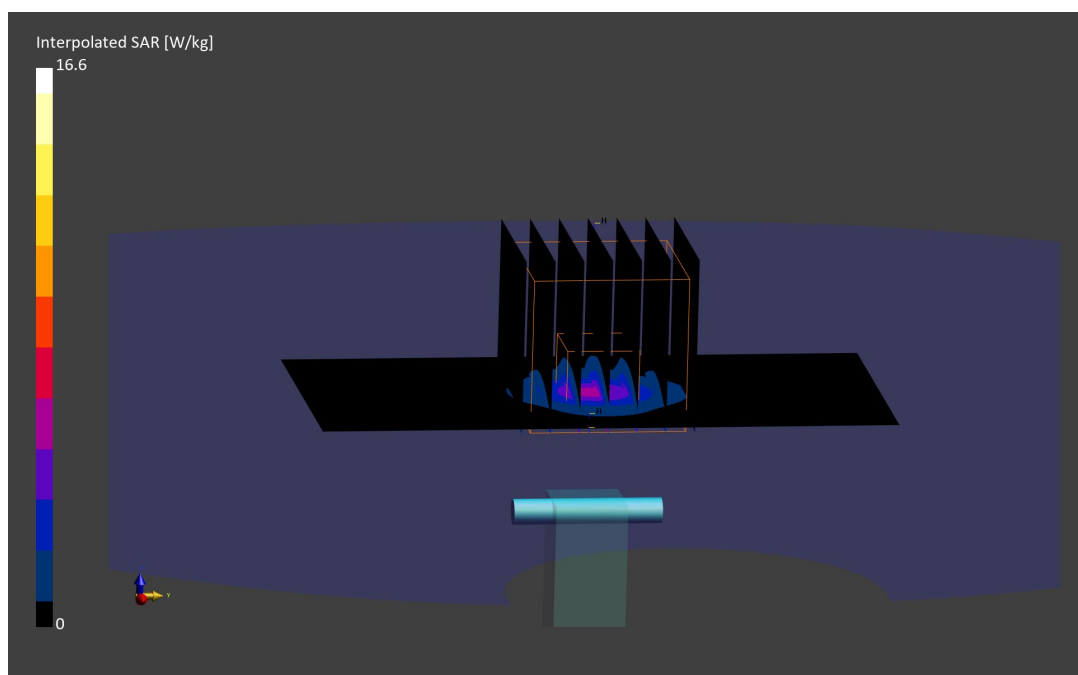
**Area Scan (40.0 x 80.0):** Measurement grid: dx=10.0 mm, dy=10.0 mm

**Zoom Scan (22.0 x 22.0 x 22.0):** Measurement grid: dx=4.0 mm, dy=4.0 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 16.6 W/kg

**SAR(1 g) = 4.14 W/kg; SAR(10 g) = 1.19 W/kg**

Deviation (1 g) = 0.98%; Deviation (10 g) = 2.15%



# ELEMENT

**DUT: Dipole 5750.000 MHz; Type: D5GHzV2 - SN1237**

Communication System: UID: 0, CW; Frequency: 5750.000 MHz  
Medium: 5200-5800 Head; Medium parameters used:  
 $f = 5750.000$  MHz;  $\text{cond} = 5.30$  S/m;  $\text{perm} = 35.2$ ;  $\text{density} = 1000$  kg/m<sup>3</sup>  
Phantom Section: Flat; Space: 10 mm

Test Date: 07/22/2024; Ambient Temp: 19.6°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7547; ConvF:(4.85,4.85,4.85); 2023-10-23  
Sensor-Surface: 1.4mm (VMS + 6p)  
Electronics: DAE4 Sn1322; 2023-10-18  
Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 1937  
Measurement SW: DASY Module SAR V16.2.4.2524

## 5750.0 MHz System Verification at 17.0 dBm (50 mW)

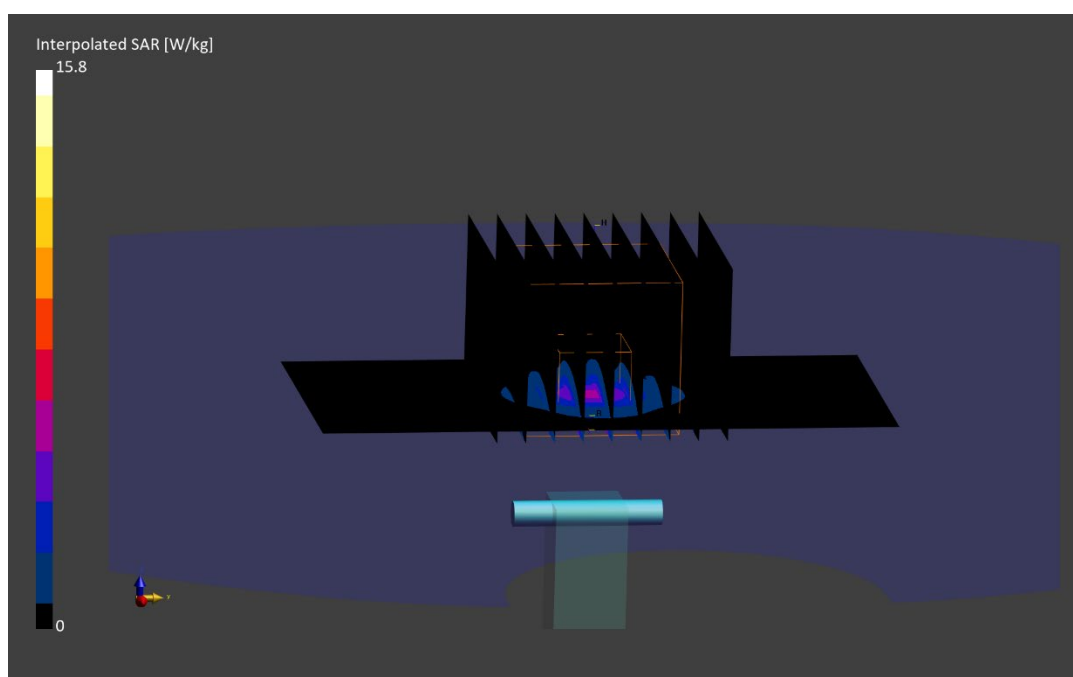
**Area Scan (40.0 x 80.0):** Measurement grid:  $dx=10.0$  mm,  $dy=10.0$  mm

**Zoom Scan (22.0 x 22.0 x 22.0):** Measurement grid:  $dx=4.0$  mm,  $dy=4.0$  mm,  $dz=1.4$  mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 15.8 W/kg

**SAR(1 g) = 3.78 W/kg; SAR(10 g) = 1.09 W/kg**

Deviation (1 g) = -4.55%; Deviation (10 g) = -3.11%



# ELEMENT

**DUT: Dipole 5850.000 MHz; Type: D5GHzV2 - SN1237**

Communication System: UID: 0, CW; Frequency: 5850.000 MHz  
Medium: 5200-5800 Head; Medium parameters used:  
f = 5850.000 MHz; cond = 5.42 S/m; perm = 35.0; density = 1000 kg/m<sup>3</sup>  
Phantom Section: Flat; Space: 10 mm

Test Date: 07/22/2024; Ambient Temp: 19.6°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7547; ConvF:(4.75,4.75,4.75); 2023-10-23  
Sensor-Surface: 1.4mm (VMS + 6p)  
Electronics: DAE4 Sn1322; 2023-10-18  
Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 1937  
Measurement SW: DASY Module SAR V16.2.4.2524

## 5850.0 MHz System Verification at 17.0 dBm (50 mW)

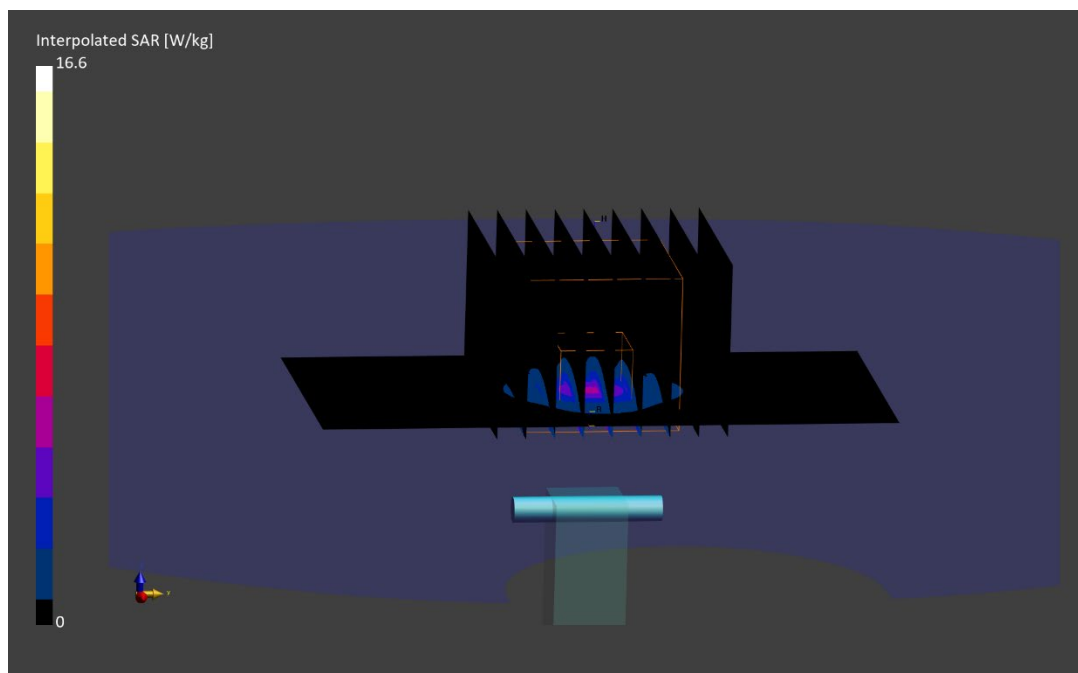
**Area Scan (40.0 x 80.0):** Measurement grid: dx=10.0 mm, dy=10.0 mm

**Zoom Scan (22.0 x 22.0 x 22.0):** Measurement grid: dx=4.0 mm, dy=4.0 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 16.6 W/kg

**SAR(1 g) = 3.91 W/kg; SAR(10 g) = 1.12 W/kg**

Deviation (1 g) = -2.74%; Deviation (10 g) = -1.75%



# ELEMENT

**DUT: Dipole 6500.000 MHz; Type: D6.5GHzV2 - SN1111**

Communication System: UID: 0, CW; Frequency: 6500.000 MHz  
Medium: 6000 Head; Medium parameters used:  
f = 6500.000 MHz; cond = 6.02 S/m; perm = 34.1; density = 1000 kg/m<sup>3</sup>  
Phantom Section: Flat; Space: 5 mm

Test Date: 07/28/2024; Ambient Temp: 22.2°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7527; ConvF:(5.15,4.68,5.36); 2024-03-08  
Sensor-Surface: 1.4mm (VMS + 6p)  
Electronics: DAE4 Sn1272; 2024-03-12  
Phantom: Twin-SAM V8.0; Serial: 1979  
Measurement SW: DASY Module SAR V16.2.4.2524

## 6500.0 MHz System Verification at 14.0 dBm (25 mW)

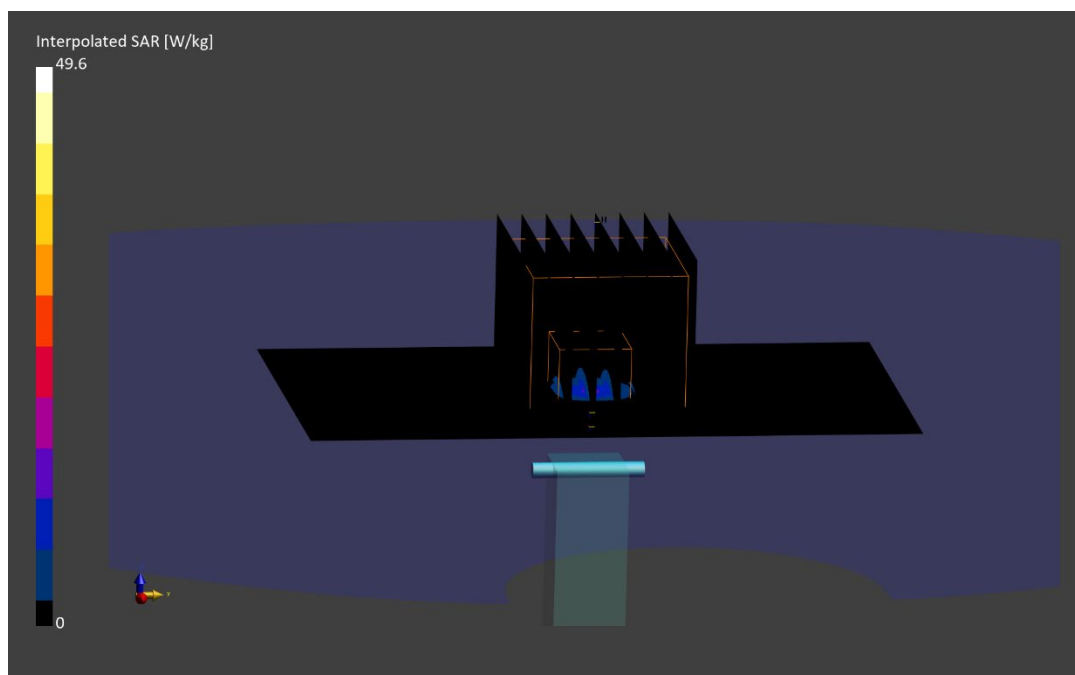
**Area Scan (51.0 x 85.0):** Measurement grid: dx=8.5 mm, dy=8.5 mm

**Zoom Scan (22.0 x 22.0 x 22.0):** Measurement grid: dx=3.4 mm, dy=3.4 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 49.6 W/kg

**SAR(1 g) = 7.74 W/kg; SAR(10 g) = 1.42 W/kg**

Deviation (1 g) = 6.39%; Deviation (10 g) = 6.17%



Element  
Date: 2024-06-30

Measurement Group

Device Under Test Properties

| DUT                        | Serial Number |
|----------------------------|---------------|
| 10 GHz Verification Source | 1002          |

Exposure Conditions

| Phantom Section | Position | Test Distance [mm] | Band            | Frequency [MHz] |
|-----------------|----------|--------------------|-----------------|-----------------|
| 5G              | FRONT    | 10.00              | Validation band | 10000.0         |

Hardware Setup

| Probe, Calibration Date      | DAE, Calibration Date       |
|------------------------------|-----------------------------|
| EUmmWV4 – SN9622, 2024-02-02 | DAE4ip – SN1639, 2023-11-15 |

Software Setup

| Software             | Software Version |
|----------------------|------------------|
| cDASY6 Module mmWave | 3.2.0.1840       |

Scans Setup

|                     |               |
|---------------------|---------------|
| Scan Type           | 5G Scan       |
| Grid Extents [mm]   | 120.0 x 120.0 |
| Grid Steps [lambda] | 0.25 x 0.25   |
| Sensor Surface [mm] | 10.0          |

Measurement Results

|                                  |         |
|----------------------------------|---------|
| Scan Type                        | 5G Scan |
| Avg. Area [cm²]                  | 4.00    |
| pS <sub>tot</sub> avg [W/m²]     | 60.7    |
| pS <sub>n</sub> avg [W/m²]       | 60.5    |
| E <sub>peak</sub> [V/m]          | 161     |
| Deviation [dB] pS <sub>tot</sub> | 0.45    |
| Deviation [dB] pS <sub>n</sub>   | 0.44    |

