

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; cond = 1.85 S/m; perm = 39.2; density = 1000 kg/m³
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)

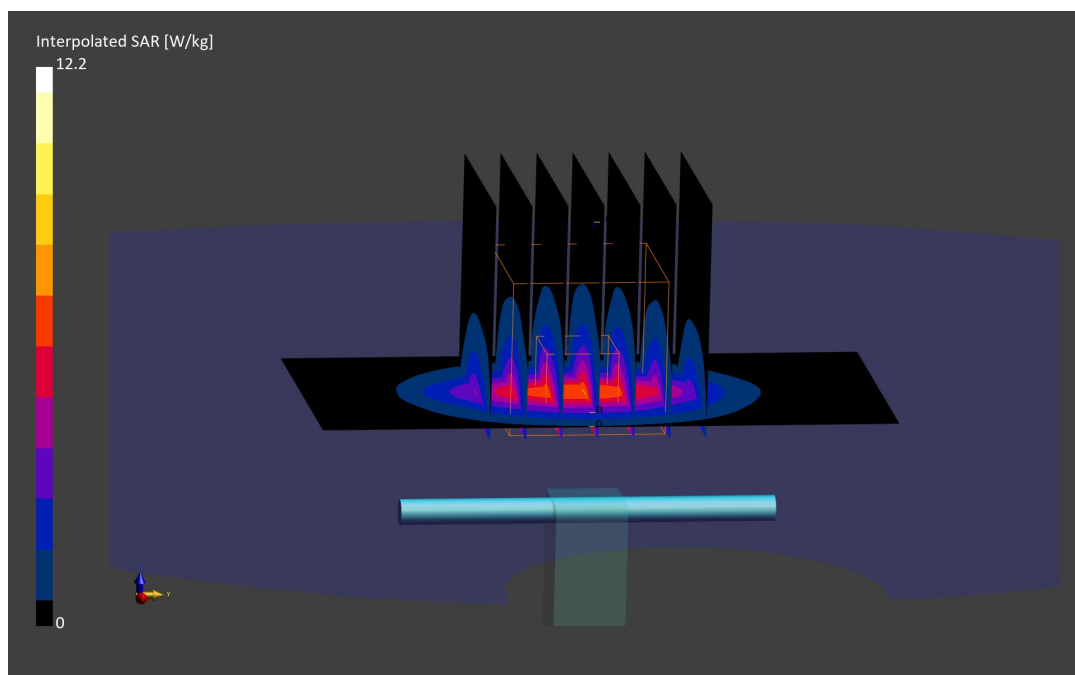
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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/m³
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)

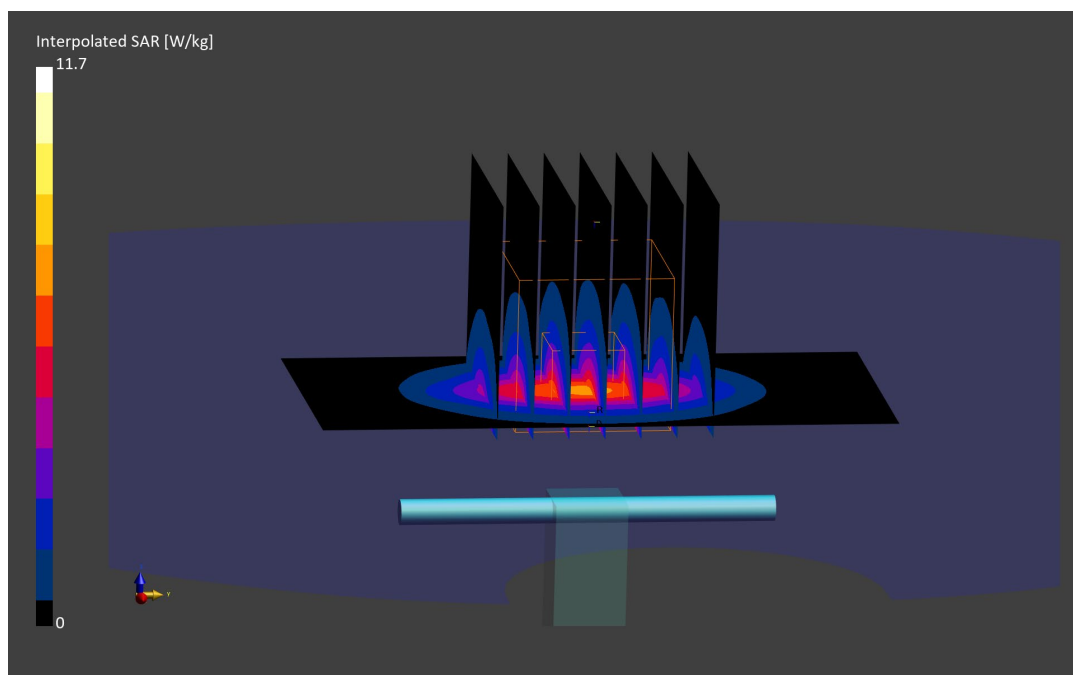
Area Scan (40.0 x 80.0): Measurement grid: $dx=10.0$ mm, $dy=10.0$ mm

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/m³
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)

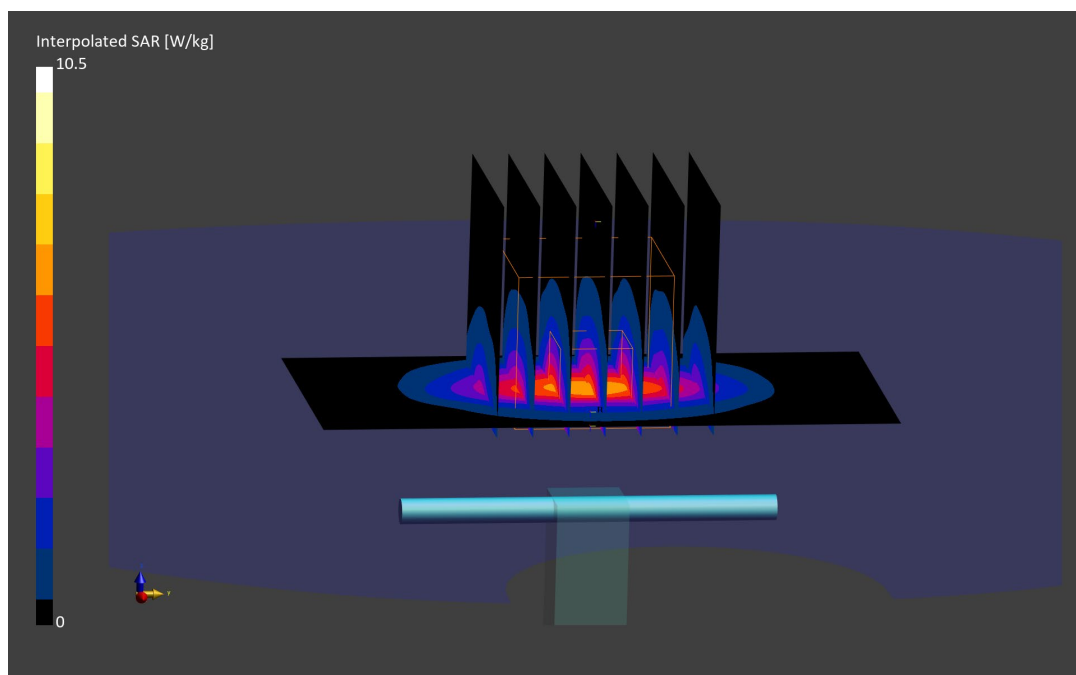
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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/m³
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)

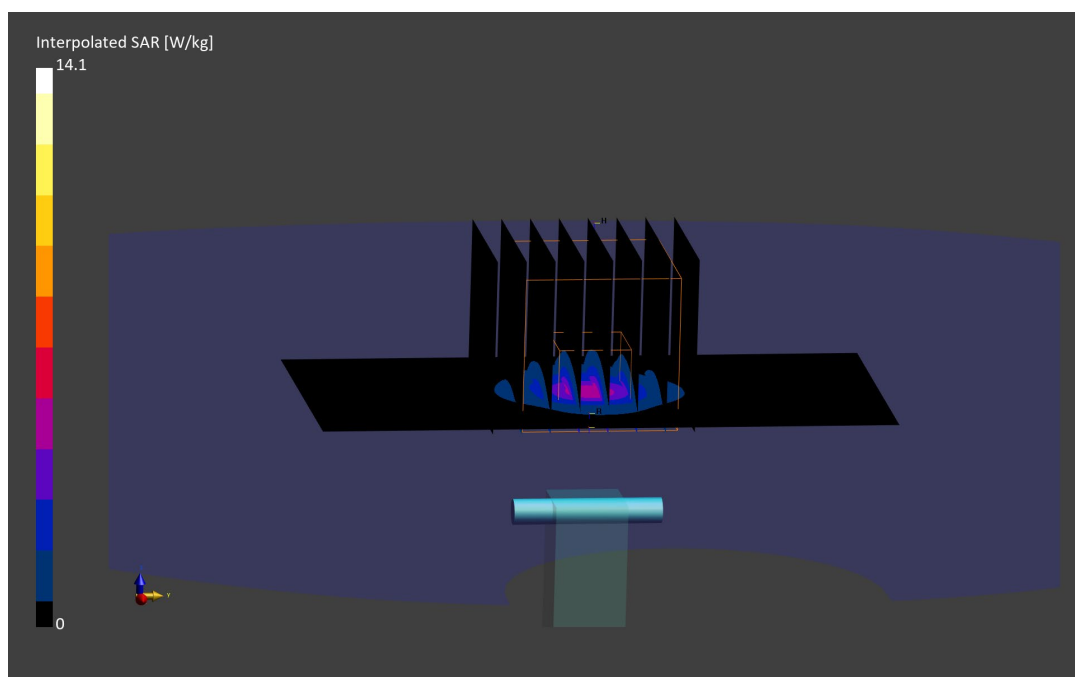
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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/m³
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)

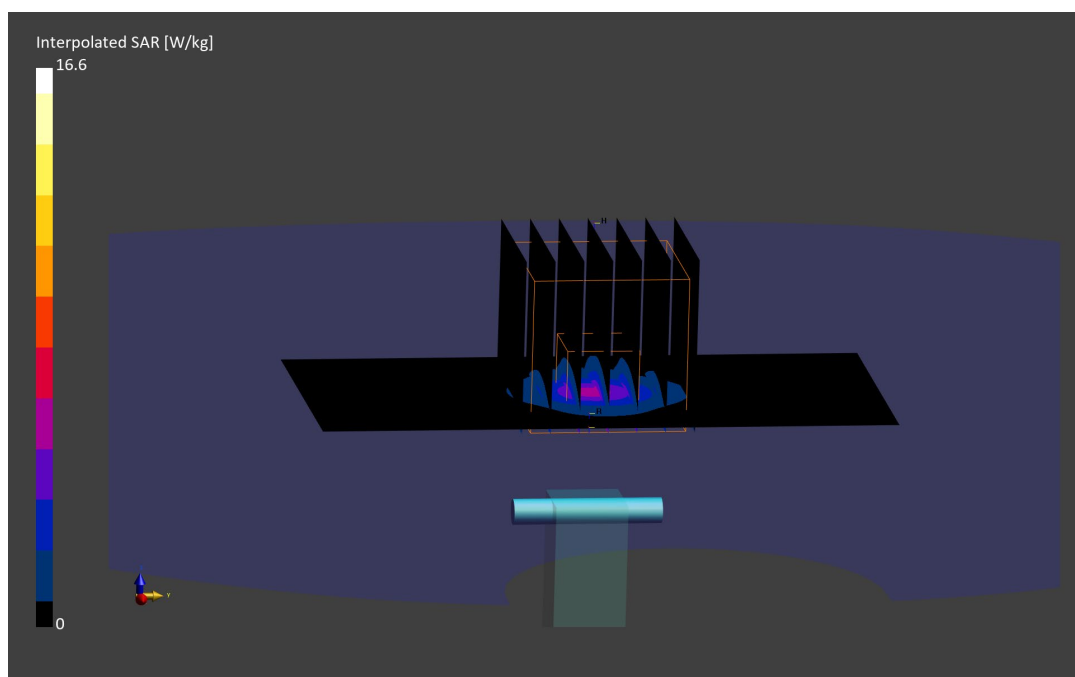
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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/m³
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)

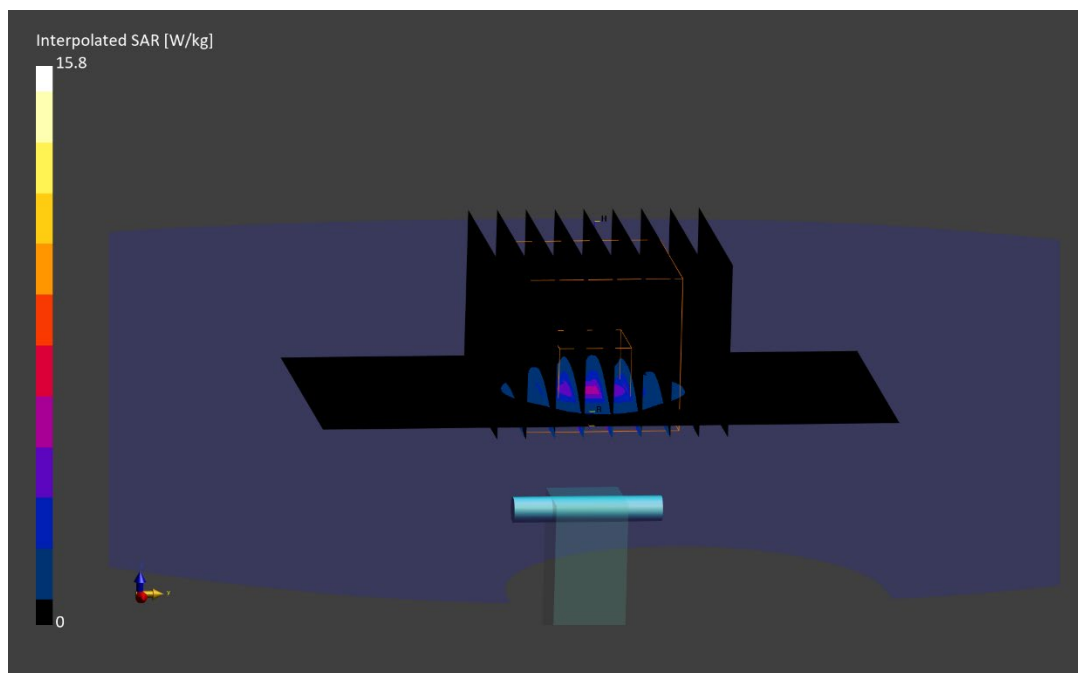
Area Scan (40.0 x 80.0): Measurement grid: $dx=10.0$ mm, $dy=10.0$ mm

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/m³
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)

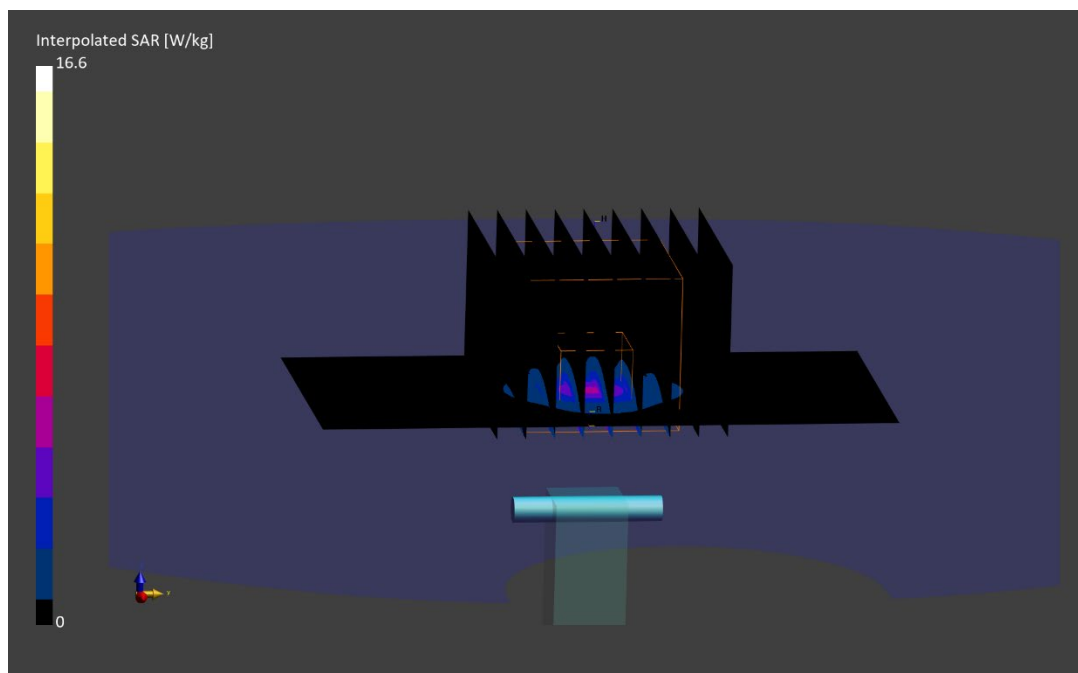
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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/m³
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)

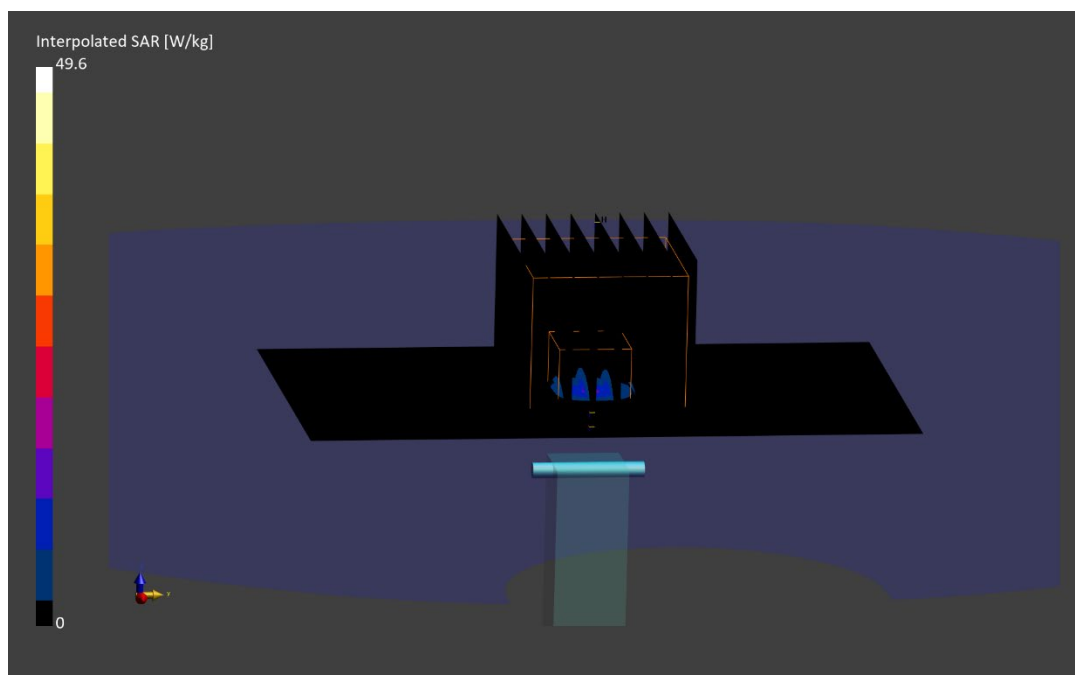
Area Scan (51.0 x 85.0): Measurement grid: dx=8.5 mm, dy=8.5 mm

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%



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 _{tot} avg [W/m²]	60.7
pS _n avg [W/m²]	60.5
E _{peak} [V/m]	161
Deviation [dB] pS _{tot}	0.45
Deviation [dB] pS _n	0.44

