

APPENDIX B: SAR DIPOLE VERIFICATION PLOTS

ELEMENT

DUT: Dipole 2450.000 MHz; Type: D2450V2 - SN797

Communication System: UID: 0, CW; Frequency: 2450.000 MHz
Medium: 2450 Head; Medium parameters used:
f = 2450.000 MHz; cond = 1.82 S/m; perm = 37.4; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 12/15/2024; Ambient Temp: 21.6°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7406; ConvF:(7.24,6.85,7.63); 2024-07-05
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1677; 2024-07-08
Phantom: Twin-SAM V5.0; Serial: 1800
Measurement SW: DASY Module SAR V16.4.0.5005

2450.0 MHz System Verification at 20.0 dBm (100 mW)

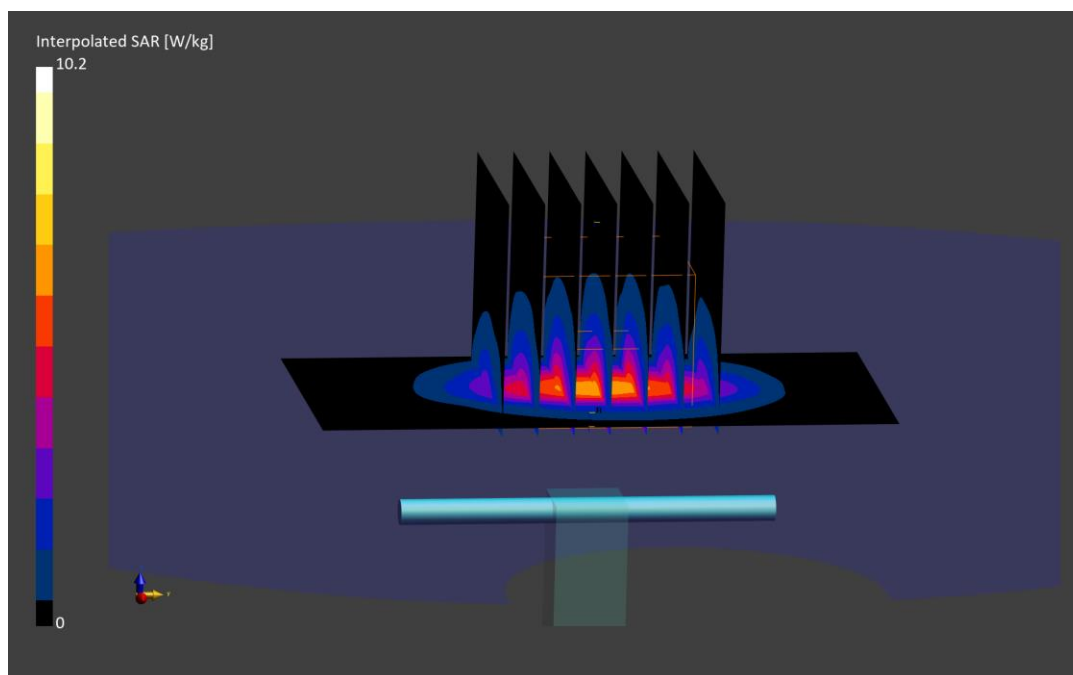
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 10.2 W/kg

SAR(1 g) = 5.05 W/kg; SAR(10 g) = 2.36 W/kg

Deviation (1 g) = -2.88%; Deviation (10 g) = -3.28%



ELEMENT

DUT: Dipole 2450.000 MHz; Type: D2450V2 - SN797

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 = 38.7; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 12/18/2024; Ambient Temp: 23.1°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7406; ConvF:(7.24,6.85,7.63); 2024-07-05
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1677; 2024-07-08
Phantom: Twin-SAM V5.0; Serial: 1800
Measurement SW: DASY Module SAR V16.4.0.5005

2450.0 MHz System Verification at 20.0 dBm (100 mW)

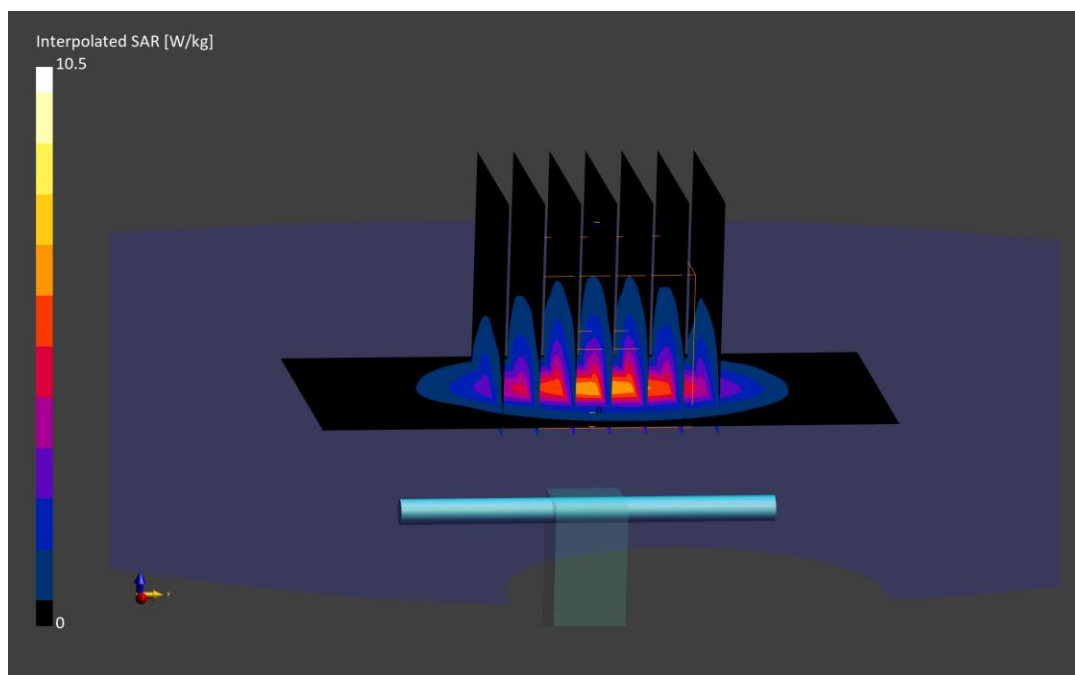
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (30.0 x 30.0 x 31.2): 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) = 5.14 W/kg; SAR(10 g) = 2.39 W/kg

Deviation (1 g) = -1.15%; Deviation (10 g) = -2.05%



ELEMENT

DUT: Dipole 2450.000 MHz; Type: D2450V2 - SN797

Communication System: UID: 0, CW; Frequency: 2450.000 MHz

Medium: Head Simulating Liquid; Medium parameters used:

$f = 2450.000$ MHz; $\text{cond} = 1.79$ S/m; $\text{perm} = 37.5$; $\text{density} = 1000$ kg/m³

Phantom Section: Flat; Space: 10 mm

Test Date: 04/07/2025; Ambient Temp: 22.00°C; Tissue Temp: 22.00°C

Probe: EX3DV4 - SN3914; ConvF:(7.52,6.84,6.89); 2024-05-10

Sensor-Surface: 1.4mm (VMS + 6p)

Electronics: DAE4 Sn728; 2024-05-08

Phantom: Twin-SAM V8.0; Serial: 2060

Measurement SW: DASY Module SAR V16.4.0.5005

2450.0 MHz System Verification at 20.0 dBm (100 mW)

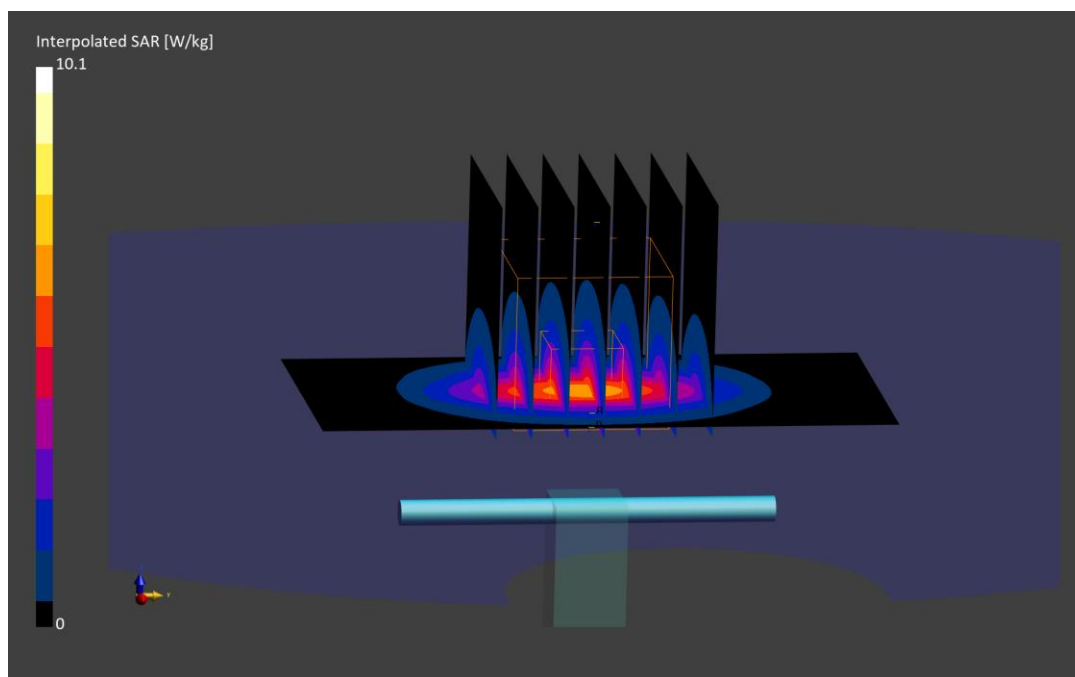
Area Scan (40.0 x 80.0): Measurement grid: $dx=10.0$ mm, $dy=10.0$ mm

Zoom Scan (30.0 x 30.0 x 31.2): Measurement grid: $dx=5.0$ mm, $dy=5.0$ mm, $dz=1.5$ mm; Graded Ratio: 1.5

Peak SAR (extrapolated) = 10.1 W/kg

SAR(1 g) = 4.84 W/kg; SAR(10 g) = 2.27 W/kg

Deviation (1 g) = -6.92%; Deviation (10 g) = -6.97%



ELEMENT

DUT: Dipole 5250.000 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5250.000 MHz
Medium: 5200-5800 Head; Medium parameters used:
f = 5250.000 MHz; cond = 4.53 S/m; perm = 36.2; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 12/30/2024; Ambient Temp: 21.4°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7803; ConvF:(5.21,5.33,5.42); 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; 2024-07-08
Phantom: Twin-SAM V8.0; Serial: 2065
Measurement SW: DASY Module SAR V16.4.0.5005

5250.0 MHz System Verification at 17.0 dBm (50 mW)

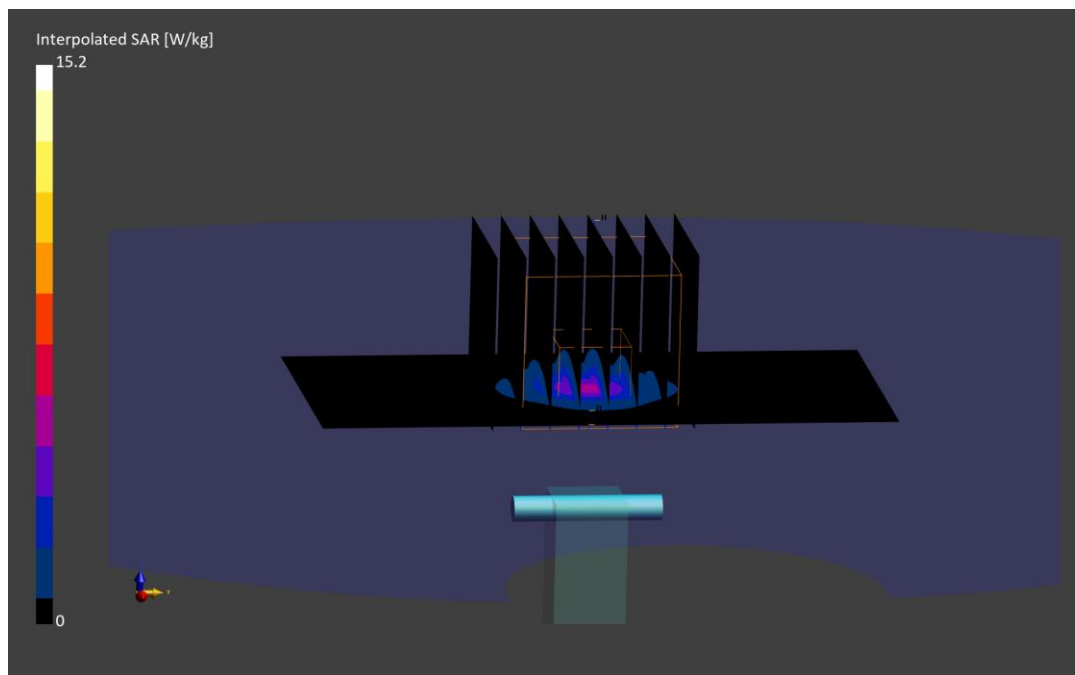
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (24.0 x 28.0 x 22.9): Measurement grid: dx=4.0 mm, dy=4.0 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 15.2 W/kg

SAR(1 g) = 3.82 W/kg; SAR(10 g) = 1.11 W/kg

Deviation (1 g) = -3.17%; Deviation (10 g) = -2.20%



ELEMENT

DUT: Dipole 5250.000 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5250.000 MHz

Medium: Head Simulating Liquid; Medium parameters used:

f = 5250.000 MHz; cond = 4.49 S/m; perm = 36.0; density = 1000 kg/m³

Phantom Section: Flat; Space: 10 mm

Test Date: 03/31/2025; Ambient Temp: 24.2°C; Tissue Temp: 19.5°C

Probe: EX3DV4 - SN7803; ConvF:(5.21,5.33,5.42); 2024-06-28

Sensor-Surface: 1.4mm (VMS + 6p)

Electronics: DAE4 Sn1583; 2024-07-08

Phantom: Twin-SAM V8.0; Serial: 2065

Measurement SW: DASY Module SAR V16.4.0.5005

5250.0 MHz System Verification at 17.0 dBm (50 mW)

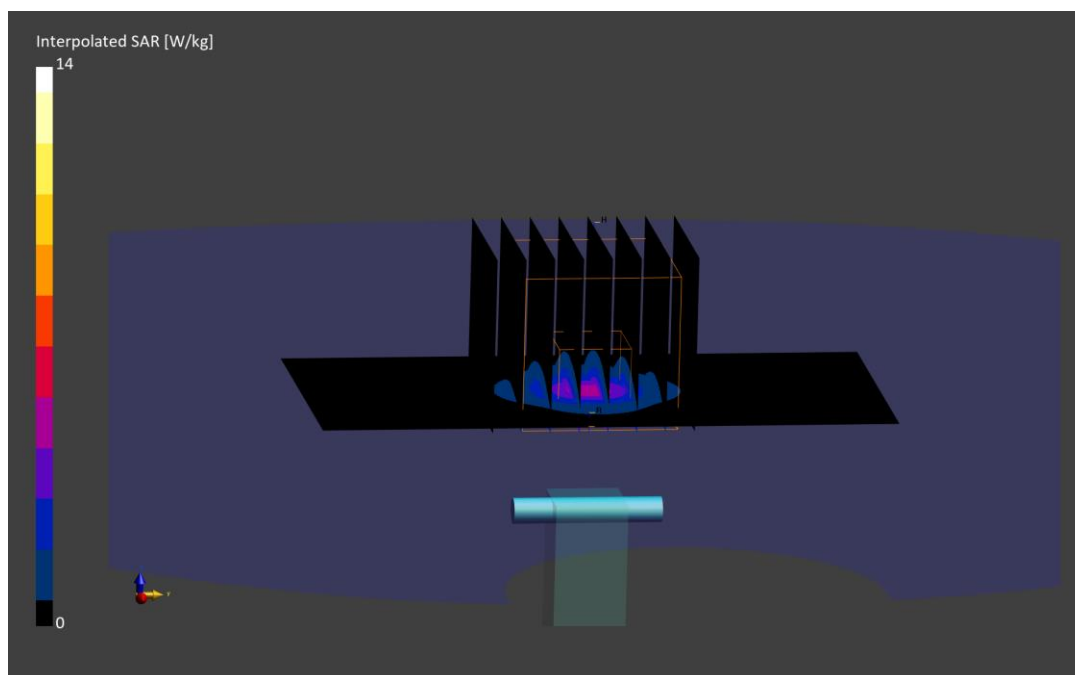
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (24.0 x 28.0 x 22.9): Measurement grid: dx=4.0 mm, dy=4.0 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 14.0 W/kg

SAR(1 g) = 3.62 W/kg; SAR(10 g) = 1.06 W/kg

Deviation (1 g) = -8.24%; Deviation (10 g) = -6.61%



ELEMENT

DUT: Dipole 5600.000 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5600.000 MHz
Medium: 5200-5800 Head; Medium parameters used:
f = 5600.000 MHz; cond = 4.91 S/m; perm = 35.6; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 12/30/2024; Ambient Temp: 21.4°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7803; ConvF:(4.82,4.92,5.01); 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; 2024-07-08
Phantom: Twin-SAM V8.0; Serial: 2065
Measurement SW: DASY Module SAR V16.4.0.5005

5600.0 MHz System Verification at 17.0 dBm (50 mW)

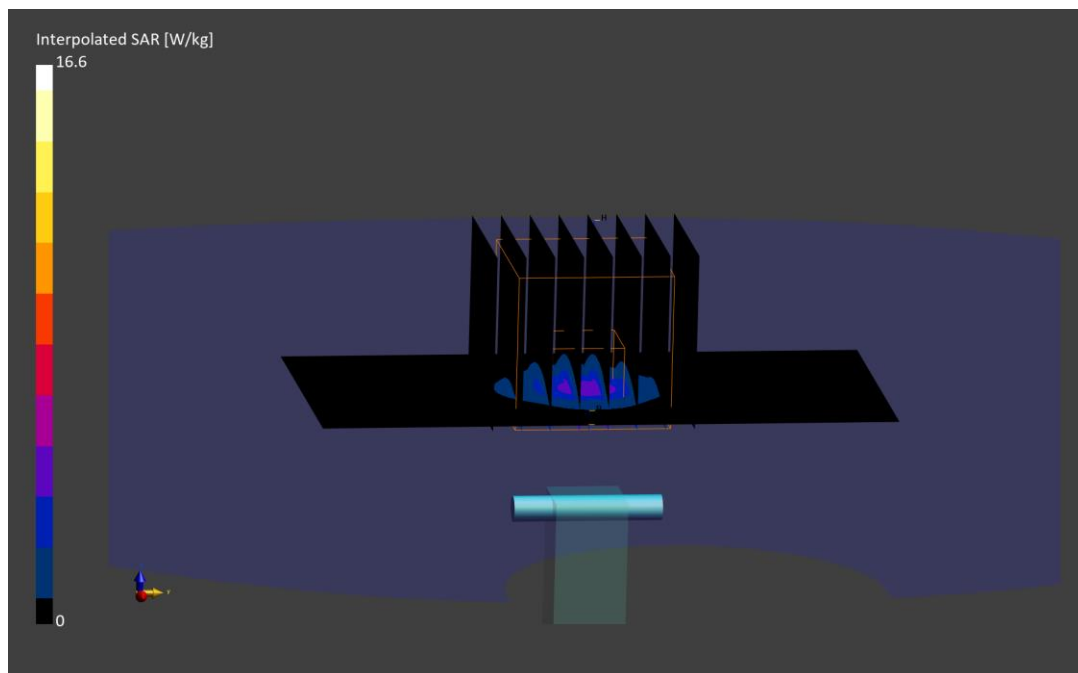
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (24.0 x 28.0 x 22.9): 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) = 3.85 W/kg; SAR(10 g) = 1.11 W/kg

Deviation (1 g) = -7.23%; Deviation (10 g) = -7.11%



ELEMENT

DUT: Dipole 5600.000 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5600.000 MHz

Medium: Head Simulating Liquid; Medium parameters used:

f = 5600.000 MHz; cond = 4.90 S/m; perm = 35.4; density = 1000 kg/m³

Phantom Section: Flat; Space: 10 mm

Test Date: 03/31/2025; Ambient Temp: 24.2°C; Tissue Temp: 19.5°C

Probe: EX3DV4 - SN7803; ConvF:(4.82,4.92,5.01); 2024-06-28

Sensor-Surface: 1.4mm (VMS + 6p)

Electronics: DAE4 Sn1583; 2024-07-08

Phantom: Twin-SAM V8.0; Serial: 2065

Measurement SW: DASY Module SAR V16.4.0.5005

5600.0 MHz System Verification at 17.0 dBm (50 mW)

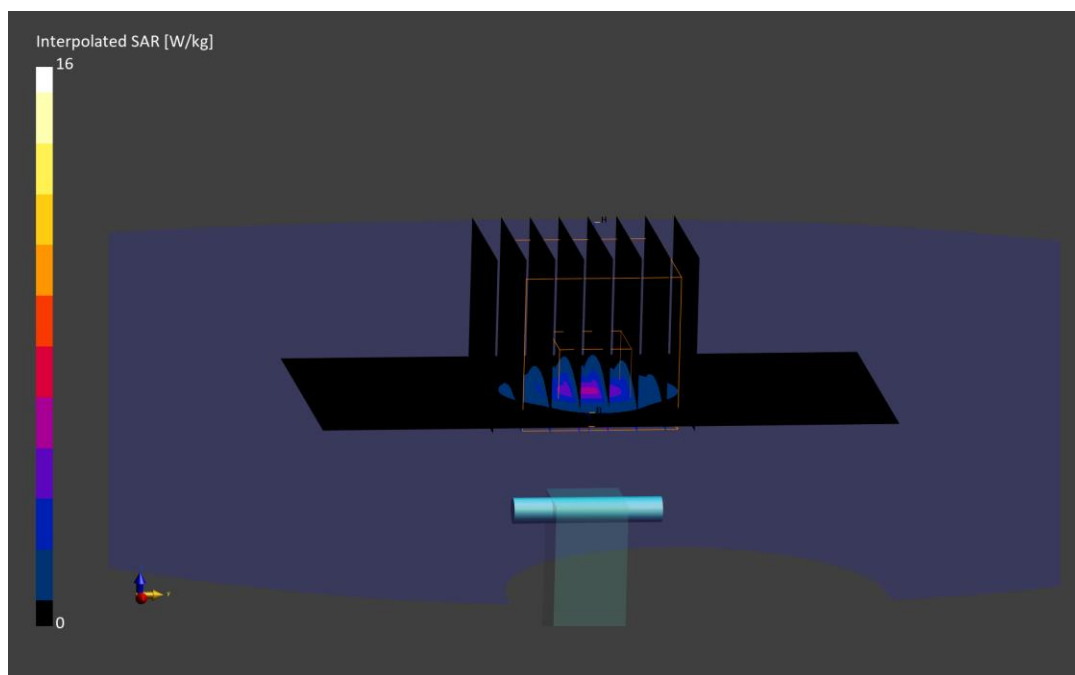
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (24.0 x 28.0 x 22.9): Measurement grid: dx=4.0 mm, dy=4.0 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 16.0 W/kg

SAR(1 g) = 3.81 W/kg; SAR(10 g) = 1.10 W/kg

Deviation (1 g) = -8.19%; Deviation (10 g) = -7.95%



ELEMENT

DUT: Dipole 5750.000 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5750.000 MHz
Medium: 5200-5800 Head; Medium parameters used:
f = 5750.000 MHz; cond = 5.09 S/m; perm = 35.4; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 12/30/2024; Ambient Temp: 21.4°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7803; ConvF:(4.79,4.89,4.98); 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; 2024-07-08
Phantom: Twin-SAM V8.0; Serial: 2065
Measurement SW: DASY Module SAR V16.4.0.5005

5750.0 MHz System Verification at 17.0 dBm (50 mW)

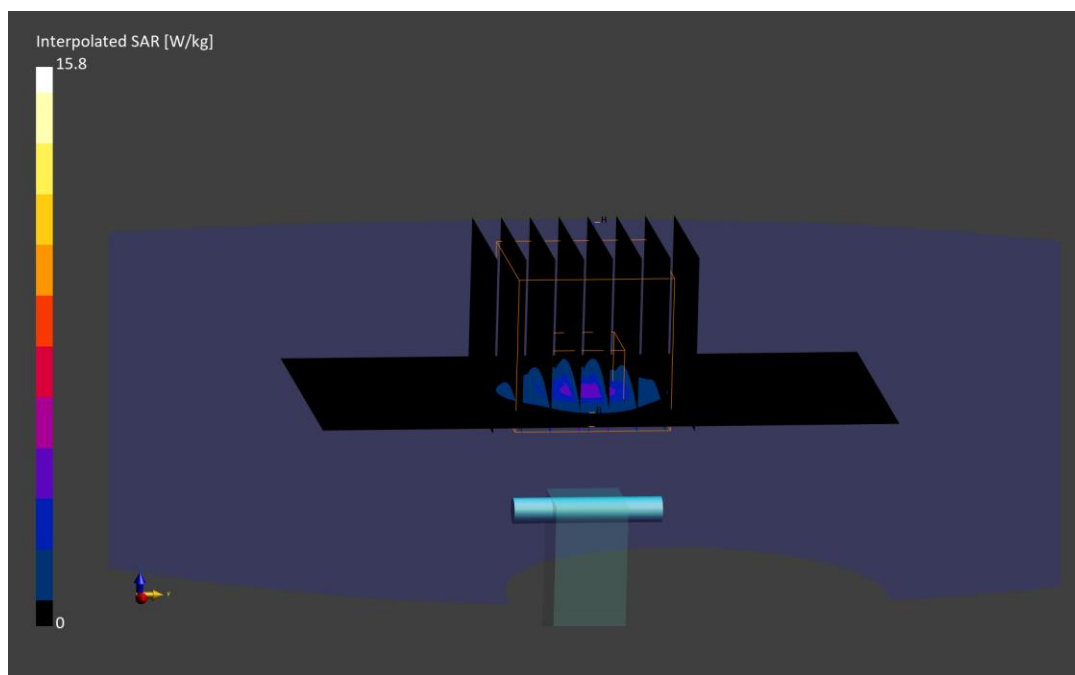
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (24.0 x 28.0 x 22.9): 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) = 3.56 W/kg; SAR(10 g) = 1.03 W/kg

Deviation (1 g) = -9.76%; Deviation (10 g) = -8.04%



ELEMENT

DUT: Dipole 5750.000 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5750.000 MHz

Medium: Head Simulating Liquid; Medium parameters used:

f = 5750.000 MHz; cond = 5.07 S/m; perm = 35.1; density = 1000 kg/m³

Phantom Section: Flat; Space: 10 mm

Test Date: 03/31/2025; Ambient Temp: 24.2°C; Tissue Temp: 19.5°C

Probe: EX3DV4 - SN7803; ConvF:(4.79,4.89,4.98); 2024-06-28

Sensor-Surface: 1.4mm (VMS + 6p)

Electronics: DAE4 Sn1583; 2024-07-08

Phantom: Twin-SAM V8.0; Serial: 2065

Measurement SW: DASY Module SAR V16.4.0.5005

5750.0 MHz System Verification at 17.0 dBm (50 mW)

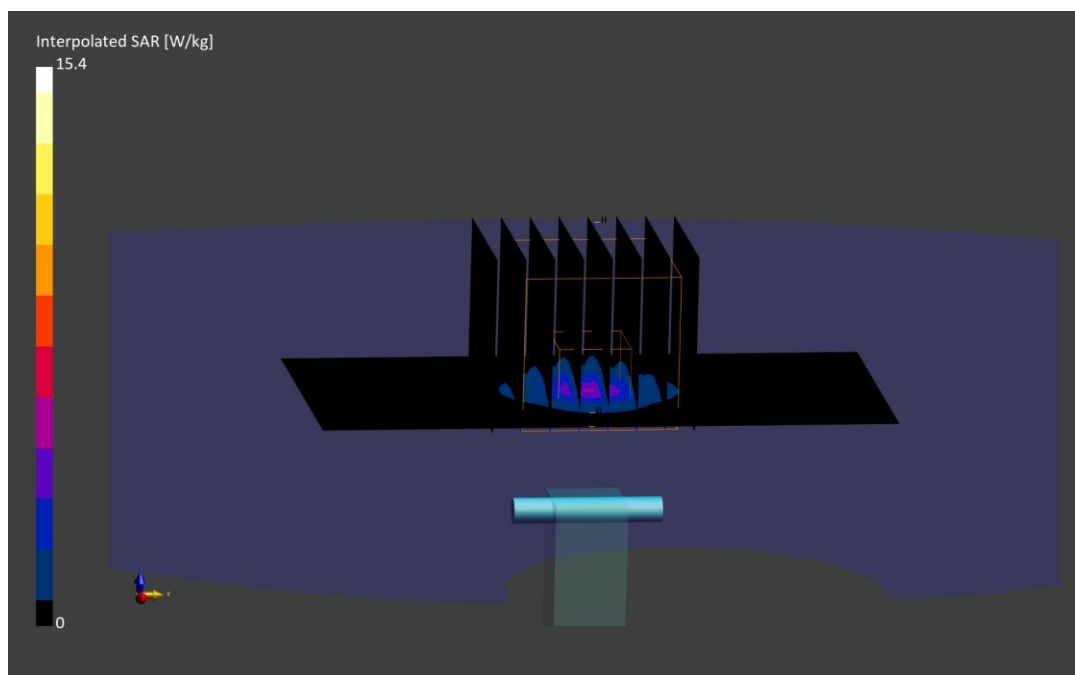
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (24.0 x 28.0 x 22.9): Measurement grid: dx=4.0 mm, dy=4.0 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 15.4 W/kg

SAR(1 g) = 3.60 W/kg; SAR(10 g) = 1.04 W/kg

Deviation (1 g) = -8.75%; Deviation (10 g) = -7.14%



ELEMENT

DUT: Dipole 5850.000 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5850.000 MHz
Medium: 5200-5800 Head; Medium parameters used:
f = 5850.000 MHz; cond = 5.21 S/m; perm = 35.2; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 12/30/2024; Ambient Temp: 21.4°C; Tissue Temp: 20.0°C

Probe: EX3DV4 - SN7803; ConvF:(4.78,4.89,4.97); 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; 2024-07-08
Phantom: Twin-SAM V8.0; Serial: 2065
Measurement SW: DASY Module SAR V16.4.0.5005

5850.0 MHz System Verification at 17.0 dBm (50 mW)

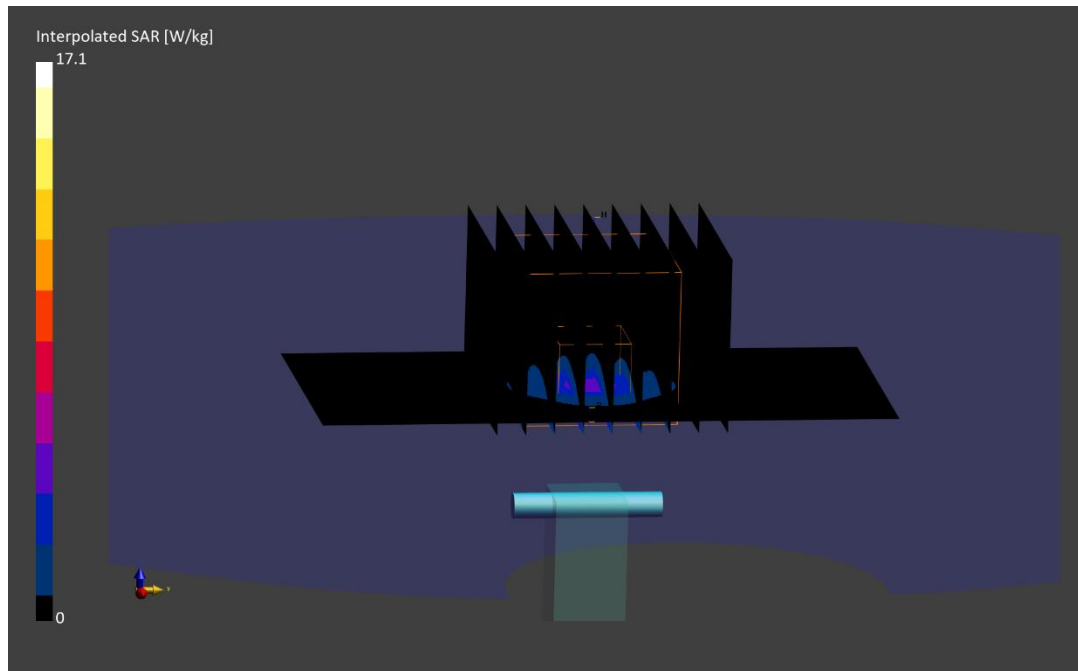
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (32.0 x 32.0 x 22.9): Measurement grid: dx=4.0 mm, dy=4.0 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 17.1 W/kg

SAR(1 g) = 3.77 W/kg; SAR(10 g) = 1.08 W/kg

Deviation (1 g) = -4.31%; Deviation (10 g) = -4.00%



ELEMENT

DUT: Dipole 5850.000 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5850.000 MHz

Medium: Head Simulating Liquid; Medium parameters used:

f = 5850.000 MHz; cond = 5.18 S/m; perm = 35.0; density = 1000 kg/m³

Phantom Section: Flat; Space: 10 mm

Test Date: 03/31/2025; Ambient Temp: 24.2°C; Tissue Temp: 19.5°C

Probe: EX3DV4 - SN7803; ConvF:(4.78,4.89,4.97); 2024-06-28

Sensor-Surface: 1.4mm (VMS + 6p)

Electronics: DAE4 Sn1583; 2024-07-08

Phantom: Twin-SAM V8.0; Serial: 2065

Measurement SW: DASY Module SAR V16.4.0.5005

5850.0 MHz System Verification at 17.0 dBm (50 mW)

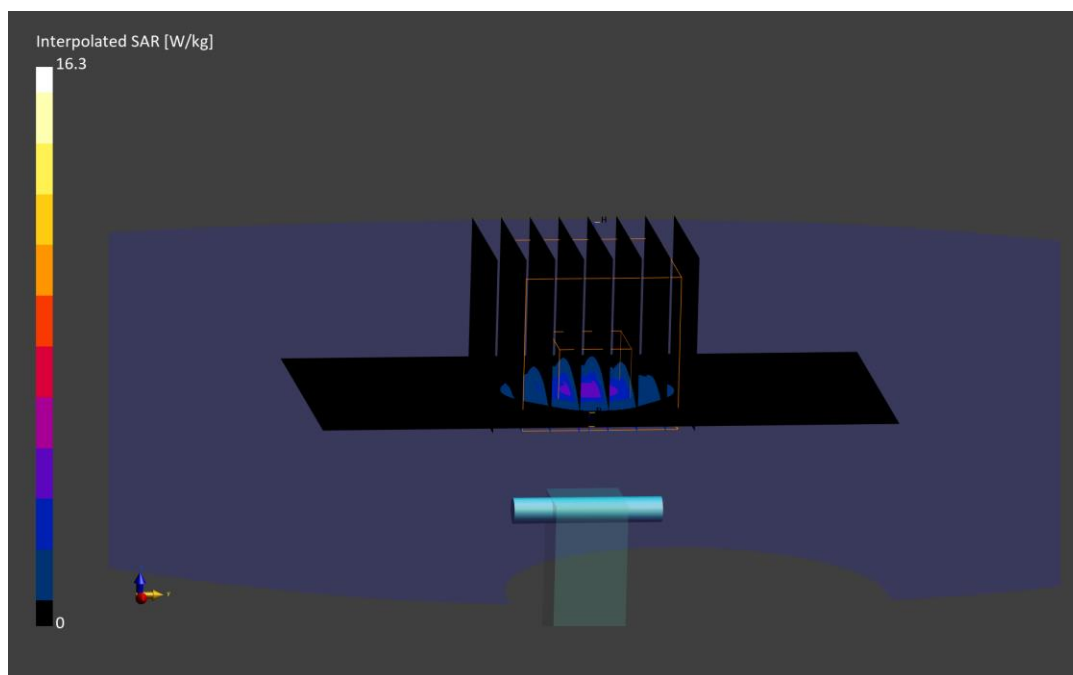
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (24.0 x 28.0 x 22.9): Measurement grid: dx=4.0 mm, dy=4.0 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 16.3 W/kg

SAR(1 g) = 3.71 W/kg; SAR(10 g) = 1.06 W/kg

Deviation (1 g) = -5.84%; Deviation (10 g) = -5.78%



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 = 5.91 S/m; perm = 34.0; density = 1000 kg/m³
Phantom Section: Flat; Space: 5 mm

Test Date: 12/26/2024; Ambient Temp: 19.5°C; Tissue Temp: 19.5°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 V16.4.0.5005

6500.0 MHz System Verification at 14.0 dBm (25 mW)

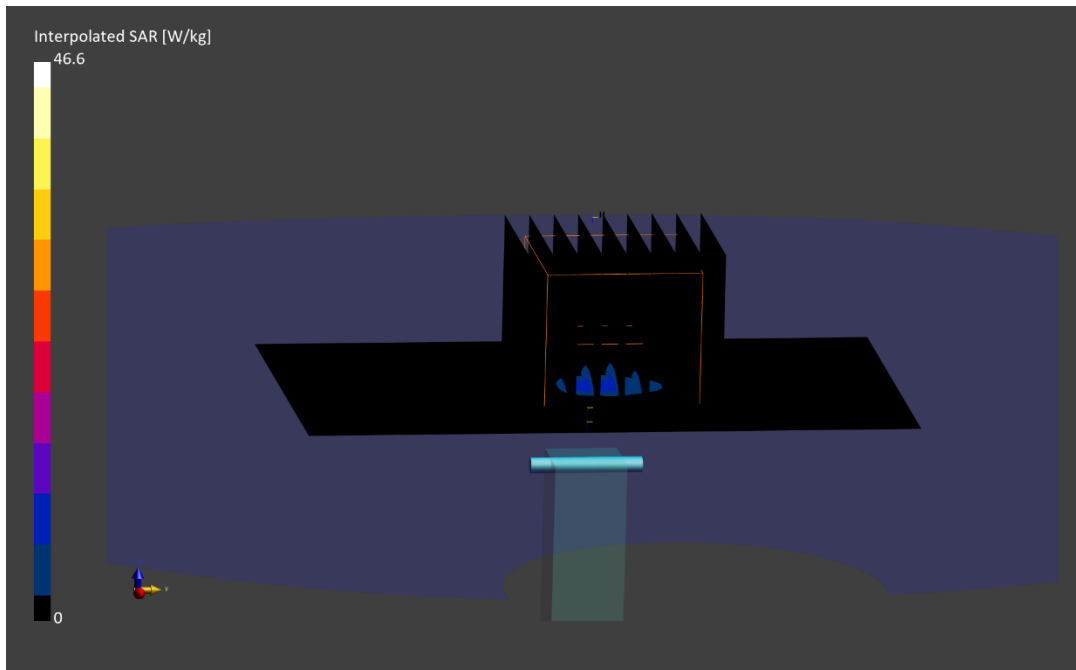
Area Scan (51.0 x 85.0): Measurement grid: dx=8.5 mm, dy=8.5 mm

Zoom Scan (23.8 x 27.2 x 22.9): Measurement grid: dx=3.4 mm, dy=3.4 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 46.6 W/kg

SAR(1 g) = 7.44 W/kg; SAR(10 g) = 1.38 W/kg; APD(4.0 cm²) = 33.3 W/m²

Deviation (1 g) = 2.27%; Deviation (10 g) = 3.18%; Deviation (APD) = 2.46%



ELEMENT

DUT: Dipole 6500.000 MHz; Type: D6.5GHzV2 - SN1018

Communication System: UID: 0, CW; Frequency: 6500.000 MHz
Medium: Head Simulating Liquid; Medium parameters used:
f = 6500.000 MHz; cond = 6.03 S/m; perm = 33.7; density = 1000 kg/m³
Phantom Section: Flat; Space: 5 mm

Test Date: 04/06/2025; Ambient Temp: 21.6°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7570; ConvF:(5.35,5.65,5.29); 2025-02-10
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4ip Sn1638; 2025-02-07
Phantom: Twin-SAM V8.0; Serial: 1979
Measurement SW: DASY Module SAR V16.4.0.5005

6500.0 MHz System Verification at 14.0 dBm (25 mW)

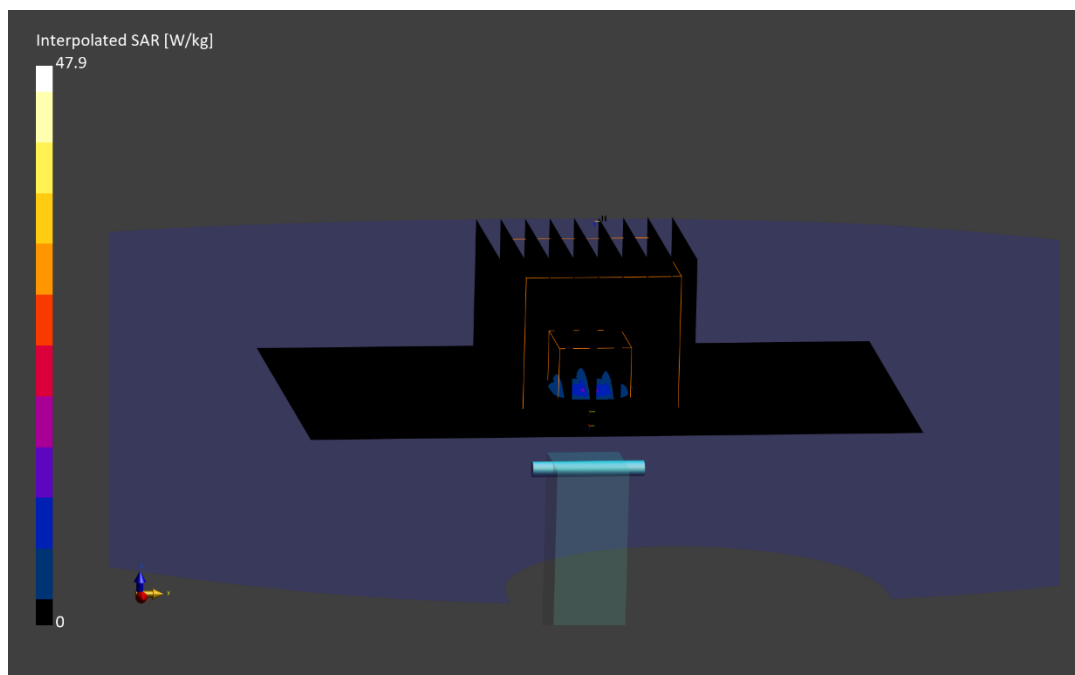
Area Scan (51.0 x 85.0): Measurement grid: dx=8.5 mm, dy=8.5 mm

Zoom Scan (23.8 x 27.2 x 22.9): Measurement grid: dx=3.4 mm, dy=3.4 mm, dz=1.4 mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 47.9 W/kg

SAR(1 g) = 7.57 W/kg; SAR(10 g) = 1.38 W/kg; APD(4.0 cm²) = 33.5 W/m²

Deviation (1 g) = 3.70%; Deviation (10 g) = 2.41%; Deviation (APD) = 2.29%



Date: 2024-12-16

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	DAE4 - SN1449, 2024-09-10

Software Setup

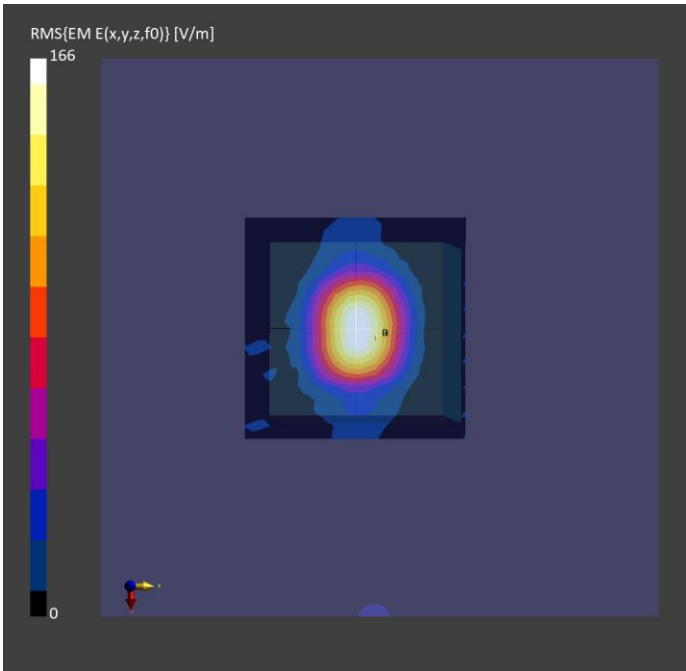
Software	Software Version
cDASY6 Module mmWave	3.2.0.1840

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]	62.3
pS _n avg [W/m²]	61.8
E _{peak} [V/m]	165
Deviation [dB] pS _{tot}	
Deviation [dB] pS _n	



Date: 2025-04-07

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
EUmmWV3 – SN9389, 2025-01-08	DAE4 – SN1449, 2024-09-10

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]	57.2
pS _n avg [W/m²]	56.8
E _{peak} [V/m]	153
Deviation [dB] pS _{tot}	0.25
Deviation [dB] pS _n	0.24

