

APPENDIX A: VERIFICATION PLOTS

ELEMENT

DUT: Dipole 750.000 MHz; Type: D750V3 - SN1054

Communication System: UID: 0, CW; Frequency: 750.000 MHz

Medium: 750 Head; Medium parameters used:

f = 750.000 MHz; cond = 0.875 S/m; perm = 41.0; density = 1000 kg/m³

Phantom Section: Flat; Space: 15 mm

Test Date: 10/03/2024; Ambient Temp: 22.9°C; Tissue Temp: 23.9°C

Probe: EX3DV4 - SN7551; ConvF:(10.09,10.09,10.09); 2023-11-14

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

Electronics: DAE4 Sn1323; 2023-11-15

Phantom: Twin-SAM V8.0 (Left); Serial: 1964

Measurement SW: DASY Module SAR V16.4.0.5005

750.0 MHz System Verification at 23.0 dBm (200 mW)

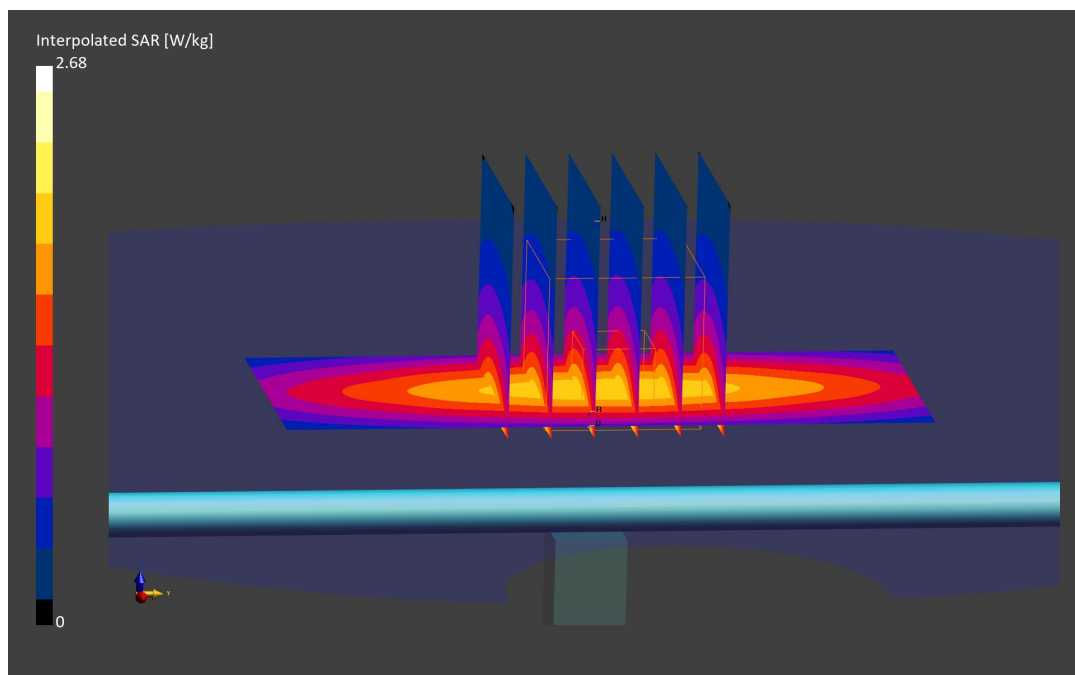
Area Scan (40.0 x 90.0): Measurement grid: dx=10.0 mm, dy=15.0 mm

Zoom Scan (30.0 x 30.0 x 30.0): Measurement grid: dx=6.0 mm, dy=6.0 mm, dz=1.5 mm; Graded Ratio: 1.5

Peak SAR (extrapolated) = 2.68 W/kg

SAR(1 g) = 1.74 W/kg; SAR(10 g) = 1.16 W/kg

Deviation (1 g) = 2.11%



ELEMENT

DUT: Dipole 835.000 MHz; Type: D835V2 - SN4d132

Communication System: UID: 0, CW; Frequency: 835.000 MHz

Medium: 835 Head; Medium parameters used:

f = 835.000 MHz; cond = 0.905 S/m; perm = 40.8; density = 1000 kg/m³

Phantom Section: Flat; Space: 15 mm

Test Date: 10/03/2024; Ambient Temp: 22.9°C; Tissue Temp: 23.9°C

Probe: EX3DV4 - SN7551; ConvF:(9.87,9.87,9.87); 2023-11-14

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

Electronics: DAE4 Sn1323; 2023-11-15

Phantom: Twin-SAM V8.0 (Left); Serial: 1964

Measurement SW: DASY Module SAR V16.4.0.5005

835.0 MHz System Verification at 23.0 dBm (200 mW)

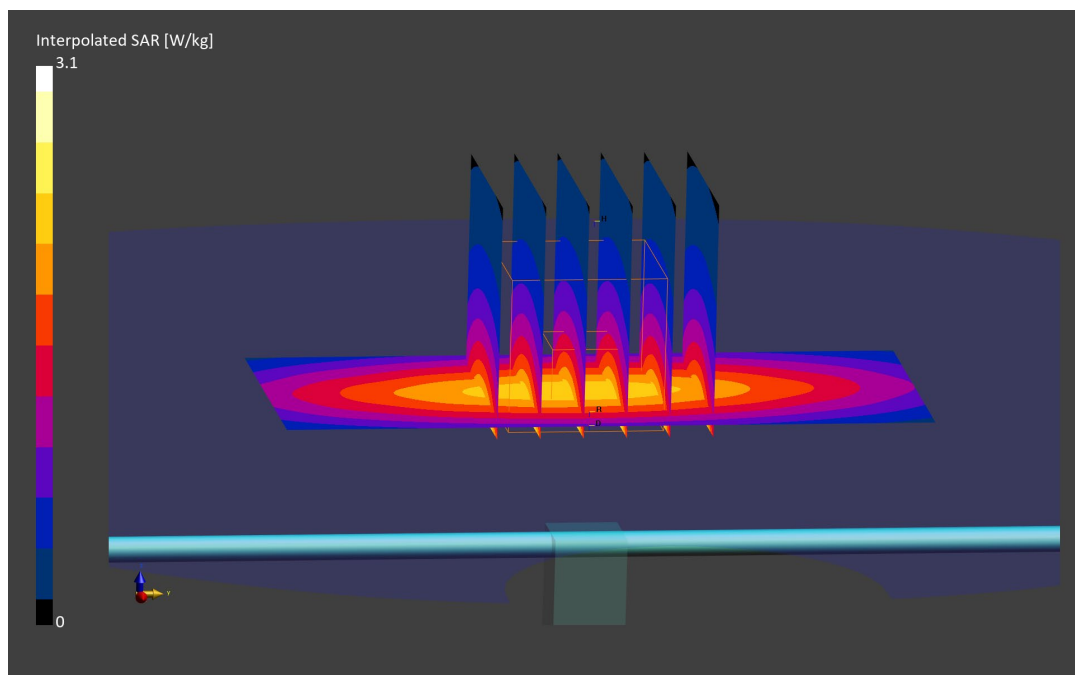
Area Scan (40.0 x 90.0): Measurement grid: dx=10.0 mm, dy=15.0 mm

Zoom Scan (30.0 x 30.0 x 30.0): Measurement grid: dx=6.0 mm, dy=6.0 mm, dz=1.5 mm; Graded Ratio: 1.5

Peak SAR (extrapolated) = 3.10 W/kg

SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.30 W/kg

Deviation (1 g) = 0.61%



ELEMENT

DUT: Dipole 1900.000 MHz; Type: D1900V2 - SN5d080

Communication System: UID: 0, CW; Frequency: 1900.000 MHz
Medium: 1900 Head; Medium parameters used:
f = 1900.000 MHz; cond = 1.40 S/m; perm = 38.6; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 10/03/2024; Ambient Temp: 22.9°C; Tissue Temp: 23.9°C

Probe: EX3DV4 - SN7551; ConvF:(8.14,8.14,8.14); 2023-11-14
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1323; 2023-11-15
Phantom: Twin-SAM V8.0 (Left); Serial: 1964
Measurement SW: DASY Module SAR V16.4.0.5005

1900.0 MHz System Verification at 20.0 dBm (100 mW)

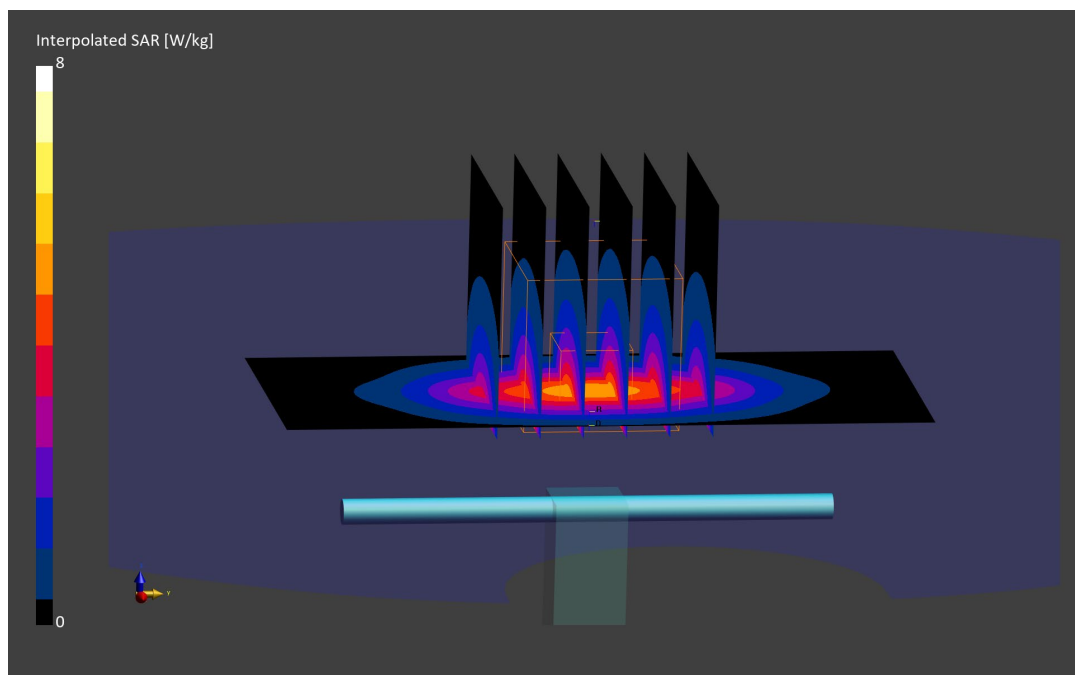
Area Scan (40.0 x 90.0): Measurement grid: dx=10.0 mm, dy=15.0 mm

Zoom Scan (30.0 x 30.0 x 30.0): Measurement grid: dx=6.0 mm, dy=6.0 mm, dz=1.5 mm; Graded Ratio: 1.5

Peak SAR (extrapolated) = 8.00 W/kg

SAR(1 g) = 4.20 W/kg; SAR(10 g) = 2.21 W/kg

Deviation (1 g) = 6.06%



ELEMENT

DUT: Dipole 2450.000 MHz; Type: D2450V2 - SN719

Communication System: UID: 0, CW; Frequency: 2450.000 MHz
Medium: 2450 Head; Medium parameters used:
 $f = 2450.000$ MHz; $\text{cond} = 1.78$ S/m; $\text{perm} = 39.4$; $\text{density} = 1000$ kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 10/15/2024; Ambient Temp: 23.5°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7551; ConvF:(7.56,7.56,7.56); 2023-11-14
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1323; 2023-11-15
Phantom: Twin-SAM V8.0 (Left); Serial: 1964
Measurement SW: DASY Module SAR V16.4.0.5005

2450.0 MHz System Verification at 20.0 dBm (100 mW)

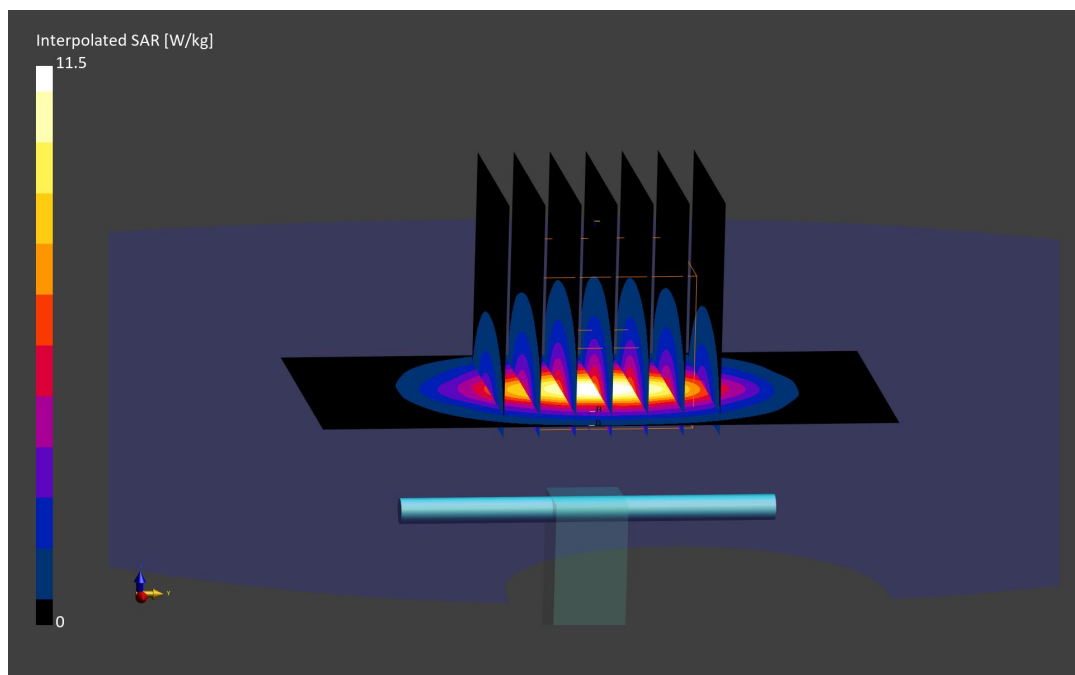
Area Scan (40.0 x 80.0): Measurement grid: $dx=10.0$ mm, $dy=10.0$ mm

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) = 11.5 W/kg

SAR(1 g) = 5.50 W/kg; SAR(10 g) = 2.58 W/kg

Deviation (1 g) = 5.36%



ELEMENT

DUT: Dipole 2600.000 MHz; Type: D2600V2 - SN1071

Communication System: UID: 0, CW; Frequency: 2600.000 MHz
Medium: 2450 Head; Medium parameters used:
f = 2600.000 MHz; cond = 1.89 S/m; perm = 39.5; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 09/25/2024; Ambient Temp: 23.1°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7551; ConvF:(7.5,7.5,7.5); 2023-11-14
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1323; 2023-11-15
Phantom: Twin-SAM V8.0 (Left); Serial: 1964
Measurement SW: DASY Module SAR V16.4.0.5005

2600.0 MHz System Verification at 20.0 dBm (100 mW)

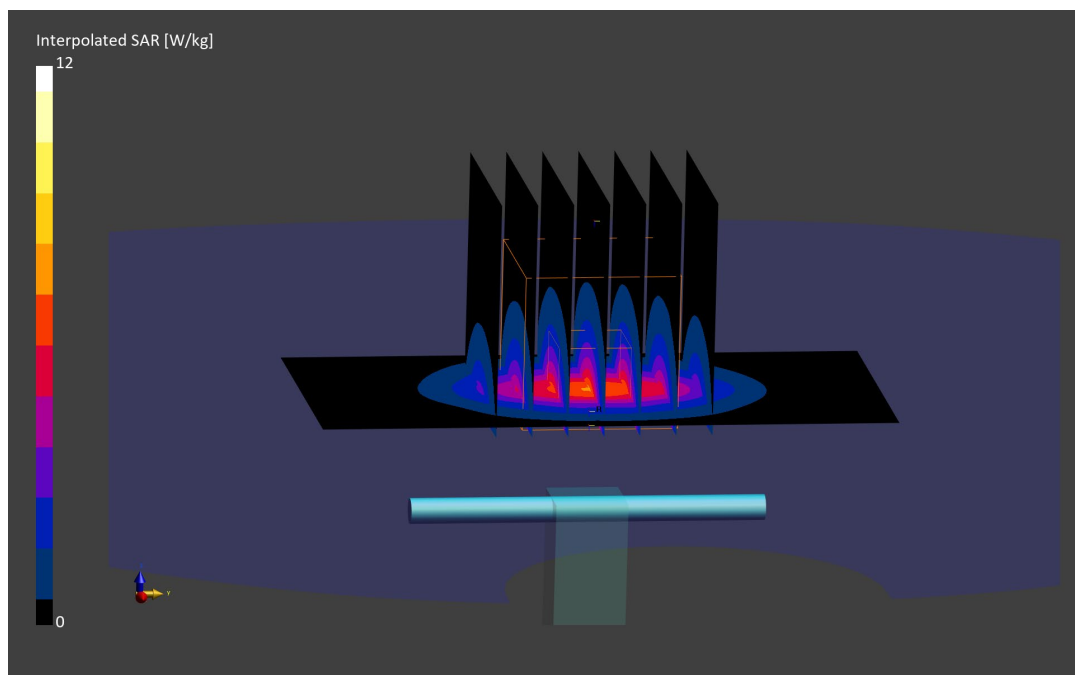
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 12.0 W/kg

SAR(1 g) = 5.49 W/kg; SAR(10 g) = 2.49 W/kg

Deviation (1 g) = -2.83%



ELEMENT

DUT: Dipole 2600.000 MHz; Type: D2600V2 - SN1071

Communication System: UID: 0, CW; Frequency: 2600.000 MHz
Medium: 2450 Head; Medium parameters used:
f = 2600.000 MHz; cond = 1.89 S/m; perm = 39.1; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 10/15/2024; Ambient Temp: 23.5°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7551; ConvF:(7.5,7.5,7.5); 2023-11-14
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1323; 2023-11-15
Phantom: Twin-SAM V8.0 (Left); Serial: 1964
Measurement SW: DASY Module SAR V16.4.0.5005

2600.0 MHz System Verification at 20.0 dBm (100 mW)

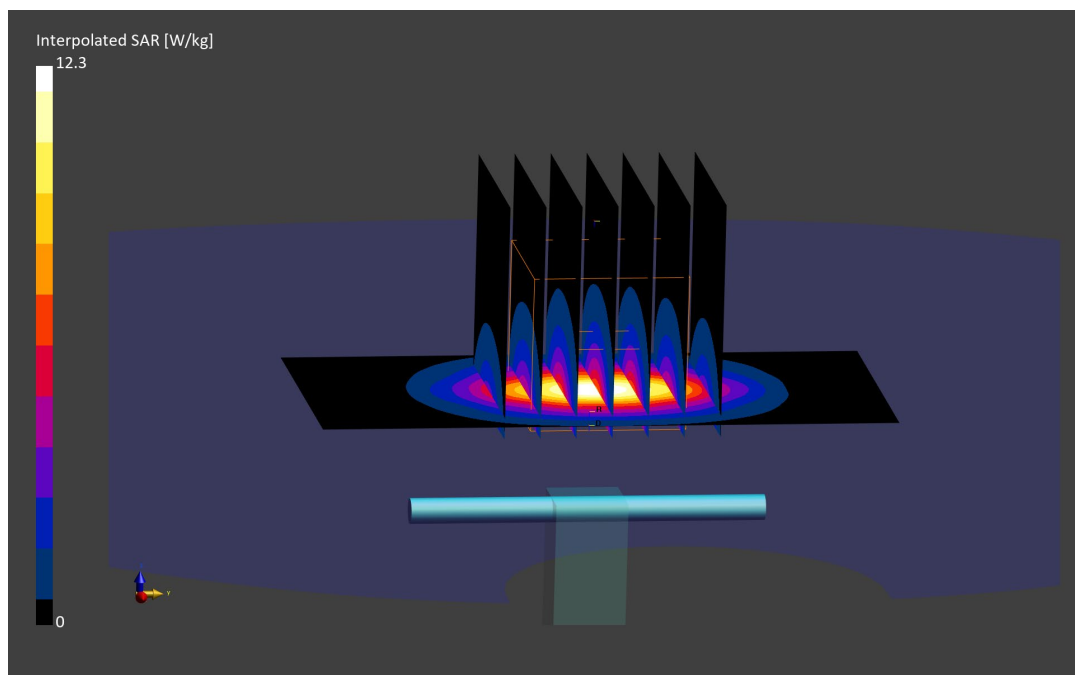
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 12.3 W/kg

SAR(1 g) = 5.67 W/kg; SAR(10 g) = 2.58 W/kg

Deviation (1 g) = 0.35%



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 = 4.52 S/m; perm = 36.8; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 10/17/2024; Ambient Temp: 21.0°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7571; ConvF:(5.14,5.14,5.14); 2024-01-11
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn859; 2024-01-09
Phantom: Twin-SAM V8.0; Serial: 1978
Measurement SW: DASY Module SAR V16.4.0.5005

5250.0 MHz System Verification at 17.0 dBm (50 mW)

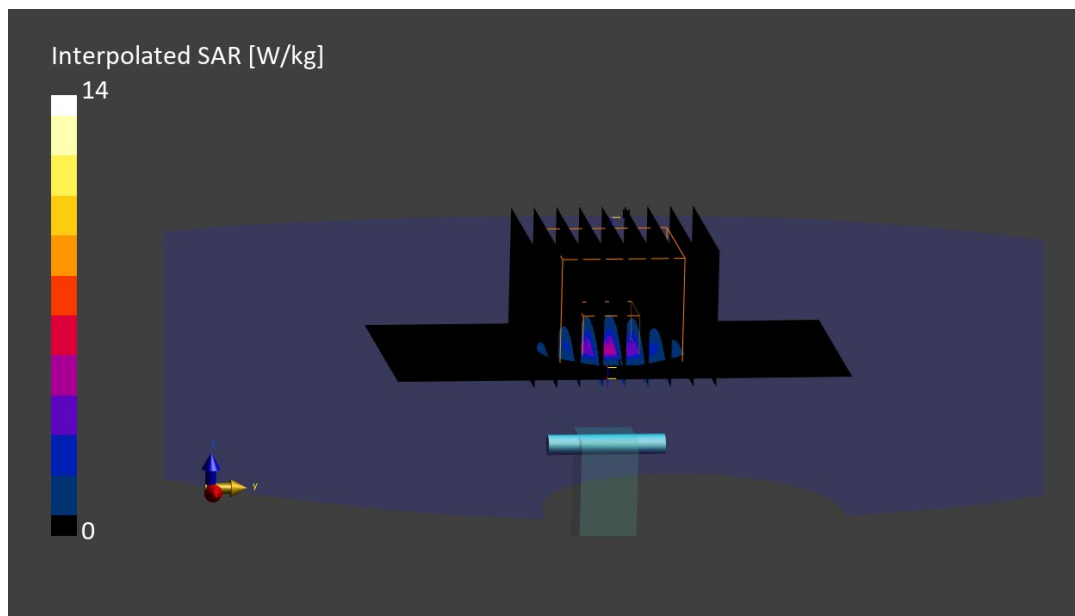
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (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) = 14.0 W/kg

SAR(1 g) = 3.74 W/kg; SAR(10 g) = 1.08 W/kg

Deviation (1 g) = -5.20%



Device Under Test Properties

DUT	Serial Number	DUT Type
30 GHz Verification Source	1035	Phone

Exposure Conditions

Phantom Section	Position	Test Distance [mm]	Band	Frequency [MHz]
5G	FRONT	5.55	Validation band	30000.0

Hardware Setup

Probe, Calibration Date	DAE, Calibration Date
EUmmWV3 – SN9389_F1-55GHz, 2024-01-05	DAE4 Sn859, 2024-01-09

Software Setup

Software	Software Version
cDasy6 Module mmWave	3.2.0.1840

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	5.55

Measurement Results

Scan Type	5G Scan
Avg. Area [cm²]	4.00
pS _{tot} avg [W/m²]	33.2
pS _n avg [W/m²]	32.9
E _{peak} [V/m]	131
Power Drift [dB]	0.05

