

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 = 38.9; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 01/08/2025; Ambient Temp: 22.7°C; Tissue Temp: 21.6°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)

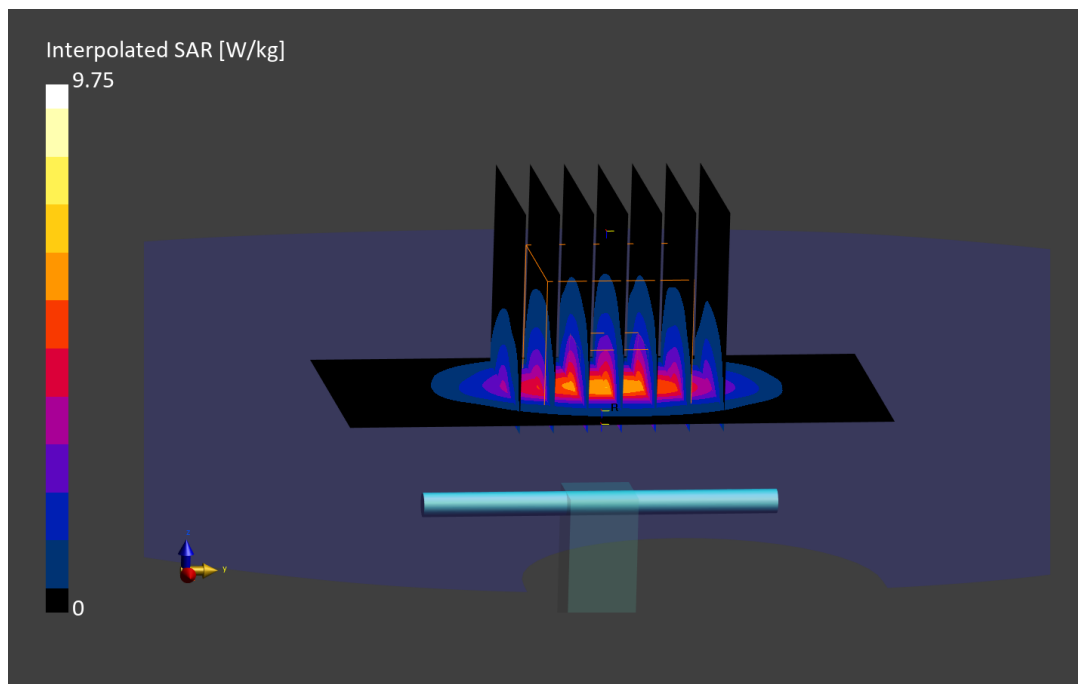
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 9.75 W/kg

SAR(1 g) = 4.94 W/kg; SAR(10 g) = 2.33 W/kg

Deviation (1 g) = -5.00%; Deviation (10 g) = -4.51%



ELEMENT

DUT: Dipole 2450.000 MHz; Type: D2450V2 - SN981

Communication System: UID: 0, CW; Frequency: 2450.000 MHz
Medium: 2450 Head; Medium parameters used:
f = 2450.000 MHz; cond = 1.84 S/m; perm = 38.7; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 01/20/2025; Ambient Temp: 22.3°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7406; ConvF:(7.24,6.85,7.63); Calibrated: 2024-07-05
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1677; Calibrated: 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)

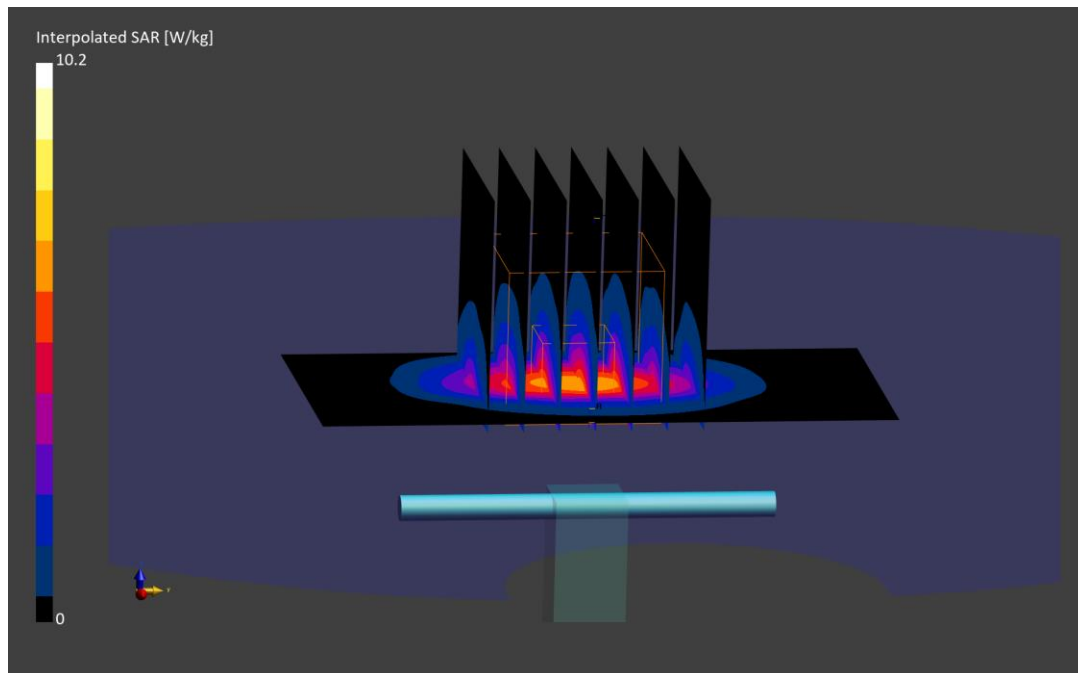
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 10.2 W/kg

SAR(1 g) = 5.02 W/kg; SAR(10 g) = 2.34 W/kg

Deviation (1 g) = -3.09%; Deviation (10 g) = -3.70%



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; cond = 1.85 S/m; perm = 38.4; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 02/03/2025; Ambient Temp: 21.1°C; Tissue Temp: 19.5°C

Probe: EX3DV4 - SN3914; ConvF:(7.52,6.84,6.89); Calibrated: 2024-05-10
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn728; Calibrated: 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)

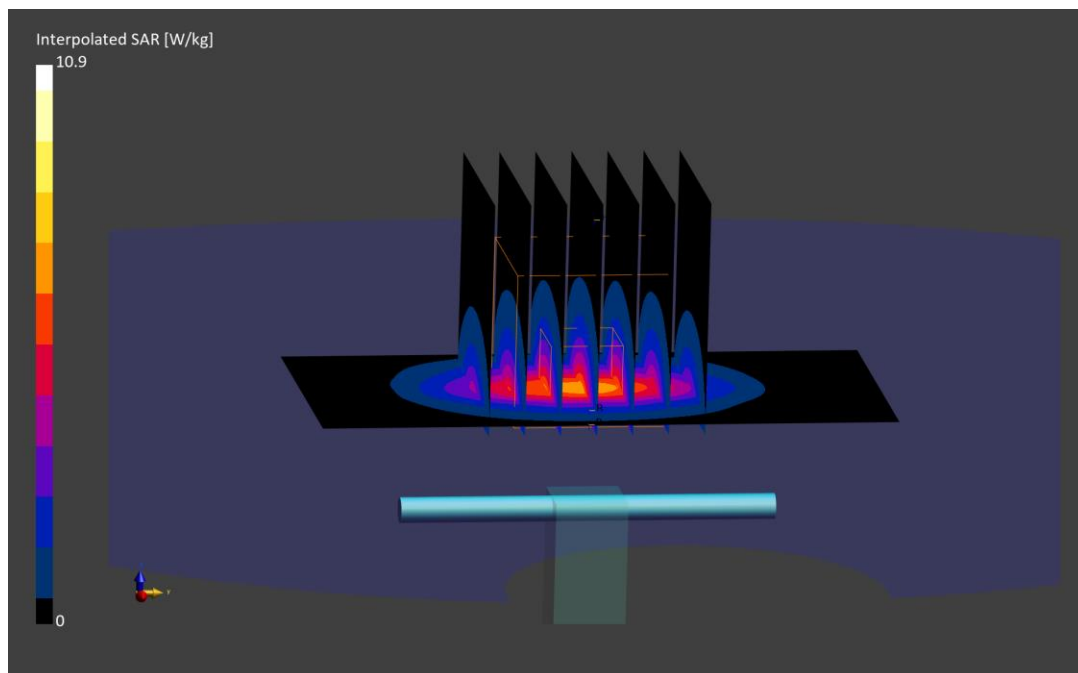
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 10.9 W/kg

SAR(1 g) = 5.26 W/kg; SAR(10 g) = 2.44 W/kg

Deviation (1 g) = 0.77%; Deviation (10 g) = -0.81%



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 = 4.57 S/m; perm = 37.4; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 01/07/2025; Ambient Temp: 19.0°C; Tissue Temp: 19.0°C

Probe: EX3DV4 - SN7803; ConvF:(5.21,5.33,5.42); Calibrated: 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; Calibrated: 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)

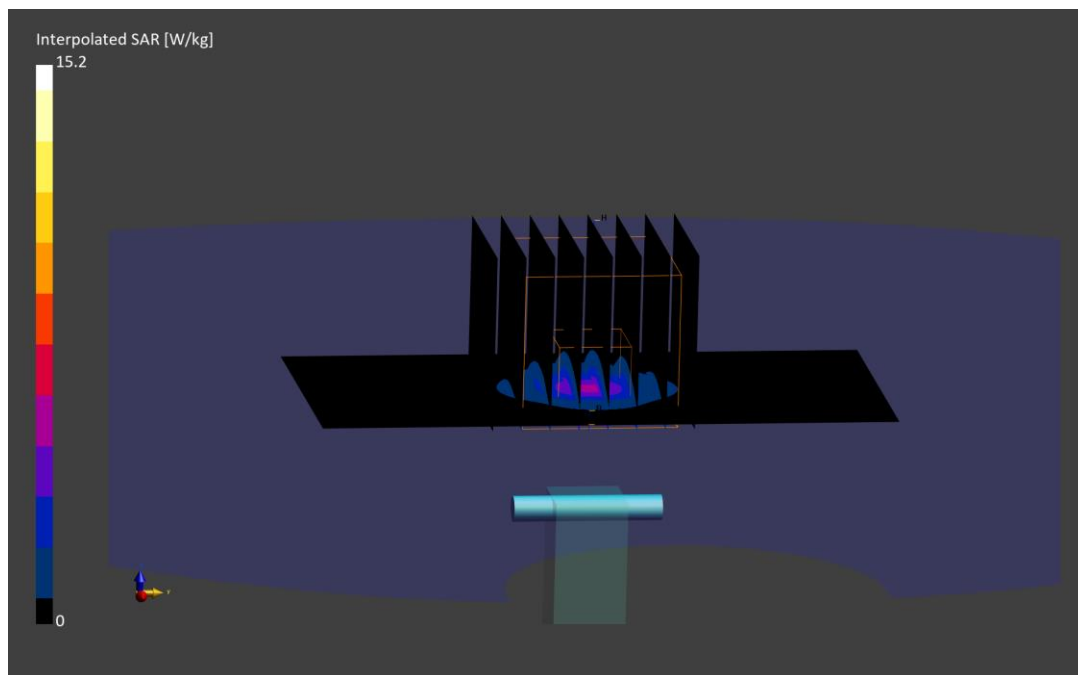
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 3.72 W/kg; SAR(10 g) = 1.07 W/kg

Deviation (1 g) = -5.70%; Deviation (10 g) = -5.73%



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 = 4.57 S/m; perm = 35.7; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 01/13/2025; Ambient Temp: 19.0°C; Tissue Temp: 19.4°C

Probe: EX3DV4 - SN7803; ConvF:(5.21,5.33,5.42); Calibrated: 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; Calibrated: 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)

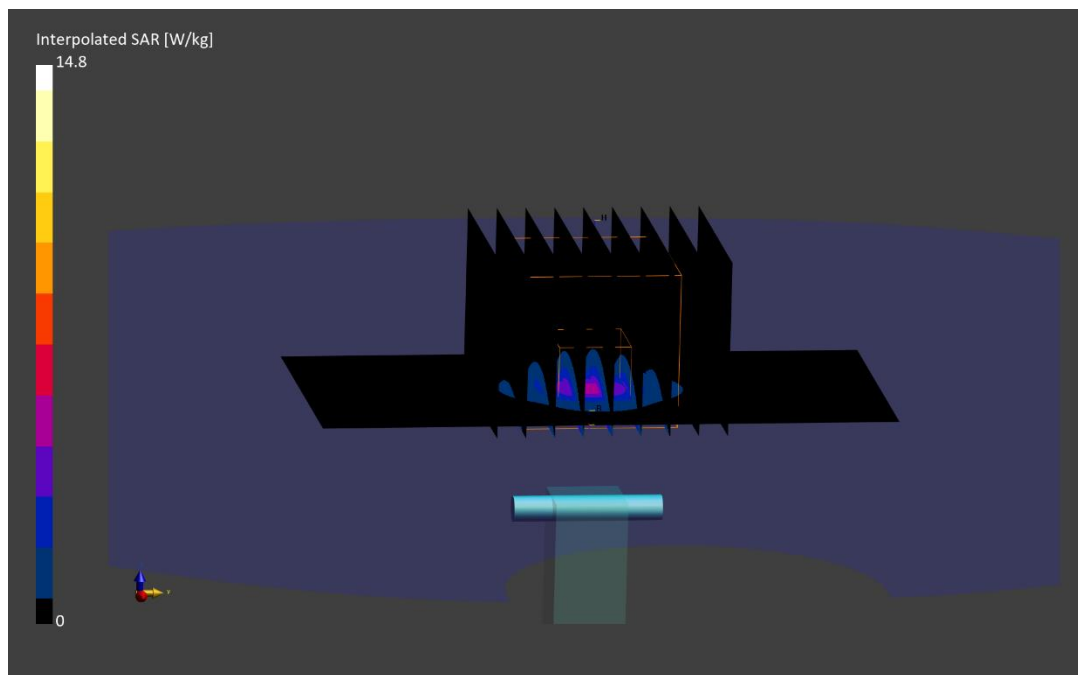
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

Zoom Scan (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) = 14.8 W/kg

SAR(1 g) = 3.73 W/kg; SAR(10 g) = 1.08 W/kg

Deviation (1 g) = -5.45%; Deviation (10 g) = -4.85%



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 = 4.96 S/m; perm = 36.8; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 01/07/2025; Ambient Temp: 19.0°C; Tissue Temp: 19.0°C

Probe: EX3DV4 - SN7803; ConvF:(4.82,4.92,5.01); Calibrated: 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; Calibrated: 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)

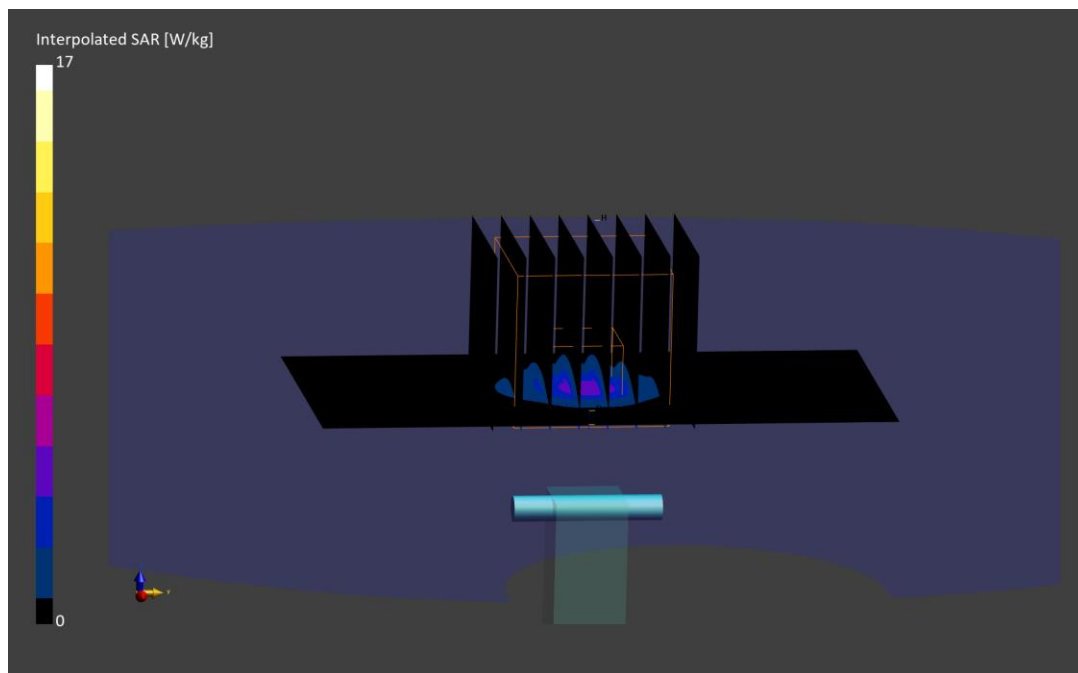
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 17.0 W/kg

SAR(1 g) = 3.87 W/kg; SAR(10 g) = 1.11 W/kg

Deviation (1 g) = -6.75%; Deviation (10 g) = -7.11%



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 = 4.95 S/m; perm = 35.1; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 01/13/2025; Ambient Temp: 19.0°C; Tissue Temp: 19.4°C

Probe: EX3DV4 - SN7803; ConvF:(4.82,4.92,5.01); Calibrated: 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; Calibrated: 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)

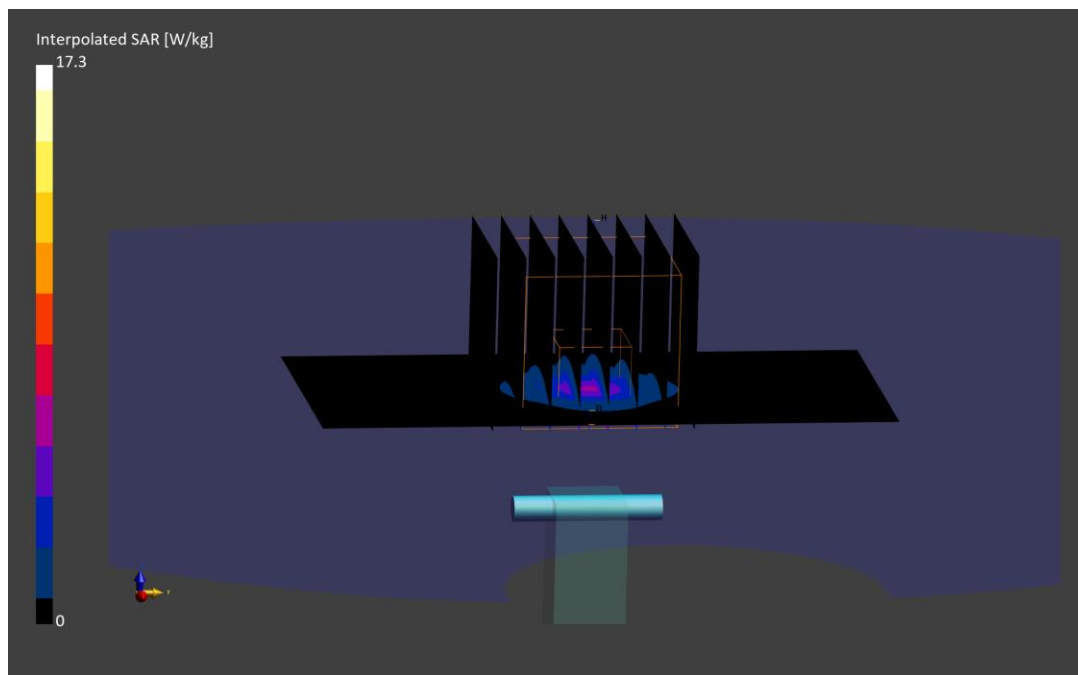
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 17.3 W/kg

SAR(1 g) = 4.04 W/kg; SAR(10 g) = 1.17 W/kg

Deviation (1 g) = -2.65%; Deviation (10 g) = -2.09%



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 = 5.15 S/m; perm = 36.6; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 01/07/2025; Ambient Temp: 19.0°C; Tissue Temp: 19.0°C

Probe: EX3DV4 - SN7803; ConvF:(4.79,4.89,4.98); Calibrated: 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; Calibrated: 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)

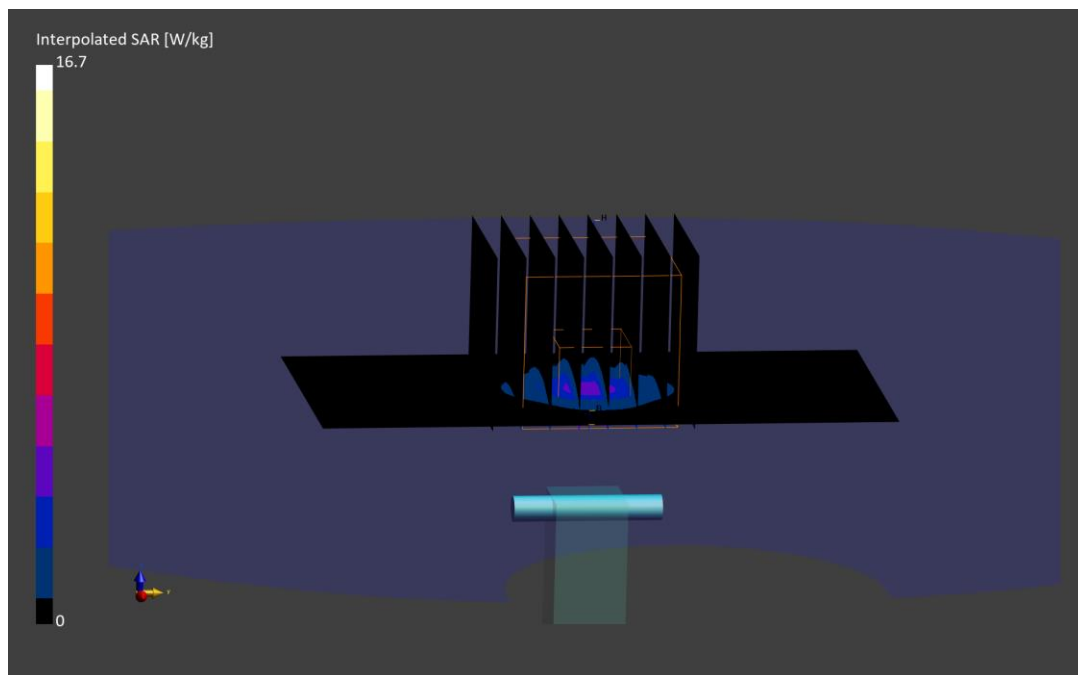
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 16.7 W/kg

SAR(1 g) = 3.67 W/kg; SAR(10 g) = 1.07 W/kg

Deviation (1 g) = -6.97%; Deviation (10 g) = -4.46%



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 = 5.12 S/m; perm = 34.8; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 01/13/2025; Ambient Temp: 19.1°C; Tissue Temp: 19.4°C

Probe: EX3DV4 - SN7803; ConvF:(4.79,4.89,4.98); Calibrated: 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; Calibrated: 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)

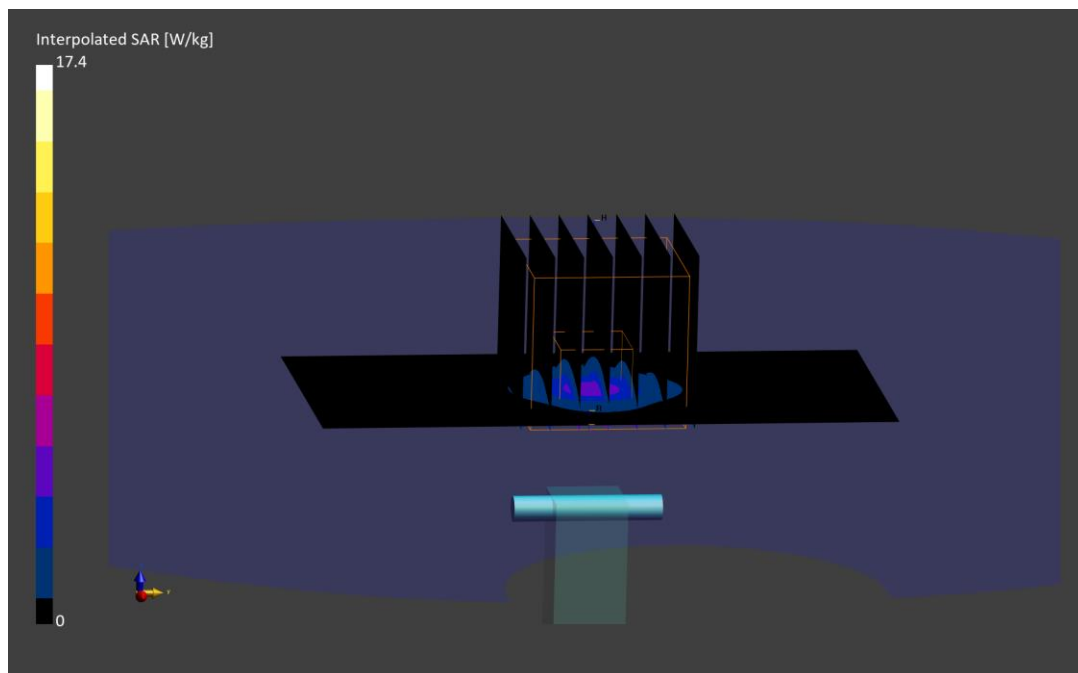
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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

Peak SAR (extrapolated) = 17.5 W/kg

SAR(1 g) = 3.93 W/kg; SAR(10 g) = 1.14 W/kg

Deviation (1 g) = -0.38%; Deviation (10 g) = 1.79%



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 = 5.26 S/m; perm = 36.4; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 01/07/2025; Ambient Temp: 19.0°C; Tissue Temp: 19.0°C

Probe: EX3DV4 - SN7803; ConvF:(4.78,4.89,4.97); Calibrated: 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; Calibrated: 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)

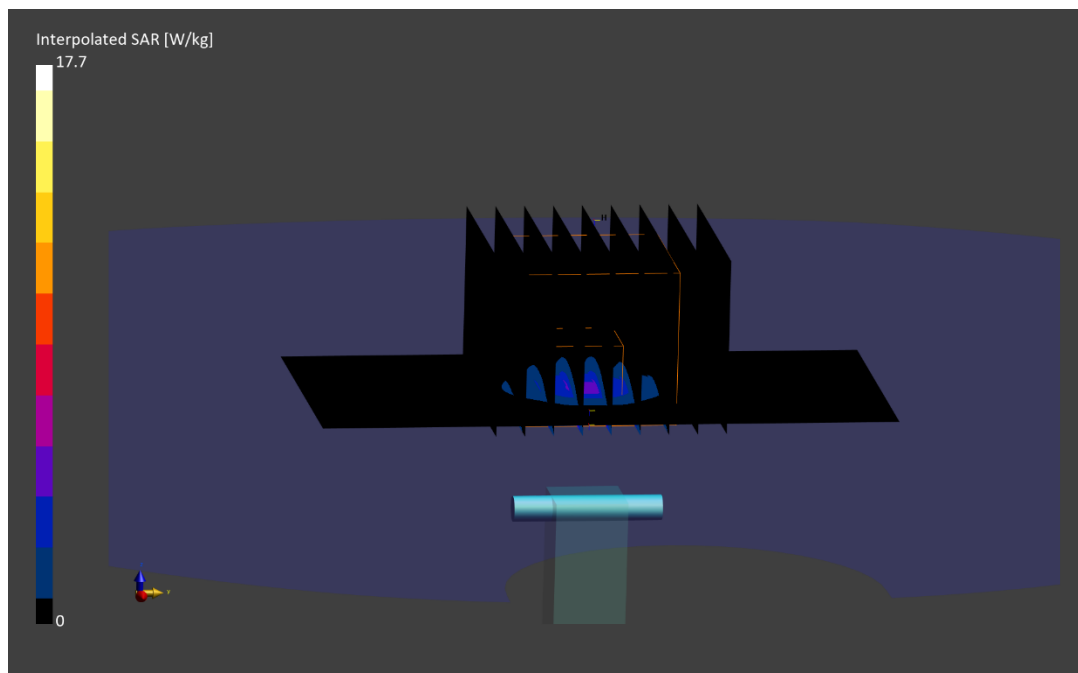
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 17.7 W/kg

SAR(1 g) = 3.80 W/kg; SAR(10 g) = 1.09 W/kg

Deviation (1 g) = -3.55%; Deviation (10 g) = -3.11%



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 = 5.24 S/m; perm = 34.6; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 01/13/2025; Ambient Temp: 19.1°C; Tissue Temp: 19.4°C

Probe: EX3DV4 - SN7803; ConvF:(4.78,4.89,4.97); Calibrated: 2024-06-28
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1583; Calibrated: 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)

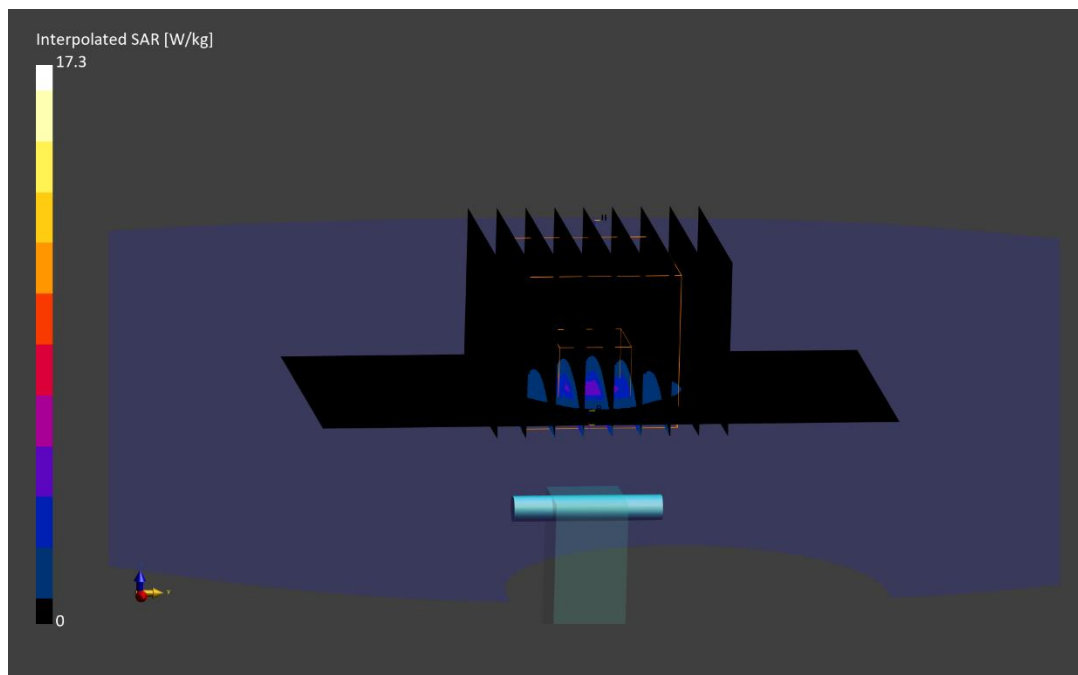
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 17.3 W/kg

SAR(1 g) = 3.84 W/kg; SAR(10 g) = 1.11 W/kg

Deviation (1 g) = -2.54%; Deviation (10 g) = -1.33%



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 = 5.87 S/m; perm = 34.9; density = 1000 kg/m³
Phantom Section: Flat; Space: 5 mm

Test Date: 01/13/2025; Ambient Temp: 19.0°C; Tissue Temp: 19.0°C

Probe: EX3DV4 - SN7527; ConvF:(5.15,4.68,5.36); Calibrated: 2024-03-08
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1272; Calibrated: 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)

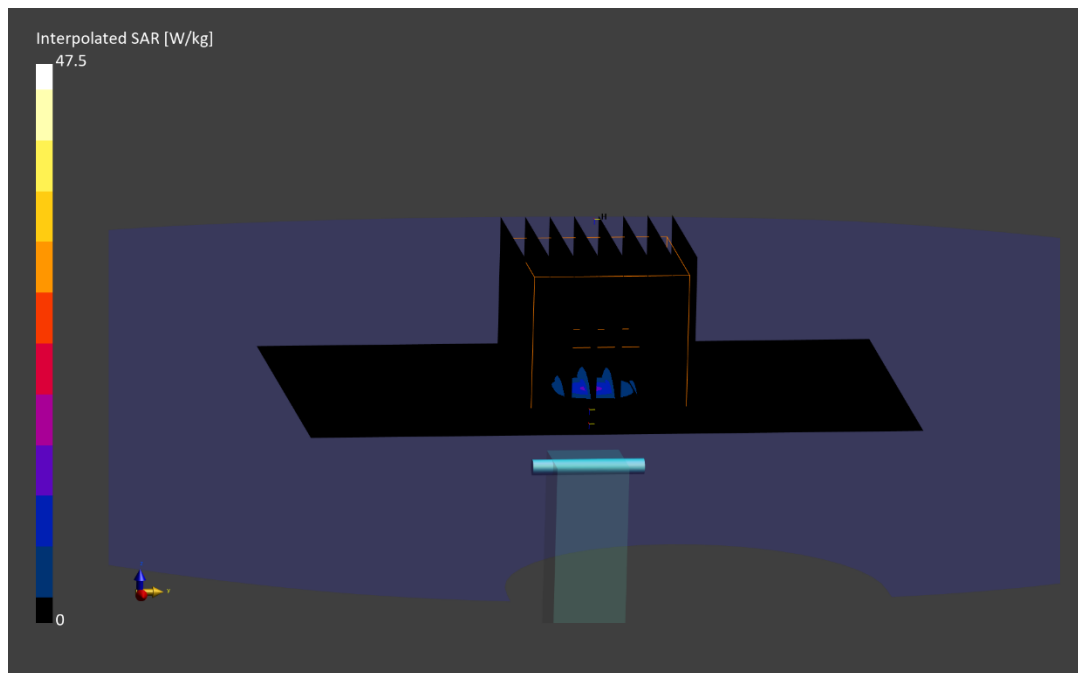
Area Scan (51.0 x 85.0): Measurement grid: dx=8.5 mm, dy=8.5 mm

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

Peak SAR (extrapolated) = 47.5 W/kg

SAR(1 g) = 7.60 W/kg; SAR(10 g) = 1.40 W/kg; APD(4.0 cm²) = 33.8 W/m²

Deviation (1 g) = 4.47%; Deviation (10 g) = 4.67%; Deviation (APD) = 4.00%



Date: 2025-01-13

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

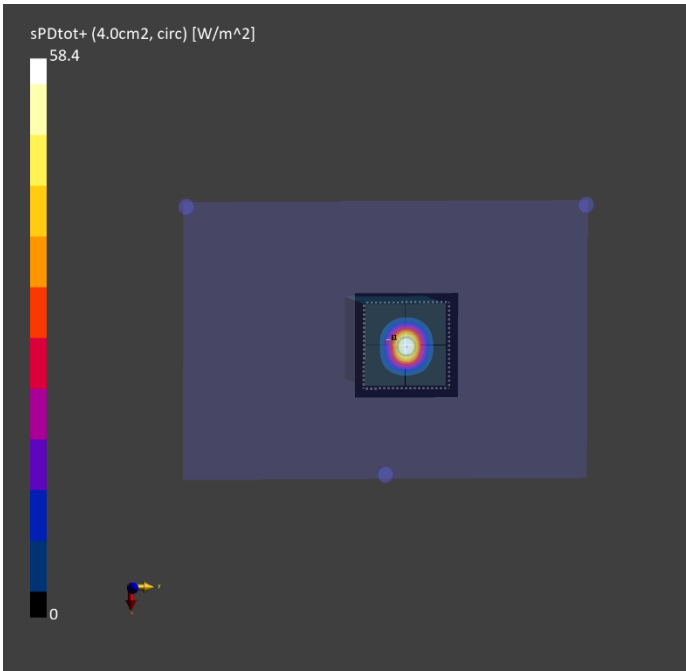
Software	Software Version
cDASY6 Module mmWave	3.2.0.1840

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]	58.4
pS _n avg [W/m²]	58.2
E _{peak} [V/m]	158
Deviation [dB] pS _{tot}	0.27
Deviation [dB] pS _n	0.28



Date: 2025-02-18

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]	53.0
pS _n avg [W/m²]	52.5
E _{peak} [V/m]	150
Deviation [dB] pS _{tot}	-0.15
Deviation [dB] pS _n	-0.17

