

APPENDIX B: SYSTEM VERIFICATION

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1161

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 750 Head Medium parameters used:

$f = 750 \text{ MHz}$; $\sigma = 0.892 \text{ S/m}$; $\epsilon_r = 41.239$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/05/2021; Ambient Temp: 22.2°C; Tissue Temp: 20.7°C

Probe: EX3DV4 - SN7571; ConvF(10.02, 10.02, 10.02) @ 750 MHz; Calibrated: 12/11/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1533; Calibrated: 12/7/2020

Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

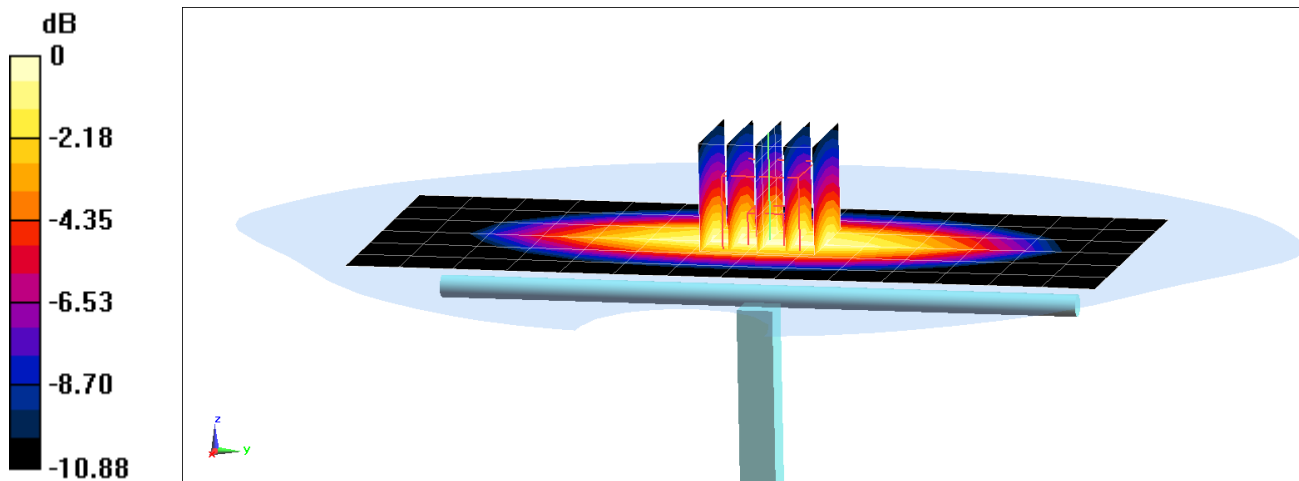
Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 2.60 W/kg

SAR(1 g) = 1.68 W/kg

Deviation(1 g) = 4.61%



0 dB = 2.28 W/kg = 3.58 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Head Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.887 \text{ S/m}$; $\epsilon_r = 40.137$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/28/2021; Ambient Temp: 22.7°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7571; ConvF(9.76, 9.76, 9.76) @ 835 MHz; Calibrated: 12/11/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1533; Calibrated: 12/7/2020

Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

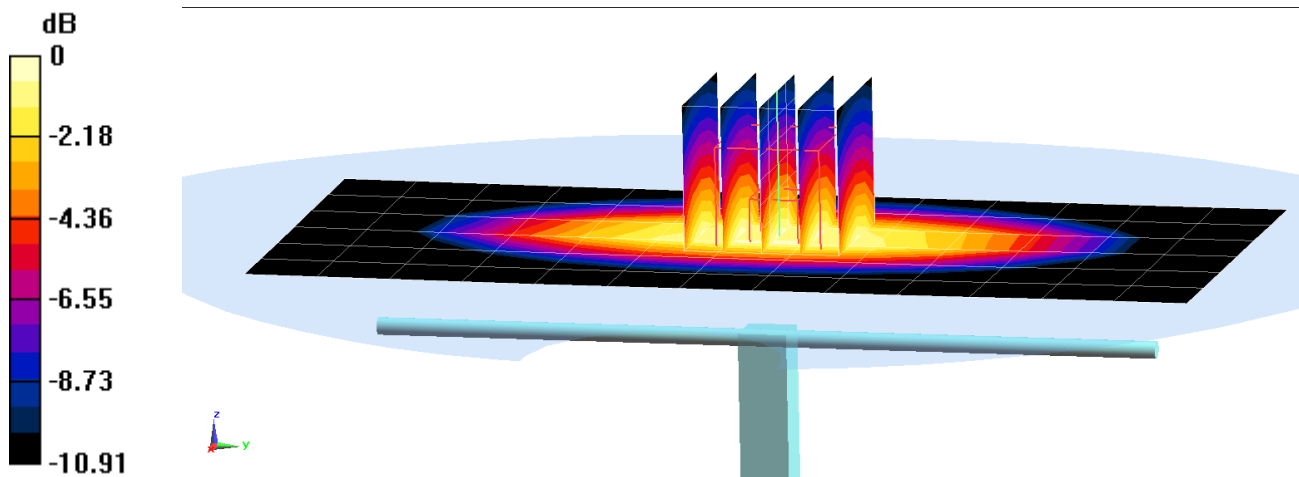
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 2.99 W/kg

SAR(1 g) = 1.92 W/kg

Deviation(1 g) = -0.62%



0 dB = 2.62 W/kg = 4.18 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d132

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Head Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.889 \text{ S/m}$; $\epsilon_r = 40.644$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/30/2021; Ambient Temp: 23.5°C; Tissue Temp: 23.5°C

Probe: EX3DV4 - SN7571; ConvF(9.76, 9.76, 9.76) @ 835 MHz; Calibrated: 12/11/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1533; Calibrated: 12/7/2020

Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648

Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

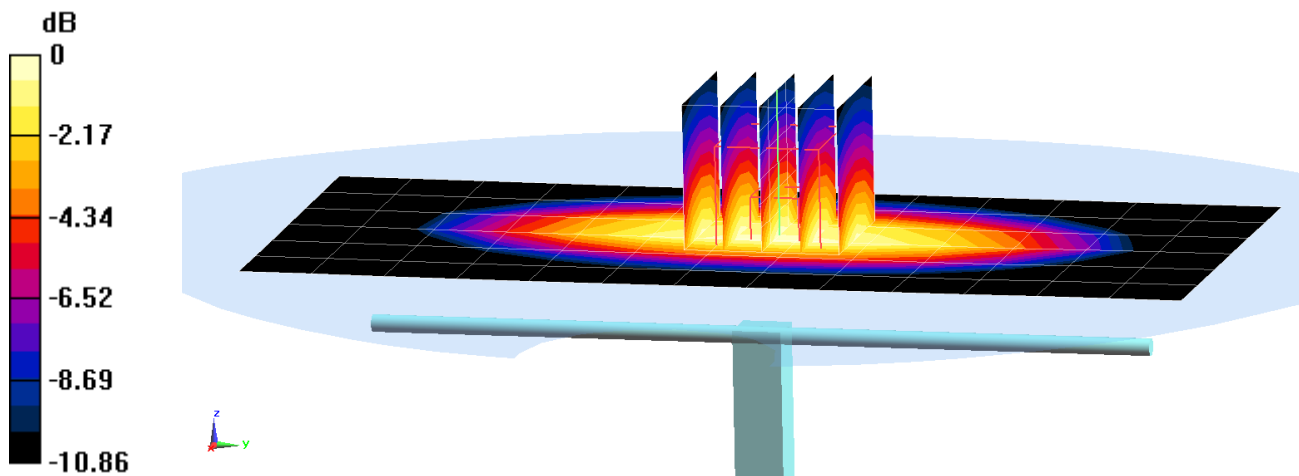
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 2.79 W/kg

SAR(1 g) = 1.83 W/kg

Deviation(1 g) = -5.28%



0 dB = 2.47 W/kg = 3.93 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d133

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Head Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.923 \text{ S/m}$; $\epsilon_r = 42.345$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/07/2021; Ambient Temp: 21.3°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7551; ConvF(9.96, 9.96, 9.96) @ 835 MHz; Calibrated: 10/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 10/16/2020

Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

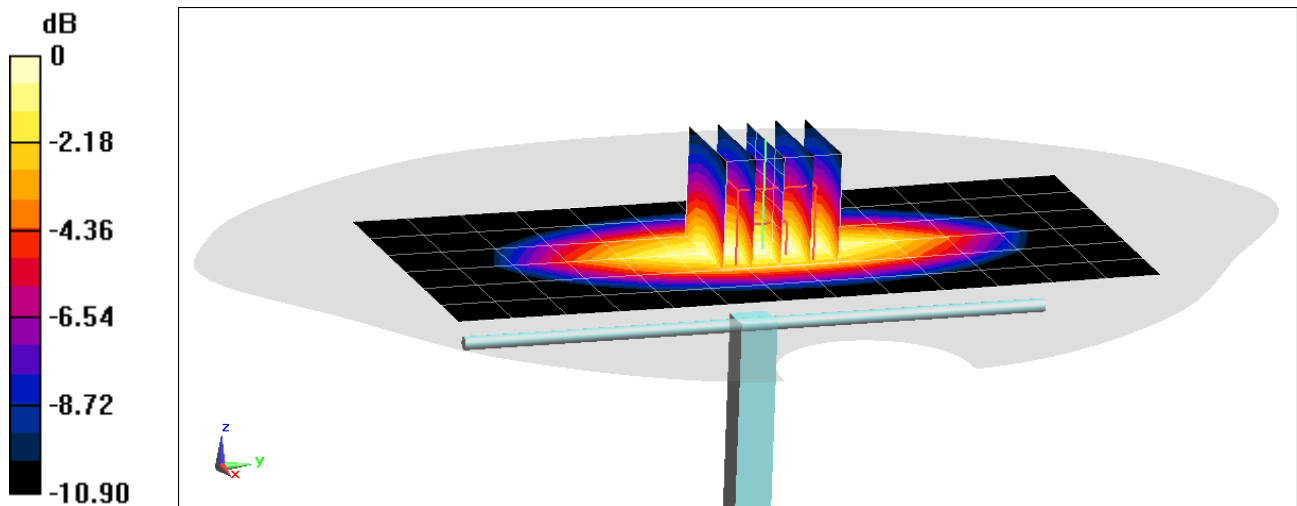
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 3.01 W/kg

SAR(1 g) = 1.95 W/kg

Deviation(1 g) = 3.39%



PCTEST

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1148

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: 1750 Head Medium parameters used:

$f = 1750$ MHz; $\sigma = 1.41$ S/m; $\epsilon_r = 39.053$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/06/2021; Ambient Temp: 21.5°C; Tissue Temp: 20.2°C

Probe: EX3DV4 - SN7308; ConvF(8.55, 8.55, 8.55) @ 1750 MHz; Calibrated: 7/31/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1450; Calibrated: 8/11/2020

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792

Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

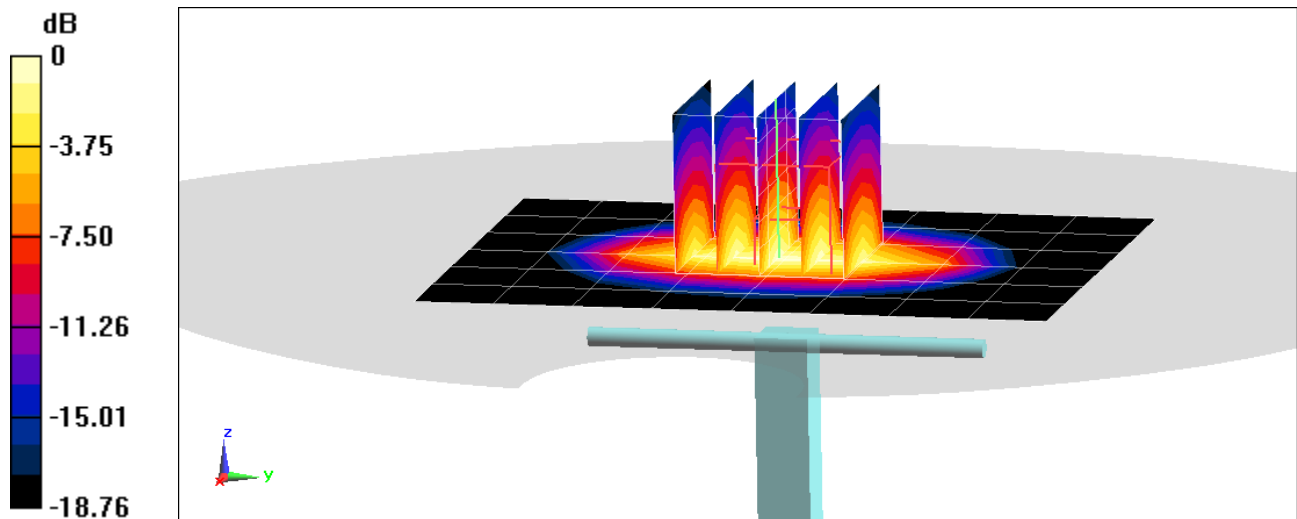
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 6.31 W/kg

SAR(1 g) = 3.31 W/kg

Deviation(1 g) = -7.80%



0 dB = 5.16 W/kg = 7.13 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Head Medium parameters used:

$f = 1900$ MHz; $\sigma = 1.386$ S/m; $\epsilon_r = 39.575$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/13/2021; Ambient Temp: 22.2°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7551; ConvF(8.12, 8.12, 8.12) @ 1900 MHz; Calibrated: 10/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 10/16/2020

Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

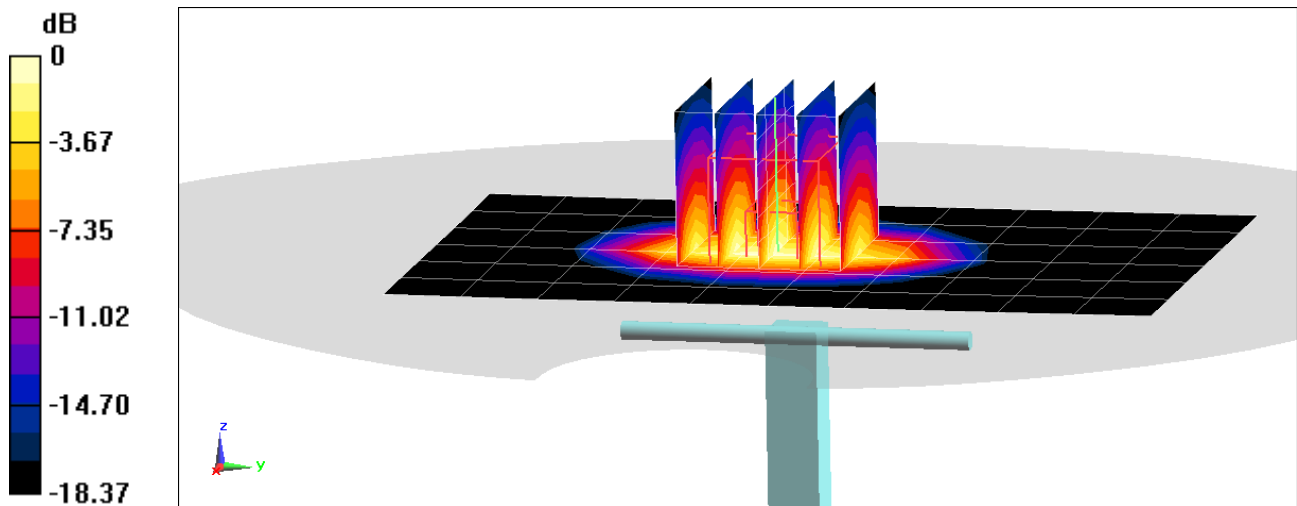
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 8.03 W/kg

SAR(1 g) = 4.23 W/kg

Deviation(1 g) = 7.63%



0 dB = 6.72 W/kg = 8.27 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: 2450 Head Medium parameters used:

$f = 2450$ MHz; $\sigma = 1.82$ S/m; $\epsilon_r = 37.301$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/07/2021; Ambient Temp: 25.0°C; Tissue Temp: 24.0°C

Probe: EX3DV4 - SN7571; ConvF(7.28, 7.28, 7.28) @ 2450 MHz; Calibrated: 12/11/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1533; Calibrated: 12/7/2020

Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

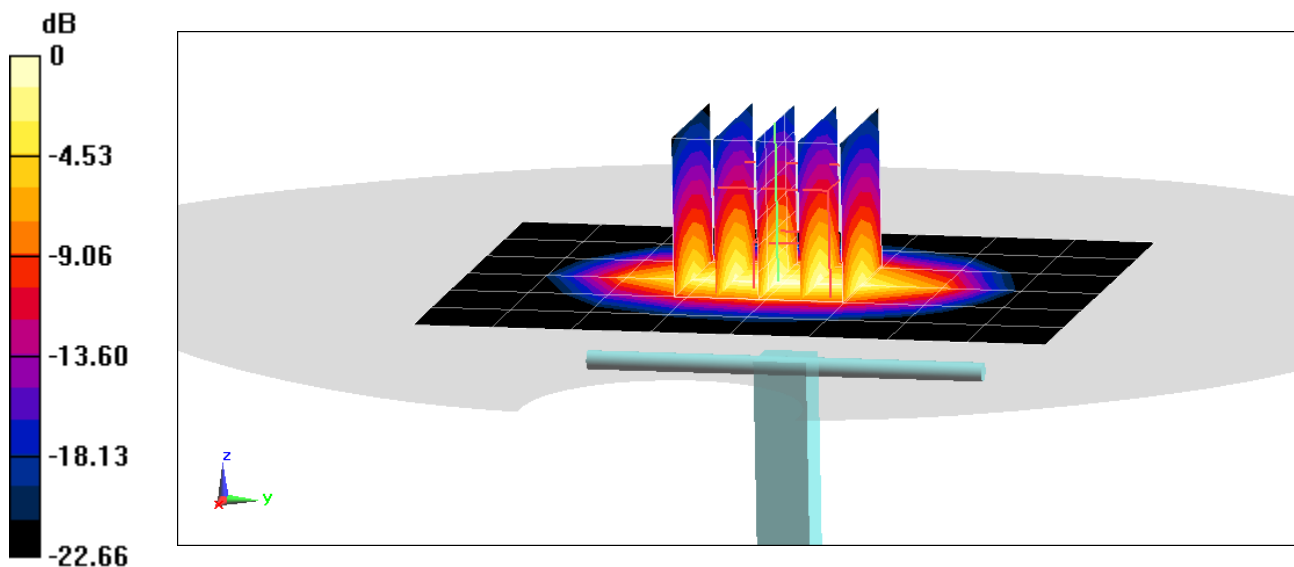
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 11.4 W/kg

SAR(1 g) = 5.28 W/kg

Deviation(1 g) = 2.72%



0 dB = 8.94 W/kg = 9.51 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 719

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: 2450 Head Medium parameters used:

$f = 2450$ MHz; $\sigma = 1.842$ S/m; $\epsilon_r = 37.663$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/11/2021; Ambient Temp: 24.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7571; ConvF(7.28, 7.28, 7.28) @ 2450 MHz; Calibrated: 12/11/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1533; Calibrated: 12/7/2020

Phantom: SAM 5.0 front; Type: QD000P40CD; Serial: 1648

Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

2450 MHz System Verification at 20.0 dBm (100 mW)

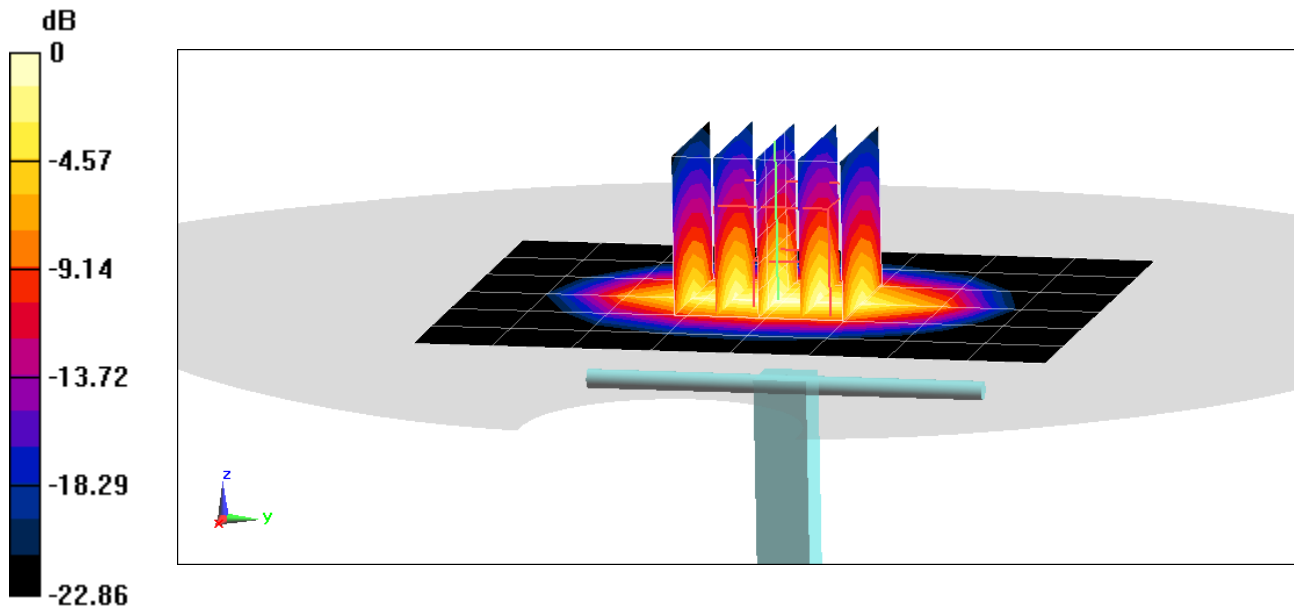
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 11.6 W/kg

SAR(1 g) = 5.39 W/kg

Deviation(1 g) = 4.86%



0 dB = 9.12 W/kg = 9.60 dBW/kg

PCTEST

DUT: Dipole 5250.0 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5250.0 MHz
Medium: 5200-5800 Head; Medium parameters used:
 $f = 5250.0$ MHz; $\sigma = 4.55$ S/m; $\epsilon_r = 34.7$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/12/2021; Ambient Temp: 23.4°C; Tissue Temp: 22.2°C

Probe: EX3DV4 - SN7538; ConvF:(5.29,5.29,5.29); Calibrated: 2020-11-23
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1449; Calibrated: 2020-09-10
Phantom: Twin-SAM V5.0 (Left); Serial: 1873
Measurement SW: cDASY6 Module SAR V6.14.0.959

5250.0 MHz System Verification at 17.0 dBm

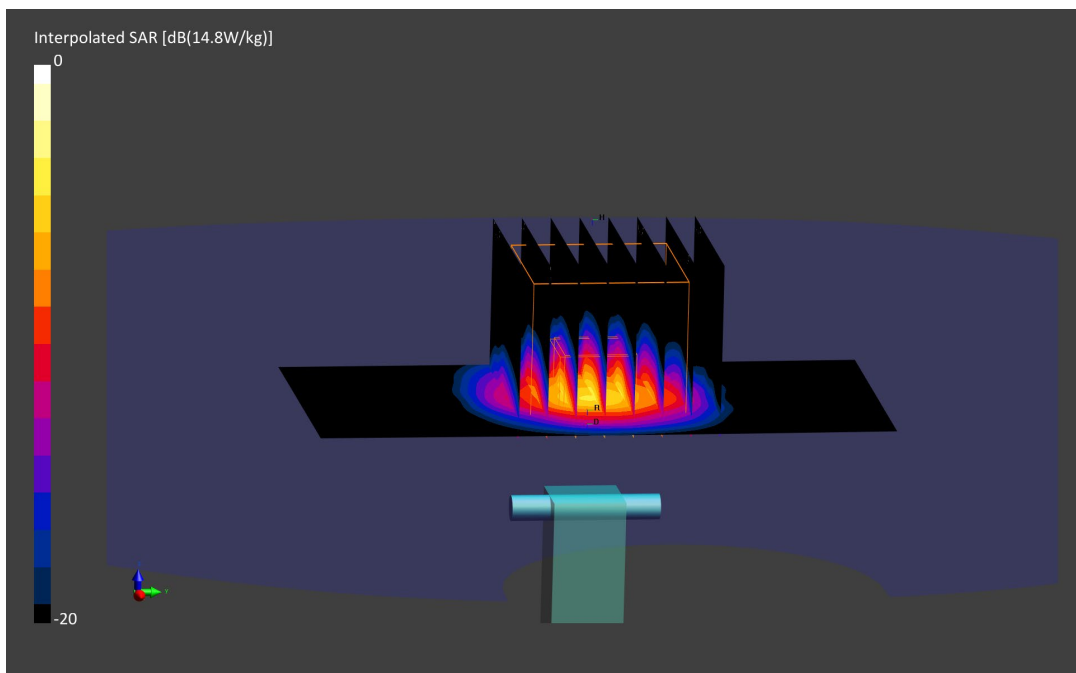
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 14.8 W/kg

SAR(1 g) = 3.83 W/kg

Deviation (1 g) = -4.01%



PCTEST

DUT: Dipole 5600.0 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5600.0 MHz
Medium: 5200-5800 Head; Medium parameters used:
f = 5600.0 MHz; $\sigma = 4.94$ S/m; $\epsilon_r = 34.1$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/12/2021; Ambient Temp: 23.4°C; Tissue Temp: 22.2°C

Probe: EX3DV4 - SN7538; ConvF:(4.63,4.63,4.63); Calibrated: 2020-11-23
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1449; Calibrated: 2020-09-10
Phantom: Twin-SAM V5.0 (Left); Serial: 1873
Measurement SW: cDASY6 Module SAR V6.14.0.959

5600.0 MHz System Verification at 17.0 dBm

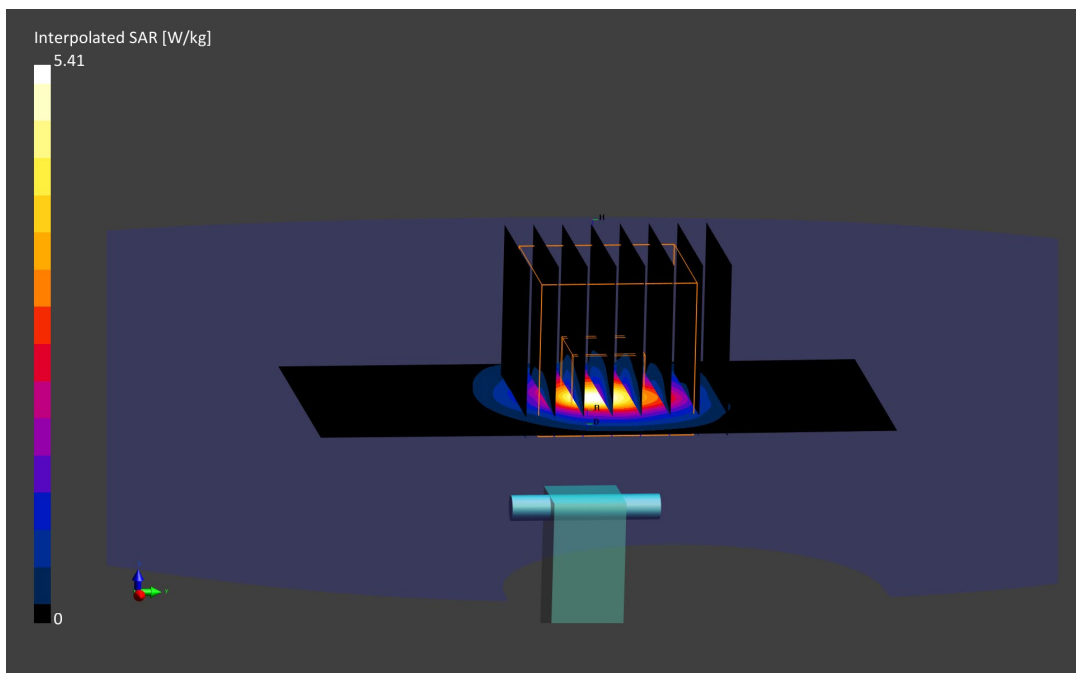
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 17.8 W/kg

SAR(1 g) = 4.34 W/kg

Deviation (1 g) = 6.11%



PCTEST

DUT: Dipole 5750.0 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5750.0 MHz
Medium: 5200-5800 Head; Medium parameters used:
 $f = 5750.0$ MHz; $\sigma = 5.11$ S/m; $\epsilon_r = 33.9$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/12/2021; Ambient Temp: 23.4°C; Tissue Temp: 22.2°C

Probe: EX3DV4 - SN7538; ConvF:(4.78,4.78,4.78); Calibrated: 2020-11-23
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1449; Calibrated: 2020-09-10
Phantom: Twin-SAM V5.0 (Left); Serial: 1873
Measurement SW: cDASY6 Module SAR V6.14.0.959

5750.0 MHz System Verification at 17.0 dBm

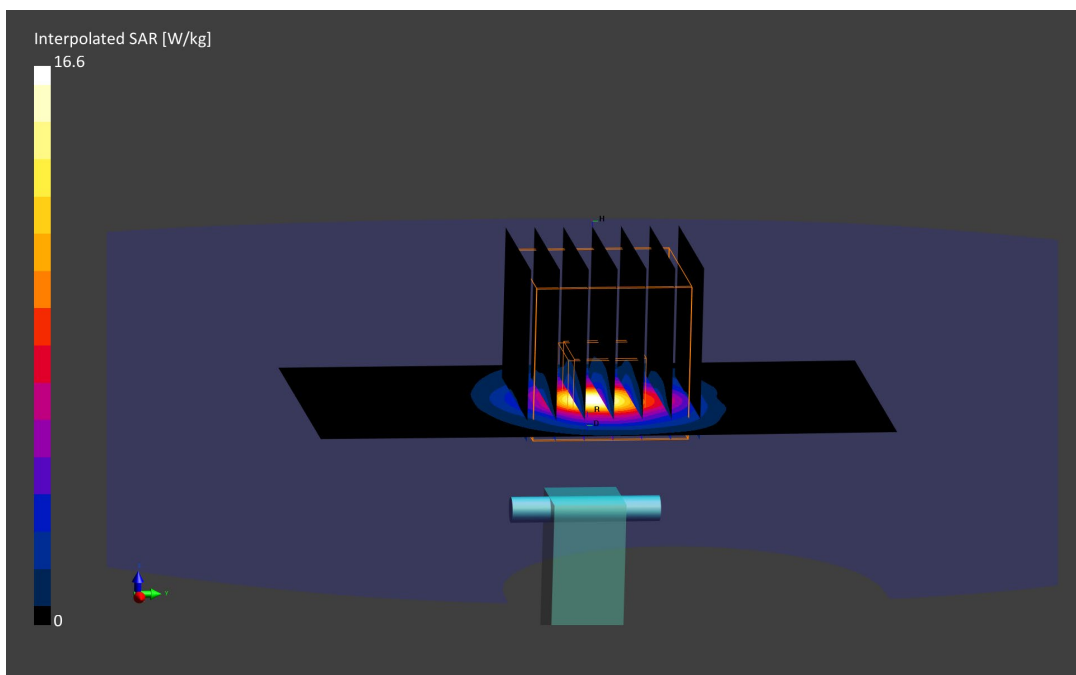
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 3.93 W/kg

Deviation (1 g) = -3.91%



PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1003

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used:

$f = 750 \text{ MHz}$; $\sigma = 0.959 \text{ S/m}$; $\epsilon_r = 55.56$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/28/2021; Ambient Temp: 22.0°C; Tissue Temp: 21.20°C

Probe: EX3DV4 - SN7357; ConvF(10.29, 10.29, 10.29) @ 750 MHz; Calibrated: 4/19/2021

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1407; Calibrated: 4/7/2021

Phantom: Front; Type: QD 000 P40 CD; Serial: 1686

Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

750 MHz System Verification at 23.0 dBm (200 mW)

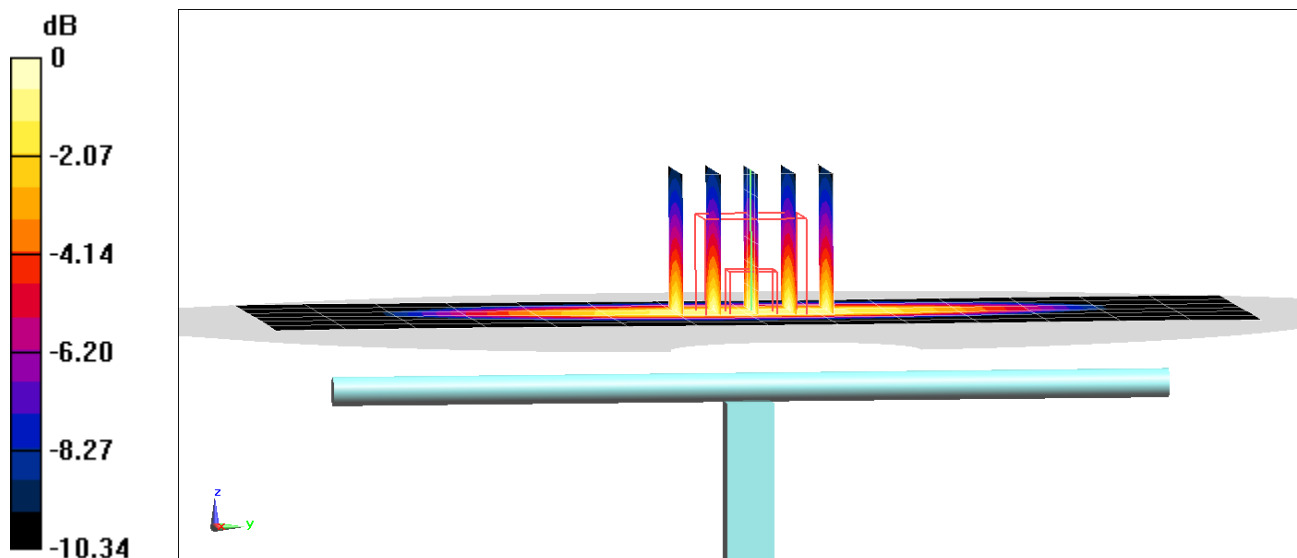
Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 2.69 W/kg

SAR(1 g) = 1.71 W/kg; SAR(10 g) = 1.13 W/kg

Deviation(1 g) = -0.70%; Deviation(10 g) = -0.35%



PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d047

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.948 \text{ S/m}$; $\epsilon_r = 53.843$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/29/2021; Ambient Temp: 25.0°C; Tissue Temp: 23.0°C

Probe: EX3DV4 - SN7410; ConvF(9.73, 9.73, 9.73) @ 835 MHz; Calibrated: 7/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/15/2020

Phantom: Twin-SAM V5.0 Left 20; Type: QD 000 P40 CD; Serial: 1715

Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

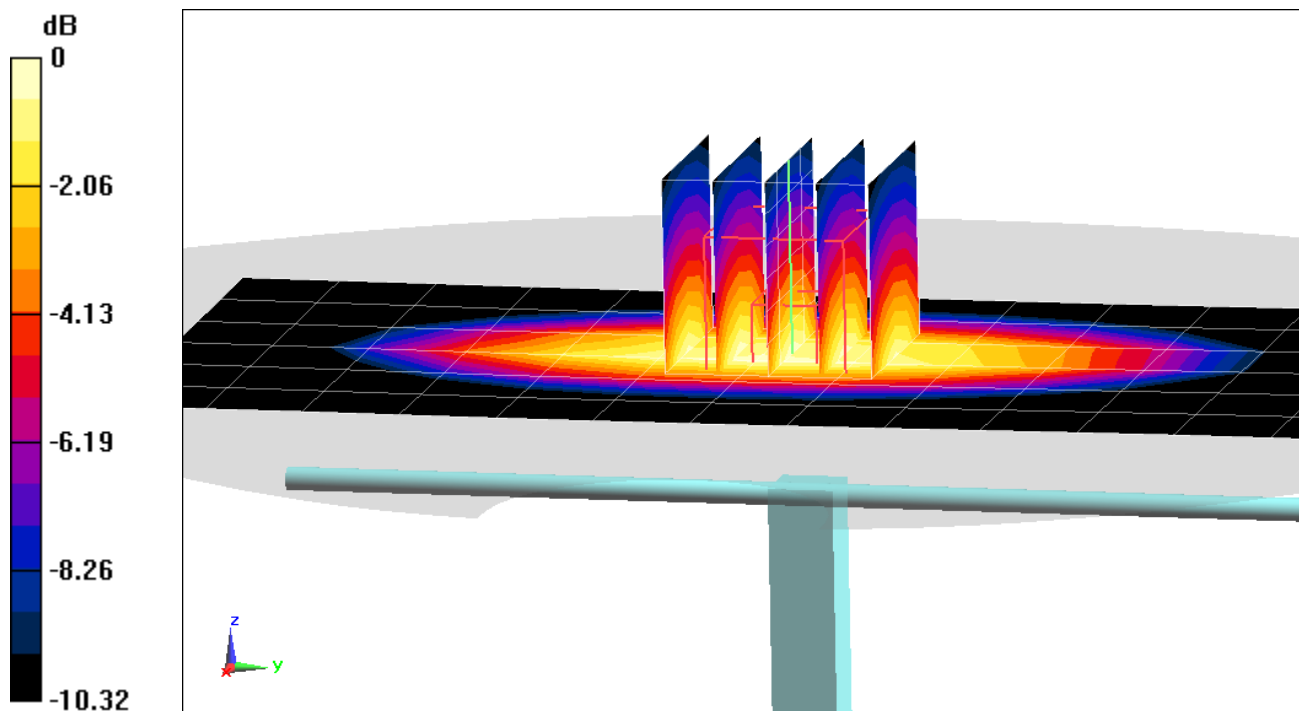
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 2.94 W/kg

SAR(1 g) = 1.97 W/kg

Deviation(1 g) = 4.01%



0 dB = 2.62 W/kg = 4.18 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d133

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.949 \text{ S/m}$; $\epsilon_r = 53.23$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/01/2021; Ambient Temp: 22.0°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7410; ConvF(9.73, 9.73, 9.73) @ 835 MHz; Calibrated: 7/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/15/2020

Phantom: Twin-SAM V5.0 Left 20; Type: QD 000 P40 CD; Serial: 1715

Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

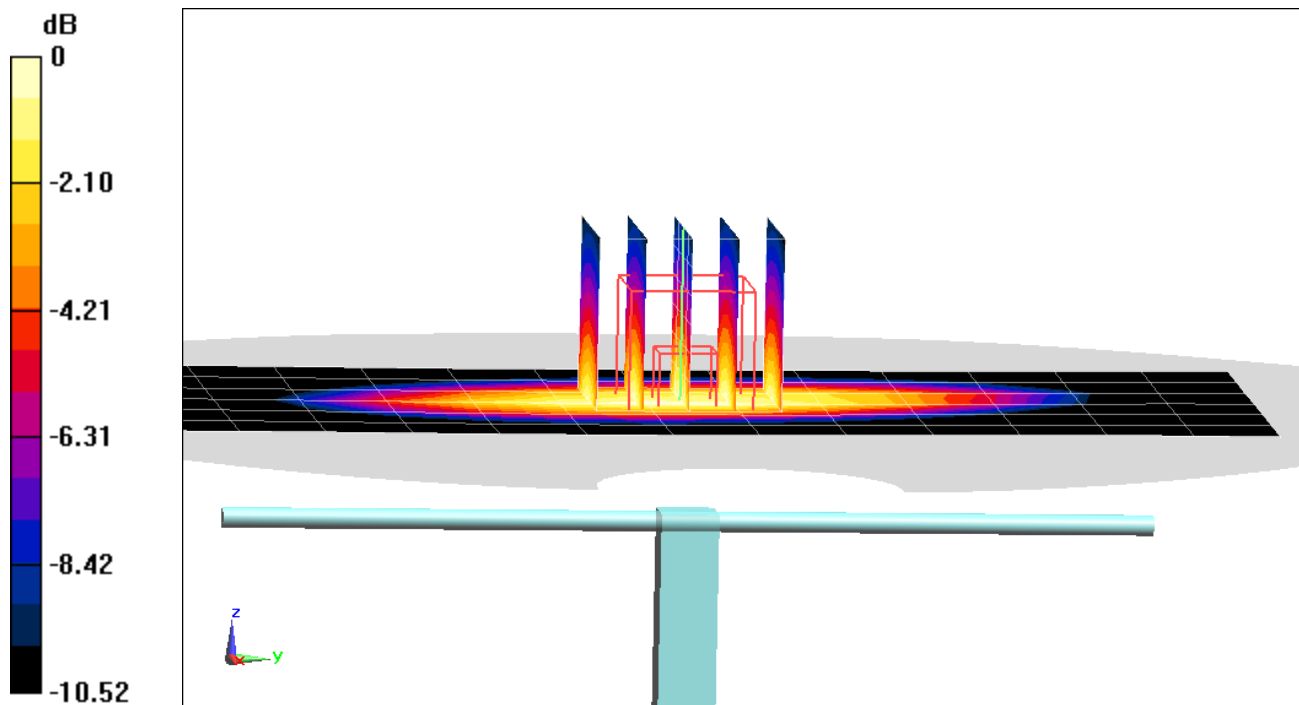
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 3.12 W/kg

SAR(1 g) = 2.05 W/kg; SAR(10 g) = 1.35 W/kg

Deviation(1 g) = 5.13%; Deviation(10 g) = 5.47%



PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d133

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.938 \text{ S/m}$; $\epsilon_r = 52.574$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/06/2021; Ambient Temp: 24.4°C; Tissue Temp: 22.7°C

Probe: EX3DV4 - SN7409; ConvF(9.66, 9.66, 9.66) @ 835 MHz; Calibrated: 6/21/2021

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 6/15/2021

Phantom: Twin-SAM V5.0 Left 20; Type: QD 000 P40 CD; Serial: 1715

Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

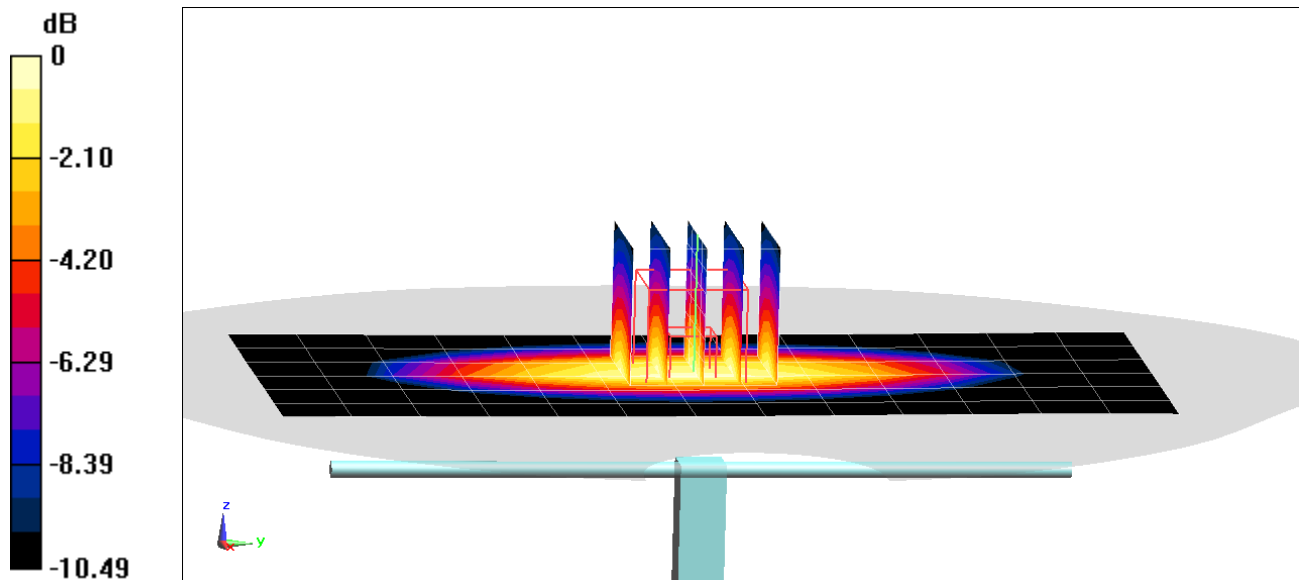
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 3.11 W/kg

SAR(1 g) = 2 W/kg; SAR(10 g) = 1.32 W/kg

Deviation(1 g) = 2.56%; Deviation(10 g) = 3.13%



0 dB = 2.72 W/kg = 4.35 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d133

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: 835 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.943 \text{ S/m}$; $\epsilon_r = 52.866$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/11/2021; Ambient Temp: 23.3°C; Tissue Temp: 24.4°C

Probe: EX3DV4 - SN7409; ConvF(9.66, 9.66, 9.66) @ 835 MHz; Calibrated: 6/21/2021

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 6/15/2021

Phantom: Twin-SAM V5.0 Left 20; Type: QD 000 P40 CD; Serial: 1715

Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

835 MHz System Verification at 23.0 dBm (200 mW)

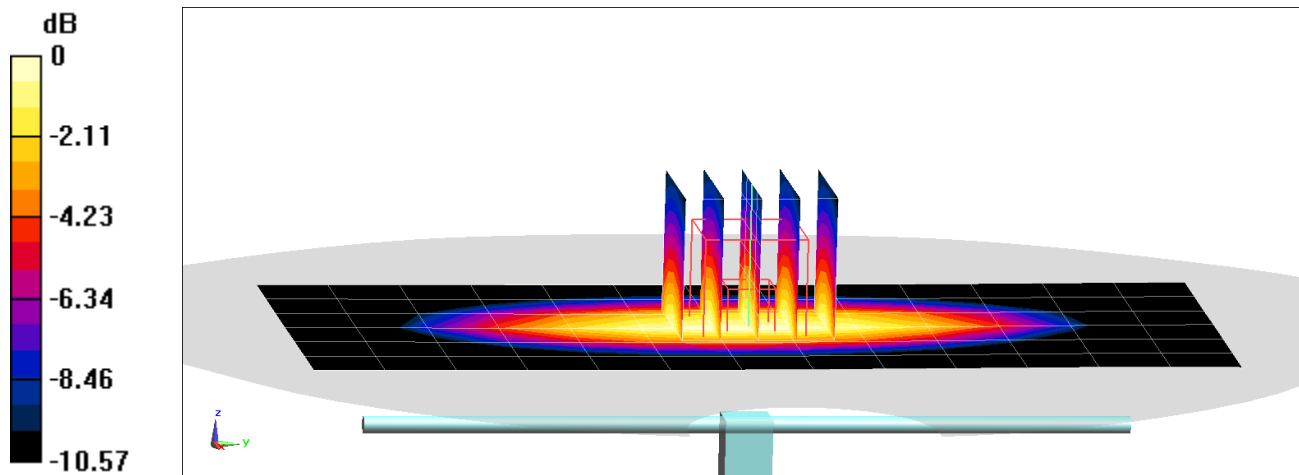
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 3.10 W/kg

SAR(1 g) = 1.99 W/kg

Deviation(1 g) = 2.05%



0 dB = 2.70 W/kg = 4.31 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1148

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used:

$f = 1750$ MHz; $\sigma = 1.525$ S/m; $\epsilon_r = 52.648$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/28/2021; Ambient Temp: 21.2°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7308; ConvF(8.2, 8.2, 8.2) @ 1750 MHz; Calibrated: 7/31/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1450; Calibrated: 8/11/2020

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1792

Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

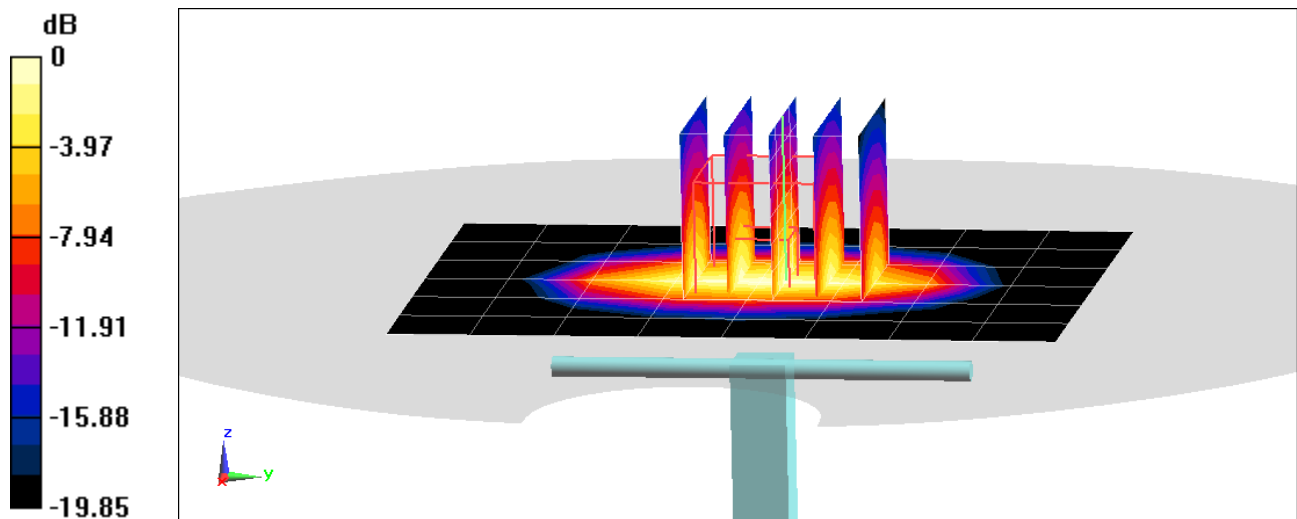
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 6.96 W/kg

SAR(1 g) = 3.73 W/kg; SAR(10 g) = 1.94 W/kg

Deviation(1 g) = 2.75%; Deviation(10 g) = 0.52%



0 dB = 5.73 W/kg = 7.58 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used:

$f = 1900$ MHz; $\sigma = 1.538$ S/m; $\epsilon_r = 52.129$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/29/2021; Ambient Temp: 24.0°C; Tissue Temp: 23.3°C

Probe: EX3DV4 - SN3589; ConvF(6.84, 6.84, 6.84) @ 1900 MHz; Calibrated: 1/20/2021

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 1/13/2021

Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1646

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

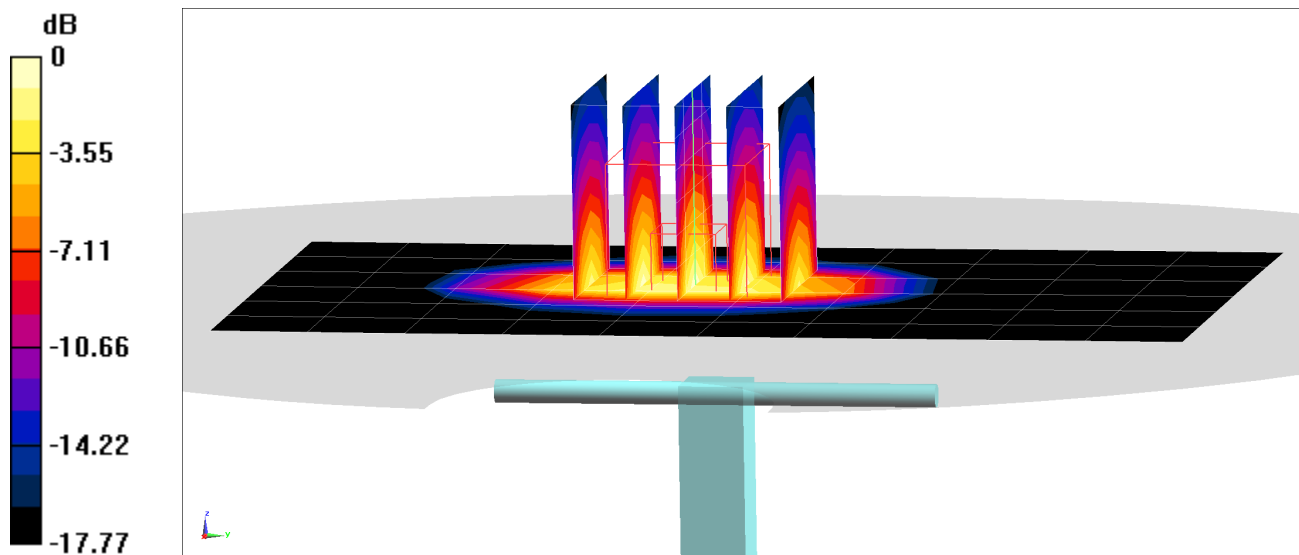
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 7.35 W/kg

SAR(1 g) = 3.95 W/kg

Deviation(1 g) = 0.77%



0 dB = 6.16 W/kg = 7.90 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d149

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used:

$f = 1900$ MHz; $\sigma = 1.574$ S/m; $\epsilon_r = 52.007$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/05/2021; Ambient Temp: 23.0°C; Tissue Temp: 23.2°C

Probe: EX3DV4 - SN3589; ConvF(6.84, 6.84, 6.84) @ 1900 MHz; Calibrated: 1/20/2021

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 1/13/2021

Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1646

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

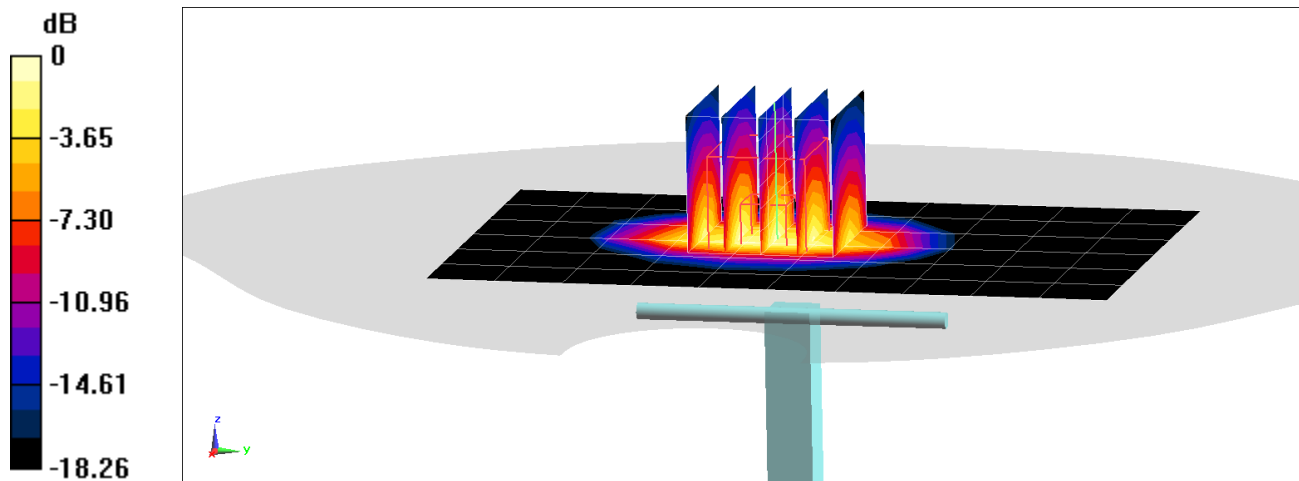
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 7.73 W/kg

SAR(10 g) = 2.09 W/kg

Deviation(10 g) = 0.97%



0 dB = 6.42 W/kg = 8.08 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d080

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used:

$f = 1900 \text{ MHz}$; $\sigma = 1.562 \text{ S/m}$; $\epsilon_r = 51.686$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/07/2021; Ambient Temp: 23.7°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN3589; ConvF(6.84, 6.84, 6.84) @ 1900 MHz; Calibrated: 1/20/2021

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 1/13/2021

Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1646

Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

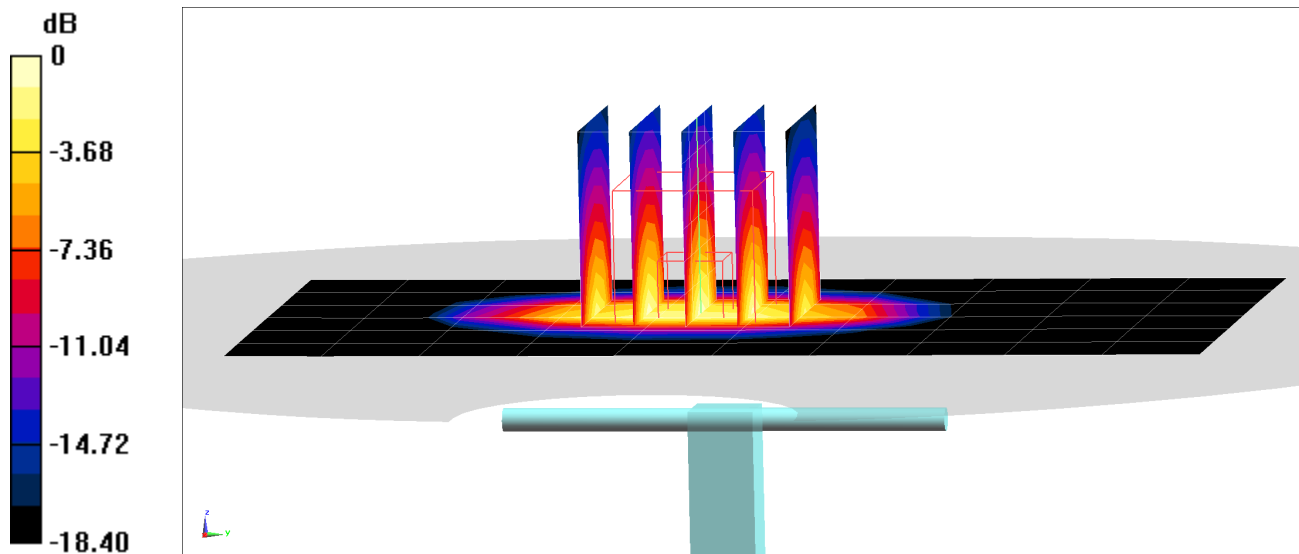
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Peak SAR (extrapolated) = 7.70 W/kg

SAR(1 g) = 4.06 W/kg; SAR(10 g) = 2.08 W/kg

Deviation(1 g) = 3.57%; Deviation(10 g) = 0.97%



0 dB = 6.39 W/kg = 8.06 dBW/kg

PCTEST

DUT: Dipole 2450.0 MHz; Type: D2450V2 - SN719

Communication System: UID: 0, CW; Frequency: 2450.0 MHz
Medium: 2450 Body; Medium parameters used:
 $f = 2450.0$ MHz; $\sigma = 2.04$ S/m; $\epsilon_r = 52.5$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/29/2021; Ambient Temp: 22.8°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7538; ConvF:(7.44,7.44,7.44); Calibrated: 2020-11-23
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1449; Calibrated: 2020-09-10
Phantom: Twin-SAM V5.0 (Left); Serial: 1873
Measurement SW: cDASY6 Module SAR V6.14.0.959

2450.0 MHz System Verification at 20.0 dBm

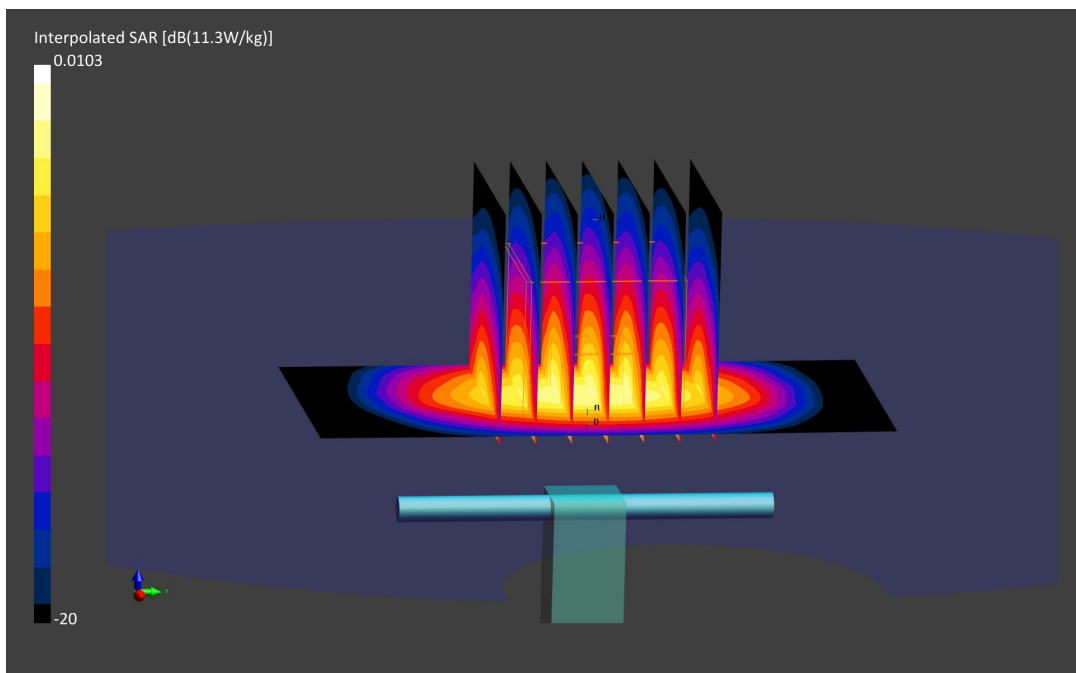
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 11.3 W/kg

SAR(1 g) = 5.26 W/kg; SAR(10 g) = 2.42 W/kg

Deviation (1 g) = 3.75%; Deviation (10 g) = 1.26%



PCTEST

DUT: Dipole 2450.0 MHz; Type: D2450V2 - SN719

Communication System: UID: 0, CW; Frequency: 2450.0 MHz
Medium: 2450 Body; Medium parameters used:
 $f = 2450.0$ MHz; $\sigma = 2.05$ S/m; $\epsilon_r = 51.6$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/06/2021; Ambient Temp: 23.8°C; Tissue Temp: 22.2°C

Probe: EX3DV4 - SN7538; ConvF:(7.44,7.44,7.44); Calibrated: 2020-11-23
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1449; Calibrated: 2020-09-10
Phantom: Twin-SAM V5.0 (Left); Serial: 1873
Measurement SW: cDASY6 Module SAR V6.14.0.959

2450.0 MHz System Verification at 20.0 dBm

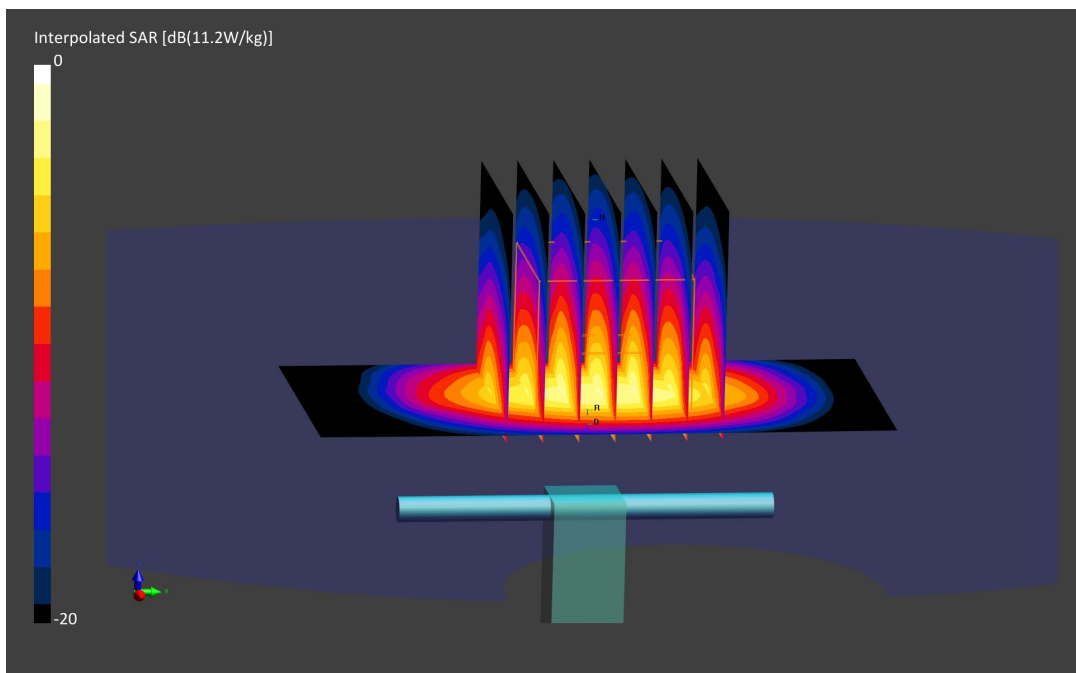
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 11.2 W/kg

SAR(1 g) = 5.22 W/kg

Deviation (1 g) = 2.96%



PCTEST

DUT: Dipole 2450.0 MHz; Type: D2450V2 - SN981

Communication System: UID: 0, CW; Frequency: 2450.0 MHz
Medium: 2450 Body; Medium parameters used:
 $f = 2450.0$ MHz; $\sigma = 1.97$ S/m; $\epsilon_r = 53.6$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/12/2021; Ambient Temp: 21.7°C; Tissue Temp: 23.4°C

Probe: EX3DV4 - SN7539; ConvF:(7.62,7.62,7.62); Calibrated: 2020-10-20
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1415; Calibrated: 2021-03-10
Phantom: Twin-SAM V8.0 (Right); Serial: 1966
Measurement SW: cDASY6 Module SAR V16.0.0.116

2450.0 MHz System Verification at 20.0 dBm

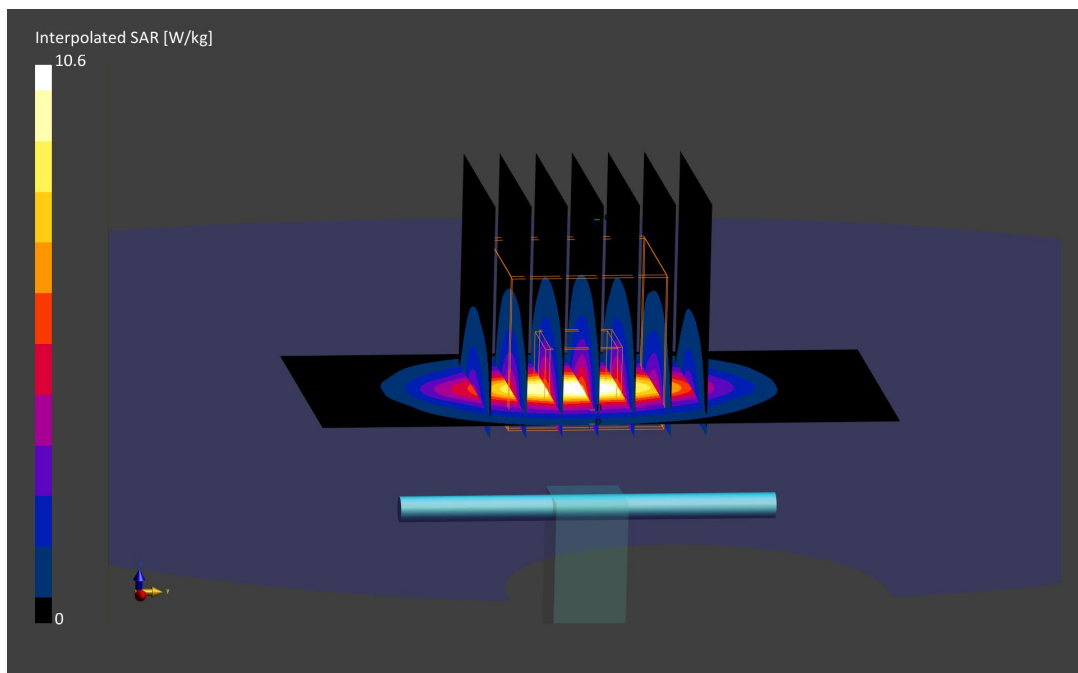
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 10.6 W/kg

SAR(1 g) = 5.03 W/kg; SAR(10 g) = 2.33 W/kg

Deviation (1 g) = 0.40%; Deviation (10 g) = -1.69%



PCTEST

DUT: Dipole 2600.0 MHz; Type: D2600V2 - SN1064

Communication System: UID: 0, CW; Frequency: 2600.0 MHz
Medium: 2450 Body; Medium parameters used:
 $f = 2600.0$ MHz; $\sigma = 2.22$ S/m; $\epsilon_r = 52.1$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/29/2021; Ambient Temp: 22.8°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7538; ConvF:(7.25,7.25,7.25); Calibrated: 2020-11-23
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1449; Calibrated: 2020-09-10
Phantom: Twin-SAM V5.0 (Left); Serial: 1873
Measurement SW: cDASY6 Module SAR V6.14.0.959

2600.0 MHz System Verification at 20.0 dBm

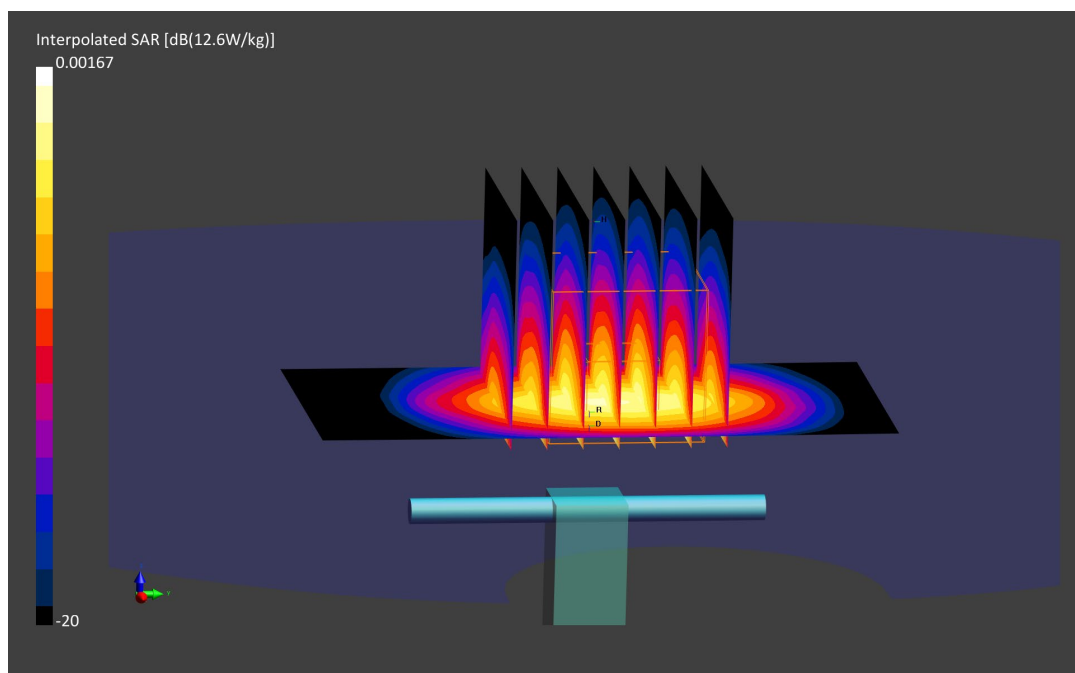
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 12.6 W/kg

SAR(1 g) = 5.67 W/kg; SAR(10 g) = 2.50 W/kg

Deviation (1 g) = 1.98%; Deviation (10 g) = 0.00%



PCTEST

DUT: Dipole 5250.0 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5250.0 MHz
Medium: 5200-5800 Body; Medium parameters used:
 $f = 5250.0$ MHz; $\sigma = 5.31$ S/m; $\epsilon_r = 47.9$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/04/2021; Ambient Temp: 21.3°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7526; ConvF:(4.55,4.55,4.55); Calibrated: 2021-03-16
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1272; Calibrated: 2021-03-18
Phantom: Twin-SAM V5.0 (left); Serial: 1758
Measurement SW: cDASY6 Module SAR V6.14.0.959

5250.0 MHz System Verification at 17.0 dBm

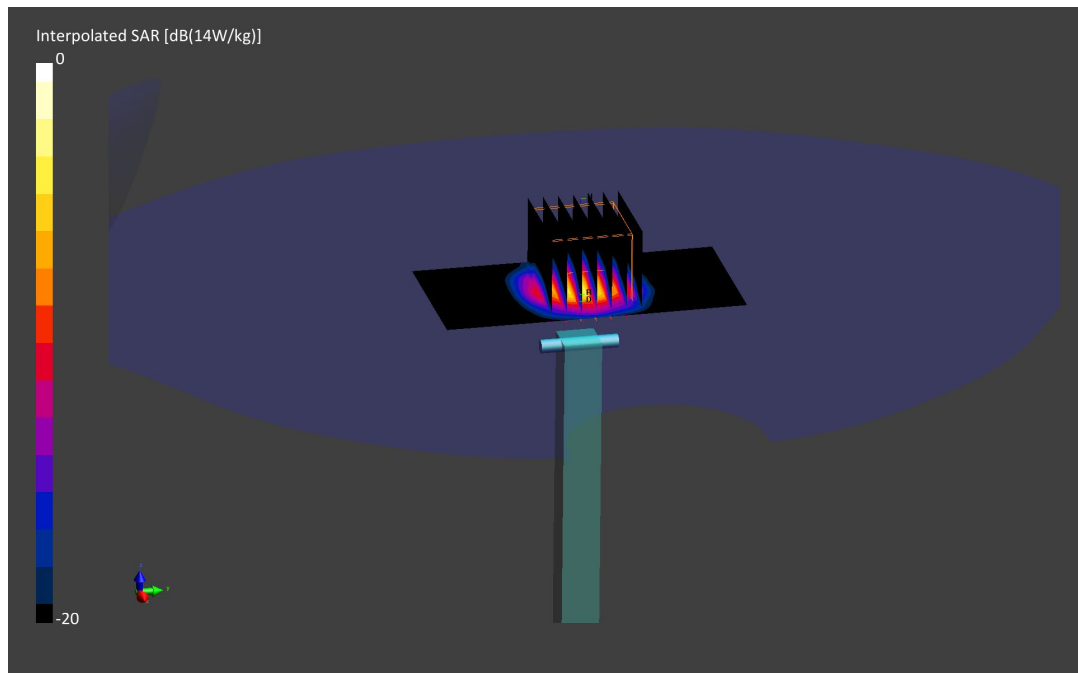
Area Scan (40.0 x 80.0): Measurement grid: dx=5.0 mm, dy=10.0 mm

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) = 3.52 W/kg; SAR(10 g) = 0.990 W/kg

Deviation (1 g) = -5.63%; Deviation (10 g) = -5.71%



PCTEST

DUT: Dipole 5250.0 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5250.0 MHz
Medium: 5200-5800 Body; Medium parameters used:
 $f = 5250.0$ MHz; $\sigma = 5.26$ S/m; $\epsilon_r = 47.4$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/11/2021; Ambient Temp: 22.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7526; ConvF:(4.55,4.55,4.55); Calibrated: 2021-03-16
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1272; Calibrated: 2021-03-18
Phantom: Twin-SAM V5.0 (left); Serial: 1758
Measurement SW: cDASY6 Module SAR V6.14.0.959

5250.0 MHz System Verification at 17.0 dBm

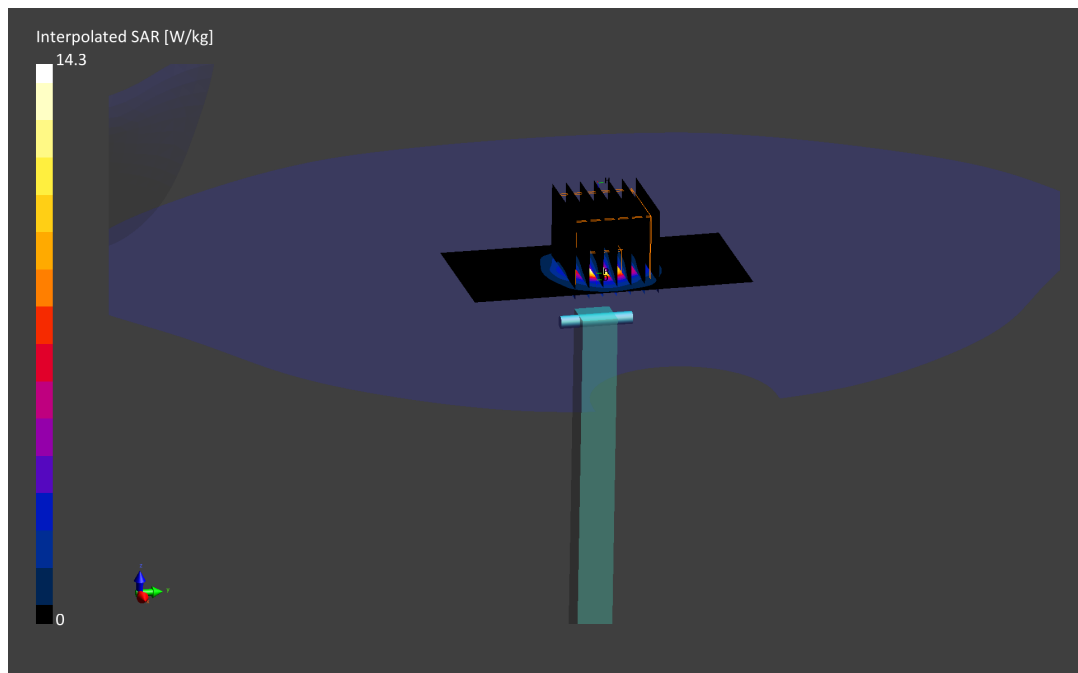
Area Scan (40.0 x 80.0): Measurement grid: dx=5.0 mm, dy=10.0 mm

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) = 14.3 W/kg

SAR(1 g) = 3.65 W/kg; SAR(10 g) = 1.03 W/kg

Deviation (1 g) = 2.14%; Deviation (10 g) = -1.90%



PCTEST

DUT: Dipole 5600.0 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5600.0 MHz
Medium: 5200-5800 Body; Medium parameters used:
 $f = 5600.0$ MHz; $\sigma = 5.81$ S/m; $\epsilon_r = 47.4$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/04/2021; Ambient Temp: 21.3°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7526; ConvF:(4.12,4.12,4.12); Calibrated: 2021-03-16
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1272; Calibrated: 2021-03-18
Phantom: Twin-SAM V5.0 (left); Serial: 1758
Measurement SW: cDASY6 Module SAR V6.14.0.959

5600.0 MHz System Verification at 17.0 dBm

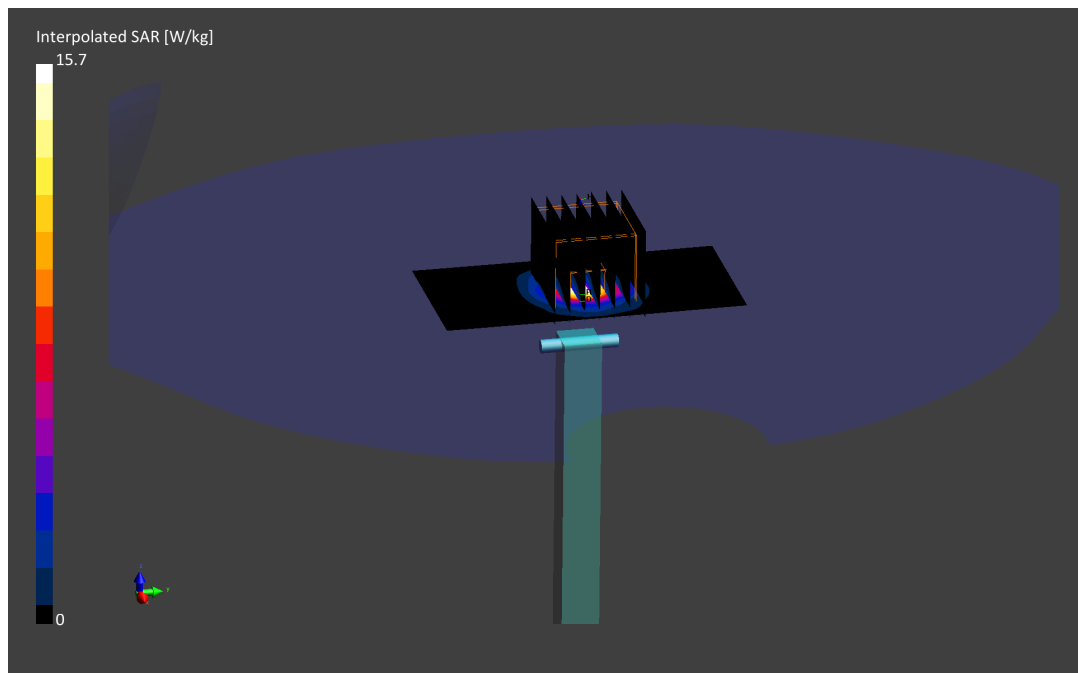
Area Scan (40.0 x 80.0): Measurement grid: dx=5.0 mm, dy=10.0 mm

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) = 15.66 W/kg

SAR(1 g) = 3.62 W/kg; SAR(10 g) = 1.00 W/kg

Deviation (1 g) = -7.30%; Deviation (10 g) = -7.83%



PCTEST

DUT: Dipole 5600.0 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5600.0 MHz
Medium: 5200-5800 Body; Medium parameters used:
 $f = 5600.0$ MHz; $\sigma = 5.74$ S/m; $\epsilon_r = 46.8$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/11/2021; Ambient Temp: 22.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7526; ConvF:(4.12,4.12,4.12); Calibrated: 2021-03-16
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1272; Calibrated: 2021-03-18
Phantom: Twin-SAM V5.0 (left); Serial: 1758
Measurement SW: cDASY6 Module SAR V6.14.0.959

5600.0 MHz System Verification at 17.0 dBm

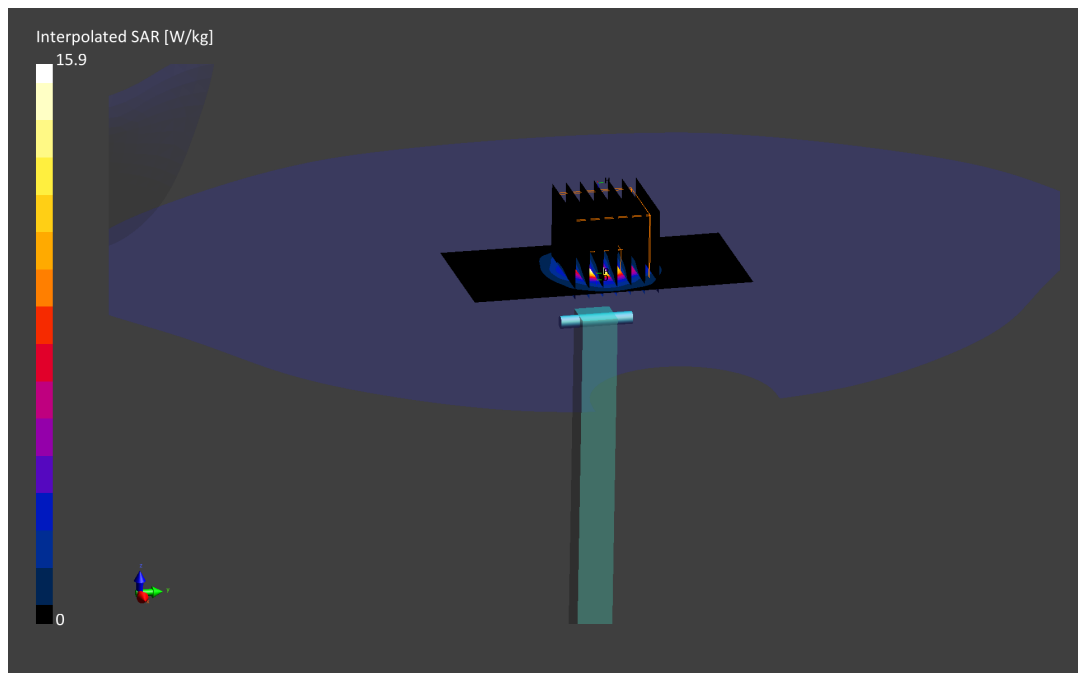
Area Scan (40.0 x 80.0): Measurement grid: dx=5.0 mm, dy=10.0 mm

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) = 15.9 W/kg

SAR(1 g) = 3.72 W/kg; SAR(10 g) = 1.03 W/kg

Deviation (1 g) = -4.74%; Deviation (10 g) = -5.07%



PCTEST

DUT: Dipole 5750.0 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5750.0 MHz
Medium: 5200-5800 Body; Medium parameters used:
 $f = 5750.0$ MHz; $\sigma = 6.03$ S/m; $\epsilon_r = 47.1$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/04/2021; Ambient Temp: 21.3°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7526; ConvF:(4.14,4.14,4.14); Calibrated: 2021-03-16
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1272; Calibrated: 2021-03-18
Phantom: Twin-SAM V5.0 (left); Serial: 1758
Measurement SW: cDASY6 Module SAR V6.14.0.959

5750.0 MHz System Verification at 17.0 dBm

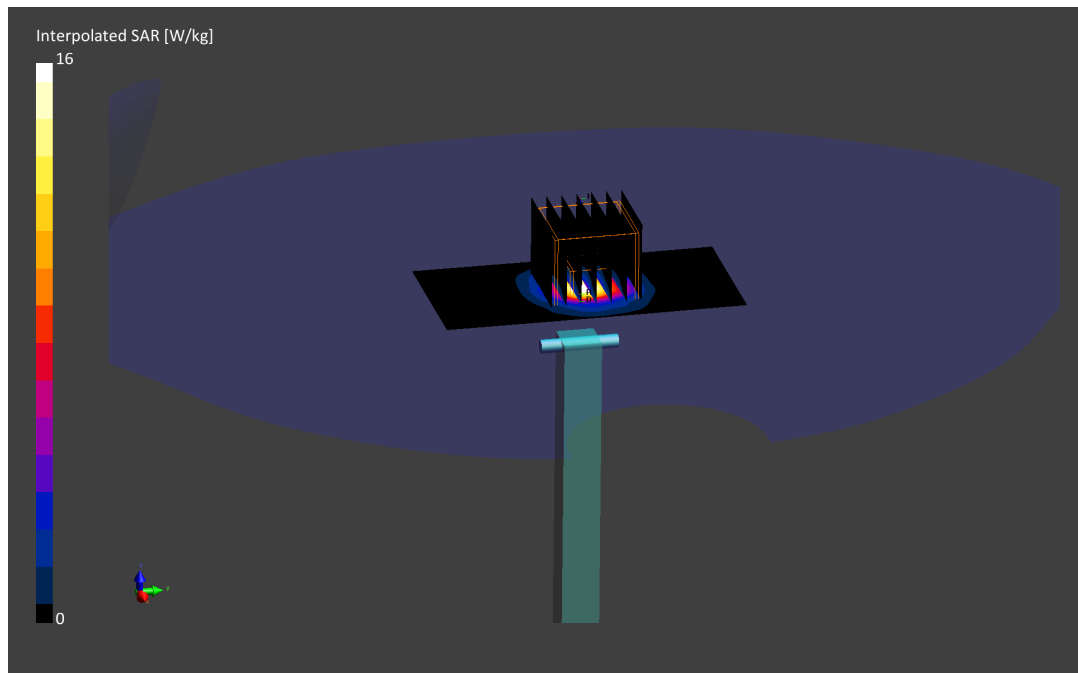
Area Scan (40.0 x 80.0): Measurement grid: dx=5.0 mm, dy=10.0 mm

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) = 16.0 W/kg

SAR(1 g) = 3.59 W/kg; SAR(10 g) = 1.01 W/kg

Deviation (1 g) = -4.14%; Deviation (10 g) = -2.88%



PCTEST

DUT: Dipole 5750.0 MHz; Type: D5GHzV2 - SN1191

Communication System: UID: 0, CW; Frequency: 5750.0 MHz
Medium: 5200-5800 Body; Medium parameters used:
 $f = 5750.0$ MHz; $\sigma = 5.95$ S/m; $\epsilon_r = 46.6$; density = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/11/2021; Ambient Temp: 22.1°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7526; ConvF:(4.14,4.14,4.14); Calibrated: 2021-03-16
Sensor-Surface: 1.4mm (VMS + 6p)
Electronics: DAE4 Sn1272; Calibrated: 2021-03-18
Phantom: Twin-SAM V5.0 (left); Serial: 1758
Measurement SW: cDASY6 Module SAR V6.14.0.959

5750.0 MHz System Verification at 17.0 dBm

Area Scan (40.0 x 80.0): Measurement grid: dx=5.0 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) = 15.5 W/kg

SAR(1 g) = 3.50 W/kg; SAR(10 g) = 0.983 W/kg

Deviation (1 g) = -6.54%; Deviation (10 g) = -5.48%

