

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: 1.5cm

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)

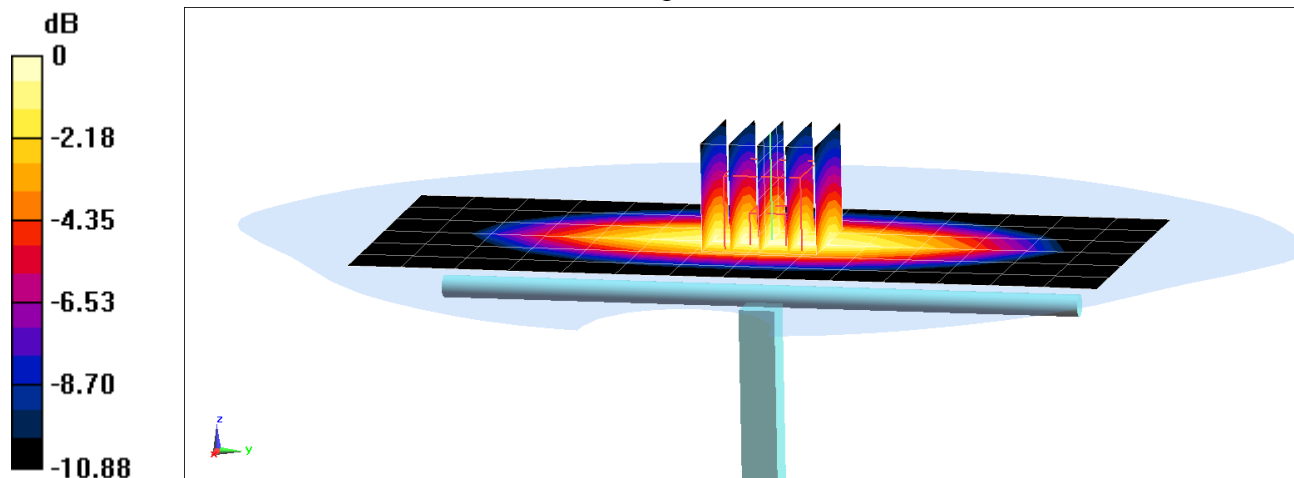
Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

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(1g) = 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)

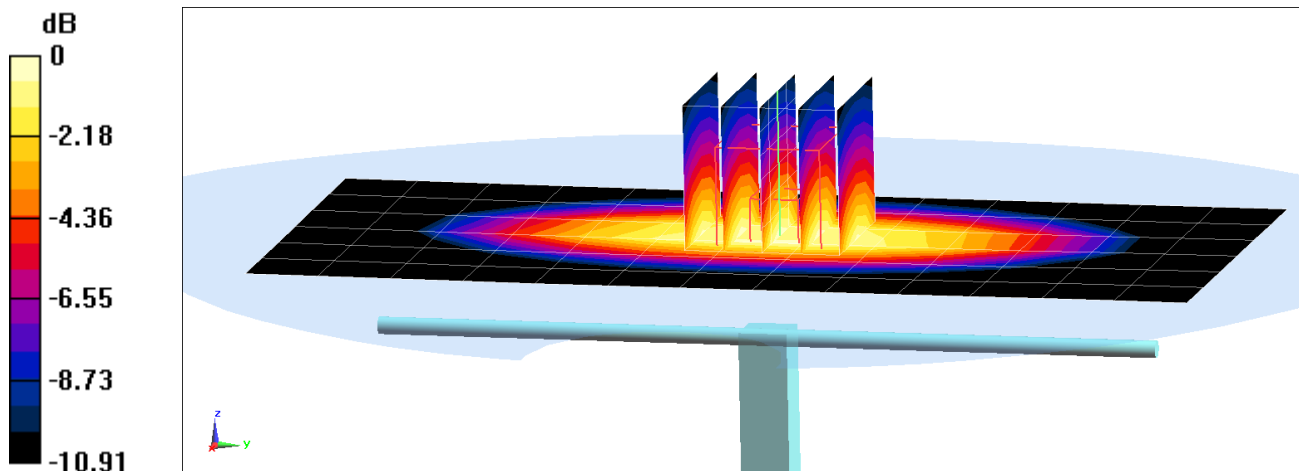
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

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 1750 MHz; Type: D1750V2; Serial: 1148

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

Medium: 1750 Head Medium parameters used:

$f = 1750 \text{ MHz}$; $\sigma = 1.41 \text{ S/m}$; $\epsilon_r = 39.053$; $\rho = 1000 \text{ kg/m}^3$

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)

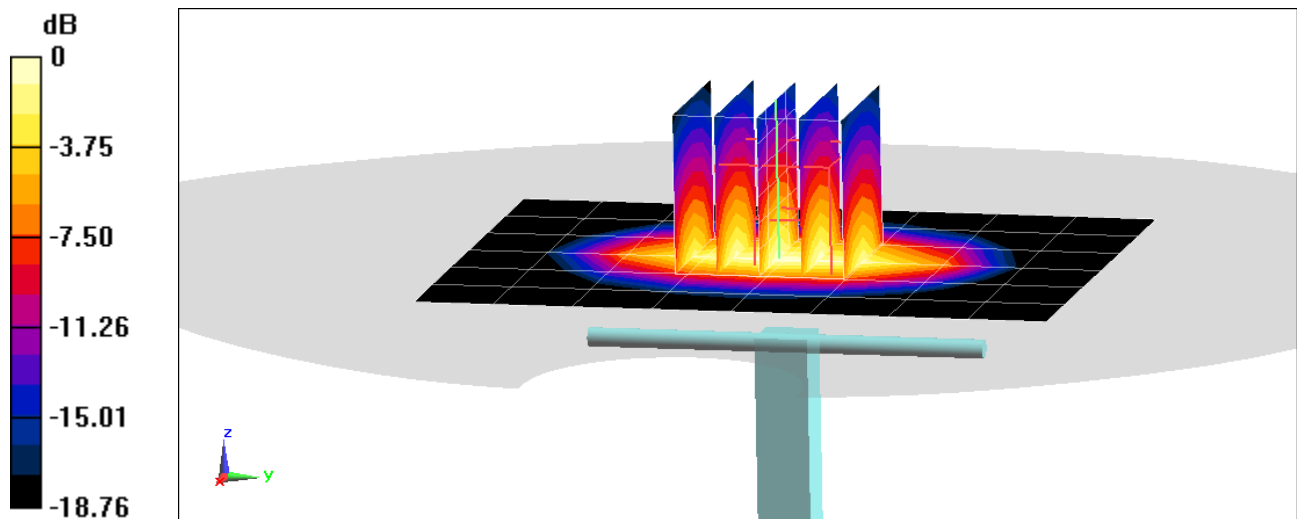
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

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; $\sigma = 1.448$ S/m; $\epsilon_r = 39.462$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/12/2021; Ambient Temp: 22.0°C; Tissue Temp: 21.7°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)

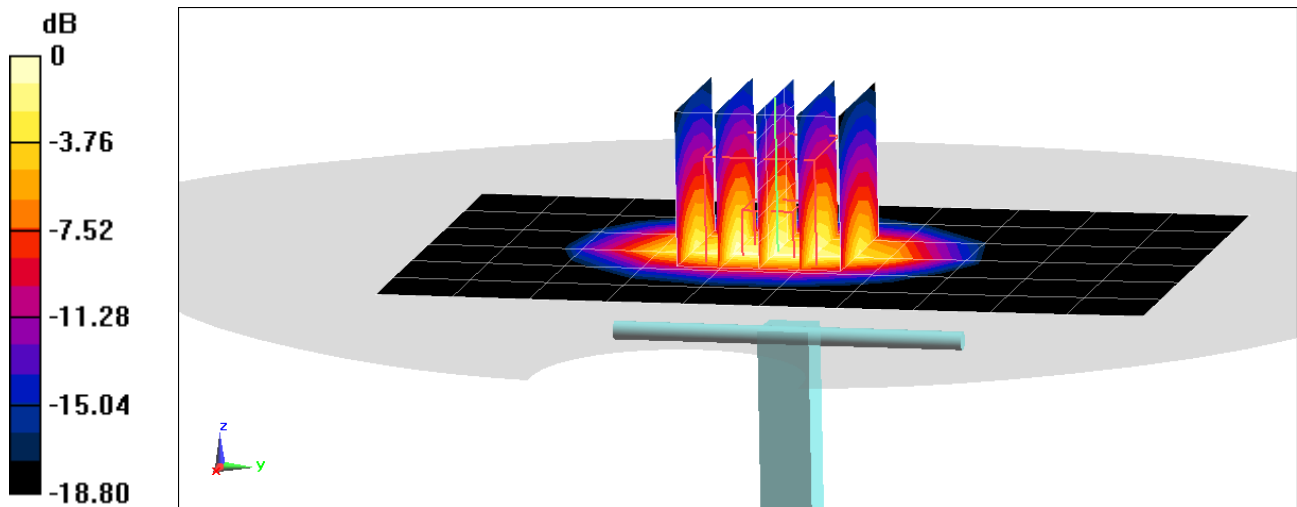
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.53 W/kg

SAR(1 g) = 3.98 W/kg

Deviation(1 g) = 1.27%



0 dB = 6.27 W/kg = 7.97 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:

$f = 2450 \text{ MHz}$; $\sigma = 1.82 \text{ S/m}$; $\epsilon_r = 37.301$; $\rho = 1000 \text{ kg/m}^3$

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)

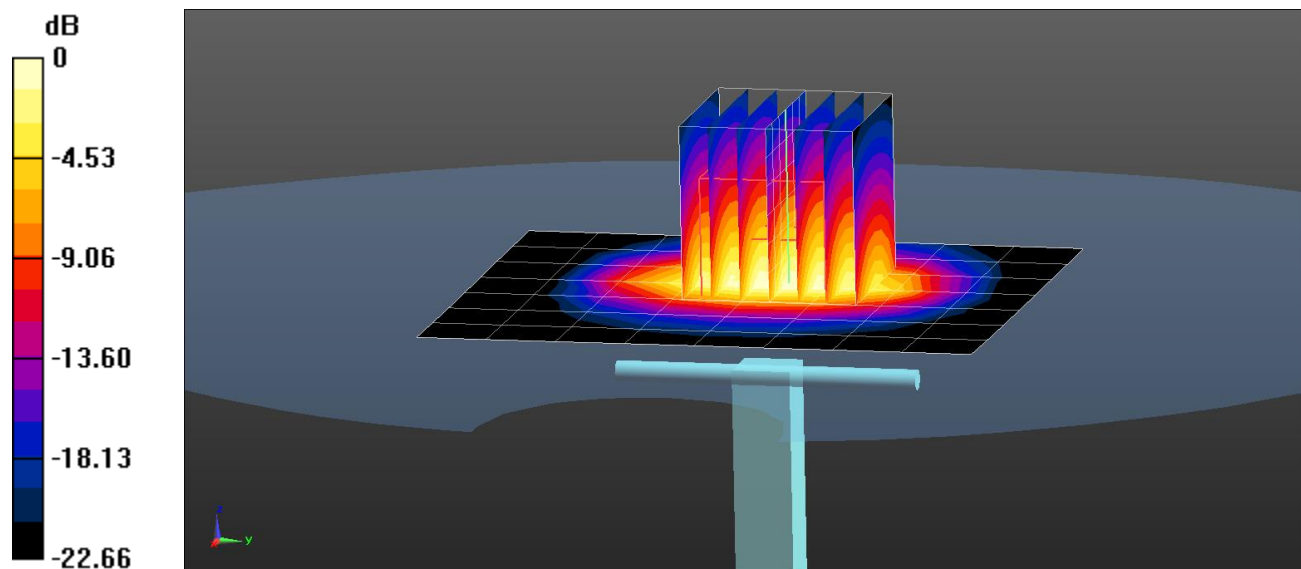
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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%



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)

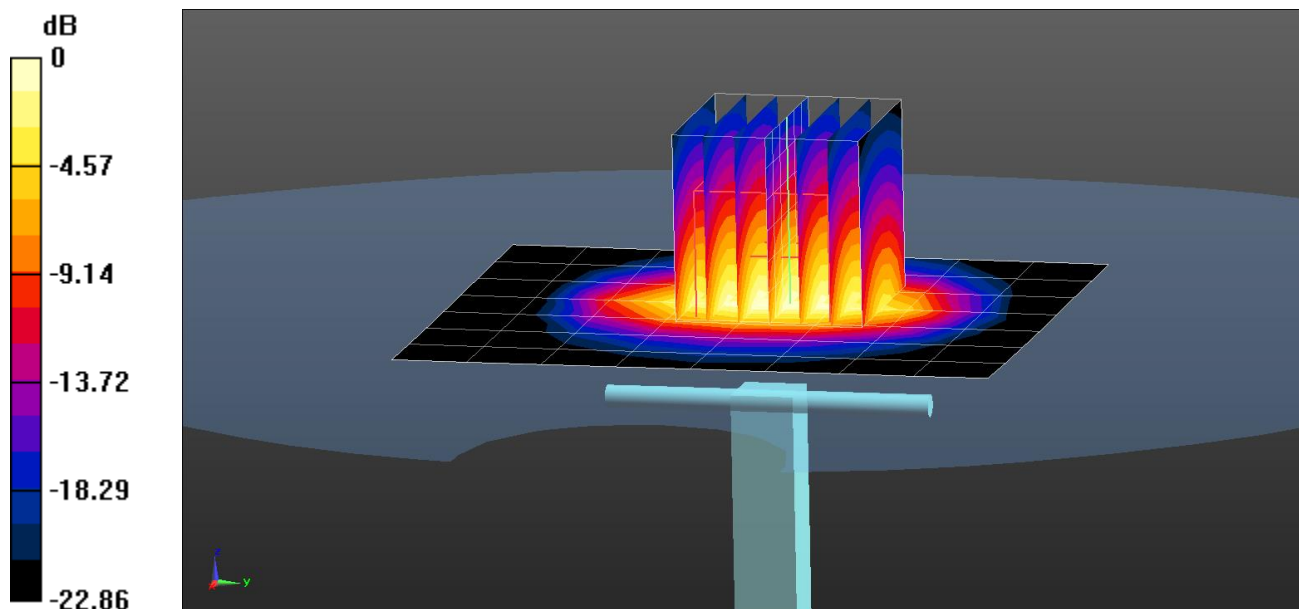
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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 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; $\sigma = 1.844$ S/m; $\epsilon_r = 38.502$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/31/2021; Ambient Temp: 24.2°C; Tissue Temp: 22.9°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)

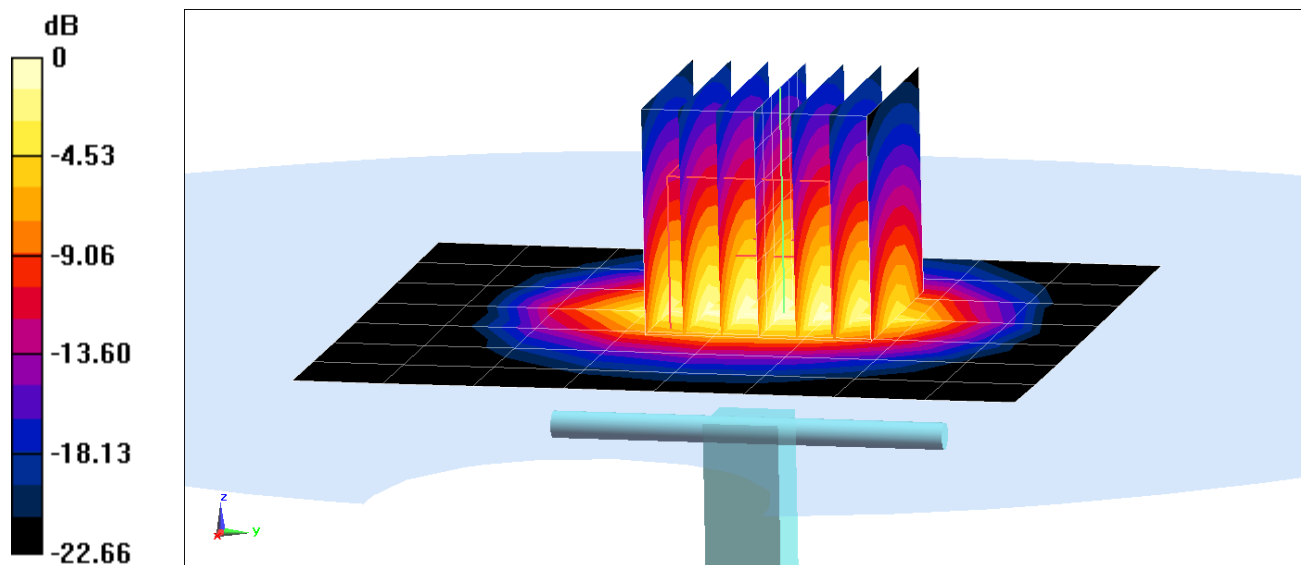
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 11.6 W/kg

SAR(1 g) = 5.46 W/kg

Deviation(1 g) = 6.23%



0 dB = 9.17 W/kg = 9.62 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1064

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
 $f = 2600$ MHz; $\sigma = 1.955$ S/m; $\epsilon_r = 37.442$; $\rho = 1000$ 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(7.05, 7.05, 7.05) @ 2600 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)

2600 MHz System Verification at 20.0 dBm (100 mW)

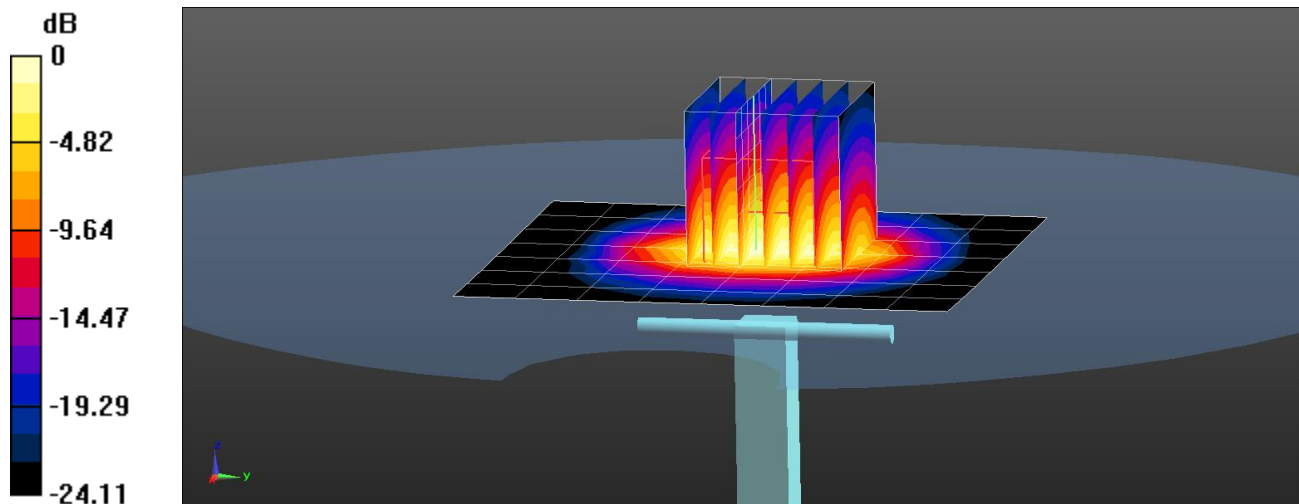
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 12.9 W/kg

SAR(1 g) = 5.83 W/kg

Deviation(1 g) = 0.34 %



0 dB = 9.95 W/kg = 9.98 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; cond = 4.56 S/m; perm = 34.5; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 07/09/2021; Ambient Temp: 23.5°C; Tissue Temp: 21.0°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 (50 mW)

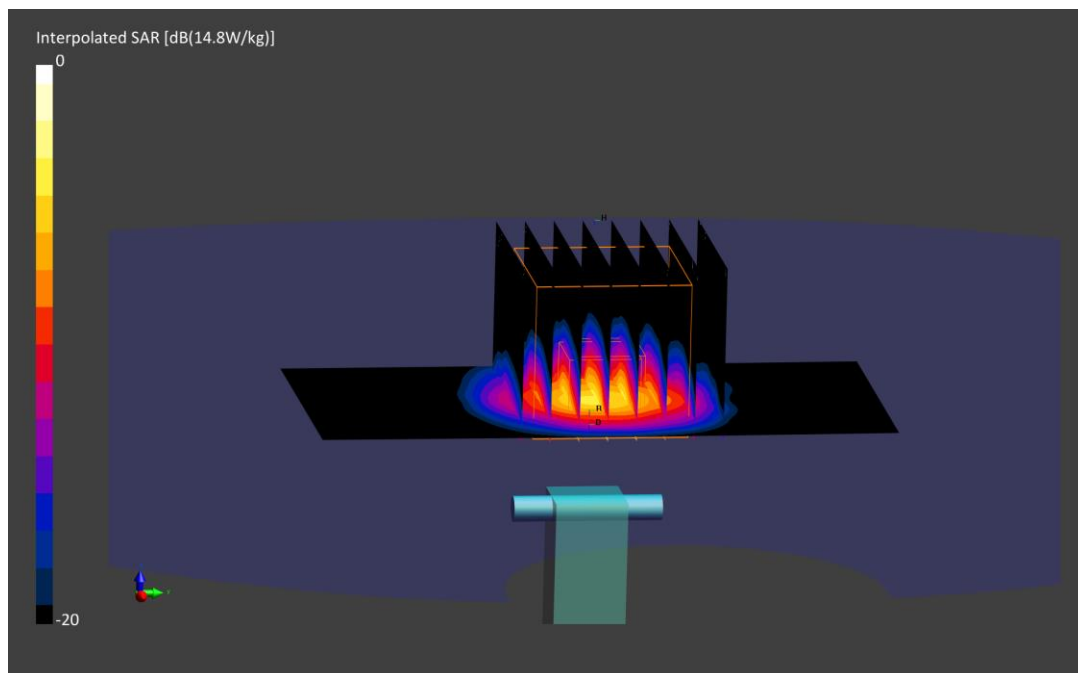
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 14.8 W/kg

SAR(1 g) = 3.82 W/kg

Deviation (1 g) = -4.26%



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; cond = 4.95 S/m; perm = 34.0; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 07/09/2021; Ambient Temp: 23.5°C; Tissue Temp: 21.0°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 (50 mW)

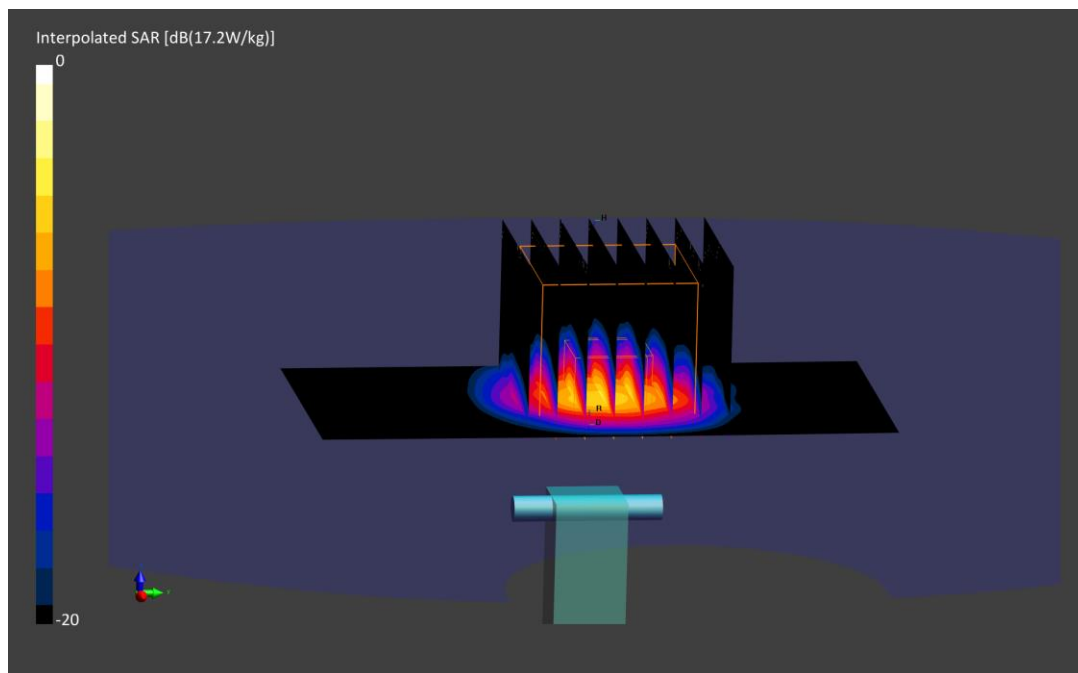
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 17.2 W/kg

SAR(1 g) = 4.18 W/kg

Deviation (1 g) = 2.20%



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; cond = 5.11 S/m; perm = 33.7; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 07/09/2021; Ambient Temp: 23.5°C; Tissue Temp: 21.0°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 (50 mW)

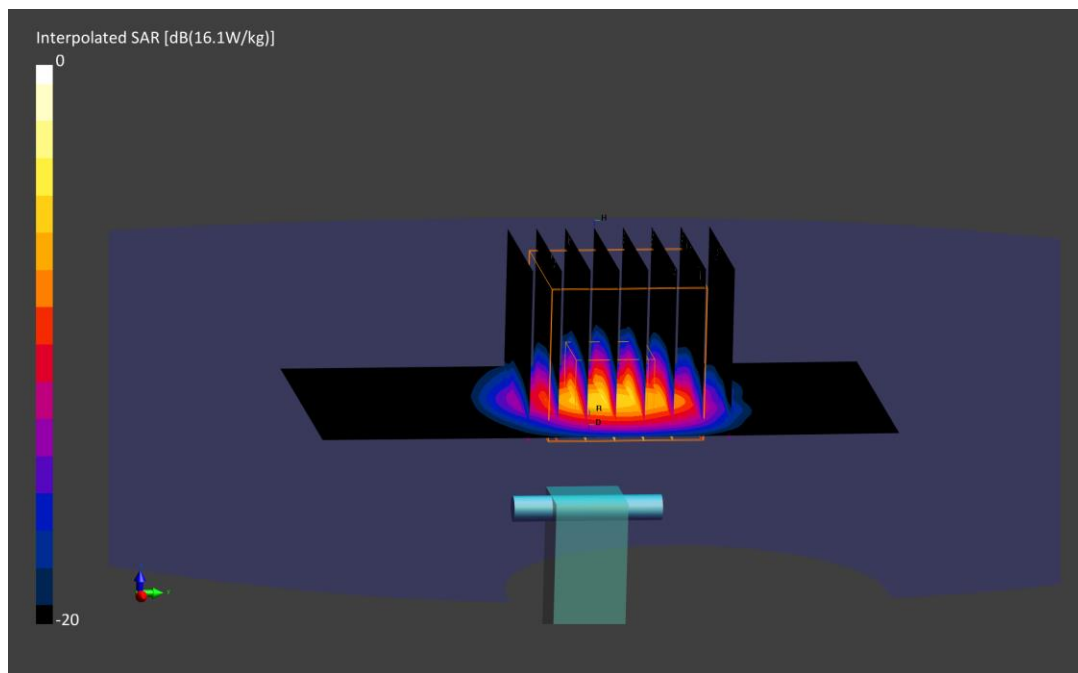
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 16.1 W/kg

SAR(1 g) = 3.81 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: 21.2°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)

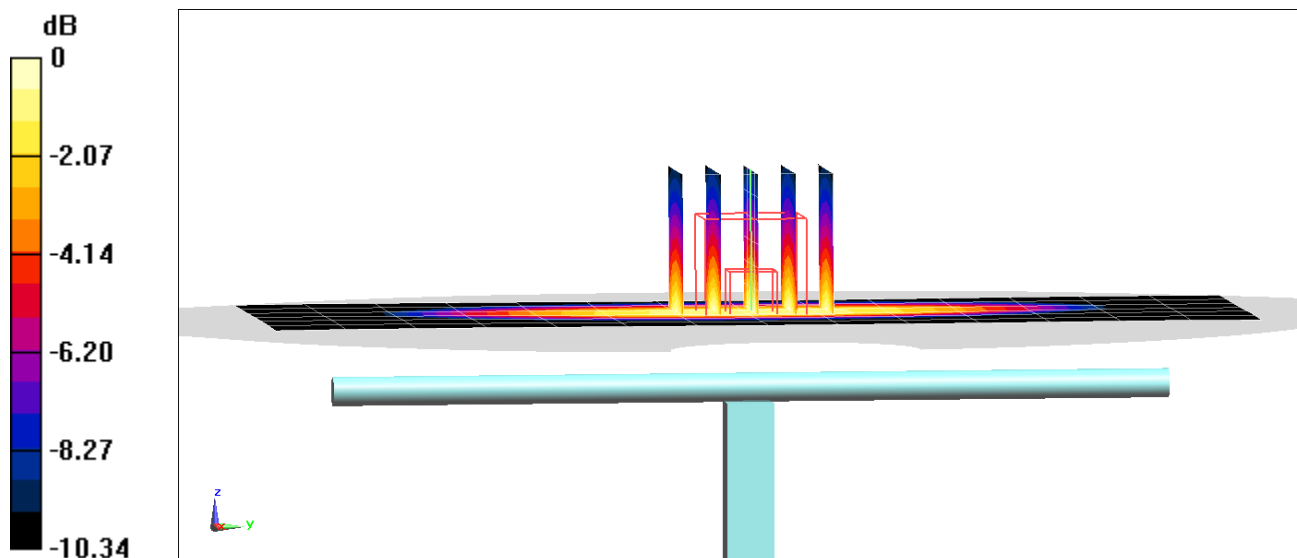
Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

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

Deviation(1 g) = -0.70%



0 dB = 2.33 W/kg = 3.67 dBW/kg

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:

$f = 750 \text{ MHz}$; $\sigma = 0.965 \text{ S/m}$; $\epsilon_r = 54.919$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/30/2021; Ambient Temp: 22.6°C; Tissue Temp: 21.0°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)

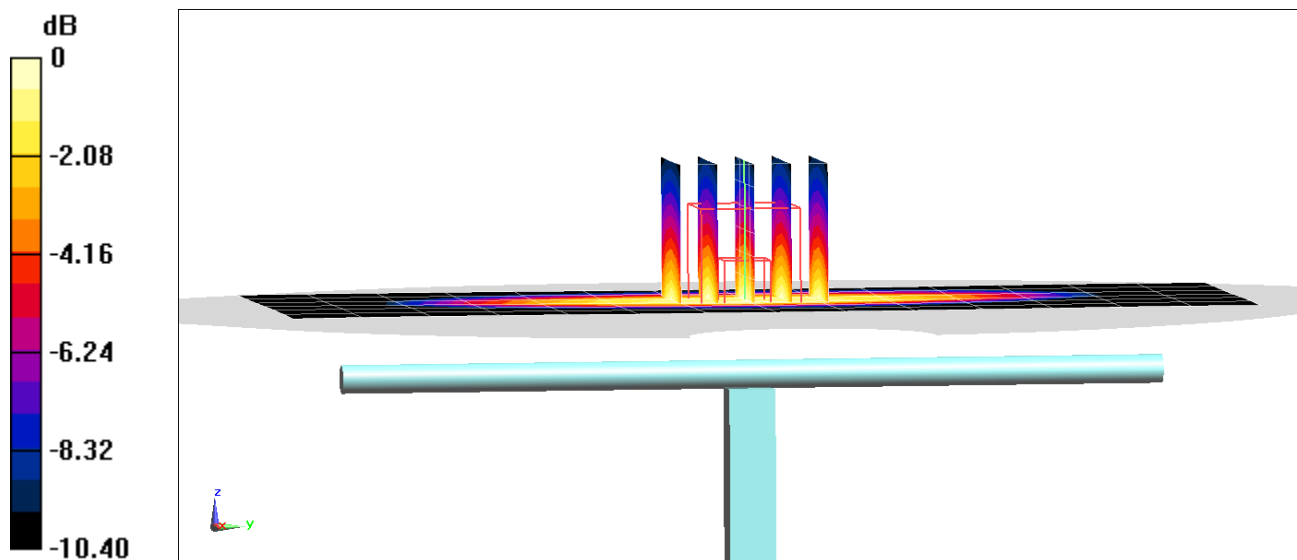
Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 2.79 W/kg

SAR(1 g) = 1.78 W/kg

Deviation(1 g) = 3.37%



0 dB = 2.42 W/kg = 3.84 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used:

$f = 750 \text{ MHz}$; $\sigma = 0.991 \text{ S/m}$; $\epsilon_r = 54.057$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/06/2021; Ambient Temp: 23.2°C; Tissue Temp: 22.1°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)

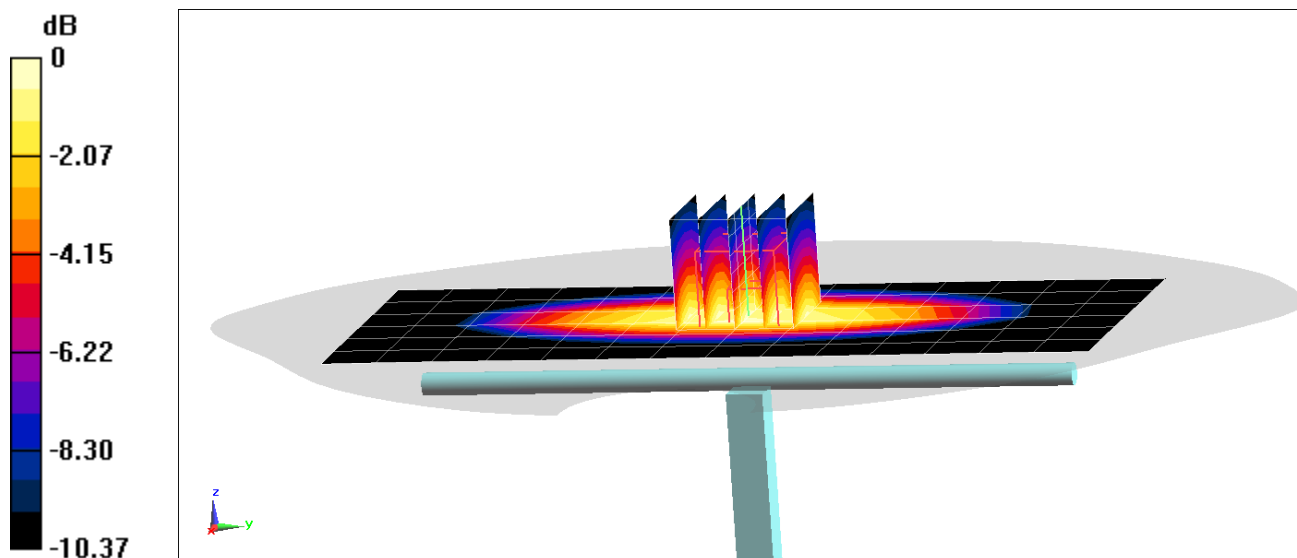
Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 2.72 W/kg

SAR(1 g) = 1.78 W/kg

Deviation(1 g) = 5.58%



0 dB = 2.39 W/kg = 3.78 dBW/kg

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)

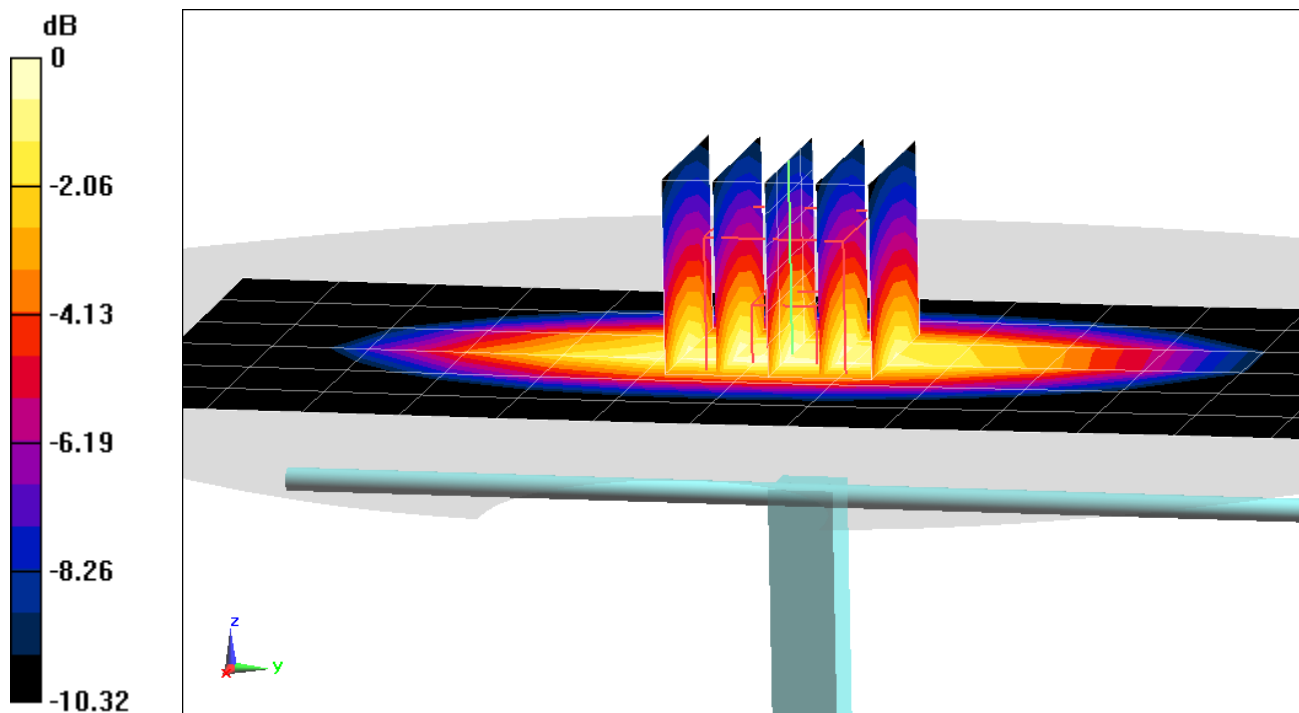
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

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:

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

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07/04/2021; Ambient Temp: 24.8°C; Tissue Temp: 22.8°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)

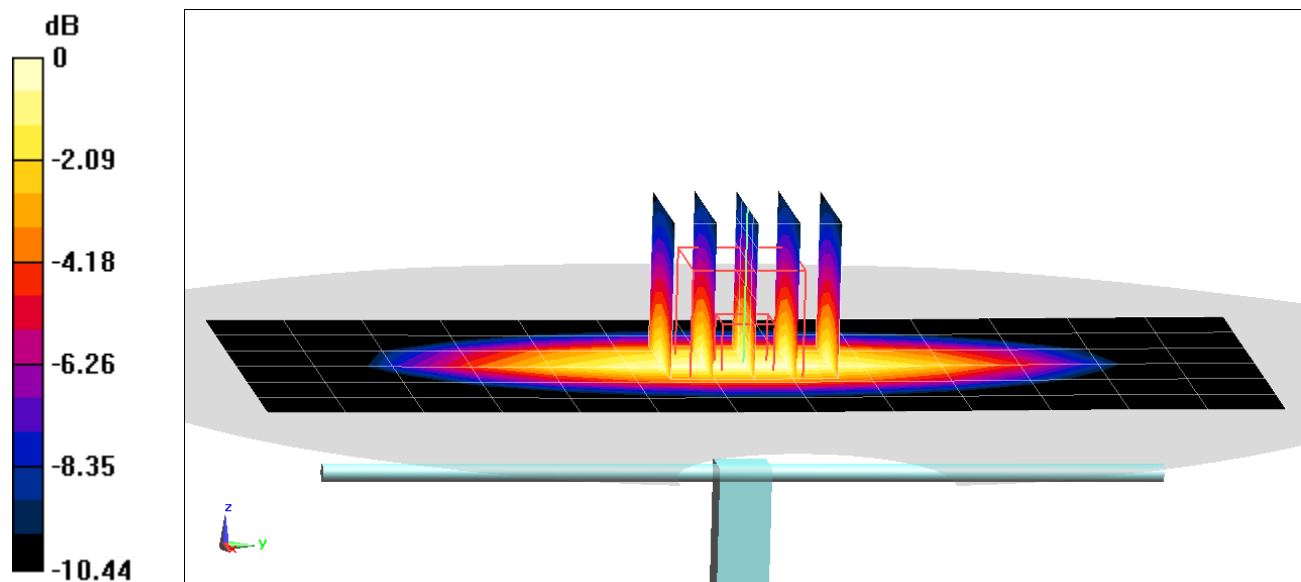
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 3.11 W/kg

SAR(1 g) = 2.04 W/kg

Deviation(1 g) = 4.62%



0 dB = 2.73 W/kg = 4.36 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)

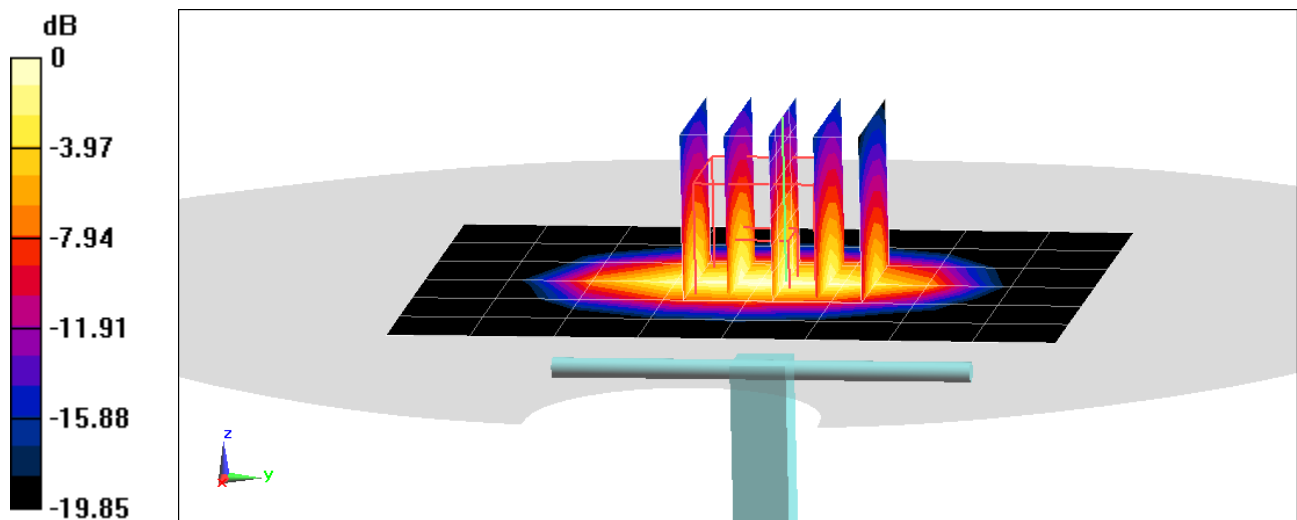
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

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

Deviation(1 g) = 2.75%



0 dB = 5.73 W/kg = 7.58 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:

$f = 1750 \text{ MHz}$; $\sigma = 1.53 \text{ S/m}$; $\epsilon_r = 52.349$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0cm

Test Date: 06/30/2021; Ambient Temp: 21.6°C; Tissue Temp: 21.3°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)

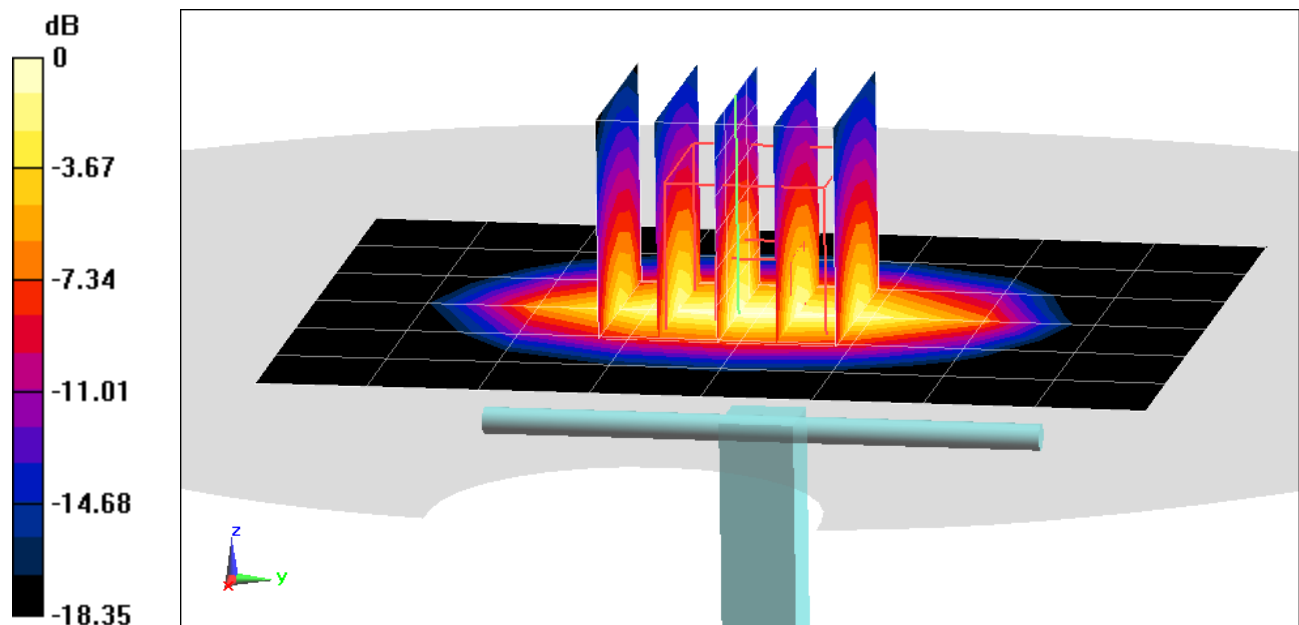
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 6.70 W/kg

SAR(1 g) = 3.62 W/kg; SAR(10 g) = 1.9 W/kg

Deviation(1 g) = -0.28%; Deviation(10 g) = -1.55%



0 dB = 5.58 W/kg = 7.47 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1150

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

Medium: 1750 Body Medium parameters used:

$f = 1750$ MHz; $\sigma = 1.456$ S/m; $\epsilon_r = 52.178$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/13/2021; Ambient Temp: 24.1°C; Tissue Temp: 23.5°C

Probe: EX3DV4 - SN3589; ConvF(7, 7, 7) @ 1750 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)

1750 MHz System Verification at 20.0 dBm (100 mW)

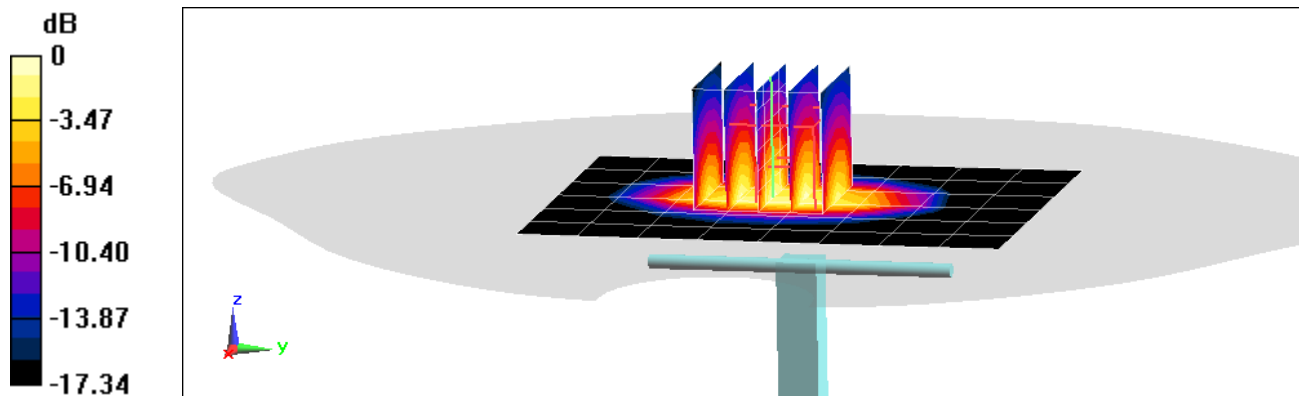
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.02 W/kg

SAR(1 g) = 3.86 W/kg

Deviation(1 g) = 5.46%



0 dB = 5.88 W/kg = 7.69 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: 1.0cm

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)

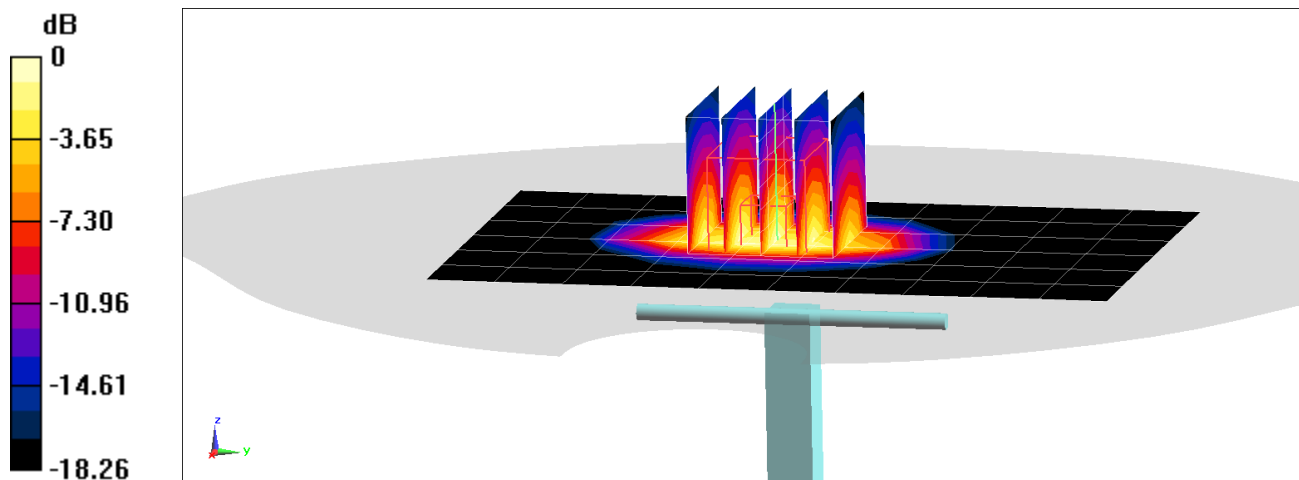
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.73 W/kg

SAR(1 g) = 4.07 W/kg

Deviation(1 g) = 3.30%



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:

$f = 1900$ MHz; $\sigma = 1.575$ S/m; $\epsilon_r = 52.655$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/12/2021; Ambient Temp: 23.3°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)

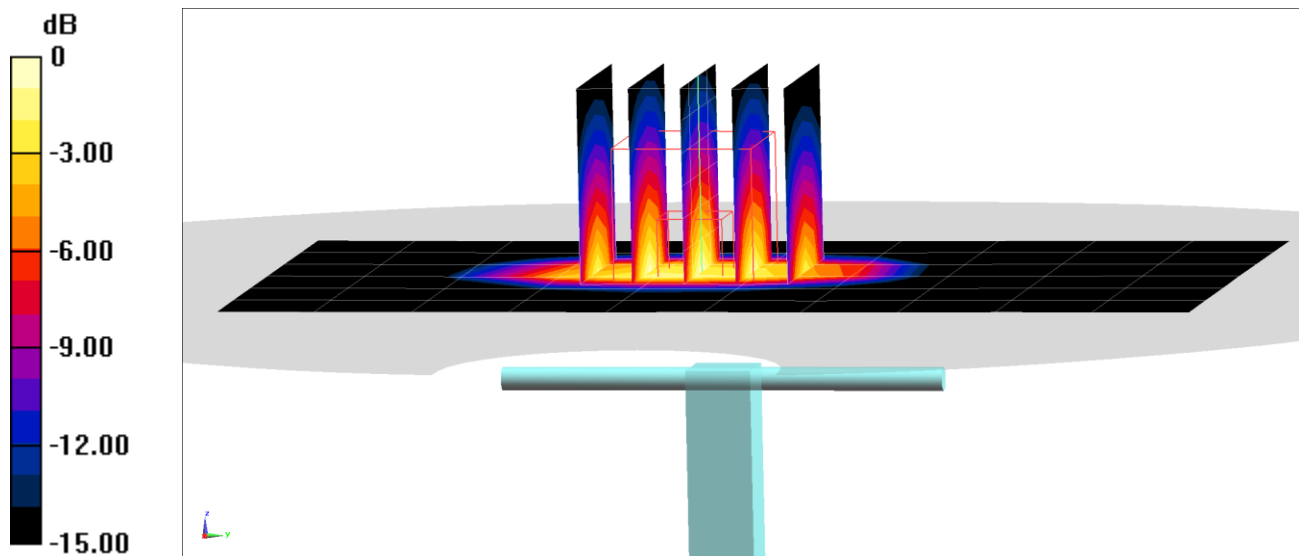
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.88 W/kg

SAR(10 g) = 2.15 W/kg

Deviation(10 g) = 4.37%



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; $\sigma = 1.584$ S/m; $\epsilon_r = 51.377$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07/15/2021; Ambient Temp: 23.4°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7551; ConvF(7.84, 7.84, 7.84) @ 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)

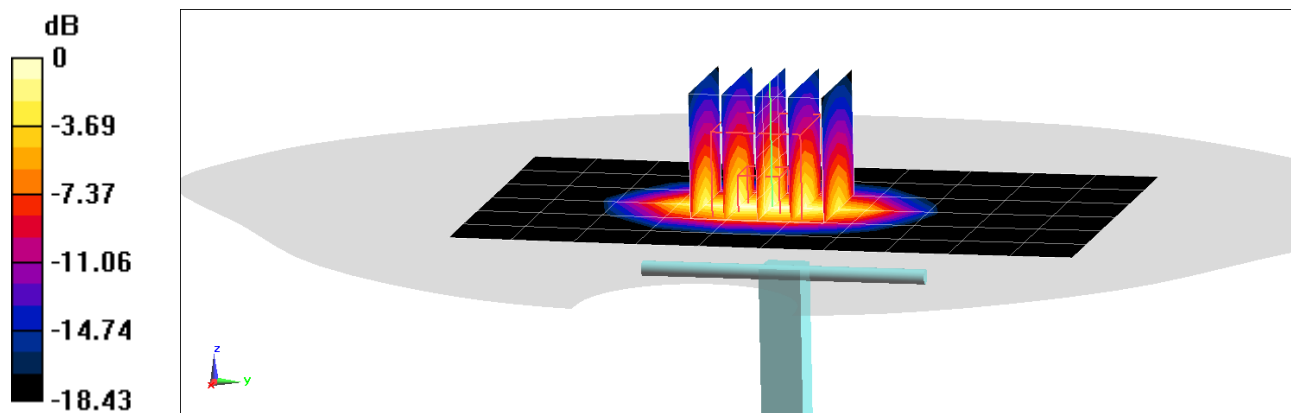
1900 MHz System Verification at 20.0 dBm (100 mW)

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) = 7.87 W/kg

SAR(1 g) = 4.3 W/kg



0 dB = 6.63 W/kg = 8.22 dBW/kg

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; cond = 1.94 S/m; perm = 52.1; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 07/06/2021; Ambient Temp: 21.0°C; Tissue Temp: 24.5°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 (100 mW)

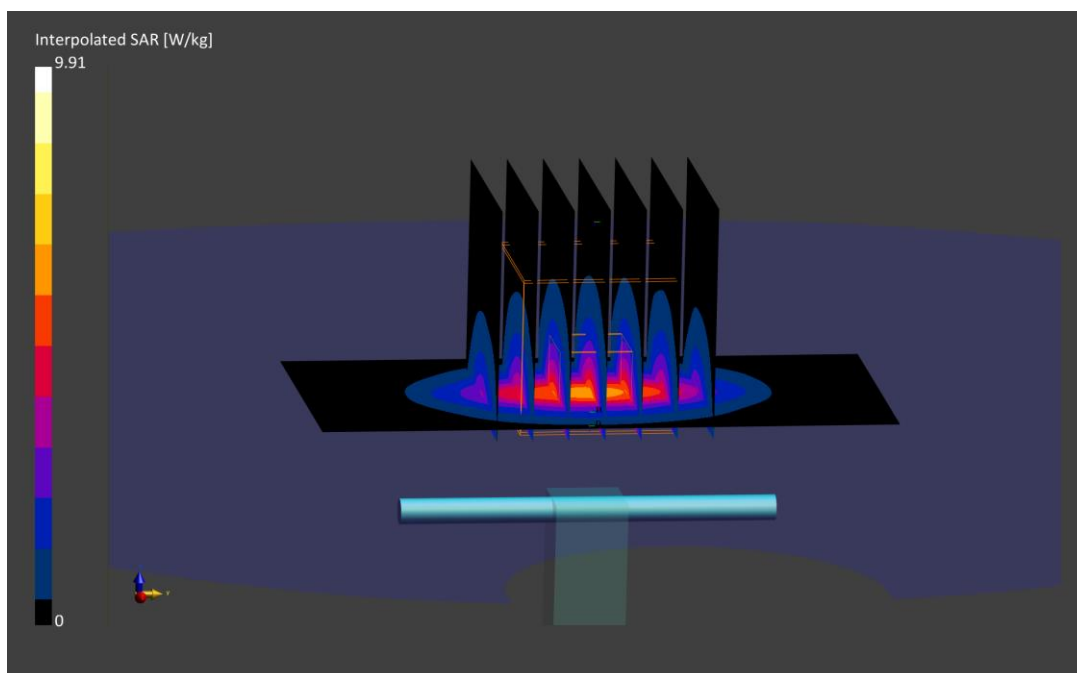
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 9.91 W/kg

SAR(1 g) = 4.80 W/kg

Deviation (1 g) = -4.19%



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; cond = 1.94 S/m; perm = 52.7; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 07/08/2021; Ambient Temp: 22.1 °C; Tissue Temp: 24.3 °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 (100 mW)

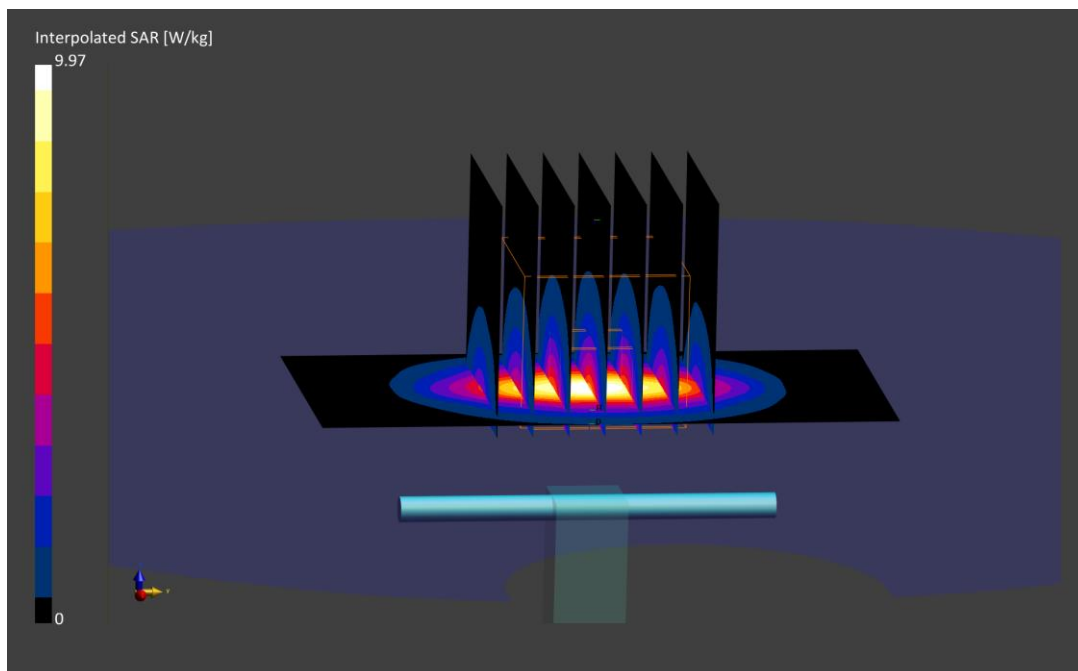
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 9.97 W/kg

SAR(1 g) = 4.85 W/kg

Deviation (1 g) = -3.19%



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; cond = 2.04 S/m; perm = 50.6; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 07/14/2021; Ambient Temp: 23.6°C; Tissue Temp: 24.2°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 (100 mW)

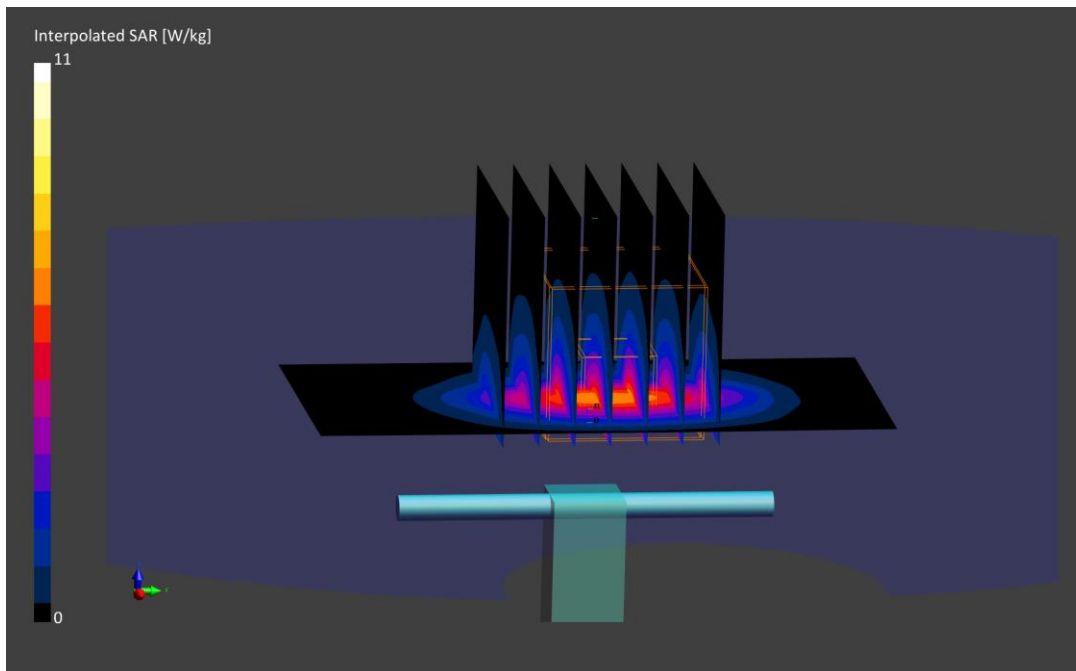
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 11.0 W/kg

SAR(1 g) = 5.16 W/kg; SAR(10 g) = 2.36 W/kg

Deviation (1 g) = 1.78%; Deviation (10 g) = -1.26%;



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; cond = 2.22 S/m; perm = 50.1; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

Test Date: 07/14/2021; Ambient Temp: 23.6°C; Tissue Temp: 24.2°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 (100 mW)

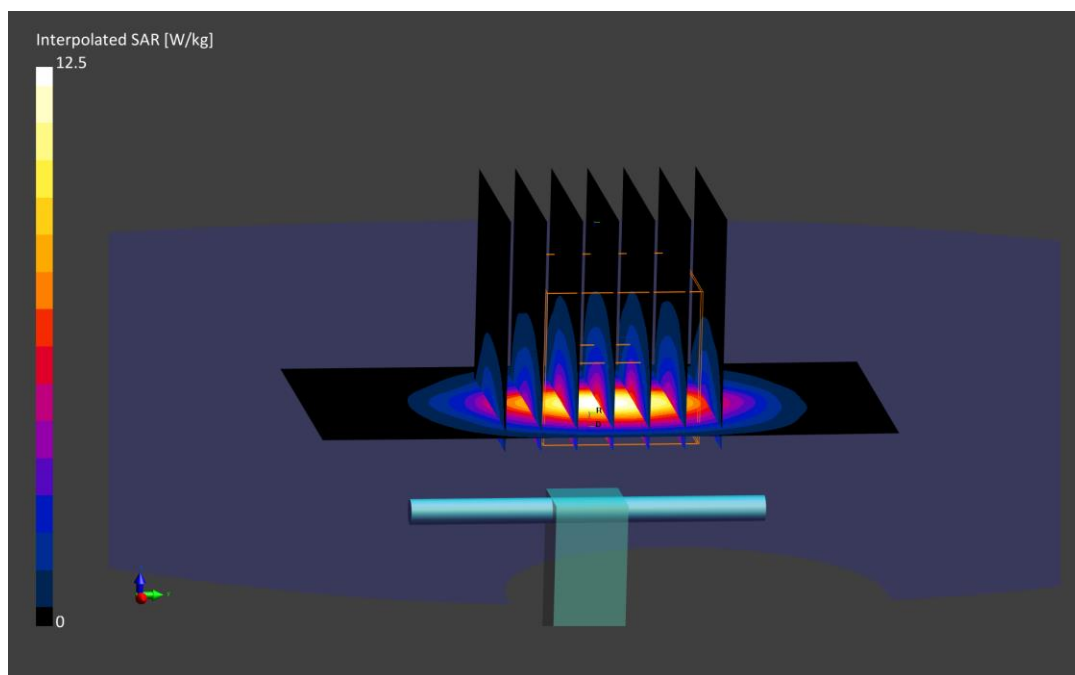
Area Scan (40.0 x 80.0): Measurement grid: dx=10.0 mm, dy=10.0 mm

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) = 12.5 W/kg

SAR(1 g) = 5.54 W/kg; SAR(10 g) = 2.44 W/kg

Deviation (1 g) = -0.36%; Deviation (10 g) = -2.40%;



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; cond = 5.31 S/m; perm = 47.9; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

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 (50 mW)

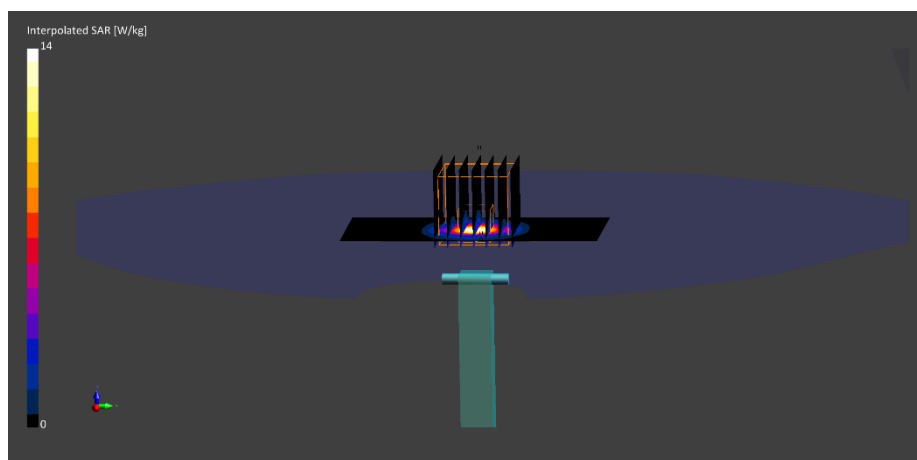
Area Scan (40.0 x 80.0): Measurement grid: dx=5.0mm, dy=10.0mm

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 13.973 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; cond = 5.26 S/m; perm = 47.4; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

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

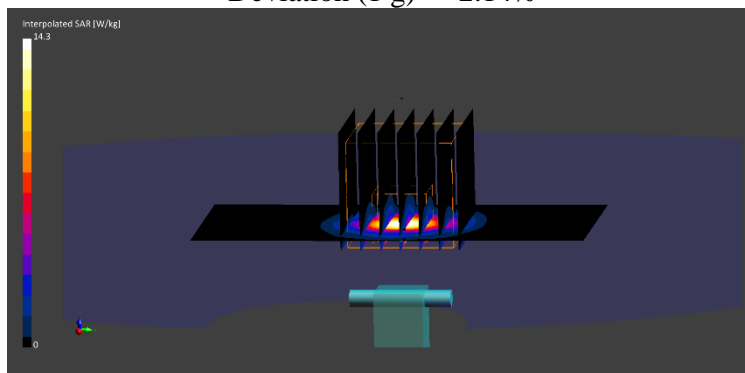
5250.0 MHz System Verification at 17.0 dBm (50 mW)

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

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 14.315 W/kg

SAR(1 g) = 3.65 W/kg

Deviation (1 g) = -2.14%



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; cond = 5.81 S/m; perm = 47.4; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

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 (50 mW)

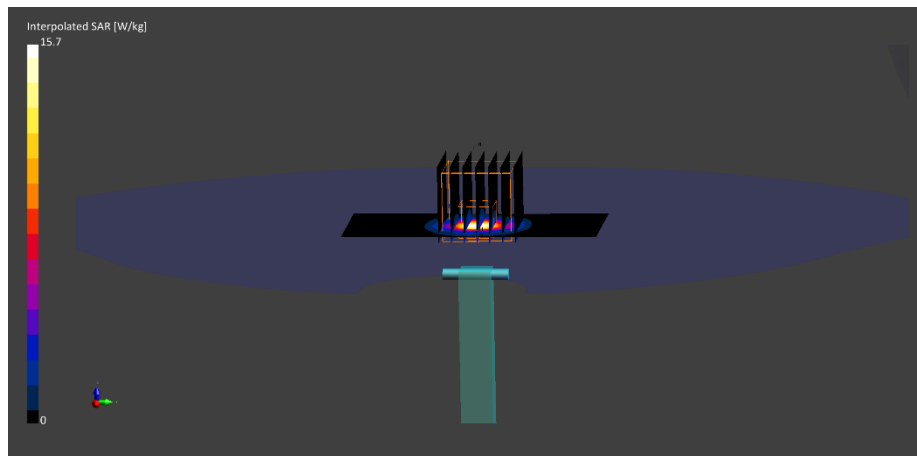
Area Scan (40.0 x 80.0): Measurement grid: dx=5.0mm, dy=10.0mm

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 15.662 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; cond = 5.74 S/m; perm = 46.8; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

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

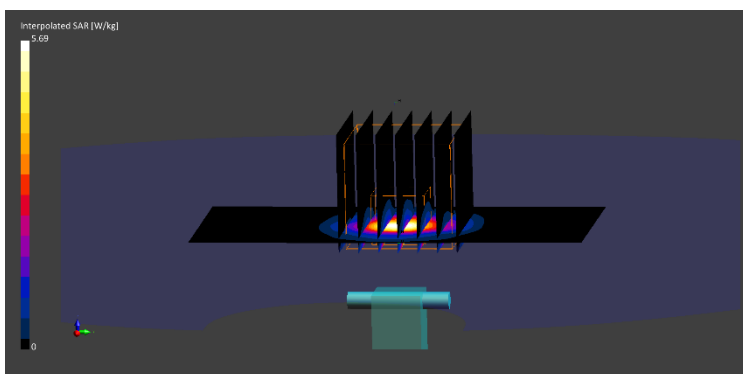
5600.0 MHz System Verification at 17.0 dBm (50 mW)

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

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 15.88 W/kg

SAR(1 g) = 3.72 W/kg

Deviation (1 g) = -4.74%



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; cond = 6.03 S/m; perm = 47.1; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

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 (50 mW)

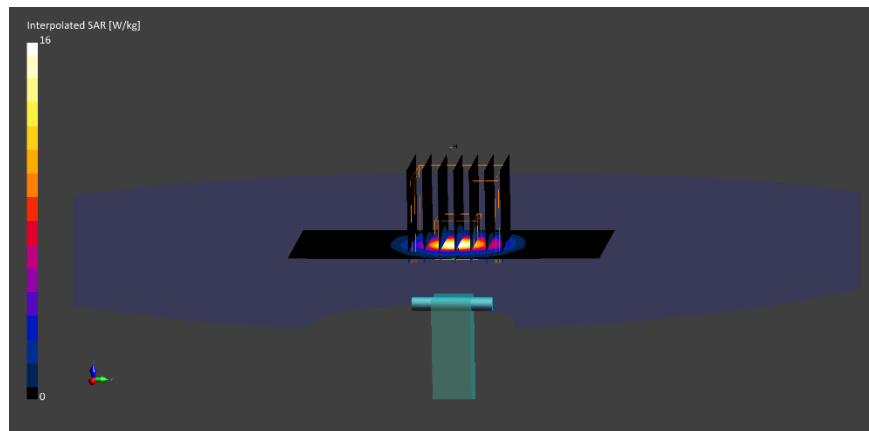
Area Scan (40.0 x 80.0): Measurement grid: dx=5.0mm, dy=10.0mm

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 16.00 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; cond = 5.95 S/m; perm = 46.6; density = 1000 kg/m³
Phantom Section: Flat; Space: 10 mm

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 (50 mW)

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

Zoom Scan (22.0 x 22.0 x 22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 15.495 W/kg

SAR(1 g) = 3.50 W/kg

Deviation (1 g) = -6.54%

