

PCTEST

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

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

Medium: 835 Body; Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.969 \text{ S/m}$; $\epsilon_r = 53.152$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09/20/2020; Ambient Temp: 21.0°C; Tissue Temp: 21.3°C

Probe: EX3DV4 - SN7308; ConvF(9.92, 9.92, 9.92) @ 835 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)

835 MHz System Verification at 23.0 dBm (200 mW)

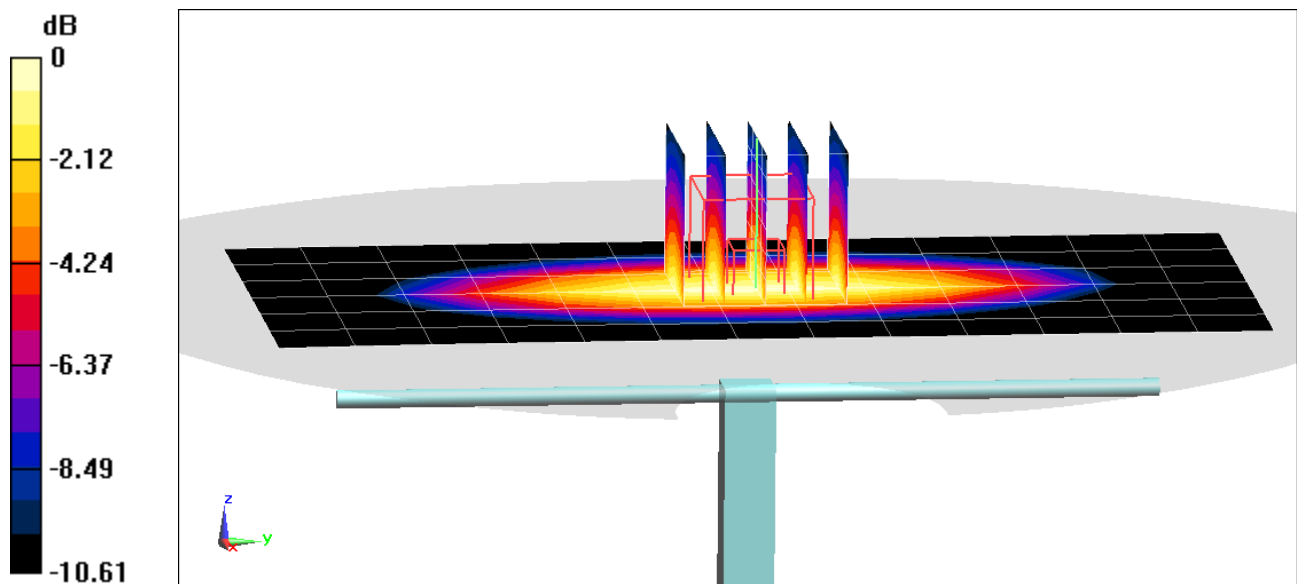
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 3.18 W/kg

SAR(1 g) = 2.02 W/kg

Deviation(1 g) = 1.41%



0 dB = 2.75 W/kg = 4.39 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 Body; Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.955 \text{ S/m}$; $\epsilon_r = 53.042$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 09/22/2020; Ambient Temp: 23.7°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7308; ConvF(9.92, 9.92, 9.92) @ 835 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)

835 MHz System Verification at 23.0 dBm (200 mW)

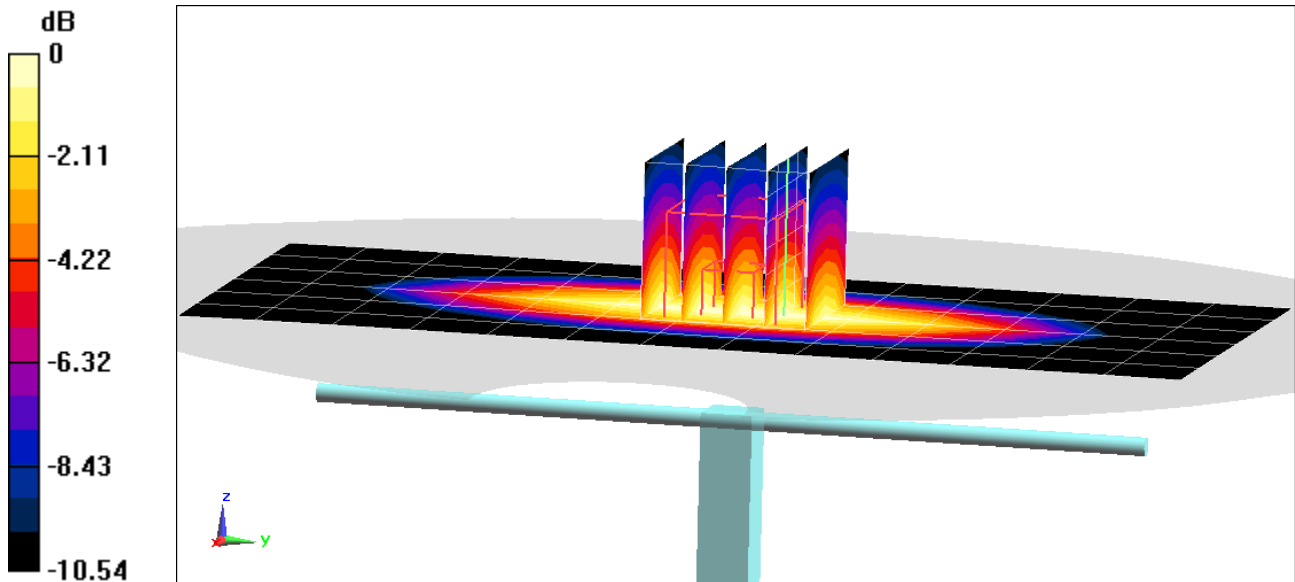
Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 2.97 W/kg

SAR(1 g) = 1.87 W/kg

Deviation(1 g) = -6.12%



0 dB = 2.55 W/kg = 4.07 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; $\sigma = 1.501$ S/m; $\epsilon_r = 51.993$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/08/2020; Ambient Temp: 21.4°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 12/11/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1368; Calibrated: 3/12/2020

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)

1750 MHz System Verification at 20.0 dBm (100 mW)

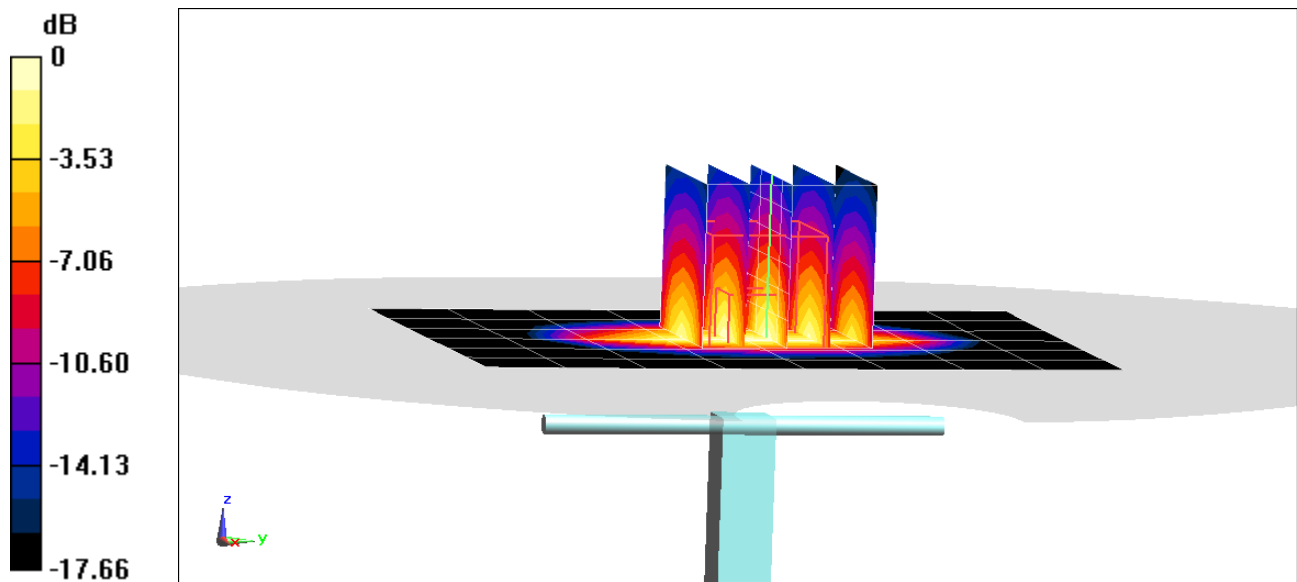
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 6.77 W/kg

SAR(1 g) = 3.75 W/kg

Deviation(1 g) = 3.31%



PCTEST

DUT: Dipole 1750 MHz; Type: D1765V2; Serial: 1008

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

Medium: 1750 Body Medium parameters used:

$f = 1750$ MHz; $\sigma = 1.513$ S/m; $\epsilon_r = 52.973$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/14/2020; Ambient Temp: 22.1°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7538; ConvF(8.38, 8.38, 8.38) @ 1750 MHz; Calibrated: 5/18/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn728; Calibrated: 5/20/2020

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

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

1750 MHz System Verification at 20.0 dBm (100 mW)

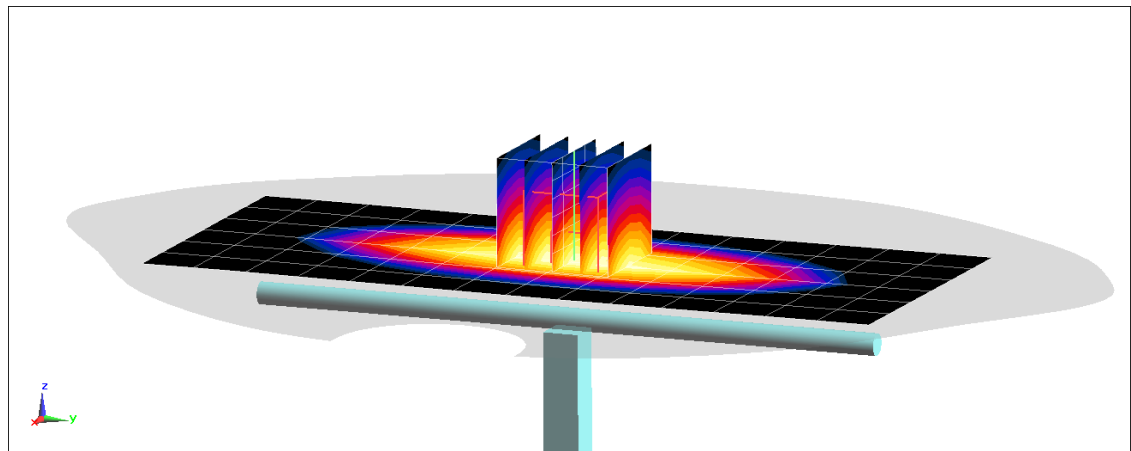
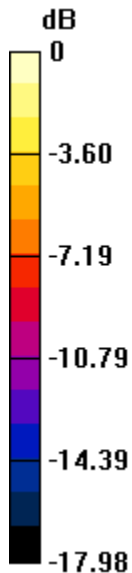
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.18 W/kg

SAR(1 g) = 3.94 W/kg

Deviation(1 g) = 5.35%



0 dB = 5.99 W/kg = 7.77 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; $\sigma = 1.508$ S/m; $\epsilon_r = 51.697$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/23/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 12/11/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1368; Calibrated: 3/12/2020

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)

1750 MHz System Verification at 20.0 dBm (100 mW)

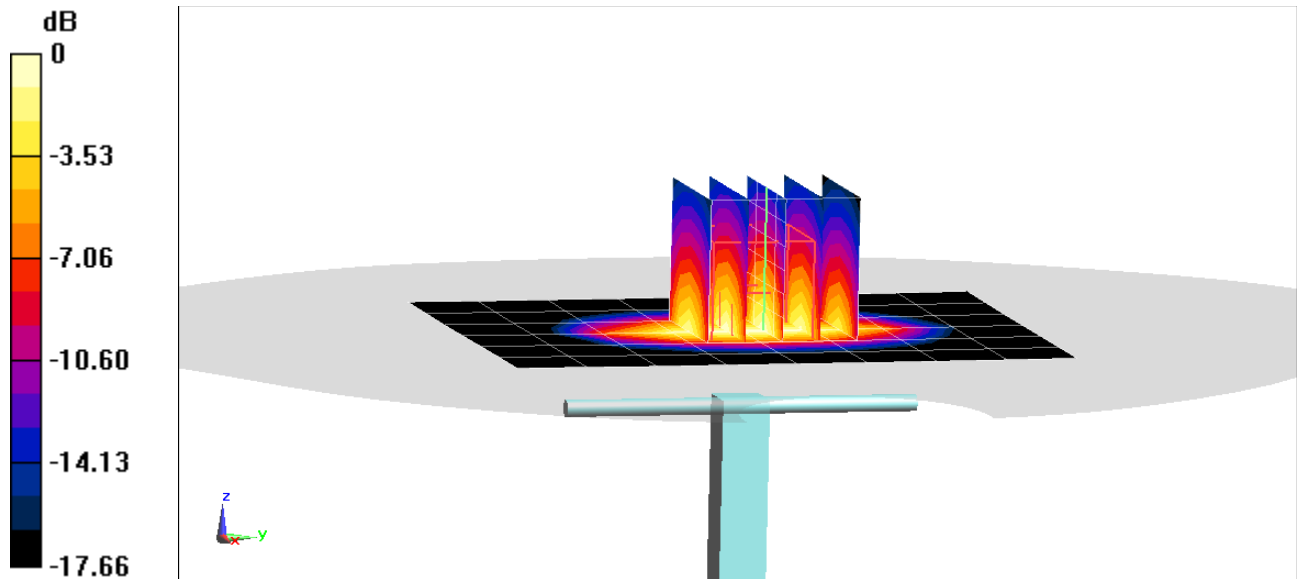
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 6.83 W/kg

SAR(1 g) = 3.72 W/kg; SAR(10 g) = 1.96 W/kg

Deviation(1 g) = 2.48%; Deviation(10 g) = 1.55%



0 dB = 5.66 W/kg = 7.53 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; $\sigma = 1.565$ S/m; $\epsilon_r = 52.861$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/06/2020; Ambient Temp: 22.0°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1533; Calibrated: 12/5/2019

Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375

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

1900 MHz System Verification at 20.0 dBm (100 mW)

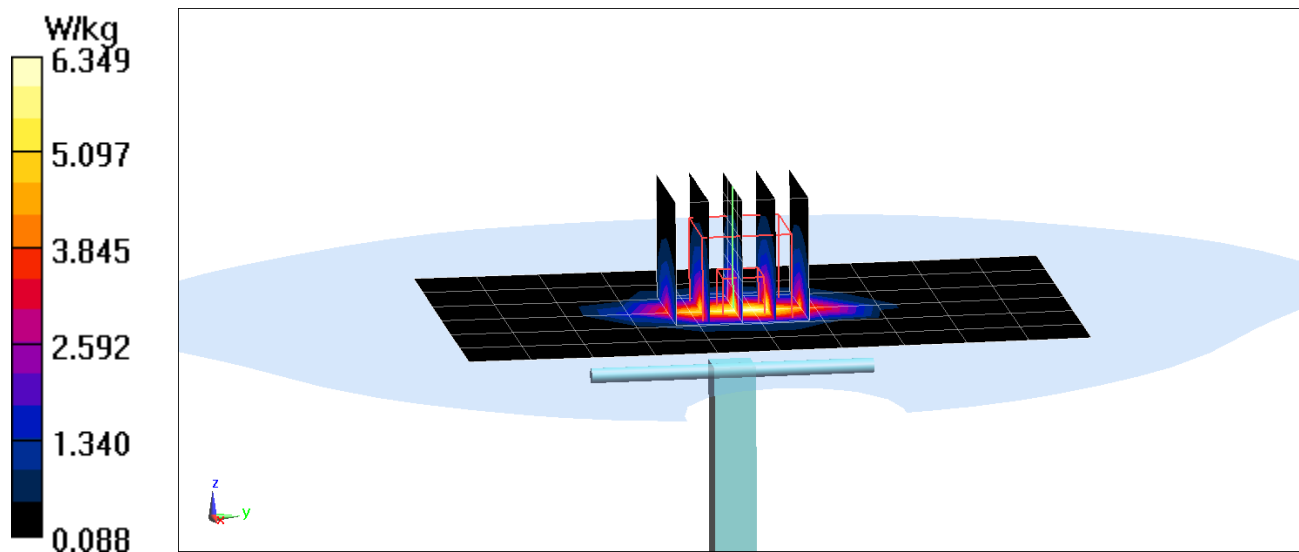
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.55 W/kg

SAR(1 g) = 4.08 W/kg

Deviation(1 g) = 4.08%



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; $\sigma = 1.571$ S/m; $\epsilon_r = 51.863$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/08/2020; Ambient Temp: 21.3°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.8, 7.8, 7.8) @ 1900 MHz; Calibrated: 4/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1407; Calibrated: 4/15/2020

Phantom: Twin-SAM V5.0 Right 30; Type: QD 000 P40 CD; Serial: 1759

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

1900 MHz System Verification at 20.0 dBm (100 mW)

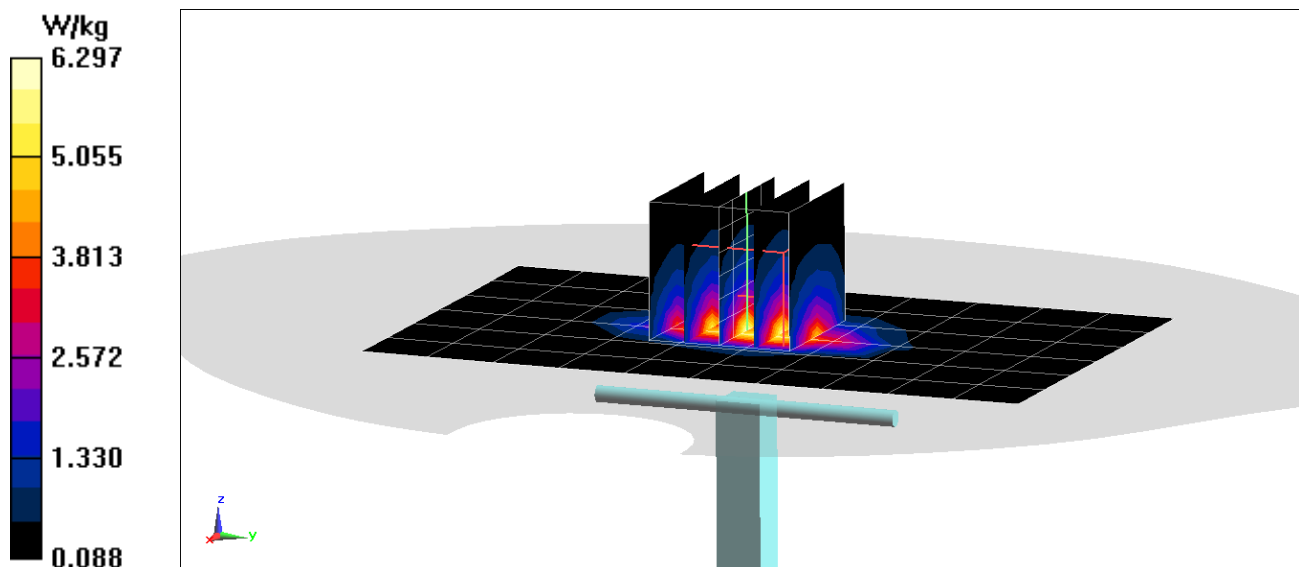
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.43 W/kg

SAR(1 g) = 4.06 W/kg

Deviation(1 g) = 3.05%



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:

$f = 1900 \text{ MHz}$; $\sigma = 1.562 \text{ S/m}$; $\epsilon_r = 51.79$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/17/2020; Ambient Temp: 22.7°C; Tissue Temp: 22.1°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1900 MHz; Calibrated: 12/11/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1533; Calibrated: 12/5/2019

Phantom: SAM Left; Type: QD000P40CC; Serial: TP: 1375

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

1900 MHz System Verification at 20.0 dBm (100 mW)

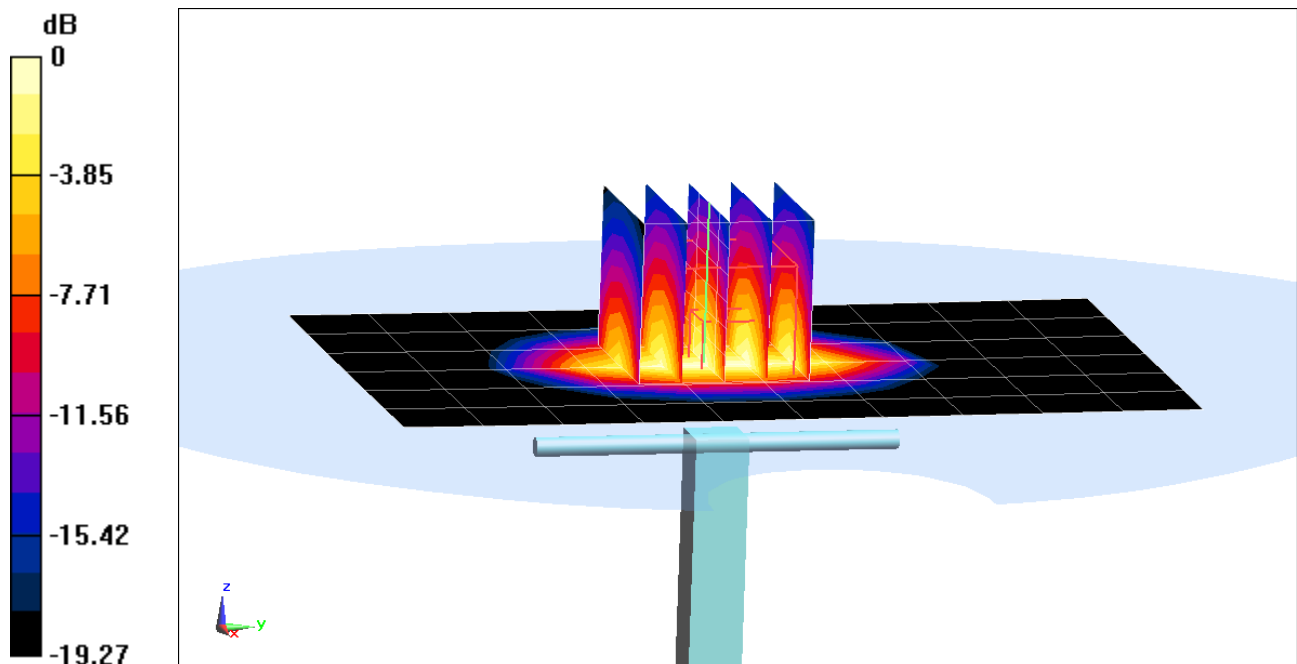
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.80 W/kg

SAR(1 g) = 4.17 W/kg; SAR(10 g) = 2.13 W/kg

Deviation(1 g) = 6.38%; Deviation(10 g) = 3.40%



0 dB = 6.43 W/kg = 8.08 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; $\sigma = 1.579$ S/m; $\epsilon_r = 51.554$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/21/2020; Ambient Temp: 22.2°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7357; ConvF(7.8, 7.8, 7.8) @ 1900 MHz; Calibrated: 4/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1407; Calibrated: 4/15/2020

Phantom: Twin-SAM V5.0 Right 30; Type: QD 000 P40 CD; Serial: 1759

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

1900 MHz System Verification at 20.0 dBm (100 mW)

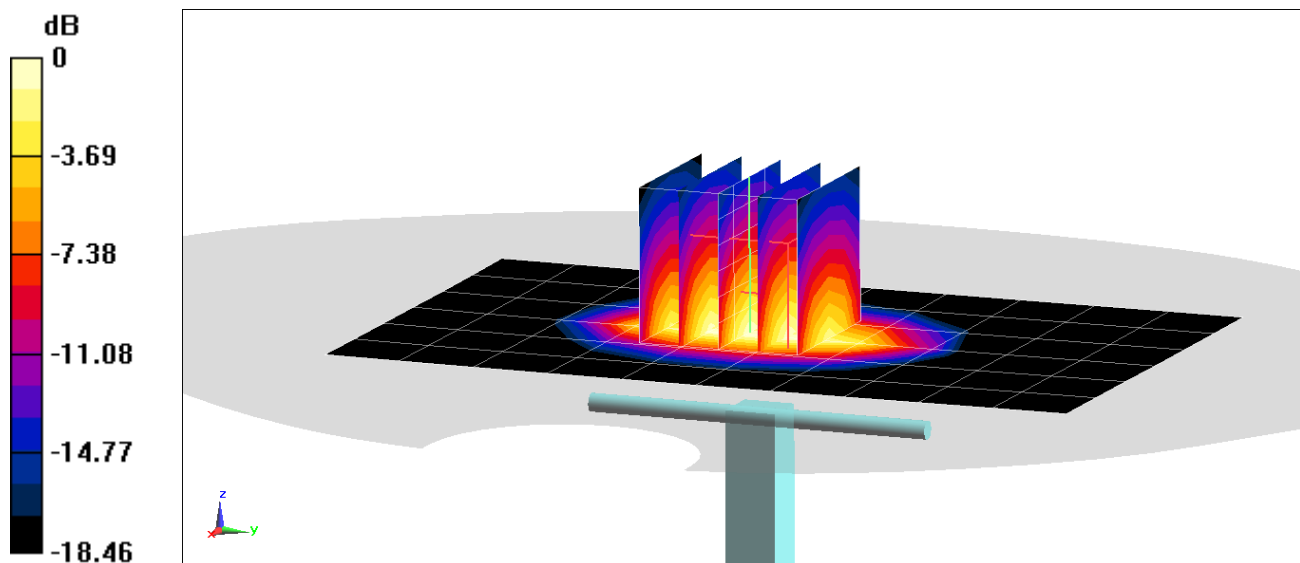
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.27 W/kg

SAR(1 g) = 4 W/kg; SAR(10 g) = 2.06 W/kg

Deviation(1 g) = 1.52%; Deviation(10 g) = -0.48%



0 dB = 6.18 W/kg = 7.91 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 882

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

Medium: 2450 Body; Medium parameters used:

$f = 2450 \text{ MHz}$; $\sigma = 2.03 \text{ S/m}$; $\epsilon_r = 52.446$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/08/2020; Ambient Temp: 22.0°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7402; ConvF(7.73, 7.73, 7.73) @ 2450 MHz; Calibrated: 4/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1502; Calibrated: 4/15/2020

Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1868

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

2450 MHz System Verification at 20.0 dBm (100 mW)

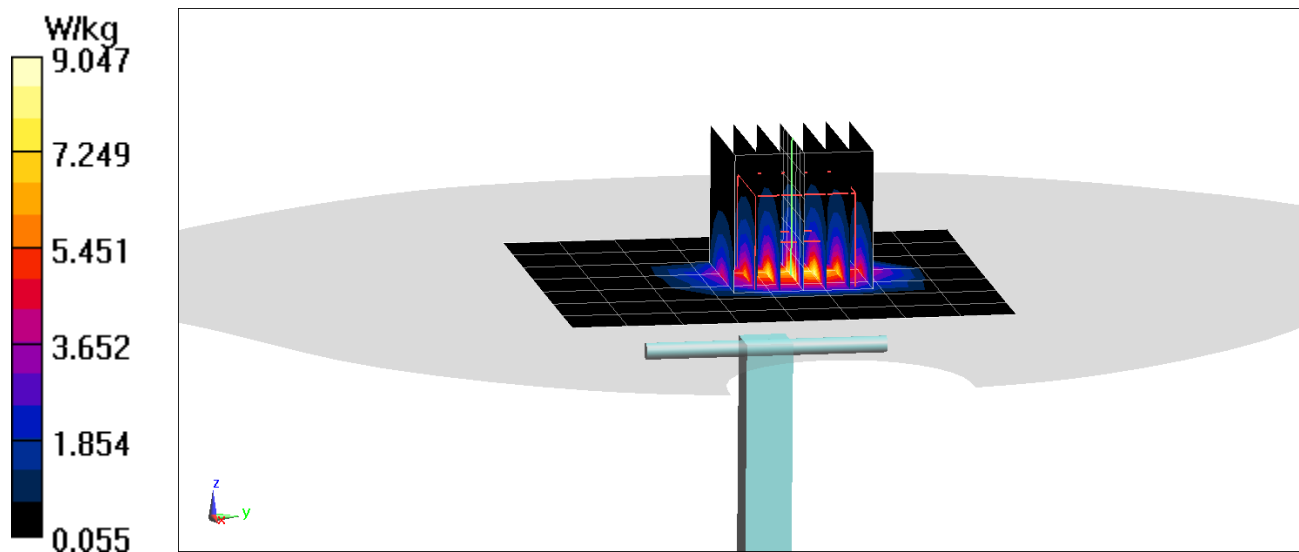
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 11.2 W/kg

SAR(1 g) = 5.4 W/kg

Deviation(1 g) = 4.85%



PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 981

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

Medium: 2450 Body; Medium parameters used:

$f = 2450$ MHz; $\sigma = 2.034$ S/m; $\epsilon_r = 51.063$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/14/2020; Ambient Temp: 22.7°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7308; ConvF(7.41, 7.41, 7.41) @ 2450 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)

2450 MHz System Verification at 20.0 dBm (100 mW)

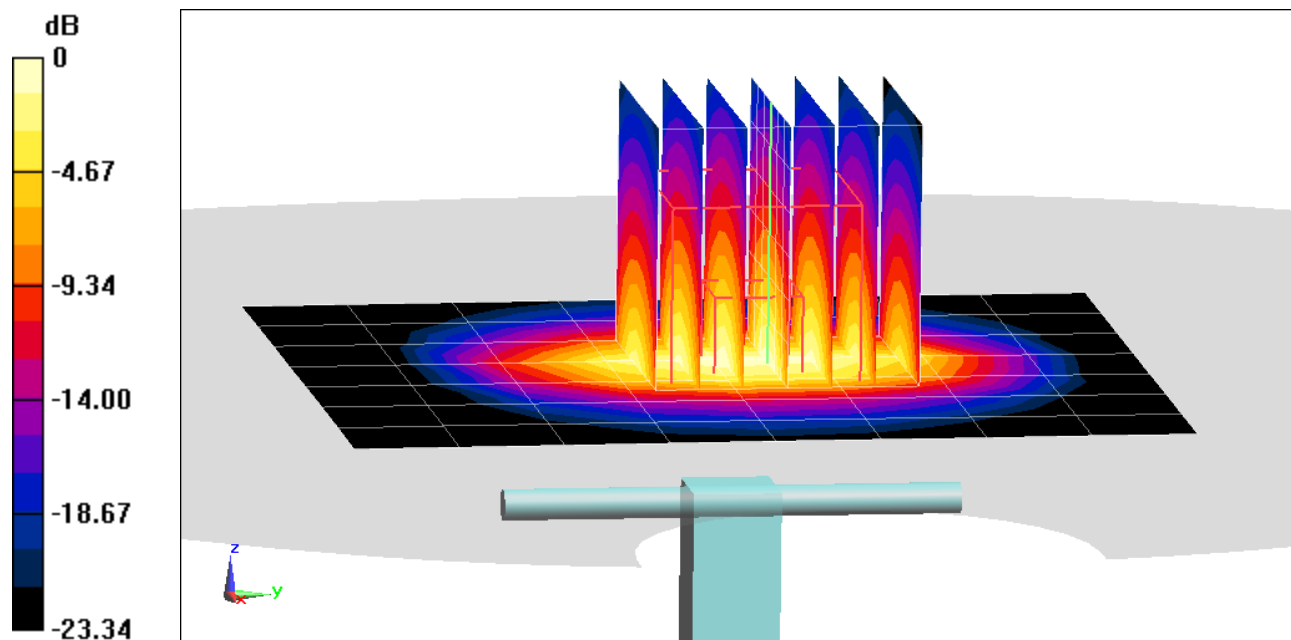
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 11.4 W/kg

SAR(1 g) = 5.17 W/kg

Deviation(1 g) = 1.57%



0 dB = 8.93 W/kg = 9.51 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1004

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: 2450 Body; Medium parameters used:|

$f = 2600$ MHz; $\sigma = 2.243$ S/m; $\epsilon_r = 50.492$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/14/2020; Ambient Temp: 22.7°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7308; ConvF(7.37, 7.37, 7.37) @ 2600 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)

2600 MHz System Verification at 20.0 dBm (100 mW)

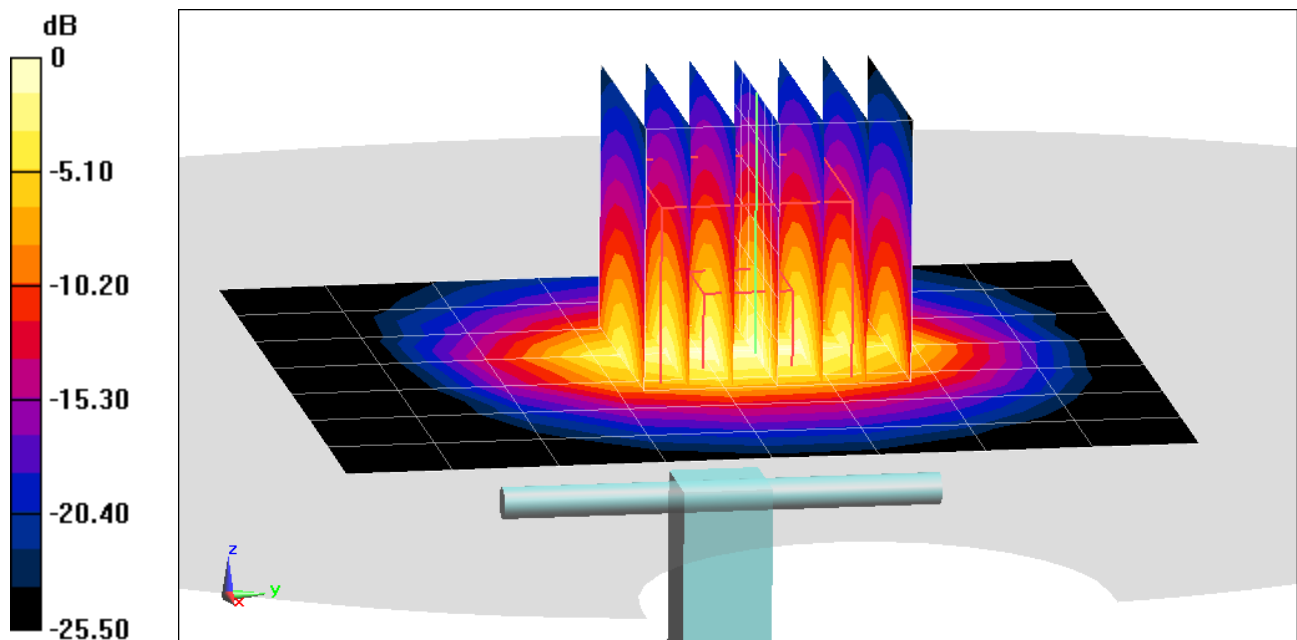
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 12.9 W/kg

SAR(1 g) = 5.58 W/kg

Deviation(1 g) = 1.82%



0 dB = 9.87 W/kg = 9.94 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 Body Medium parameters used:

$f = 2600$ MHz; $\sigma = 2.205$ S/m; $\epsilon_r = 51.009$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 10/01/2020; Ambient Temp: 22.4°C; Tissue Temp: 22.2°C

Probe: EX3DV4 - SN7409; ConvF(7.12, 7.12, 7.12) @ 2600 MHz; Calibrated: 6/23/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 6/18/2020

Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375

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

2600 MHz System Verification at 20.0 dBm (100 mW)

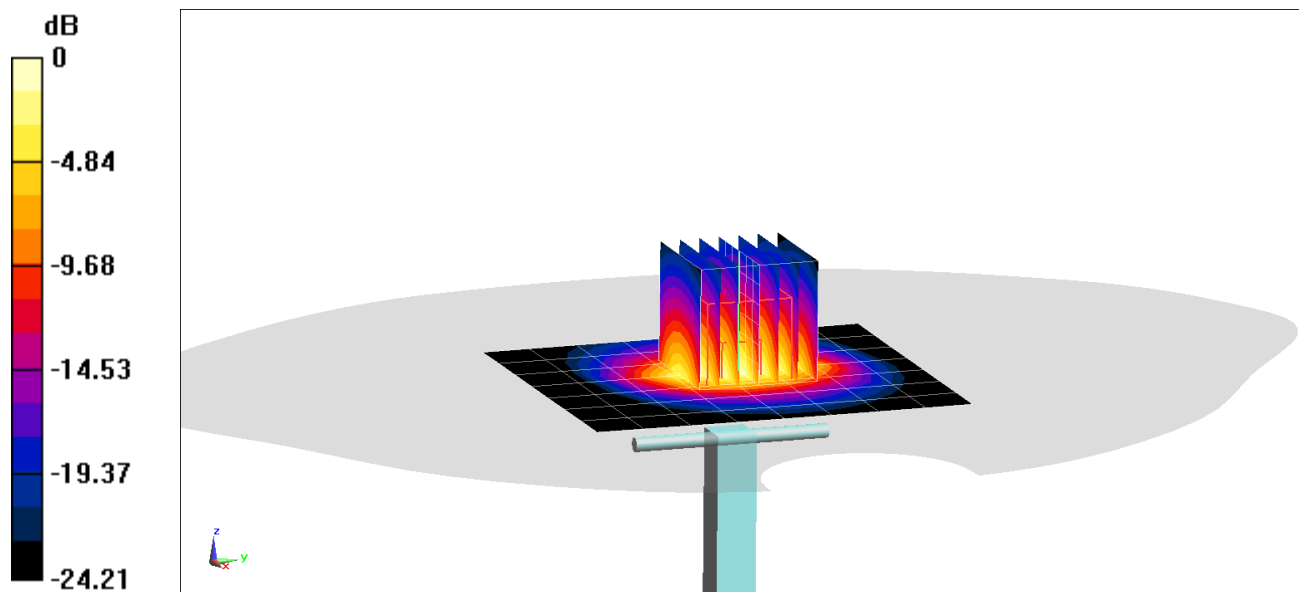
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 12.5 W/kg

SAR(1 g) = 5.54 W/kg

Deviation(1 g) = -0.36%



0 dB = 9.76 W/kg = 9.89 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 Body Medium parameters used:

$f = 2600$ MHz; $\sigma = 2.224$ S/m; $\epsilon_r = 51.471$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/28/2020; Ambient Temp: 22.0°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7409; ConvF(7.12, 7.12, 7.12) @ 2600 MHz; Calibrated: 6/23/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1334; Calibrated: 6/18/2020

Phantom: LeftTwin-SAM V5.0; Type: QD 000 P40 CD; Serial: TP1375

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

2600 MHz System Verification at 20.0 dBm (100 mW)

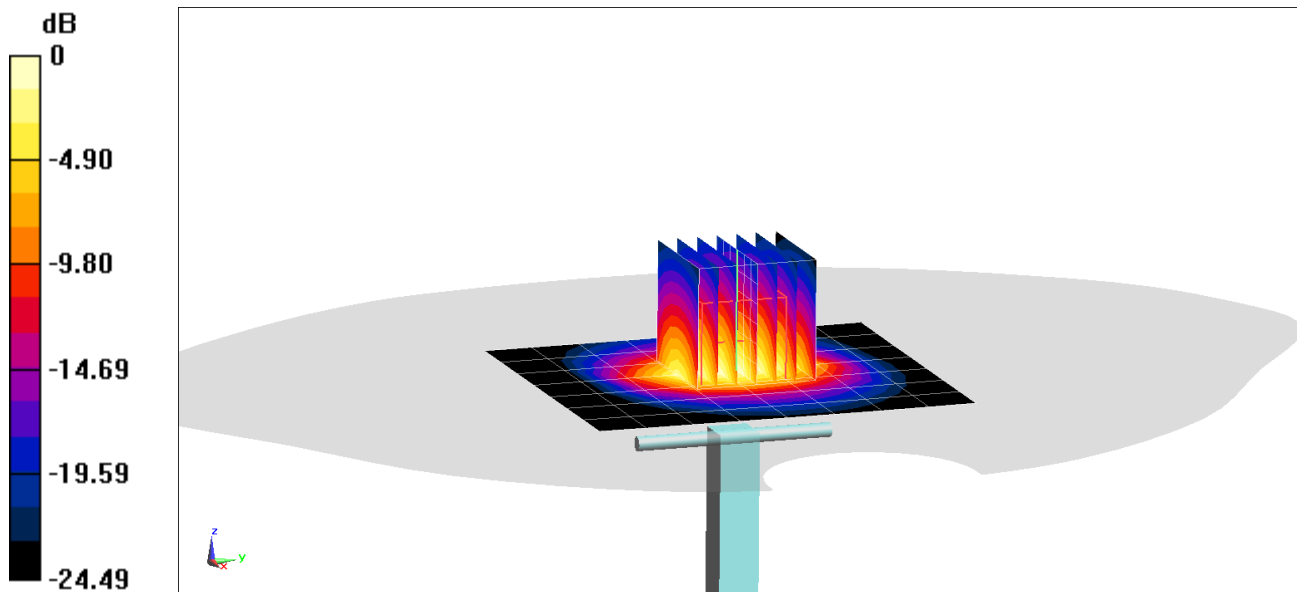
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 12.3 W/kg

SAR(1 g) = 5.49 W/kg

Deviation(1 g) = -1.26%



0 dB = 9.53 W/kg = 9.79 dBW/kg

PCTEST

DUT: Dipole 3500 MHz; Type: D3500V2; Serial: 1059

Communication System: UID 0, CW; Frequency: 3500 MHz; Duty Cycle: 1:1

Medium: 3600 Body Medium parameters used:

$f = 3500 \text{ MHz}$; $\sigma = 3.39 \text{ S/m}$; $\epsilon_r = 49.918$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/27/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7488; ConvF(7, 7, 7) @ 3500 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1530; Calibrated: 1/13/2020

Phantom: Twin-SAM V5.0 (20); Type: QD 000 P40 CD; Serial: 1646

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

3500 MHz System Verification at 20.0 dBm (100 mW)

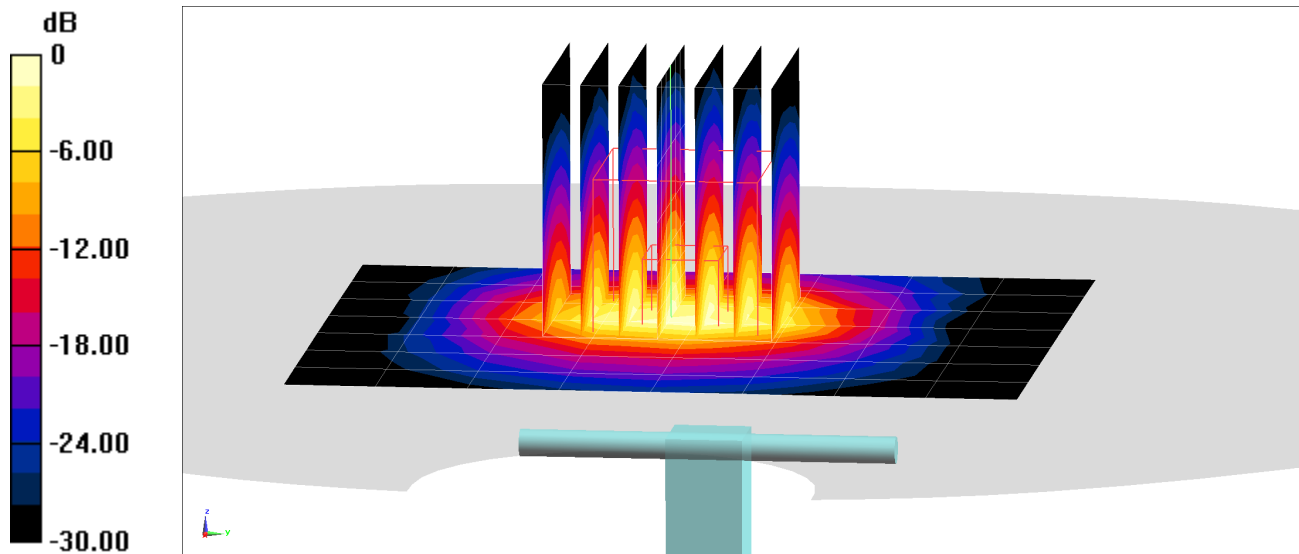
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 17.0 W/kg

SAR(1 g) = 6.57 W/kg

Deviation(1 g) = 0.92%



0 dB = 12.7 W/kg = 11.04 dBW/kg

PCTEST

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: 1018

Communication System: UID 0, CW; Frequency: 3700 MHz; Duty Cycle: 1:1

Medium: 3600 Body Medium parameters used:

$f = 3700 \text{ MHz}$; $\sigma = 3.605 \text{ S/m}$; $\epsilon_r = 49.623$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 09/27/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7488; ConvF(6.85, 6.85, 6.85) @ 3700 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1530; Calibrated: 1/13/2020

Phantom: Twin-SAM V5.0 (20); Type: QD 000 P40 CD; Serial: 1646

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

3700 MHz System Verification at 20.0 dBm (100 mW)

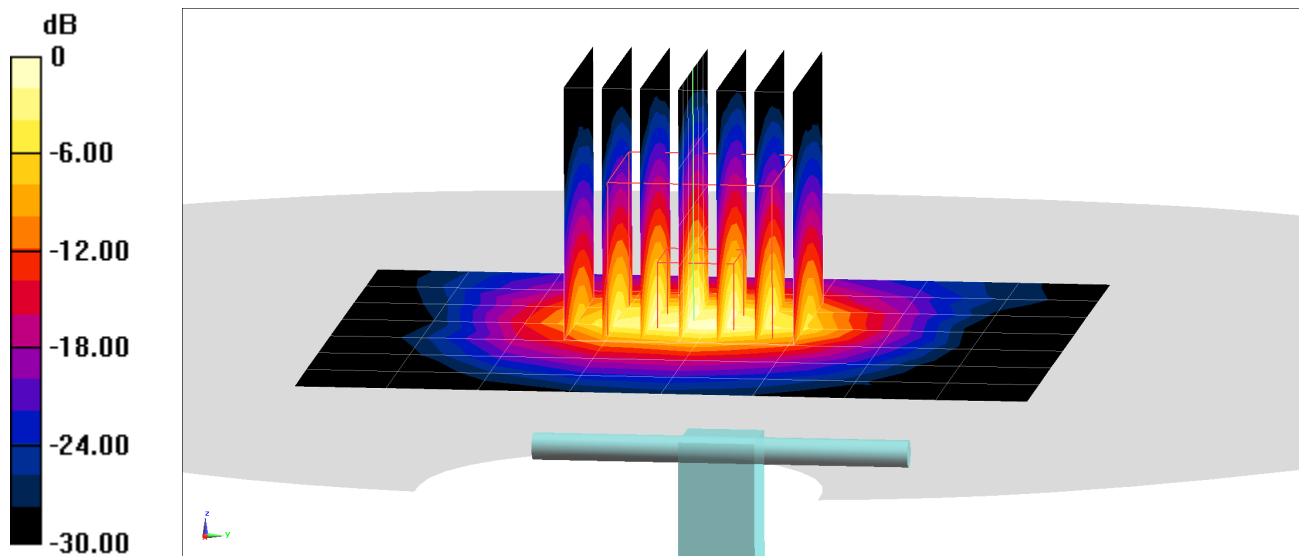
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

Zoom Scan (7x7x8)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 6.43 W/kg

Deviation(1 g) = 0.00%



0 dB = 12.8 W/kg = 11.07 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: 5200-5800 Body Medium parameters used:
 $f = 5250$ MHz; $\sigma = 5.45$ S/m; $\epsilon_r = 47.801$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/31/2020; Ambient Temp: 21.1°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7538; ConvF(4.6, 4.6, 4.6) @ 5250 MHz; Calibrated: 5/18/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

5250 MHz System Verification at 17.0 dBm (50 mW)

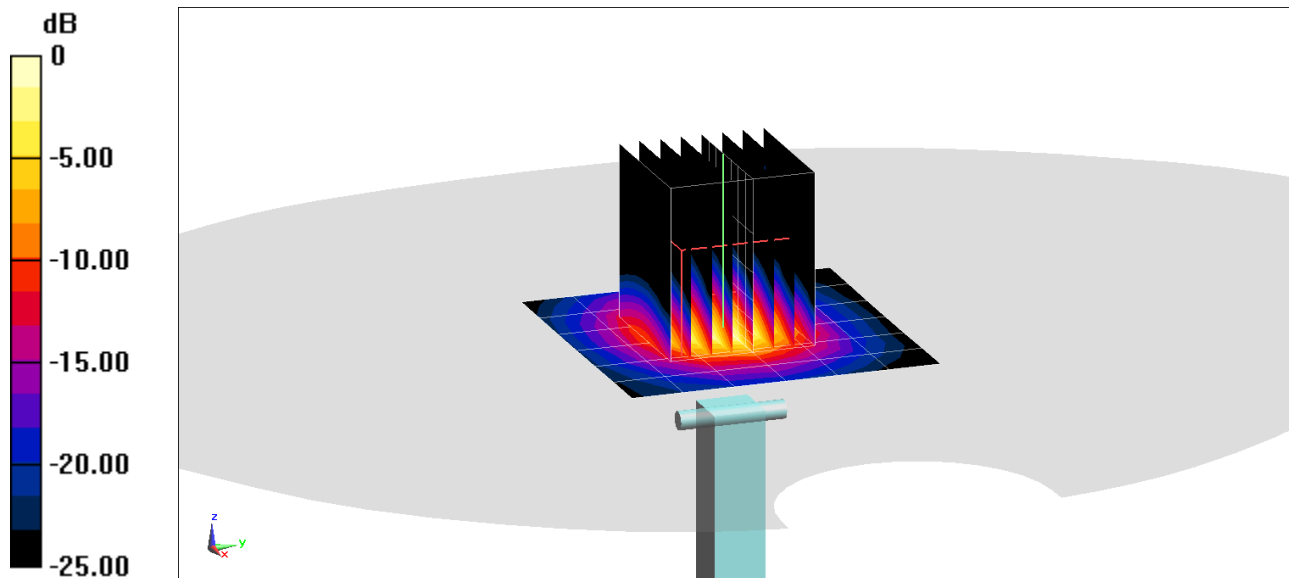
Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm

Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 13.0 W/kg

SAR(1 g) = 3.54 W/kg; SAR(10 g) = 0.987 W/kg

Deviation(1 g) = -6.35%; Deviation(10 g) = -6.89%



0 dB = 7.81 W/kg = 8.93 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: 5200-5800 Body Medium parameters used:

$f = 5600$ MHz; $\sigma = 5.905$ S/m; $\epsilon_r = 47.207$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/31/2020; Ambient Temp: 21.1°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7538; ConvF(4.09, 4.09, 4.09) @ 5600 MHz; Calibrated: 5/18/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

5600 MHz System Verification at 17.0 dBm (50 mW)

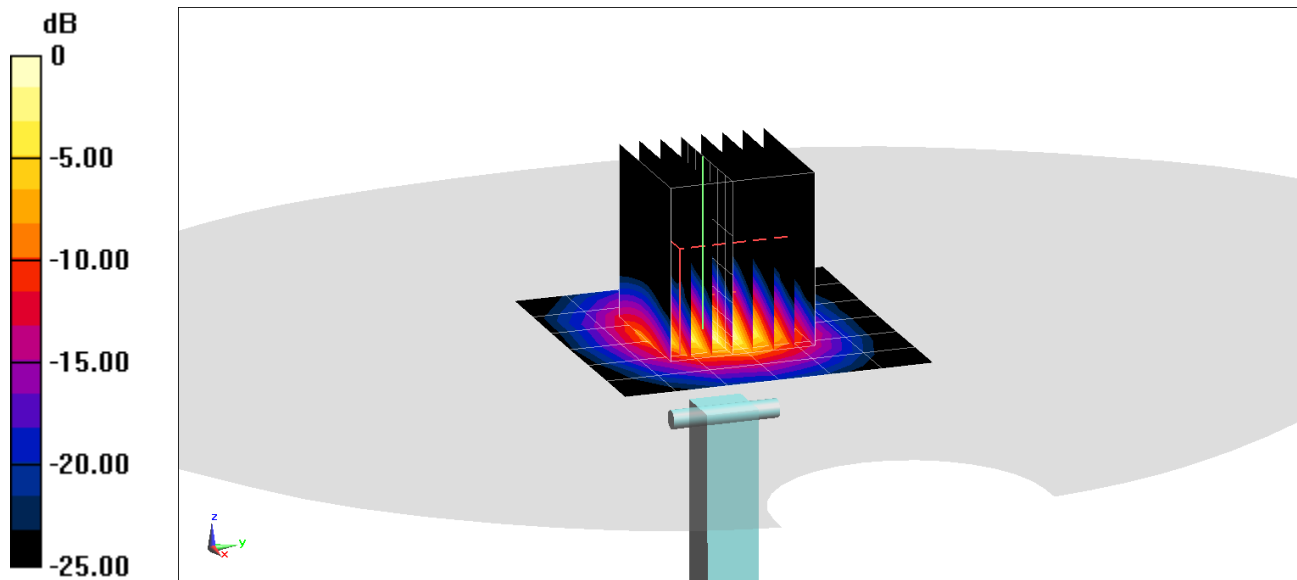
Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm

Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 16.6 W/kg

SAR(1 g) = 3.76 W/kg; SAR(10 g) = 1.05 W/kg

Deviation(1 g) = -4.20%; Deviation(10 g) = -4.55%



0 dB = 9.44 W/kg = 9.75 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1237

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: 5200-5800 Body Medium parameters used:
 $f = 5750 \text{ MHz}$; $\sigma = 6.135 \text{ S/m}$; $\epsilon_r = 46.99$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 08/31/2020; Ambient Temp: 21.1°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7538; ConvF(4.17, 4.17, 4.17) @ 5750 MHz; Calibrated: 5/18/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

5750 MHz System Verification at 17.0 dBm (50 mW)

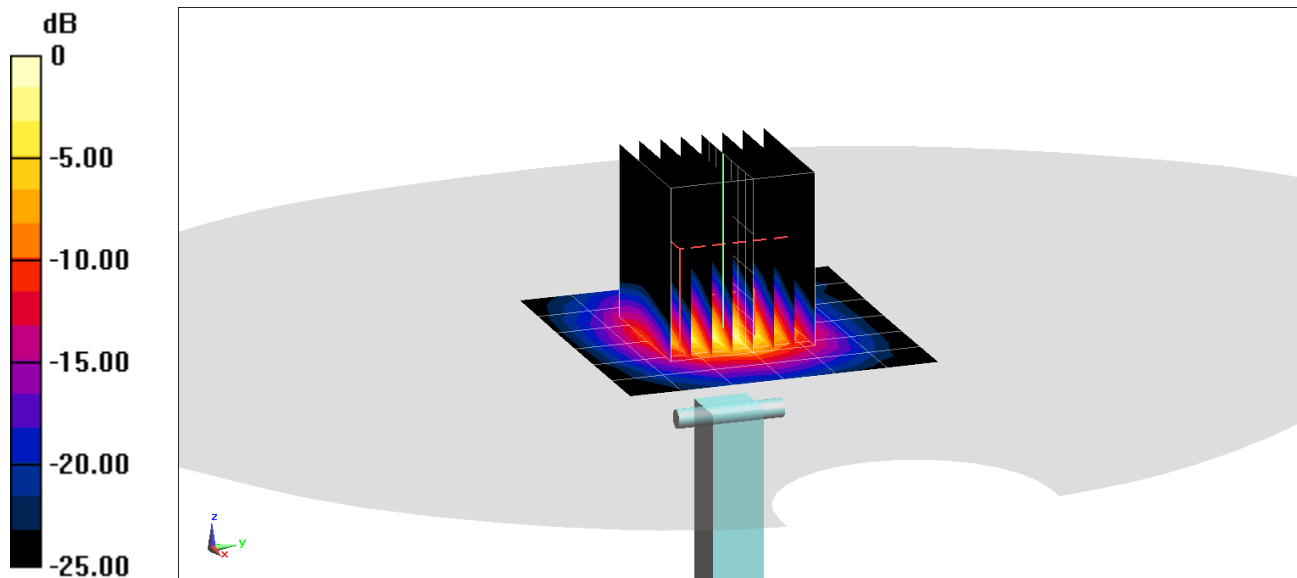
Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm

Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 16.7 W/kg

SAR(1 g) = 3.6 W/kg

Deviation(1 g) = -5.14%



0 dB = 9.31 W/kg = 9.69 dBW/kg

APPENDIX C: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

- 1) The network analyzer and probe system was configured and calibrated.
- 2) The probe was immersed in the tissue. The tissue was placed in a nonmetallic container. Trapped air bubbles beneath the flange were minimized by placing the probe at a slight angle.
- 3) The complex admittance with respect to the probe aperture was measured
- 4) The complex relative permittivity ϵ' can be calculated from the below equation (Pournaropoulos and Misra):




$$Y = \frac{j2\omega\epsilon_r\epsilon_0}{[\ln(b/a)]^2} \int_a^b \int_a^b \int_0^\pi \cos\phi' \frac{\exp[-j\omega r(\mu_0\epsilon_r'\epsilon_0)^{1/2}]}{r} d\phi' d\rho' d\rho$$

where Y is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively, $r^2 = \rho^2 + \rho'^2 - 2\rho\rho'\cos\phi'$, ω is the angular frequency, and $j = \sqrt{-1}$.

| 3 Composition / Information on ingredients | | |
|---|--|-----------|
| 3.2 Mixtures | | |
| Description: Aqueous solution with surfactants and inhibitors | | |
| Declarable, or hazardous components: | | |
| CAS: 107-21-1 EINECS: 203-473-3 Reg.nr.: 01-2119456816-28-0000 | Ethenediol STOT RE 2, H373; Acute Tox. 4, H302 | >1.0-4.9% |
| CAS: 68608-26-4 EINECS: 271-781-5 Reg.nr.: 01-2119527859-22-0000 | Sodium petroleum sulfonate Eye Irrit. 2, H319 | < 2.9% |
| CAS: 107-41-5 EINECS: 203-489-0 Reg.nr.: 01-2119539582-35-0000 | Hexylene Glycol / 2-Methyl-pentane-2,4-diol Skin Irrit. 2, H315; Eye Irrit. 2, H319 | < 2.9% |
| CAS: 68920-66-1 NLP: 500-236-9 Reg.nr.: 01-2119489407-26-0000 | Alkoxylated alcohol, > C₁₆ Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319 | < 2.0% |
| Additional information: For the wording of the listed risk phrases refer to section 16. Not mentioned CAS-, EINECS- or registration numbers are to be regarded as Proprietary/Confidential. The specific chemical identity and/or exact percentage concentration of proprietary components is withheld as a trade secret. | | |

Figure C-1

Note: Liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

| | | | | |
|---|---|-----------------------|---|--|
| FCC ID: ZNFF100TM |  PCTEST <small>Proud to be part of </small> | SAR EVALUATION REPORT |  LG | Approved by: Quality Manager |
| Test Dates: 08/31/20 – 10/06/20 | DUT Type: Portable Handset | | | APPENDIX C Page 1 of 3 |

Measurement Certificate / Material Test

| | |
|--------------|--|
| Item Name | Body Tissue Simulating Liquid (MBBL600-6000V6) |
| Product No. | SL AAM U16 BC (Batch: 181029-1) |
| Manufacturer | SPEAG |

Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

Target Parameters

Target parameters as defined in the KDB 865664 compliance standard.

Test Condition

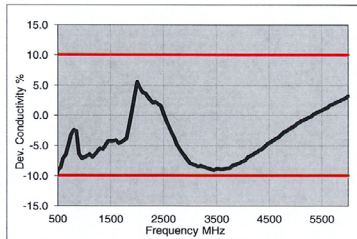
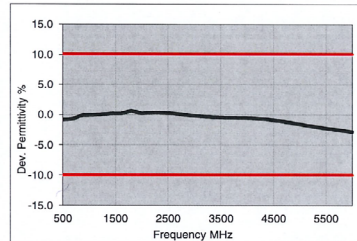
Ambient Condition 22°C ; 30% humidity
 TSL Temperature 22°C
 Test Date 30-Oct-18
 Operator CL

Additional Information

TSL Density
 TSL Heat-capacity



Results

| f [MHz] | Measured | | | Target | | Diff.to Target [%] | |
|---------|----------|------|-------|--------|-------|--------------------|---------|
| | e' | e'' | sigma | eps | sigma | Δ-eps | Δ-sigma |
| 800 | 55.1 | 21.3 | 0.95 | 55.3 | 0.97 | -0.4 | -2.1 |
| 825 | 55.1 | 20.8 | 0.96 | 55.2 | 0.98 | -0.3 | -2.0 |
| 835 | 55.1 | 20.6 | 0.96 | 55.1 | 0.99 | 0.0 | -2.5 |
| 850 | 55.1 | 20.4 | 0.96 | 55.2 | 0.99 | -0.1 | -3.0 |
| 900 | 55.0 | 19.7 | 0.98 | 55.0 | 1.05 | 0.0 | -6.7 |
| 1400 | 54.2 | 15.6 | 1.22 | 54.1 | 1.28 | 0.2 | -4.7 |
| 1450 | 54.1 | 15.4 | 1.24 | 54.0 | 1.30 | 0.2 | -4.6 |
| 1500 | 54.1 | 15.3 | 1.27 | 53.9 | 1.33 | 0.3 | -4.5 |
| 1550 | 54.0 | 15.1 | 1.30 | 53.9 | 1.36 | 0.2 | -4.4 |
| 1600 | 53.9 | 15.0 | 1.33 | 53.8 | 1.39 | 0.2 | -4.3 |
| 1625 | 53.9 | 14.9 | 1.35 | 53.8 | 1.41 | 0.3 | -4.3 |
| 1640 | 53.9 | 14.9 | 1.36 | 53.7 | 1.42 | 0.3 | -4.2 |
| 1650 | 53.8 | 14.9 | 1.36 | 53.7 | 1.43 | 0.2 | -4.9 |
| 1700 | 53.8 | 14.8 | 1.40 | 53.6 | 1.46 | 0.4 | -4.1 |
| 1750 | 53.7 | 14.7 | 1.43 | 53.4 | 1.49 | 0.5 | -4.0 |
| 1800 | 53.7 | 14.6 | 1.46 | 53.3 | 1.52 | 0.8 | -3.9 |
| 1810 | 53.7 | 14.6 | 1.47 | 53.3 | 1.52 | 0.8 | -3.3 |
| 1825 | 53.7 | 14.6 | 1.48 | 53.3 | 1.52 | 0.8 | -2.6 |
| 1850 | 53.6 | 14.5 | 1.50 | 53.3 | 1.52 | 0.6 | -1.3 |
| 1900 | 53.5 | 14.5 | 1.53 | 53.3 | 1.52 | 0.4 | 0.7 |
| 1950 | 53.5 | 14.5 | 1.57 | 53.3 | 1.52 | 0.4 | 3.3 |
| 2000 | 53.4 | 14.4 | 1.60 | 53.3 | 1.52 | 0.2 | 5.3 |
| 2050 | 53.4 | 14.4 | 1.64 | 53.2 | 1.57 | 0.3 | 4.5 |
| 2100 | 53.3 | 14.4 | 1.68 | 53.2 | 1.62 | 0.2 | 3.7 |
| 2150 | 53.3 | 14.4 | 1.72 | 53.1 | 1.66 | 0.4 | 3.6 |
| 2200 | 53.2 | 14.4 | 1.76 | 53.0 | 1.71 | 0.3 | 2.9 |
| 2250 | 53.1 | 14.4 | 1.81 | 53.0 | 1.76 | 0.2 | 2.8 |
| 2300 | 53.1 | 14.4 | 1.85 | 52.9 | 1.81 | 0.4 | 2.2 |
| 2350 | 53.0 | 14.5 | 1.89 | 52.8 | 1.85 | 0.3 | 2.2 |
| 2400 | 52.9 | 14.5 | 1.94 | 52.8 | 1.90 | 0.2 | 2.1 |
| 2450 | 52.9 | 14.5 | 1.98 | 52.7 | 1.95 | 0.4 | 1.5 |
| 2500 | 52.8 | 14.6 | 2.03 | 52.6 | 2.02 | 0.3 | 0.5 |
| 2550 | 52.7 | 14.6 | 2.07 | 52.6 | 2.09 | 0.2 | -1.0 |
| 2600 | 52.6 | 14.7 | 2.12 | 52.5 | 2.16 | 0.2 | -1.9 |



| | | | | | | | |
|------|------|------|------|------|------|------|------|
| 3500 | 51.1 | 15.5 | 3.02 | 51.3 | 3.31 | -0.4 | -8.8 |
| 3700 | 50.8 | 15.7 | 3.24 | 51.1 | 3.55 | -0.5 | -8.8 |
| 5200 | 48.1 | 18.2 | 5.27 | 49.0 | 5.30 | -1.8 | -0.6 |
| 5250 | 48.0 | 18.3 | 5.34 | 49.0 | 5.36 | -1.9 | 0.4 |
| 5300 | 47.9 | 18.4 | 5.41 | 48.9 | 5.42 | -2.0 | -0.2 |
| 5500 | 47.5 | 18.6 | 5.70 | 48.6 | 5.65 | -2.2 | 0.8 |
| 5600 | 47.3 | 18.8 | 5.84 | 48.5 | 5.77 | -2.3 | 1.3 |
| 5700 | 47.1 | 18.9 | 5.99 | 48.3 | 5.88 | -2.5 | 1.8 |
| 5800 | 47.0 | 19.0 | 6.14 | 48.2 | 6.00 | -2.6 | 2.3 |

Figure C-2
600 – 5800 MHz Body Tissue Equivalent Matter

| | | | | |
|------------------------------------|---|-----------------------|---|---------------------------------|
| FCC ID: ZNFF100TM |  | SAR EVALUATION REPORT |  | Approved by: Quality Manager |
| Test Dates: 08/31/20 – 10/06/20 | DUT Type: Portable Handset | | | APPENDIX C Page 2 of 3 |