

APPENDIX A: SAR TEST DATA

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03DQ7KN

Communication System: UID 0, GSM GPRS; 2 Tx slots; Frequency: 824.2 MHz; Duty Cycle: 1:4.15

Medium: 850 Body Medium parameters used (interpolated):

$f = 824.2 \text{ MHz}$; $\sigma = 0.978 \text{ S/m}$; $\epsilon_r = 54.588$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-17-2020; Ambient Temp: 21.3°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7421; ConvF(9.42, 9.42, 9.42) @ 824.2 MHz; Calibrated: 3/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn604; Calibrated: 3/19/2020

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1179

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

Mode: GPRS 850 Antenna D, Body SAR, Back side, Low.ch, 2 Tx Slots

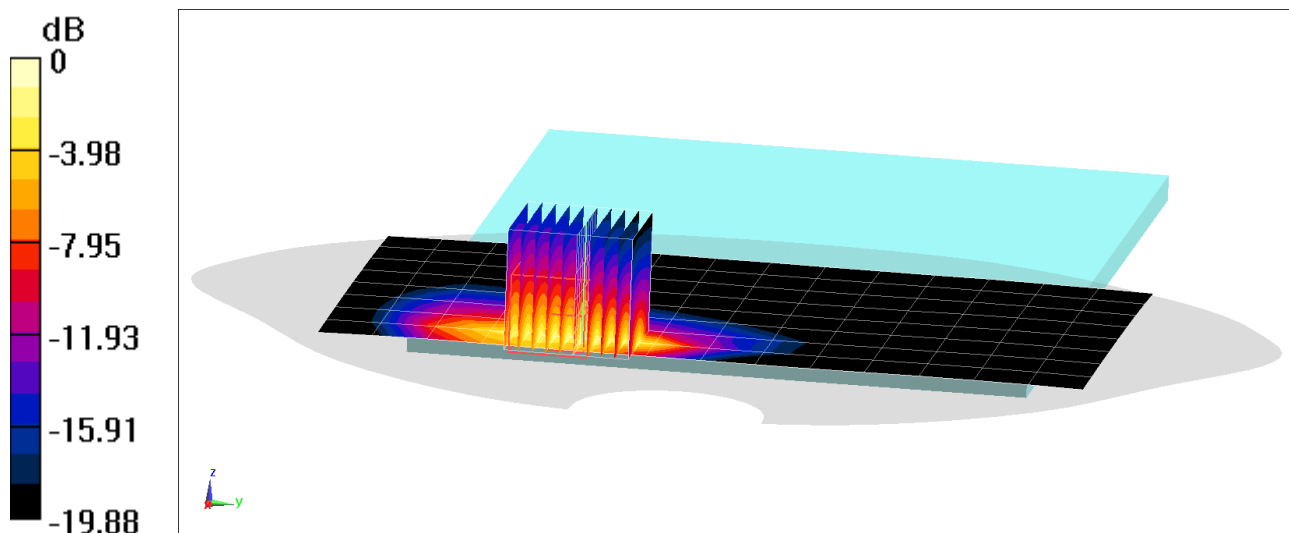
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4

Reference Value = 35.33 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.82 W/kg

SAR(1 g) = 1.17 W/kg; SAR(10 g) = 0.577 W/kg



0 dB = 2.30 W/kg = 3.62 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN04QQ7KN

Communication System: UID 0, GSM GPRS; 2 Tx slots; 1909.8 MHz; Duty Cycle: 1:4.15

Medium: 1900 Body Medium parameters used:

$f = 1910 \text{ MHz}$; $\sigma = 1.591 \text{ S/m}$; $\epsilon_r = 51.867$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-10-2020; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: EX3DV4 - SN7532; ConvF(7.96, 7.96, 7.96) @ 1909.8 MHz; Calibrated: 4/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn501; Calibrated: 4/15/2020

Phantom: Twin-SAM V8.0_Left; Type: QD 000 P41 AA; Serial: 1935

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

Mode: GPRS 1900 Antenna D, Body SAR, Back side, High.ch, 2 Tx Slots

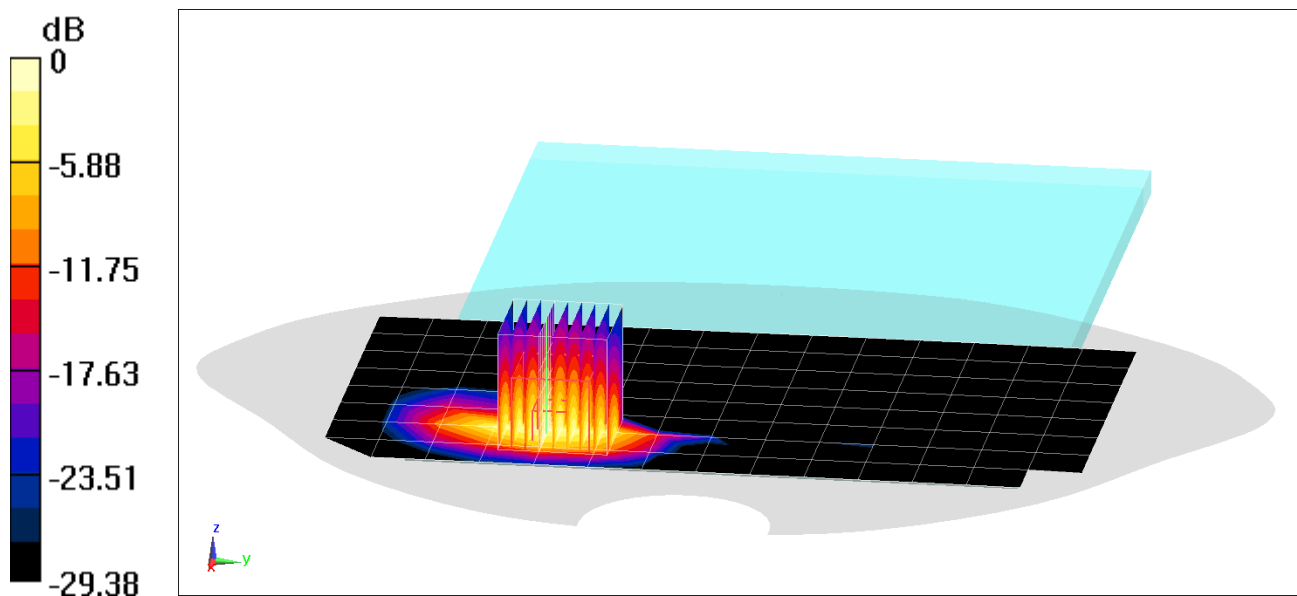
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (9x9x8)/Cube 0: Measurement grid: $dx=3.8\text{mm}$, $dy=3.8\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Reference Value = 24.78 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 2.16 W/kg

SAR(1 g) = 0.867 W/kg; SAR(10 g) = 0.364 W/kg



0 dB = 1.58 W/kg = 1.99 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03DQ7KN

Communication System: UID 0, UMTS; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: 850 Body Medium parameters used (interpolated):

$f = 826.4 \text{ MHz}$; $\sigma = 0.975 \text{ S/m}$; $\epsilon_r = 54.609$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-15-2020; Ambient Temp: 22.1°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7421; ConvF(9.42, 9.42, 9.42) @ 826.4 MHz; Calibrated: 3/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn604; Calibrated: 3/19/2020

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1179

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

Mode: UMTS 850 Antenna D, Body SAR, Back side, Low.ch

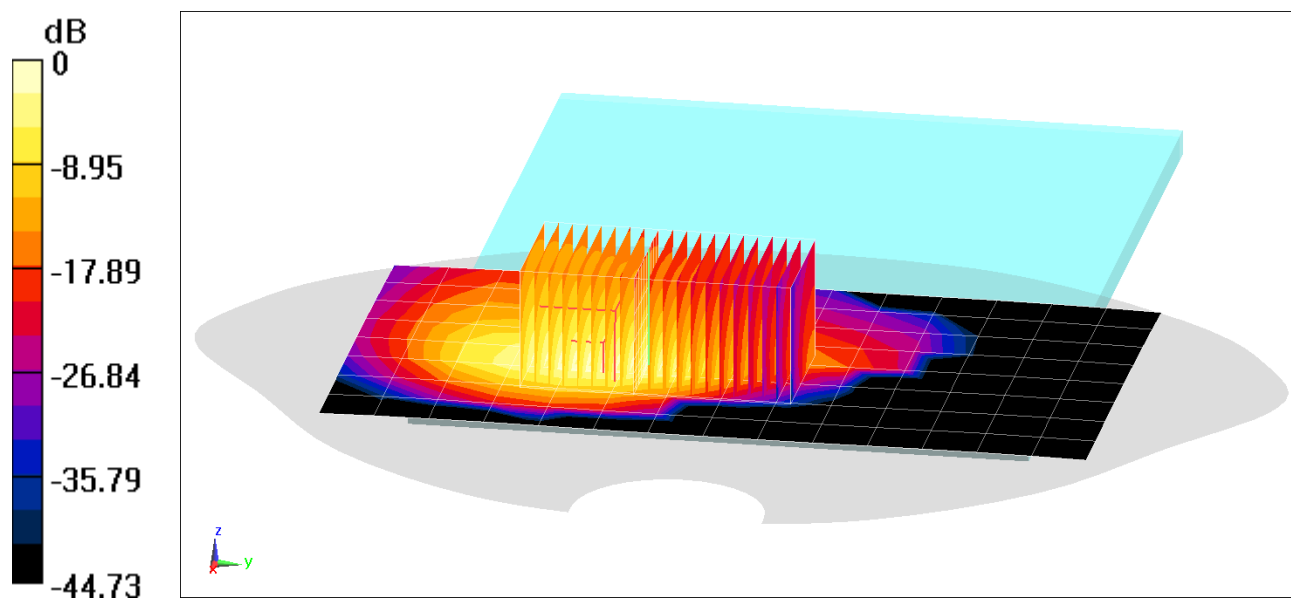
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (11x20x8)/Cube 0: Measurement grid: $dx=3.9\text{mm}$, $dy=3.9\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Reference Value = 34.73 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 3.99 W/kg

SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.554 W/kg



0 dB = 2.04 W/kg = 3.10 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03GQ7KN

Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used (interpolated):

$f = 1732.4$ MHz; $\sigma = 1.514$ S/m; $\epsilon_r = 51.64$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-15-2020; Ambient Temp: 23.3°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7427; ConvF(7.92, 7.92, 7.92) @ 1732.4 MHz; Calibrated: 2/19/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1403; Calibrated: 2/13/2020

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CD; Serial: 1736

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

Mode: UMTS 1750 Antenna C, Body SAR, Back side, Mid.ch

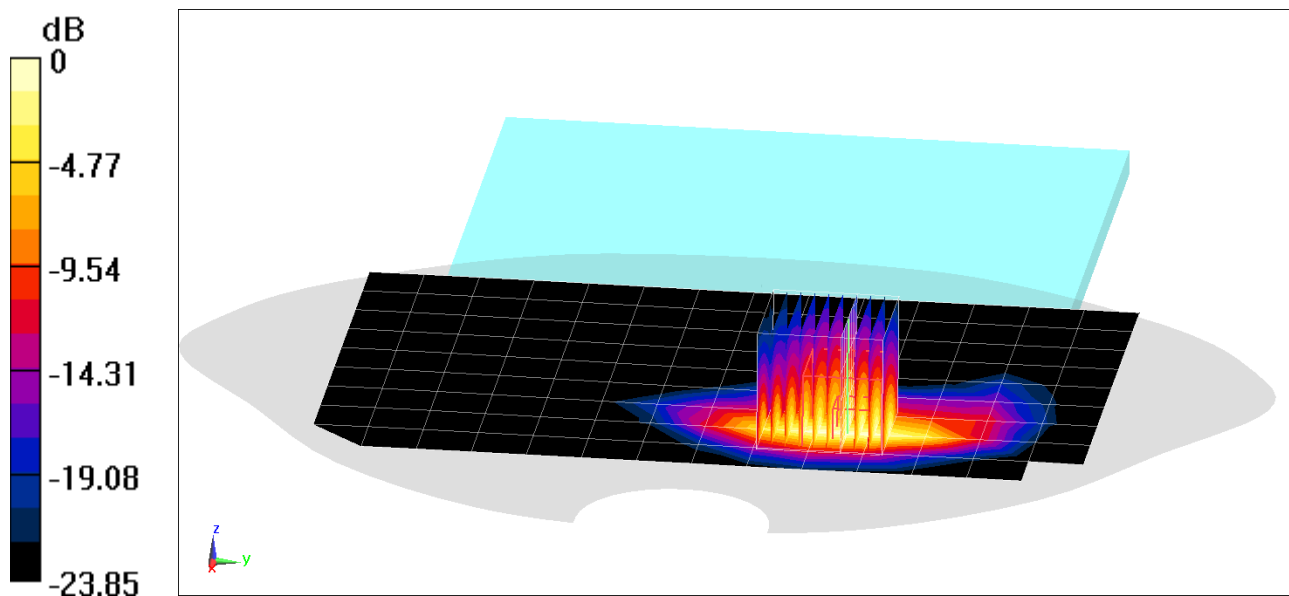
Area Scan (10x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4

Reference Value = 24.83 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 2.12 W/kg

SAR(1 g) = 0.904 W/kg; SAR(10 g) = 0.427 W/kg



0 dB = 1.51 W/kg = 1.79 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN04QQ7KN

Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1907.6 \text{ MHz}$; $\sigma = 1.589 \text{ S/m}$; $\epsilon_r = 51.875$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-10-2020; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: EX3DV4 - SN7532; ConvF(7.96, 7.96, 7.96) @ 1907.6 MHz; Calibrated: 4/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn501; Calibrated: 4/15/2020

Phantom: Twin-SAM V8.0_Left; Type: QD 000 P41 AA; Serial: 1935

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

Mode: UMTS 1900 Antenna C, Body SAR, Back side, High.ch

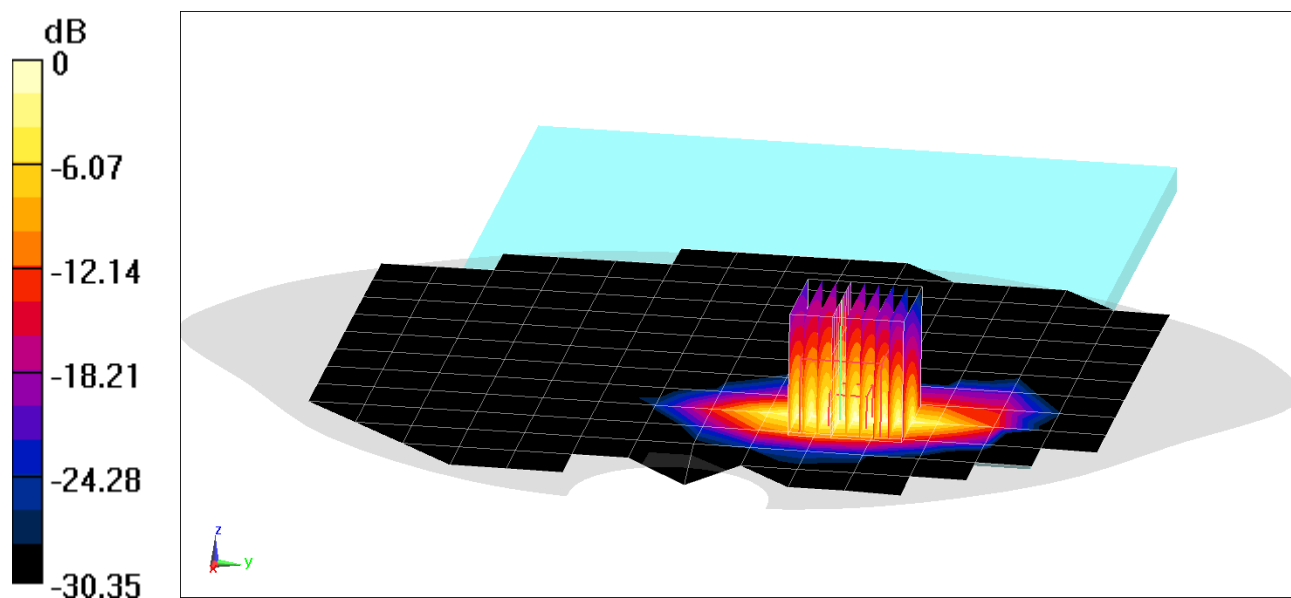
Area Scan (15x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (9x9x8)/Cube 0: Measurement grid: $dx=3.8\text{mm}$, $dy=3.8\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Reference Value = 26.52 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.44 W/kg

SAR(1 g) = 0.977 W/kg; SAR(10 g) = 0.441 W/kg



PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN04UQ7KN

Communication System: UID 0, LTE Band 71; Frequency: 680.5 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used (interpolated):

$f = 680.5 \text{ MHz}$; $\sigma = 0.95 \text{ S/m}$; $\epsilon_r = 53.631$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-16-2020; Ambient Temp: 21.0°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7532; ConvF(10.43, 10.43, 10.43) @ 680.5 MHz; Calibrated: 4/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn501; Calibrated: 4/15/2020

Phantom: Twin-SAM V8.0_Left; Type: QD 000 P41 AA; Serial: 1935

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

**Mode: LTE Band 71 Antenna C, Body SAR, Back side, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

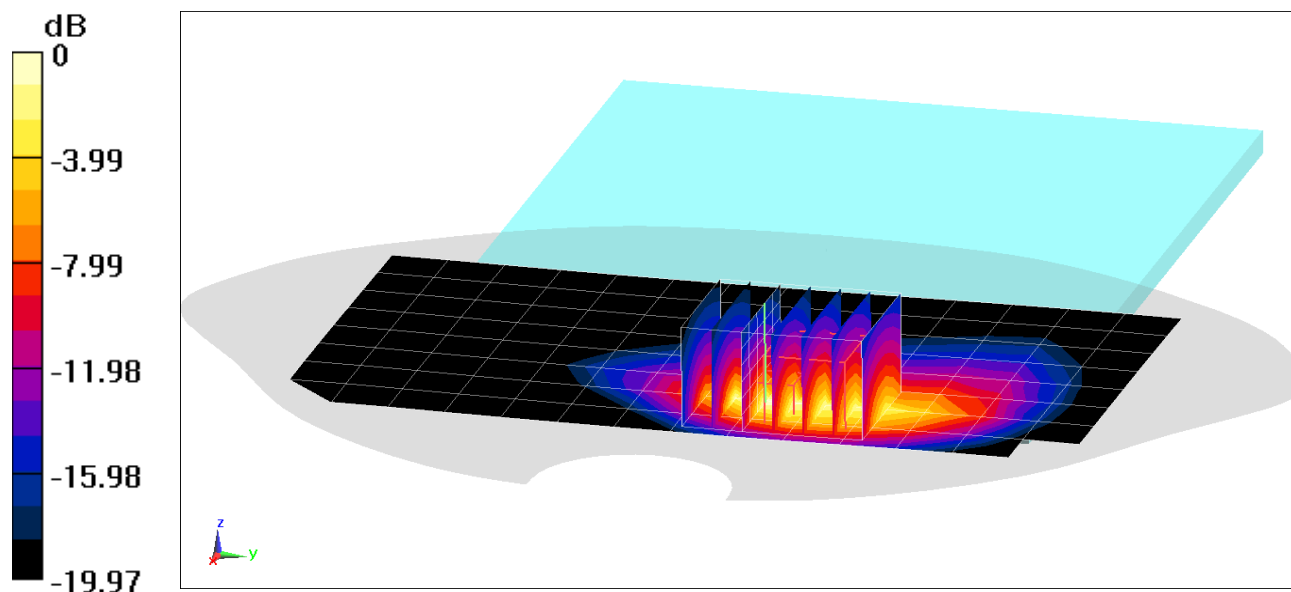
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (11x11x8)/Cube 0: Measurement grid: $dx=3.8\text{mm}$, $dy=3.8\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Reference Value = 32.72 V/m; Power Drift = -0.21 dB

Peak SAR (extrapolated) = 3.91 W/kg

SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.488 W/kg



0 dB = 1.99 W/kg = 2.99 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03QQ7KN

Communication System: UID 0, LTE Band 12; Frequency: 707.5 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used (interpolated):

$f = 707.5$ MHz; $\sigma = 0.959$ S/m; $\epsilon_r = 53.582$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-16-2020; Ambient Temp: 21.0°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7532; ConvF(10.43, 10.43, 10.43) @ 707.5 MHz; Calibrated: 4/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn501; Calibrated: 4/15/2020

Phantom: Twin-SAM V8.0_Left; Type: QD 000 P41 AA; Serial: 1935

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

**Mode: LTE Band 12 Antenna C, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 25 RB, 0 RB Offset**

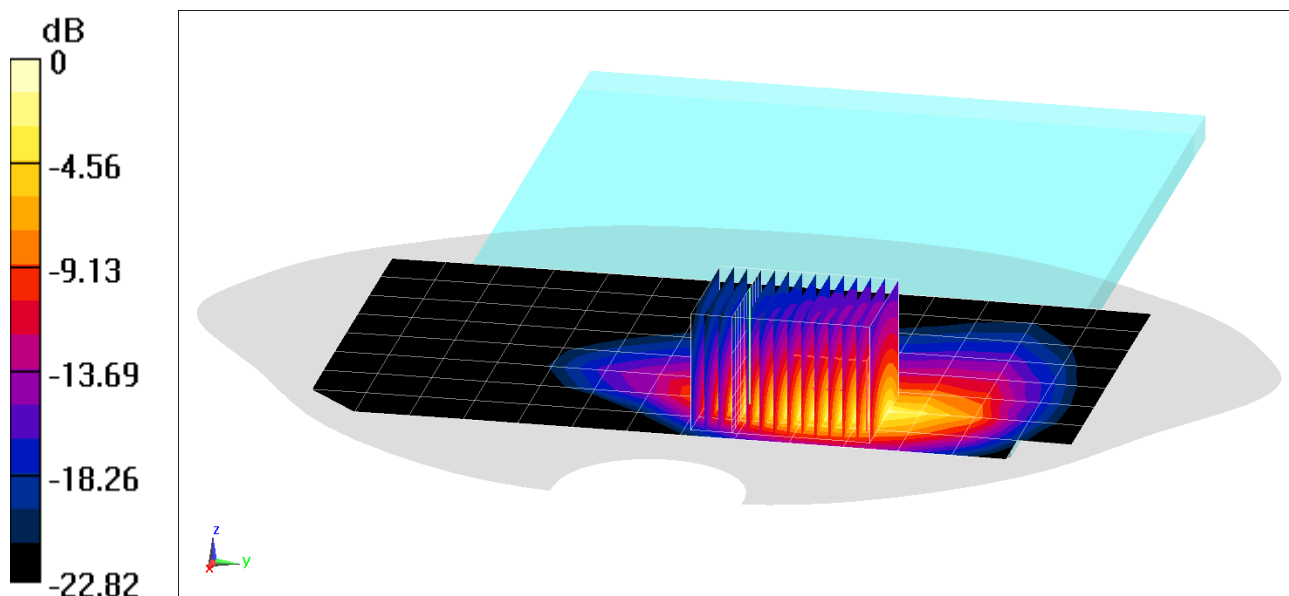
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (11x14x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4

Reference Value = 29.86 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 4.97 W/kg

SAR(1 g) = 1 W/kg; SAR(10 g) = 0.477 W/kg



0 dB = 1.99 W/kg = 2.99 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03NQ7KN

Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used (interpolated):

$f = 782 \text{ MHz}$; $\sigma = 0.987 \text{ S/m}$; $\epsilon_r = 53.41$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-16-2020; Ambient Temp: 21.0°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7532; ConvF(10.43, 10.43, 10.43) @ 782 MHz; Calibrated: 4/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn501; Calibrated: 4/15/2020

Phantom: Twin-SAM V8.0_Left; Type: QD 000 P41 AA; Serial: 1935

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

**Mode: LTE Band 13 Antenna D, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

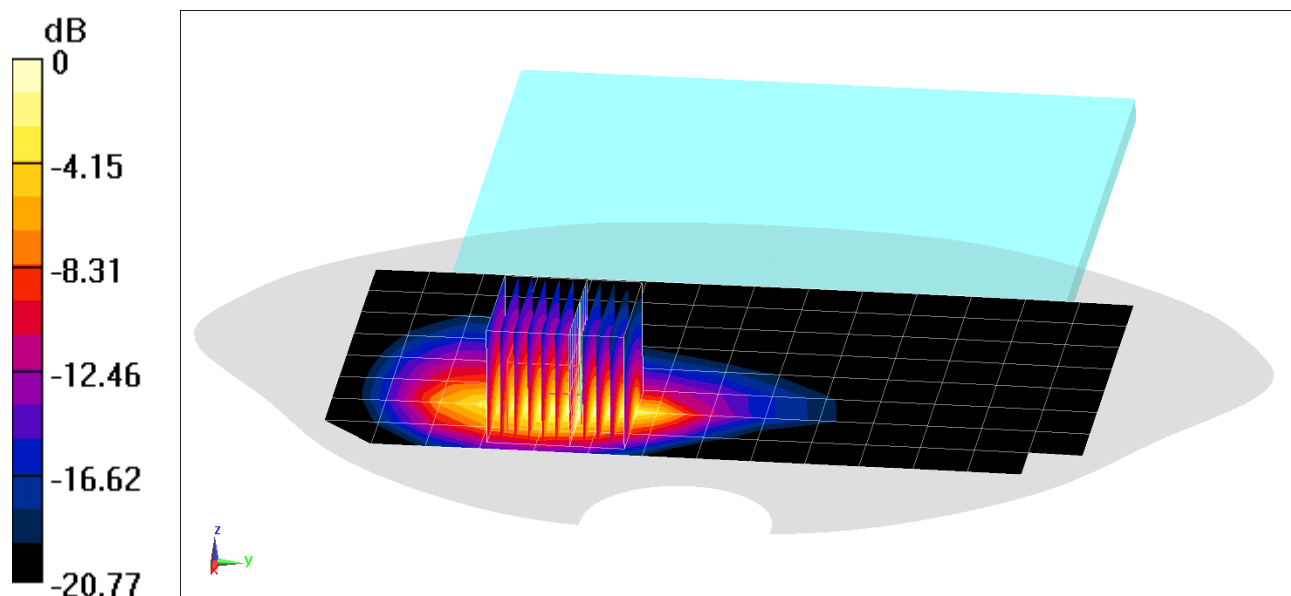
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (11x11x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4

Reference Value = 30.07 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 3.82 W/kg

SAR(1 g) = 0.952 W/kg; SAR(10 g) = 0.463 W/kg



0 dB = 1.86 W/kg = 2.70 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03QQ7KN

Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1

Medium: 750 Body Medium parameters used (interpolated):

$f = 793 \text{ MHz}$; $\sigma = 0.991 \text{ S/m}$; $\epsilon_r = 53.378$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-16-2020; Ambient Temp: 21.0°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7532; ConvF(10.43, 10.43, 10.43) @ 793 MHz; Calibrated: 4/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn501; Calibrated: 4/15/2020

Phantom: Twin-SAM V8.0_Left; Type: QD 000 P41 AA; Serial: 1935

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

**Mode: LTE Band 14 Antenna C, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 50 RB, 0 RB Offset**

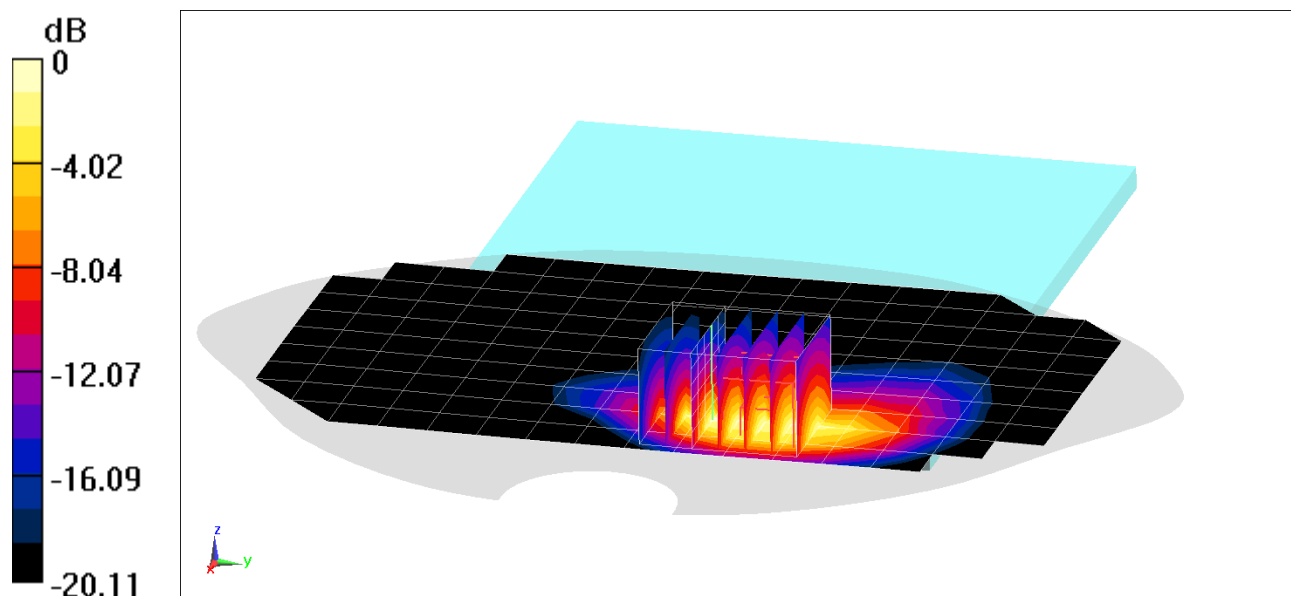
Area Scan (11x17x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.92 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.90 W/kg

SAR(1 g) = 0.816 W/kg; SAR(10 g) = 0.405 W/kg



0 dB = 1.47 W/kg = 1.67 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03DQ7KN

Communication System: UID 0, _LTE Band 26; Frequency: 819 MHz; Duty Cycle: 1:1

Medium: 850 Body Medium parameters used (interpolated):

$f = 819 \text{ MHz}$; $\sigma = 0.968 \text{ S/m}$; $\epsilon_r = 54.678$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-15-2020; Ambient Temp: 22.1°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7421; ConvF(9.42, 9.42, 9.42) @ 819 MHz; Calibrated: 3/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn604; Calibrated: 3/19/2020

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1179

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

**Mode: LTE Band 26 (Cell.) Antenna C, Body SAR, Back side, Low.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

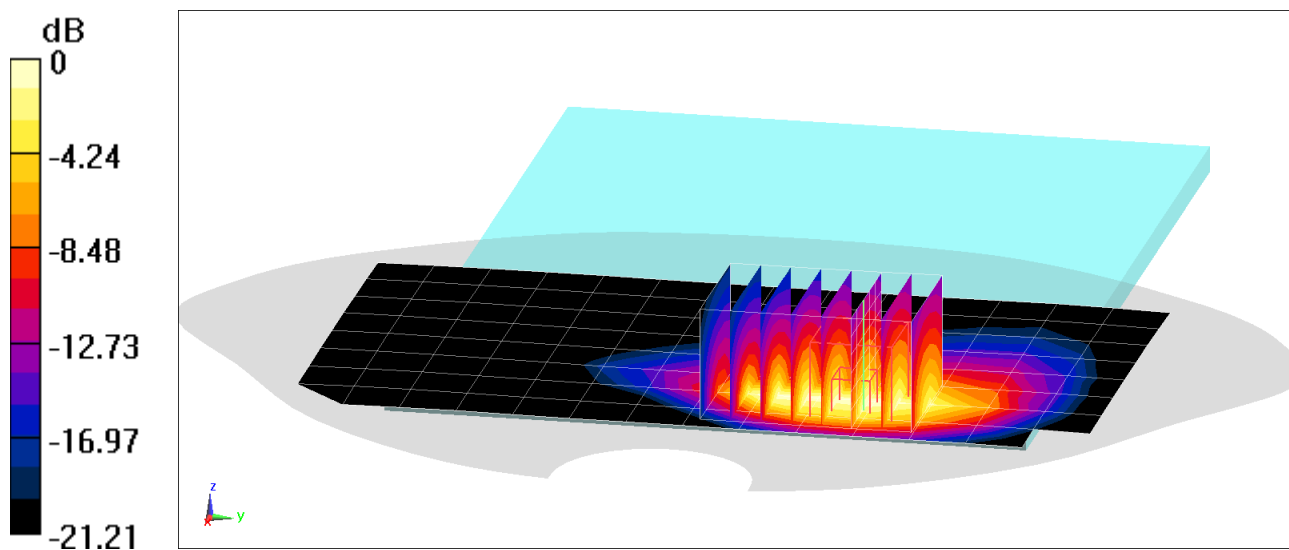
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (6x8x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.84 V/m; Power Drift = -0.21 dB

Peak SAR (extrapolated) = 2.29 W/kg

SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.531 W/kg



0 dB = 1.53 W/kg = 1.85 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN04QQ7KN

Communication System: UID 0, LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium: 850 Body Medium parameters used (interpolated):

$f = 836.5 \text{ MHz}$; $\sigma = 0.99 \text{ S/m}$; $\epsilon_r = 53.742$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-16-2020; Ambient Temp: 23.0°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7421; ConvF(9.42, 9.42, 9.42) @ 836.5 MHz; Calibrated: 3/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn604; Calibrated: 3/19/2020

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1179

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

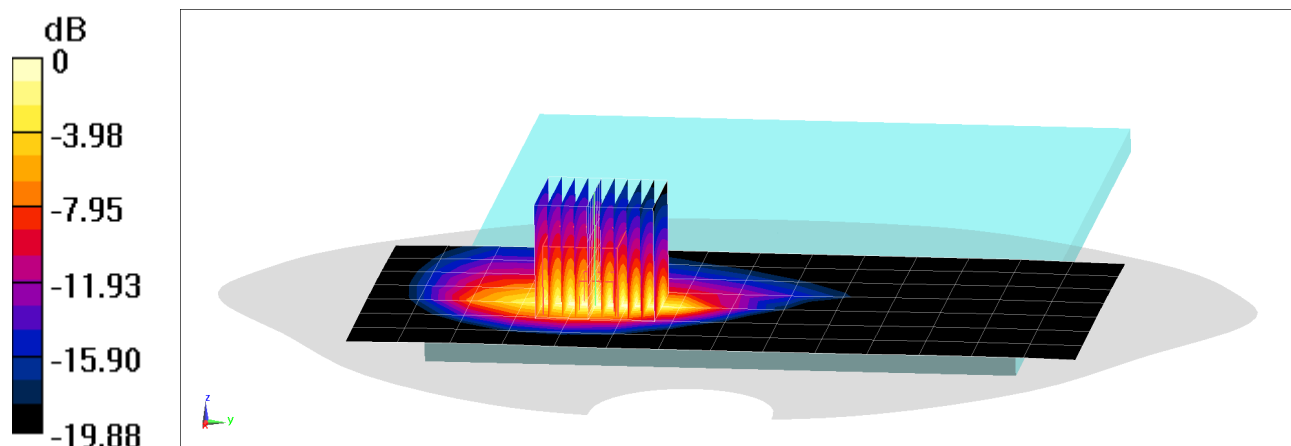
**Mode: LTE Band 5 (Cell.) Antenna D, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 25 RB, 0 RB Offset**

Area Scan (8x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (9x10x8)/Cube 0: Measurement grid: $dx=3.8\text{mm}$, $dy=3.8\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Reference Value = 33.79 V/m; Power Drift = -0.1 dB

SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.516 W/kg



PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03QQ7KN

Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1

Medium: 1750 Body Medium parameters used (interpolated):

$f = 1770 \text{ MHz}$; $\sigma = 1.55 \text{ S/m}$; $\epsilon_r = 51.527$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-15-2020; Ambient Temp: 23.3°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7427; ConvF(7.92, 7.92, 7.92) @ 1770 MHz; Calibrated: 2/19/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1403; Calibrated: 2/13/2020

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CD; Serial: 1736

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

**Mode: LTE Band 66 (AWS) Antenna D, Body SAR, Back side, High.ch,
20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset**

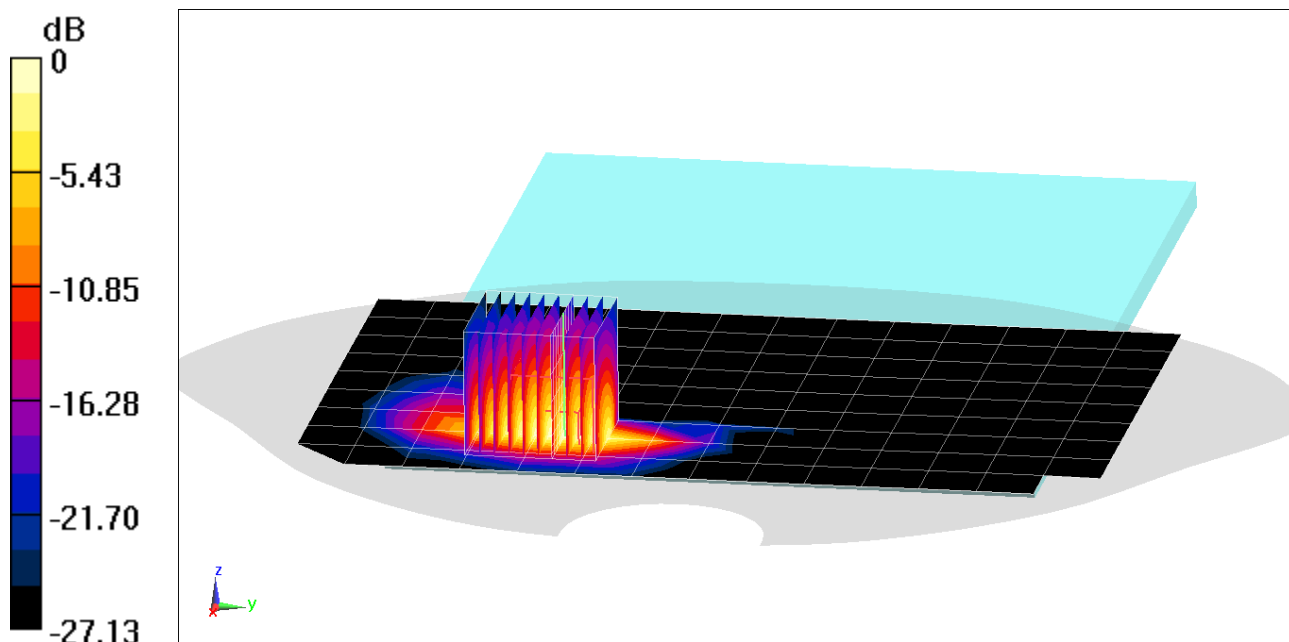
Area Scan (10x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4

Reference Value = 25.72 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 2.21 W/kg

SAR(1 g) = 0.926 W/kg; SAR(10 g) = 0.397 W/kg



0 dB = 1.66 W/kg = 2.20 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03FQ7KN

Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1905 \text{ MHz}$; $\sigma = 1.527 \text{ S/m}$; $\epsilon_r = 51.687$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-08-2020; Ambient Temp: 22.4°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7532; ConvF(7.96, 7.96, 7.96) @ 1905 MHz; Calibrated: 4/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn501; Calibrated: 4/15/2020

Phantom: Twin-SAM V8.0_Left; Type: QD 000 P41 AA; Serial: 1935

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

**Mode: LTE Band 25 (PCS) Antenna C, Body SAR, Back side, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

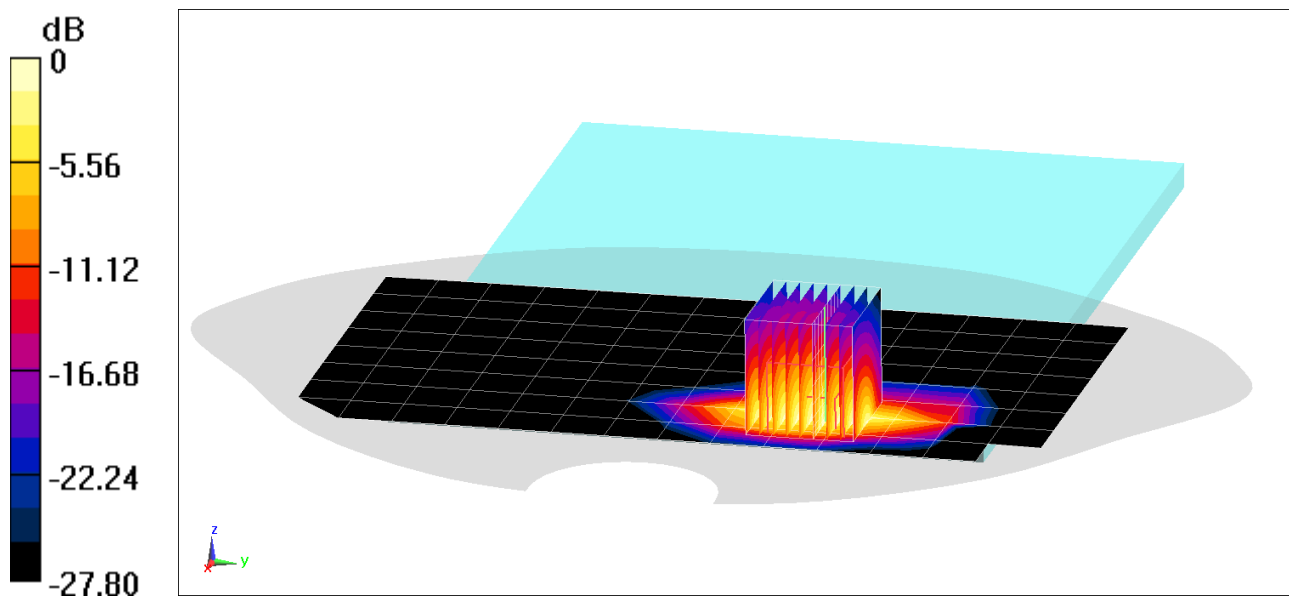
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (10x9x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4

Reference Value = 29.54 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.96 W/kg

SAR(1 g) = 1.16 W/kg; SAR(10 g) = 0.524 W/kg



0 dB = 2.02 W/kg = 3.05 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN04QQ7KN

Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1

Medium: 2300 MHz Body Medium parameters used:

$f = 2310 \text{ MHz}$; $\sigma = 1.9 \text{ S/m}$; $\epsilon_r = 50.992$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 07-06-2020; Ambient Temp: 22.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN3837; ConvF(7.78, 7.78, 7.78) @ 2310 MHz; Calibrated: 1/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn793; Calibrated: 1/14/2020

Phantom: Twin-SAM V4.0 Main; Type: QD 000 P40 CC; Serial: 1114

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

**Mode: LTE Band 30 Antenna C, Body SAR, Top Edge, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

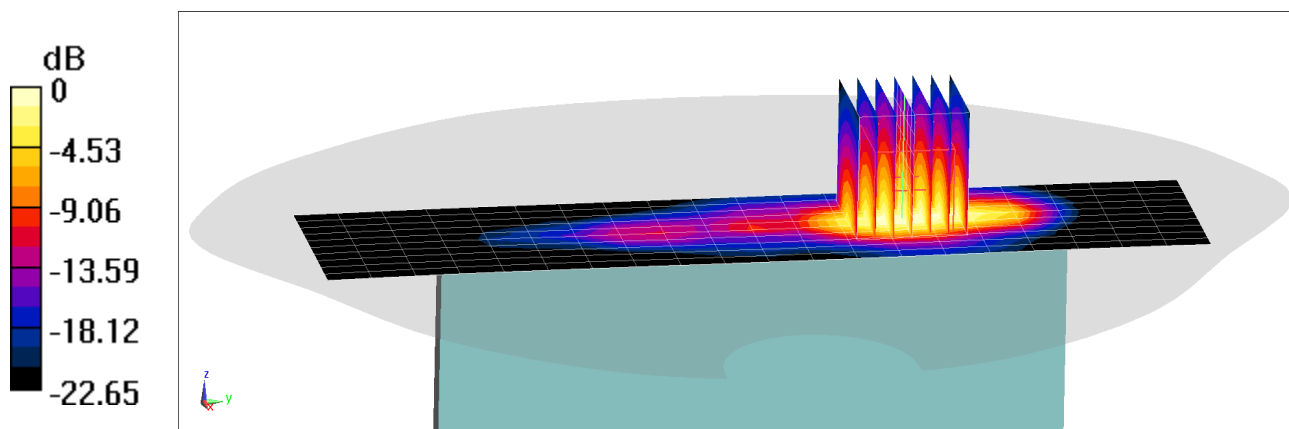
Area Scan (11x21x1): Measurement grid: $dx=5\text{mm}$, $dy=12\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 22.16 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.78 W/kg

SAR(1 g) = 0.832 W/kg; SAR(10 g) = 0.370 W/kg



0 dB = 1.38 W/kg = 1.40 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN038Q7KN

Communication System: UID 0, _LTE Band 7; Frequency: 2535 MHz; Duty Cycle: 1:1

Medium: 2450 MHz Body Medium parameters used (interpolated):

$f = 2535 \text{ MHz}$; $\sigma = 2.127 \text{ S/m}$; $\epsilon_r = 51.462$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-25-2020; Ambient Temp: 21.2°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN3949; ConvF(7.69, 7.69, 7.69) @ 2535 MHz; Calibrated: 8/29/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 8/12/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1596

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

Mode: LTE Band 7 ULCA Antenna C, Body SAR, Top Edge, Mid Ch.

PCC: 20 MHz Bandwidth, QPSK, Ch. 21100, 1 RB, 99 RB Offset

SCC: 20 MHz Bandwidth, QPSK, Ch. 21298, 1 RB, 0 RB Offset

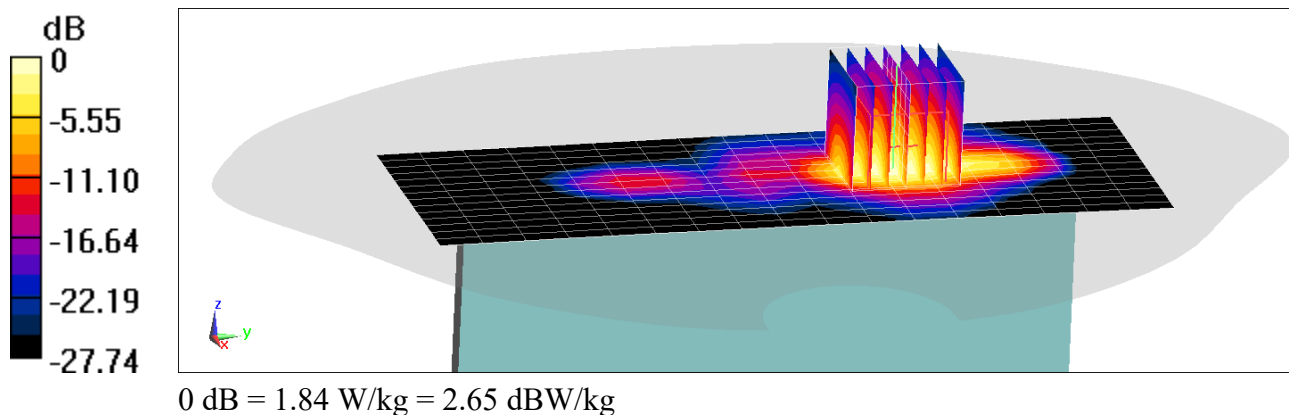
Area Scan (11x11x1): Measurement grid: $dx=5\text{mm}$, $dy=12\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.41 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 2.60 W/kg

SAR(1 g) = 1.1 W/kg; SAR(10 g) = 0.458 W/kg



PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03DQ7KN

Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2636.5 MHz; Duty Cycle: 1:1.58

Medium: 2450 MHz Body Medium parameters used (interpolated):

$f = 2636.5$ MHz; $\sigma = 2.271$ S/m; $\epsilon_r = 50.967$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-17-2020; Ambient Temp: 23.7°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN3949; ConvF(7.69, 7.69, 7.69) @ 2636.5 MHz; Calibrated: 8/29/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 8/12/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1596

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

**Mode: LTE Band 41 Antenna C, Body SAR, Top Edge, Mid-High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

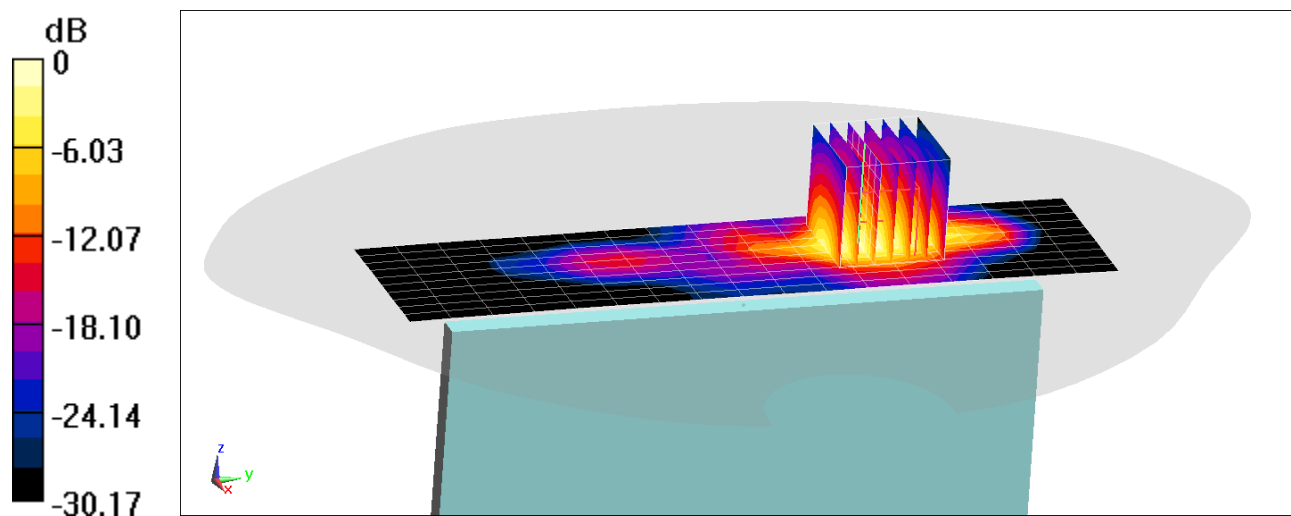
Area Scan (11x18x1): Measurement grid: dx=5mm, dy=12mm

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

Reference Value = 23.31 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.59 W/kg

SAR(1 g) = 1.1 W/kg; SAR(10 g) = 0.452 W/kg



0 dB = 2.00 W/kg = 3.01 dBW/kg

PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN038Q7KN

Communication System: UID 0, _IEEE 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium: 2450 MHz Body Medium parameters used (interpolated):

$f = 2437 \text{ MHz}$; $\sigma = 1.994 \text{ S/m}$; $\epsilon_r = 51.773$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-17-2020; Ambient Temp: 23.7°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN3949; ConvF(7.75, 7.75, 7.75) @ 2437 MHz; Calibrated: 8/29/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 8/12/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1596

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

Mode: IEEE 802.11b Antenna B Variant 1

22 MHz Bandwidth, Body SAR, Ch 6, 1 Mbps, Bottom Edge

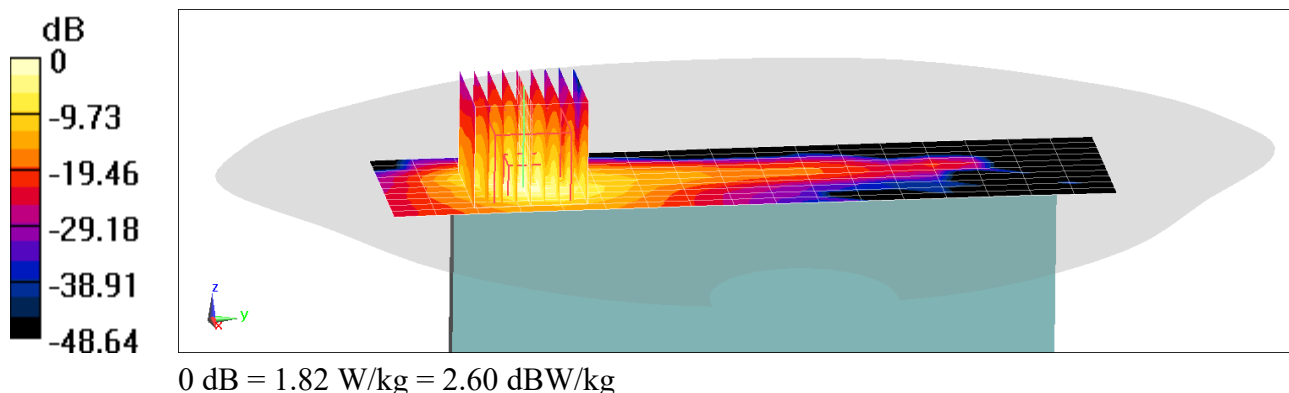
Area Scan (11x18x1): Measurement grid: dx=5mm, dy=12mm

Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=5mm

Reference Value = 22.72 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 2.47 W/kg

SAR(1 g) = 0.820 W/kg; SAR(10 g) = 0.270 W/kg



PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN03QQ7KN

Communication System: UID 0, _IEEE 802.11ac; Frequency: 5690 MHz; Duty Cycle: 1:1

Medium: 5GHz Body Medium parameters used (interpolated):

$f = 5690 \text{ MHz}$; $\sigma = 6.103 \text{ S/m}$; $\epsilon_r = 46.681$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-11-2020; Ambient Temp: 23.8°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7420; ConvF(4.28, 4.28, 4.28) @ 5690 MHz; Calibrated: 11/21/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 11/13/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CA; Serial: 1275

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

Mode: IEEE 802.11ac, U-NII-2C Antenna B Variant 1
80 MHz Bandwidth, Body SAR, Ch 138, 29.3 Mbps, Bottom Edge

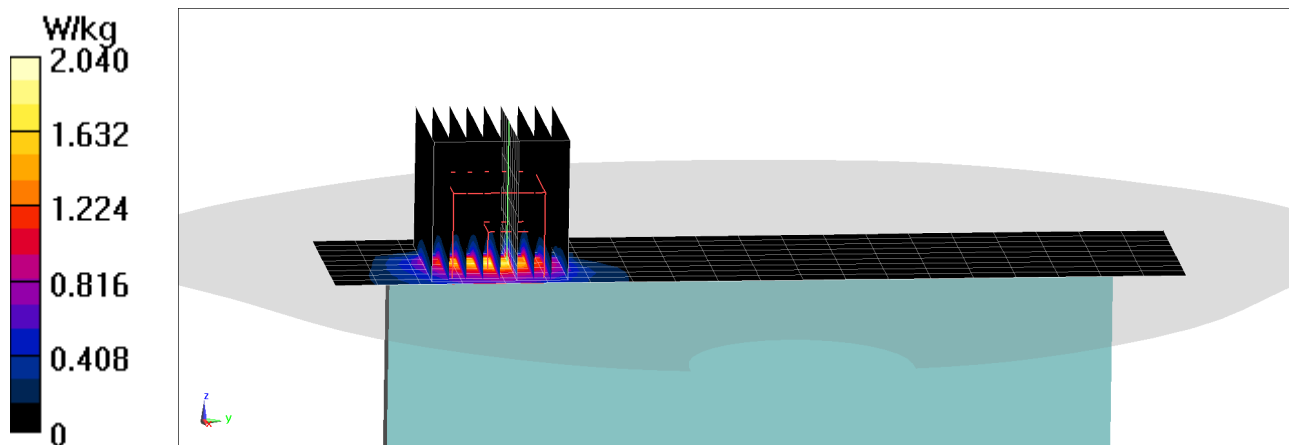
Area Scan (10x21x1): Measurement grid: dx=5mm, dy=10mm

Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4

Reference Value = 12.16 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 3.65 W/kg

SAR(1 g) = 0.815 W/kg; SAR(10 g) = 0.293 W/kg



PCTEST

DUT: BCGA2428; Type: Tablet Device; Serial: F9FCN04UQ7KN

Communication System: UID 0, Bluetooth; Frequency: 2480 MHz; Duty Cycle: 1:1.290

Medium: 2450 MHz Body Medium parameters used (interpolated):

$f = 2480 \text{ MHz}$; $\sigma = 2.034 \text{ S/m}$; $\epsilon_r = 51.132$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06-21-2020; Ambient Temp: 21.2°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN3949; ConvF(7.75, 7.75, 7.75) @ 2480 MHz; Calibrated: 8/29/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 8/12/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1596

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

Mode: Bluetooth Antenna A Variant 2, Body SAR, Ch 78, 1 Mbps, Bottom Edge

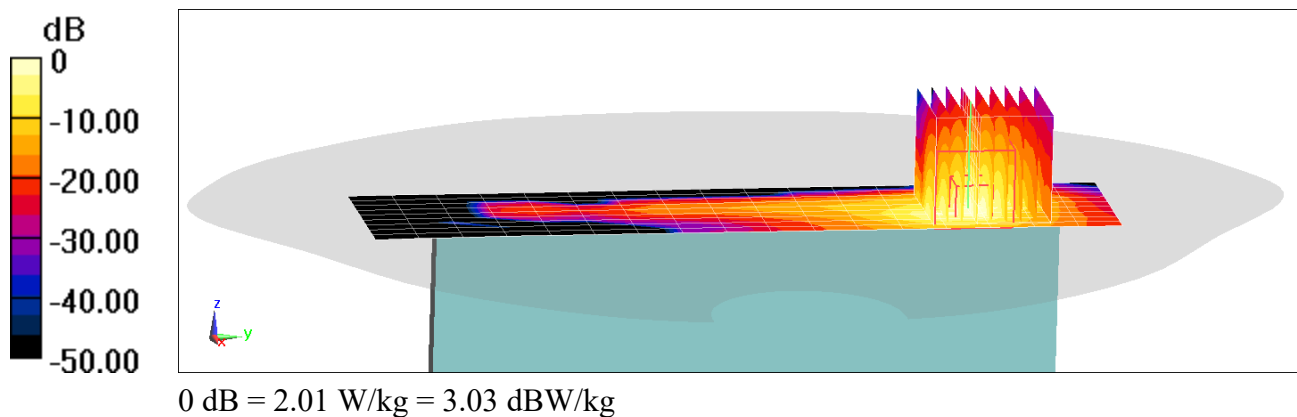
Area Scan (10x18x1): Measurement grid: dx=5mm, dy=12mm

Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=5mm

Reference Value = 24.16 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.00 W/kg

SAR(1 g) = 1.0 W/kg; SAR(10 g) = 0.327 W/kg



APPENDIX B: SYSTEM VERIFICATION

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1057

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

Medium: 750 Body Medium parameters used (interpolated):

$f = 750 \text{ MHz}$; $\sigma = 0.976 \text{ S/m}$; $\epsilon_r = 53.494$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-16-2020; Ambient Temp: 21.0°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7532; ConvF(10.43, 10.43, 10.43) @ 750 MHz; Calibrated: 4/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn501; Calibrated: 4/15/2020

Phantom: Twin-SAM V8.0_Left; Type: QD 000 P41 AA; Serial: 1935

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

750 MHz System Verification at 23.0 dBm (200 mW)

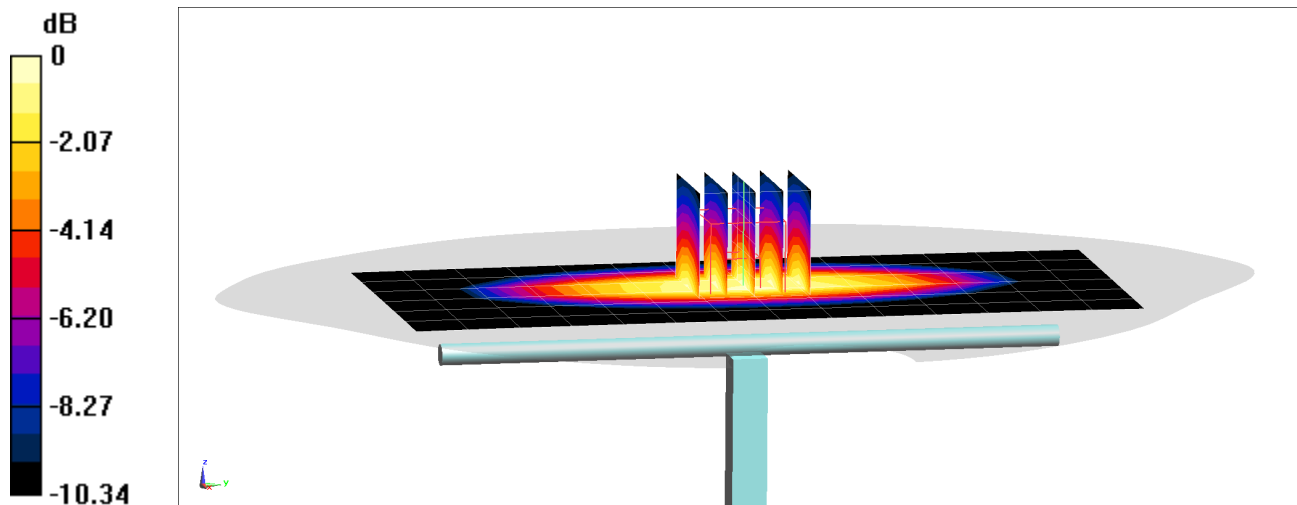
Area Scan (7x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 2.74 W/kg

SAR(1 g) = 1.79 W/kg; SAR(10 g) = 1.19 W/kg

Deviation(1 g) = 3.59%



0 dB = 2.41 W/kg = 3.82 dBW/kg

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d040

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

Medium: 850 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.984 \text{ S/m}$; $\epsilon_r = 54.529$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-15-2020; Ambient Temp: 22.1°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7421; ConvF(9.42, 9.42, 9.42) @ 835 MHz; Calibrated: 3/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn604; Calibrated: 3/19/2020

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1179

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

835 MHz System Verification at 23.0 dBm (200 mW)

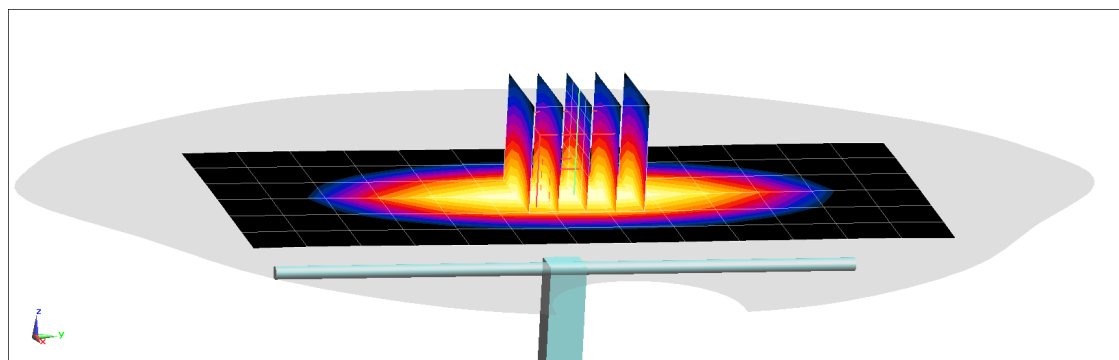
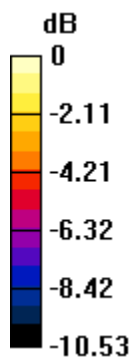
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 3.05 W/kg

SAR(1 g) = 2.04 W/kg; SAR(10 g) = 1.34 W/kg

Deviation(1 g) = 7.03%



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

PCTEST

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d180

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

Medium: 850 Body Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.989 \text{ S/m}$; $\epsilon_r = 54.479$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06-17-2020; Ambient Temp: 21.3°C; Tissue Temp: 22.6°C

Probe: EX3DV4 - SN7421; ConvF(9.42, 9.42, 9.42) @ 835 MHz; Calibrated: 3/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn604; Calibrated: 3/19/2020

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1179

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

835 MHz System Verification at 23.0 dBm (200 mW)

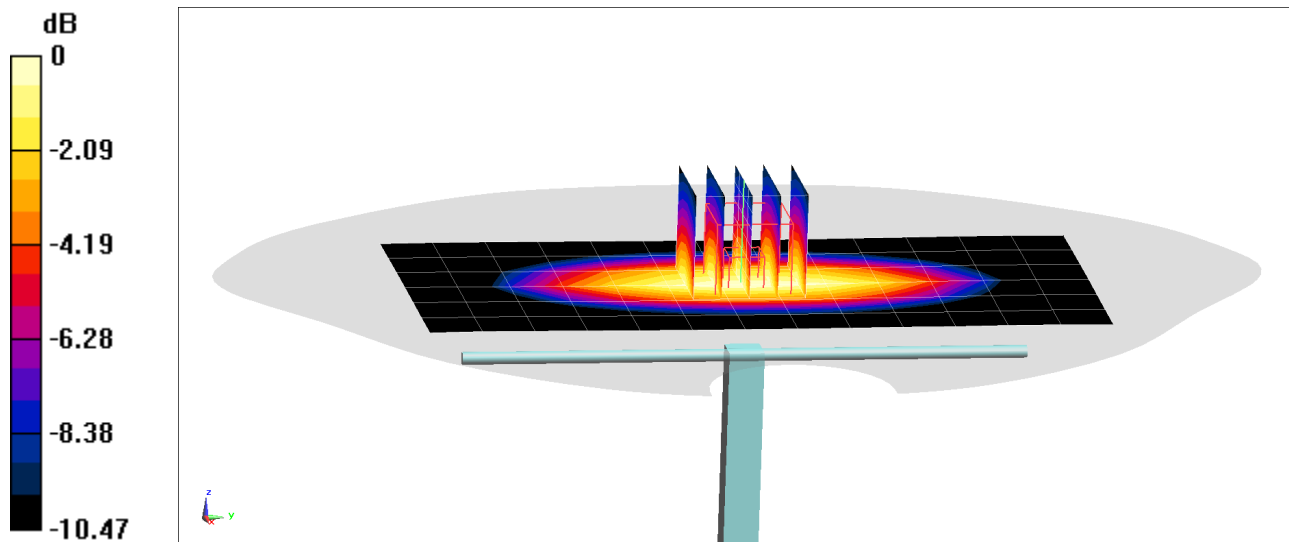
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 3.05 W/kg

SAR(1 g) = 2.03 W/kg; SAR(10 g) = 1.34 W/kg

Deviation(1 g) = 5.84%



0 dB = 2.71 W/kg = 4.33 dBW/kg

PCTEST

DUT: Dipole 850 MHz; Type: D850V2; Serial: 1010

Communication System: UID 0, CW; Frequency: 850 MHz; Duty Cycle: 1:1

Medium: 850 Body Medium parameters used:

$f = 850 \text{ MHz}$; $\sigma = 1.003 \text{ S/m}$; $\epsilon_r = 53.623$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 07-16-2020; Ambient Temp: 23.0°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7421; ConvF(9.42, 9.42, 9.42) @ 850 MHz; Calibrated: 3/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn604; Calibrated: 3/19/2020

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1179

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

850 MHz System Verification at 23.0 dBm (200 mW)

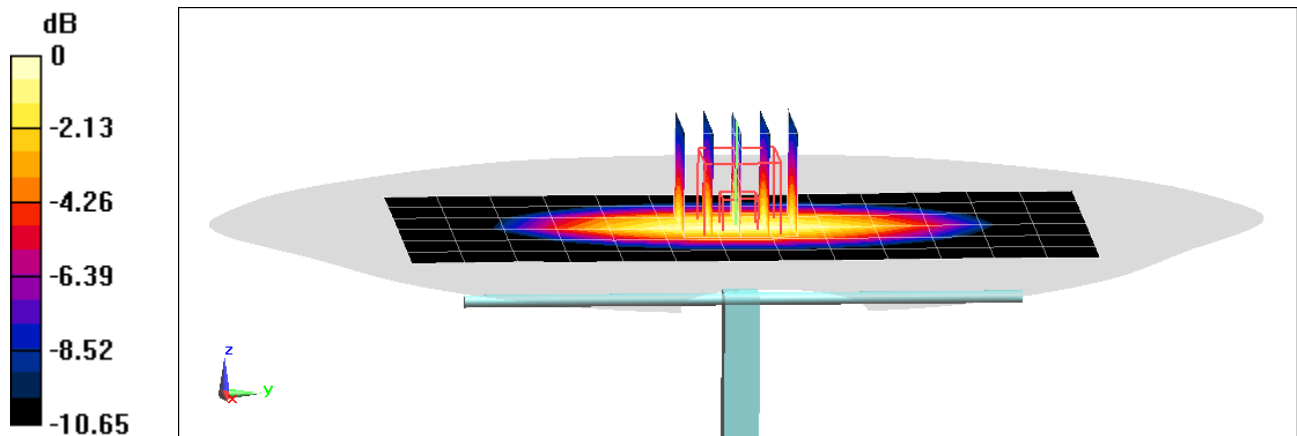
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 3.24 W/kg

SAR(1 g) = 2.17 W/kg; SAR(10 g) = 1.42 W/kg

Deviation (1 g) = 6.37%



0 dB = 2.90 W/kg = 4.62 dBW/kg

PCTEST

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1104

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

Medium: 1750 Body Medium parameters used:

$f = 1750 \text{ MHz}$; $\sigma = 1.532 \text{ S/m}$; $\epsilon_r = 51.596$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-15-2020; Ambient Temp: 23.3°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7427; ConvF(7.92, 7.92, 7.92) @ 1750 MHz; Calibrated: 2/19/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1403; Calibrated: 2/13/2020

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CD; Serial: 1736

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

1750 MHz System Verification at 20.0 dBm (100 mW)

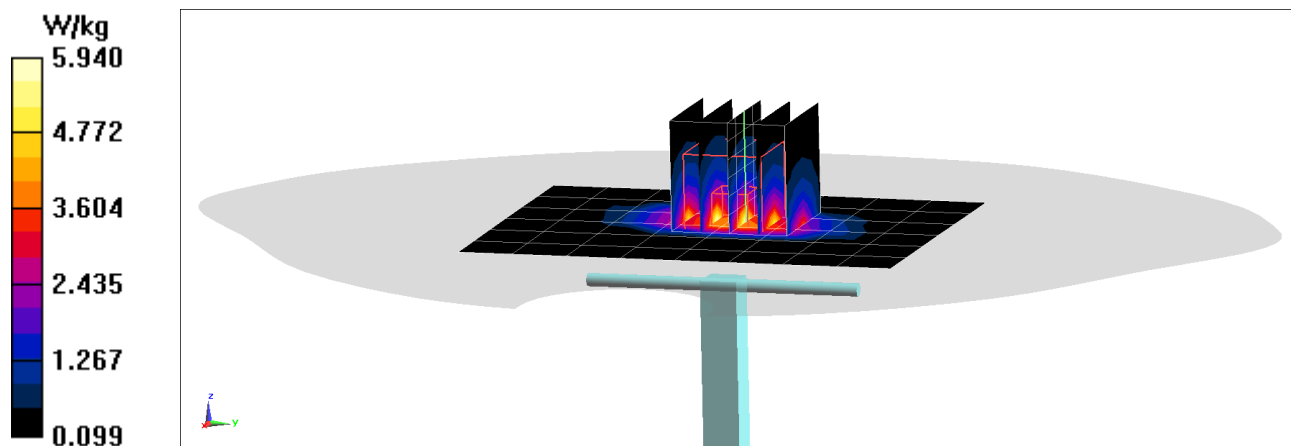
Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.07 W/kg

SAR(1 g) = 3.93 W/kg; SAR(10 g) = 2.07 W/kg

Deviation(1 g) = 7.38%



PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d026

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

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.521 \text{ S/m}$; $\epsilon_r = 51.702$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-08-2020; Ambient Temp: 22.4°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7532; ConvF(7.96, 7.96, 7.96) @ 1900 MHz; Calibrated: 4/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn501; Calibrated: 4/15/2020

Phantom: Twin-SAM V8.0_Left; Type: QD 000 P41 AA; Serial: 1935

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

1900 MHz System Verification at 20.0 dBm (100 mW)

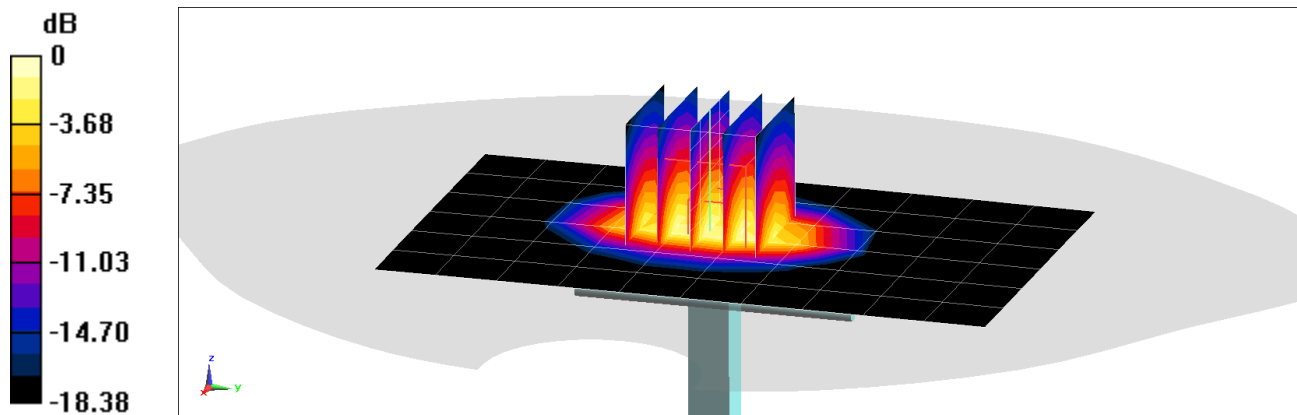
Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 7.58 W/kg

SAR(1 g) = 4.03 W/kg; SAR(10 g) = 2.07 W/kg

Deviation(1 g) = 1.00%



0 dB = 6.35 W/kg = 8.03 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d180

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

Medium: 1900 Body Medium parameters used (interpolated):

$f = 1900 \text{ MHz}$; $\sigma = 1.581 \text{ S/m}$; $\epsilon_r = 51.899$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-10-2020; Ambient Temp: 22.8°C; Tissue Temp: 20.4°C

Probe: EX3DV4 - SN7532; ConvF(7.96, 7.96, 7.96) @ 1900 MHz; Calibrated: 4/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn501; Calibrated: 4/15/2020

Phantom: Twin-SAM V8.0_Left; Type: QD 000 P41 AA; Serial: 1935

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

1900 MHz System Verification at 20.0 dBm (100 mW)

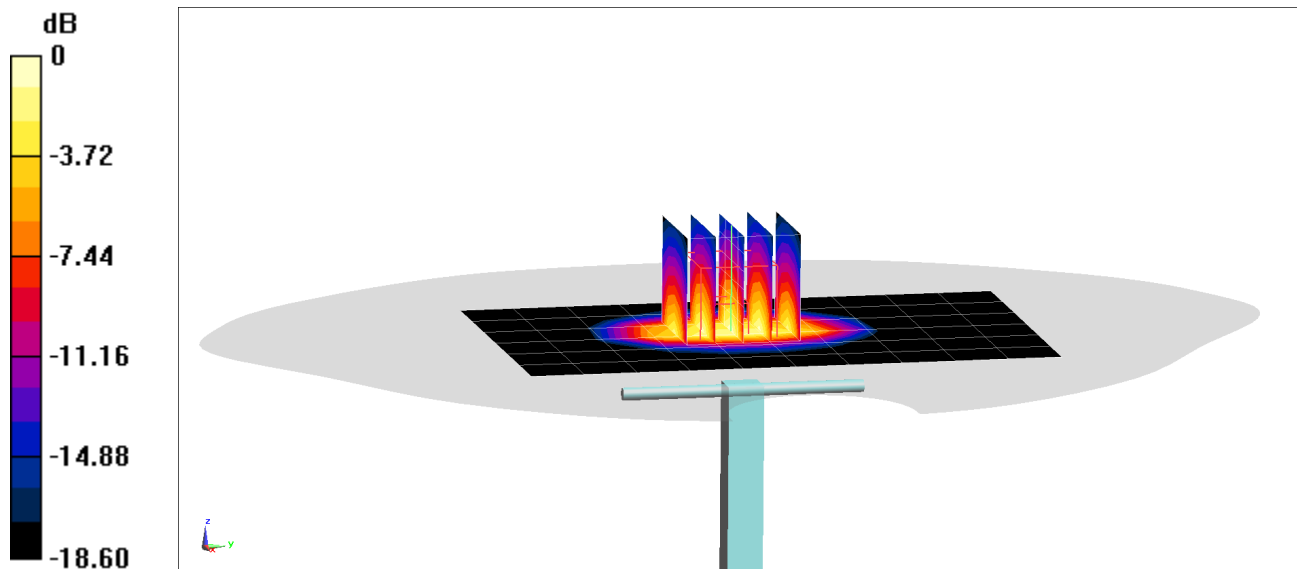
Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 7.71 W/kg

SAR(1 g) = 4.08 W/kg; SAR(10 g) = 2.08 W/kg

Deviation(1 g) = 3.29%



0 dB = 6.45 W/kg = 8.10 dBW/kg

PCTEST

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: 1064

Communication System: UID 0, CW; Frequency: 2300 MHz; Duty Cycle: 1:1

Medium: 2300 MHz Body Medium parameters used:

$f = 2300 \text{ MHz}$; $\sigma = 1.891 \text{ S/m}$; $\epsilon_r = 50.998$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 07-06-2020; Ambient Temp: 22.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN3837; ConvF(7.78, 7.78, 7.78) @ 2300 MHz; Calibrated: 1/20/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn793; Calibrated: 1/14/2020

Phantom: Twin-SAM V4.0 Main; Type: QD 000 P40 CC; Serial: 1114

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

2300 MHz System Verification at 20.0 dBm (100 mW)

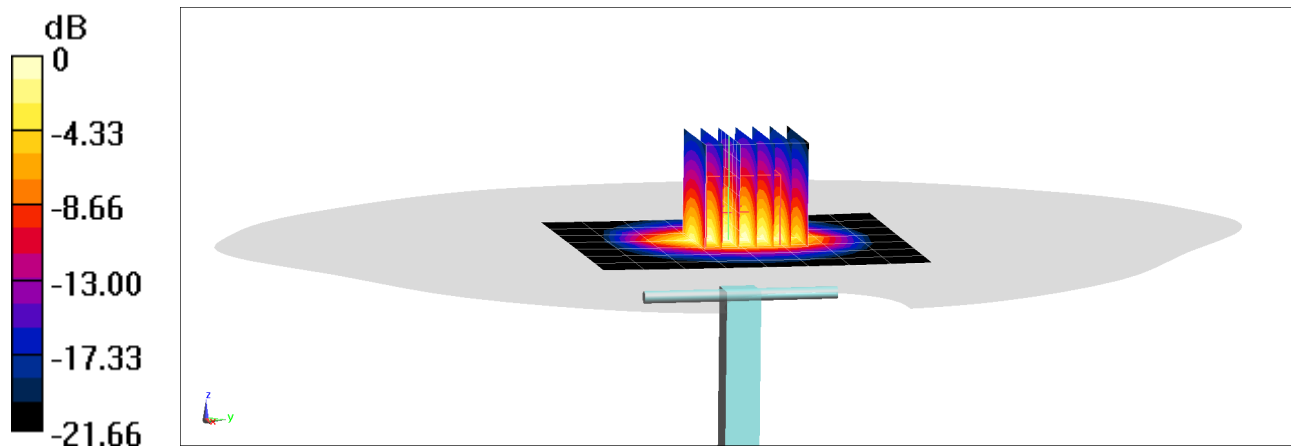
Area Scan (8x9x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 10.5 W/kg

SAR(1 g) = 4.98 W/kg; SAR(10 g) = 2.35 W/kg

Deviation(1 g) = 4.62%



PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 921

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

Medium: 2450 MHz Body Medium parameters used:

$f = 2450 \text{ MHz}$; $\sigma = 2.009 \text{ S/m}$; $\epsilon_r = 51.71$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-17-2020; Ambient Temp: 23.7°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN3949; ConvF(7.75, 7.75, 7.75) @ 2450 MHz; Calibrated: 8/29/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 8/12/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1596

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

2450 MHz System Verification at 20.0 dBm (100 mW)

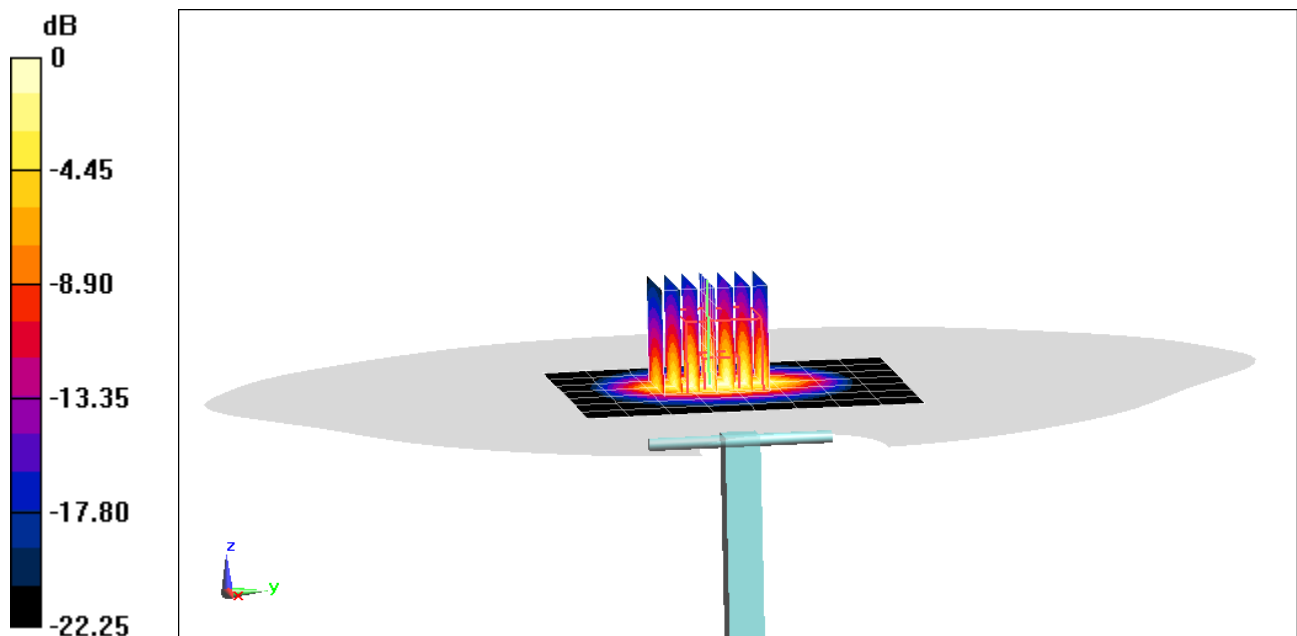
Area Scan (8x9x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 5.41 W/kg; SAR(10 g) = 2.54 W/kg

Deviation(1 g) = 6.50%



0 dB = 8.81 W/kg = 9.45 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 921

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

Medium: 2450 MHz Body Medium parameters used:

$f = 2450 \text{ MHz}$; $\sigma = 1.99 \text{ S/m}$; $\epsilon_r = 51.242$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-21-2020; Ambient Temp: 21.2°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN3949; ConvF(7.75, 7.75, 7.75) @ 2450 MHz; Calibrated: 8/29/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 8/12/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1596

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

2450 MHz System Verification at 20.0 dBm (100 mW)

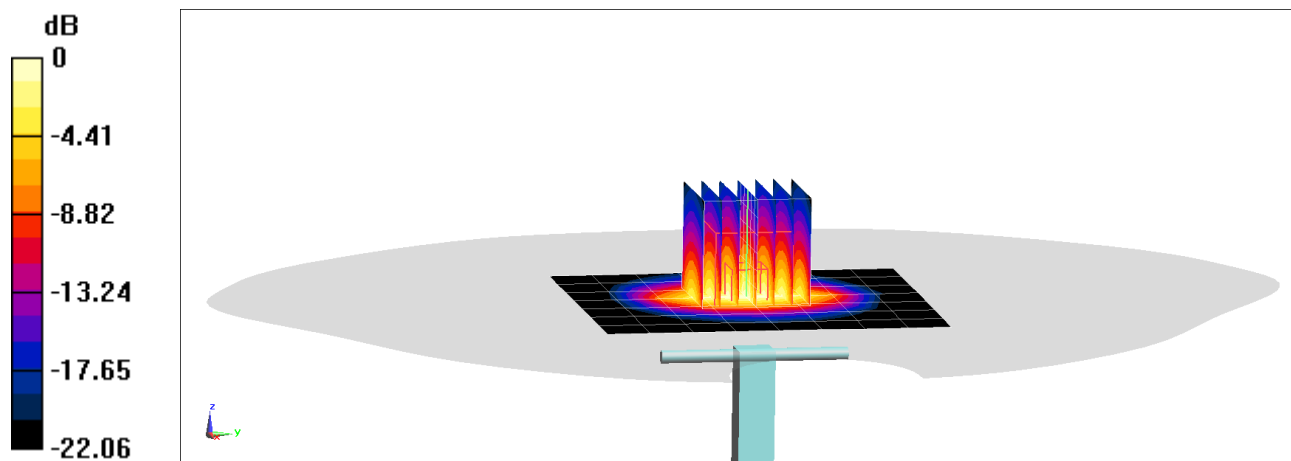
Area Scan (8x9x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 10.5 W/kg

SAR(1 g) = 4.98 W/kg; SAR(10 g) = 2.28 W/kg

Deviation(1 g) = -1.97%



0 dB = 8.47 W/kg = 9.28 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 921

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

Medium: 2450 MHz Body Medium parameters used:

$f = 2450 \text{ MHz}$; $\sigma = 2.01 \text{ S/m}$; $\epsilon_r = 51.786$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-25-2020; Ambient Temp: 21.2°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN3949; ConvF(7.75, 7.75, 7.75) @ 2450 MHz; Calibrated: 8/29/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 8/12/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1596

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

2450 MHz System Verification at 20.0 dBm (100 mW)

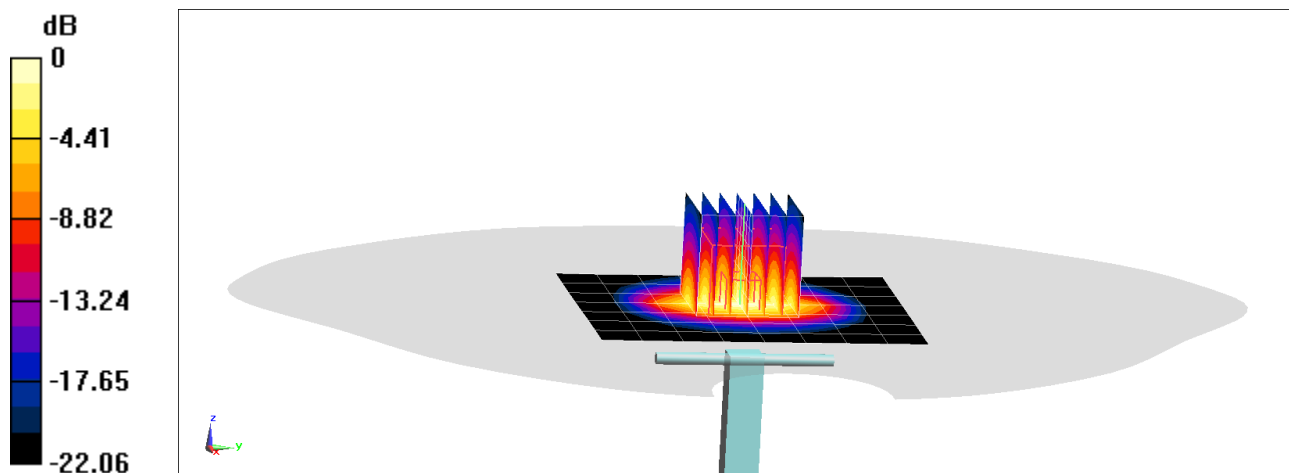
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 11.0 W/kg

SAR(1 g) = 5.23 W/kg; SAR(10 g) = 2.42 W/kg

Deviation(1 g) = 2.95%



0 dB = 8.79 W/kg = 9.44 dBW/kg

PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1069

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

Medium: 2450 MHz Body Medium parameters used:

$f = 2600$ MHz; $\sigma = 2.218$ S/m; $\epsilon_r = 51.168$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-17-2020; Ambient Temp: 23.7°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN3949; ConvF(7.69, 7.69, 7.69) @ 2600 MHz; Calibrated: 8/29/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 8/12/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1596

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

2600 MHz System Verification at 20.0 dBm (100 mW)

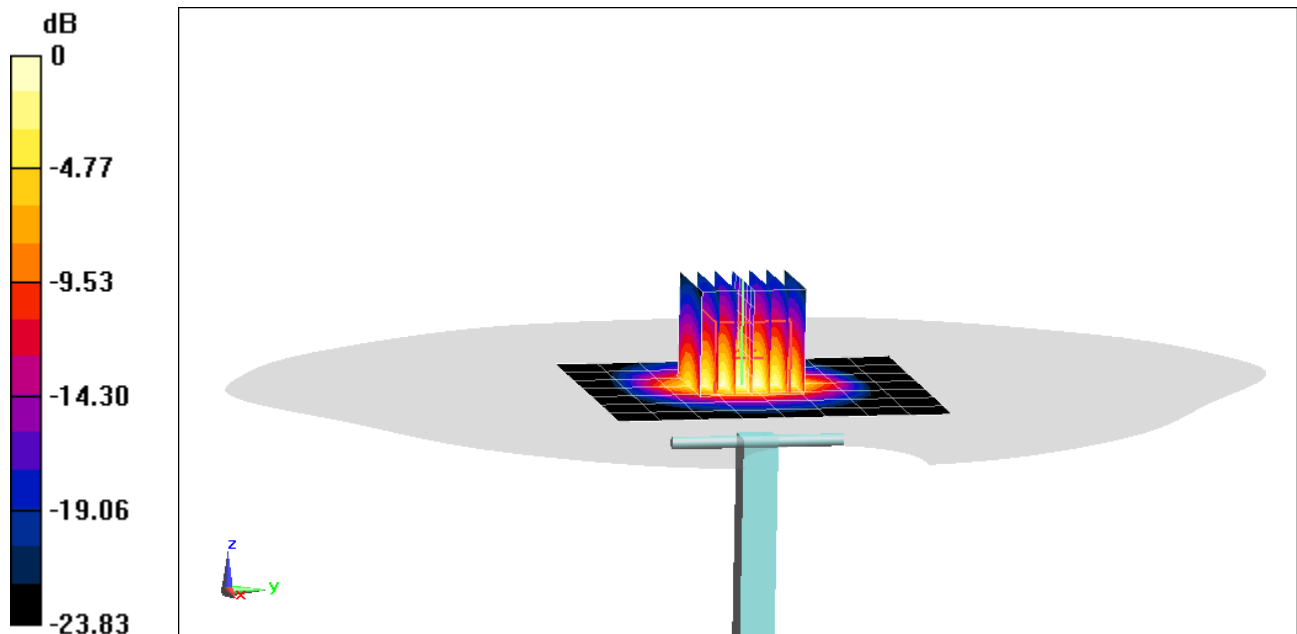
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 12.8 W/kg

SAR(1 g) = 5.85 W/kg; SAR(10 g) = 2.58 W/kg

Deviation(1 g) = 5.79%



PCTEST

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1069

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

Medium: 2450 MHz Body Medium parameters used:

$f = 2600$ MHz; $\sigma = 2.218$ S/m; $\epsilon_r = 51.249$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-25-2020; Ambient Temp: 21.2°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN3949; ConvF(7.69, 7.69, 7.69) @ 2600 MHz; Calibrated: 8/29/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1408; Calibrated: 8/12/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CC; Serial: 1596

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

2600 MHz System Verification at 20.0 dBm (100 mW)

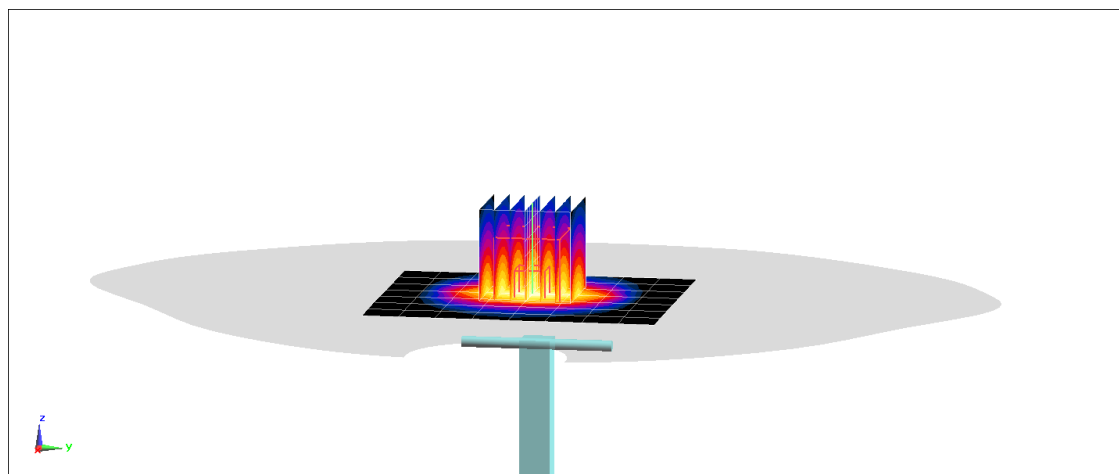
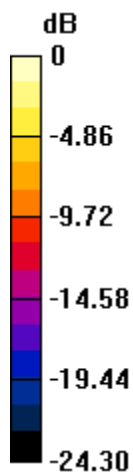
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 11.8 W/kg

SAR(1 g) = 5.28 W/kg; SAR(10 g) = 2.29 W/kg

Deviation(1 g) = -4.52%



0 dB = 9.30 W/kg = 9.68 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1123

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

Medium: 5GHz Body Medium parameters used (interpolated):

$f = 5250 \text{ MHz}$; $\sigma = 5.505 \text{ S/m}$; $\epsilon_r = 47.433$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-11-2020; Ambient Temp: 23.8°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7420; ConvF(4.8, 4.8, 4.8) @ 5250 MHz; Calibrated: 11/21/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 11/13/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CA; Serial: 1275

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

5250 MHz System Verification at 17.0 dBm (50 mW)

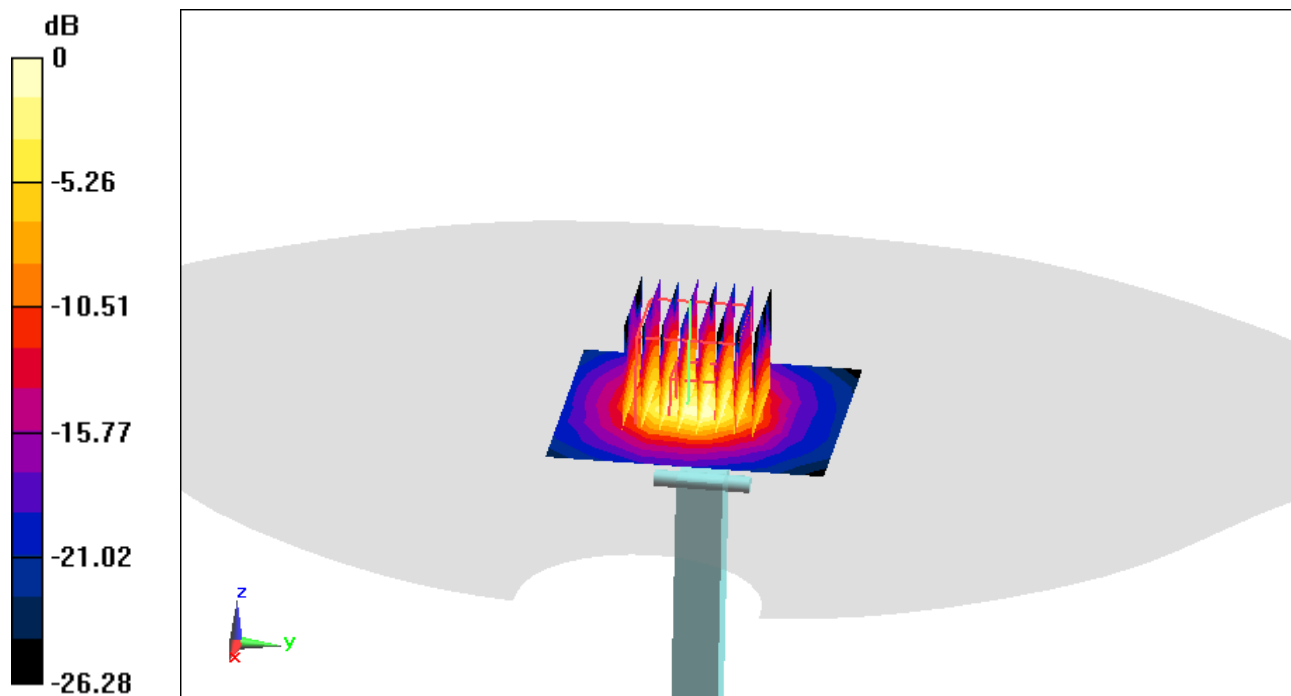
Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm

Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 14.7 W/kg

SAR(1 g) = 3.59 W/kg; SAR(10 g) = 0.993 W/kg

Deviation(1 g) = -2.97%



0 dB = 8.10 W/kg = 9.08 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1123

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

Medium: 5GHz Body Medium parameters used:

$f = 5600 \text{ MHz}$; $\sigma = 5.98 \text{ S/m}$; $\epsilon_r = 46.844$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-11-2020; Ambient Temp: 23.8°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7420; ConvF(4.1, 4.1, 4.1) @ 5600 MHz; Calibrated: 11/21/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 11/13/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CA; Serial: 1275

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

5600 MHz System Verification at 17.0 dBm (50 mW)

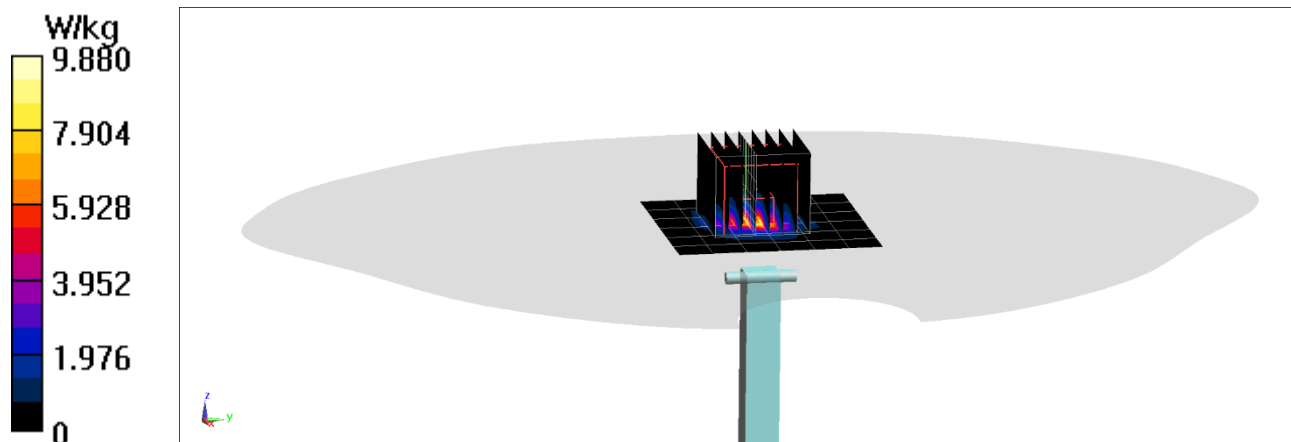
Area Scan (7x7x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Zoom Scan (8x8x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$; Graded Ratio: 1.4

Peak SAR (extrapolated) = 18.1 W/kg

SAR(1 g) = 4.06 W/kg; SAR(10 g) = 1.12 W/kg

Deviation(1 g) = 4.64%



PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1123

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

Medium: 5GHz Body Medium parameters used (interpolated):

$f = 5750 \text{ MHz}$; $\sigma = 6.187 \text{ S/m}$; $\epsilon_r = 46.573$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06-11-2020; Ambient Temp: 23.8°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7420; ConvF(4.28, 4.28, 4.28) @ 5750 MHz; Calibrated: 11/21/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1213; Calibrated: 11/13/2019

Phantom: Twin-SAM V4.0; Type: QD 000 P40 CA; Serial: 1275

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

5750 MHz System Verification at 17.0 dBm (50 mW)

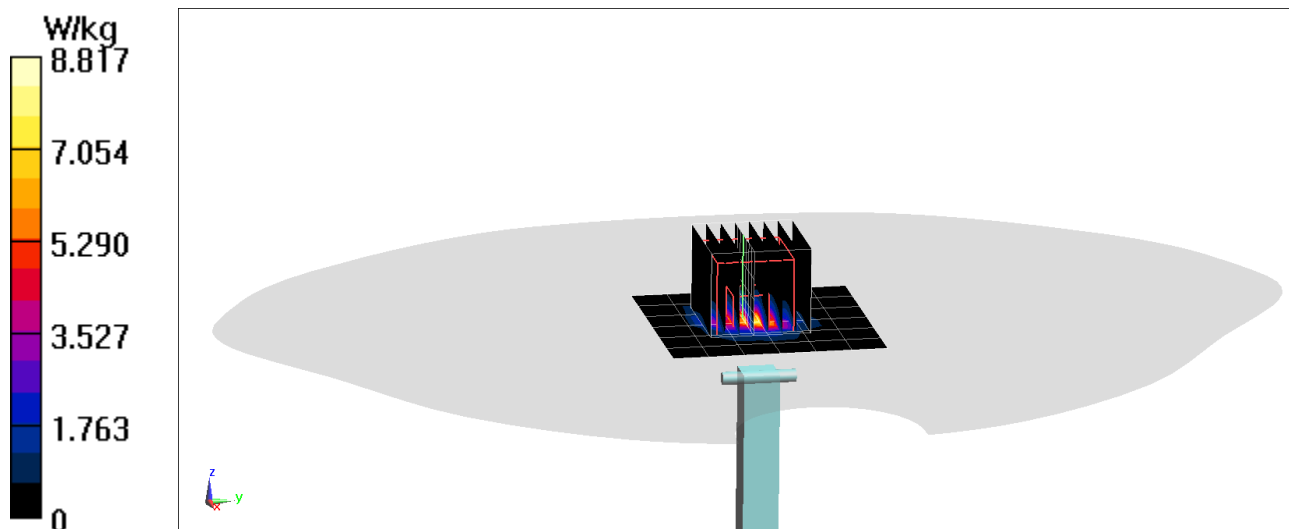
Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm

Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4

Peak SAR (extrapolated) = 16.5 W/kg

SAR(1 g) = 3.53 W/kg; SAR(10 g) = 0.972 W/kg

Deviation(1 g) = -5.49%



APPENDIX C: SAR TISSUE SPECIFICATIONS

FCC ID: BCGA2428	 PCTEST Proud to be part of 	SAR EVALUATION REPORT	Approved by: Quality Manager
Test Dates: 06/08/2020-07/16/2020	DUT Type: Tablet Device		APPENDIX C: Page 1 of 3

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	Ethanediol 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: BCGA2428	 PCTEST Proud to be part of 	SAR EVALUATION REPORT	Approved by: Quality Manager
Test Dates: 06/08/2020-07/16/2020	DUT Type: Tablet Device		APPENDIX C: Page 2 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

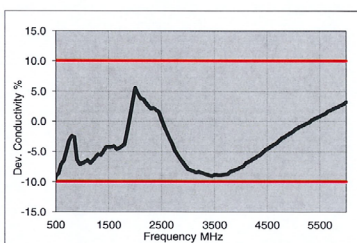
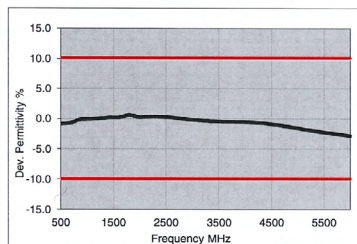
Additional Information

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

TSL Dielectric Parameters

1

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

FCC ID: BCGA2428		SAR EVALUATION REPORT	Approved by: Quality Manager
Test Dates: 06/08/2020-07/16/2020	DUT Type: Tablet Device		APPENDIX C: Page 3 of 3

APPENDIX D: SAR SYSTEM VALIDATION

FCC ID: BCGA2428	 PCTEST Proud to be part of element	SAR EVALUATION REPORT	Approved by: Quality Manager
Test Dates: 06/08/2020 – 07/16/2020	DUT Type: Tablet Device		Appendix D: Page 1 of 2

Per FCC KDB Publication 865664 D02v01r02, SAR system validation status should be documented to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in FCC KDB Publication 865664 D01v01r04 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue- equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

Table D-1
SAR System Validation Summary – 1g

SAR System	Freq. (MHz)	Date	Probe SN	Probe Cal Point		Cond. (σ)	Perm. (ϵ_r)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
AM8	750	5/27/2020	7532	750	Body	0.942	52.946	PASS	PASS	PASS	N/A	N/A	N/A
AM4	835	4/22/2020	7421	835	Body	0.992	54.556	PASS	PASS	PASS	GMSK	PASS	N/A
AM1	1750	4/10/2020	7427	1750	Body	1.483	52.52	PASS	PASS	PASS	N/A	N/A	N/A
AM8	1900	5/27/2020	7532	1900	Body	1.561	50.995	PASS	PASS	PASS	GMSK	PASS	N/A
AM6	2300	3/3/2020	3837	2300	Body	1.867	51.215	PASS	PASS	PASS	N/A	N/A	N/A
AM3	2450	9/4/2019	3949	2450	Body	1.955	52.22	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
AM3	2600	9/4/2019	3949	2600	Body	2.096	51.97	PASS	PASS	PASS	TDD	PASS	N/A
AM2	5250	12/3/2019	7420	5250	Body	5.5	48.38	PASS	PASS	PASS	OFDM	N/A	PASS
AM2	5600	12/3/2019	7420	5600	Body	5.974	47.79	PASS	PASS	PASS	OFDM	N/A	PASS
AM2	5750	12/3/2019	7420	5750	Body	6.18	47.556	PASS	PASS	PASS	OFDM	N/A	PASS

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to FCC KDB Publication 865664 D01v01r04.

FCC ID: BCGA2428	 PCTEST Proud to be part of element	SAR EVALUATION REPORT	Approved by: Quality Manager
Test Dates: 06/08/2020 – 07/16/2020	DUT Type: Tablet Device		Appendix D: Page 2 of 2