

APPENDIX A: SAR TEST DATA

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09839

Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 836.6 MHz; Duty Cycle: 1:2.076

Medium: 835 Head; Medium parameters used (interpolated):

$f = 836.6 \text{ MHz}$; $\sigma = 0.907 \text{ S/m}$; $\epsilon_r = 40.969$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 05/13/2020; Ambient Temp: 21.5°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 836.6 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 9/17/2019

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)

Mode: GPRS 850, Left Head, Cheek, Mid.ch, 4 Tx slots

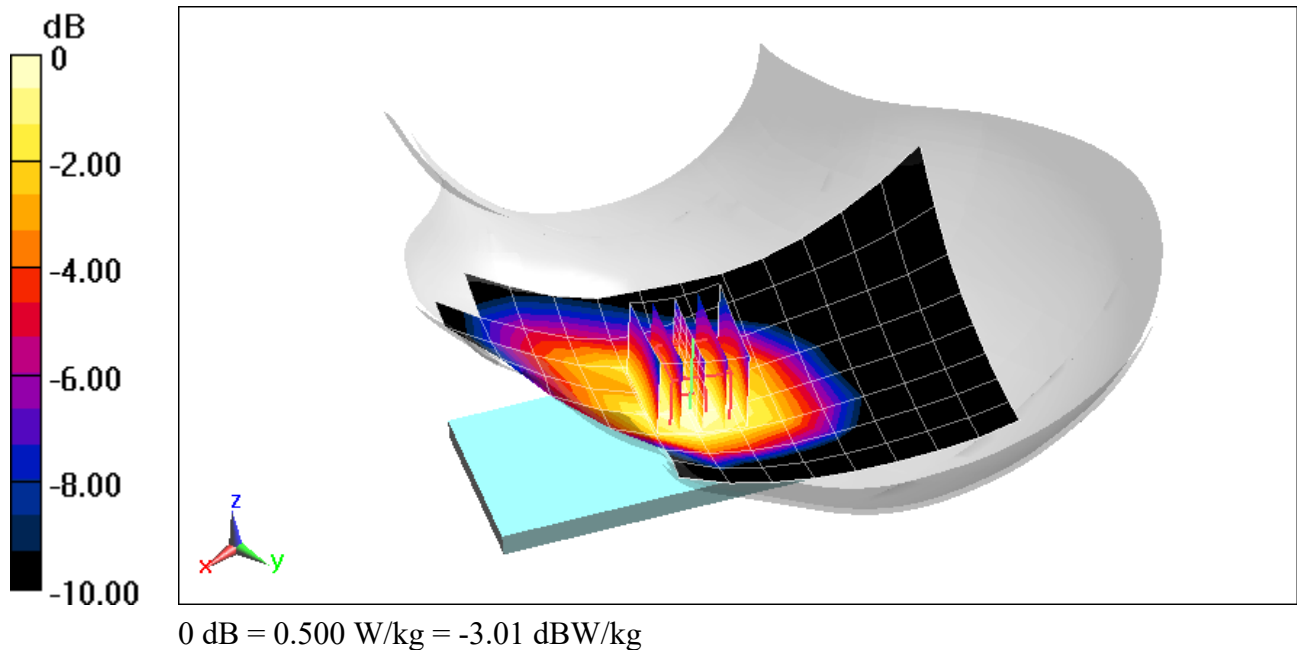
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (6x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 21.58 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.512 W/kg

SAR(1 g) = 0.404 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:2.076

Medium: 1900 Head; Medium parameters used:

$f = 1880$ MHz; $\sigma = 1.438$ S/m; $\epsilon_r = 40.978$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Test Date: 05/11/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7410; ConvF(8.11, 8.11, 8.11) @ 1880 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

Mode: GPRS 1900, Right Head, Cheek, Mid.ch, 4 Tx slots

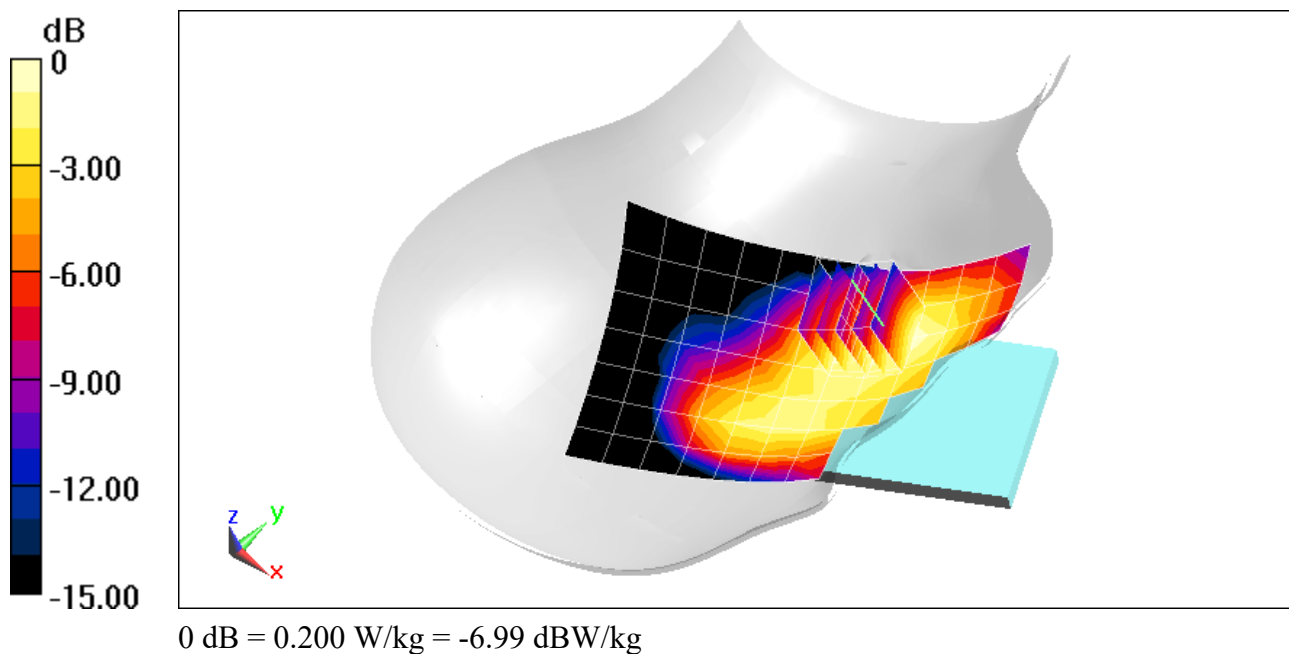
Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 11.20 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.256 W/kg

SAR(1 g) = 0.167 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09839

Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium: 835 Head; Medium parameters used (interpolated):

$f = 836.6$ MHz; $\sigma = 0.874$ S/m; $\epsilon_r = 41.94$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Test Date: 05/06/2020; Ambient Temp: 21.3°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 836.6 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 9/17/2019

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)

Mode: UMTS 850, Left Head, Cheek, Mid.ch

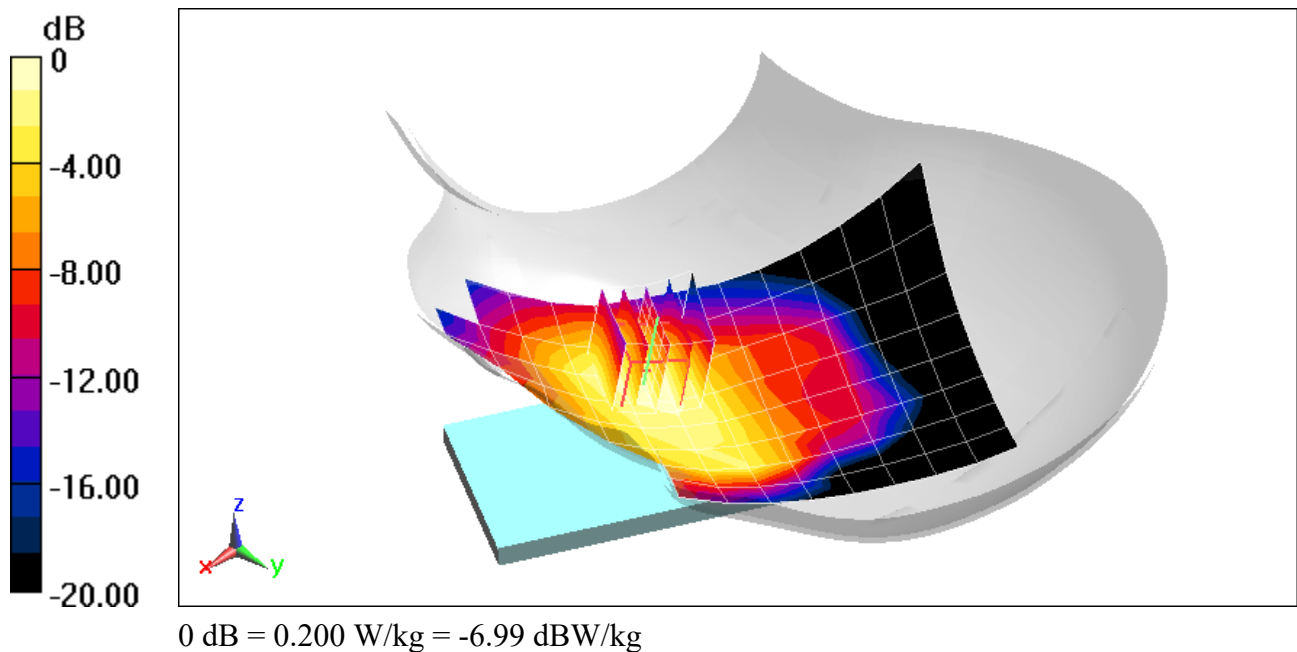
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 13.54 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.217 W/kg

SAR(1 g) = 0.147 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09847

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

Medium: 1750 Head; Medium parameters used (interpolated):

$f = 1732.4$ MHz; $\sigma = 1.395$ S/m; $\epsilon_r = 41.061$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Test Date: 05/11/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7570; ConvF(8.68, 8.68, 8.68) @ 1732.4 MHz; Calibrated: 12/11/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 12/18/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964

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

Mode: UMTS 1750, Right Head, Cheek, Mid.ch

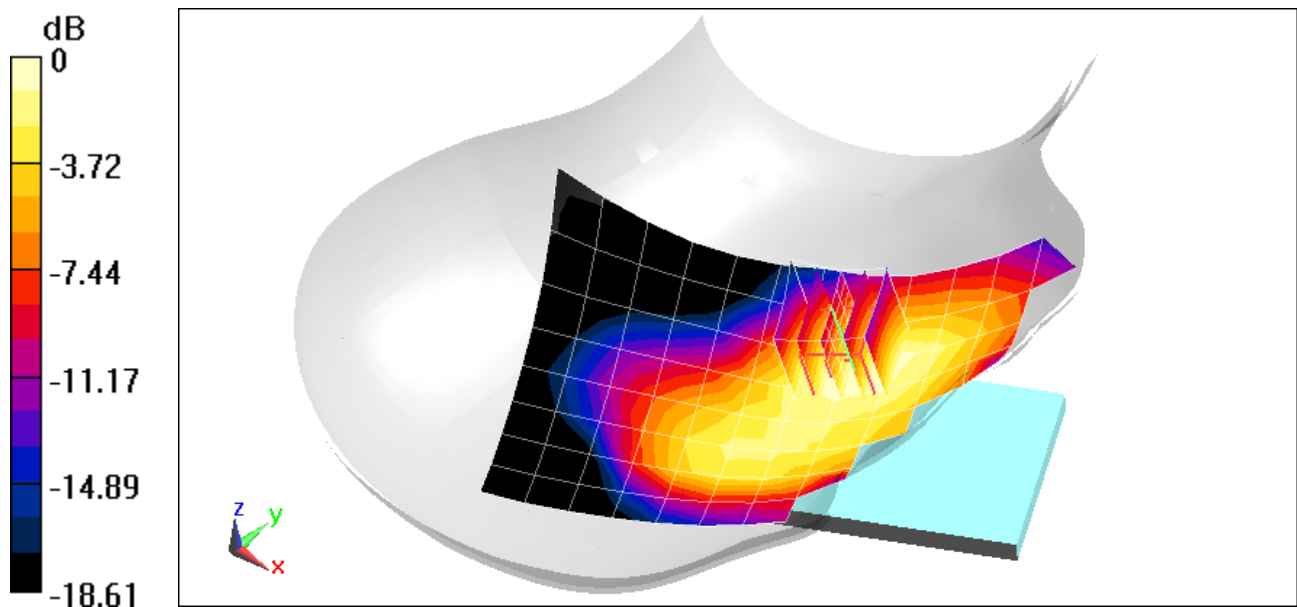
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 14.59 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.439 W/kg

SAR(1 g) = 0.276 W/kg



0 dB = 0.360 W/kg = -4.44 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: 1900 Head; Medium parameters used:

$f = 1880$ MHz; $\sigma = 1.438$ S/m; $\epsilon_r = 40.978$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Test Date: 05/11/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7410; ConvF(8.11, 8.11, 8.11) @ 1880 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

Mode: UMTS 1900, Right Head, Cheek, Mid.ch

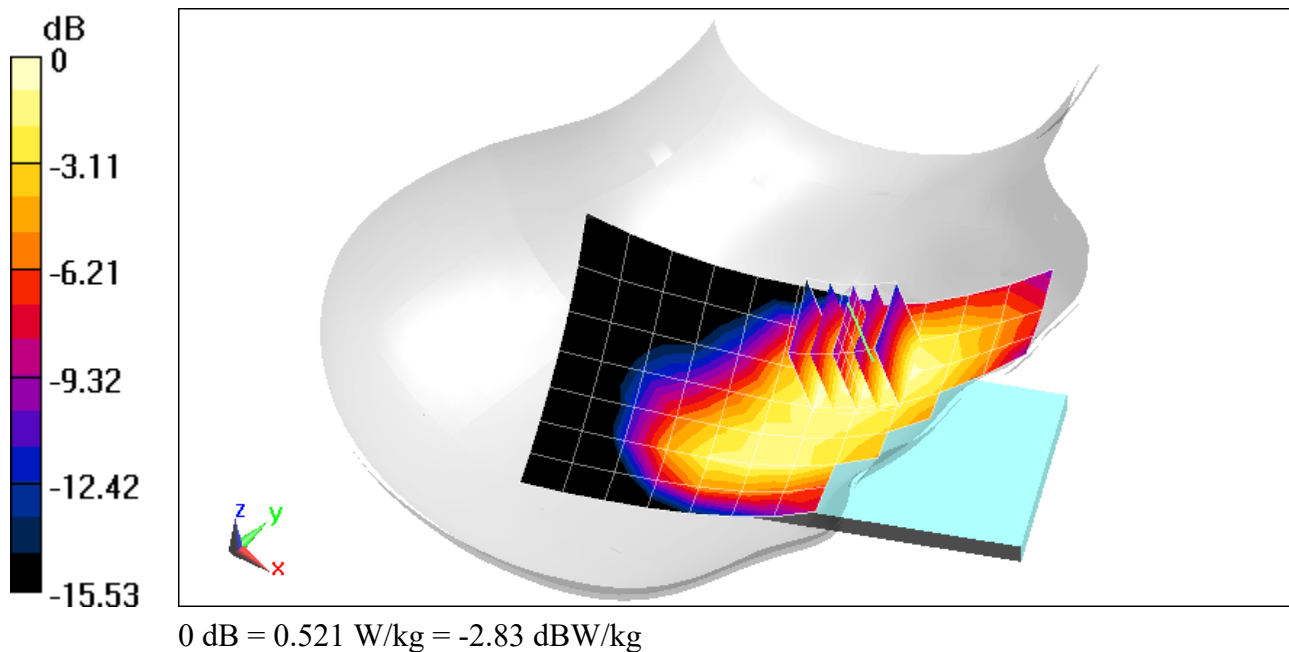
Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 17.39 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.607 W/kg

SAR(1 g) = 0.408 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09839

Communication System: UID 0, Cellular CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1

Medium: 835 Head; Medium parameters used (interpolated):

$f = 820.1$ MHz; $\sigma = 0.867$ S/m; $\epsilon_r = 41.992$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Test Date: 05/06/2020; Ambient Temp: 21.3°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 820.1 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 9/17/2019

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)

Mode: Cell. CDMA, BC 10, Left Head, Cheek, Mid.ch

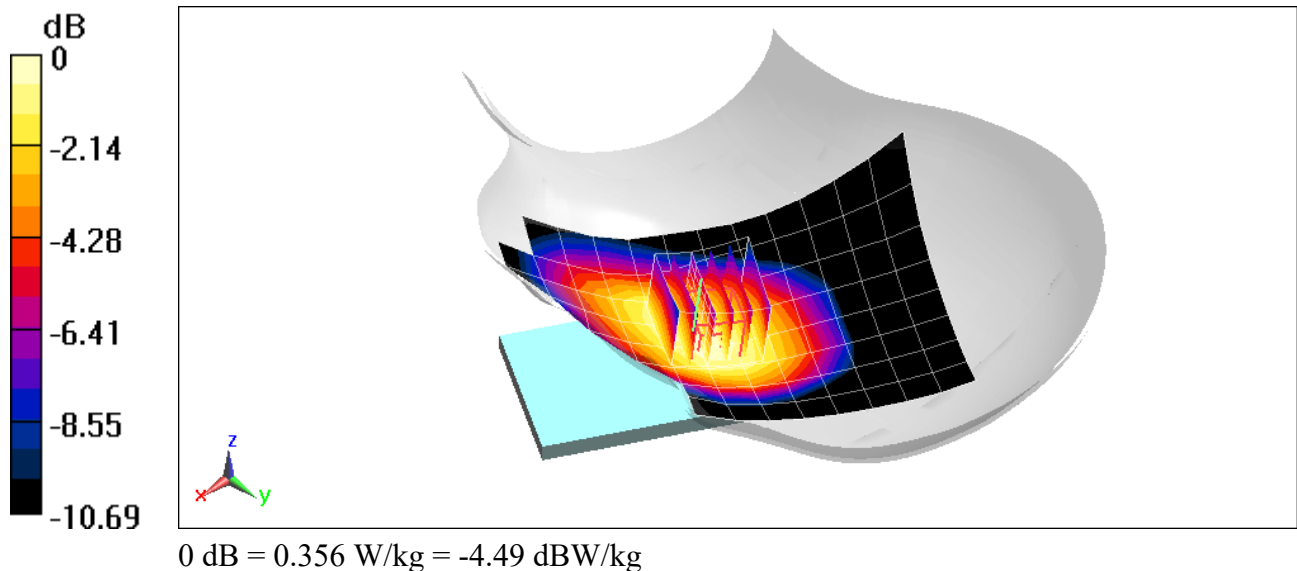
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 19.01 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.385 W/kg

SAR(1 g) = 0.302 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09839

Communication System: UID 0, Cellular CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: 835 Head; Medium parameters used (interpolated):

$f = 836.52 \text{ MHz}$; $\sigma = 0.874 \text{ S/m}$; $\epsilon_r = 41.941$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 05/06/2020; Ambient Temp: 21.3°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 836.52 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 9/17/2019

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)

Mode: Cell. CDMA, BC 0, Left Head, Cheek, Mid.ch

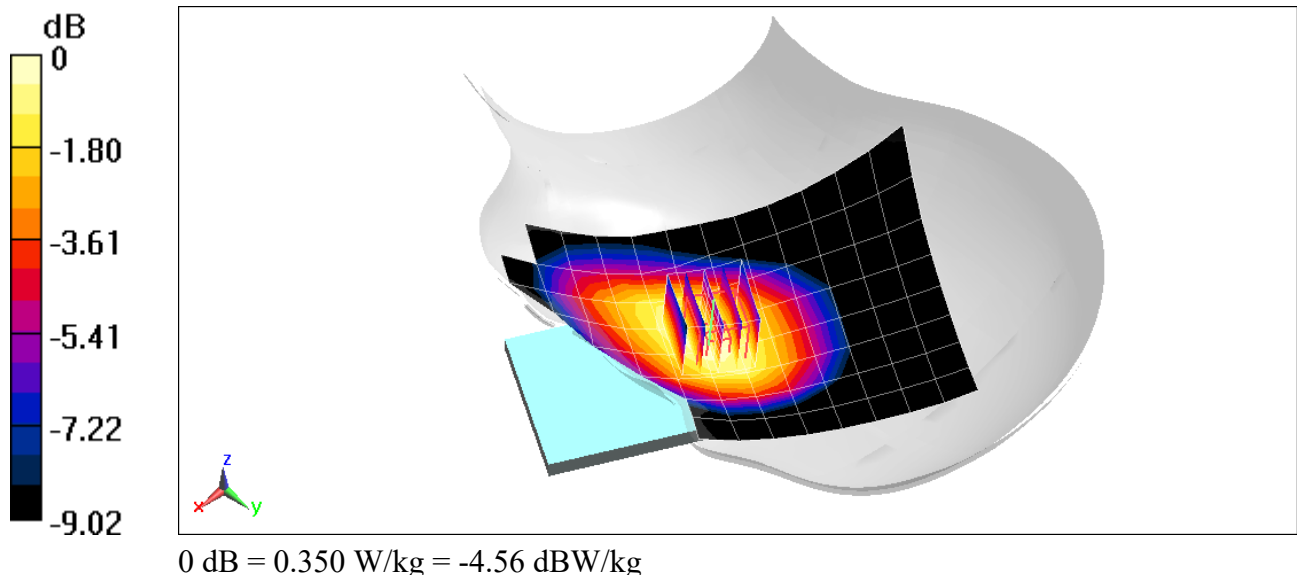
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Reference Value = 19.01 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.378 W/kg

SAR(1 g) = 0.294 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

Communication System: UID 0, CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: 1900 Head; Medium parameters used:

$f = 1880$ MHz; $\sigma = 1.438$ S/m; $\epsilon_r = 40.978$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Test Date: 05/11/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7410; ConvF(8.11, 8.11, 8.11) @ 1880 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

Mode: PCS CDMA, Right Head, Cheek, Mid.ch

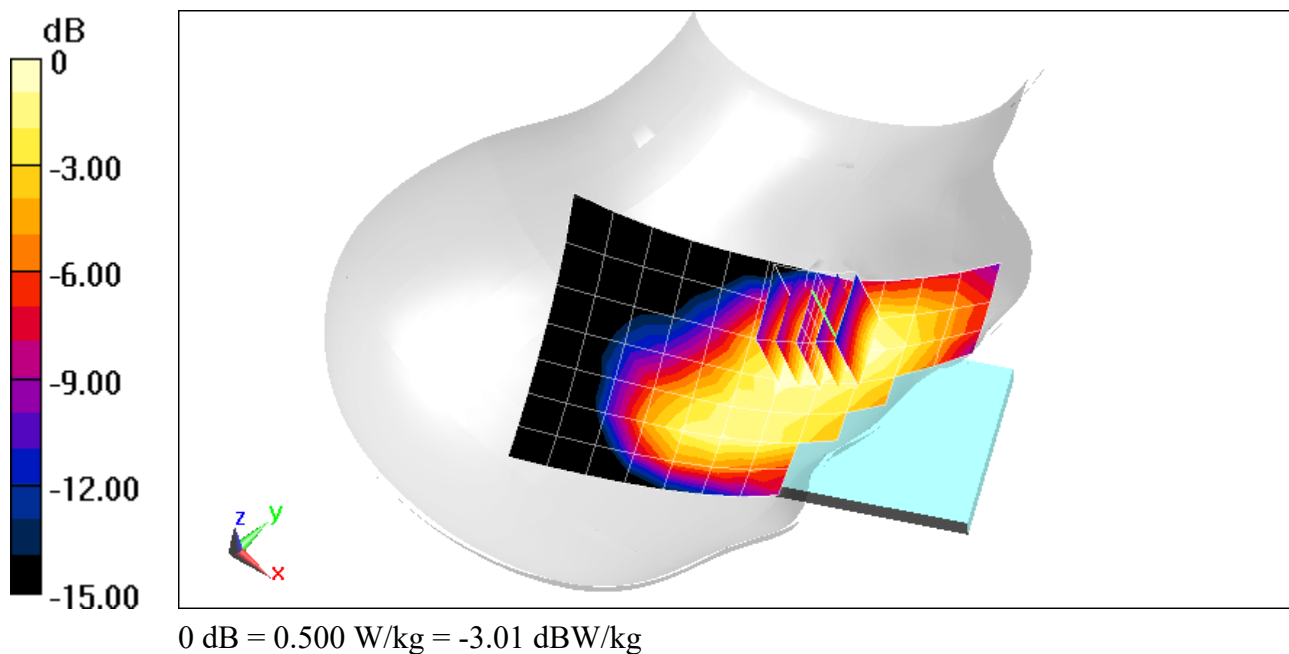
Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 15.83 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.563 W/kg

SAR(1 g) = 0.375 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

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

Medium: 750 Head; Medium parameters used (interpolated):

$f = 680.5 \text{ MHz}$; $\sigma = 0.864 \text{ S/m}$; $\epsilon_r = 43.966$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 04/30/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7410; ConvF(9.95, 9.95, 9.95) @ 680.5 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

**Mode: LTE Band 71, Left Head, Cheek, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

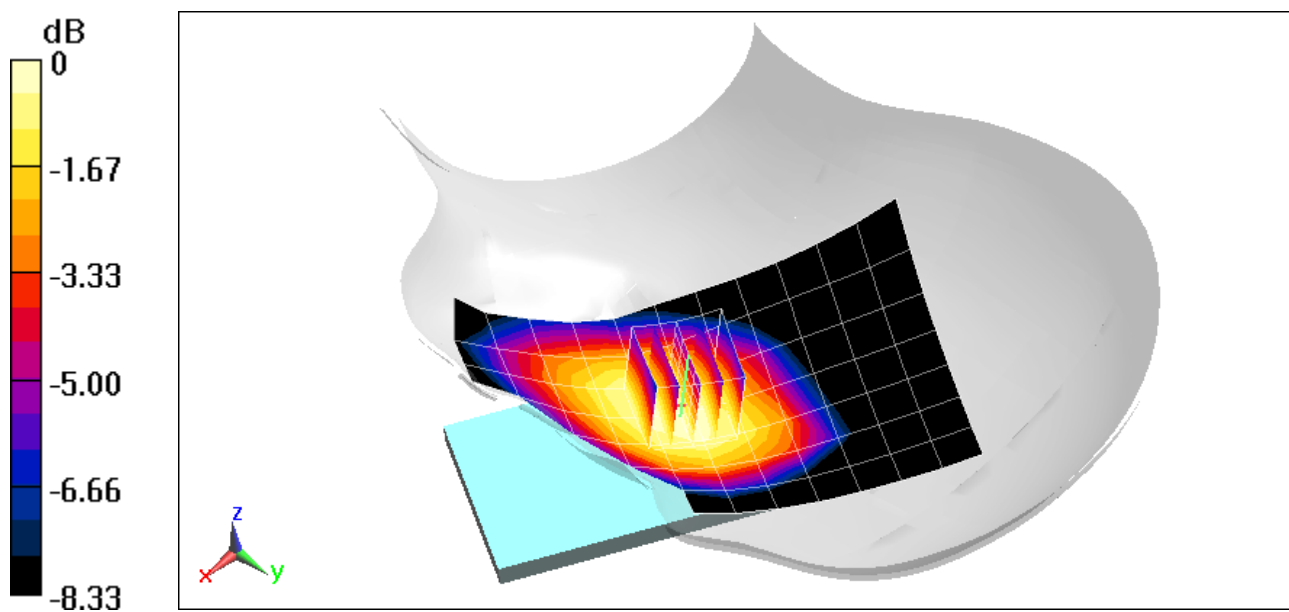
Area Scan (8x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Reference Value = 16.09 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.241 W/kg

SAR(1 g) = 0.206 W/kg



0 dB = 0.231 W/kg = -6.36 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

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

Medium: 750 Head; Medium parameters used (interpolated):

$f = 707.5 \text{ MHz}$; $\sigma = 0.873 \text{ S/m}$; $\epsilon_r = 43.898$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 04/30/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7410; ConvF(9.95, 9.95, 9.95) @ 707.5 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

**Mode: LTE Band 12, Left Head, Cheek, Mid.ch,
QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset**

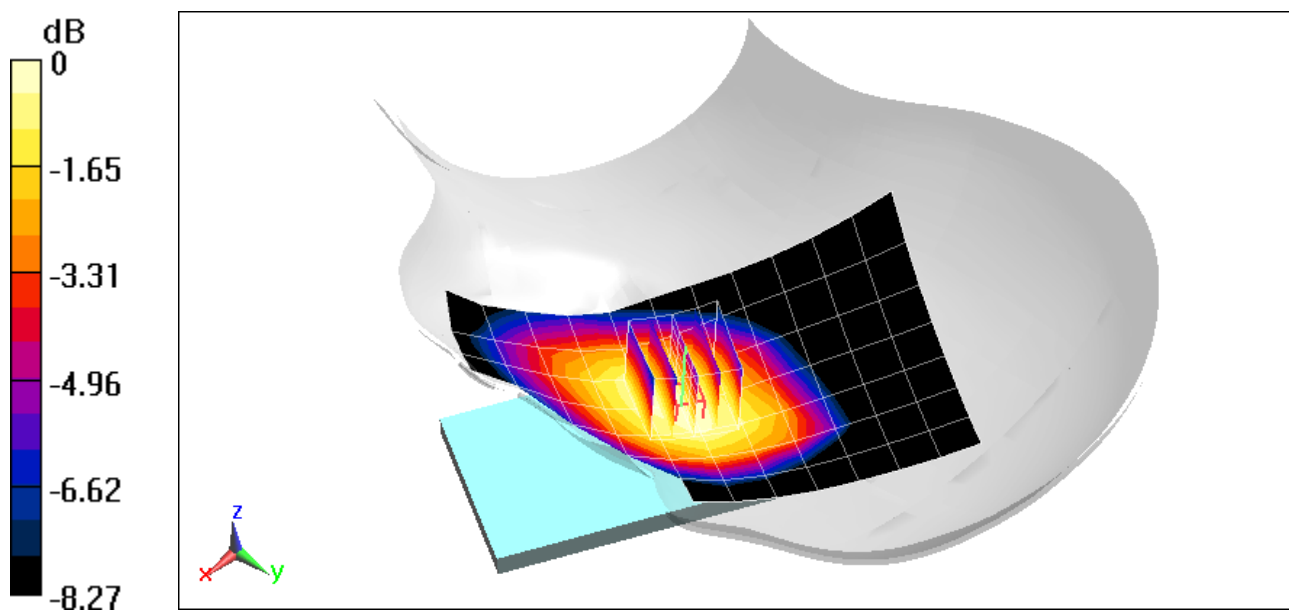
Area Scan (8x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Reference Value = 19.37 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.341 W/kg

SAR(1 g) = 0.292 W/kg



0 dB = 0.330 W/kg = -4.81 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

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

Medium: 750 Head; Medium parameters used (interpolated):

$f = 782 \text{ MHz}$; $\sigma = 0.898 \text{ S/m}$; $\epsilon_r = 43.67$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Test Date: 04/30/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7410; ConvF(9.95, 9.95, 9.95) @ 782 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

**Mode: LTE Band 13, Left Head, Cheek, Mid.ch,
QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset**

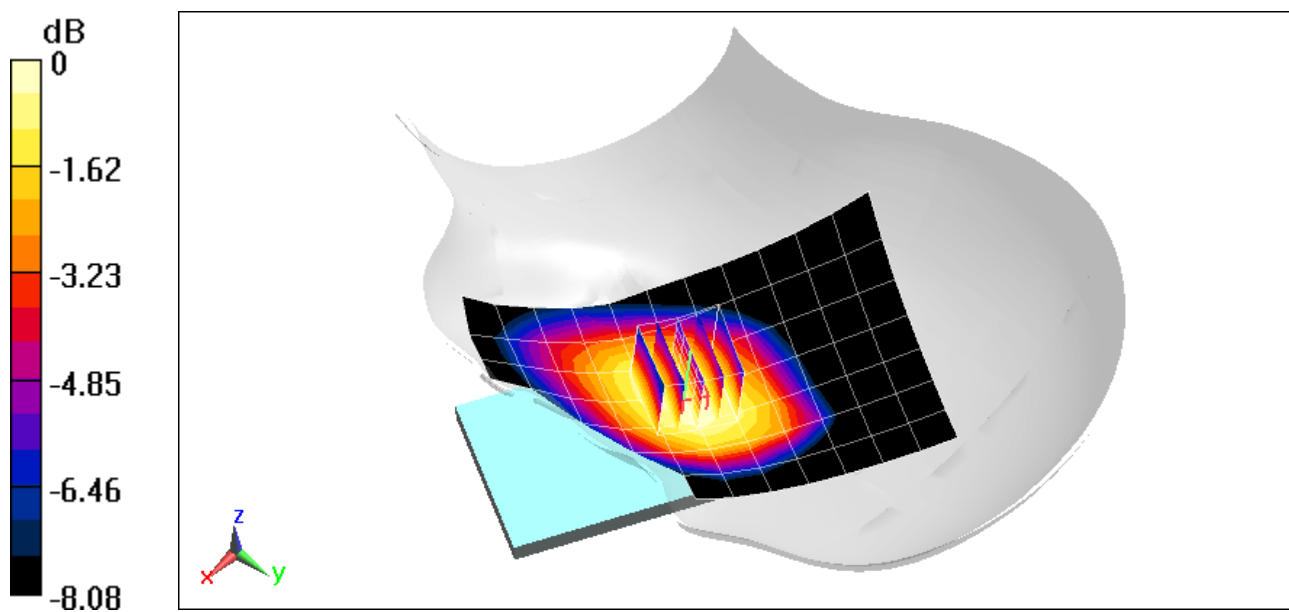
Area Scan (8x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Reference Value = 19.73 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.368 W/kg

SAR(1 g) = 0.314 W/kg



0 dB = 0.355 W/kg = -4.50 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09839

Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1

Medium: 835 Head; Medium parameters used (interpolated):

$f = 831.5$ MHz; $\sigma = 0.905$ S/m; $\epsilon_r = 40.985$; $\rho = 1000$ kg/m³

Phantom section: Left Section

Test Date: 05/13/2020; Ambient Temp: 21.5°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 831.5 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 9/17/2019

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)

**Mode: LTE Band 26 (Cell.), Left Head, Cheek, Mid.ch,
15 MHz Bandwidth, QPSK, 1 RB, 36 RB Offset**

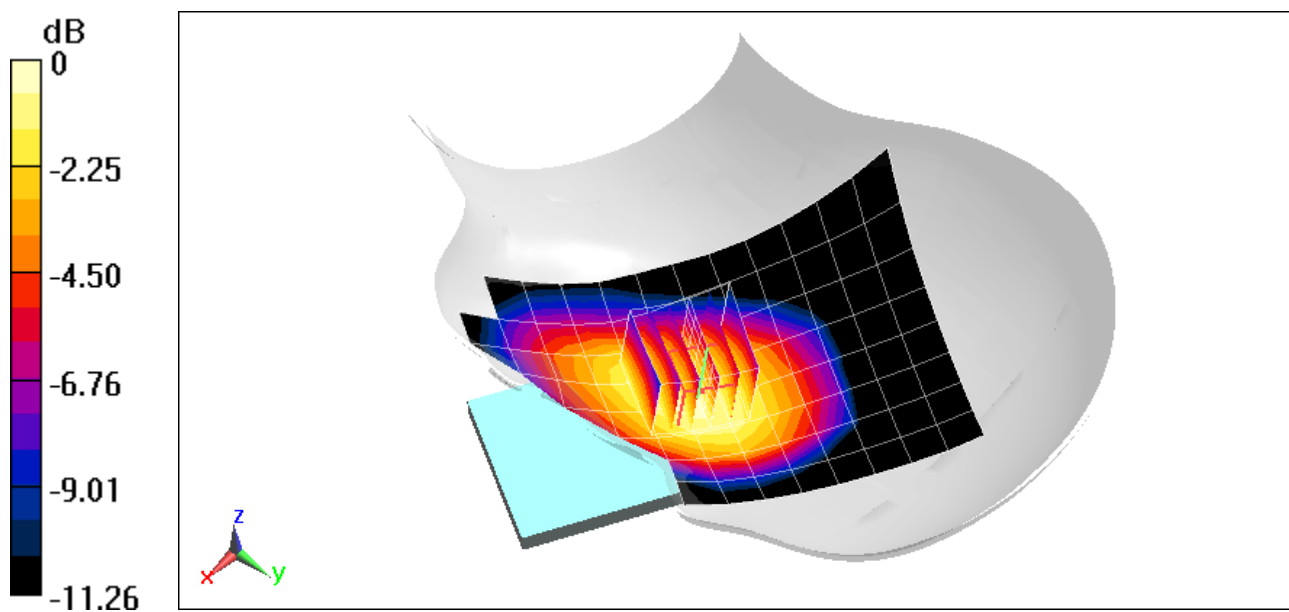
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 20.62 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.477 W/kg

SAR(1 g) = 0.368 W/kg



0 dB = 0.440 W/kg = -3.57 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

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

Medium: 1750 Head; Medium parameters used:

$f = 1770$ MHz; $\sigma = 1.351$ S/m; $\epsilon_r = 40.589$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Test Date: 05/13/2020; Ambient Temp 23.9°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN7410; ConvF(8.46, 8.46, 8.46) @ 1770 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

**Mode: LTE Band 66 (AWS), Right Head, Cheek, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

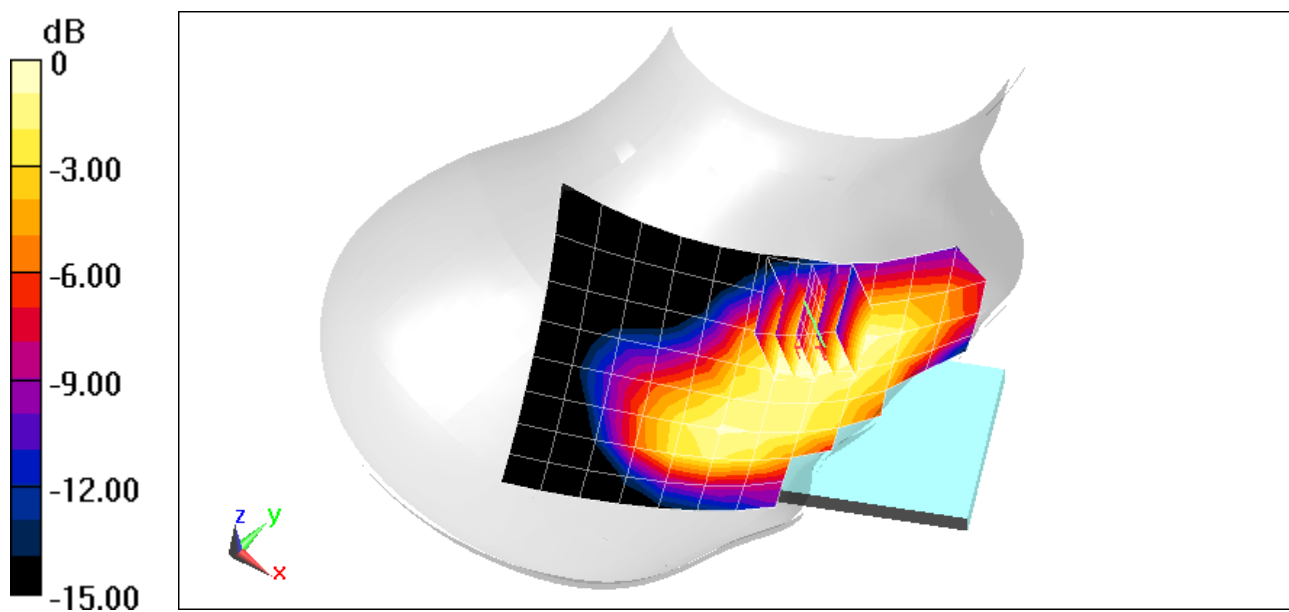
Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 15.23 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.418 W/kg

SAR(1 g) = 0.273 W/kg



0 dB = 0.350 W/kg = -4.56 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09839

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

Medium: 1900 Head; Medium parameters used:

$f = 1905 \text{ MHz}$; $\sigma = 1.453 \text{ S/m}$; $\epsilon_r = 40.952$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Test Date: 05/11/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7410; ConvF(8.11, 8.11, 8.11) @ 1905 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

**Mode: LTE Band 25 (PCS), Right Head, Cheek, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

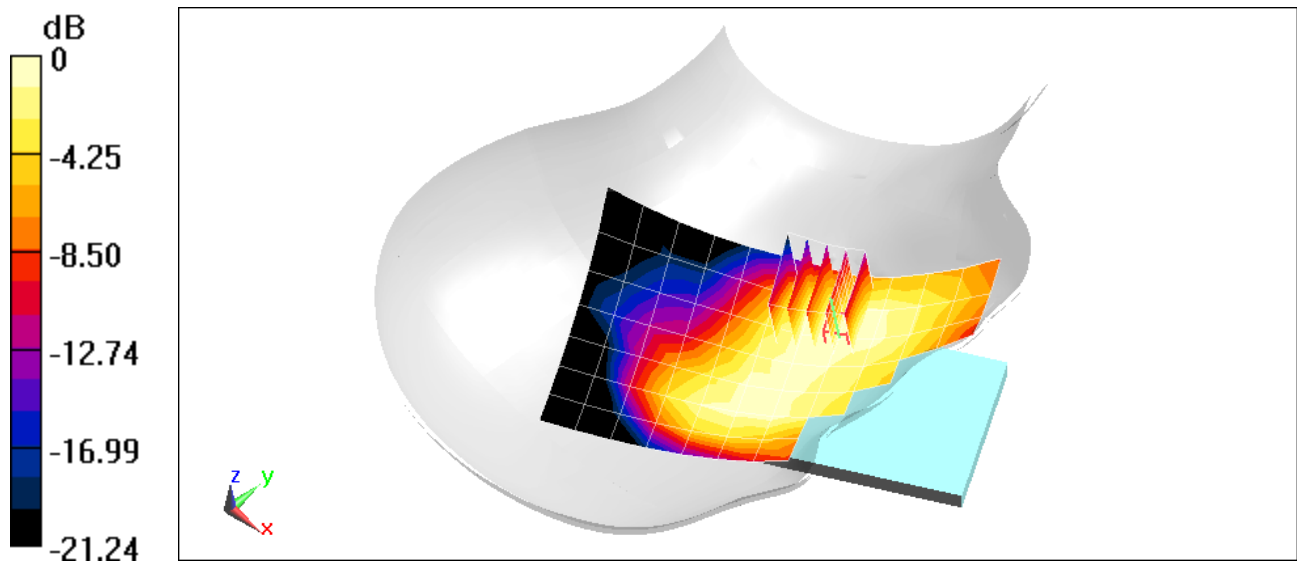
Area Scan (8x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Reference Value = 14.82 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.448 W/kg

SAR(1 g) = 0.290 W/kg



0 dB = 0.379 W/kg = -4.21 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

Communication System: UID 0, LTE Band 41 (Class 2); Frequency: 2506 MHz; Duty Cycle: 1:2.31

Medium: 2450 Head; Medium parameters used (interpolated):

$f = 2506$ MHz; $\sigma = 1.824$ S/m; $\epsilon_r = 37.655$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Test Date: 05/13/2020; Ambient Temp: 21.6°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2506 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 1/13/2020

Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647

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

**Mode: LTE Band 41 PC2, Right Head, Cheek, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

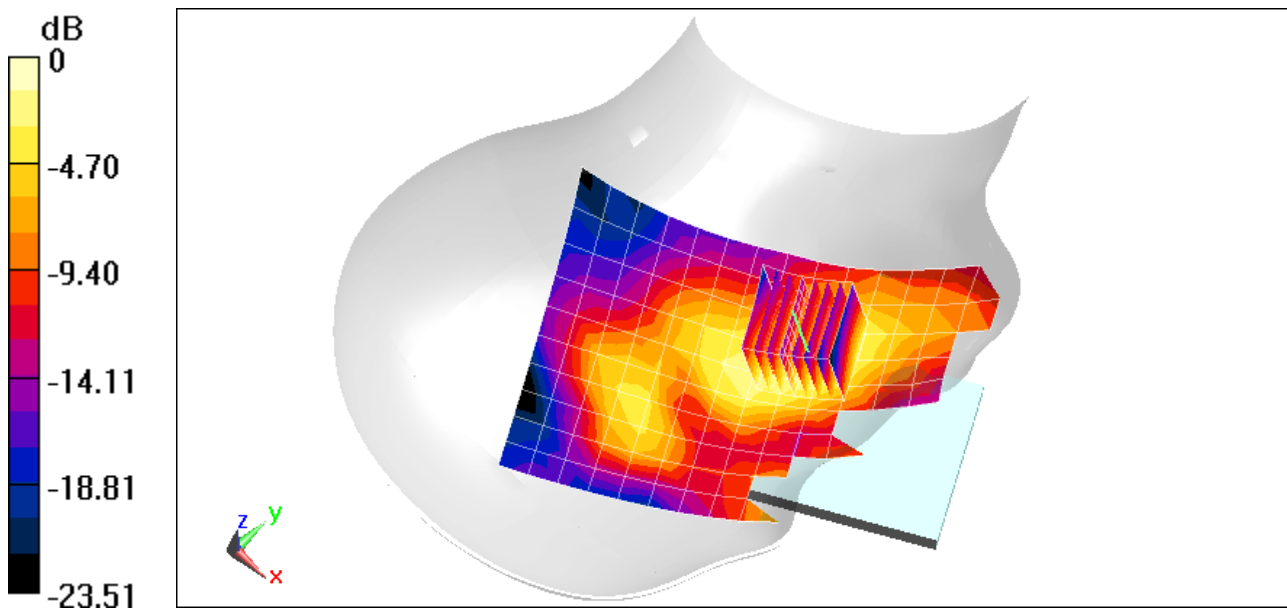
Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm

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

Reference Value = 10.38 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.272 W/kg

SAR(1 g) = 0.154 W/kg



0 dB = 0.226 W/kg = -6.46 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 10001

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

Medium: 2450 Head; Medium parameters used (interpolated):

$f = 2437$ MHz; $\sigma = 1.771$ S/m; $\epsilon_r = 37.766$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Test Date: 05/13/2020; Ambient Temp: 21.6°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2437 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 1/13/2020

Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647

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

Mode: IEEE 802.11b, 22 MHz Bandwidth, Right Head, Cheek, Ch 6, 1 Mbps

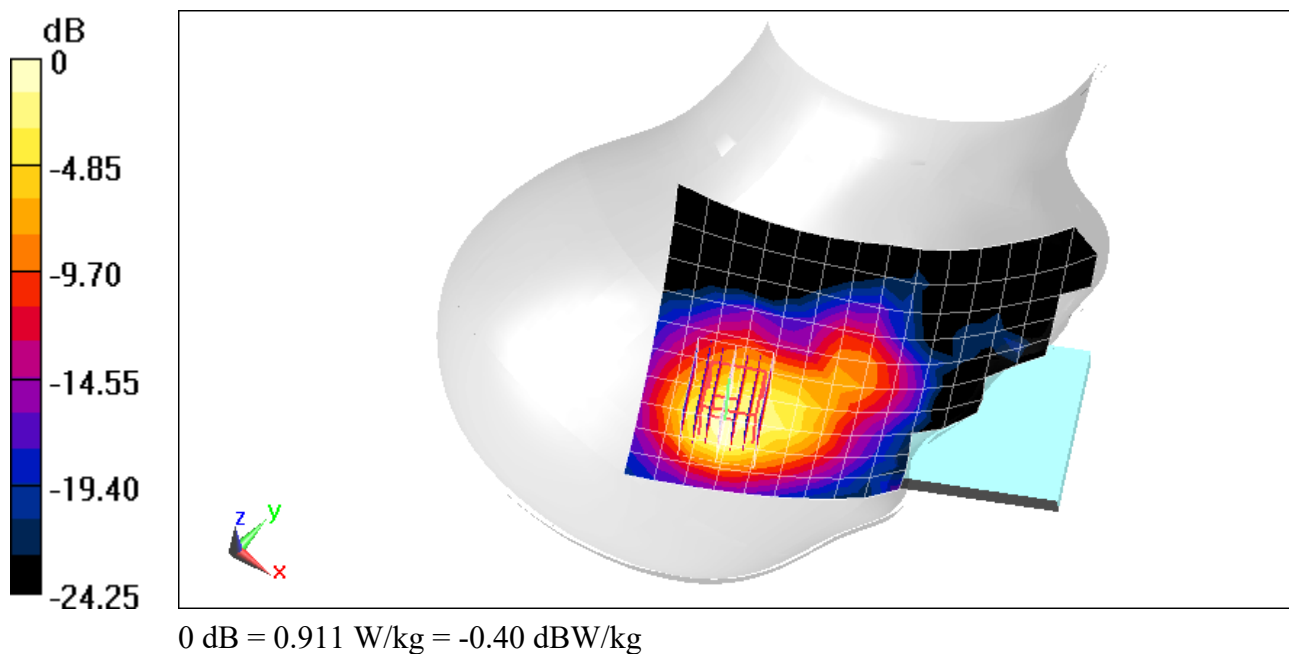
Area Scan (11x16x1): Measurement grid: dx=12mm, dy=12mm

Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.075 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.16 W/kg

SAR(1 g) = 0.546 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 10001

Communication System: UID 0, Bluetooth; Frequency: 2480 MHz; Duty Cycle: 1:1.297

Medium: 2450 Head; Medium parameters used:

$f = 2480$ MHz; $\sigma = 1.843$ S/m; $\epsilon_r = 38.593$; $\rho = 1000$ kg/m³

Phantom section: Right Section

Test Date: 05/06/2020; Ambient Temp: 22.9°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2480 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 1/13/2020

Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647

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

Mode: Bluetooth, Right Head, Cheek, Ch 78, 1 Mbps

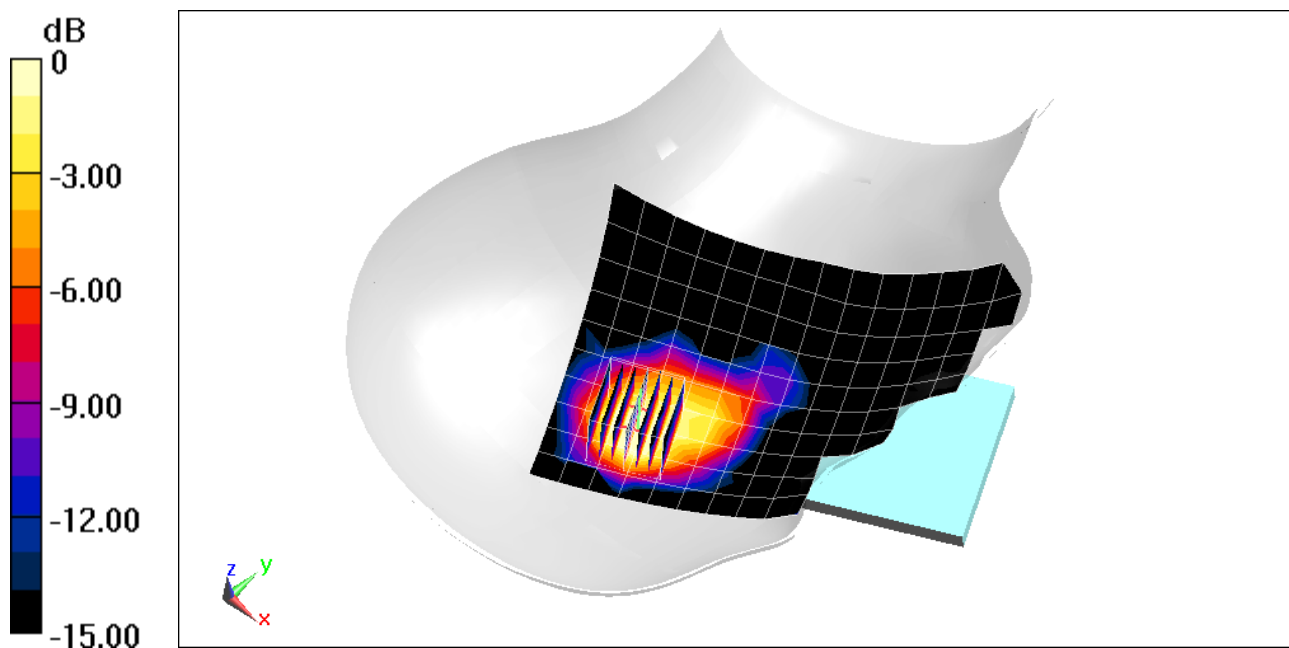
Area Scan (11x16x1): Measurement grid: dx=12mm, dy=12mm

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

Reference Value = 5.195 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.104 W/kg

SAR(1 g) = 0.046 W/kg



0 dB = 0.0500 W/kg = -13.01 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09821

Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 824.2 MHz; Duty Cycle: 1:2.076

Medium: 835 Body; Medium parameters used (interpolated):

$f = 824.2$ MHz; $\sigma = 0.939$ S/m; $\epsilon_r = 53.667$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/13/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7570; ConvF(9.83, 9.83, 9.83) @ 824.2 MHz; Calibrated: 12/11/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 12/18/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964

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

Mode: GPRS 850, Body SAR, Back side, Low.ch, 4 Tx Slots

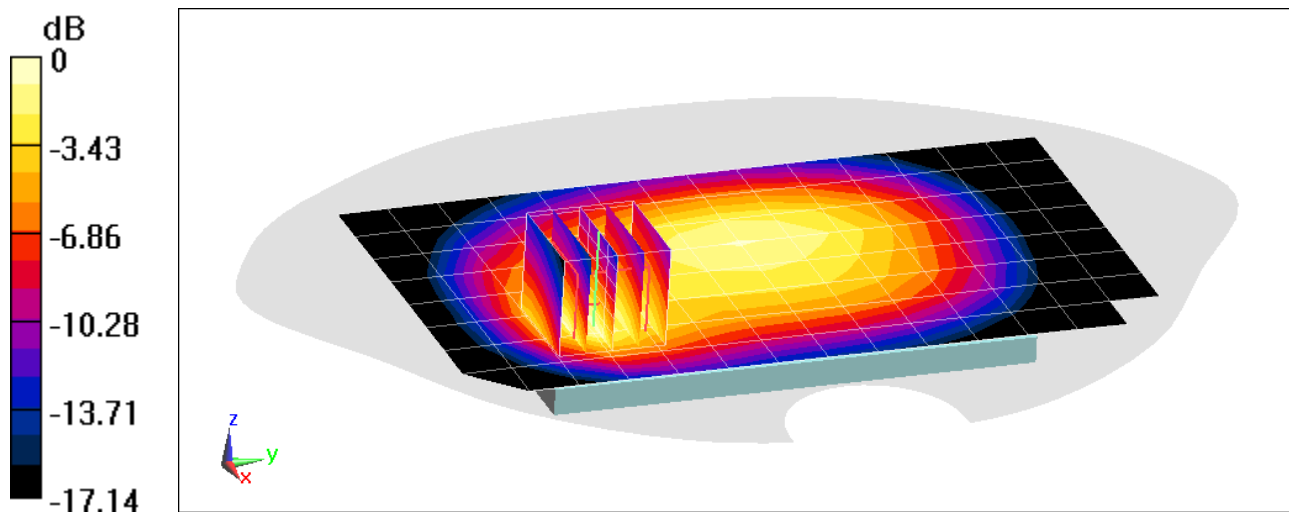
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 27.80 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.682 W/kg



0 dB = 0.973 W/kg = -0.12 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09821

Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:2.076

Medium: 1900 Body; Medium parameters used:

$f = 1880$ MHz; $\sigma = 1.545$ S/m; $\epsilon_r = 52.726$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/12/2020; Ambient Temp: 24.9°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7552; ConvF(7.58, 7.58, 7.58) @ 1880 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1449; Calibrated: 9/12/2019

Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792

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

Mode: GPRS 1900, Body SAR, Back side, Mid.ch, 4 Tx Slots

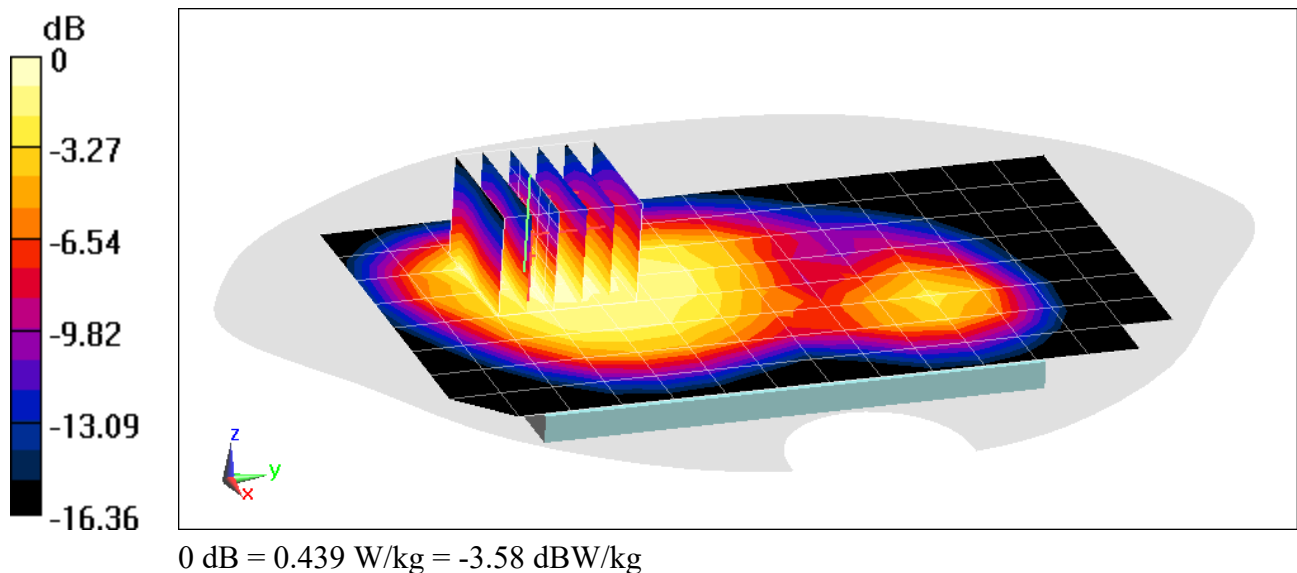
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 14.85 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.518 W/kg

SAR(1 g) = 0.314 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09821

Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:2.076

Medium: 1900 Body; Medium parameters used:

$f = 1880$ MHz; $\sigma = 1.545$ S/m; $\epsilon_r = 52.726$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/12/2020; Ambient Temp: 24.9°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7552; ConvF(7.58, 7.58, 7.58) @ 1880 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1449; Calibrated: 9/12/2019

Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792

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

Mode: GPRS 1900, Body SAR, Front side, Mid.ch, 4 Tx Slots

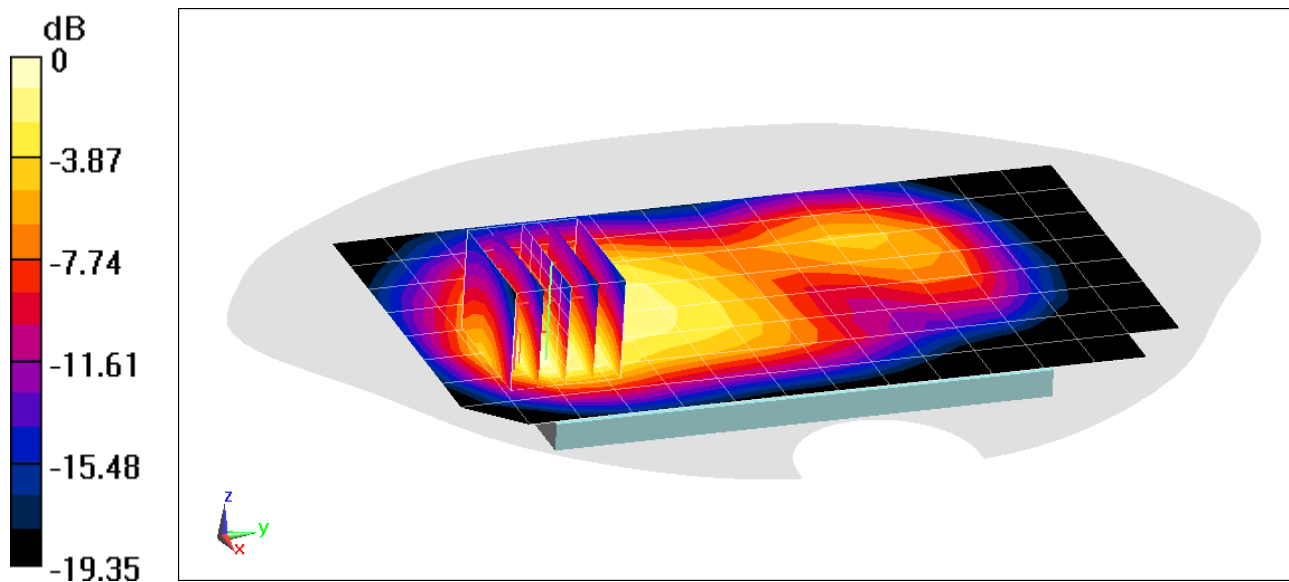
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.06 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.678 W/kg

SAR(1 g) = 0.386 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09839

Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium: 835 Body; Medium parameters used (interpolated):

$f = 836.6 \text{ MHz}$; $\sigma = 0.967 \text{ S/m}$; $\epsilon_r = 54.139$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/04/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.6 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687

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

Mode: UMTS 850, Body SAR, Back side, Mid.ch

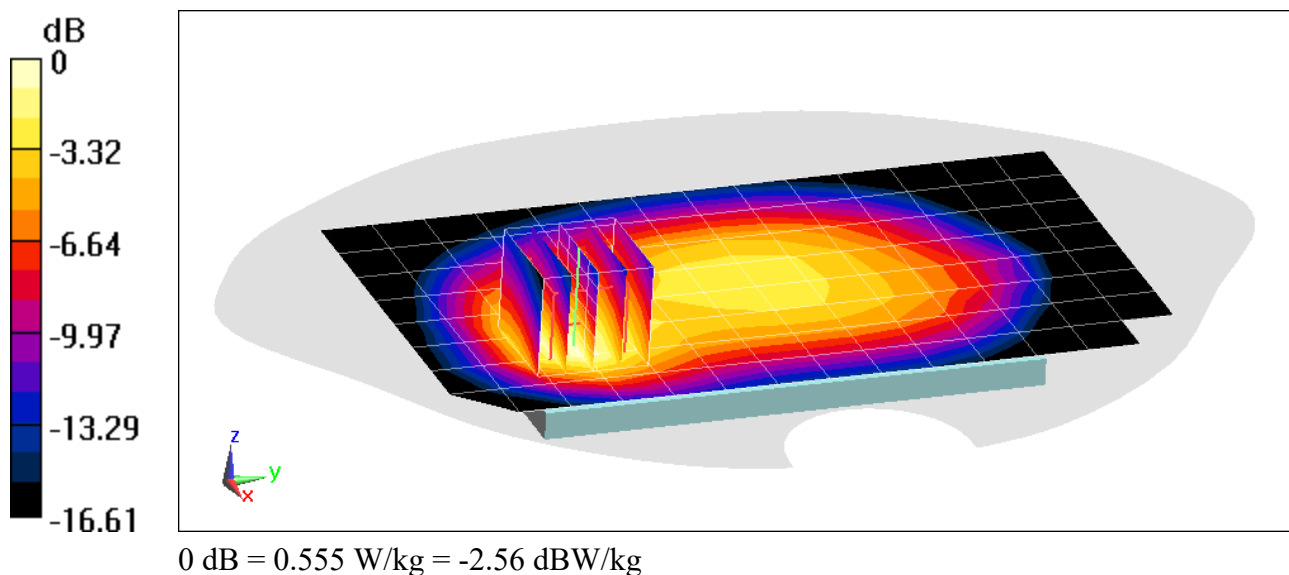
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Reference Value = 21.17 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.724 W/kg

SAR(1 g) = 0.395 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09847

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

Medium: 1750 Body; Medium parameters used (interpolated):

$f = 1732.4$ MHz; $\sigma = 1.512$ S/m; $\epsilon_r = 51.937$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/29/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.2°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1732.4 MHz; Calibrated: 3/17/2020

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)

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

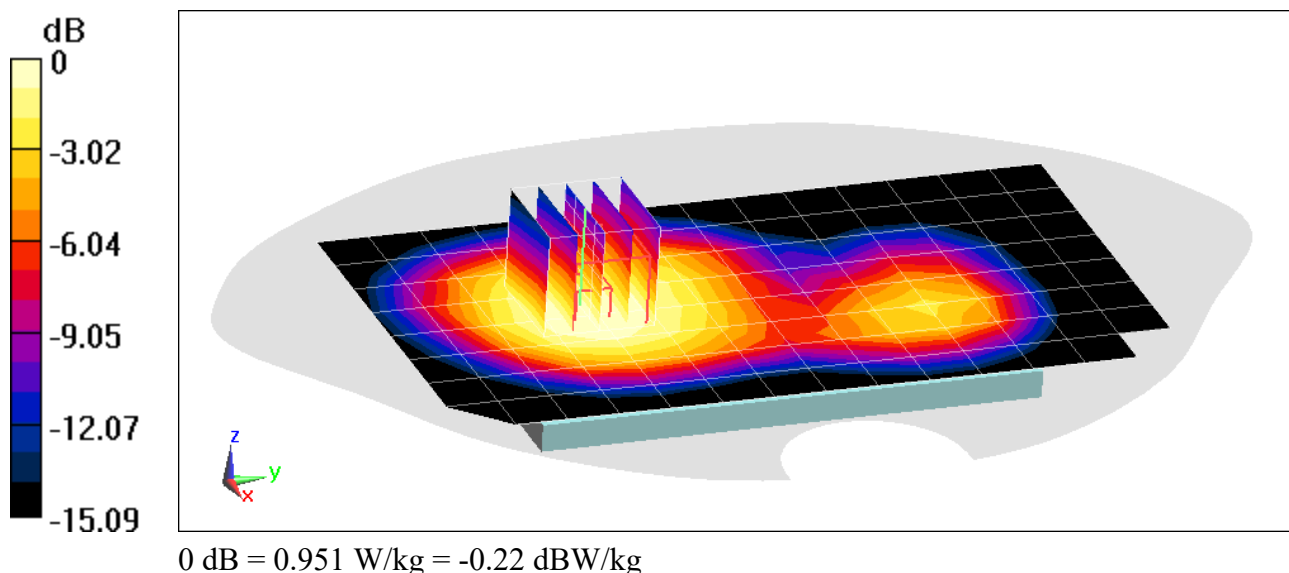
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 22.89 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.721 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: 1900 Body; Medium parameters used:

$f = 1880 \text{ MHz}$; $\sigma = 1.55 \text{ S/m}$; $\epsilon_r = 55.235$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/03/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1880 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)

Mode: UMTS 1900, Body SAR, Back side, Mid.ch

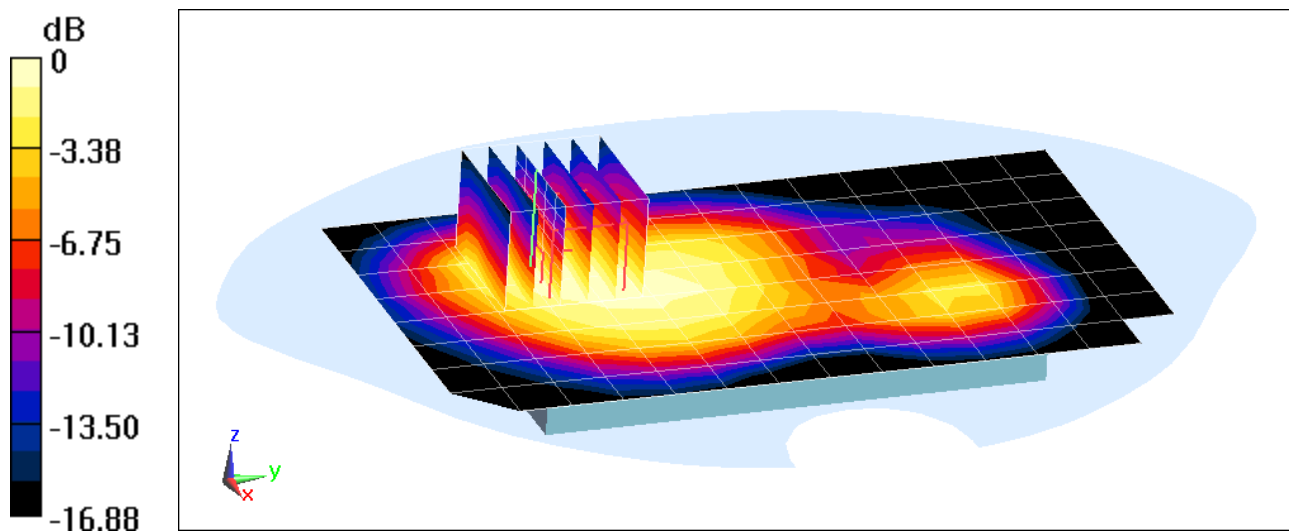
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Reference Value = 20.00 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.966 W/kg

SAR(1 g) = 0.581 W/kg



0 dB = 0.799 W/kg = -0.97 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

Communication System: UID 0, UMTS; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: 1900 Body; Medium parameters used (interpolated):

$f = 1852.4 \text{ MHz}$; $\sigma = 1.518 \text{ S/m}$; $\epsilon_r = 55.333$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/03/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1852.4 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)

Mode: UMTS 1900, Body SAR, Front side, Low.ch

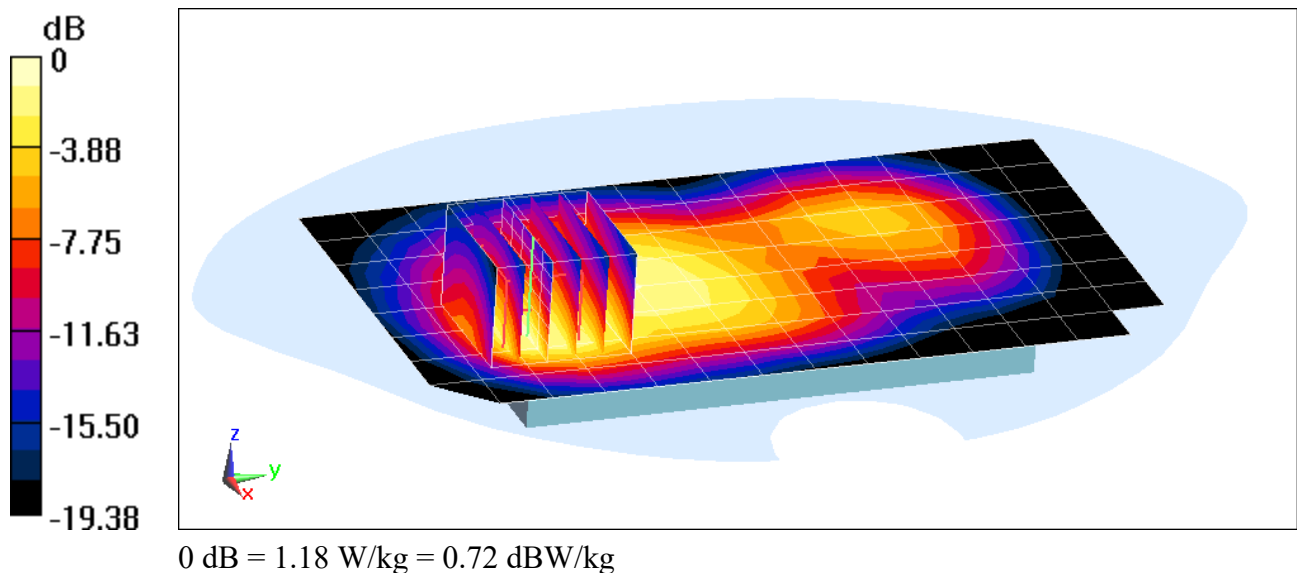
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Reference Value = 24.03 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.799 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09821

Communication System: UID 0, CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1

Medium: 835 Body; Medium parameters used (interpolated):

$f = 820.1$ MHz; $\sigma = 0.949$ S/m; $\epsilon_r = 54.303$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/04/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 820.1 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687

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

Mode: Cell. CDMA BC10, Body SAR, Back side, Mid.ch

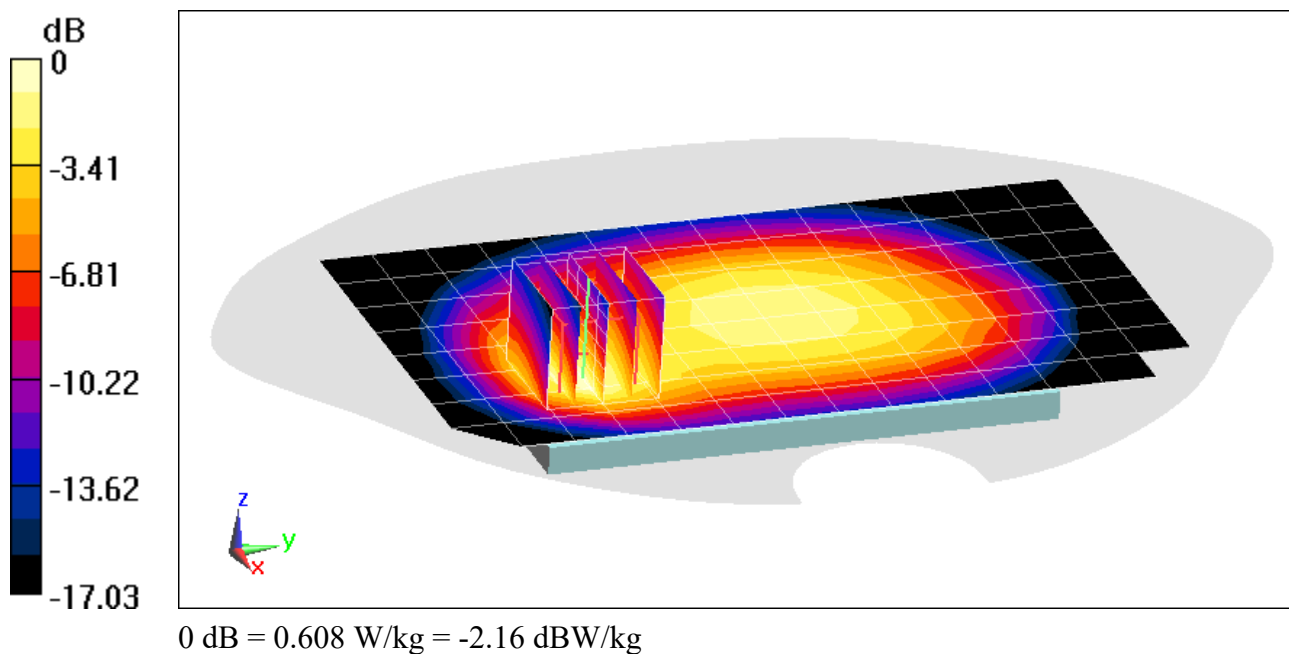
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 21.83 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.800 W/kg

SAR(1 g) = 0.429 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09821

Communication System: UID 0, CDMA; Frequency: 820.1 MHz; Duty Cycle: 1:1

Medium: 835 Body; Medium parameters used (interpolated):

$f = 820.1$ MHz; $\sigma = 0.949$ S/m; $\epsilon_r = 54.303$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/04/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 820.1 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687

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

Mode: Cell. EVDO BC10, Body SAR, Back side, Mid.ch

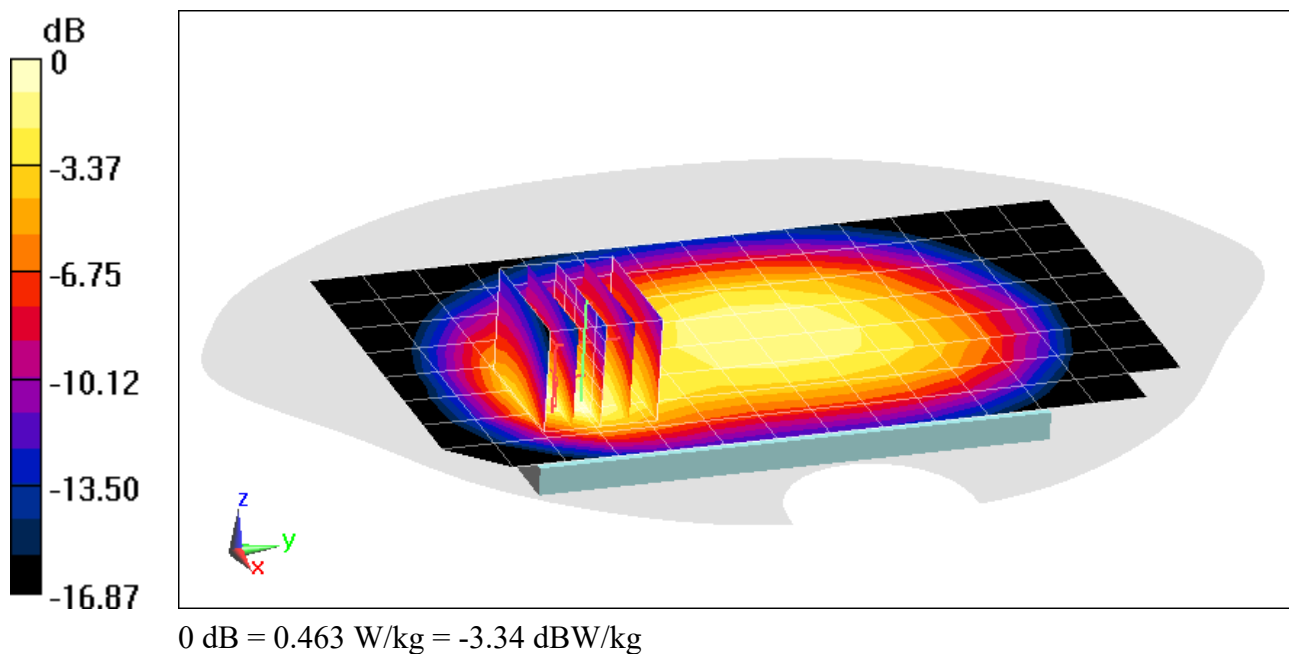
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.09 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.631 W/kg

SAR(1 g) = 0.335 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09821

Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: 835 Body; Medium parameters used (interpolated):

$f = 836.52$ MHz; $\sigma = 0.967$ S/m; $\epsilon_r = 54.14$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/04/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.52 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687

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

Mode: Cell. CDMA, BC 0, Body SAR, Back side, Mid.ch

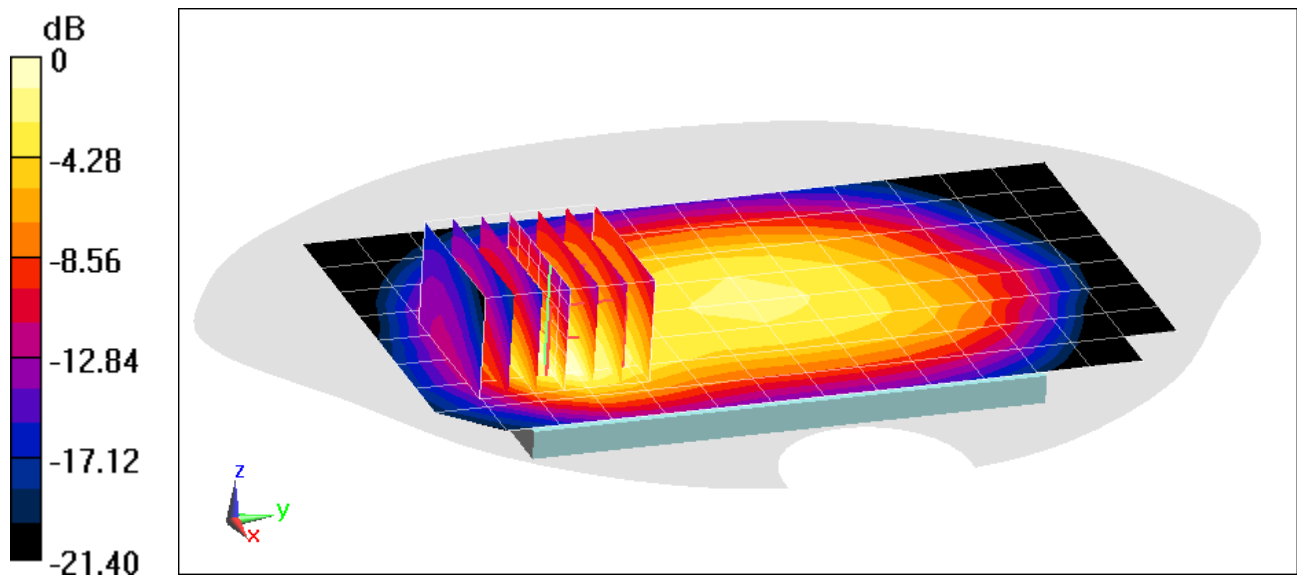
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.05 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.902 W/kg

SAR(1 g) = 0.490 W/kg



0 dB = 0.689 W/kg = -1.62 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09821

Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1

Medium: 835 Body; Medium parameters used (interpolated):

$f = 836.52$ MHz; $\sigma = 0.967$ S/m; $\epsilon_r = 54.14$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/04/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.52 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687

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

Mode: Cell. EVDO, BC 0, Body SAR, Back side, Mid.ch

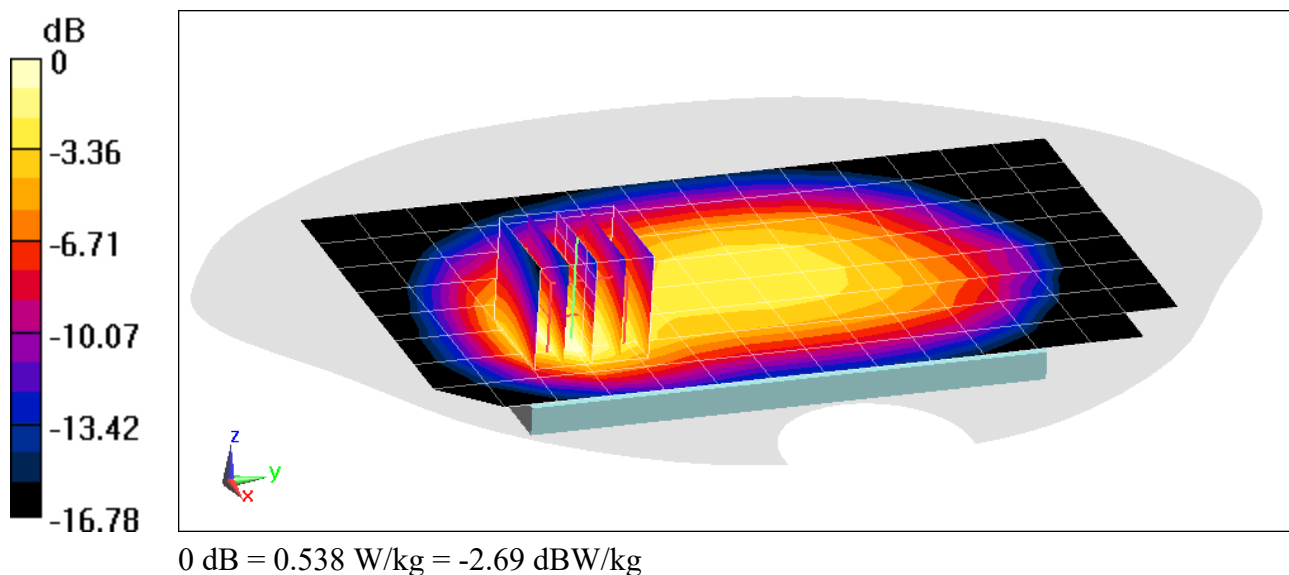
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 20.54 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.715 W/kg

SAR(1 g) = 0.388 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09821

Communication System: UID 0, CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: 1900 Body; Medium parameters used:

$f = 1880 \text{ MHz}$; $\sigma = 1.55 \text{ S/m}$; $\epsilon_r = 55.235$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/03/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1880 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)

Mode: PCS CDMA, Body SAR, Back side, Mid.ch

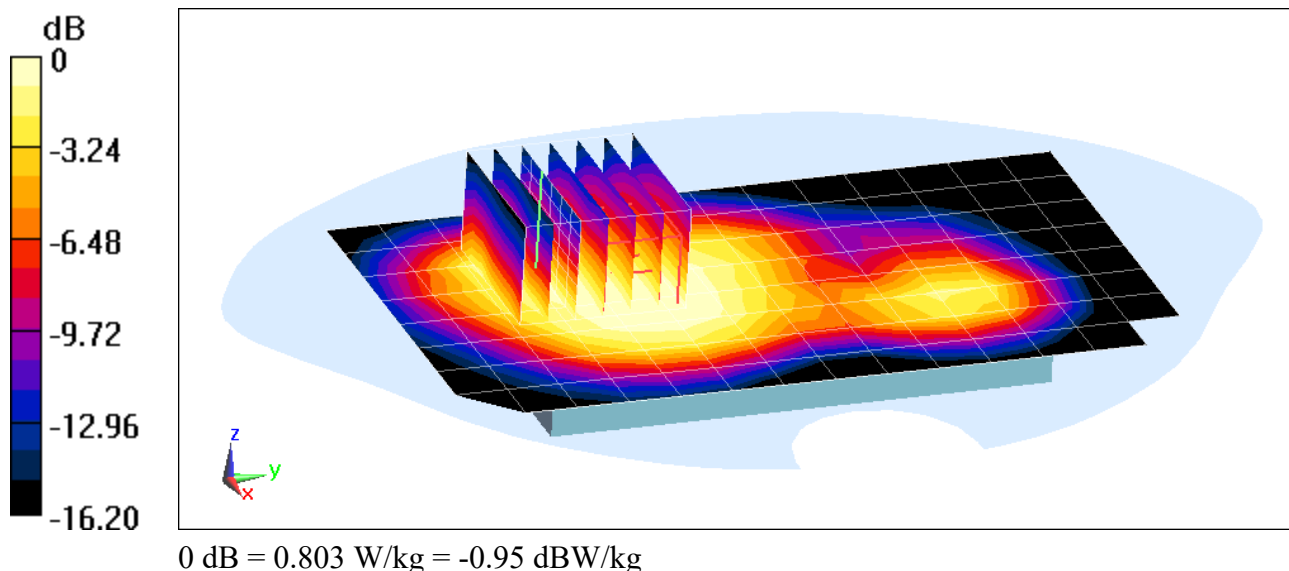
Area Scan (9x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 19.81 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 0.957 W/kg

SAR(1 g) = 0.588 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09821

Communication System: UID 0, CDMA; Frequency: 1908.75 MHz; Duty Cycle: 1:1;
Medium: 1900 Body; Medium parameters used (interpolated):
 $f = 1908.75$ MHz; $\sigma = 1.583$ S/m; $\epsilon_r = 55.149$; $\rho = 1000$ kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/03/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1908.75 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)

Mode: PCS EVDO, Body SAR, Front side, High.ch

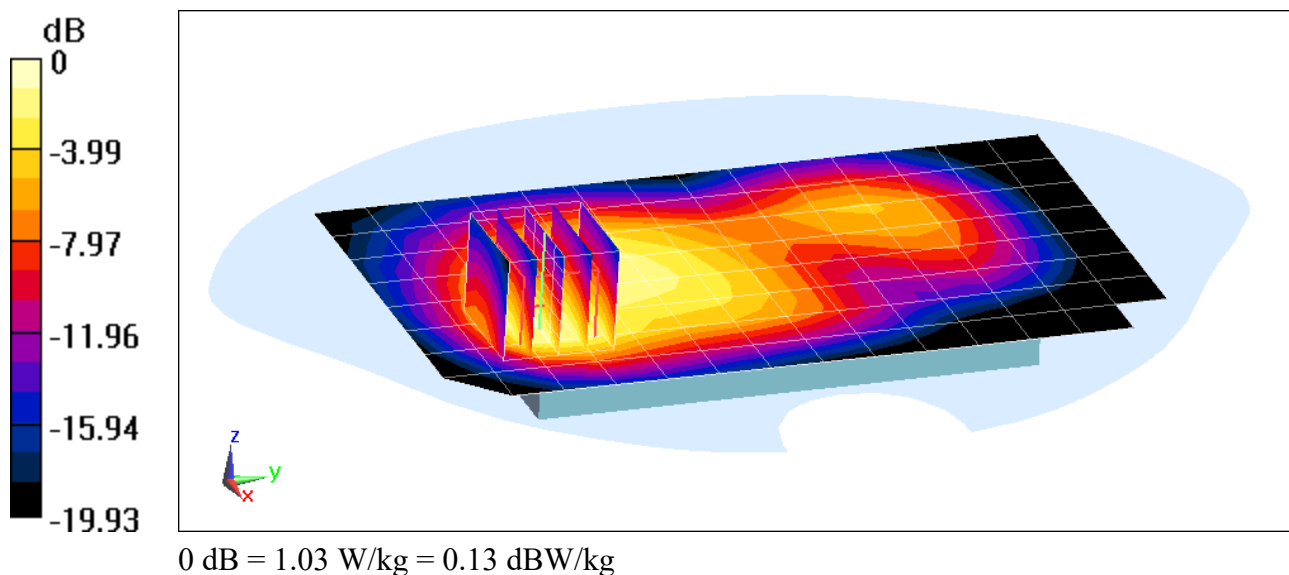
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 21.94 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.693 W/kg



PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

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

Medium: 750 Body; Medium parameters used (interpolated):

$f = 680.5$ MHz; $\sigma = 0.934$ S/m; $\epsilon_r = 54.107$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/29/2020; Ambient Temp: 23.0°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 680.5 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

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

**Mode: LTE Band 71, Body SAR, Back side, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

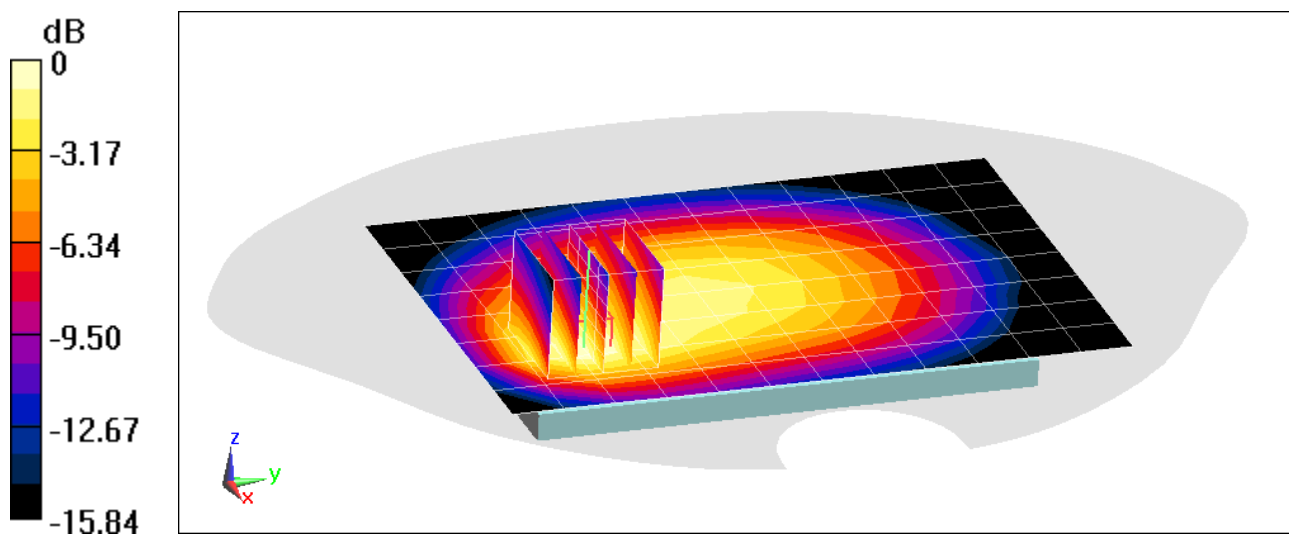
Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 20.34 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.617 W/kg

SAR(1 g) = 0.379 W/kg



0 dB = 0.512 W/kg = -2.91 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

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

Medium: 750 Body; Medium parameters used (interpolated):

$f = 707.5 \text{ MHz}$; $\sigma = 0.944 \text{ S/m}$; $\epsilon_r = 54.036$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/29/2020; Ambient Temp: 23.0°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 707.5 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

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

**Mode: LTE Band 12, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset**

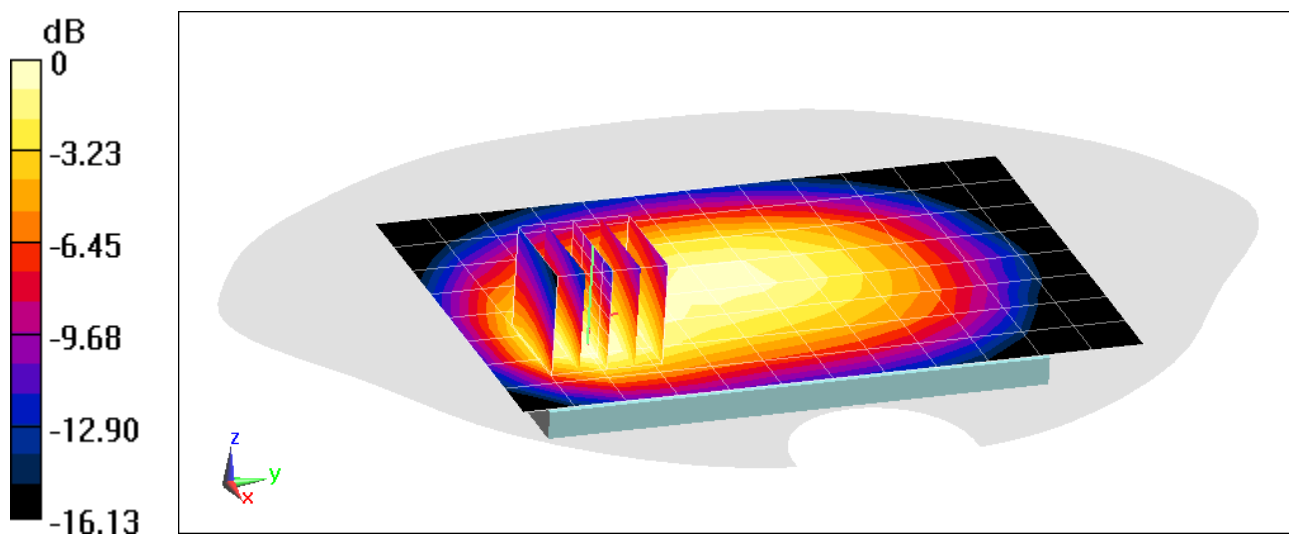
Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 22.59 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.735 W/kg

SAR(1 g) = 0.459 W/kg



0 dB = 0.613 W/kg = -2.13 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

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

Medium: 750 Body; Medium parameters used (interpolated):

$f = 782 \text{ MHz}$; $\sigma = 0.974 \text{ S/m}$; $\epsilon_r = 53.824$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/29/2020; Ambient Temp: 23.0°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 782 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

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

**Mode: LTE Band 13, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 25 RB Offset**

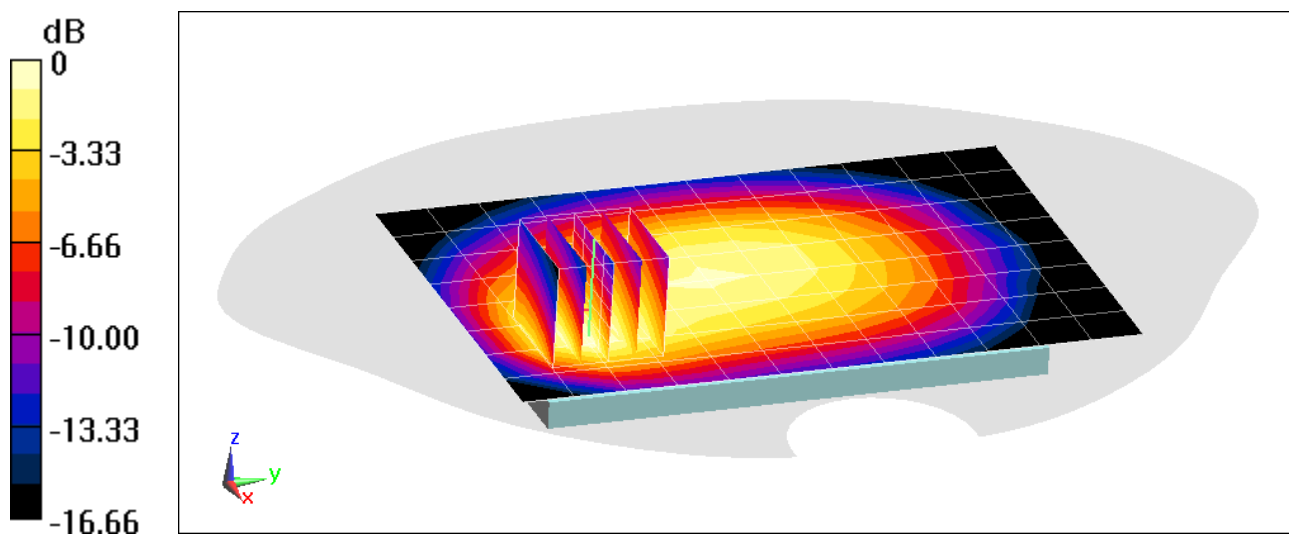
Area Scan (9x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Reference Value = 23.49 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.880 W/kg

SAR(1 g) = 0.521 W/kg



0 dB = 0.700 W/kg = -1.55 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09821

Communication System: UID 0, LTE Band 26; Frequency: 831.5 MHz; Duty Cycle: 1:1

Medium: 835 Body; Medium parameters used (interpolated):

$f = 831.5$ MHz; $\sigma = 0.946$ S/m; $\epsilon_r = 53.587$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/13/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7570; ConvF(9.83, 9.83, 9.83) @ 831.5 MHz; Calibrated: 12/11/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 12/18/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964

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

**Mode: LTE Band 26 (Cell.), Body SAR, Back side, Mid.ch,
15 MHz Bandwidth, QPSK, 1 RB, 36 RB Offset**

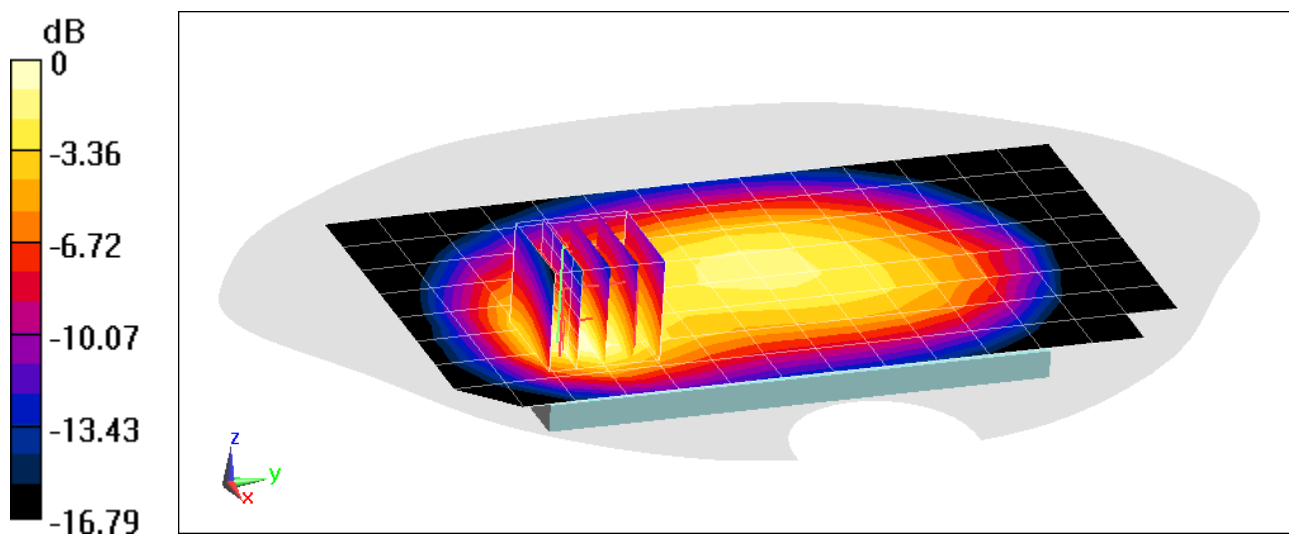
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 23.12 V/m; Power Drift = -0.20 dB

Peak SAR (extrapolated) = 0.892 W/kg

SAR(1 g) = 0.483 W/kg



0 dB = 0.687 W/kg = -1.63 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09813

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

Medium: 1750 Body; Medium parameters used:

$f = 1770$ MHz; $\sigma = 1.553$ S/m; $\epsilon_r = 51.618$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/14/2020; Ambient Temp: 23°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(8.17, 8.17, 8.17) @ 1770 MHz; Calibrated: 4/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715

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

**Mode: LTE Band 66 (AWS), Body SAR, Back side, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

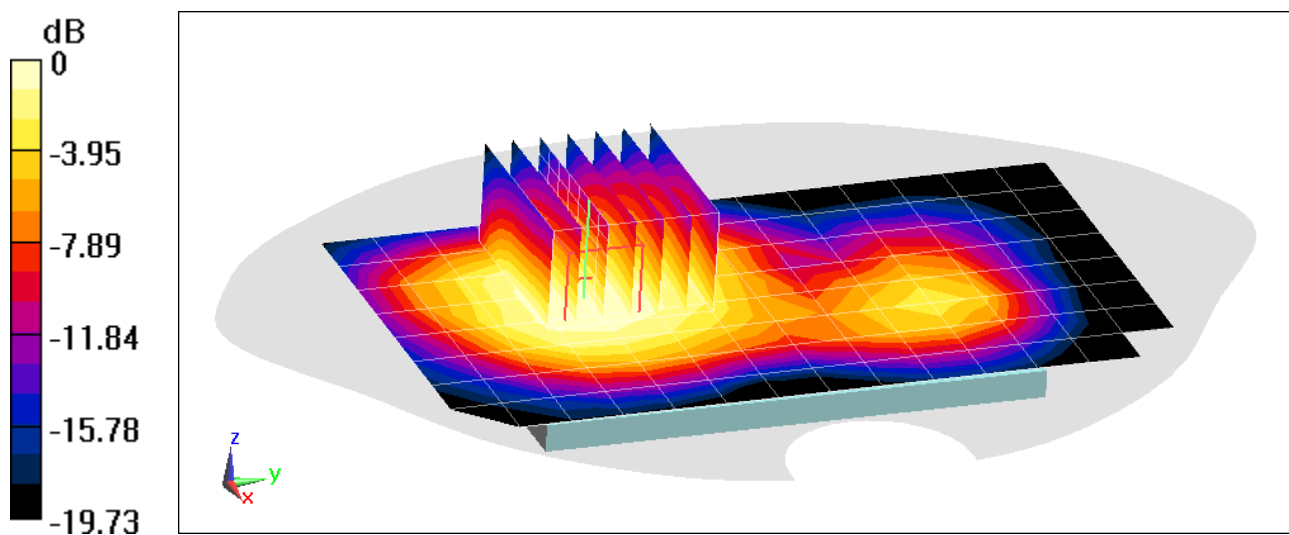
Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.95 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.773 W/kg



0 dB = 1.02 W/kg = 0.09 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09839

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

Medium: 1900 Body; Medium parameters used:

$f = 1905$ MHz; $\sigma = 1.568$ S/m; $\epsilon_r = 53.208$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/30/2020; Ambient Temp: 23.0°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7552; ConvF(7.58, 7.58, 7.58) @ 1905 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1449; Calibrated: 9/12/2019

Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792

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

**Mode: LTE Band 25 (PCS), Body SAR, Back side, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

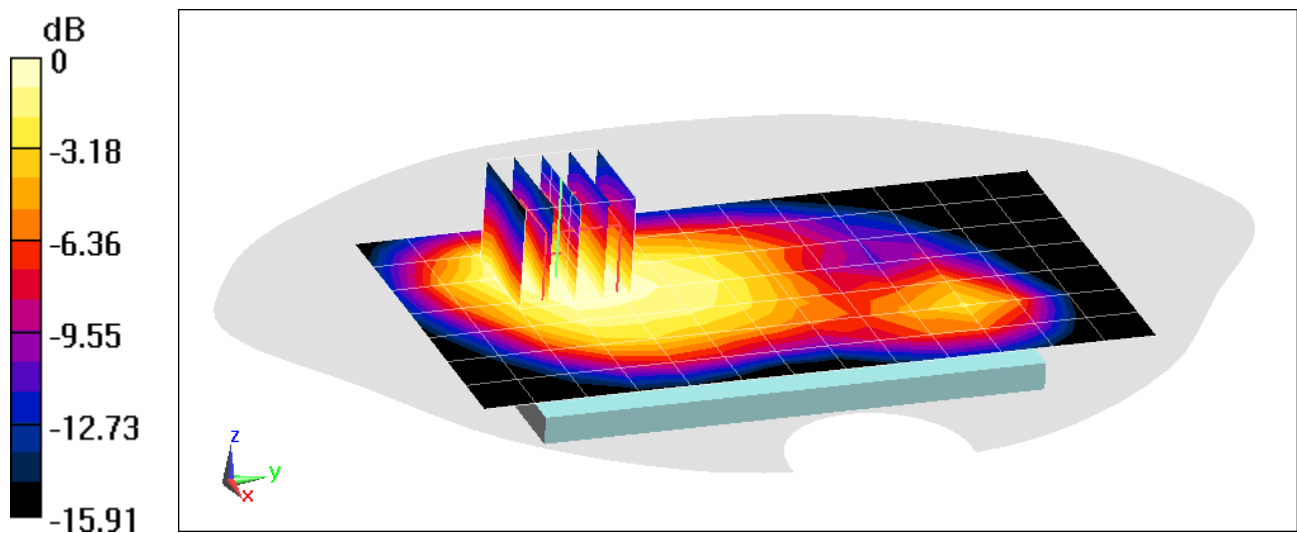
Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 21.36 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.641 W/kg



0 dB = 0.894 W/kg = -0.49 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09839

Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium: 1900 Body; Medium parameters used:

$f = 1860$ MHz; $\sigma = 1.518$ S/m; $\epsilon_r = 53.341$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/30/2020; Ambient Temp: 23.0°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7552; ConvF(7.58, 7.58, 7.58) @ 1860 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1449; Calibrated: 9/12/2019

Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792

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

**Mode: LTE Band 25 (PCS), Body SAR, Front side, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

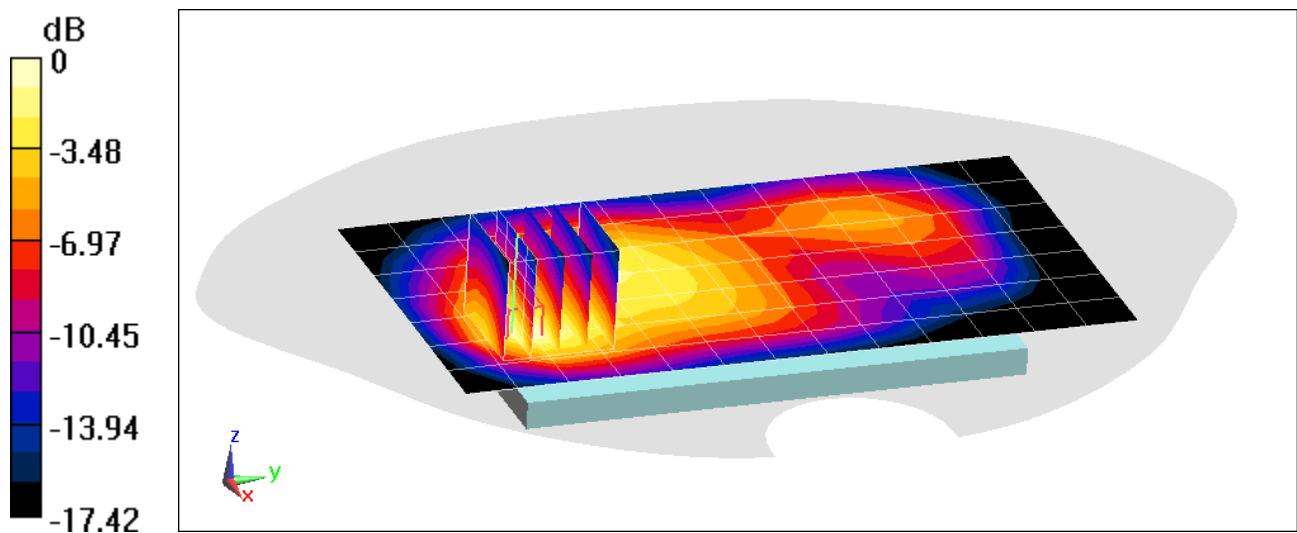
Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

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

Reference Value = 20.80 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.689 W/kg



0 dB = 1.03 W/kg = 0.13 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09847

Communication System: UID 0, LTE Band 41 (Class 2); Frequency: 2506 MHz; Duty Cycle: 1:2.31

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

$f = 2506$ MHz; $\sigma = 2.113$ S/m; $\epsilon_r = 51.434$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/13/2020; Ambient Temp: 24.0°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2506 MHz; Calibrated: 7/15/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1323; Calibrated: 7/11/2019

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)

**Mode: LTE Band 41 PC2, Body SAR, Back side, Low.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

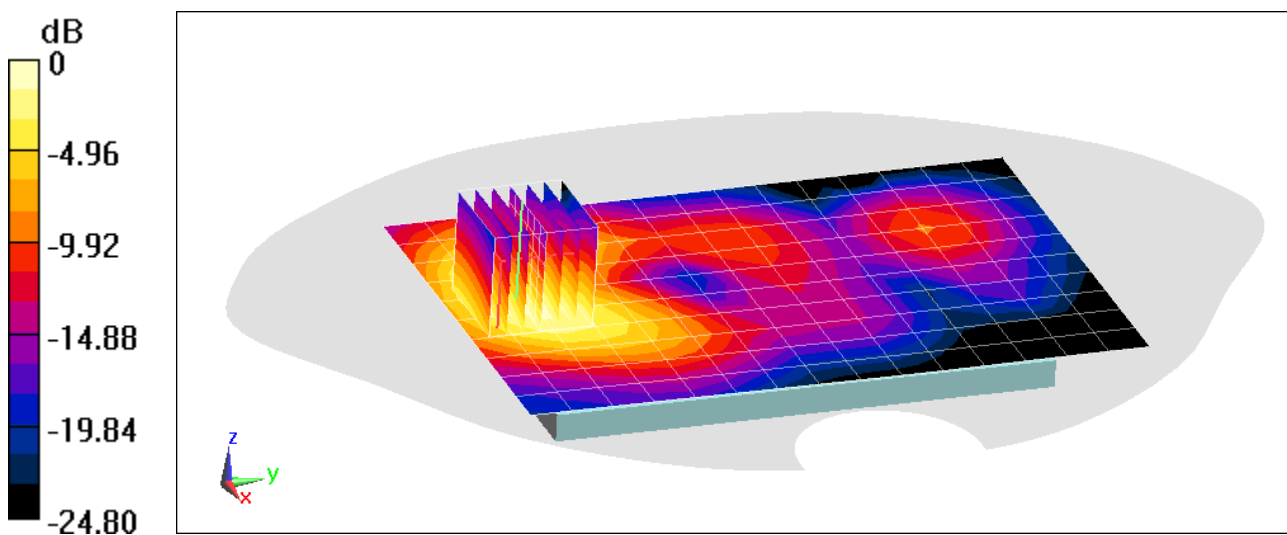
Area Scan (11x16x1): Measurement grid: dx=12mm, dy=12mm

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

Reference Value = 19.72 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.753 W/kg



0 dB = 1.17 W/kg = 0.68 dBW/kg

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09847

Communication System: UID 0, LTE Band 41 (Class 2); Frequency: 2636.5 MHz; Duty Cycle: 1:2.31

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

$f = 2636.5$ MHz; $\sigma = 2.27$ S/m; $\epsilon_r = 51.052$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/13/2020; Ambient Temp: 24.0°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7547; ConvF(7.18, 7.18, 7.18) @ 2636.5 MHz; Calibrated: 7/15/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1323; Calibrated: 7/11/2019

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)

**Mode: LTE Band 41 PC2, Body SAR, Bottom Edge, Mid-High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

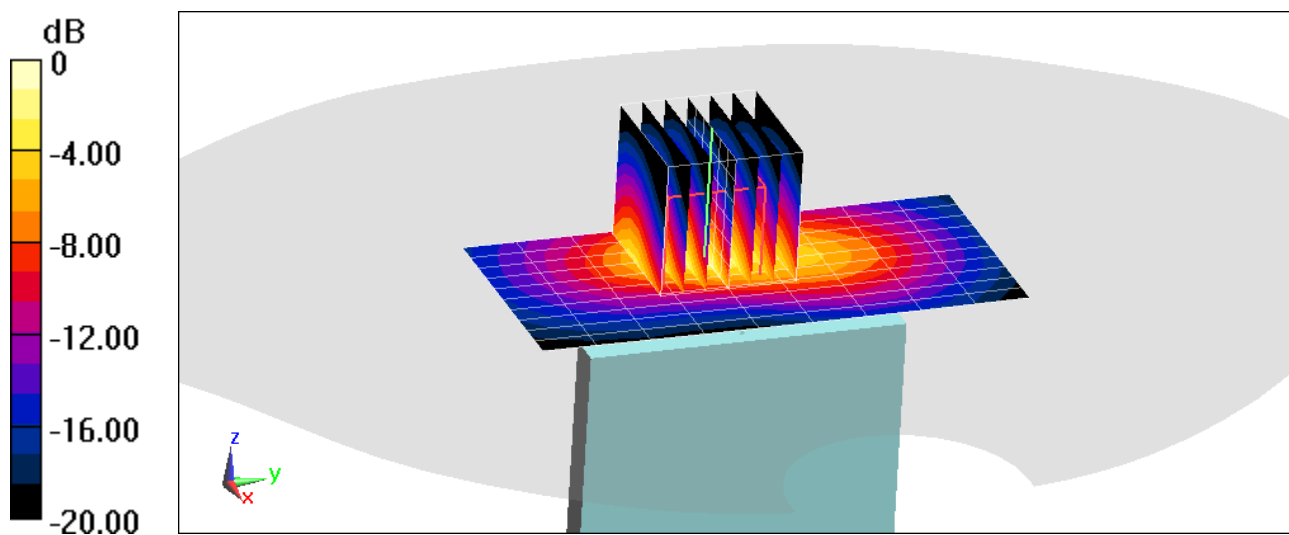
Area Scan (11x10x1): Measurement grid: dx=5mm, dy=12mm

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

Reference Value = 22.07 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 2.22 W/kg

SAR(1 g) = 0.996 W/kg



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

PCTEST

DUT: ZNFL355DL; Type: Portable Handset; Serial: 09995

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

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

$f = 2437 \text{ MHz}$; $\sigma = 1.996 \text{ S/m}$; $\epsilon_r = 52.353$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/11/2020; Ambient Temp: 22.5°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2437 MHz; Calibrated: 7/15/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1323; Calibrated: 7/11/2019

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)

Mode: IEEE 802.11b, 22 MHz Bandwidth, Body SAR, Ch 6, 1 Mbps, Back Side

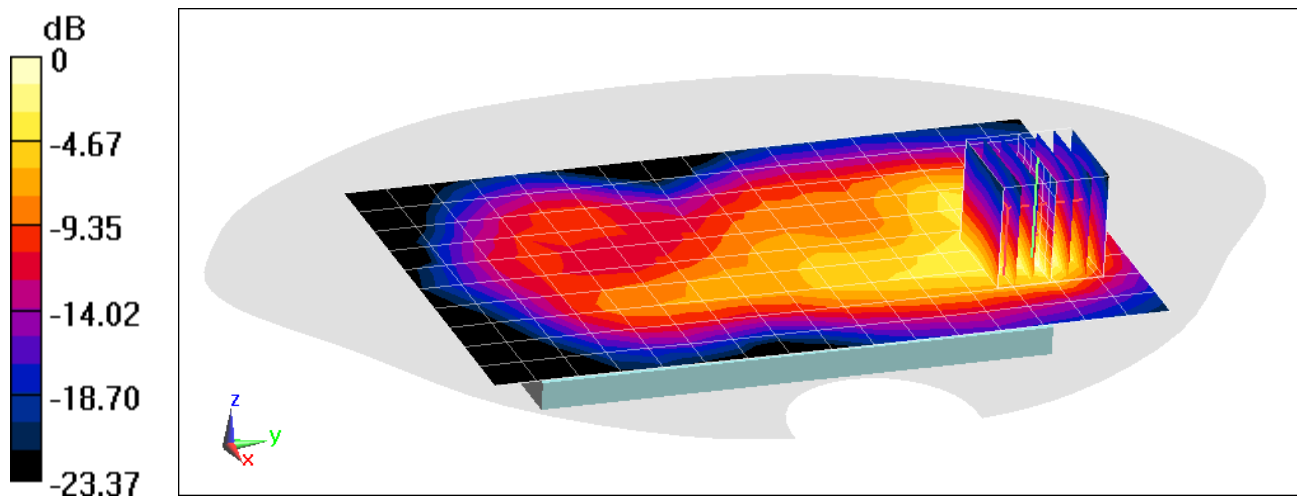
Area Scan (11x17x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

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

Reference Value = 7.598 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.487 W/kg



0 dB = 0.832 W/kg = -0.80 dBW/kg

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:

$f = 750 \text{ MHz}$; $\sigma = 0.888 \text{ S/m}$; $\epsilon_r = 43.758$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/30/2020; Ambient Temp: 24.0°C; Tissue Temp: 22.4°C

Probe: EX3DV4 - SN7410; ConvF(9.95, 9.95, 9.95) @ 750 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

750 MHz System Verification at 23.0 dBm (200 mW)

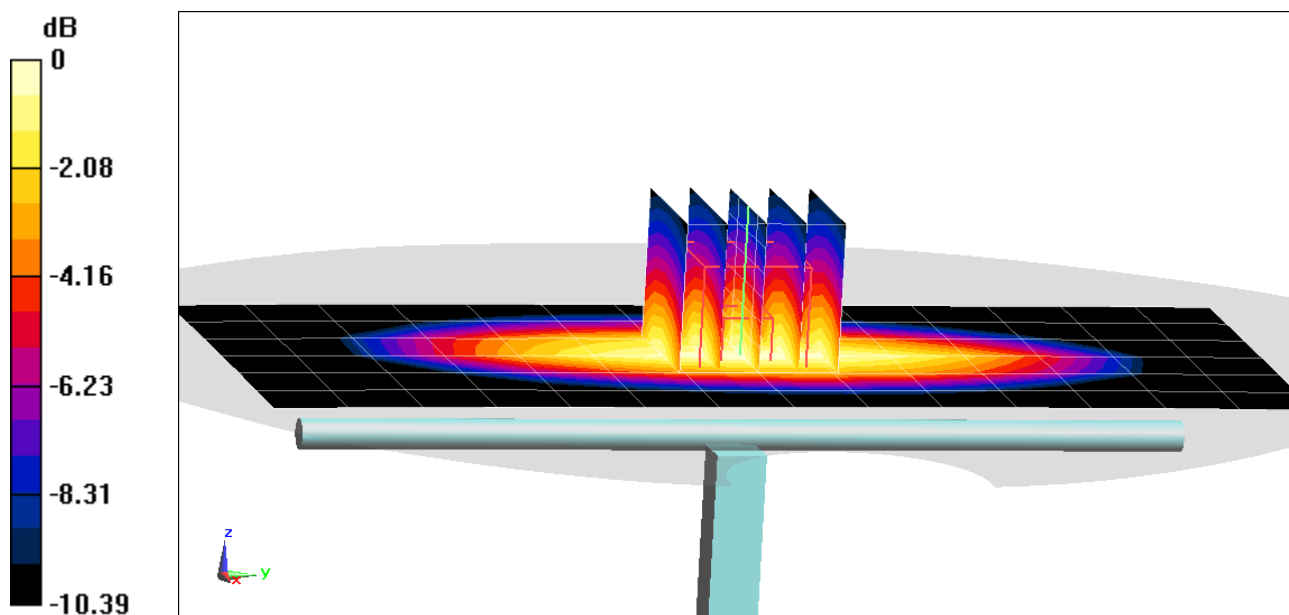
Area Scan (7x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 2.41 W/kg

SAR(1 g) = 1.68 W/kg

Deviation(1 g) = 4.61%



0 dB = 2.19 W/kg = 3.40 dBW/kg

PCTEST

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

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

Medium: 835 Head; Medium parameters used:

$f = 835 \text{ MHz}$; $\sigma = 0.873 \text{ S/m}$; $\epsilon_r = 41.945$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/06/2020; Ambient Temp: 21.3°C; Tissue Temp: 20.8°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 835 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 9/17/2019

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)

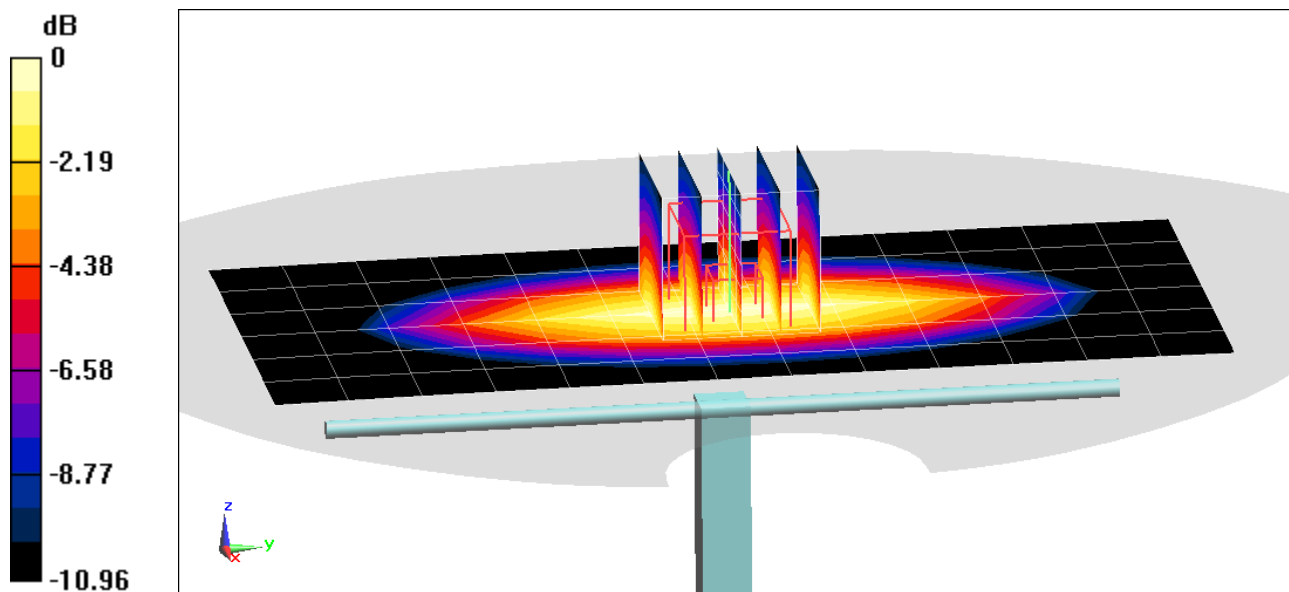
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 2.92 W/kg

SAR(1 g) = 1.89 W/kg

Deviation(1 g) = 0.21%



0 dB = 2.56 W/kg = 4.08 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:

$f = 835 \text{ MHz}$; $\sigma = 0.906 \text{ S/m}$; $\epsilon_r = 40.974$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/13/2020; Ambient Temp: 21.5°C; Tissue Temp: 20.9°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 835 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1333; Calibrated: 9/17/2019

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)

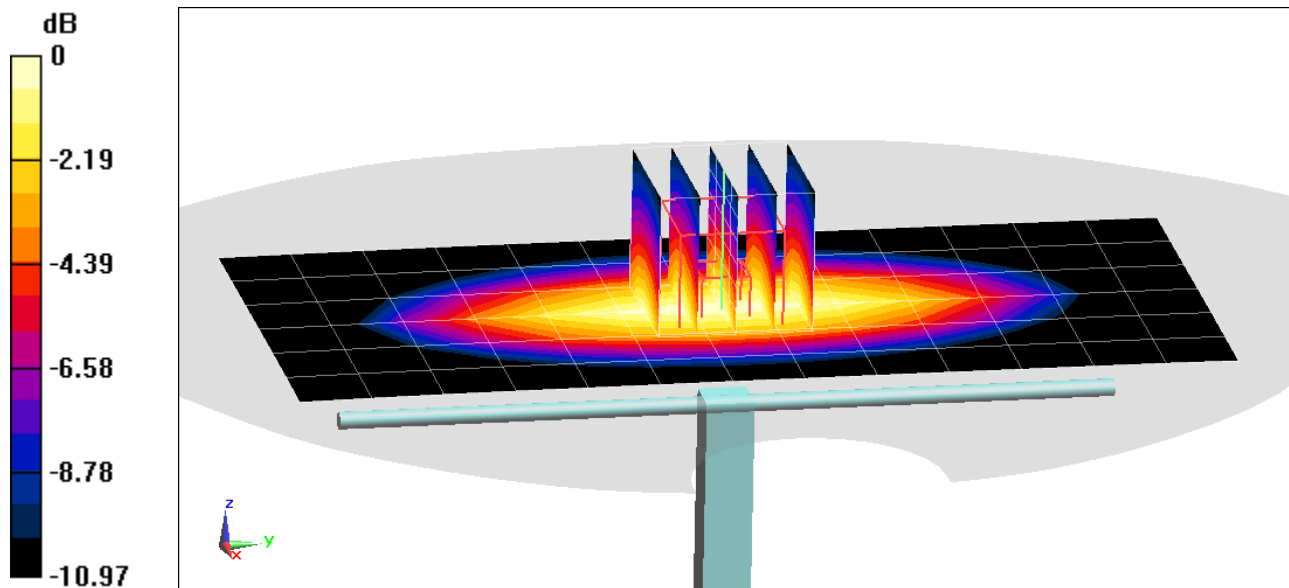
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 2.98 W/kg

SAR(1 g) = 1.9 W/kg

Deviation(1 g) = -1.55%



0 dB = 2.59 W/kg = 4.13 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 Head Medium parameters used:

$f = 1750 \text{ MHz}$; $\sigma = 1.414 \text{ S/m}$; $\epsilon_r = 40.978$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/11/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7570; ConvF(8.68, 8.68, 8.68) @ 1750 MHz; Calibrated: 12/11/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 12/18/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964

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

1750 MHz System Verification at 20.0 dBm (100 mW)

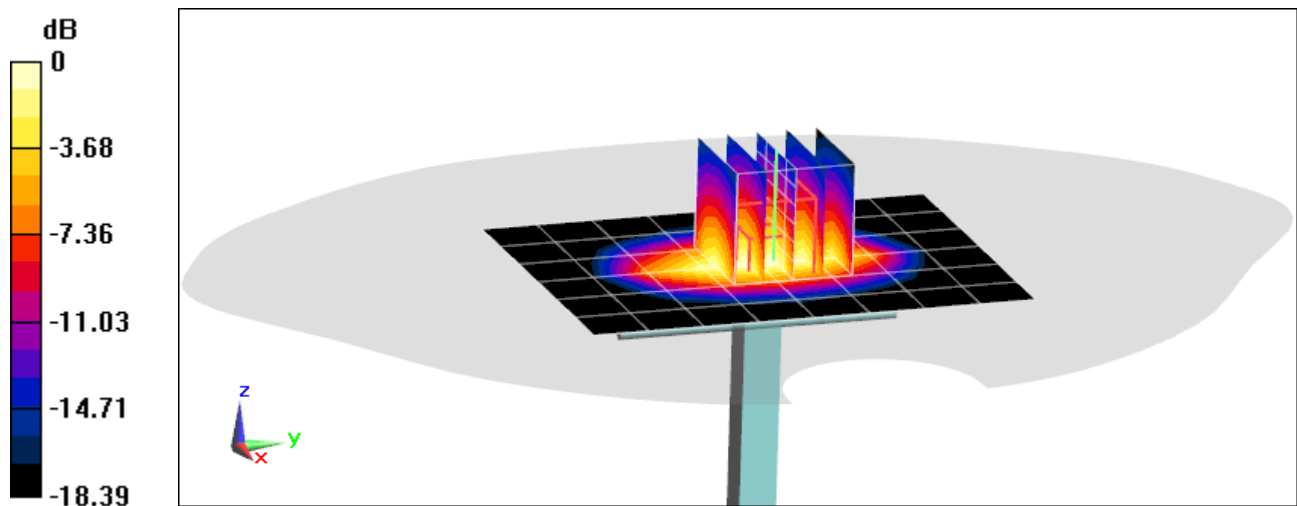
Area Scan (7x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 6.95 W/kg

SAR(1 g) = 3.69 W/kg

Deviation(1 g) = 1.10%



0 dB = 5.67 W/kg = 7.54 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 Head Medium parameters used:

$f = 1750 \text{ MHz}$; $\sigma = 1.338 \text{ S/m}$; $\epsilon_r = 40.62$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/13/2020; Ambient Temp 23.9°C; Tissue Temp: 20.5°C

Probe: EX3DV4 - SN7410; ConvF(8.46, 8.46, 8.46) @ 1750 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

1750 MHz System Verification at 20.0 dBm (100 mW)

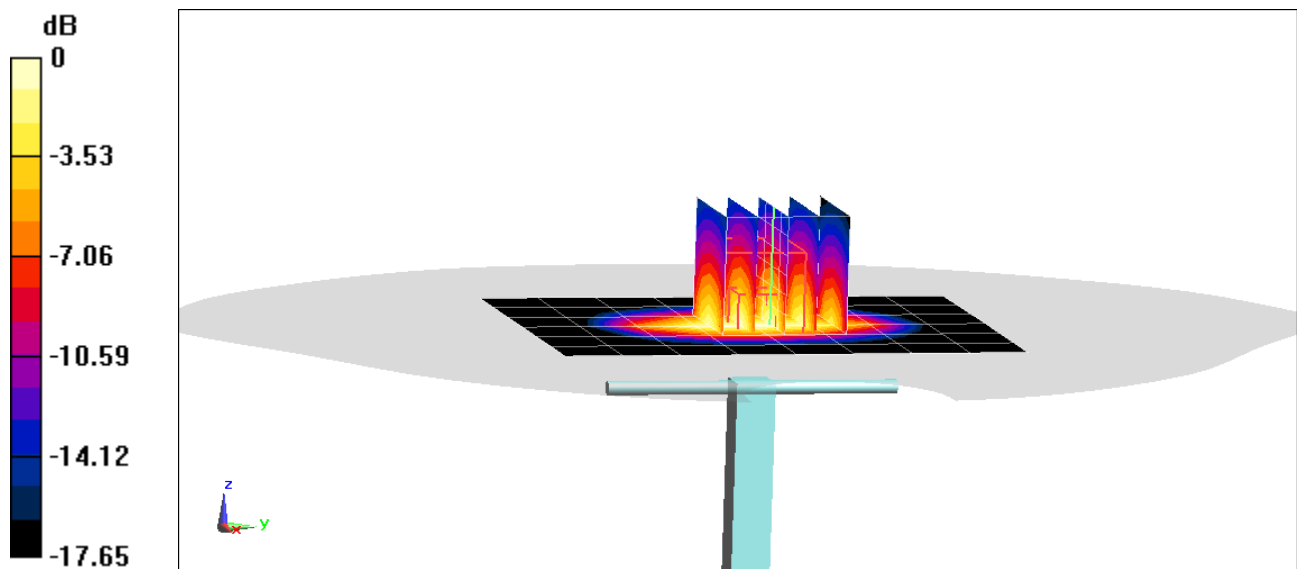
Area Scan (7x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 6.55 W/kg

SAR(1 g) = 3.61 W/kg

Deviation(1 g) = -1.10%



0 dB = 5.44 W/kg = 7.36 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 Head Medium parameters used:

$f = 1900 \text{ MHz}$; $\sigma = 1.45 \text{ S/m}$; $\epsilon_r = 40.959$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/11/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.0°C

Probe: EX3DV4 - SN7410; ConvF(8.11, 8.11, 8.11) @ 1900 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1966

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

1900 MHz System Verification at 20.0 dBm (100 mW)

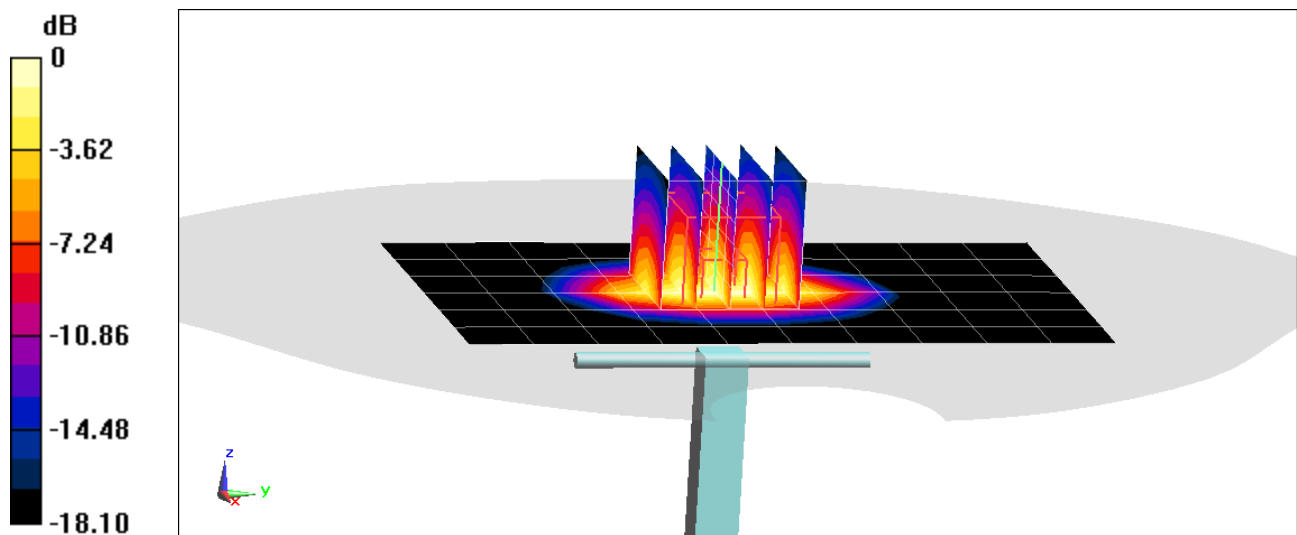
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.95 W/kg

SAR(1 g) = 4.29 W/kg

Deviation(1 g) = 7.79%



0 dB = 6.68 W/kg = 8.25 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:

$f = 2450 \text{ MHz}$; $\sigma = 1.818 \text{ S/m}$; $\epsilon_r = 38.641$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/06/2020; Ambient Temp: 22.9°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2450 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 1/13/2020

Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647

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

2450 MHz System Verification at 20.0 dBm (100 mW)

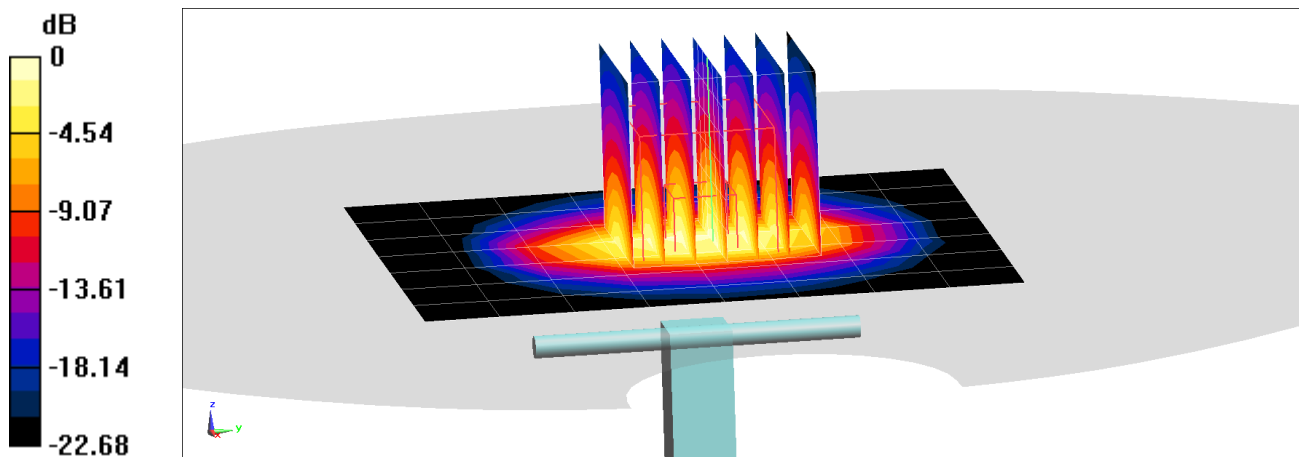
Area Scan (8x9x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

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

Peak SAR (extrapolated) = 11.3 W/kg

SAR(1 g) = 5.21 W/kg

Deviation(1 g) = -1.88%



0 dB = 8.85 W/kg = 9.47 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 797

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

Medium: 2450 Head Medium parameters used:

$f = 2450 \text{ MHz}$; $\sigma = 1.781 \text{ S/m}$; $\epsilon_r = 37.749$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/13/2020; Ambient Temp: 21.6°C; Tissue Temp: 20.6°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2450 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1558; Calibrated: 1/13/2020

Phantom: Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1647

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

2450 MHz System Verification at 20.0 dBm (100 mW)

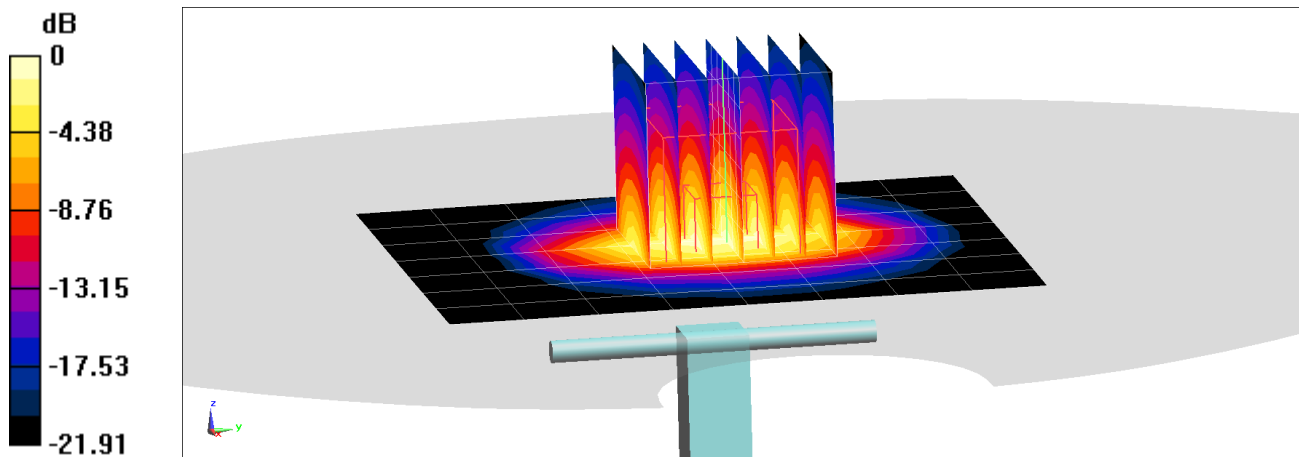
Area Scan (8x9x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

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

Peak SAR (extrapolated) = 10.7 W/kg

SAR(1 g) = 5.15 W/kg

Deviation(1 g) = -2.28%



0 dB = 8.61 W/kg = 9.35 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:

$f = 750 \text{ MHz}$; $\sigma = 0.96 \text{ S/m}$; $\epsilon_r = 53.912$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 04/29/2020; Ambient Temp: 23.0°C; Tissue Temp: 20.3°C

Probe: EX3DV4 - SN7410; ConvF(10.01, 10.01, 10.01) @ 750 MHz; Calibrated: 7/16/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1322; Calibrated: 7/11/2019

Phantom: Twin-SAM V5.0; Type: QD 000 P40 CD; Serial: 1630

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

750 MHz System Verification at 23.0 dBm (200 mW)

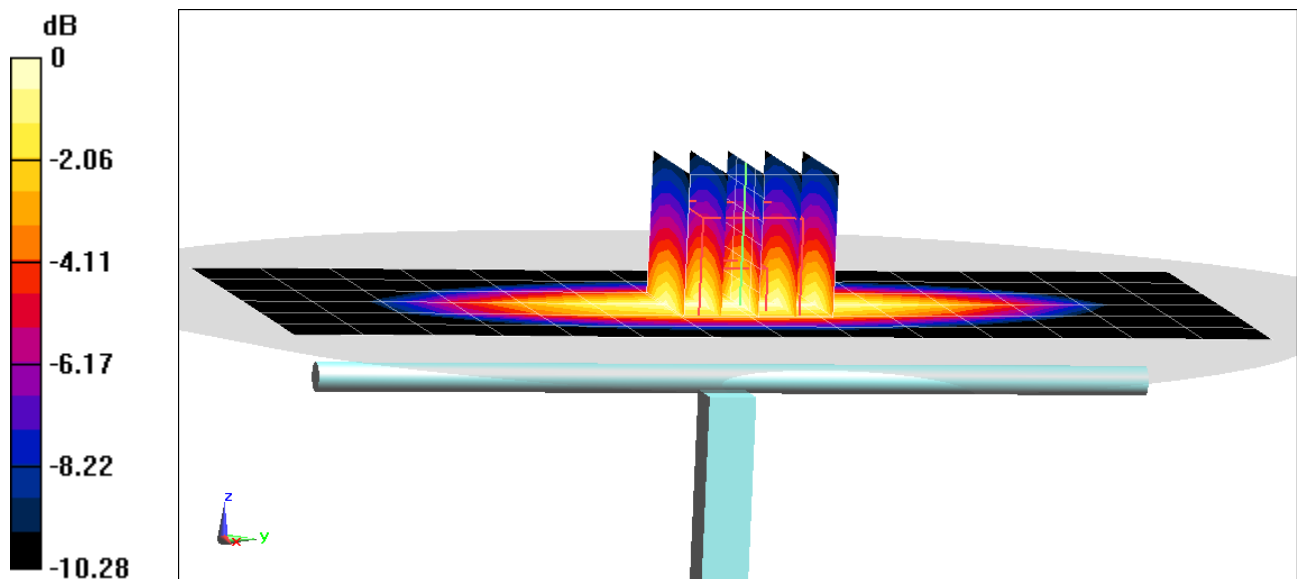
Area Scan (7x15x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 2.71 W/kg

SAR(1 g) = 1.81 W/kg

Deviation(1 g) = 7.35%



0 dB = 2.41 W/kg = 3.82 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:

$f = 835 \text{ MHz}$; $\sigma = 0.965 \text{ S/m}$; $\epsilon_r = 54.155$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/04/2020; Ambient Temp: 22.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 835 MHz; Calibrated: 1/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

Phantom: Twin-SAM V4.0 Left 30; Type: QD 000 P40 CC; Serial: 1687

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

835 MHz System Verification at 23.0 dBm (200 mW)

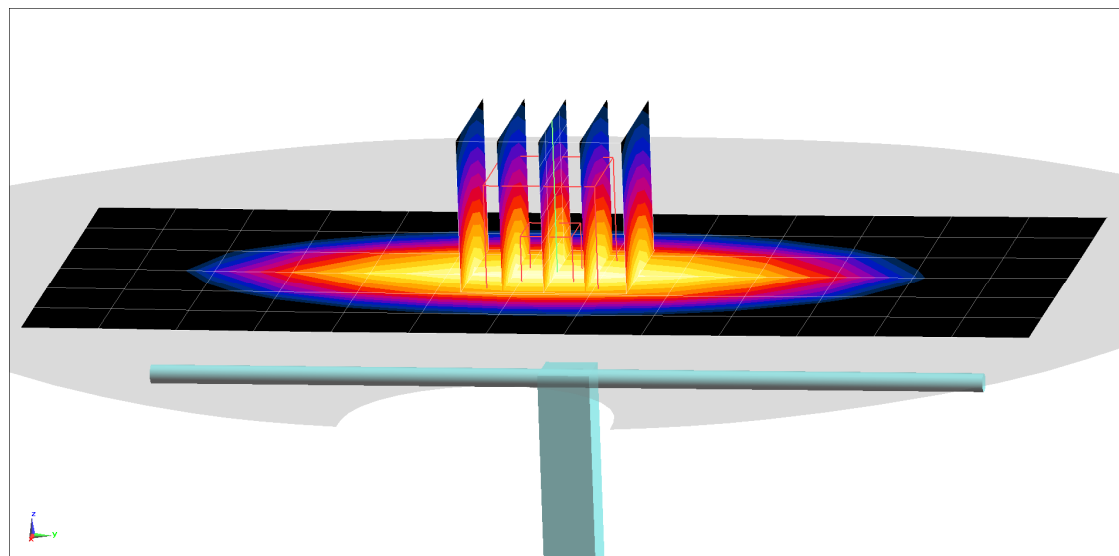
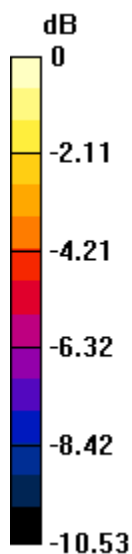
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 2.92 W/kg

SAR(1 g) = 1.91 W/kg

Deviation(1 g) = -4.12%



0 dB = 2.57 W/kg = 4.10 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:

$f = 835 \text{ MHz}$; $\sigma = 0.95 \text{ S/m}$; $\epsilon_r = 53.548$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/13/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN7570; ConvF(9.83, 9.83, 9.83) @ 835 MHz; Calibrated: 12/11/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn859; Calibrated: 12/18/2019

Phantom: Twin-SAM V8.0; Type: QD 000 P41 Ax; Serial: 1964

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

835 MHz System Verification at 23.0 dBm (200 mW)

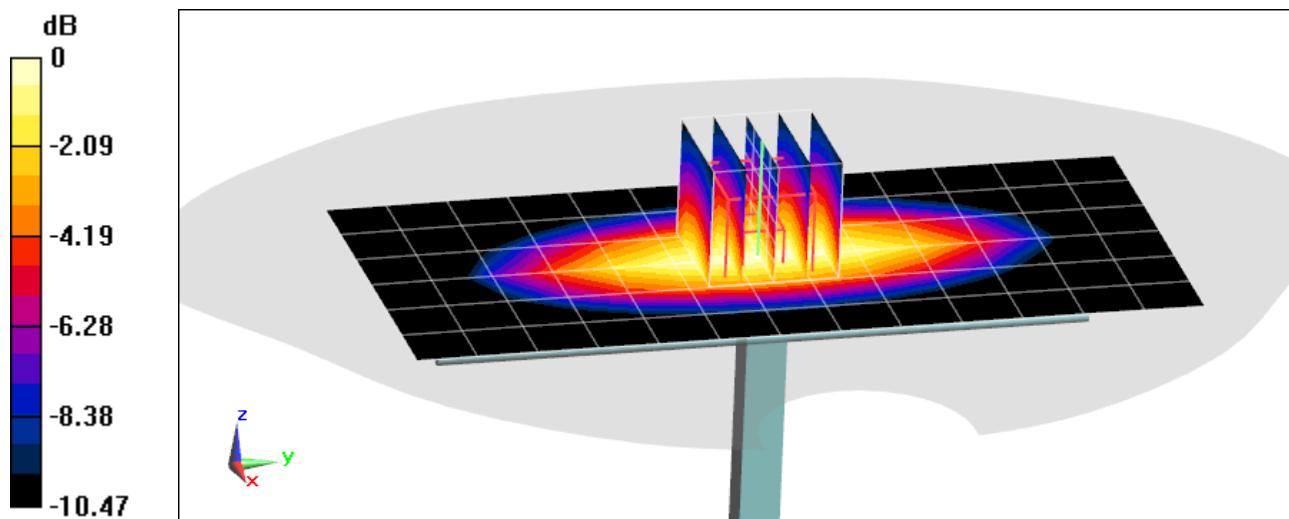
Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 3.00 W/kg

SAR(1 g) = 1.94 W/kg

Deviation(1 g) = 2.43%



0 dB = 2.62 W/kg = 4.18 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:

$f = 1750 \text{ MHz}$; $\sigma = 1.532 \text{ S/m}$; $\epsilon_r = 51.86$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/29/2020; Ambient Temp: 23.1°C; Tissue Temp: 22.2°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1750 MHz; Calibrated: 3/17/2020

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)

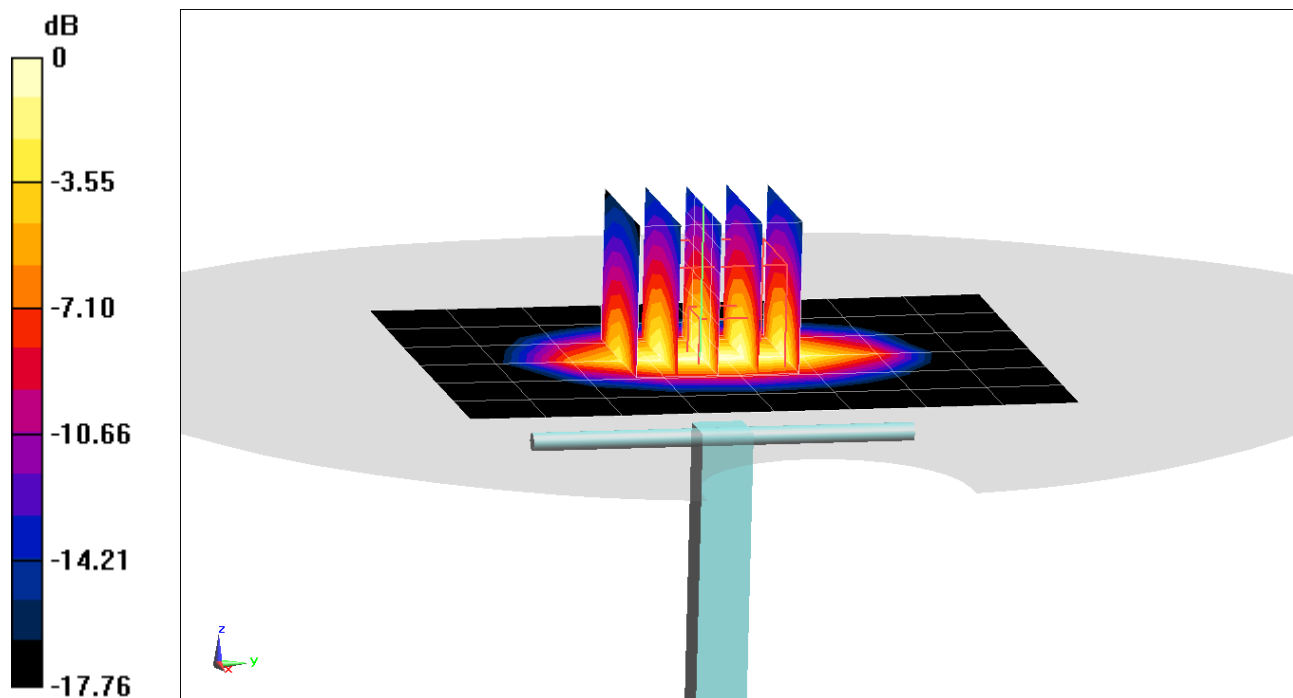
Area Scan (7x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 6.82 W/kg

SAR(1 g) = 3.82 W/kg

Deviation(1 g) = 4.37%



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:

$f = 1750 \text{ MHz}$; $\sigma = 1.531 \text{ S/m}$; $\epsilon_r = 51.701$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/14/2020; Ambient Temp: 23°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(8.17, 8.17, 8.17) @ 1750 MHz; Calibrated: 4/21/2020

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715

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

1750 MHz System Verification at 20.0 dBm (100 mW)

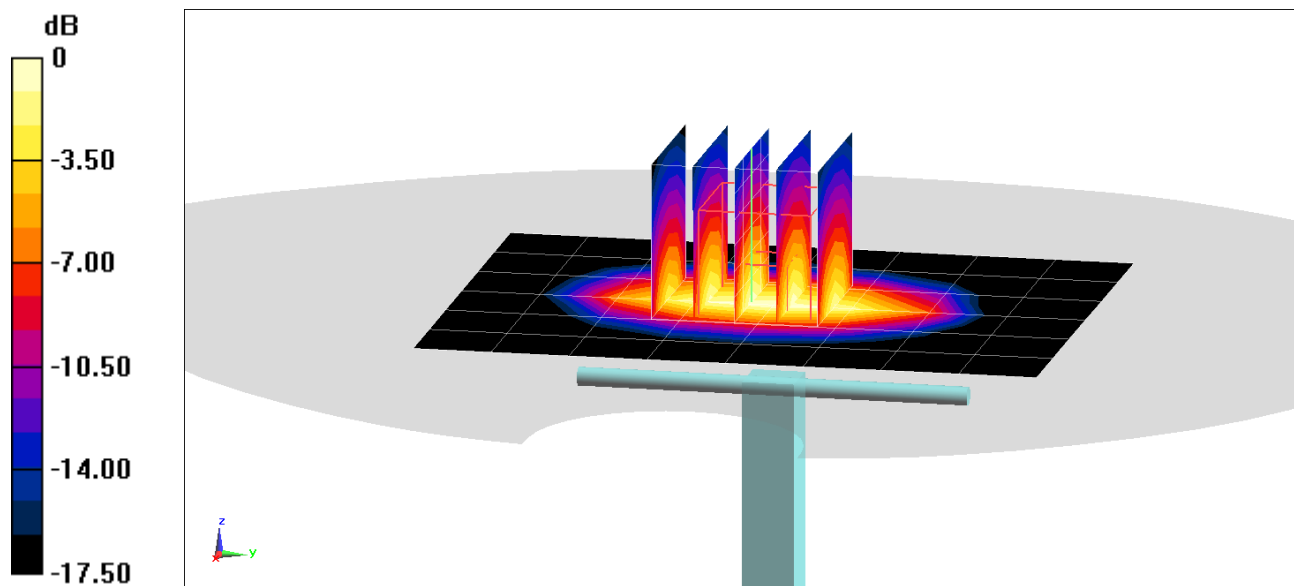
Area Scan (7x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 7.09 W/kg

SAR(1 g) = 3.94 W/kg

Deviation(1 g) = 7.65%



0 dB = 5.94 W/kg = 7.74 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:

$f = 1900 \text{ MHz}$; $\sigma = 1.562 \text{ S/m}$; $\epsilon_r = 53.223$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/30/2020; Ambient Temp: 23.0°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7552; ConvF(7.58, 7.58, 7.58) @ 1900 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1449; Calibrated: 9/12/2019

Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792

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

1900 MHz System Verification at 20.0 dBm (100 mW)

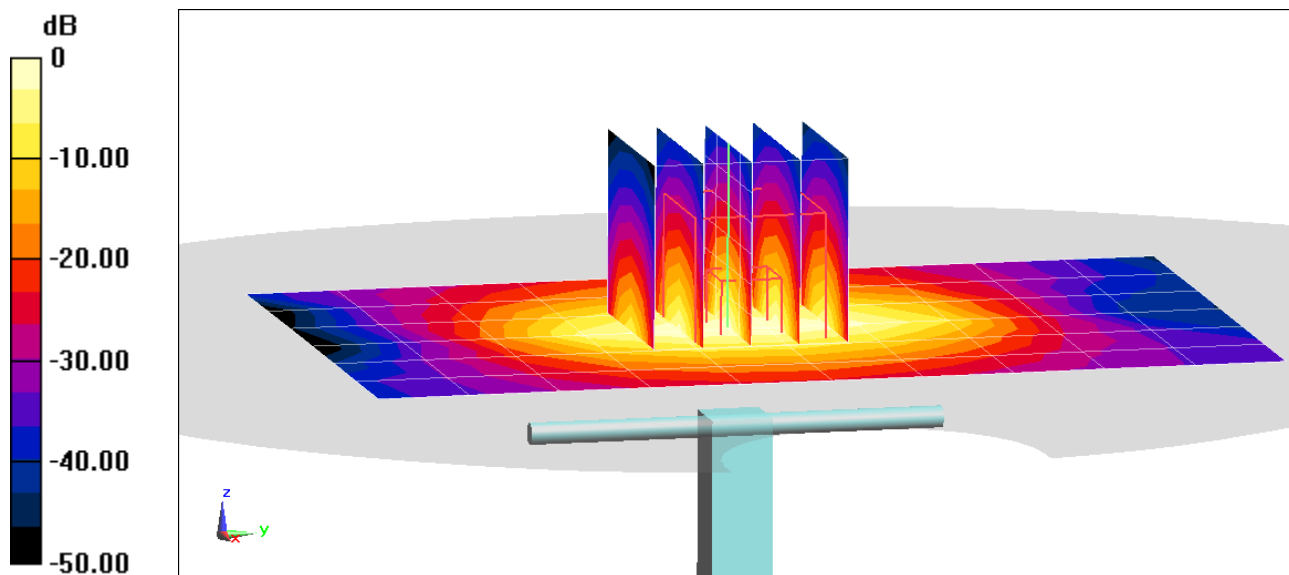
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.94 W/kg

SAR(1 g) = 4.22 W/kg

Deviation(1 g) = 7.11%



0 dB = 6.41 W/kg = 8.07 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; $\sigma = 1.573$ S/m; $\epsilon_r = 55.175$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/03/2020; Ambient Temp: 21.1°C; Tissue Temp: 22.8°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)

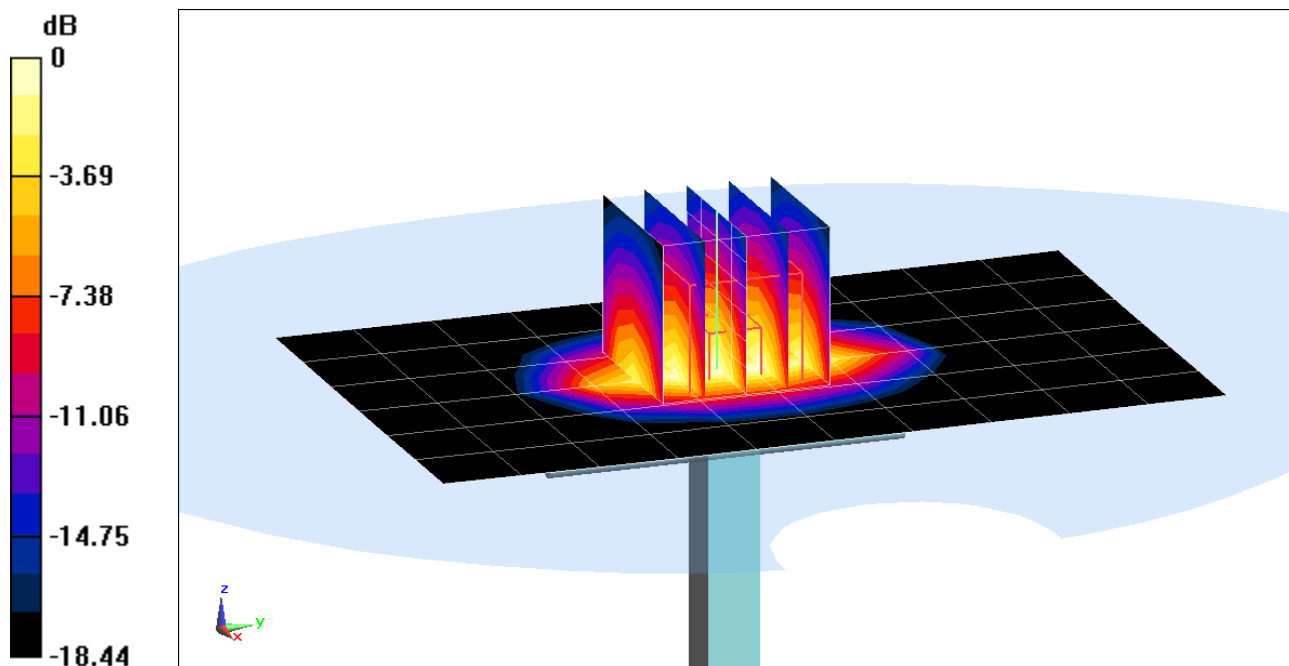
Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

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

Peak SAR (extrapolated) = 7.73 W/kg

SAR(1 g) = 4.21 W/kg

Deviation(1 g) = 7.40%



0 dB = 6.50 W/kg = 8.13 dBW/kg

PCTEST

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d148

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

Medium: 1900 Body Medium parameters used:

$f = 1900 \text{ MHz}$; $\sigma = 1.568 \text{ S/m}$; $\epsilon_r = 52.646$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/12/2020; Ambient Temp: 24.9°C; Tissue Temp: 22.3°C

Probe: EX3DV4 - SN7552; ConvF(7.58, 7.58, 7.58) @ 1900 MHz; Calibrated: 9/19/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1449; Calibrated: 9/12/2019

Phantom: Left Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1792

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

1900 MHz System Verification at 20.0 dBm (100 mW)

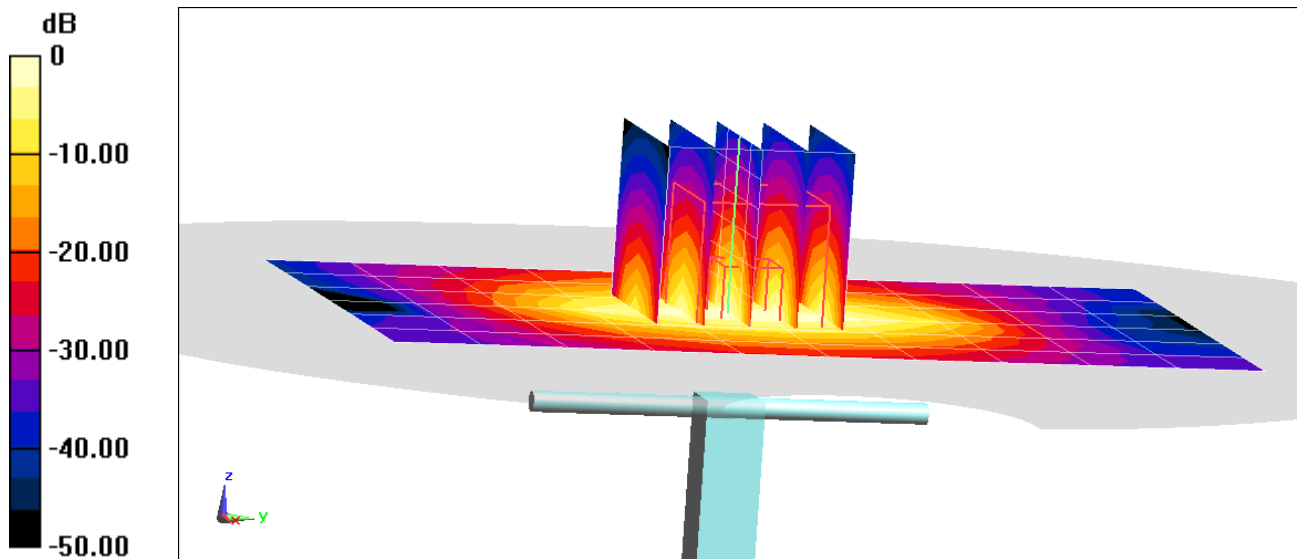
Area Scan (7x11x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

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

Peak SAR (extrapolated) = 7.69 W/kg

SAR(1 g) = 4.16 W/kg

Deviation(1 g) = 6.39%



0 dB = 6.46 W/kg = 8.10 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 Body Medium parameters used:

$f = 2450$ MHz; $\sigma = 2.012$ S/m; $\epsilon_r = 52.315$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/11/2020; Ambient Temp: 22.5°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2450 MHz; Calibrated: 7/15/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1323; Calibrated: 7/11/2019

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)

2450 MHz System Verification at 20.0 dBm (100 mW)

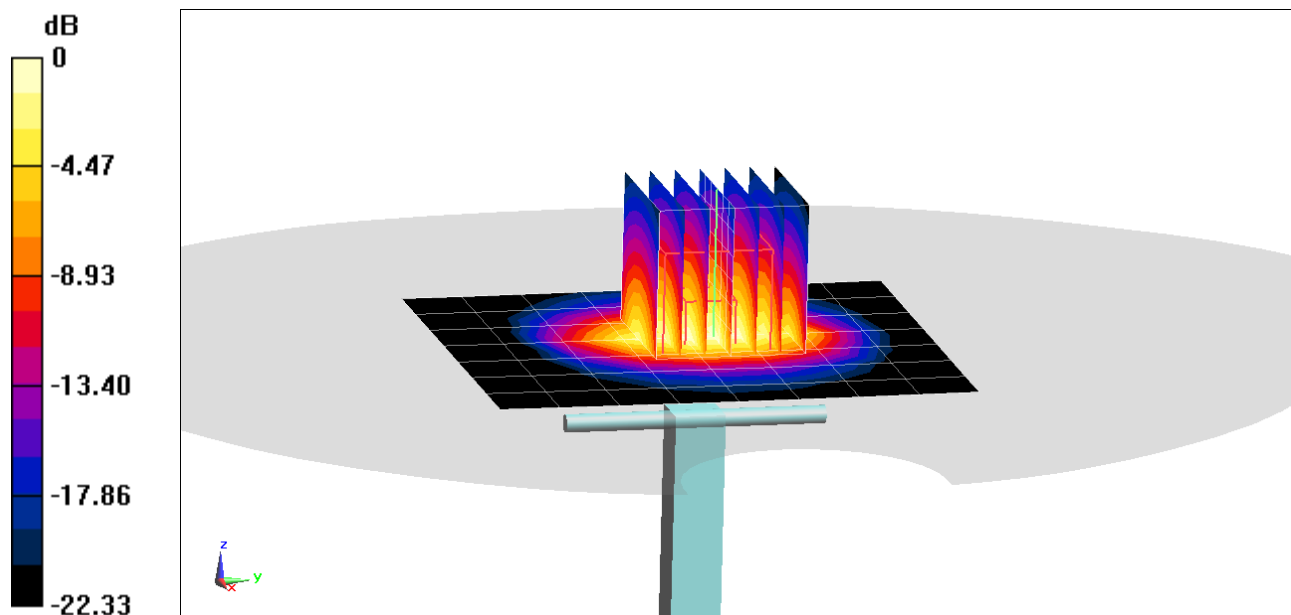
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 10.7 W/kg

SAR(1 g) = 5.11 W/kg

Deviation(1 g) = 0.59%



0 dB = 8.65 W/kg = 9.37 dBW/kg

PCTEST

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 797

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

Medium: 2450 Body Medium parameters used:

$f = 2450 \text{ MHz}$; $\sigma = 2.047 \text{ S/m}$; $\epsilon_r = 51.61$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/13/2020; Ambient Temp: 24.0°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2450 MHz; Calibrated: 7/15/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1323; Calibrated: 7/11/2019

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)

2450 MHz System Verification at 20.0 dBm (100 mW)

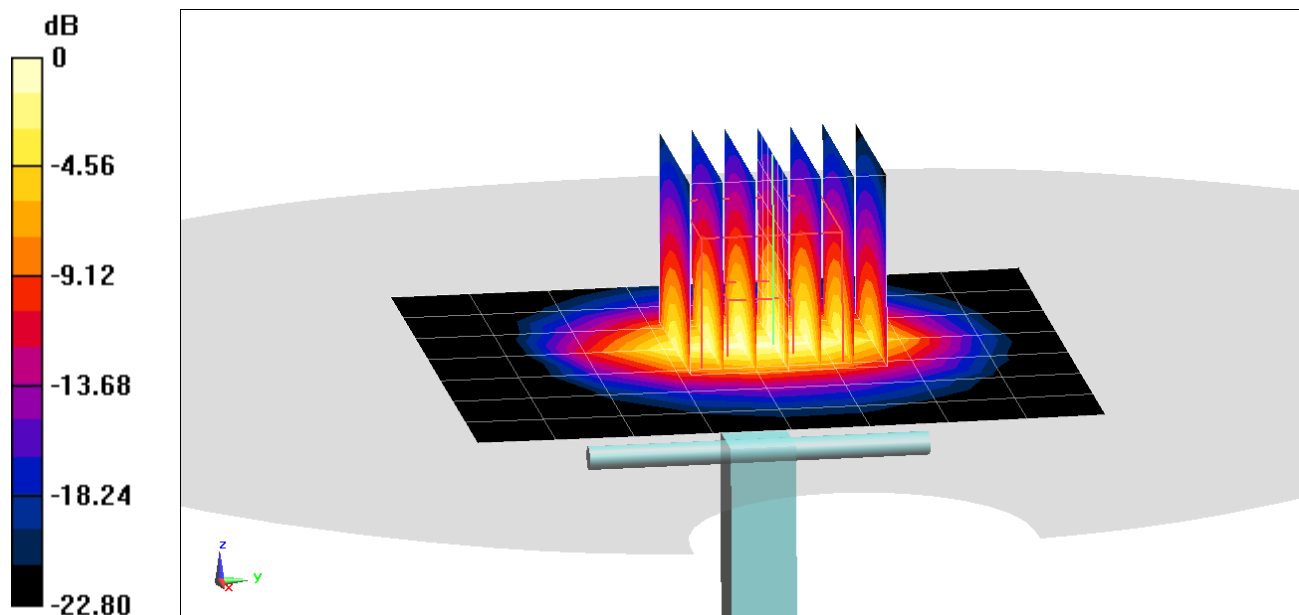
Area Scan (8x9x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

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) = 5.12 W/kg

Deviation(1 g) = 0.20%



0 dB = 8.33 W/kg = 9.21 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; $\sigma = 2.225$ S/m; $\epsilon_r = 51.169$; $\rho = 1000$ kg/m³

Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/13/2020; Ambient Temp: 24.0°C; Tissue Temp: 21.4°C

Probe: EX3DV4 - SN7547; ConvF(7.18, 7.18, 7.18) @ 2600 MHz; Calibrated: 7/15/2019

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1323; Calibrated: 7/11/2019

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)

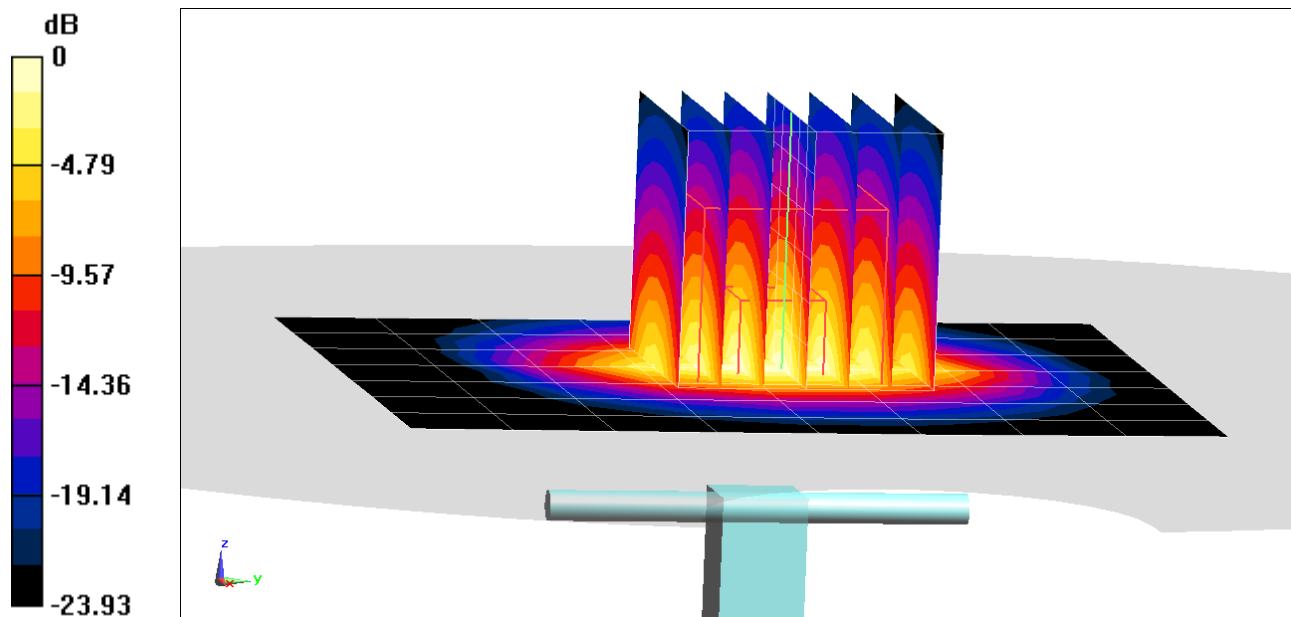
Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm

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

Peak SAR (extrapolated) = 12.1 W/kg

SAR(1 g) = 5.48 W/kg

Deviation(1 g) = -1.44%



0 dB = 9.56 W/kg = 9.80 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	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: ZNFL355DL	 PCTEST Proud to be part of element	SAR EVALUATION REPORT	 LG	Approved by: Quality Manager
Test Dates: 04/29/20 – 05/14/20	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

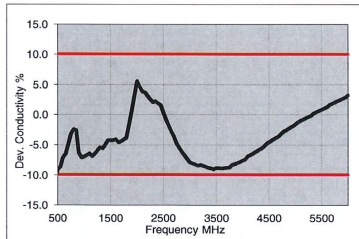
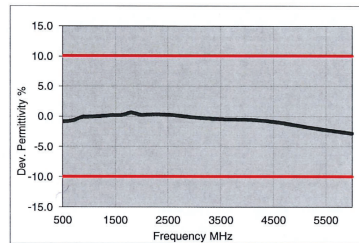
Ambient Condition 22°C ; 30% humidity
 TSL Temperature 22°C
 Test Date 30-Oct-18
 Operator CL

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	-5.7
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

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

FCC ID: ZNFL355DL		SAR EVALUATION REPORT		Approved by: Quality Manager
Test Dates: 04/29/20 – 05/14/20	DUT Type: Portable Handset			APPENDIX C: Page 2 of 3