APPENDIX A: SAR TEST DATA

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05290

Communication System: UID 0, Cellular CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.905 S/m; ε_r = 41.115; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/01/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.1°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=15mm, dy=15mm
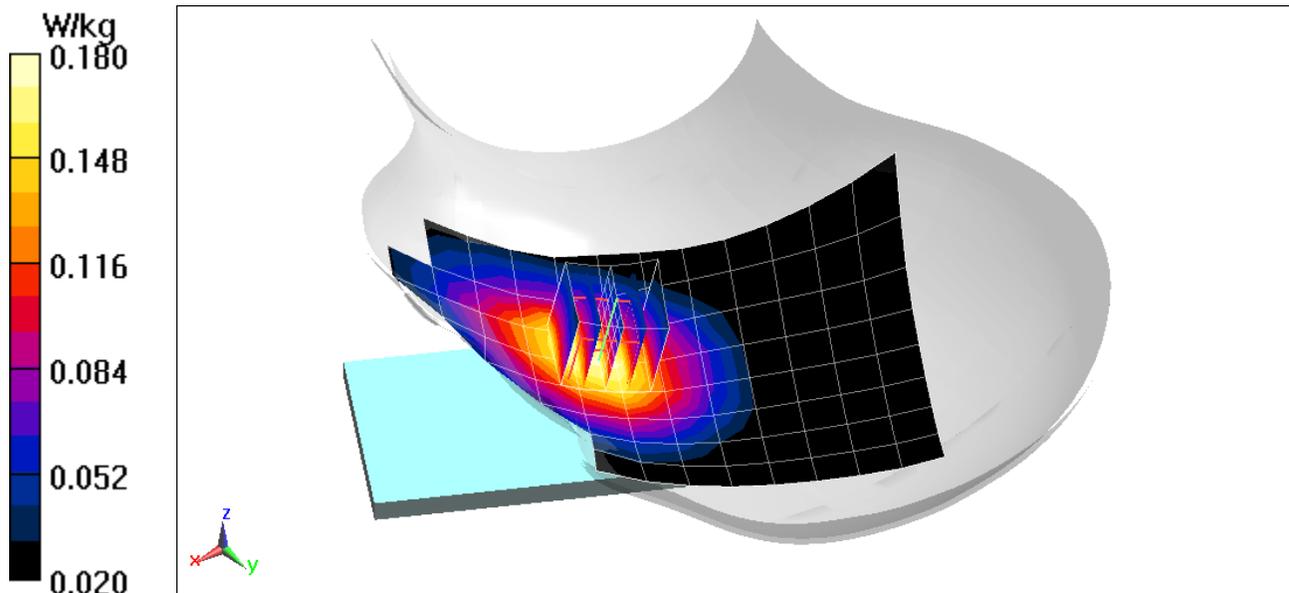**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.91 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.196 W/kg
SAR(1 g) = 0.152 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 79.7%

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05290

Communication System: UID 0, CDMA; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
$f = 1880$ MHz; $\sigma = 1.426$ S/m; $\varepsilon_r = 40.27$; $\rho = 1000$ kg/m^3
Phantom section: Right Section

Test Date: 05/18/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.9°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 EVDO Rev. A, Right Head, Cheek, Mid.ch

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
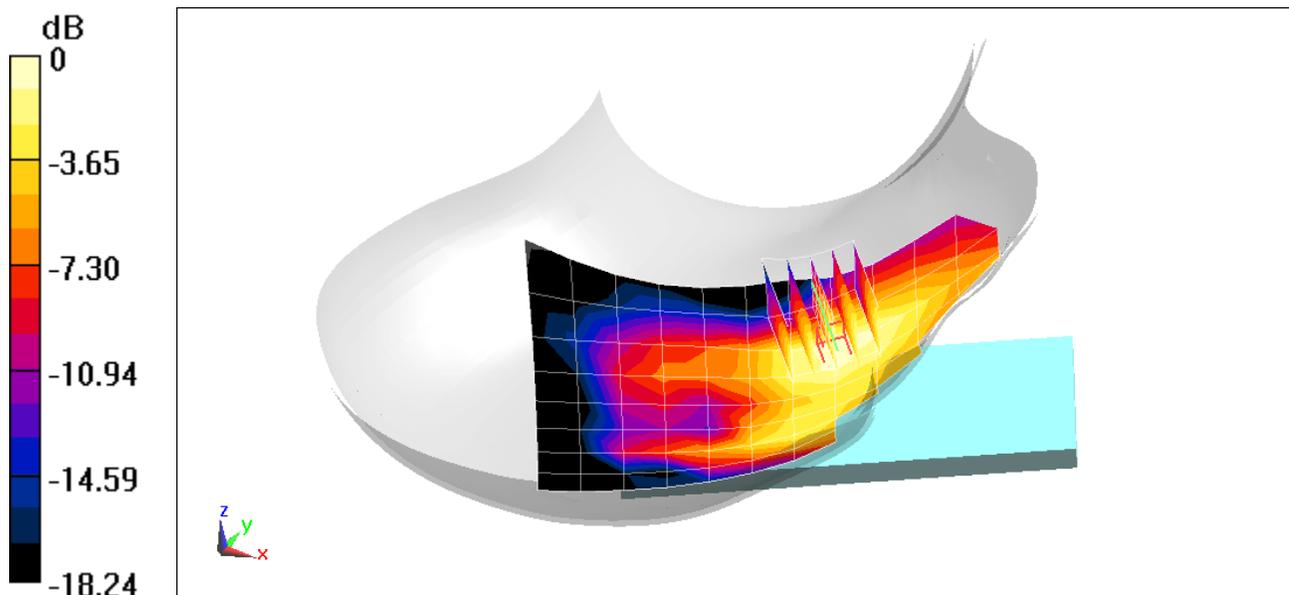Reference Value = 9.425 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.176 W/kg
SAR(1 g) = 0.119 W/kg
Smallest distance from peaks to all points 3 dB below = 16.2 mm
Ratio of SAR at M2 to SAR at M1 = 68.4%

0 dB = 0.157 W/kg = -8.04 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05290

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):
$f = 836.6$ MHz; $\sigma = 0.903$ S/m; $\varepsilon_r = 40.824$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 05/20/2020; Ambient Temp: 21.9°C; Tissue Temp: 21.8°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: GPRS 850, Left Head, Cheek, Mid.ch, 4 Tx slots

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
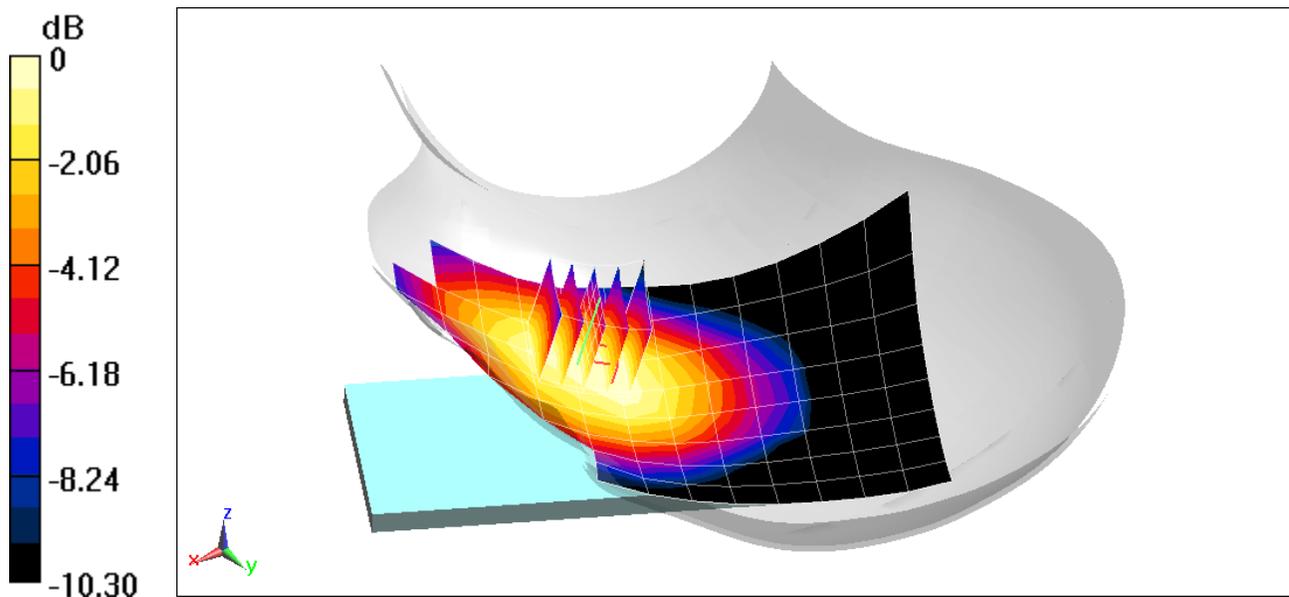**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.52 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.140 W/kg
SAR(1 g) = 0.110 W/kg
Smallest distance from peaks to all points 3 dB below = 21.2 mm
Ratio of SAR at M2 to SAR at M1 = 78.1%

0 dB = 0.130 W/kg = -8.86 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:2.76
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.426 S/m; ε_r = 40.27; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05/18/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.9°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, 3 Tx slots

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
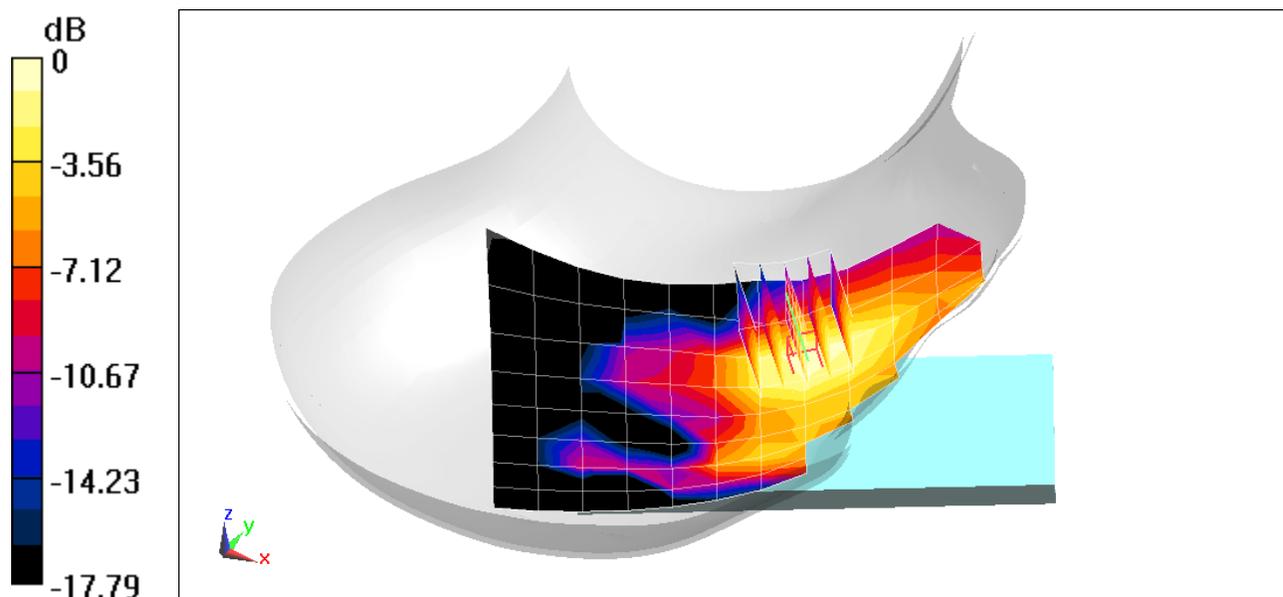**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.385 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.0800 W/kg
SAR(1 g) = 0.052 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 66.9%

0 dB = 0.0702 W/kg = -11.54 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05290

Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.916 S/m; ε_r = 40.563; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05/28/2020; Ambient Temp: 22.6°C; Tissue Temp: 21.7°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
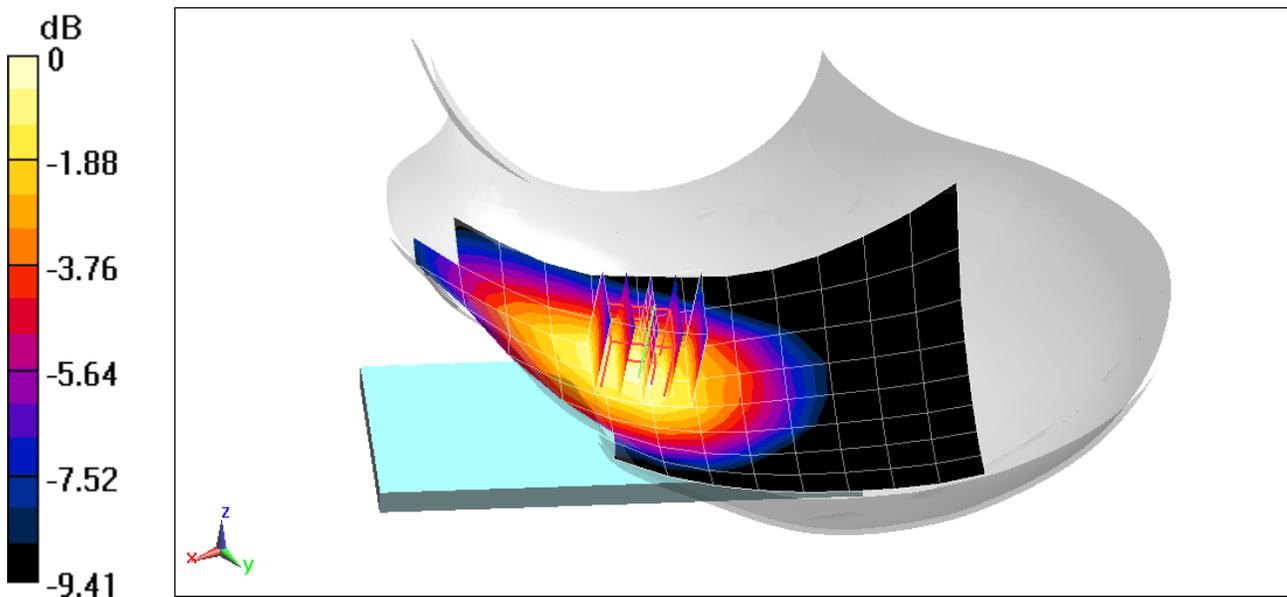**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.81 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.187 W/kg
SAR(1 g) = 0.139 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 76%

0 dB = 0.173 W/kg = -7.62 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

Communication System: UID 0, UMTS; Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used (interpolated):
f = 1732.4 MHz; σ = 1.326 S/m; ε_r = 40.642; ρ = 1000 kg/m^3
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) @ 1732.4 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 1750, Right Head, Cheek, Mid.ch

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
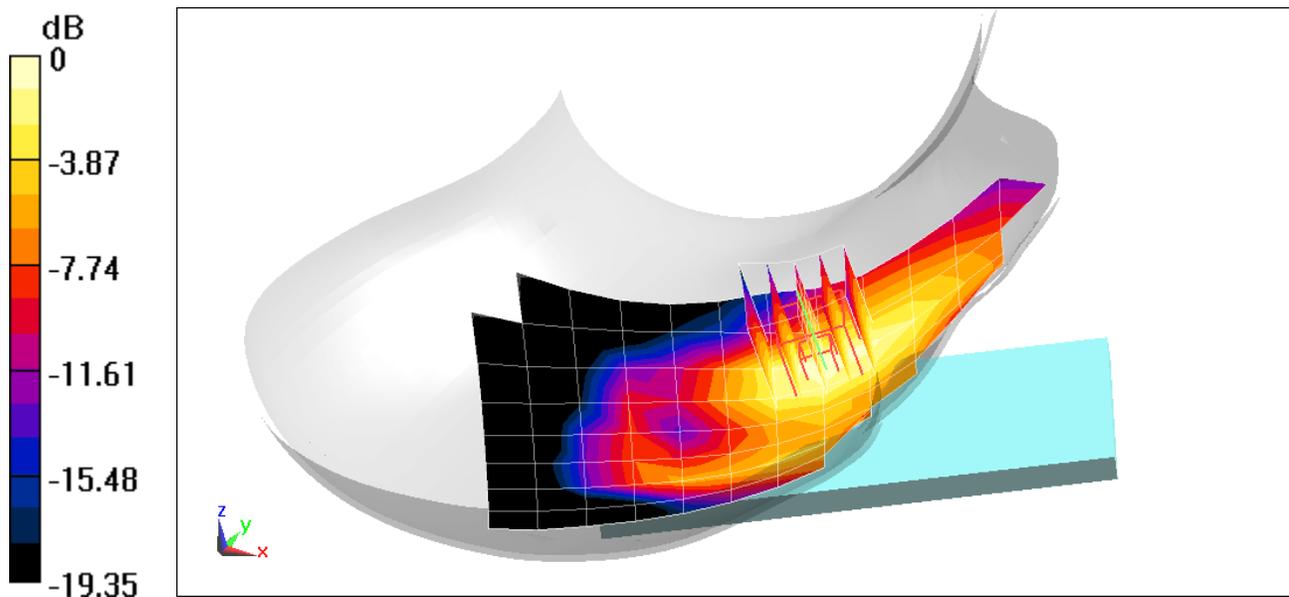**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.605 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.130 W/kg
SAR(1 g) = 0.088 W/kg
Smallest distance from peaks to all points 3 dB below = 12.3 mm
Ratio of SAR at M2 to SAR at M1 = 69.6%

0 dB = 0.115 W/kg = -9.39 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1880 MHz; σ = 1.426 S/m; $ε_r$ = 40.27; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05/18/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.9°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 (9x13x1): Measurement grid: dx=15mm, dy=15mm
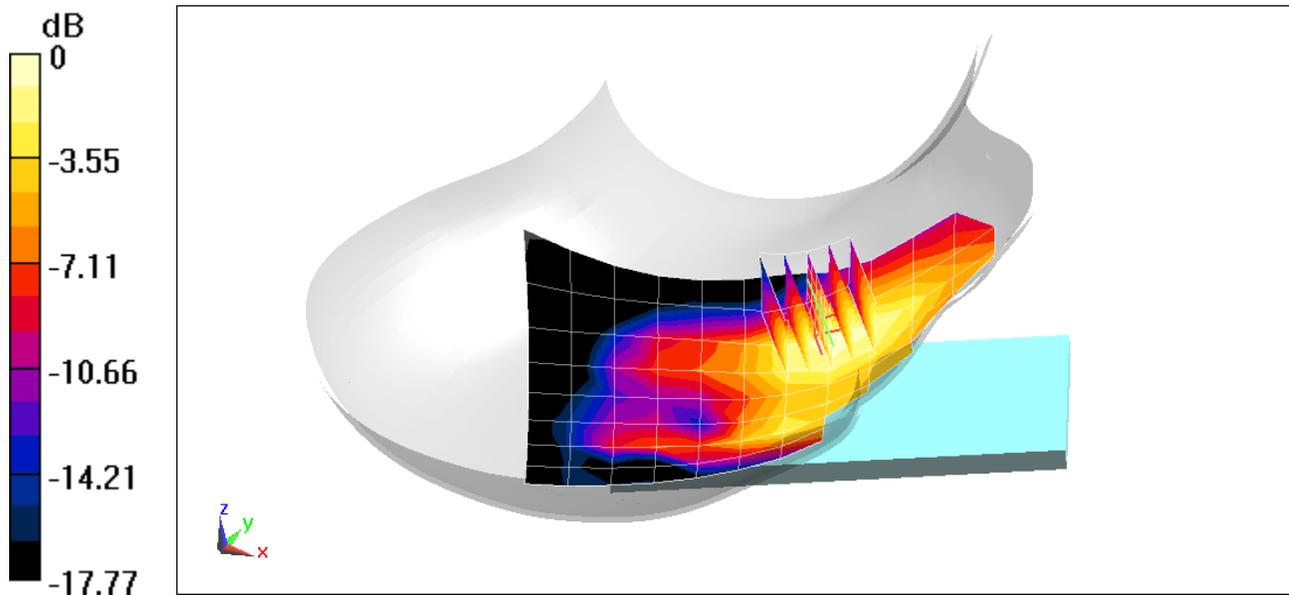**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.778 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.153 W/kg
SAR(1 g) = 0.102 W/kg
Smallest distance from peaks to all points 3 dB below = 15.3 mm
Ratio of SAR at M2 to SAR at M1 = 67.8%

0 dB = 0.135 W/kg = -8.70 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

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 MHz; σ = 0.884 S/m; ε_r = 42.697; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05/17/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN3589; ConvF(8.7, 8.7, 8.7) @ 680.5 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 71, Left Head, Cheek, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
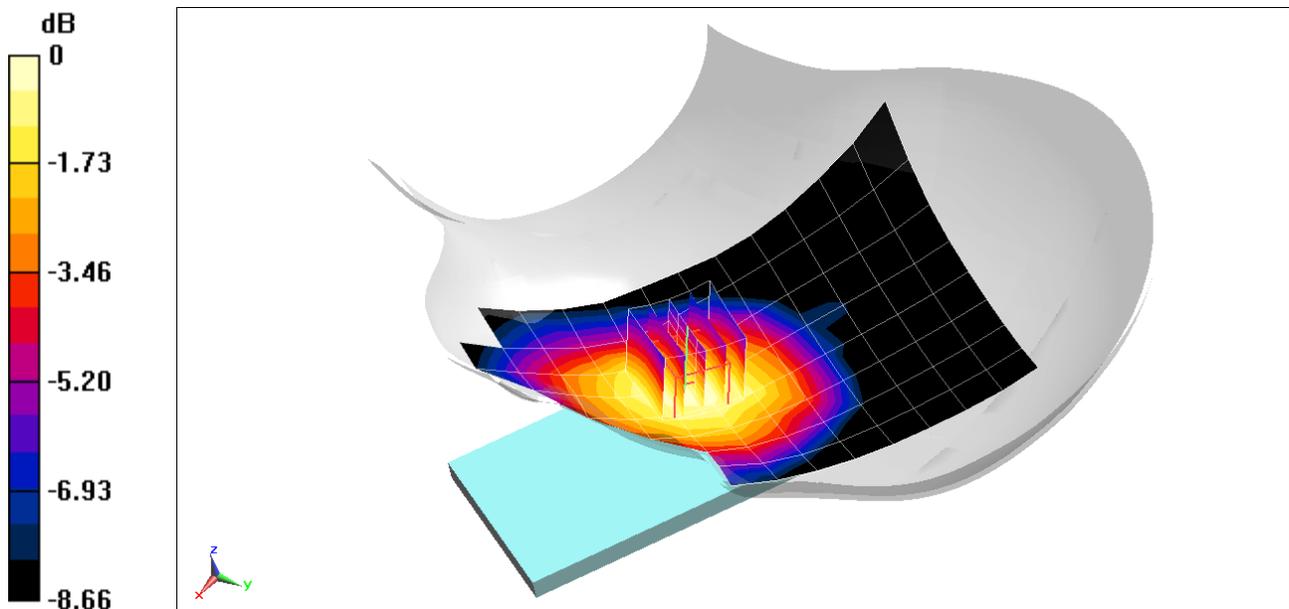**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.22 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.152 W/kg
SAR(1 g) = 0.121 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 79.9%

0 dB = 0.142 W/kg = -8.48 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05274

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 MHz; σ = 0.86 S/m; ε_r = 41.689; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05/20/2020; Ambient Temp: 22.5°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN3589; ConvF(8.7, 8.7, 8.7) @ 707.5 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 12, Left Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 49 RB Offset**

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
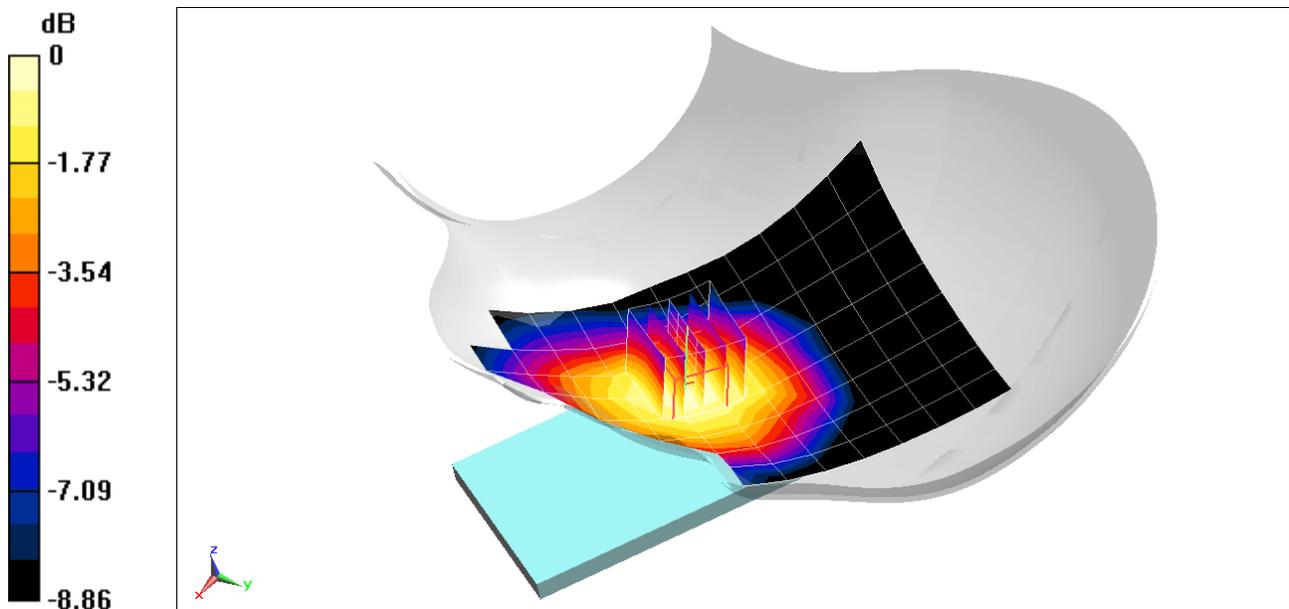**Zoom Scan (6x6x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.651 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.164 W/kg
SAR(1 g) = 0.131 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 79.3%

0 dB = 0.152 W/kg = -8.18 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05274

Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
$f = 782$ MHz; $\sigma = 0.919$ S/m; $\varepsilon_r = 42.382$; $\rho = 1000$ kg/m^3
Phantom section: Left Section

Test Date: 05/17/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN3589; ConvF(8.7, 8.7, 8.7) @ 782 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 13, Left Head, Cheek, Mid.ch,
QPSK, 10 MHz Bandwidth, 1 RB, 25 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.71 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.202 W/kg
SAR(1 g) = 0.158 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 79.4%
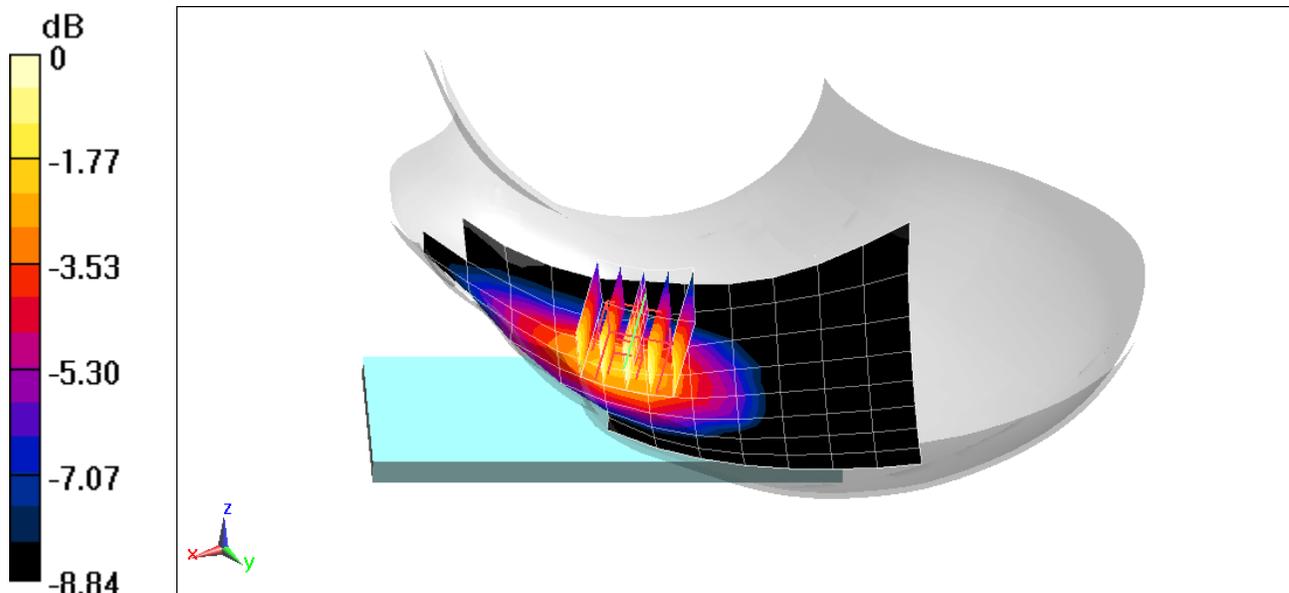
0 dB = 0.185 W/kg = -7.33 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 793 MHz; σ = 0.889 S/m; ε_r = 41.421; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05/20/2020; Ambient Temp: 22.5°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN3589; ConvF(8.7, 8.7, 8.7) @ 793 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 14, Left Head, Cheek, Mid.ch,
QPSK, 10 MHz Bandwidth, 1 RB, 0 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.15 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.160 W/kg
SAR(1 g) = 0.123 W/kg
Smallest distance from peaks to all points 3 dB below = 22.1 mm
Ratio of SAR at M2 to SAR at M1 = 78.1%
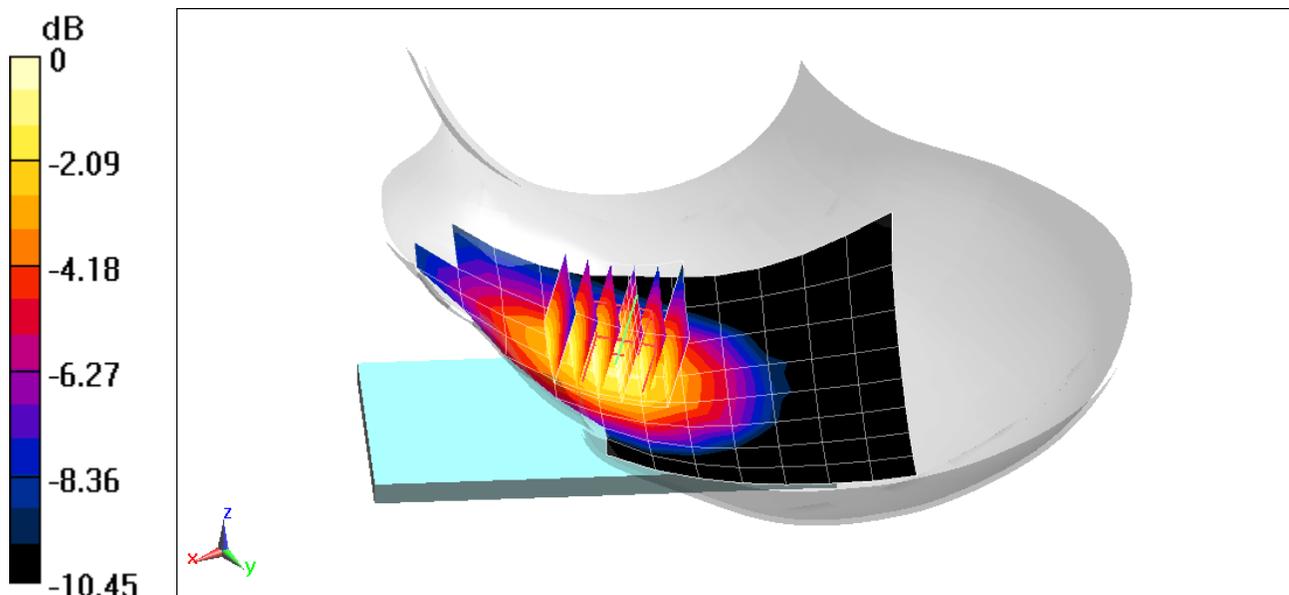
0 dB = 0.146 W/kg = -8.36 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05290

Communication System: UID 0, LTE Band 5 (Cell.); Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.916 S/m; ε_r = 40.564; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05/28/2020; Ambient Temp: 22.6°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 836.5 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 5 (Cell.), ULCA, Left Head, Cheek, Mid.ch,
PCC: 10 MHz Bandwidth, QPSK, Ch. 20525 1 RB, 49 RB Offset
SCC: 5 MHz Bandwidth, QPSK, Ch. 20597, 1 RB, 0 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 = 13.92 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.218 W/kg
SAR(1 g) = 0.166 W/kg
Smallest distance from peaks to all points 3 dB below = 21.8 mm
Ratio of SAR at M2 to SAR at M1 = 77.2%
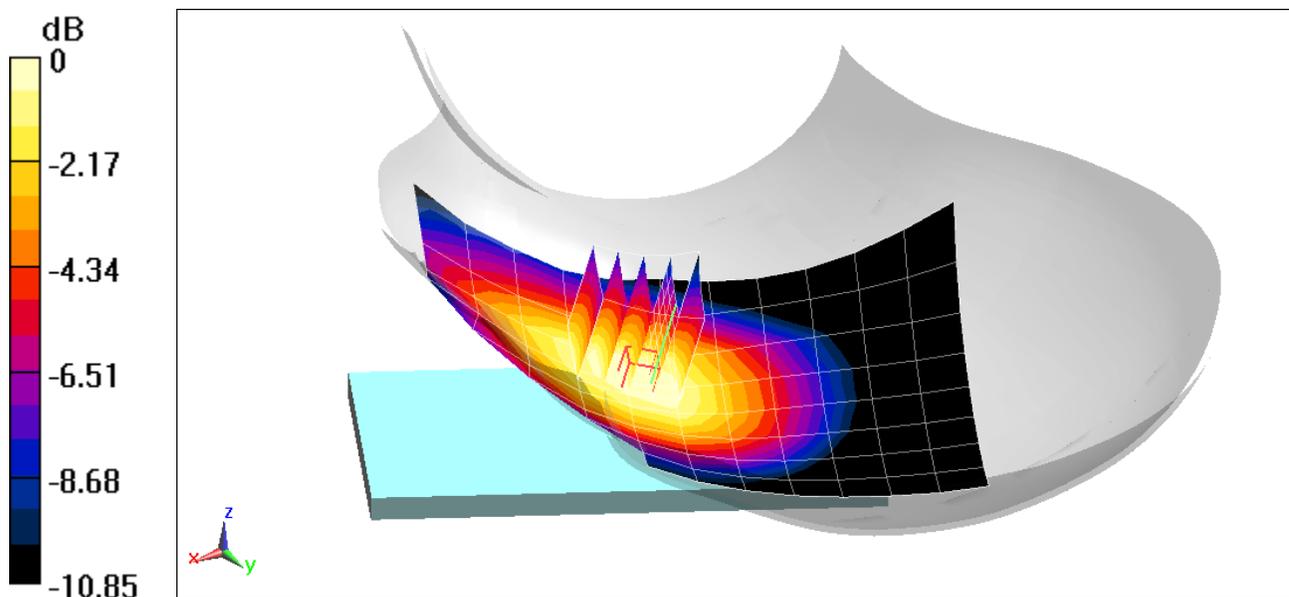
0 dB = 0.198 W/kg = -7.03 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1770 MHz; σ = 1.351 S/m; ε_r = 40.589; ρ = 1000 kg/m^3
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), Antenna 2, Right Head, Cheek,
High.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 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 = 10.41 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.189 W/kg
SAR(1 g) = 0.126 W/kg
Smallest distance from peaks to all points 3 dB below = 14.5 mm
Ratio of SAR at M2 to SAR at M1 = 69%
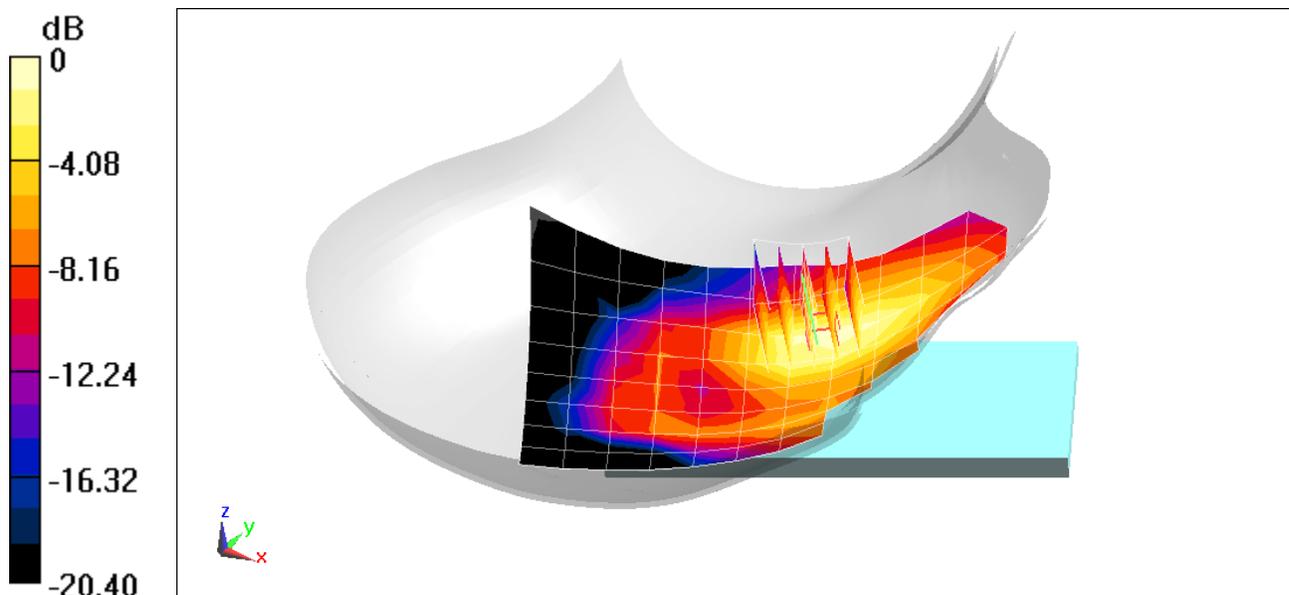
0 dB = 0.167 W/kg = -7.77 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05274

Communication System: UID 0, LTE Band 2 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1860 MHz; σ = 1.409 S/m; ε_r = 39.498; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/12/2020; Ambient Temp: 23.9°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7551; ConvF(8.05, 8.05, 8.05) @ 1860 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 2 (PCS), Antenna 3, Right Head, Cheek, Low.ch, 20 MHz Bandwidth, QPSK, 50 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 = 5.965 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.0670 W/kg
SAR(1 g) = 0.042 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 62.9%
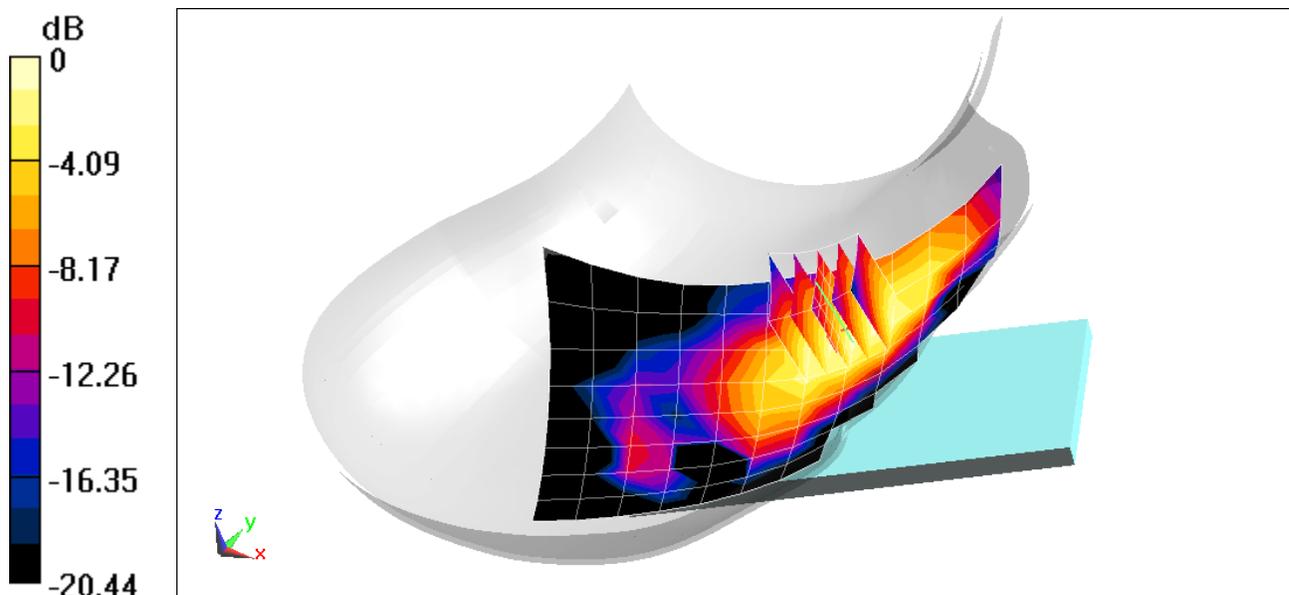
0 dB = 0.0574 W/kg = -12.41 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1882.5 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used (interpolated):
f = 1882.5 MHz; σ = 1.427 S/m; ε_r = 40.267; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05/18/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7410; ConvF(8.11, 8.11, 8.11) @ 1882.5 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 25 (PCS), Right Head, Cheek, Mid.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 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 = 10.02 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.186 W/kg
SAR(1 g) = 0.123 W/kg
Smallest distance from peaks to all points 3 dB below = 14.5 mm
Ratio of SAR at M2 to SAR at M1 = 67.2%
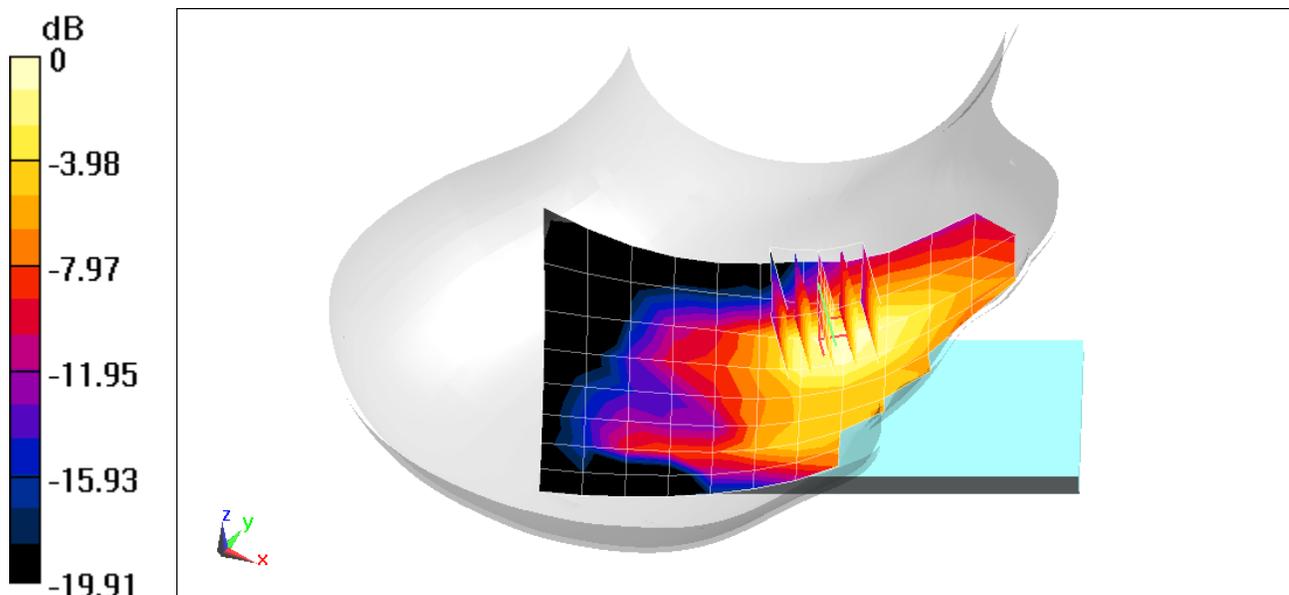
0 dB = 0.165 W/kg = -7.83 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2310 MHz; σ = 1.69 S/m; ε_r = 39.446; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 05/10/2020; Ambient Temp: 23.2°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN3589; ConvF(7.11, 7.11, 7.11) @ 2310 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 30, Left Head, Cheek, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.805 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.149 W/kg
SAR(1 g) = 0.089 W/kg
Smallest distance from peaks to all points 3 dB below = 13.7 mm
Ratio of SAR at M2 to SAR at M1 = 61.2%
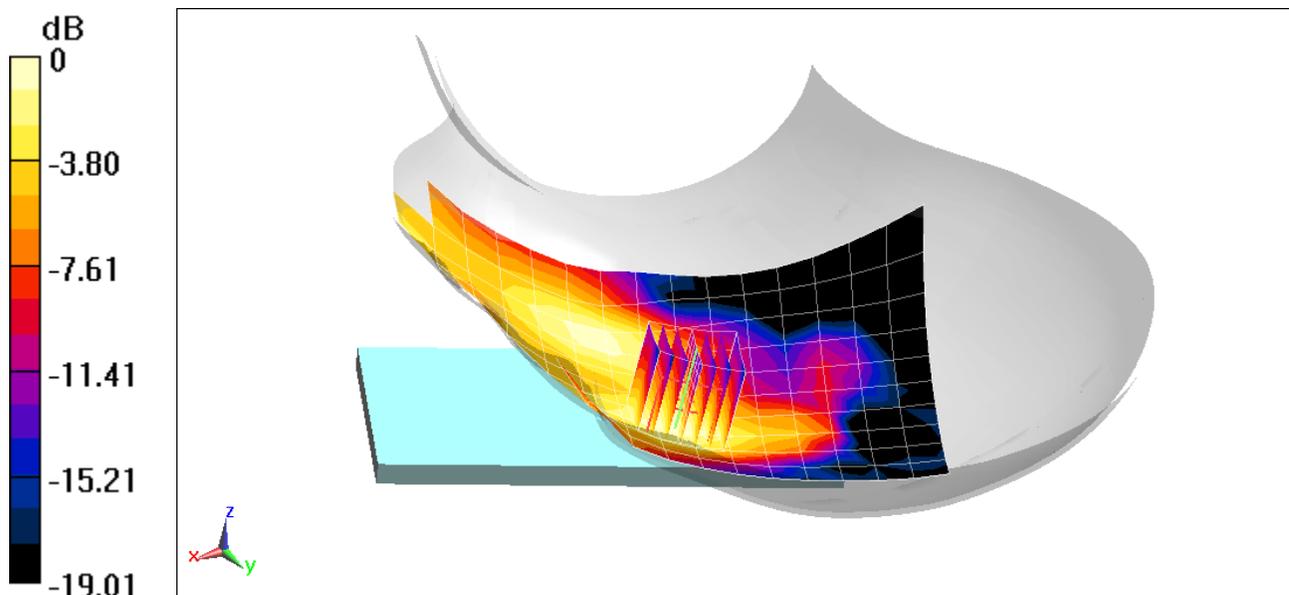
0 dB = 0.129 W/kg = -8.89 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2560 MHz; σ = 1.911 S/m; $ε_r$ = 38.47; ρ = 1000 kg/m^3
Phantom section: Left Section

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

Probe: EX3DV4 - SN3589; ConvF(6.6, 6.6, 6.6) @ 2560 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 7, Left Head, Cheek, High.ch,
QPSK, 20 MHz Bandwidth, 1 RB, 99 RB Offset**

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.939 V/m; Power Drift = 0.21 dB
Peak SAR (extrapolated) = 0.277 W/kg
SAR(1 g) = 0.148 W/kg
Smallest distance from peaks to all points 3 dB below = 13.3 mm
Ratio of SAR at M2 to SAR at M1 = 55.7%
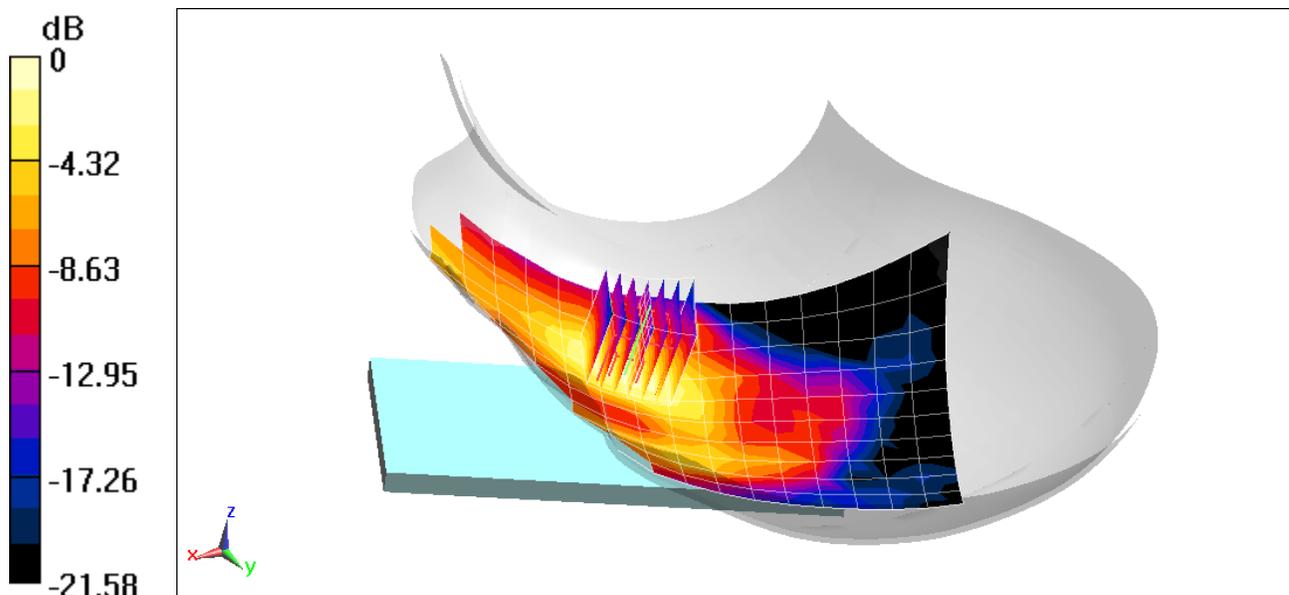
0 dB = 0.225 W/kg = -6.48 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2680 MHz; Duty Cycle: 1:1.58
Medium: 2450 Head Medium parameters used:
f = 2680 MHz; σ = 2.012 S/m; $ε_r$ = 38.267; ρ = 1000 kg/m³
Phantom section: Left Section

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

Probe: EX3DV4 - SN3589; ConvF(6.6, 6.6, 6.6) @ 2680 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, Left Head, Cheek, High.ch,
QPSK, 20 MHz Bandwidth, 1 RB, 50 RB Offset**

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.670 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 0.134 W/kg
SAR(1 g) = 0.069 W/kg
Smallest distance from peaks to all points 3 dB below = 13.2 mm
Ratio of SAR at M2 to SAR at M1 = 54.2%

0 dB = 0.107 W/kg = -9.71 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05191

Communication System: UID 0, NR Band n71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.863 S/m; ε_r = 43.212; ρ = 1000 kg/m^3
Phantom section: Left Section

Test Date: 06/15/2020; Ambient Temp: 22.5°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(8.7, 8.7, 8.7) @ 680.5 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: NR Band n71, Left Head, Cheek, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 136100, 50 RB, 28 RB Offset

Area Scan (9x13x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.913 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.00868 W/kg
SAR(1 g) = 0.00644 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 74.2%
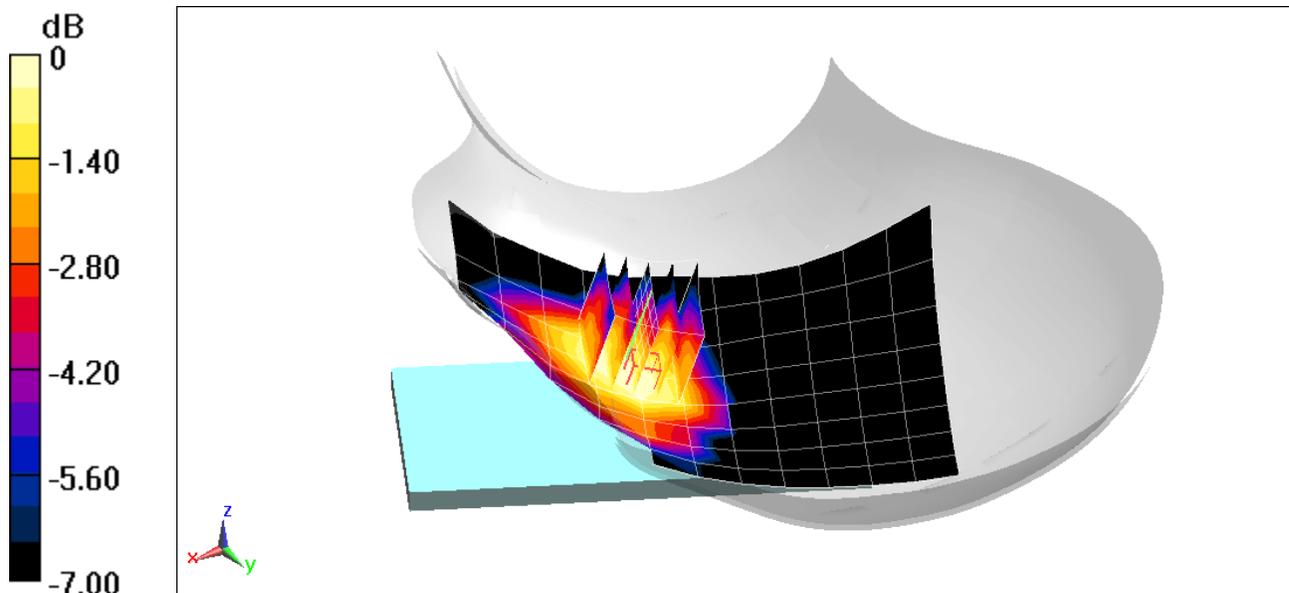
0 dB = 0.00737 W/kg = -21.33 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05209

Communication System: UID 0, NR Band n5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Head Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.916 S/m; $ε_r$ = 40.564; ρ = 1000 kg/m³
Phantom section: Left Section

Test Date: 05/28/2020; Ambient Temp: 22.6°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(9.88, 9.88, 9.88) @ 836.5 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: NR Band n5, Left Head, Cheek, 20 MHz Bandwidth,
DFT-s-OFDM QPSK, Ch. 167300, 1 RB, 1 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 = 11.67 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.147 W/kg
SAR(1 g) = 0.112 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 77.9%
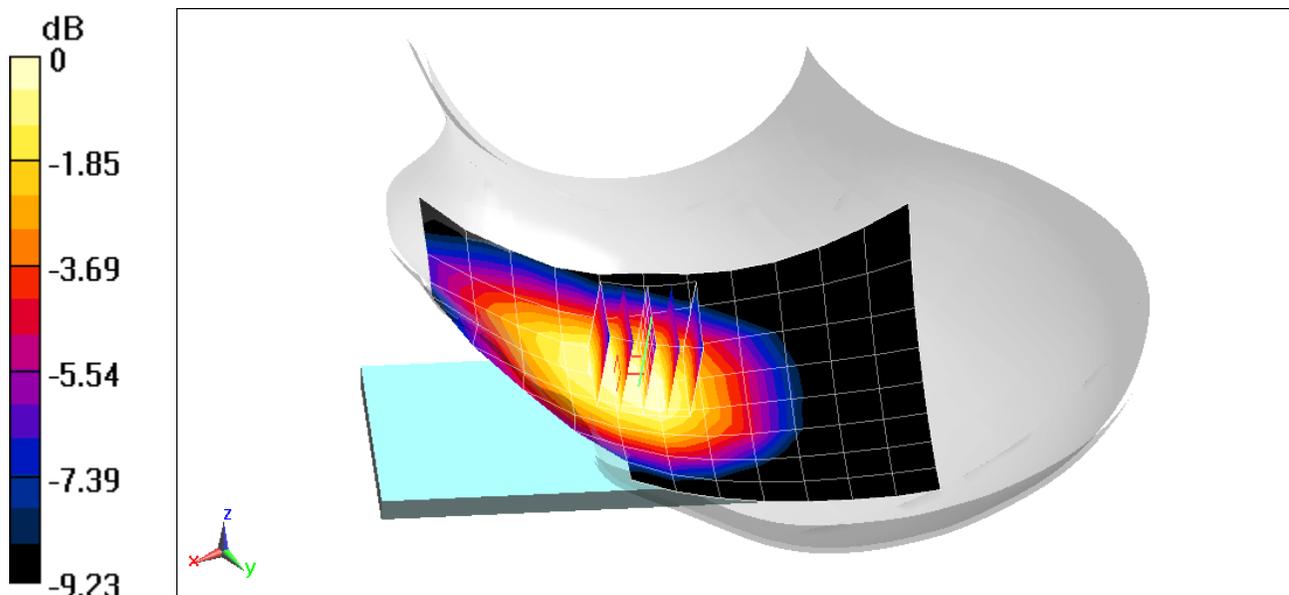
0 dB = 0.136 W/kg = -8.66 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05209

Communication System: UID 0, NR Band n66; Frequency: 1720 MHz; Duty Cycle: 1:1
Medium: 1750 Head Medium parameters used:
f = 1720 MHz; σ = 1.336 S/m; ε_r = 39.313; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/10/2020; Ambient Temp: 23.5°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(8.34, 8.34, 8.34) @ 1720 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: NR Band n66, Dual Display Cover Accessory, Position #3, Right Head, Cheek, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 344000, 1 RB, 104 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
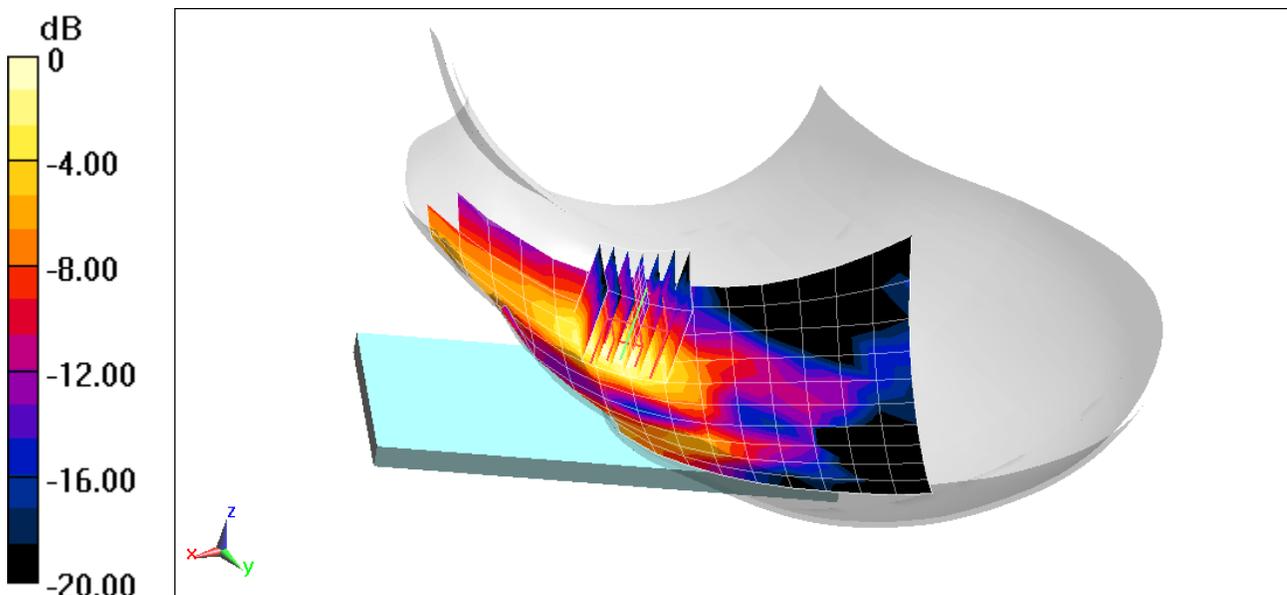**Zoom Scan (6x6x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.825 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.177 W/kg
SAR(1 g) = 0.116 W/kg
Smallest distance from peaks to all points 3 dB below = 13.6 mm
Ratio of SAR at M2 to SAR at M1 = 65.4%
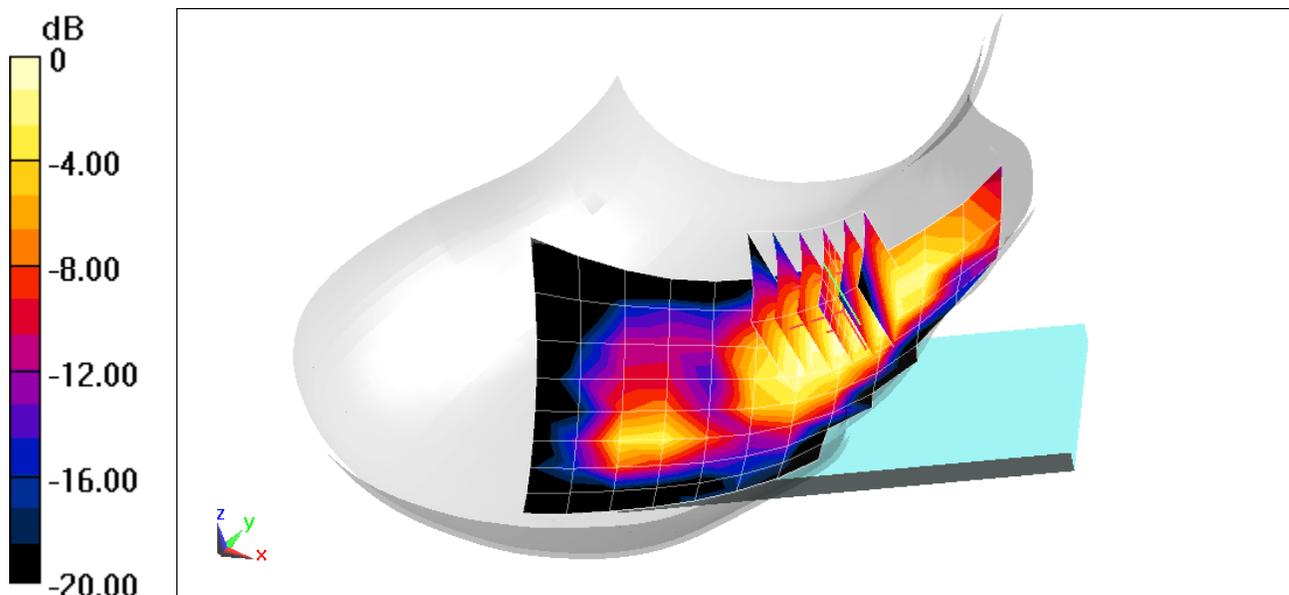
0 dB = 0.152 W/kg = -8.18 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05209

Communication System: UID 0, NR Band n25; Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1860 MHz; σ = 1.415 S/m; ε_r = 40.297; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05/18/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7410; ConvF(8.11, 8.11, 8.11) @ 1860 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: NR Band n25, Right Head, Cheek, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 372000, 50 RB, 28 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 = 12.78 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.305 W/kg
SAR(1 g) = 0.196 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 64.3%
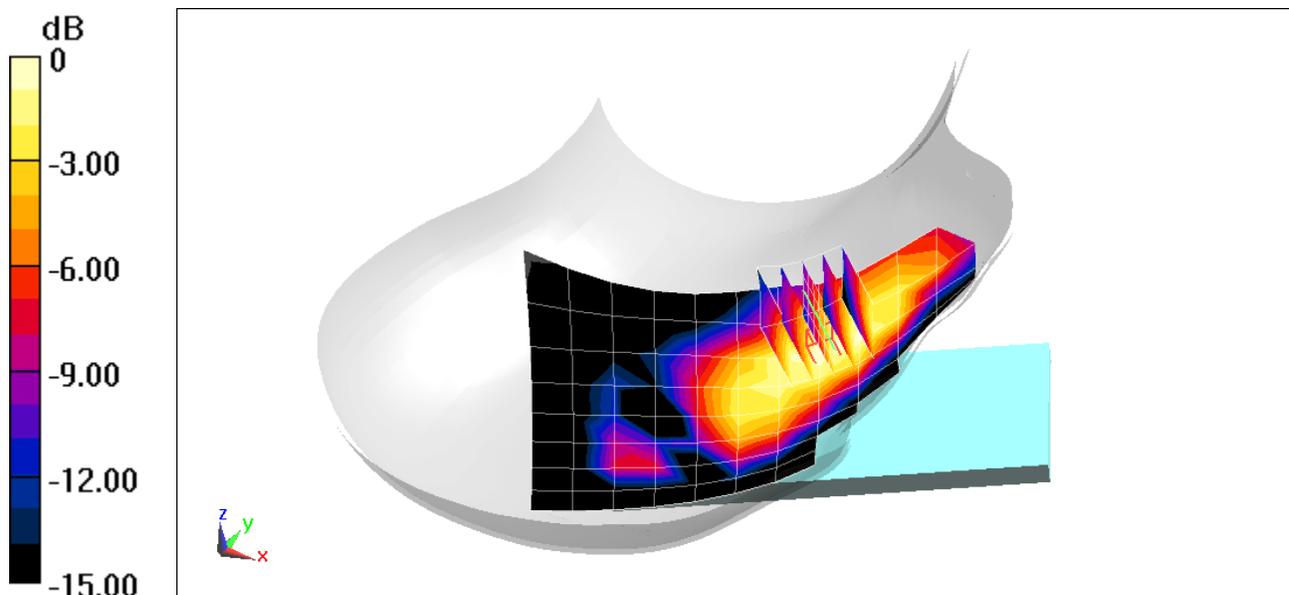
0 dB = 0.266 W/kg = -5.75 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05209

Communication System: UID 0, NR Band n41; Frequency: 2592.99 MHz; Duty Cycle: 1:4
Medium: 2450 Head Medium parameters used (interpolated):
f = 2592.99 MHz; σ = 1.887 S/m; ε_r = 39.979; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/10/2020; Ambient Temp: 21.1°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(6.6, 6.6, 6.6) @ 2592.99 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: NR Band n41, Dual Display Accessory Position #3, Right Head, Tilt, 100 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 518598, 1 RB, 1 RB Offset

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.779 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.118 W/kg
SAR(1 g) = 0.054 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 47.2%
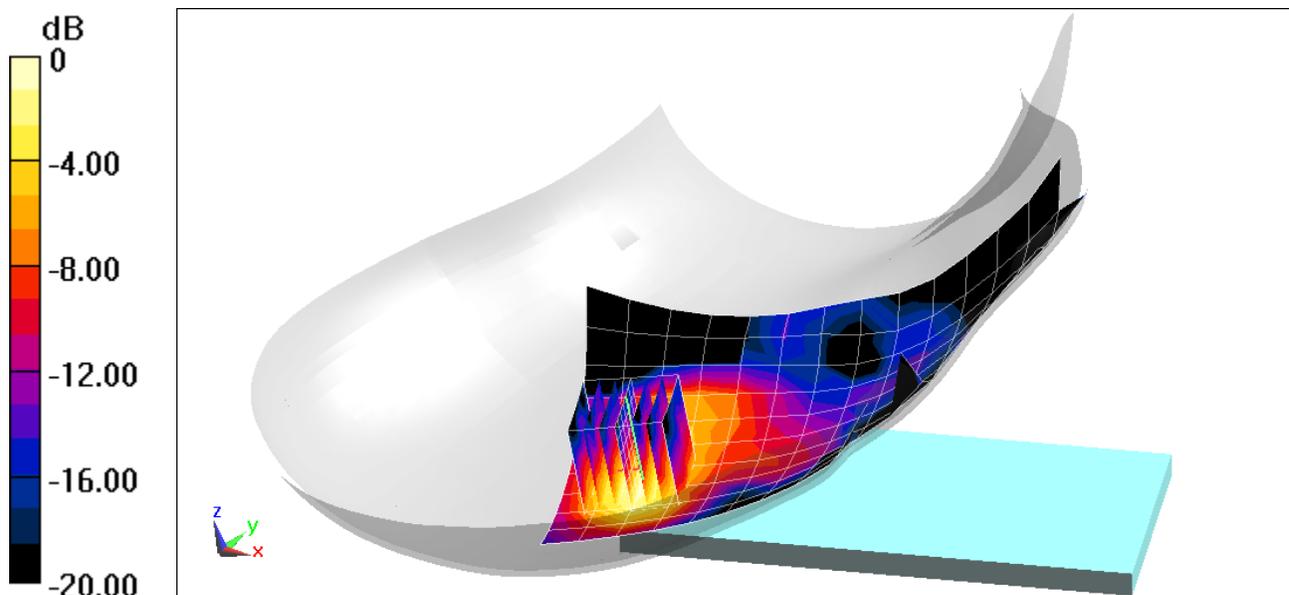
0 dB = 0.0892 W/kg = -10.50 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05381

Communication System: UID 0, 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used (interpolated):
f = 2437 MHz; σ = 1.781 S/m; $ε_r$ = 40.105; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 06/19/2020; Ambient Temp: 24.9°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7410; ConvF(7.47, 7.47, 7.47) @ 2437 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: IEEE 802.11b, 22 MHz Bandwidth, Antenna 2, Dual Display
Accessory Position #3, Right Head, Cheek, Ch 06, 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 = 10.29 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.701 W/kg
Smallest distance from peaks to all points 3 dB below = 7 mm
Ratio of SAR at M2 to SAR at M1 = 49.9%

0 dB = 1.15 W/kg = 0.61 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05381

Communication System: UID 0, IEEE 802.11n; Frequency: 5270 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Head Medium parameters used:
f = 5270 MHz; σ = 4.67 S/m; ε_r = 35.085; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05/07/2020; Ambient Temp: 22.7°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7357; ConvF(5.5, 5.5, 5.5) @ 5270 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 20; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11n, U-NII-2A, Antenna 2, 40 MHz Bandwidth, Right Head, Cheek, Ch 54, 13.5 Mbps

Area Scan (13x22x1): Measurement grid: dx=10mm, dy=10mm
**Zoom Scan (8x8x8)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 3.986 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.284 W/kg
Smallest distance from peaks to all points 3 dB below = 6.7 mm
Ratio of SAR at M2 to SAR at M1 = 63.9%
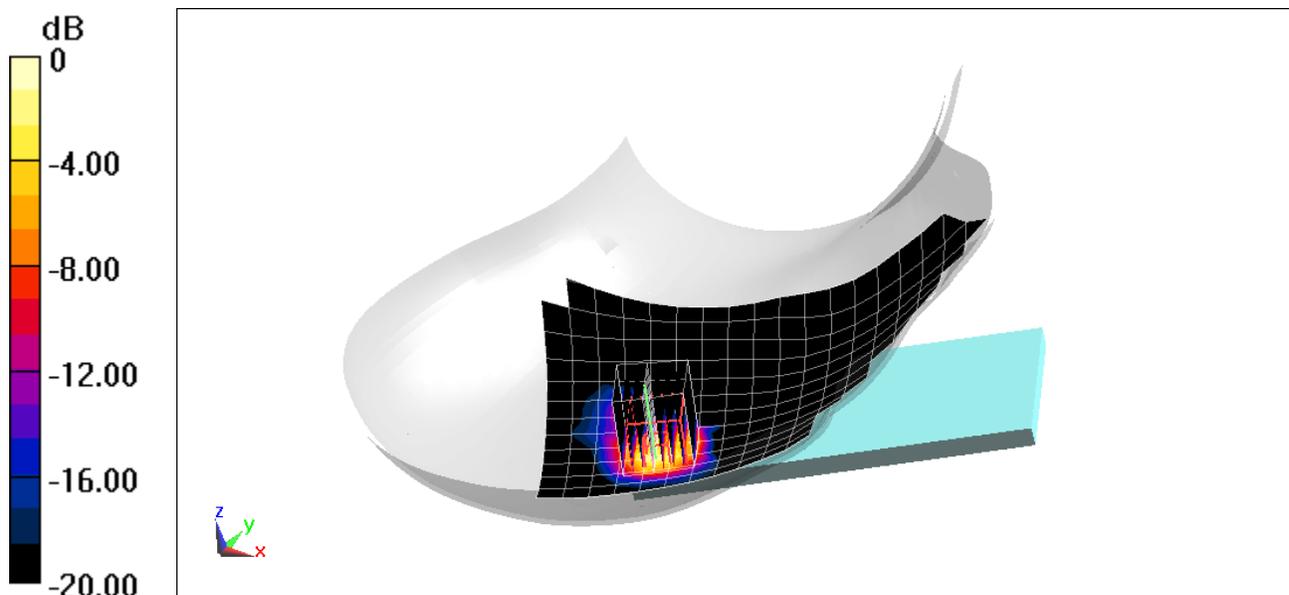
0 dB = 0.739 W/kg = -1.31 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05381

Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.294
Medium: 2450 Head Medium parameters used (interpolated):
f = 2402 MHz; σ = 1.752 S/m; ε_r = 39.342; ρ = 1000 kg/m^3
Phantom section: Right Section

Test Date: 05/10/2020; Ambient Temp: 23.2°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN3589; ConvF(6.85, 6.85, 6.85) @ 2402 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 0, 1 Mbps

Area Scan (11x19x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.964 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.201 W/kg
SAR(1 g) = 0.084 W/kg
Smallest distance from peaks to all points 3 dB below = 6.1 mm
Ratio of SAR at M2 to SAR at M1 = 43.6%
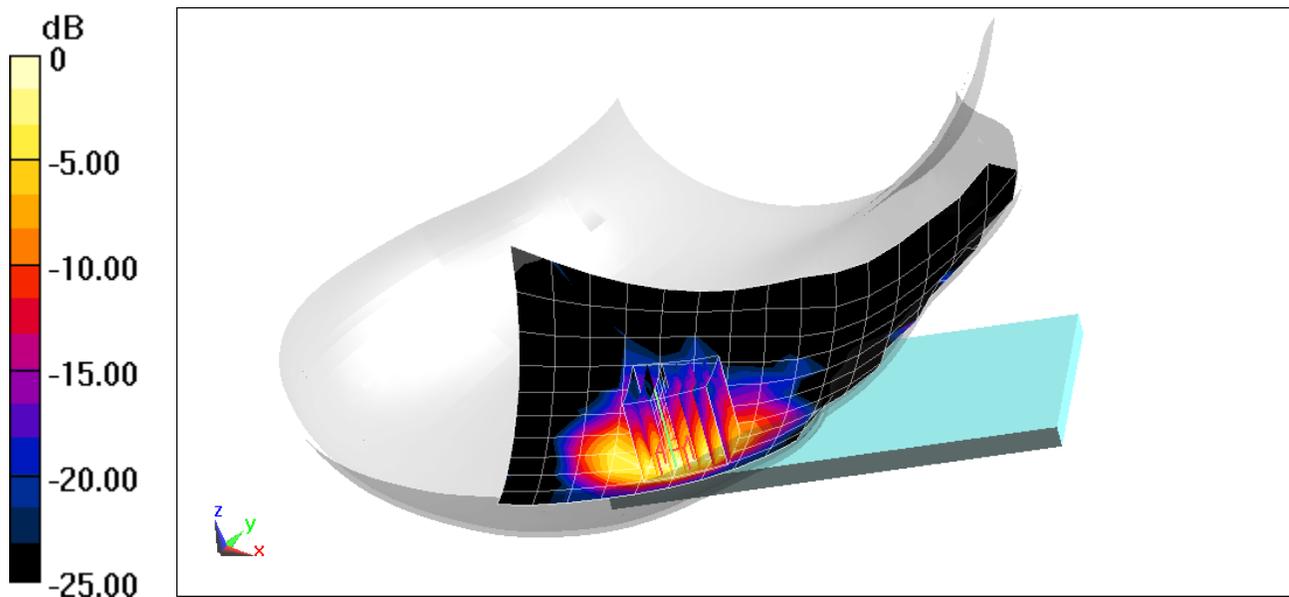
0 dB = 0.158 W/kg = -8.01 dBW/kg

PCTEST
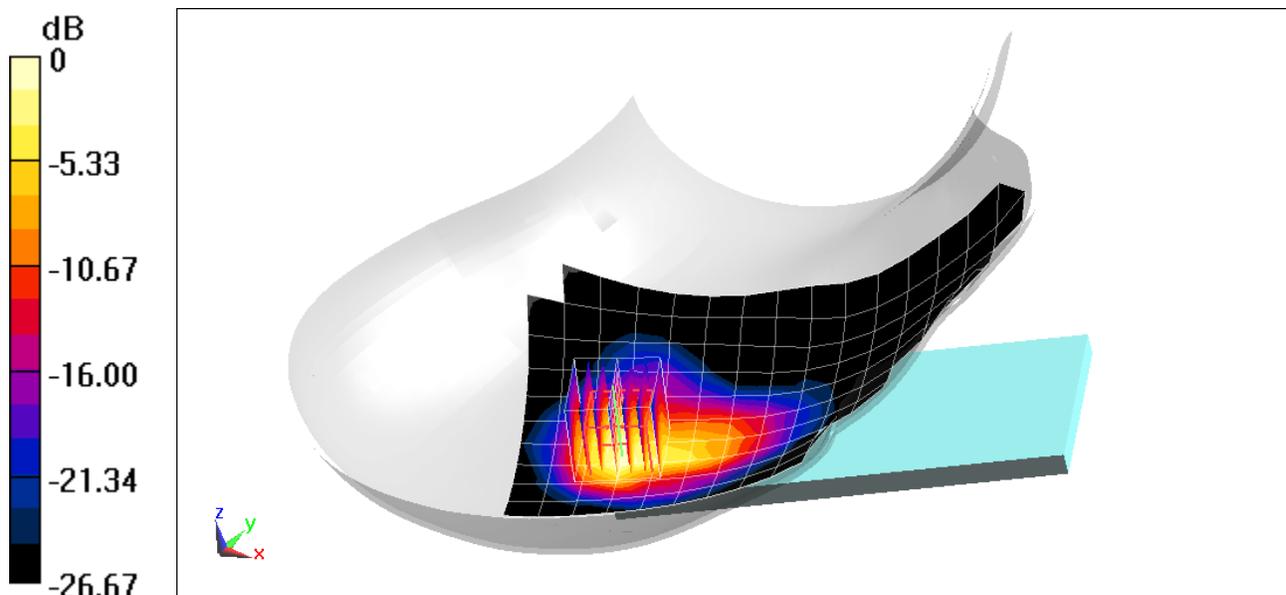
DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.963 S/m; ε_r = 53.397; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 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, Body SAR, Back side, 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 = 24.68 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.944 W/kg
SAR(1 g) = 0.567 W/kg
Smallest distance from peaks to all points 3 dB below = 16.7 mm
Ratio of SAR at M2 to SAR at M1 = 58.5%
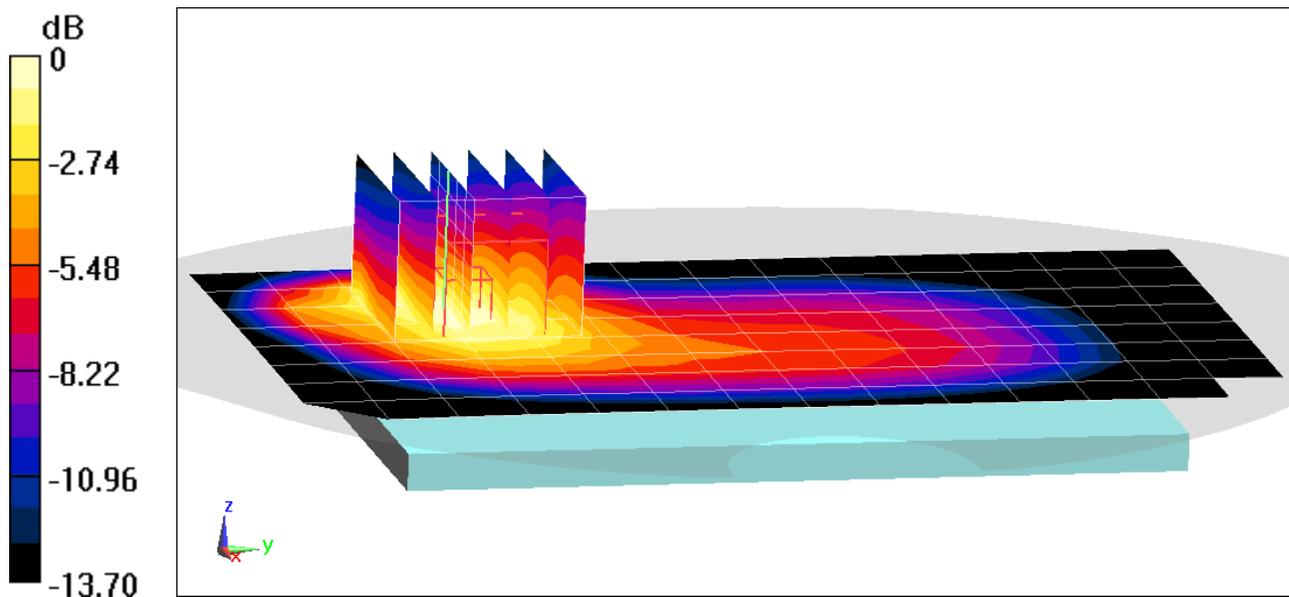
0 dB = 0.798 W/kg = -0.98 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, CDMA; Frequency: 836.52 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.52 MHz; σ = 0.963 S/m; ε_r = 53.397; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 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. EVDO, BC 0, Rev. 0, Body SAR, Back side, 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 = 23.94 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.869 W/kg
SAR(1 g) = 0.526 W/kg
Smallest distance from peaks to all points 3 dB below = 15.8 mm
Ratio of SAR at M2 to SAR at M1 = 59.6%

0 dB = 0.735 W/kg = -1.34 dBW/kg

A28

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, CDMA; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1908.75 MHz; σ = 1.594 S/m; ε_r = 51.665; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 22.1°C; Tissue Temp: 23.2°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 CDMA, Body SAR, Back 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 = 23.55 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.768 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 59.3%

0 dB = 1.15 W/kg = 0.61 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, CDMA; Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1908.75 MHz; σ = 1.594 S/m; $ε_r$ = 51.665; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 22.1°C; Tissue Temp: 23.2°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, Rev. 0, Body SAR, Bottom Edge, High.ch

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
**Zoom Scan (5x6x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.99 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.912 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 56.7%
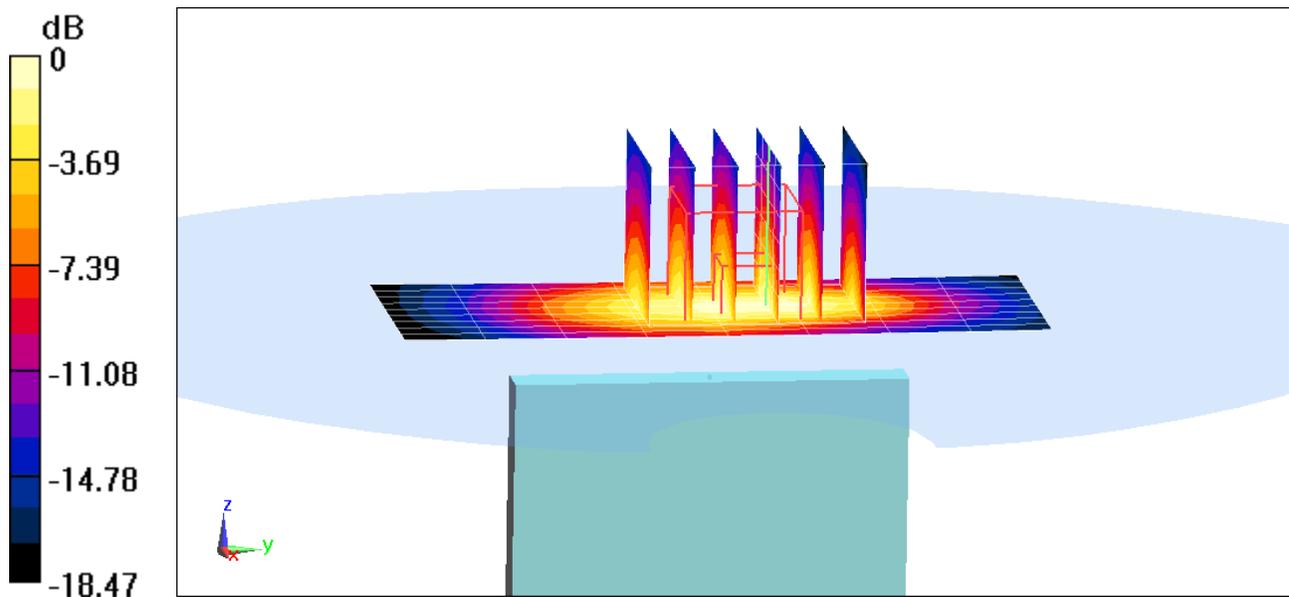
0 dB = 1.37 W/kg = 1.37 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

Communication System: UID 0, GSM GPRS; 4 Tx slots; Frequency: 836.6 MHz; Duty Cycle: 1:2.076
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.956 S/m; ε_r = 53.572; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/26/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.8°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: GPRS 850, Body SAR, Back side, Mid.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 = 23.84 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.840 W/kg
SAR(1 g) = 0.500 W/kg
Smallest distance from peaks to all points 3 dB below = 14.8 mm
Ratio of SAR at M2 to SAR at M1 = 60.7%
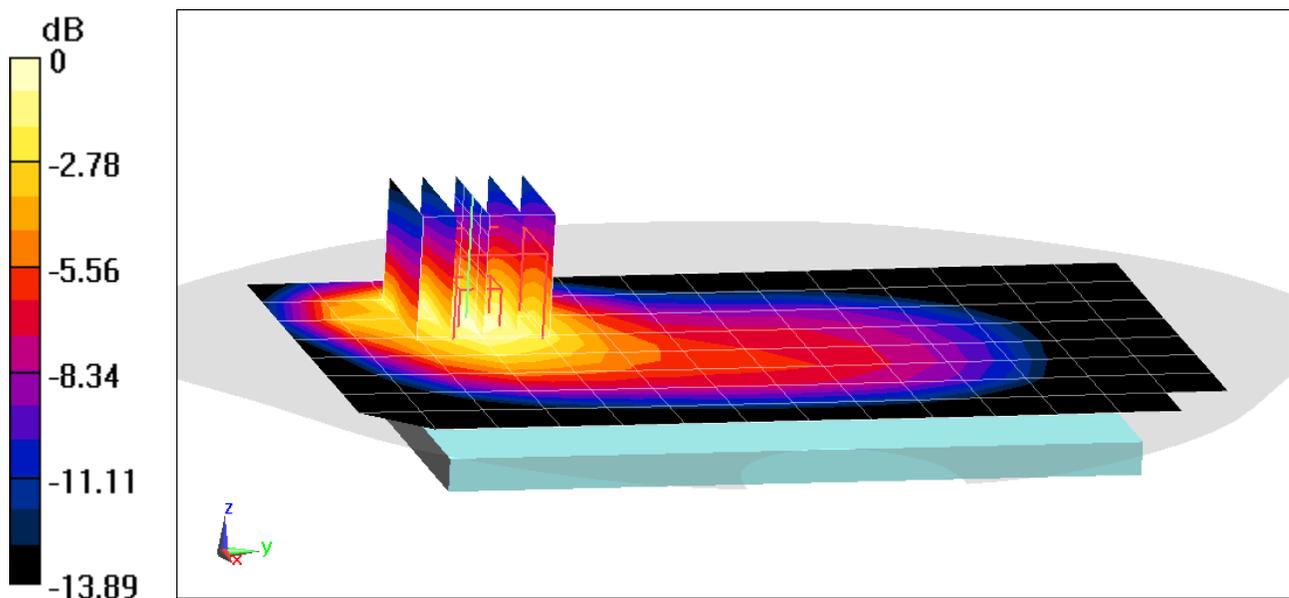
0 dB = 0.705 W/kg = -1.52 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05290

Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 1880 MHz; Duty Cycle: 1:2.76
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.559 S/m; ε_r = 52.326; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.8, 7.8, 7.8) @ 1880 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: GPRS 1900, Body SAR, Back side, Mid.ch, 3 Tx Slots

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
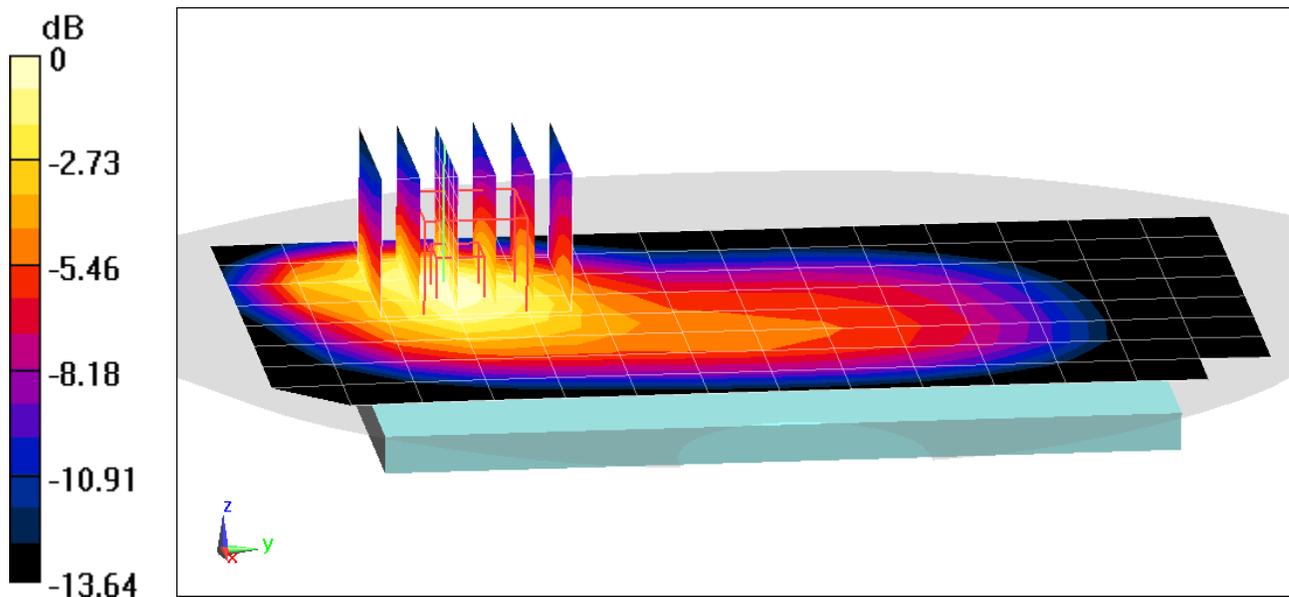**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.74 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.654 W/kg
SAR(1 g) = 0.384 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 59.7%
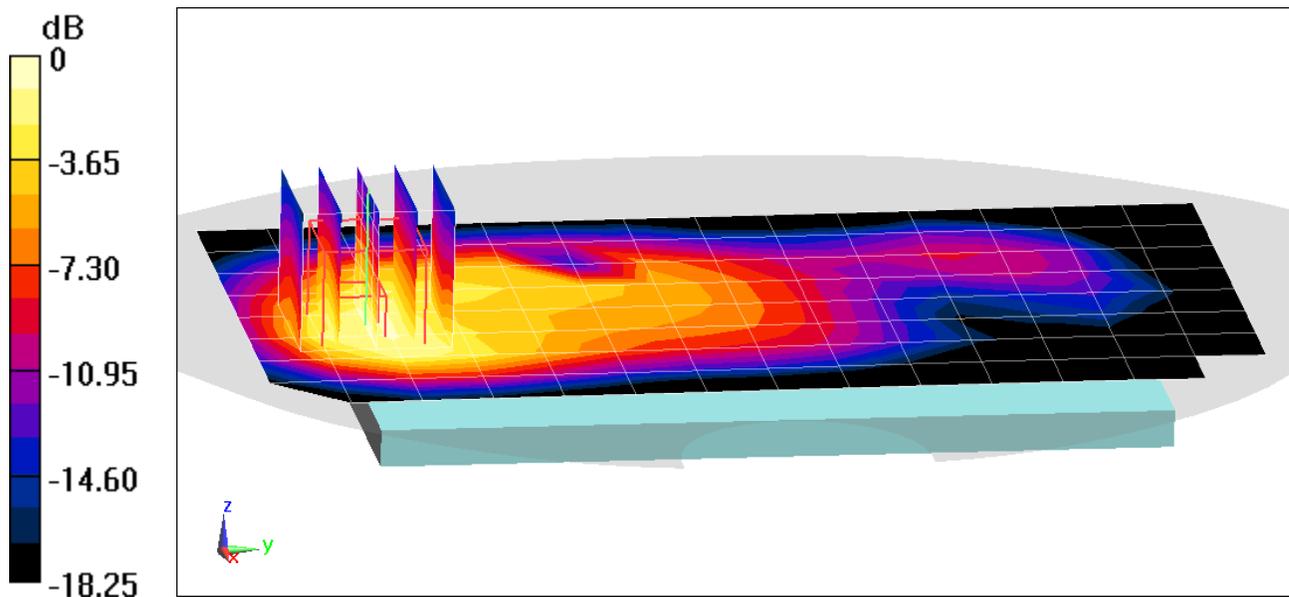
0 dB = 0.564 W/kg = -2.49 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05290

Communication System: UID 0, GSM GPRS; 3 Tx slots; Frequency: 1909.8 MHz; Duty Cycle: 1:2.76
Medium: 1900 Body Medium parameters used:
f = 1910 MHz; σ = 1.593 S/m; ε_r = 52.212; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.8, 7.8, 7.8) @ 1909.8 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: GPRS 1900, Body SAR, Bottom Edge, High.ch, 3 Tx Slots

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
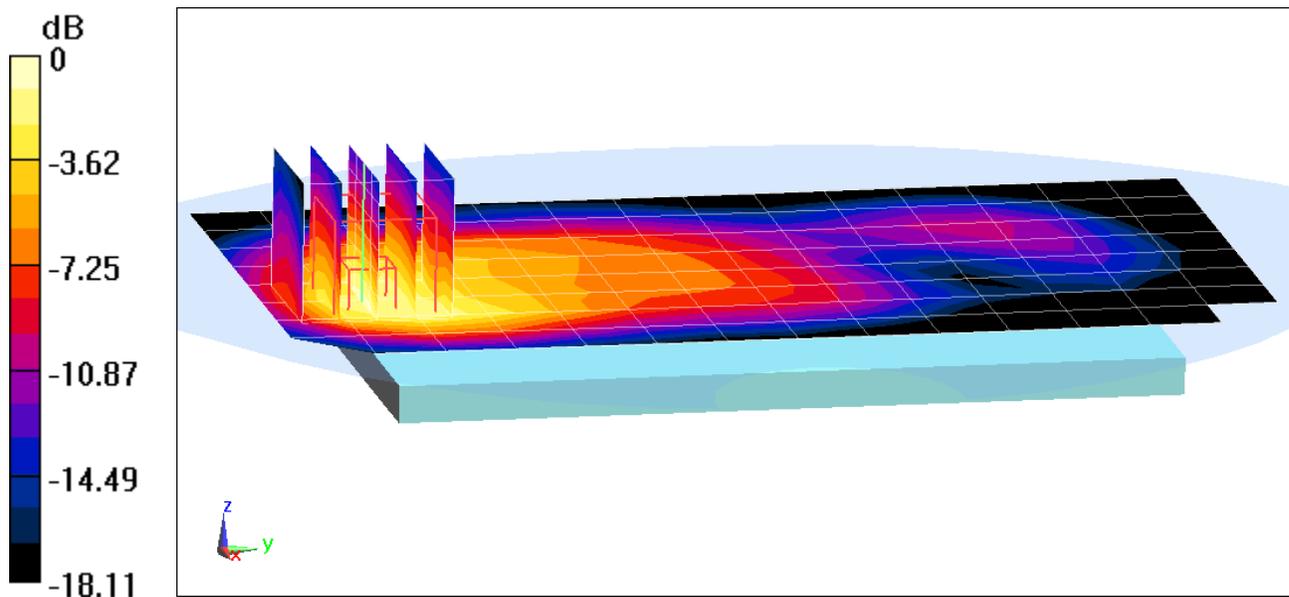**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.37 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.774 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 58.1%

0 dB = 1.16 W/kg = 0.64 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

Communication System: UID 0, UMTS; Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.6 MHz; σ = 0.956 S/m; ε_r = 53.572; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/26/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.8°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=15mm, dy=15mm
**Zoom Scan (6x6x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.24 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.864 W/kg
SAR(1 g) = 0.520 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 60.3%
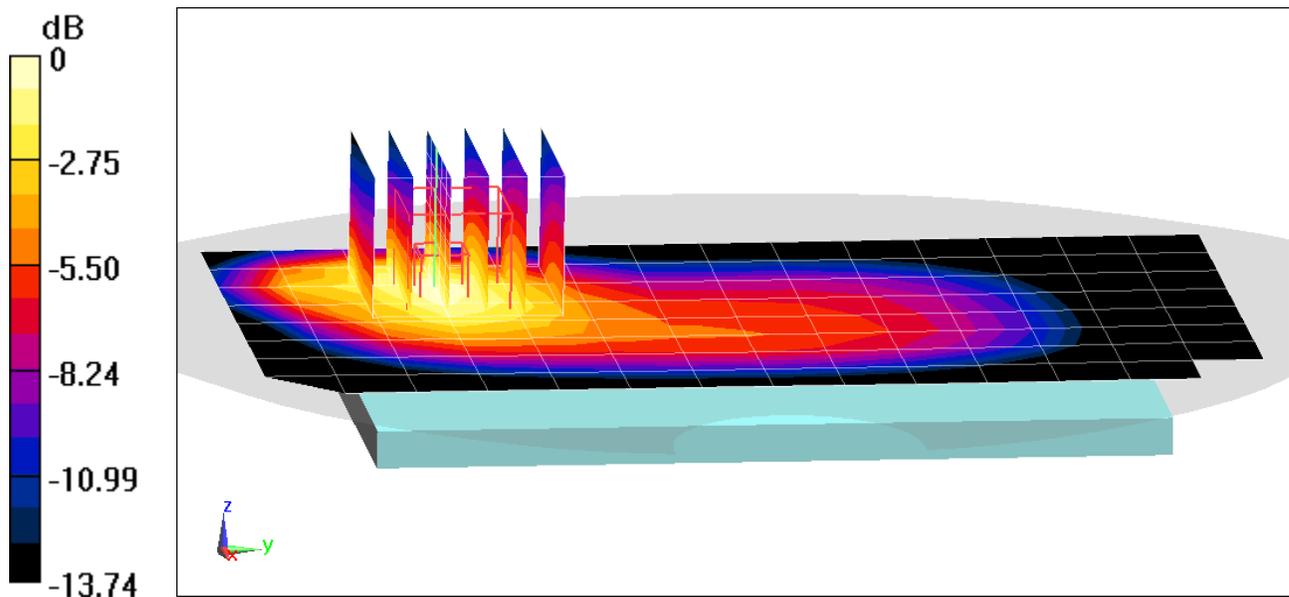
0 dB = 0.740 W/kg = -1.31 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.535 S/m; ε_r = 51.846; ρ = 1000 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) @ 1752.6 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, 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 = 22.77 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.19 W/kg
SAR(1 g) = 0.697 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 61.2%
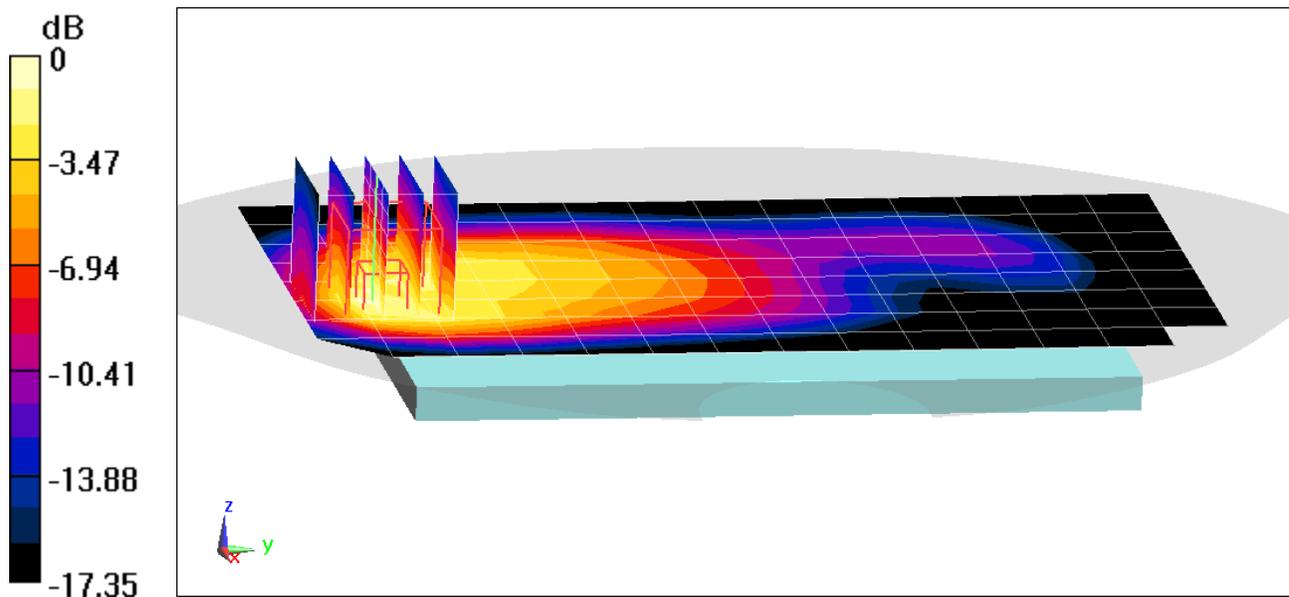
0 dB = 1.02 W/kg = 0.09 dBW/kg

PCTEST

A36

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.521 S/m; ε_r = 52.022; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/17/2020; Ambient Temp: 20.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1752.6 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

**Mode: UMTS 1750, Dual Display Accesory Position #1,
Body SAR, Bottom Edge, High.ch**

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.21 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.26 W/kg
SAR(1 g) = 0.743 W/kg
Smallest distance from peaks to all points 3 dB below = 12.2 mm
Ratio of SAR at M2 to SAR at M1 = 59.6%

0 dB = 1.08 W/kg = 0.33 dBW/kg

A36

PCTEST

A37

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, UMTS; Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1880 MHz; σ = 1.559 S/m; ε_r = 52.326; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.8, 7.8, 7.8) @ 1880 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: UMTS 1900, 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 = 23.73 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.776 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 59.2%
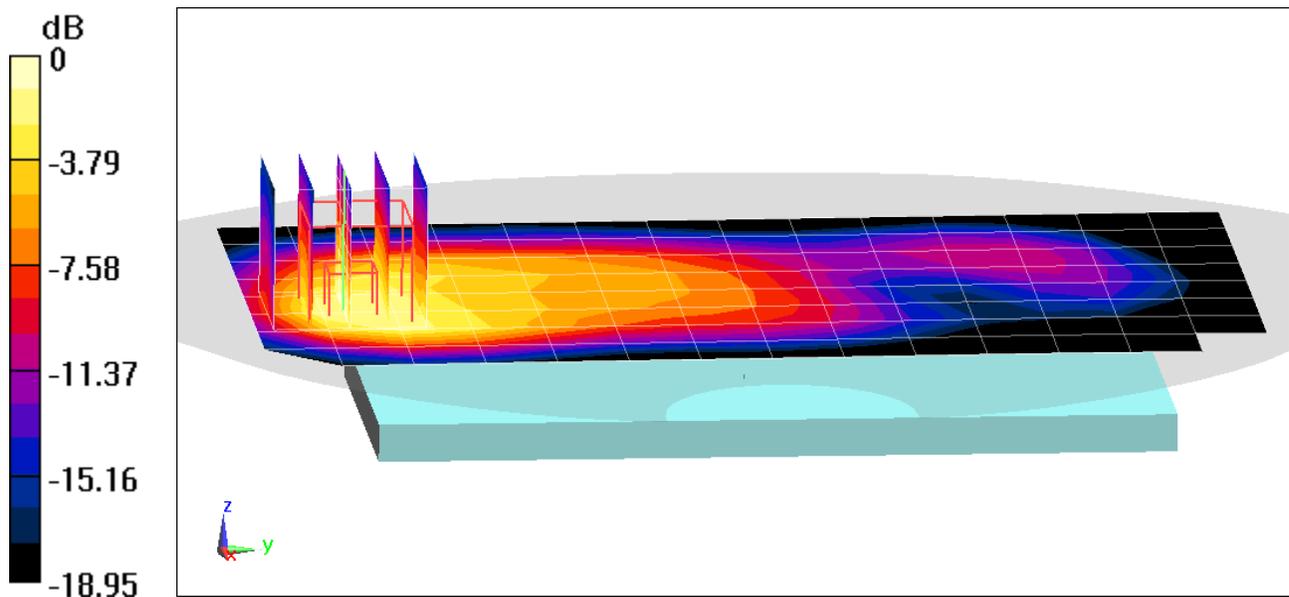
0 dB = 1.15 W/kg = 0.61 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, UMTS; Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1852.4 MHz; σ = 1.527 S/m; ε_r = 52.424; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.8, 7.8, 7.8) @ 1852.4 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: UMTS 1900, Dual Display Accessory Position #3,
Body SAR, Front side, Low.ch**

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
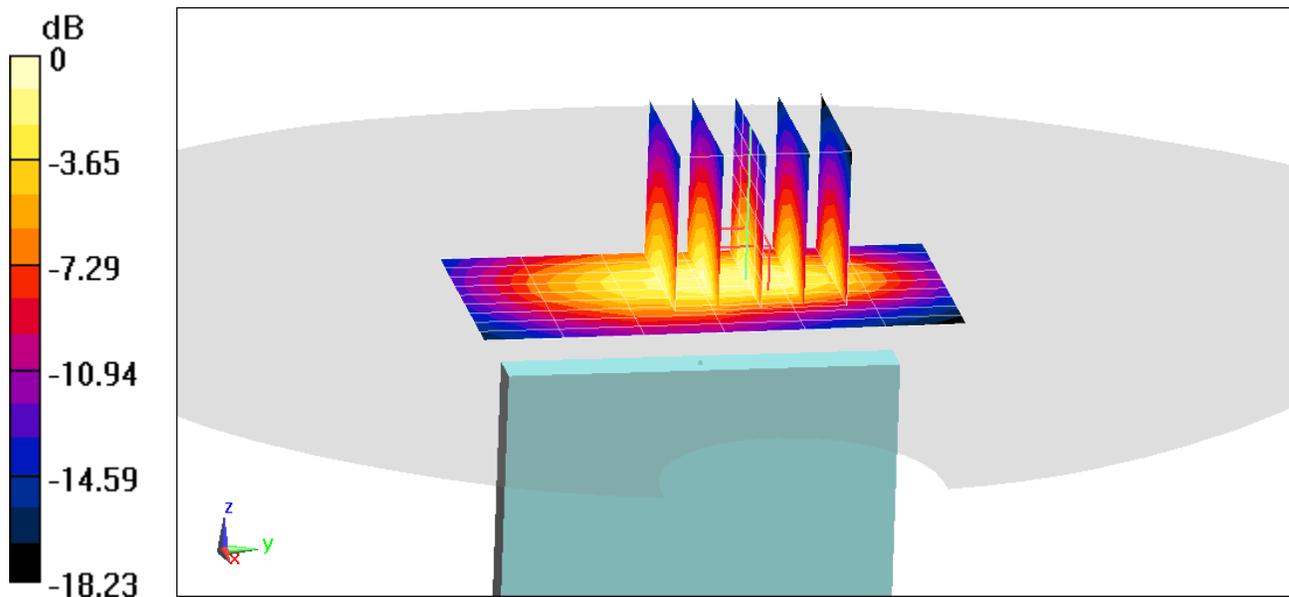**Zoom Scan (6x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.34 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 0.862 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 59.1%
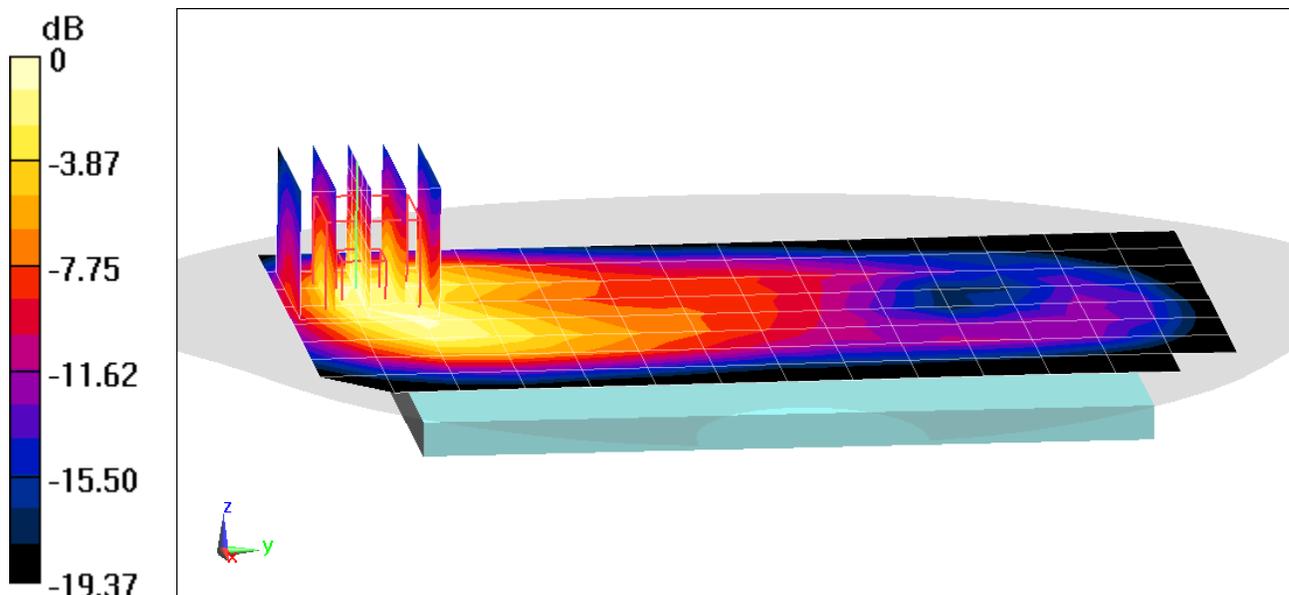
0 dB = 1.29 W/kg = 1.11 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

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; σ = 0.934 S/m; ε_r = 54.107; ρ = 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 (9x15x1): Measurement grid: dx=15mm, dy=15mm
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.18 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.539 W/kg
SAR(1 g) = 0.356 W/kg
Smallest distance from peaks to all points 3 dB below = 20.9 mm
Ratio of SAR at M2 to SAR at M1 = 65%
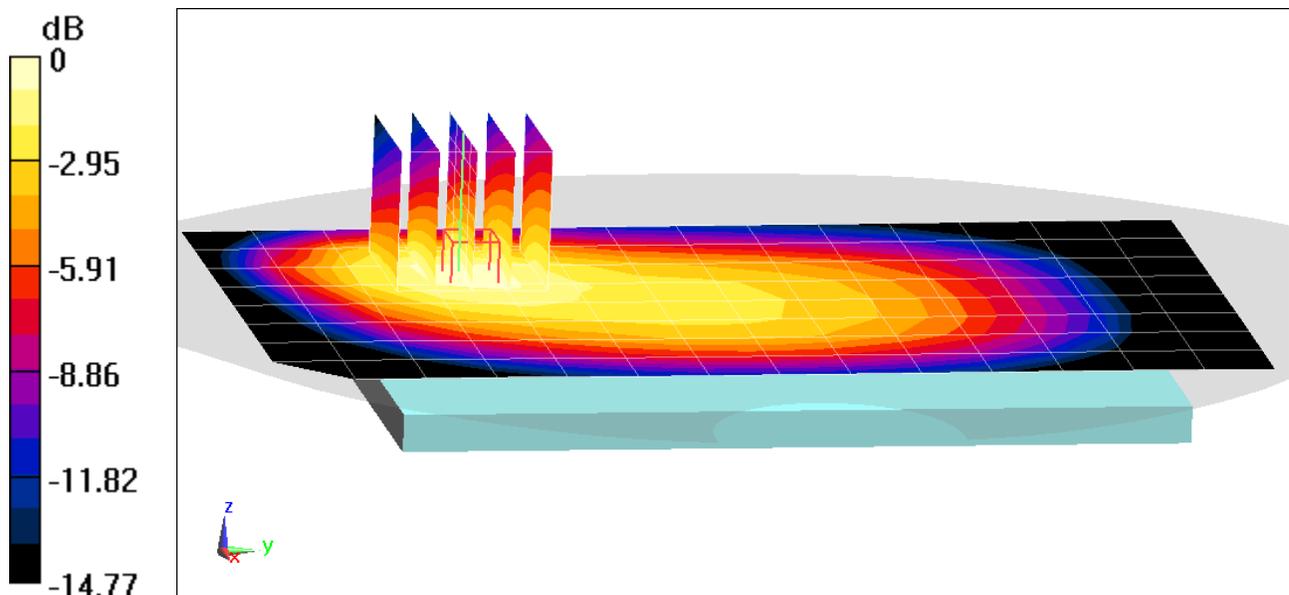
0 dB = 0.475 W/kg = -3.23 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

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; σ = 0.944 S/m; $ε_r$ = 54.036; ρ = 1000 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, 49 RB Offset**

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.71 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.574 W/kg
SAR(1 g) = 0.376 W/kg
Smallest distance from peaks to all points 3 dB below = 19.3 mm
Ratio of SAR at M2 to SAR at M1 = 65%
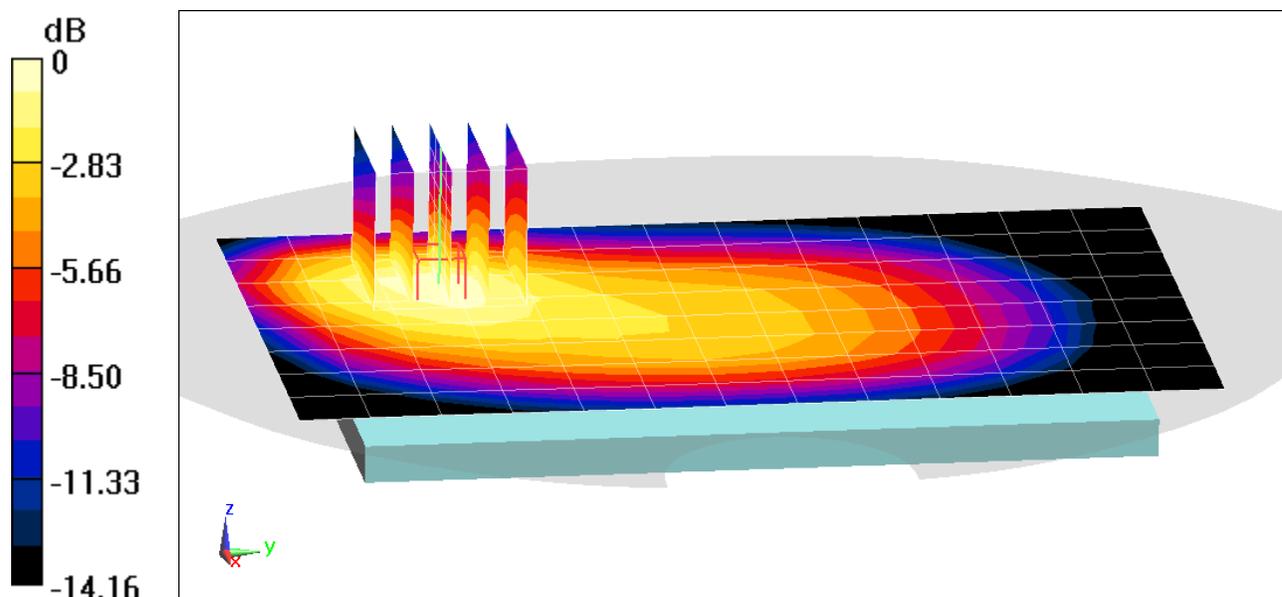
0 dB = 0.501 W/kg = -3.00 dBW/kg

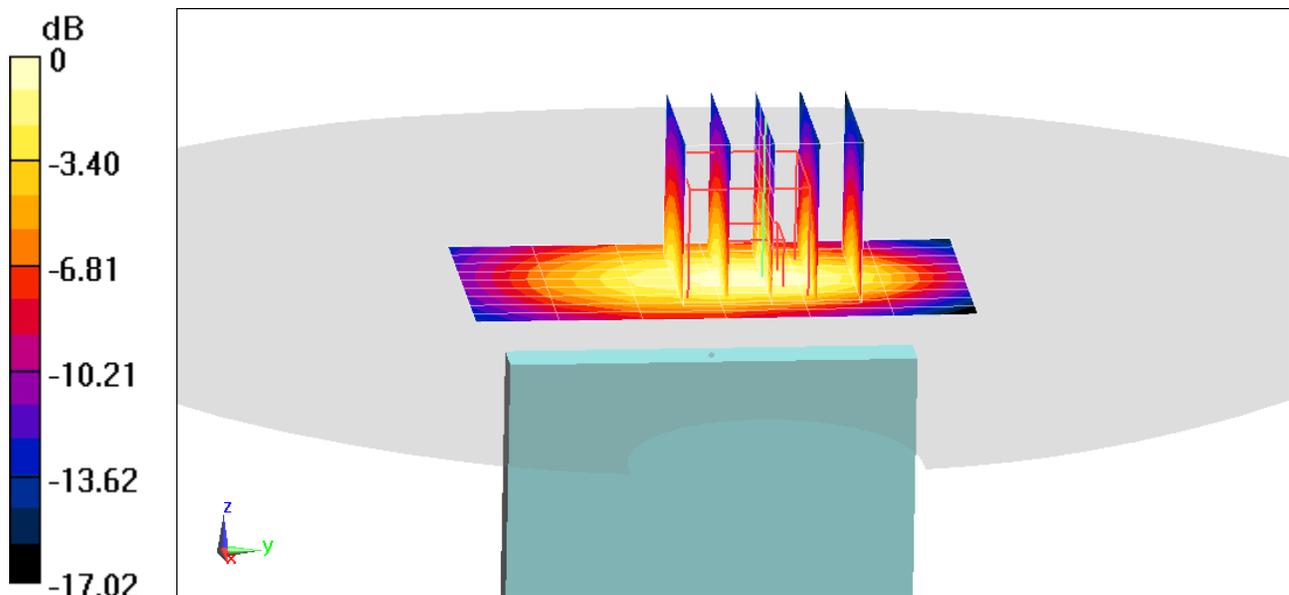# PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

Communication System: UID 0, LTE Band 13; Frequency: 782 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 782 MHz; σ = 0.974 S/m; ε_r = 53.824; ρ = 1000 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 (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.22 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.643 W/kg
SAR(1 g) = 0.411 W/kg
Smallest distance from peaks to all points 3 dB below = 17.3 mm
Ratio of SAR at M2 to SAR at M1 = 63.9%
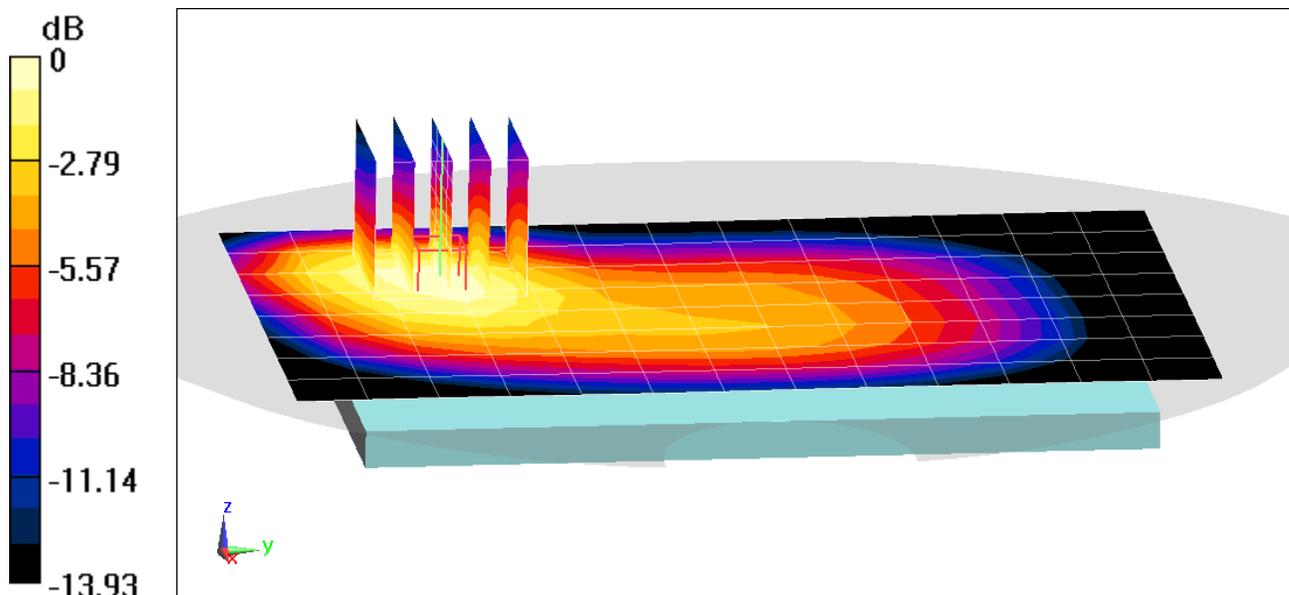
0 dB = 0.553 W/kg = -2.57 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

Communication System: UID 0, LTE Band 14; Frequency: 793 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 793 MHz; σ = 0.978 S/m; ε_r = 53.795; ρ = 1000 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) @ 793 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 14, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.23 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.654 W/kg
SAR(1 g) = 0.411 W/kg
Smallest distance from peaks to all points 3 dB below = 17 mm
Ratio of SAR at M2 to SAR at M1 = 62.1%
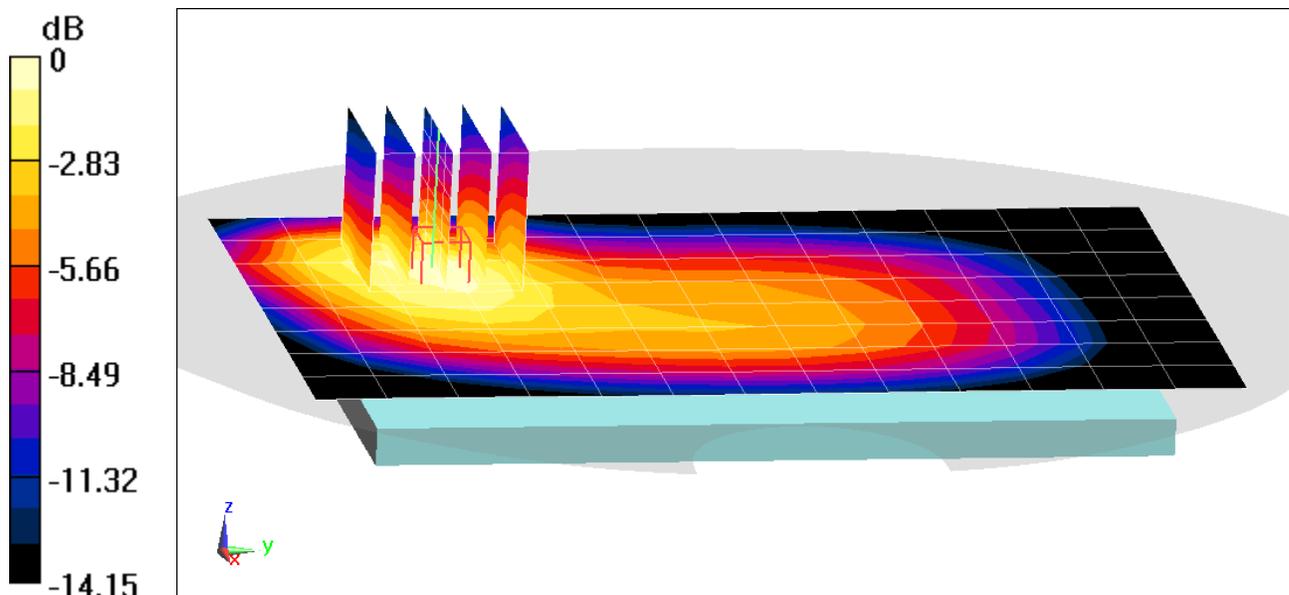
0 dB = 0.570 W/kg = -2.44 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

Communication System: UID 0, LTE Band 5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
$f = 836.5$ MHz; $\sigma = 0.956$ S/m; $\varepsilon_r = 53.573$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/26/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7488; ConvF(11.04, 11.04, 11.04) @ 836.5 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: LTE Band 5 (Cell.), ULCA, Body SAR, Back side, Mid.ch,
PCC: 10 MHz Bandwidth, QPSK, Ch. 20525, 1 RB, 49 RB Offset
SCC: 5 MHz Bandwidth, QPSK, Ch. 20597, 1 RB, 0 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 = 25.20 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.932 W/kg
SAR(1 g) = 0.560 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 60.5%
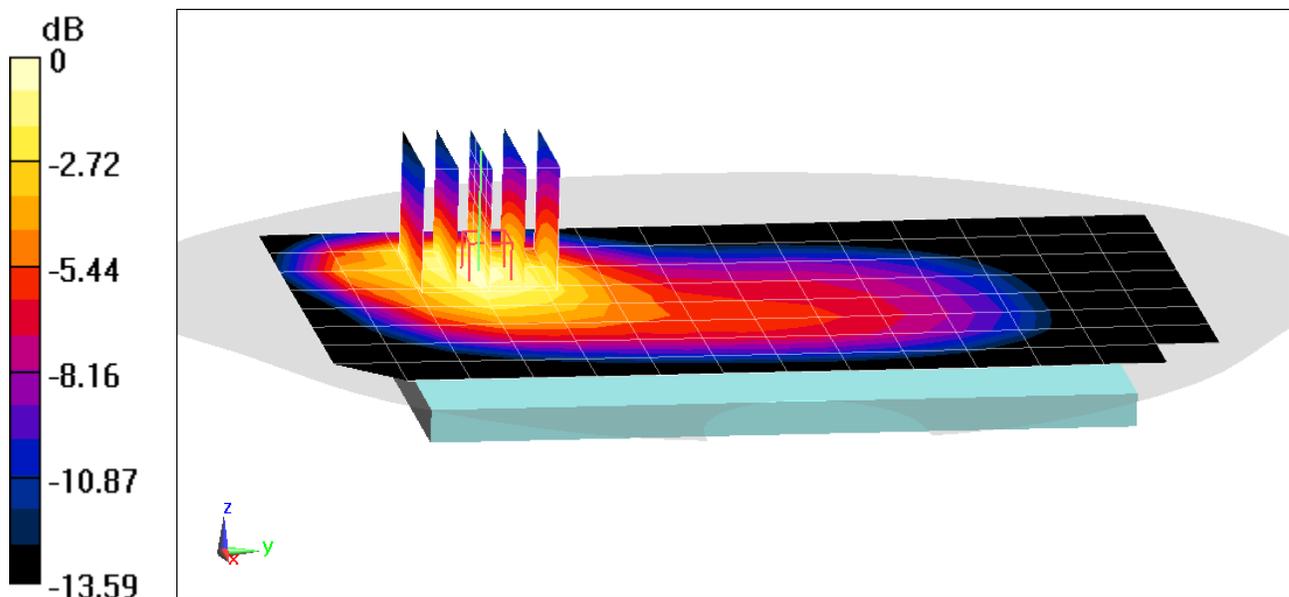
0 dB = 0.791 W/kg = -1.02 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1770 MHz; σ = 1.532 S/m; ε_r = 51.104; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/27/2020; Ambient Temp: 21.9°C; Tissue Temp: 21.6°C

Probe: EX3DV4 - SN7527; ConvF(8.1, 8.1, 8.1) @ 1770 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: LTE Band 66 (AWS), Antenna 2, 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 (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.36 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.794 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 60.9%

0 dB = 1.16 W/kg = 0.64 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05266

Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1770 MHz; σ = 1.542 S/m; $ε_r$ = 51.963; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/17/2020; Ambient Temp: 20.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1770 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

**Mode: LTE Band 66 (AWS), Antenna 2, Dual Display Accessory Position #1, Body SAR,
Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

Area Scan (11x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.20 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.690 W/kg
Smallest distance from peaks to all points 3 dB below = 12.2 mm
Ratio of SAR at M2 to SAR at M1 = 59.8%
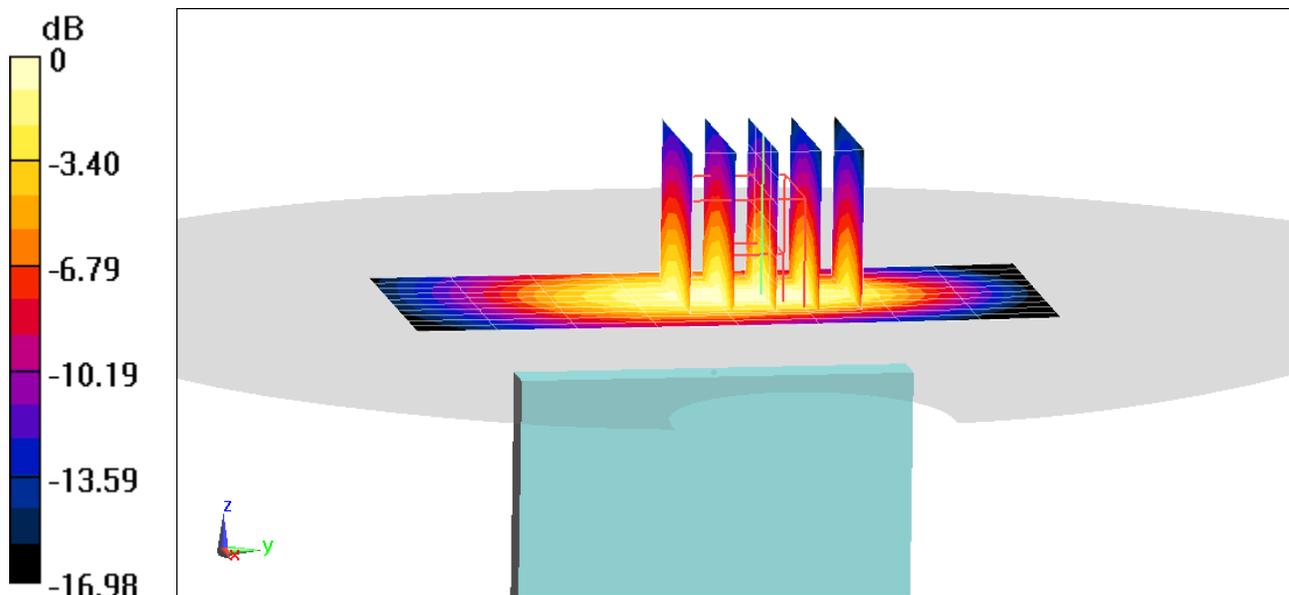
0 dB = 1.00 W/kg = 0.00 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 2 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1860 MHz; σ = 1.537 S/m; ε_r = 51.844; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/18/2020; Ambient Temp: 22.7°C; Tissue Temp: 23.0°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1860 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: LTE Band 2 (PCS), Antenna 3, Body SAR, Back side, Low.ch, 20 MHz Bandwidth, QPSK, 50 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 = 9.324 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.211 W/kg
SAR(1 g) = 0.118 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6 mm
Ratio of SAR at M2 to SAR at M1 = 58.6%
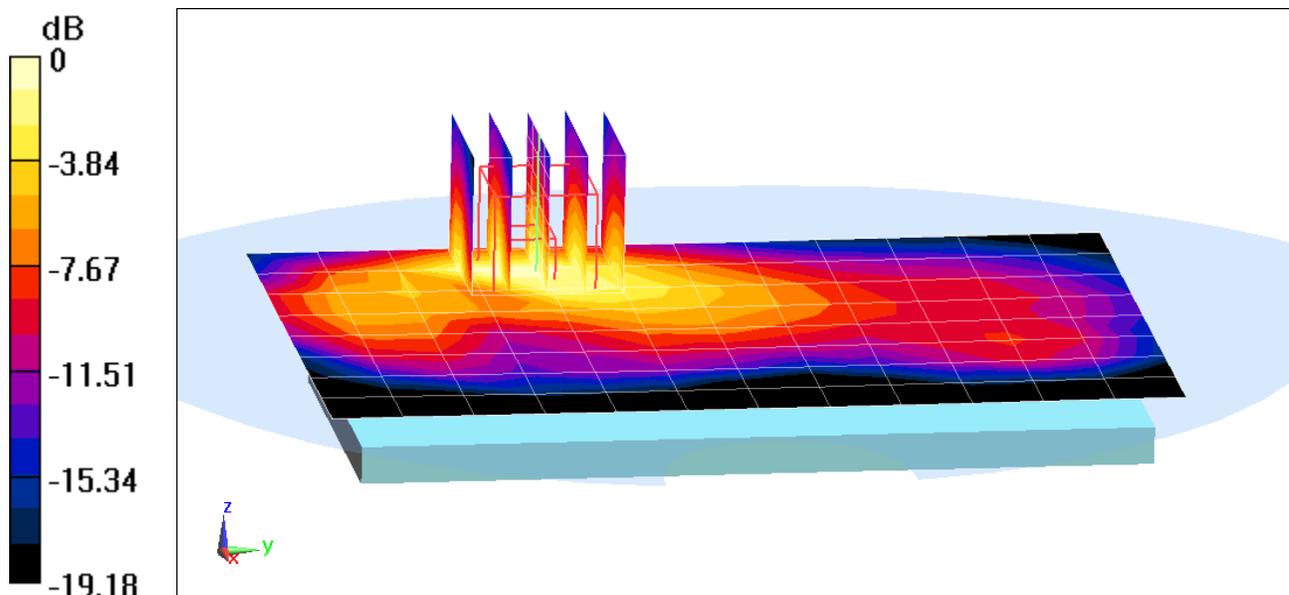
0 dB = 0.176 W/kg = -7.54 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 2 (PCS); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1860 MHz; σ = 1.537 S/m; ε_r = 51.844; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/18/2020; Ambient Temp: 22.7°C; Tissue Temp: 23.0°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1860 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: LTE Band 2 (PCS), Antenna 3, Body SAR, Right Edge, Low.ch, 20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset

Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.08 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.527 W/kg
SAR(1 g) = 0.270 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 53.2%
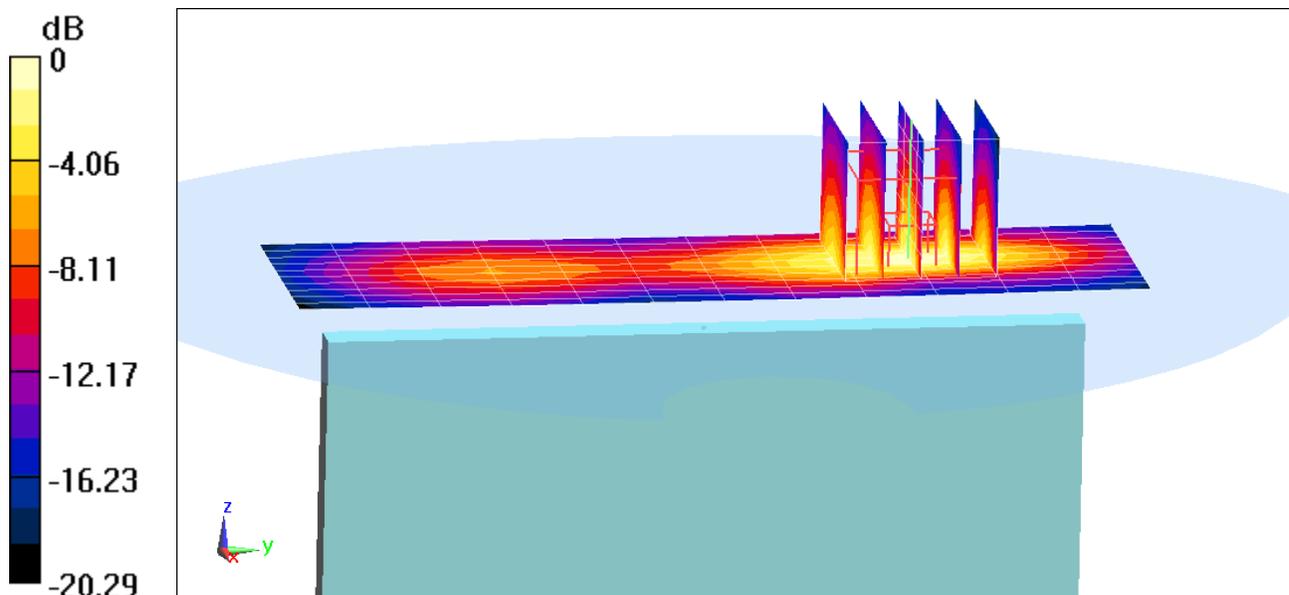
0 dB = 0.441 W/kg = -3.56 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1905 MHz; σ = 1.587 S/m; $ε_r$ = 52.232; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.8, 7.8, 7.8) @ 1905 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 25 (PCS), Body SAR, Back side, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.90 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.794 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 57.6%
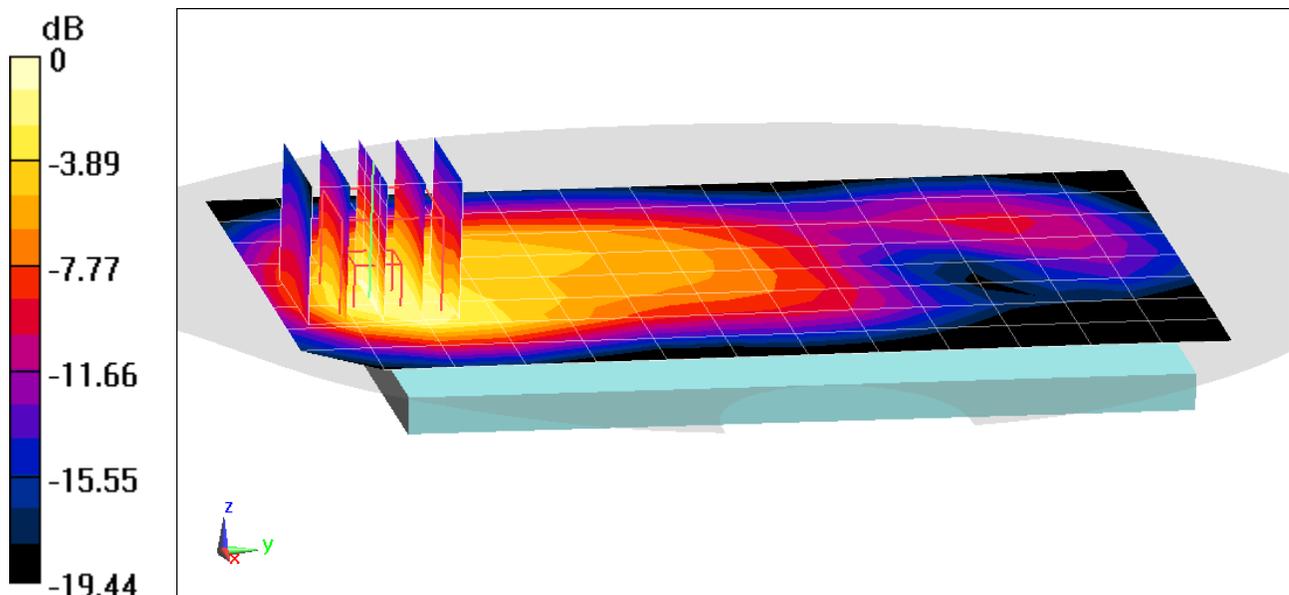
0 dB = 1.21 W/kg = 0.83 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1905 MHz; σ = 1.589 S/m; ε_r = 51.678; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 22.1°C; Tissue Temp: 23.2°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1905 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: LTE Band 25 (PCS), Body SAR, Bottom Edge,
High.ch, 20 MHz Bandwidth, QPSK, 50 RB, 50 RB Offset**

Area Scan (9x8x1): Measurement grid: dx=5mm, dy=15mm
**Zoom Scan (5x6x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.97 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.846 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 56.4%
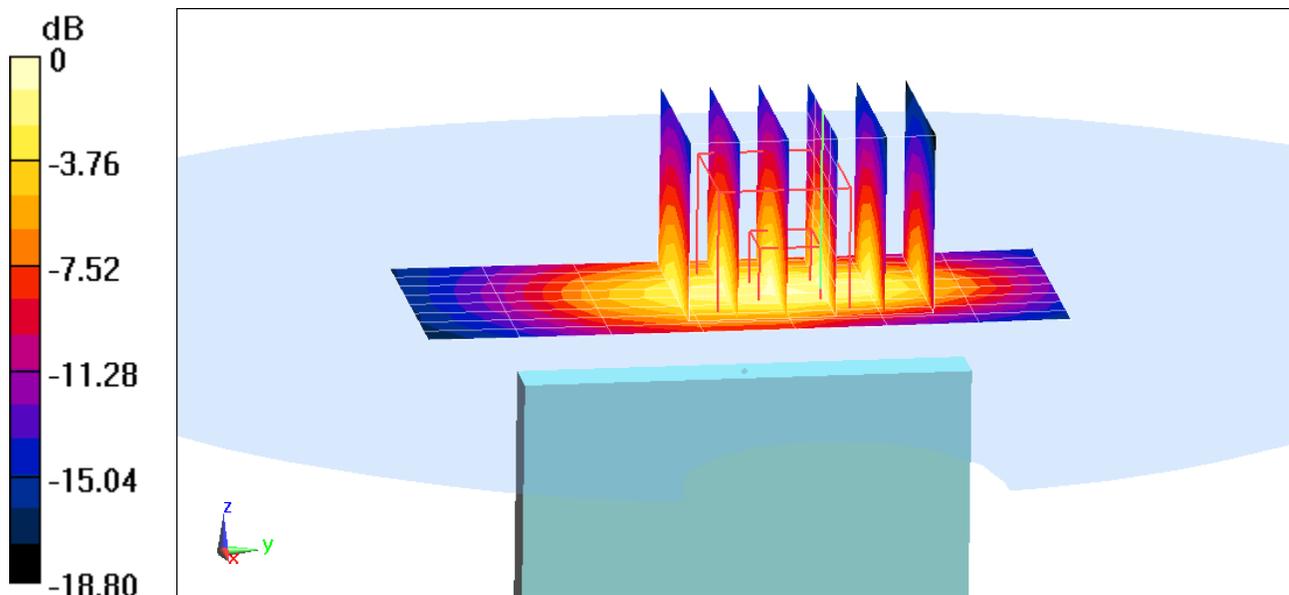
0 dB = 1.25 W/kg = 0.97 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
$f = 2310$ MHz; $\sigma = 1.879$ S/m; $\varepsilon_r = 52.053$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/06/2020; Ambient Temp: 24.4°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7547; ConvF(7.47, 7.47, 7.47) @ 2310 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 30, Body SAR, Back side, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 RB Offset**

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
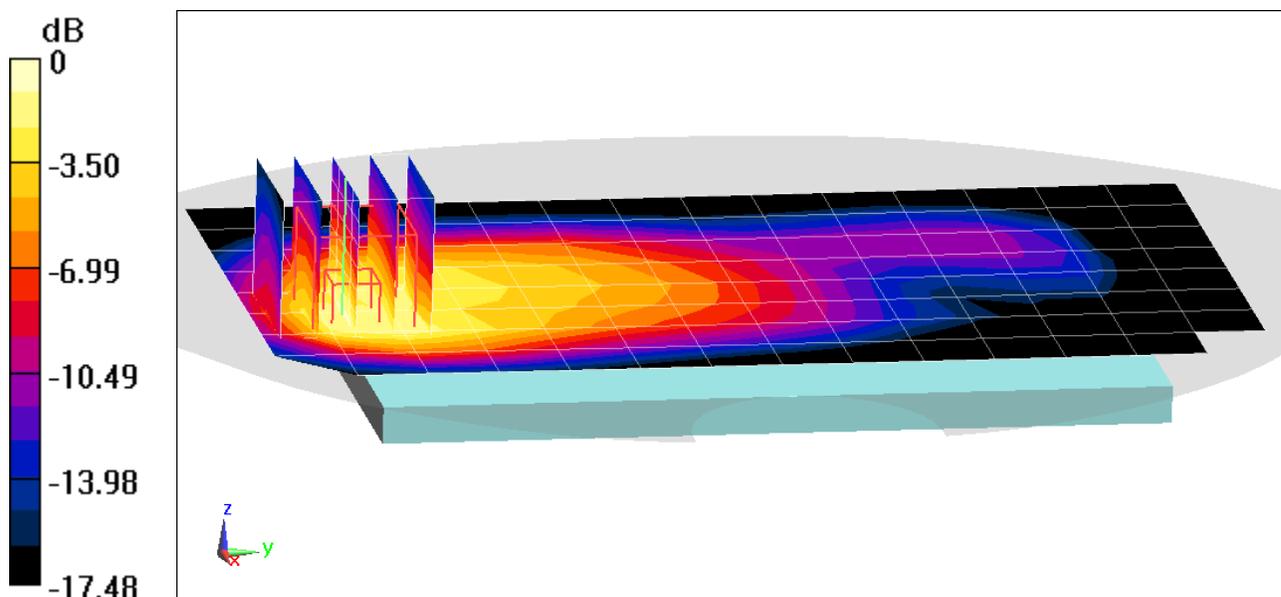**Zoom Scan (9x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.11 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.533 W/kg
Smallest distance from peaks to all points 3 dB below = 10 mm
Ratio of SAR at M2 to SAR at M1 = 53.2%
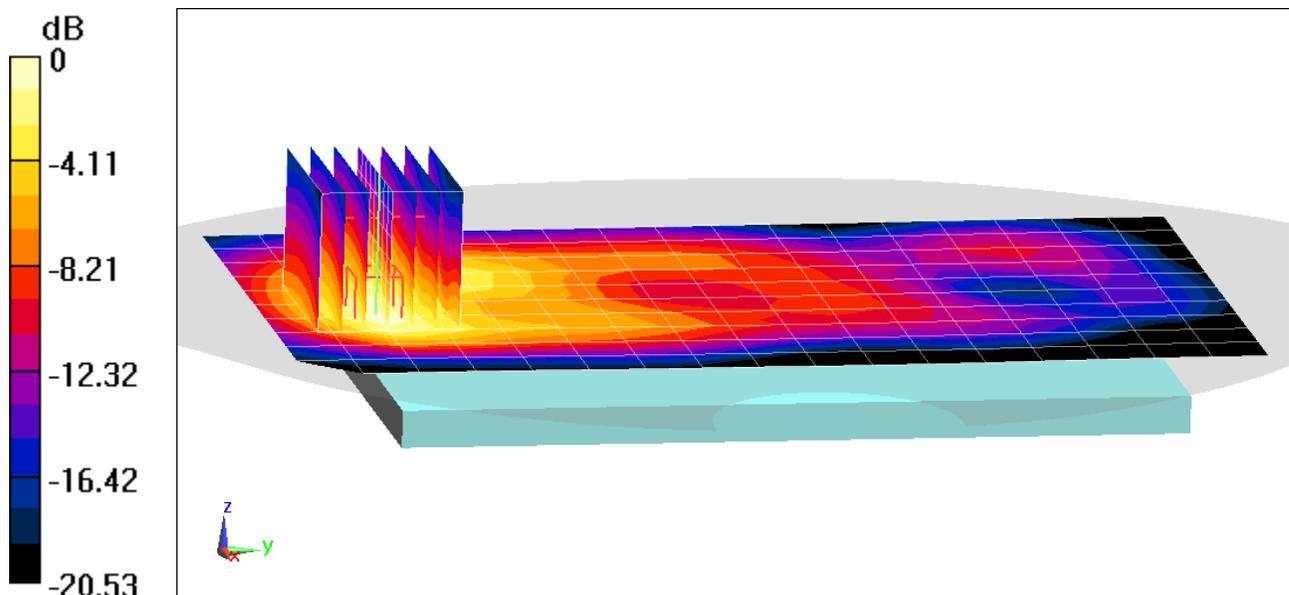
0 dB = 0.842 W/kg = -0.75 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 30; Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2310 MHz; σ = 1.879 S/m; ε_r = 52.053; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/06/2020; Ambient Temp: 24.4°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7547; ConvF(7.47, 7.47, 7.47) @ 2310 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 30, Body SAR, Bottom Edge, Mid.ch,
10 MHz Bandwidth, QPSK, 1 RB, 0 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 = 22.02 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.50 W/kg
SAR(1 g) = 0.813 W/kg
Smallest distance from peaks to all points 3 dB below = 10.4 mm
Ratio of SAR at M2 to SAR at M1 = 54.8%
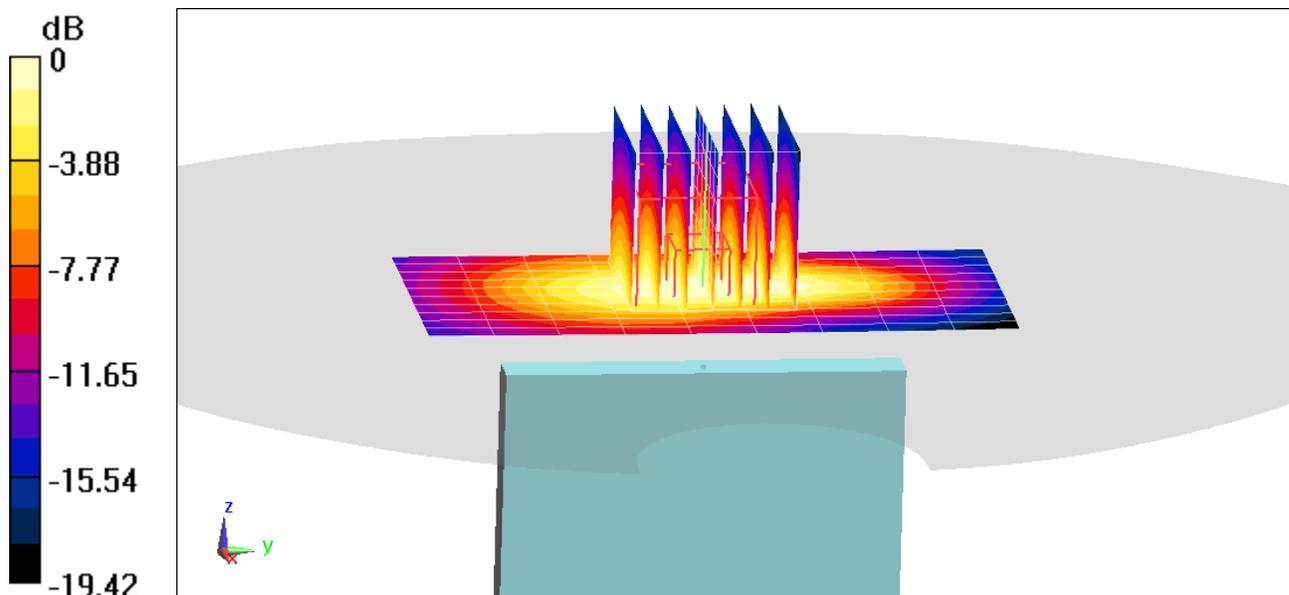
0 dB = 1.25 W/kg = 0.97 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
$f = 2560$ MHz; $\sigma = 2.142$ S/m; $\varepsilon_r = 51.986$; $\rho = 1000$ 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(7.18, 7.18, 7.18) @ 2560 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 7, Body SAR, Back side, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset**

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.49 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.647 W/kg
Smallest distance from peaks to all points 3 dB below = 10.6 mm
Ratio of SAR at M2 to SAR at M1 = 49.9%
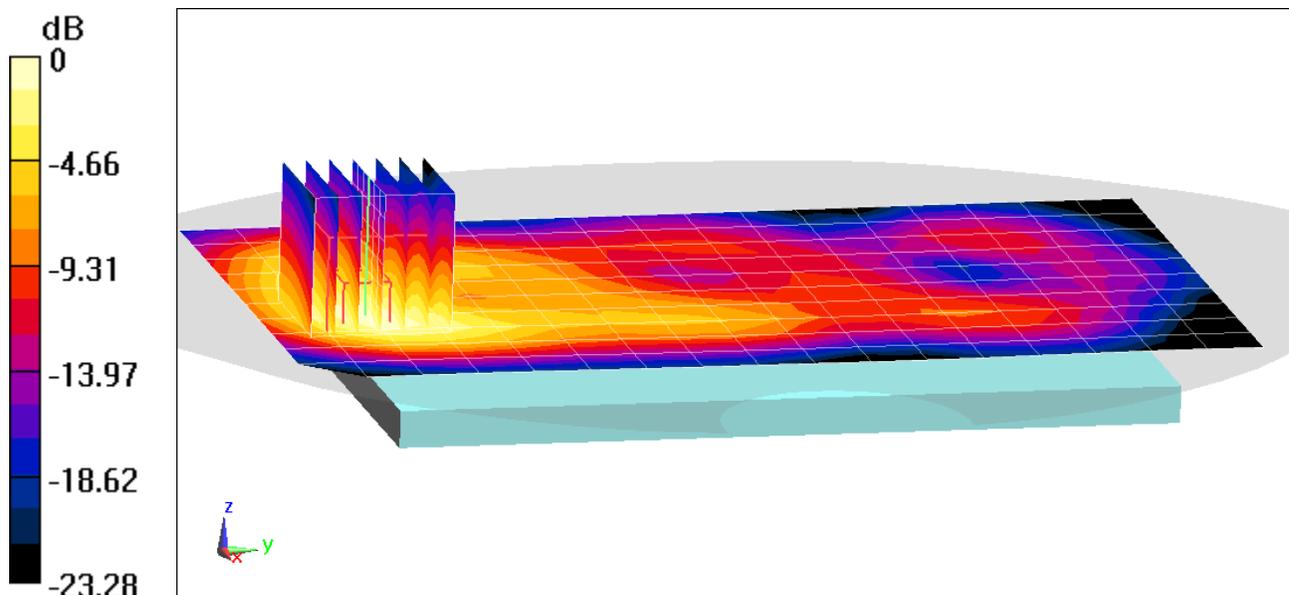
0 dB = 1.05 W/kg = 0.21 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 7; Frequency: 2560 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2560 MHz; σ = 2.142 S/m; ε_r = 51.986; ρ = 1000 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(7.18, 7.18, 7.18) @ 2560 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 7, Body SAR, Bottom Edge, High.ch,
20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset**

Area Scan (15x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.25 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 0.709 W/kg
Smallest distance from peaks to all points 3 dB below = 10.4 mm
Ratio of SAR at M2 to SAR at M1 = 50.1%

0 dB = 1.15 W/kg = 0.61 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2680 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used:
f = 2680 MHz; σ = 2.287 S/m; ε_r = 51.976; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/18/2020; Ambient Temp: 22.2°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.18, 7.18, 7.18) @ 2680 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, Body SAR, Back side, High.ch,
20 MHz Bandwidth, QPSK, 1 RB, 50 RB Offset**

Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.75 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.797 W/kg
SAR(1 g) = 0.381 W/kg
Smallest distance from peaks to all points 3 dB below = 10.8 mm
Ratio of SAR at M2 to SAR at M1 = 48%

0 dB = 0.628 W/kg = -2.02 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2680 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used:
f = 2680 MHz; σ = 2.287 S/m; $ε_r$ = 51.976; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/18/2020; Ambient Temp: 22.2°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7547; ConvF(7.18, 7.18, 7.18) @ 2680 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, Body SAR, Bottom Edge, 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 = 16.10 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.520 W/kg
Smallest distance from peaks to all points 3 dB below = 10 mm
Ratio of SAR at M2 to SAR at M1 = 46.2%
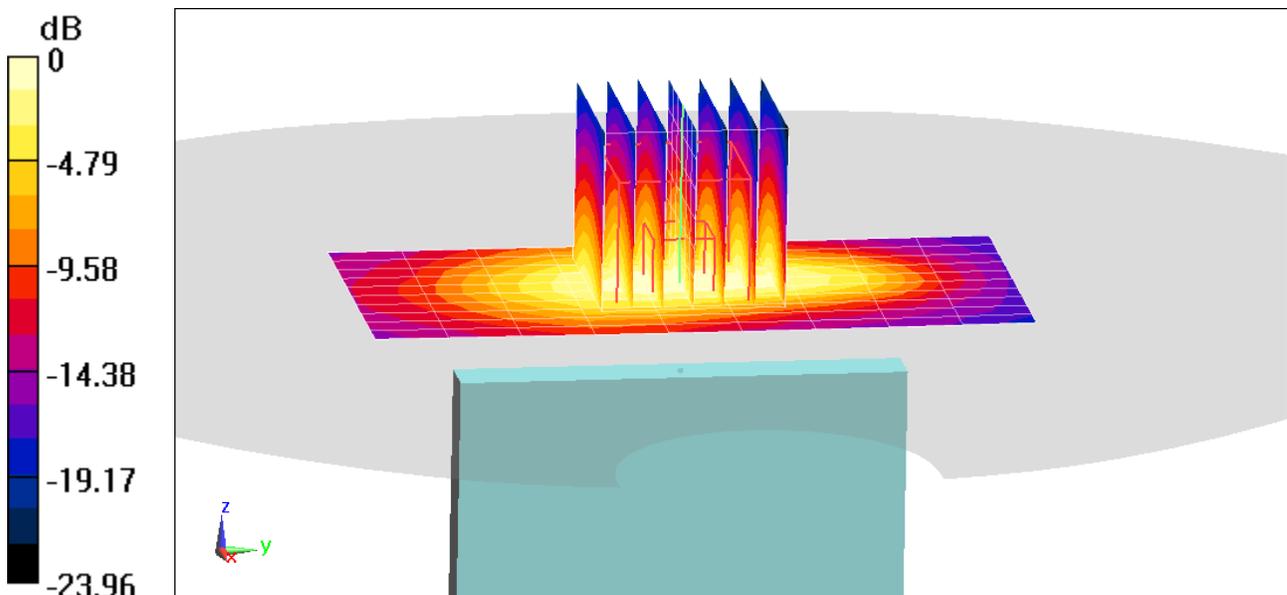
0 dB = 0.873 W/kg = -0.59 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05209

Communication System: UID 0, NR Band n71; Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used (interpolated):
f = 680.5 MHz; σ = 0.926 S/m; ε_r = 56.822; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/22/2020; Ambient Temp: 23.2°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 680.5 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: NR Band n71, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 136100, 50 RB, 28 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 = 6.877 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.0670 W/kg
SAR(1 g) = 0.042 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 62.7%
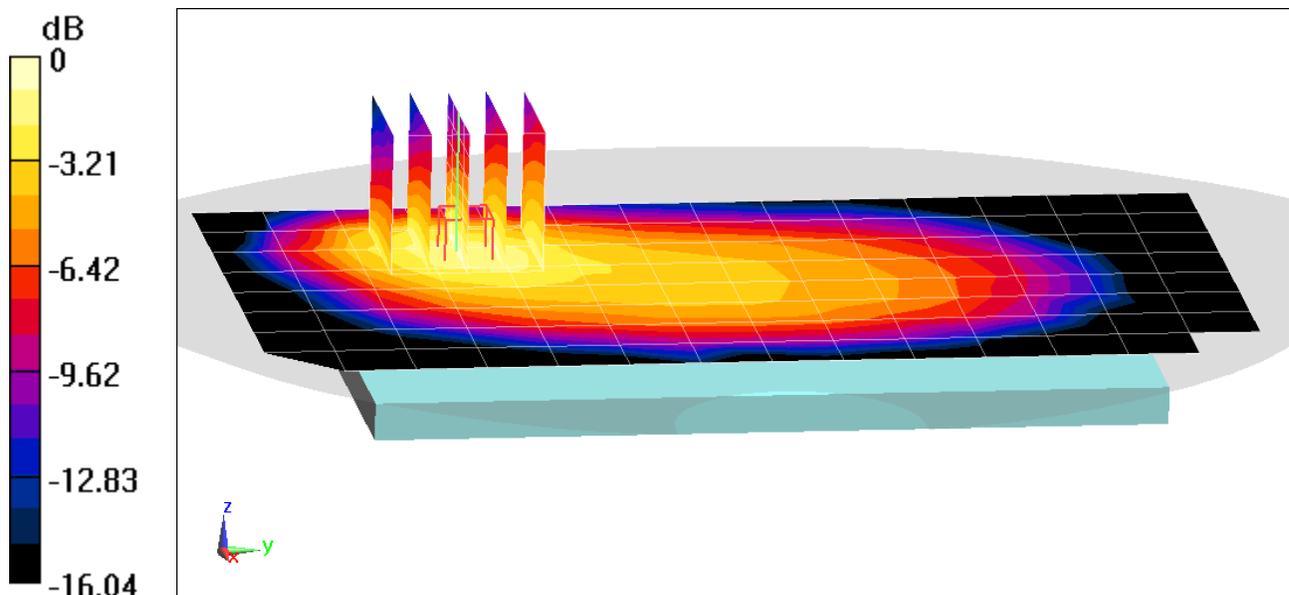
0 dB = 0.0571 W/kg = -12.43 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05191

Communication System: UID 0, NR Band n5; Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium: 835 Body Medium parameters used (interpolated):
f = 836.5 MHz; σ = 0.963 S/m; ε_r = 53.397; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 836.5 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: NR Band n5, Body SAR, Back Side, 20 MHz Bandwidth,
DFT-s-OFDM QPSK, Ch. 167300, 50 RB, 28 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 = 22.01 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.743 W/kg
SAR(1 g) = 0.440 W/kg
Smallest distance from peaks to all points 3 dB below = 16.3 mm
Ratio of SAR at M2 to SAR at M1 = 57.9%
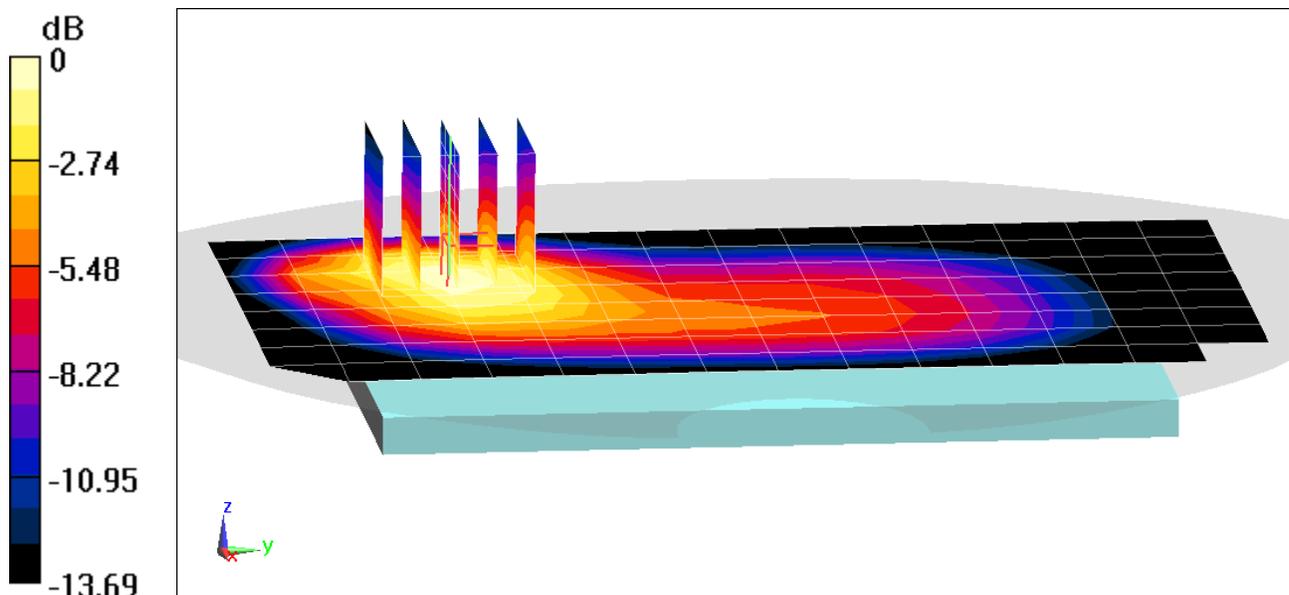
0 dB = 0.628 W/kg = -2.02 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05209

Communication System: UID 0, NR Band n66; Frequency: 1720 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1720 MHz; σ = 1.466 S/m; $ε_r$ = 52.133; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7410; ConvF(8.08, 8.08, 8.08) @ 1720 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: NR Band n66, Dual Display Accessory Position #1, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 344000, 1 RB, 104 RB Offset

Area Scan (9x14x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.81 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.621 W/kg
SAR(1 g) = 0.354 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 59.5%
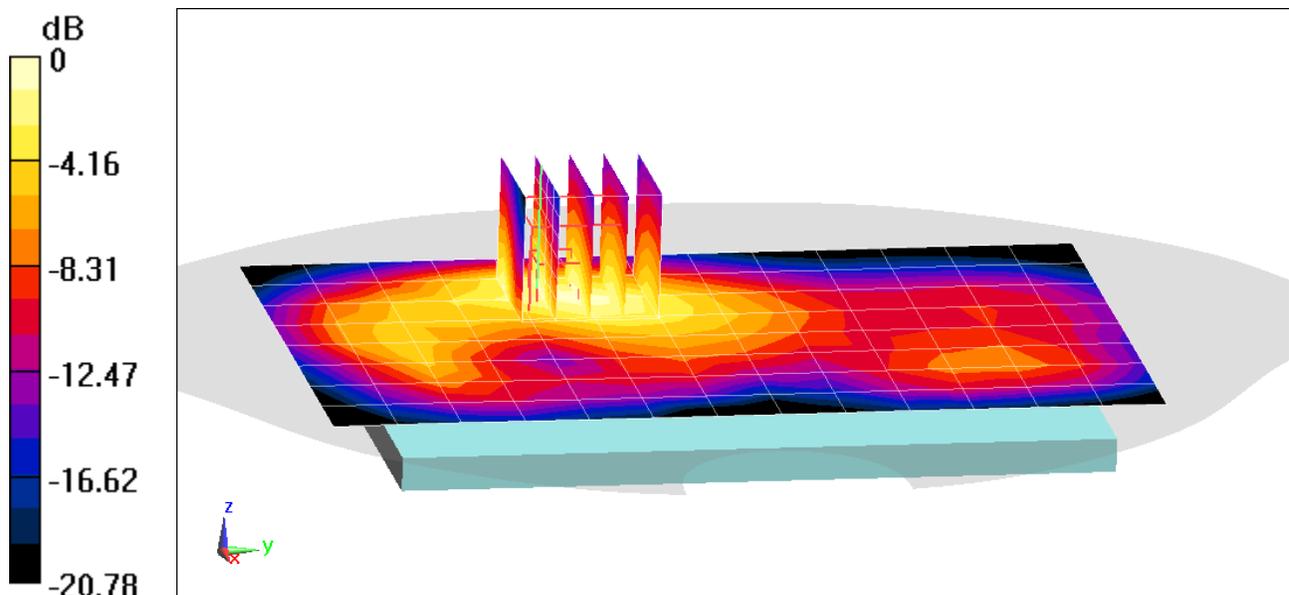
0 dB = 0.516 W/kg = -2.87 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05209

Communication System: UID 0, NR Band n66; Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1770 MHz; σ = 1.499 S/m; $ε_r$ = 52.043; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7410; ConvF(8.08, 8.08, 8.08) @ 1770 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: NR Band n66, Body SAR, Dual Display Accessory Position #1, Right Edge, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 354000, 1 RB, 104 RB Offset

Area Scan (9x14x1): Measurement grid: dx=5mm, dy=15mm
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.84 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.73 W/kg
SAR(1 g) = 0.953 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 57.2%
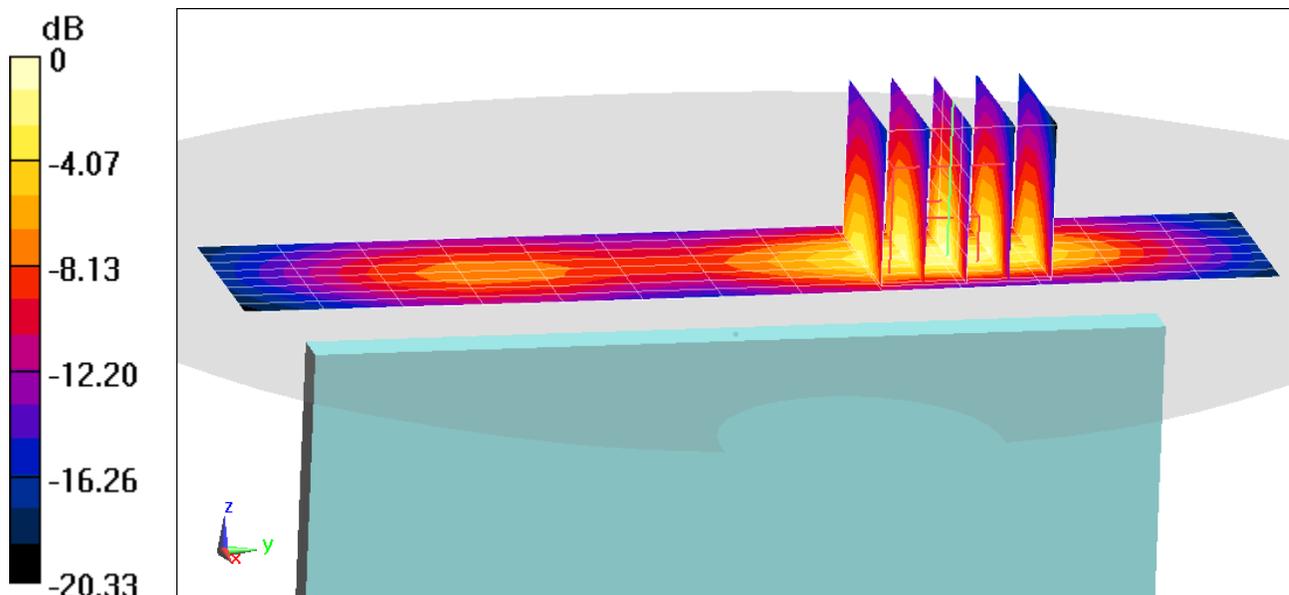
0 dB = 1.42 W/kg = 1.52 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05209

Communication System: UID 0, NR Band n25; Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1860 MHz; σ = 1.539 S/m; ε_r = 51.803; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 22.1°C; Tissue Temp: 23.2°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1860 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: NR Band n25, Body SAR, Back Side, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 372000, 1 RB, 104 RB Offset

Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm
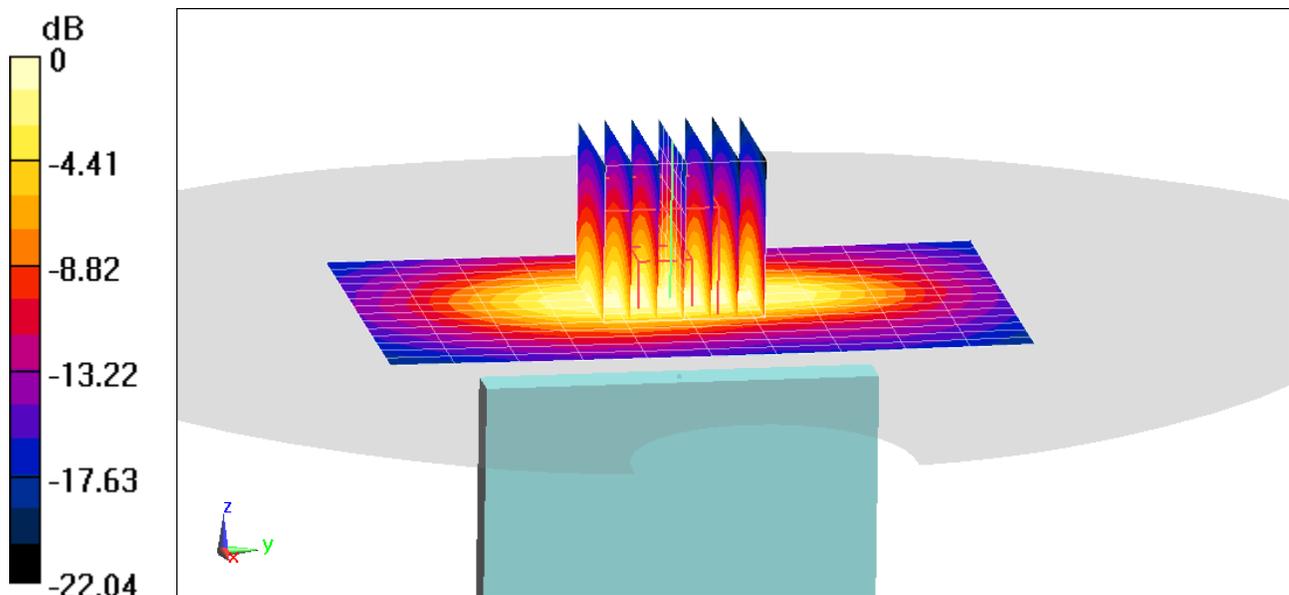**Zoom Scan (6x6x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.24 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.538 W/kg
Smallest distance from peaks to all points 3 dB below = 9.3 mm
Ratio of SAR at M2 to SAR at M1 = 55.9%
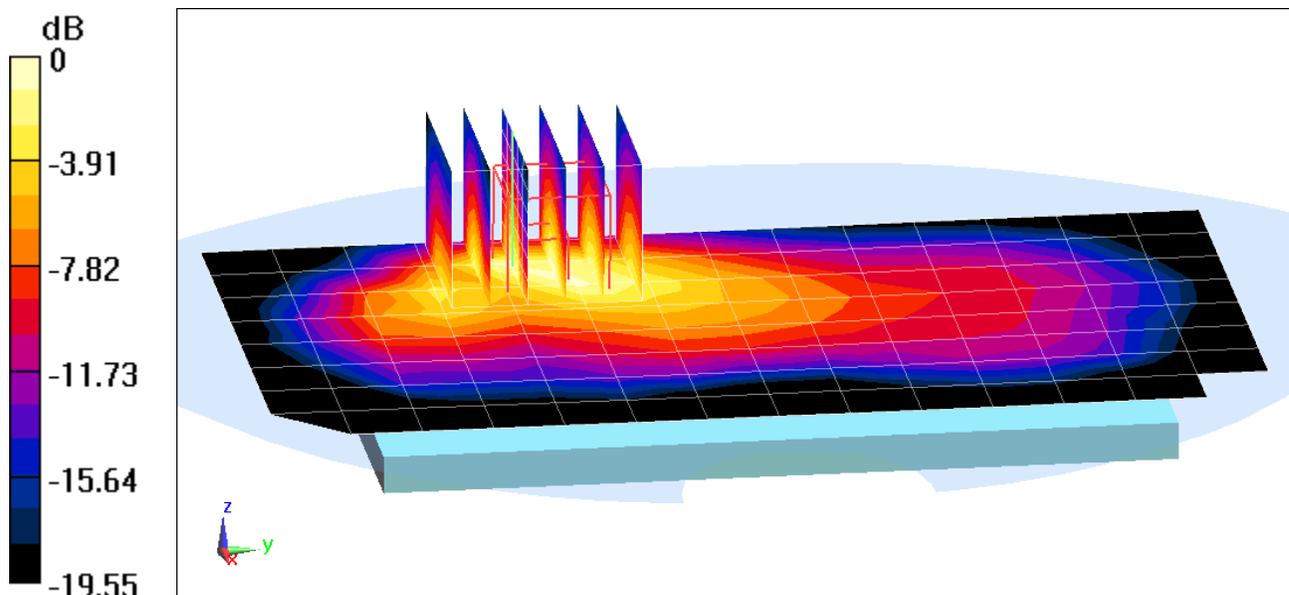
0 dB = 0.776 W/kg = -1.10 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05209

Communication System: UID 0, NR Band n25; Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1860 MHz; σ = 1.539 S/m; $ε_r$ = 51.803; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 22.1°C; Tissue Temp: 23.2°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1860 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: NR Band n25, Body SAR, Right Edge, 20 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 372000, 1 RB, 104 RB Offset

Area Scan (11x13x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.81 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 0.825 W/kg
Smallest distance from peaks to all points 3 dB below = 8.2 mm
Ratio of SAR at M2 to SAR at M1 = 52.5%
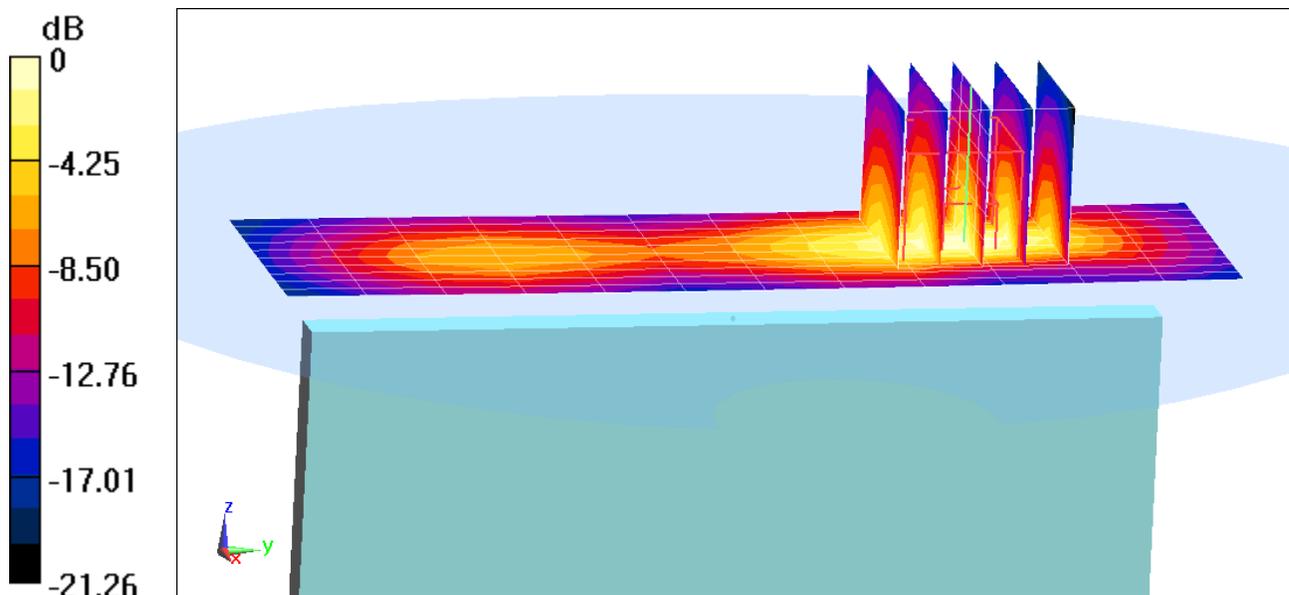
0 dB = 1.34 W/kg = 1.27 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05191

Communication System: UID 0, NR Band n41; Frequency: 2592.99 MHz; Duty Cycle: 1:4
Medium: 2450 Body Medium parameters used (interpolated):
f = 2592.99 MHz; σ = 2.204 S/m; ε_r = 50.932; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/25/2020; Ambient Temp: 22.0°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7547; ConvF(7.18, 7.18, 7.18) @ 2592.99 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: NR Band n41, Body SAR, Back Side, 100 MHz Bandwidth, DFT-s-OFDM QPSK, Ch. 518598, 135 RB, 138 RB Offset

Area Scan (11x16x1): Measurement grid: dx=12mm, dy=12mm
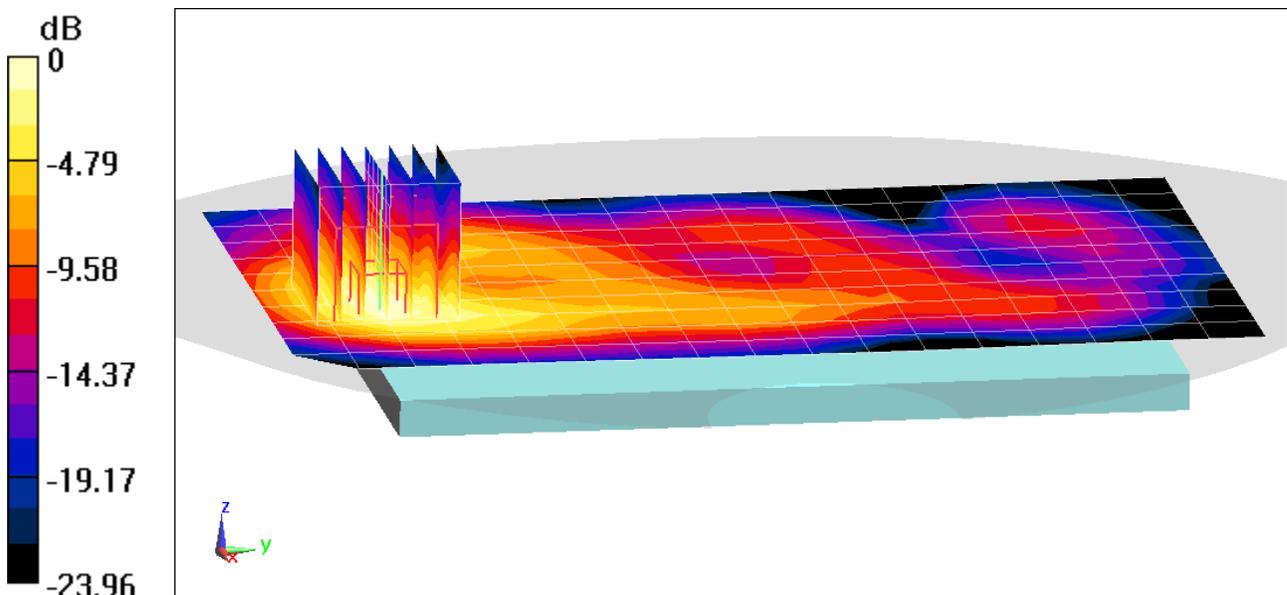**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 16.05 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.484 W/kg
Smallest distance from peaks to all points 3 dB below = 6.3 mm
Ratio of SAR at M2 to SAR at M1 = 44.6%
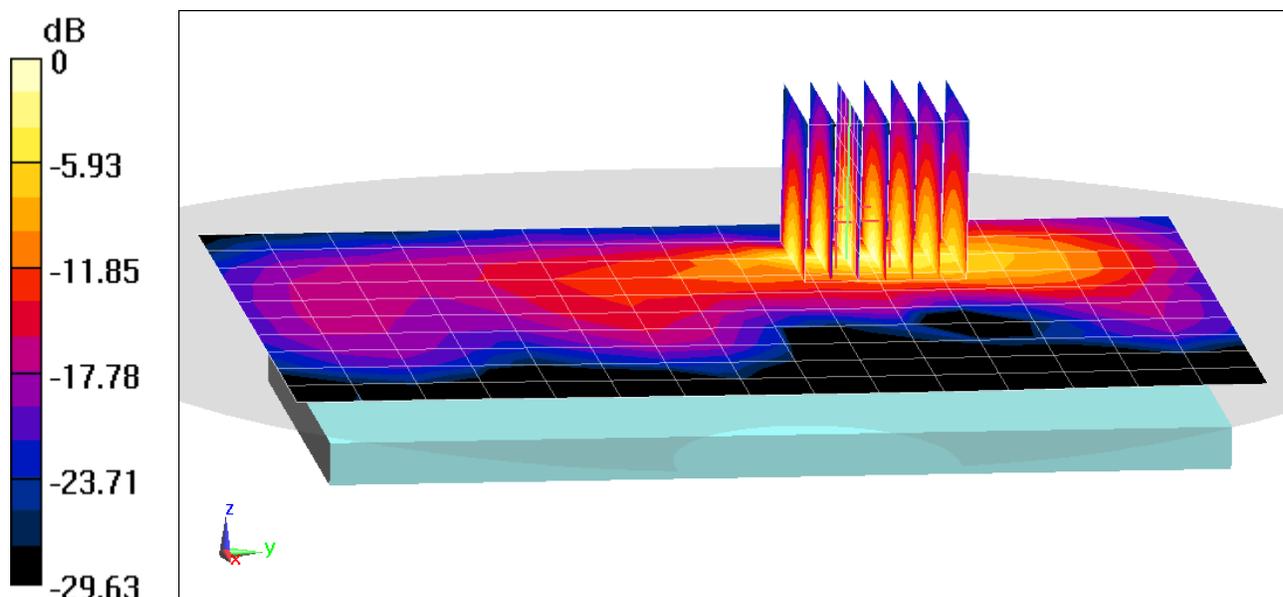
0 dB = 0.883 W/kg = -0.54 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05381

Communication System: UID 0, 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2462 MHz; σ = 2.061 S/m; $ε_r$ = 51.573; ρ = 1000 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) @ 2462 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, Antenna 2,
Body SAR, Ch 11, 1 Mbps, Back Side

Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.898 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.460 W/kg
SAR(1 g) = 0.222 W/kg
Smallest distance from peaks to all points 3 dB below = 10.3 mm
Ratio of SAR at M2 to SAR at M1 = 49.1%
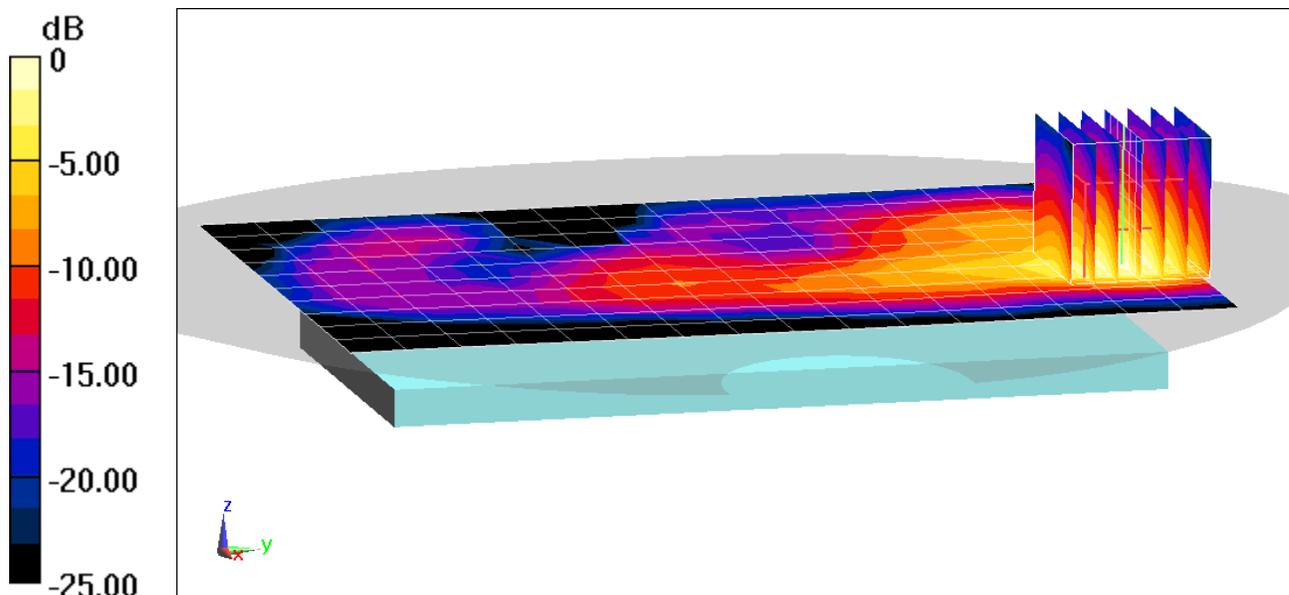
0 dB = 0.370 W/kg = -4.32 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05381

Communication System: UID 0, 802.11b; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used (interpolated):
f = 2412 MHz; σ = 2.001 S/m; $ε_r$ = 51.712; ρ = 1000 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) @ 2412 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, Antenna 1,
Body SAR, Ch 1, 1 Mbps, Left Side

Area Scan (10x17x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.918 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.665 W/kg
SAR(1 g) = 0.329 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 51.2%
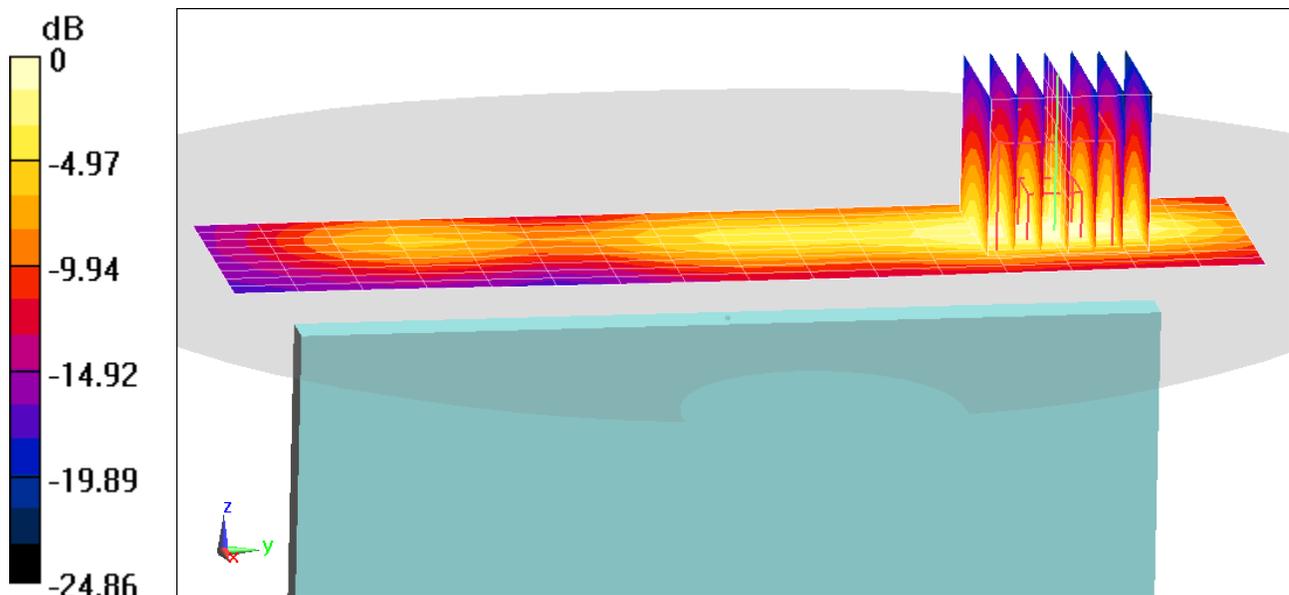
0 dB = 0.544 W/kg = -2.64 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05381

Communication System: UID 0, 802.11a 5.2-5.8 GHz Band; Frequency: 5280 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5280 MHz; σ = 5.545 S/m; ε_r = 47.425; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/27/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.7, 4.7, 4.7) @ 5280 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11a, UNII-2A, 20 MHz Bandwidth, Antenna 1, Body SAR, Ch 56, 6 Mbps, Back Side

Area Scan (13x22x1): Measurement grid: dx=10mm, dy=10mm
**Zoom Scan (7x7x8)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 9.716 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.70 W/kg
SAR(1 g) = 0.473 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 64.7%
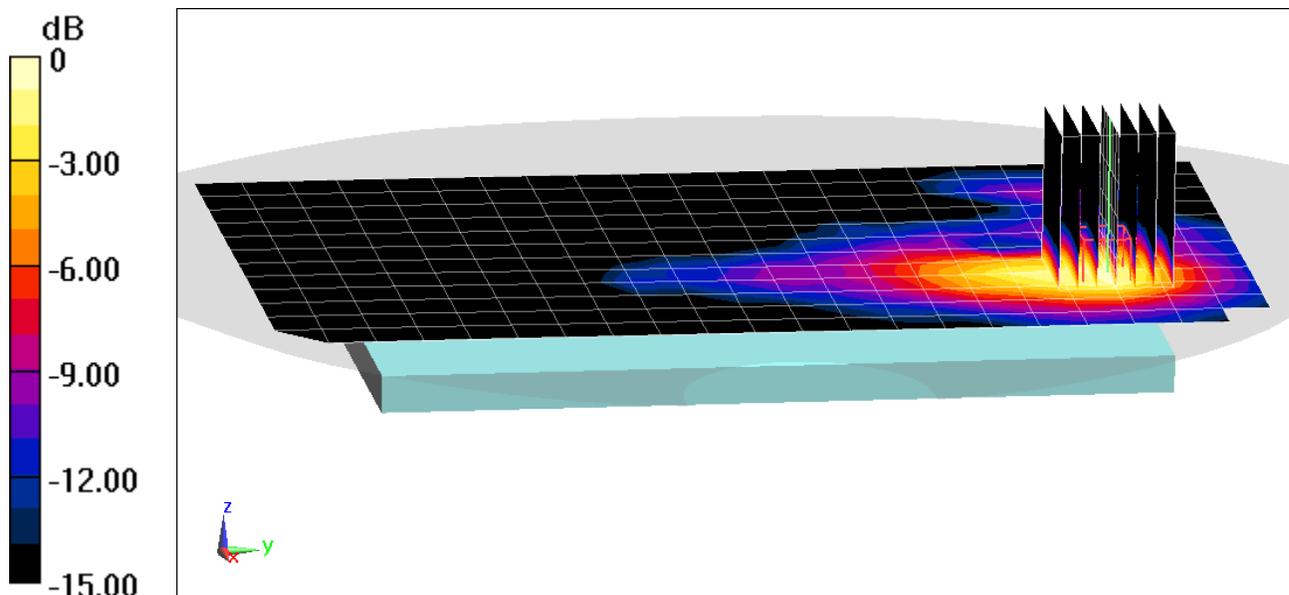
0 dB = 1.06 W/kg = 0.25 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05381

Communication System: UID 0, 802.11a 5.2-5.8 GHz Band; Frequency: 5200 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5200 MHz; σ = 5.432 S/m; ε_r = 47.523; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/27/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.7, 4.7, 4.7) @ 5200 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11a, UNII-1, 20 MHz Bandwidth, Antenna 1, Body SAR, Ch 40, 6 Mbps, Back Side

Area Scan (13x22x1): Measurement grid: dx=10mm, dy=10mm
**Zoom Scan (7x7x8)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 8.811 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.374 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 64.9%
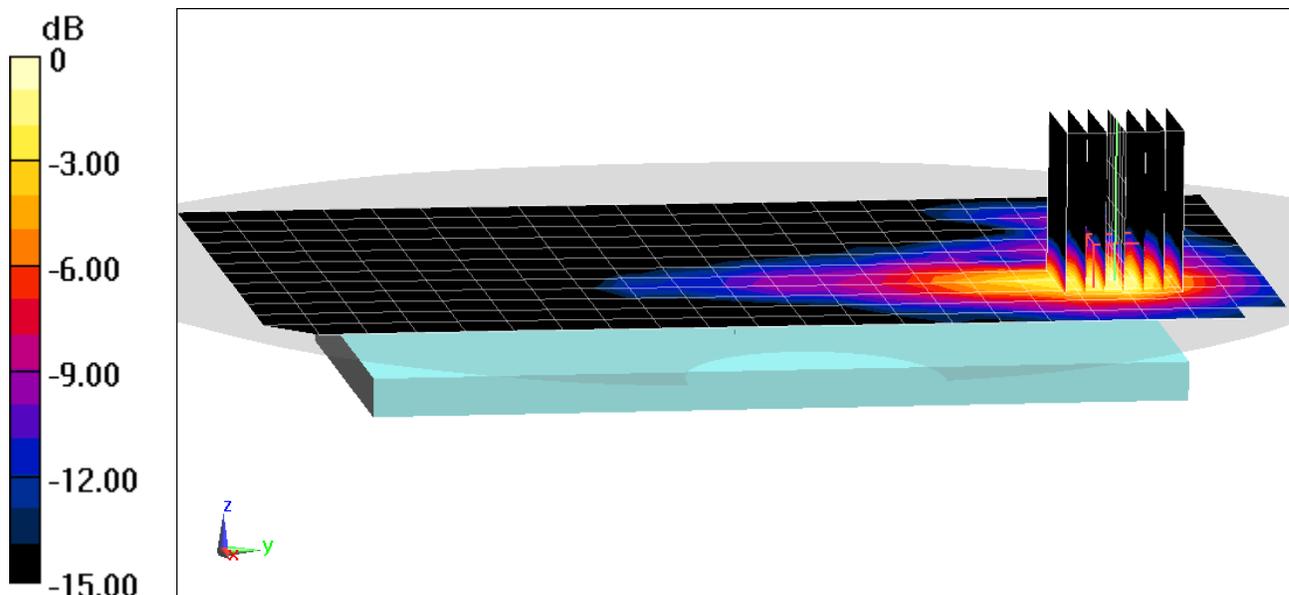
0 dB = 0.861 W/kg = -0.65 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05373

Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.294
Medium: 2450 Body Medium parameters used (interpolated):
f = 2402 MHz; σ = 1.969 S/m; $ε_r$ = 51.141; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/14/2020; Ambient Temp: 21.1°C; Tissue Temp: 23.1°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2402 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: Bluetooth, Body SAR, Ch 0, 1 Mbps, Back Side

Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (10x13x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.448 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.0290 W/kg
SAR(1 g) = 0.015 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 48.1%

0 dB = 0.0234 W/kg = -16.31 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05373

Communication System: UID 0, Bluetooth; Frequency: 2402 MHz; Duty Cycle: 1:1.294
Medium: 2450 Body Medium parameters used (interpolated):
f = 2402 MHz; σ = 1.969 S/m; ε_r = 51.141; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/14/2020; Ambient Temp: 21.1°C; Tissue Temp: 23.1°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2402 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: Bluetooth, Body SAR, Ch 0, 1 Mbps, Left Edge

Area Scan (10x16x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.693 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.0820 W/kg
SAR(1 g) = 0.037 W/kg
No points with SAR 3dB lower than peak SAR
Ratio of SAR at M2 to SAR at M1 = 46.4%
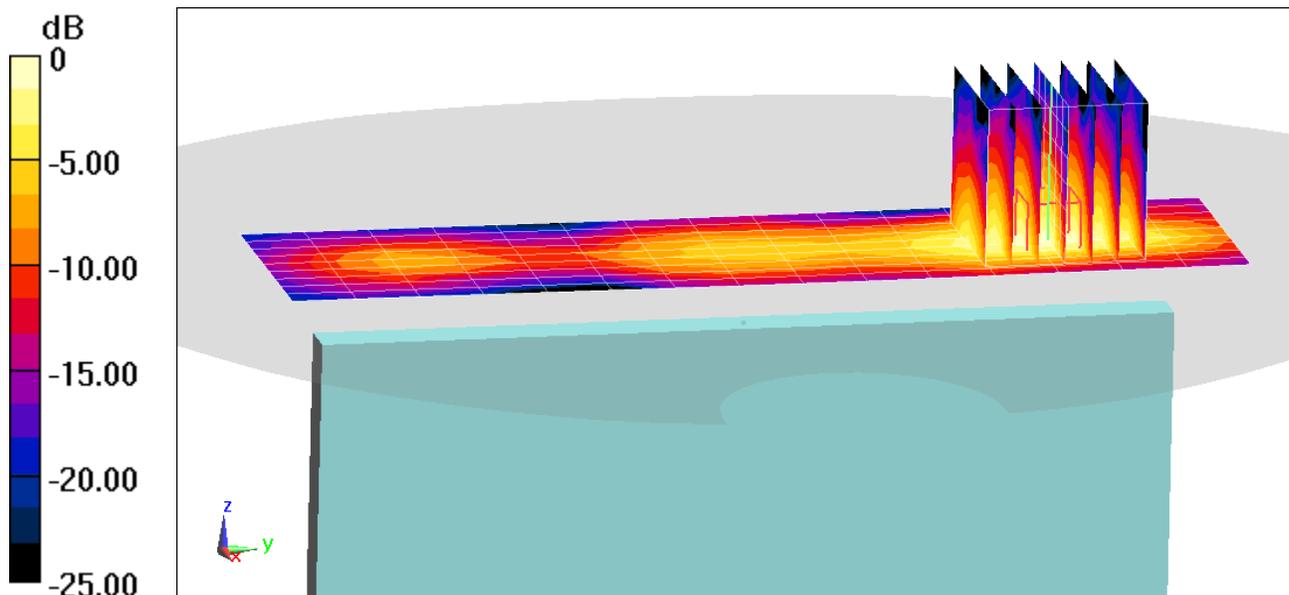
0 dB = 0.0656 W/kg = -11.83 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, CDMA, Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1908.75 MHz; σ = 1.594 S/m; ε_r = 51.665; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/15/2020; Ambient Temp: 22.1°C; Tissue Temp: 23.2°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, Rev. 0, Phablet SAR, Bottom Edge, High.ch

Area Scan (10x9x1): Measurement grid: dx=5mm, dy=15mm
Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 68.44 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 22.7 W/kg
SAR(10 g) = 2.58 W/kg
Smallest distance from peaks to all points 3 dB below = 4.6 mm
Ratio of SAR at M2 to SAR at M1 = 66.4%
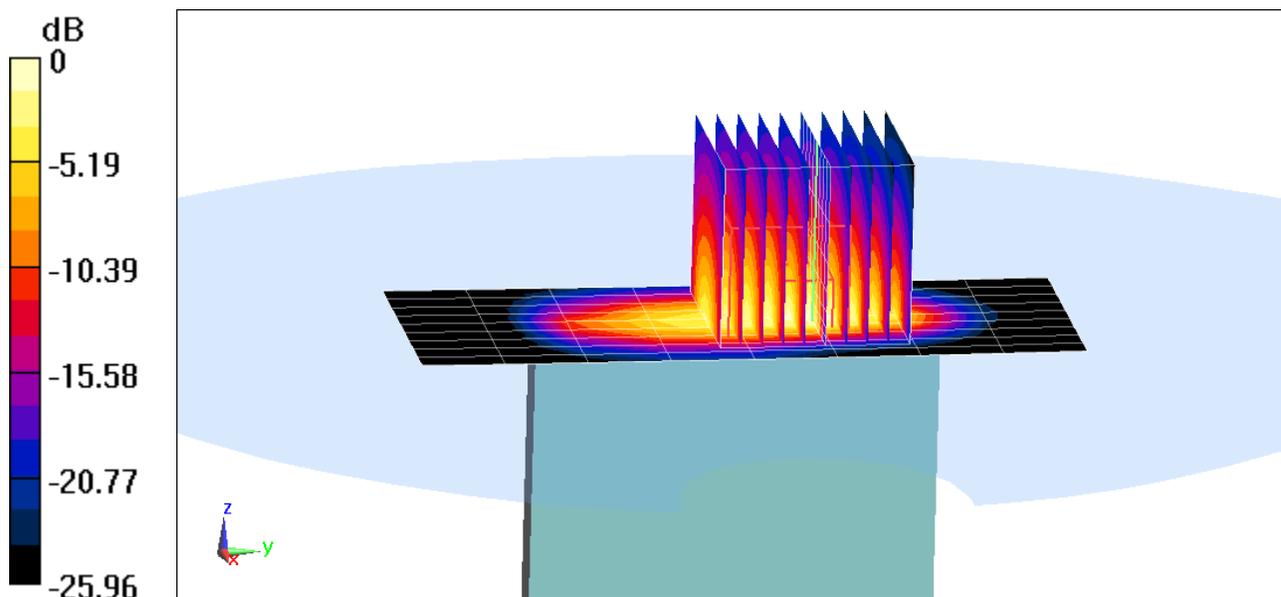
0 dB = 12.6 W/kg = 11.00 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05274

Communication System: UID 0, UMTS; Frequency: 1752.6 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used (interpolated):
f = 1752.6 MHz; σ = 1.515 S/m; ε_r = 52.076; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/21/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1752.6 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

**Mode: UMTS 1750, Dual Display Accessory Position #1,
Phablet SAR, Back side, High.ch**

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 = 62.02 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 14.6 W/kg
SAR(10 g) = 2.7 W/kg
Smallest distance from peaks to all points 3 dB below = 5.3 mm
Ratio of SAR at M2 to SAR at M1 = 82%
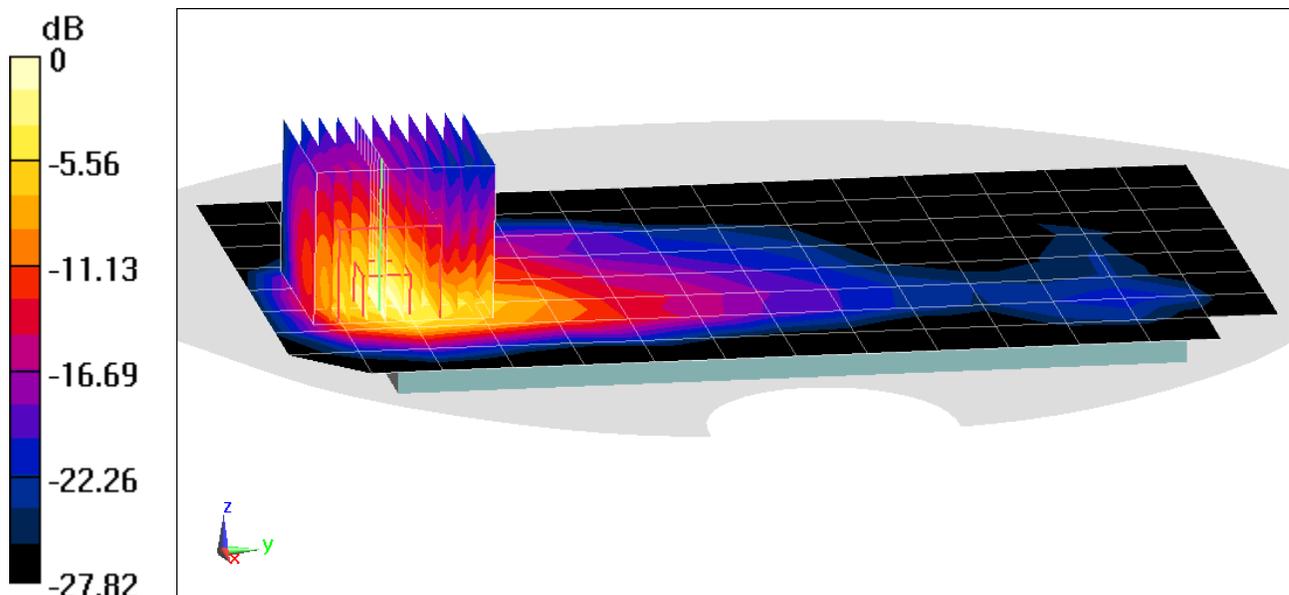
0 dB = 10.6 W/kg = 10.25 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, UMTS; Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used (interpolated):
f = 1907.6 MHz; σ = 1.59 S/m; ε_r = 52.222; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/10/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.8, 7.8, 7.8) @ 1907.6 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: UMTS 1900, Phablet SAR, Bottom Edge, High.ch

Area Scan (10x7x1): Measurement grid: dx=5mm, dy=15mm
**Zoom Scan (10x10x8)/Cube 0:** Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 66.52 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 20.0 W/kg
SAR(10 g) = 2.34 W/kg
Smallest distance from peaks to all points 3 dB below = 5.3 mm
Ratio of SAR at M2 to SAR at M1 = 71%
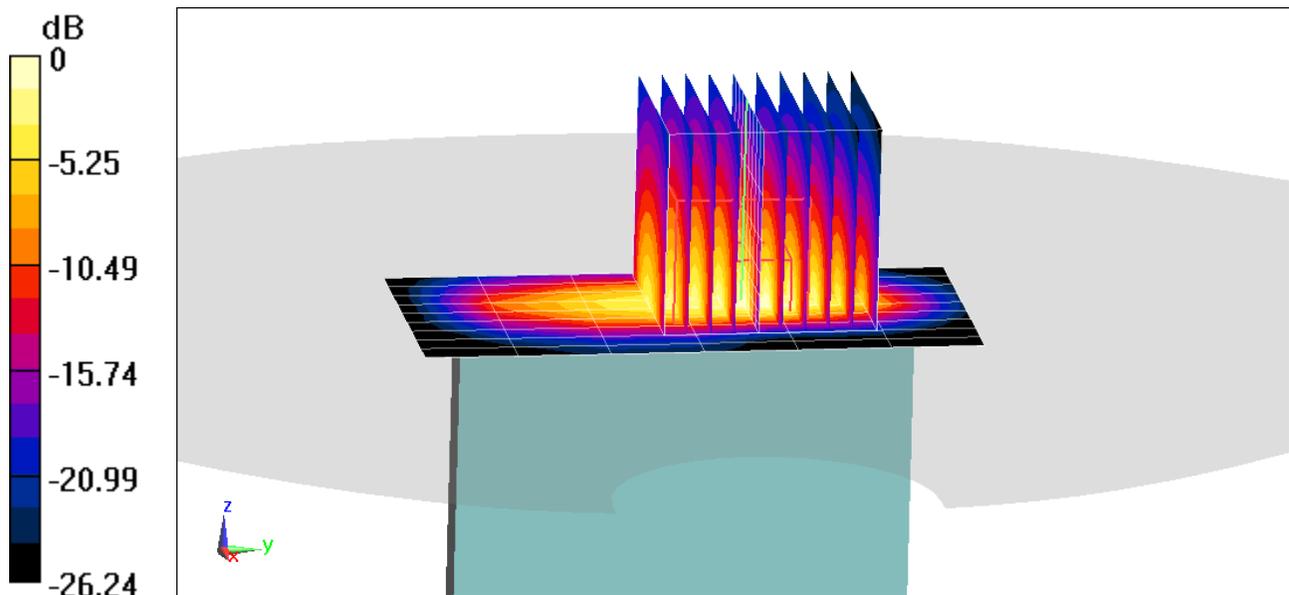
0 dB = 11.7 W/kg = 10.68 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05274

Communication System: UID 0, LTE Band 66 (AWS); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1770 MHz; σ = 1.533 S/m; ε_r = 52.007; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/21/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1770 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

**Mode: LTE Band 66 (AWS), Dual Display Accessory Position #1, Phablet 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 (11x10x8)/Cube 0:** Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 58.34 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 12.4 W/kg
SAR(10 g) = 2.35 W/kg
Smallest distance from peaks to all points 3 dB below = 5.3 mm
Ratio of SAR at M2 to SAR at M1 = 79.6%
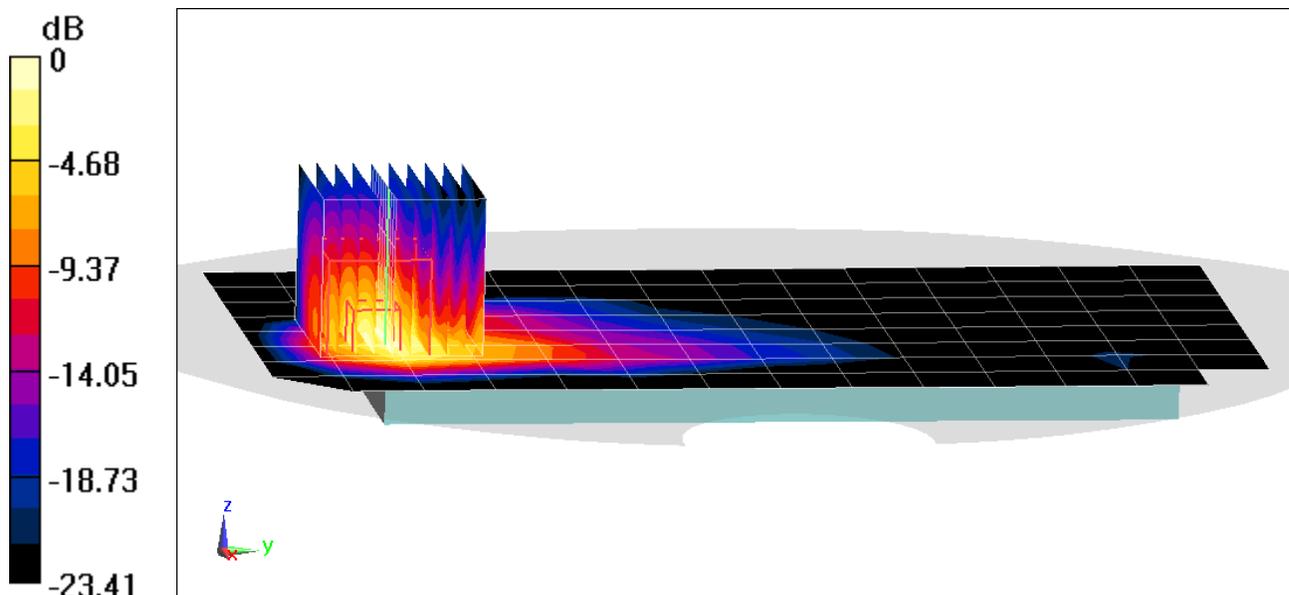
0 dB = 9.19 W/kg = 9.63 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05282

Communication System: UID 0, LTE Band 25 (PCS); Frequency: 1905 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1905 MHz; σ = 1.589 S/m; ε_r = 51.678; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/15/2020; Ambient Temp: 22.1°C; Tissue Temp: 23.2°C

Probe: EX3DV4 - SN7571; ConvF(7.56, 7.56, 7.56) @ 1905 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: LTE Band 25 (PCS), Phablet SAR, Bottom Edge, High.ch, 20 MHz Bandwidth, QPSK, 50 RB, 50 RB Offset

Area Scan (9x8x1): Measurement grid: dx=5mm, dy=15mm
**Zoom Scan (10x10x8)/Cube 0:** Measurement grid: dx=3.8mm, dy=3.8mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 66.09 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 22.6 W/kg
SAR(10 g) = 2.42 W/kg
Smallest distance from peaks to all points 3 dB below = 5.1 mm
Ratio of SAR at M2 to SAR at M1 = 69.8%
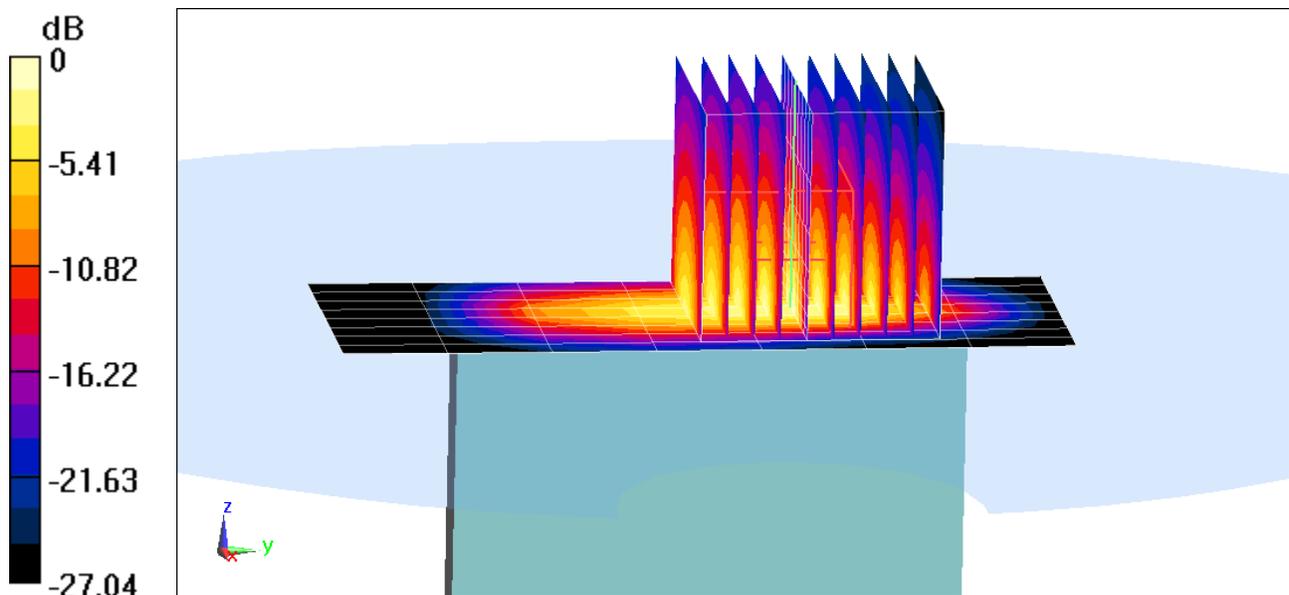
0 dB = 13.0 W/kg = 11.14 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 7; Frequency: 2510 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2510 MHz; σ = 2.115 S/m; ε_r = 50.588; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05/27/2020; Ambient Temp: 22.9°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7547; ConvF(7.3, 7.3, 7.3) @ 2510 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 7, Phablet SAR, Bottom Edge, Low.ch,
20 MHz Bandwidth, QPSK, 50 RB, 25 RB Offset**

Area Scan (15x11x1): Measurement grid: dx=5mm, dy=12mm
Zoom Scan (14x15x8)/Cube 0: Measurement grid: dx=2.4mm, dy=2.4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 69.78 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 32.7 W/kg
SAR(10 g) = 2.87 W/kg
Smallest distance from peaks to all points 3 dB below = 4.4 mm
Ratio of SAR at M2 to SAR at M1 = 66.1%
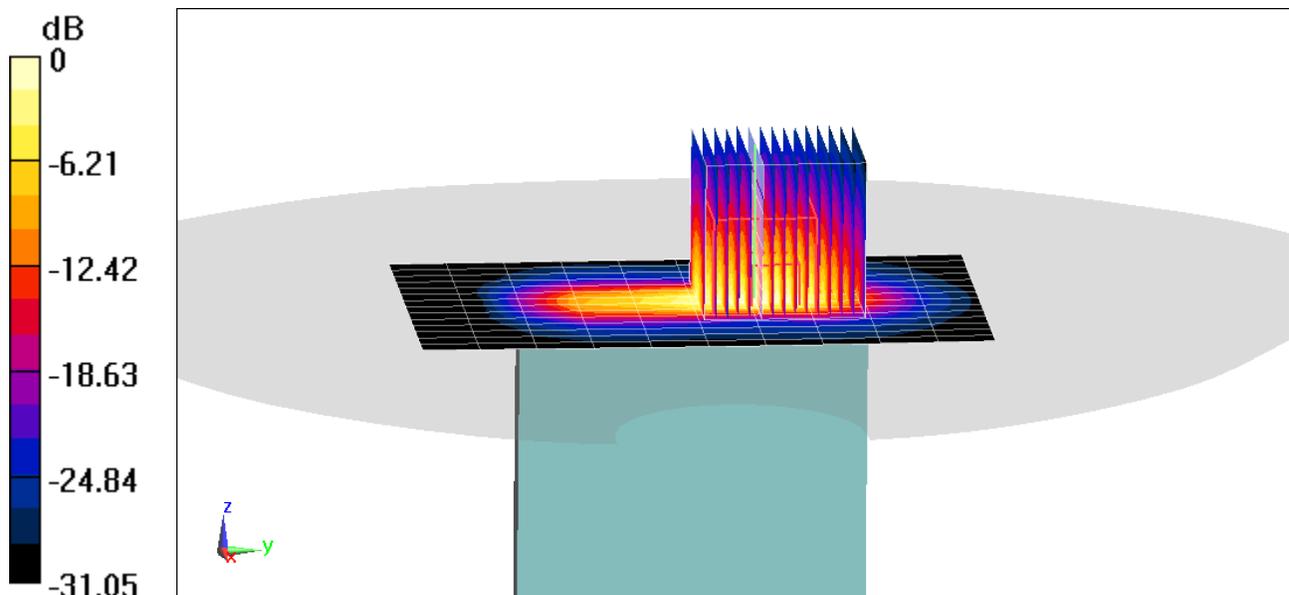
0 dB = 18.8 W/kg = 12.74 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05258

Communication System: UID 0, LTE Band 41 (Class 3); Frequency: 2506 MHz; Duty Cycle: 1:1.58
Medium: 2450 Body Medium parameters used (interpolated):
f = 2506 MHz; σ = 2.11 S/m; ε_r = 50.601; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05/27/2020; Ambient Temp: 22.9°C; Tissue Temp: 21.8°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, Phablet SAR, Bottom Edge,
Low.ch, 20 MHz Bandwidth, QPSK, 1 RB, 99 RB Offset**

Area Scan (11x10x1): Measurement grid: dx=5mm, dy=12mm
**Zoom Scan(14x14x8)/Cube 0:** Measurement grid: dx=2.4mm, dy=2.4mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 61.51 V/m; Power Drift = -0.20 dB
Peak SAR (extrapolated) = 24.4 W/kg
SAR(10 g) = 2.27 W/kg
Smallest distance from peaks to all points 3 dB below = 4.1 mm
Ratio of SAR at M2 to SAR at M1 = 68.4%
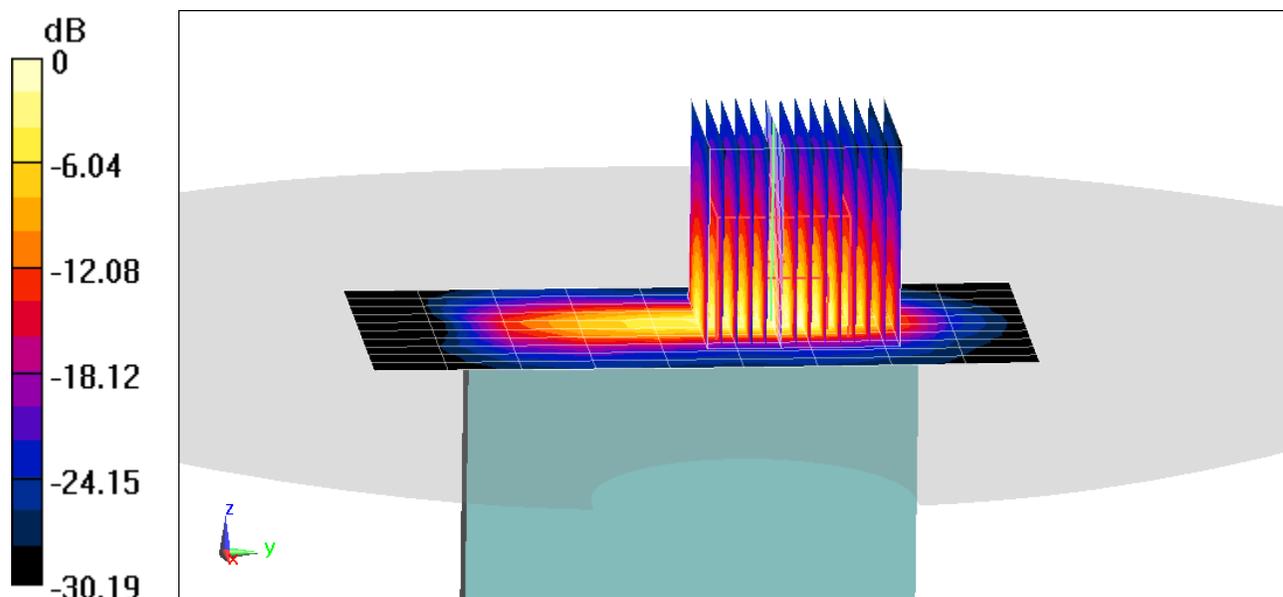
0 dB = 14.3 W/kg = 11.55 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05209

Communication System: UID 0, NR Band n66; Frequency: 1745 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1745 MHz; σ = 1.482 S/m; $ε_r$ = 52.084; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 06/15/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7410; ConvF(8.08, 8.08, 8.08) @ 1745 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: NR Band n66, Phablet SAR, Right Edge, 20 MHz Bandwidth,
DFT-s-OFDM QPSK, Ch. 349000, 50 RB, 28 RB Offset**

Area Scan (9x14x1): Measurement grid: dx=5mm, dy=15mm
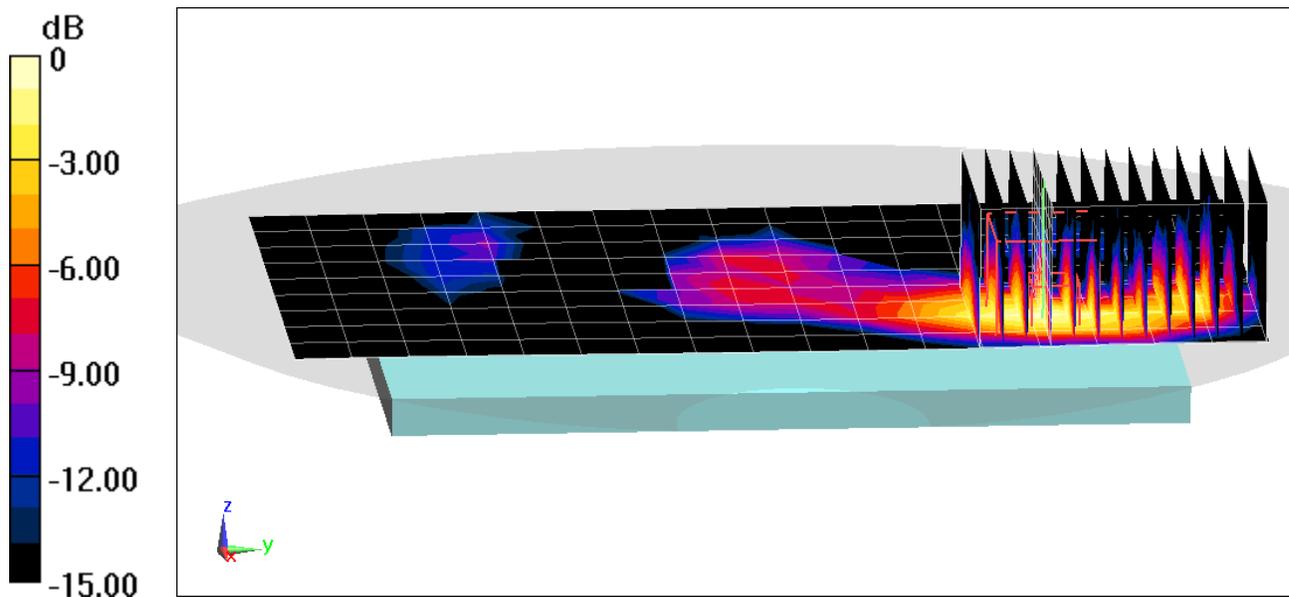**Zoom Scan (16x16x8)/Cube 0:** Measurement grid: dx=2.1mm, dy=2.1mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 79.00 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 32.4 W/kg
SAR(10 g) = 2.72 W/kg
Smallest distance from peaks to all points 3 dB below = 3.8 mm
Ratio of SAR at M2 to SAR at M1 = 65.3%
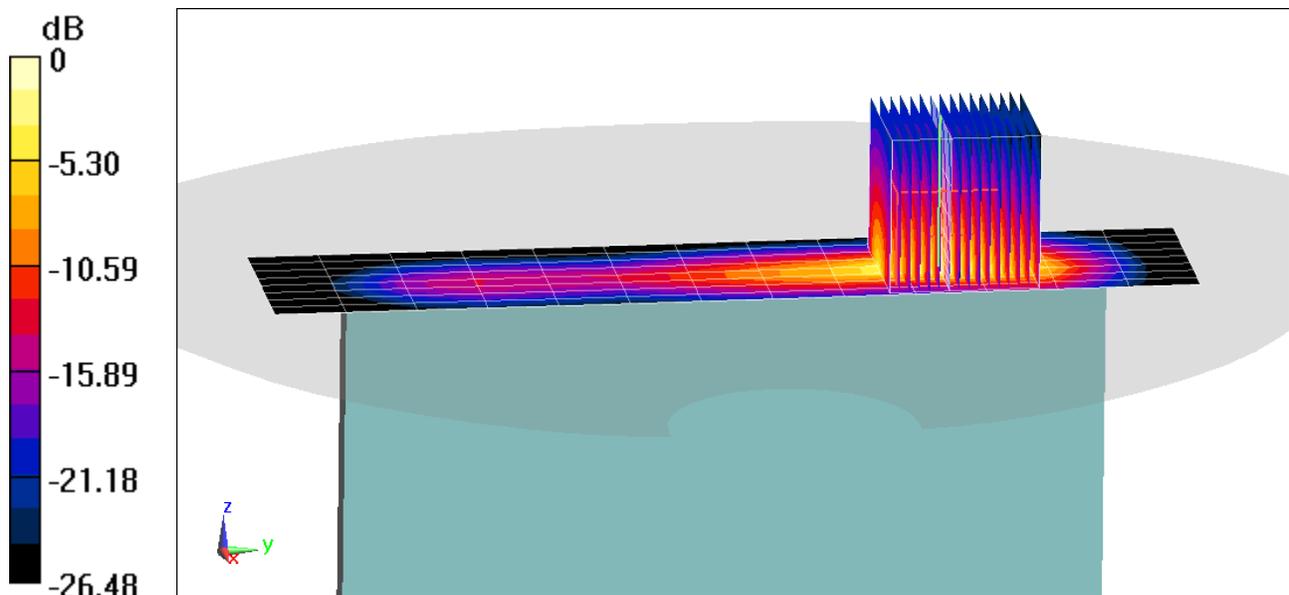
0 dB = 18.5 W/kg = 12.67 dBW/kg

PCTEST

DUT: ZNFG900UM; Type: Portable Handset; Serial: 05381

Communication System: UID 0, IEEE 802.11n; Frequency: 5280 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5280 MHz; σ = 5.476 S/m; ε_r = 46.686; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 0.0 cm

Test Date: 05/04/2020; Ambient Temp: 21.3°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.7, 4.7, 4.7) @ 5280 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

Mode: IEEE 802.11n, U-NII-2A, 20 MHz Bandwidth, MIMO, Phablet SAR, Ch 56, 13 Mbps, Back Side

Area Scan (13x22x1): Measurement grid: dx=10mm, dy=10mm
**Zoom Scan (17x17x8)/Cube 0:** Measurement grid: dx=1.9mm, dy=1.9mm, dz=1.4mm; Graded Ratio: 1.4
Reference Value = 2.269 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 86.4 W/kg
SAR(10 g) = 2.13 W/kg
Smallest distance from peaks to all points 3 dB below = 3.2 mm
Ratio of SAR at M2 to SAR at M1 = 46.7%

0 dB = 31.4 W/kg = 14.97 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used:
f = 750 MHz; σ = 0.908 S/m; $ε_r$ = 42.487; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/17/2020; Ambient Temp: 22.3°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN3589; ConvF(8.7, 8.7, 8.7) @ 750 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)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.87 W/kg
SAR(1 g) = 1.83 W/kg
Deviation(1 g) = 4.21%
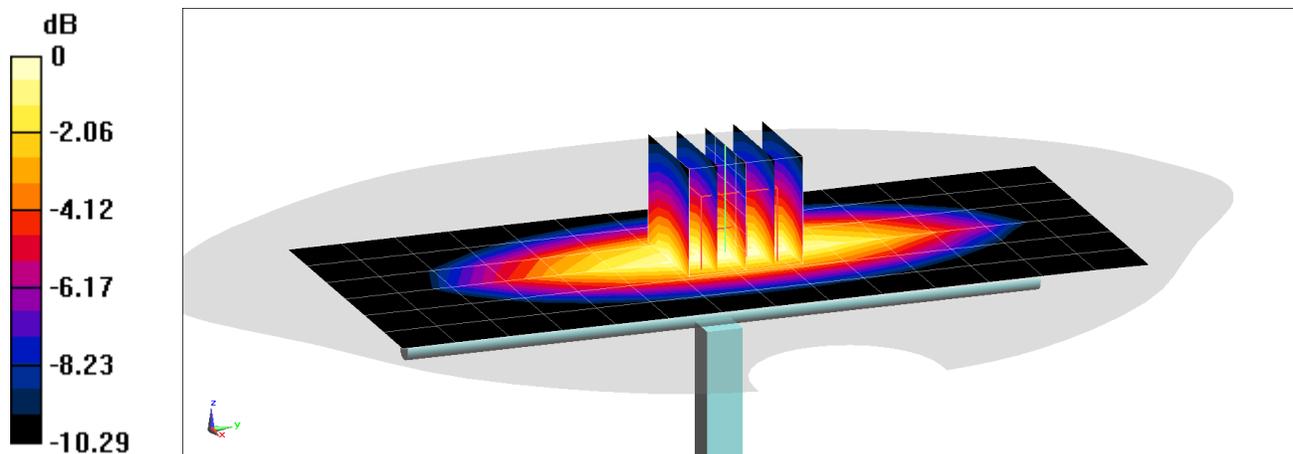
0 dB = 2.49 W/kg = 3.96 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Head Medium parameters used:
f = 750 MHz; σ = 0.875 S/m; ε_r = 41.554; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/20/2020; Ambient Temp: 22.5°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN3589; ConvF(8.7, 8.7, 8.7) @ 750 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)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.58 W/kg
SAR(1 g) = 1.67 W/kg
Deviation(1 g) = -4.90%
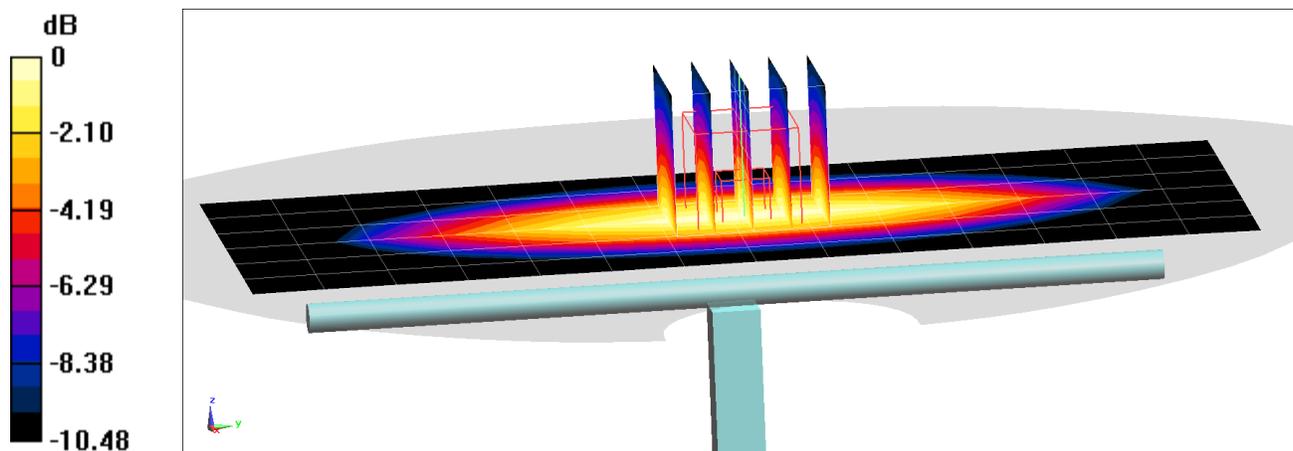
0 dB = 2.26 W/kg = 3.54 dBW/kg

PCTEST

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1054

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Head; Medium parameters used:
f = 750 MHz; σ = 0.888 S/m; $ε_r$ = 43.036; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/15/2020; Ambient Temp: 22.5°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(8.7, 8.7, 8.7) @ 750 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)

750 MHz System Verification at 23.0 dBm (200 mW)

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.78 W/kg
SAR(1 g) = 1.77 W/kg
Deviation(1 g) = 2.55%
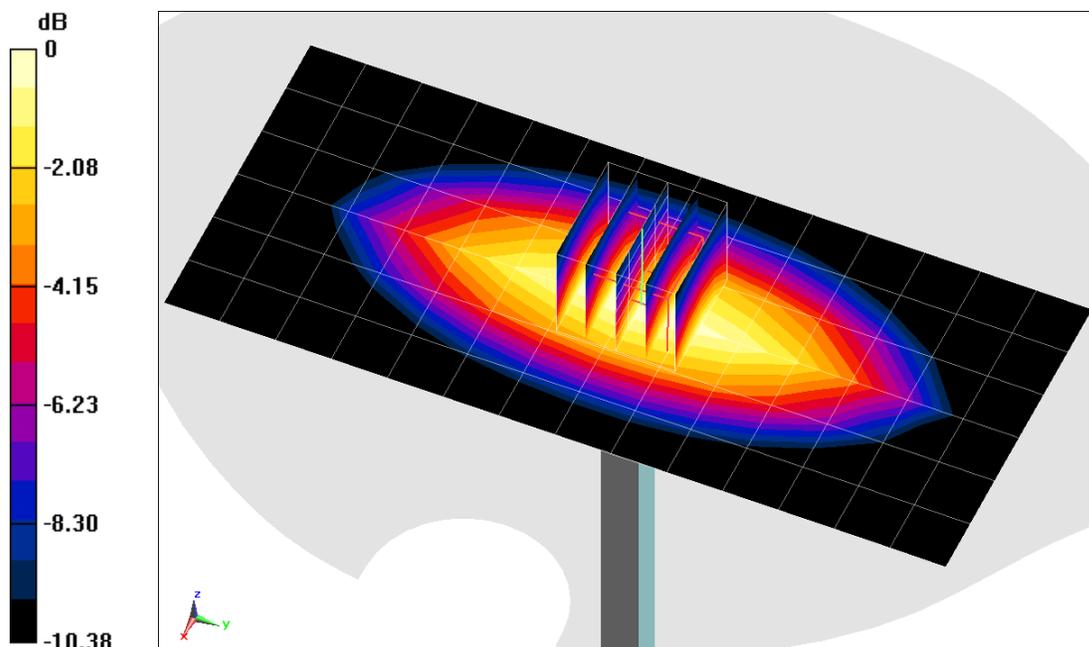
0 dB = 2.40 W/kg = 3.80 dBW/kg

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 MHz; σ = 0.902 S/m; ε_r = 40.83; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/20/2020; Ambient Temp: 21.9°C; Tissue Temp: 21.8°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=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.99 W/kg
**SAR(1 g) = 1.93 W/kg**
Deviation(1 g) = 0.00%

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

PCTEST

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

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used:
f = 835 MHz; σ = 0.915 S/m; ε_r = 40.568; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/28/2020; Ambient Temp: 22.6°C; Tissue Temp: 21.7°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=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.98 W/kg
SAR(1 g) = 1.93 W/kg
Deviation(1 g) = 0.00%

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

PCTEST

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

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: 835 Head; Medium parameters used:
f = 835 MHz; σ = 0.904 S/m; $ε_r$ = 41.119; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/01/2020; Ambient Temp: 22.2°C; Tissue Temp: 21.1°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=15mm, dy=15mm
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.79 W/kg
SAR(1 g) = 1.84 W/kg
Deviation(1 g) = -4.66%
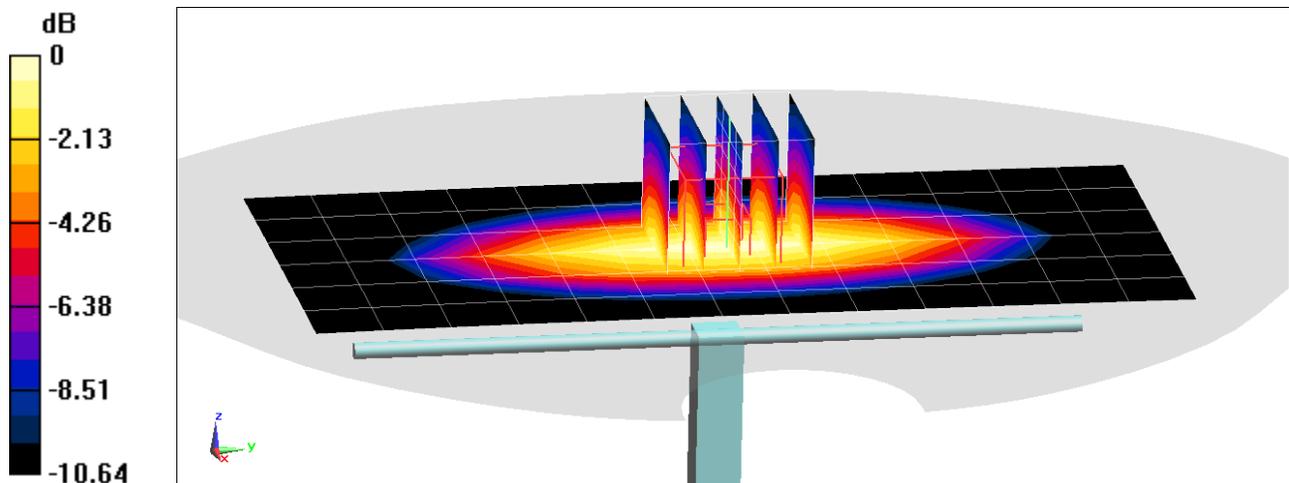
0 dB = 2.47 W/kg = 3.93 dBW/kg

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 MHz; σ = 1.338 S/m; ε_r = 40.62; ρ = 1000 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=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.55 W/kg
**SAR(1 g) = 3.61 W/kg**
Deviation(1 g) = -1.10%
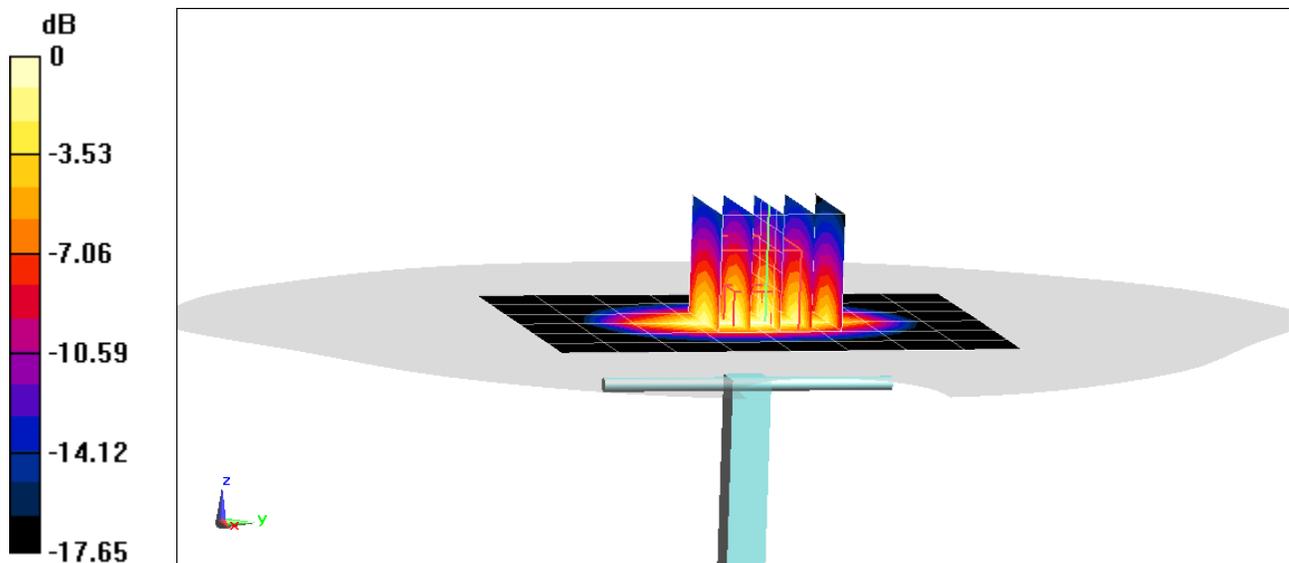
0 dB = 5.44 W/kg = 7.36 dBW/kg

PCTEST

DUT: Dipole 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 MHz; σ = 1.353 S/m; ε_r = 39.243; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 23.5°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(8.34, 8.34, 8.34) @ 1750 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)

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) = 7.22 W/kg
SAR(1 g) = 3.78 W/kg
Deviation(1 g) = 3.56%
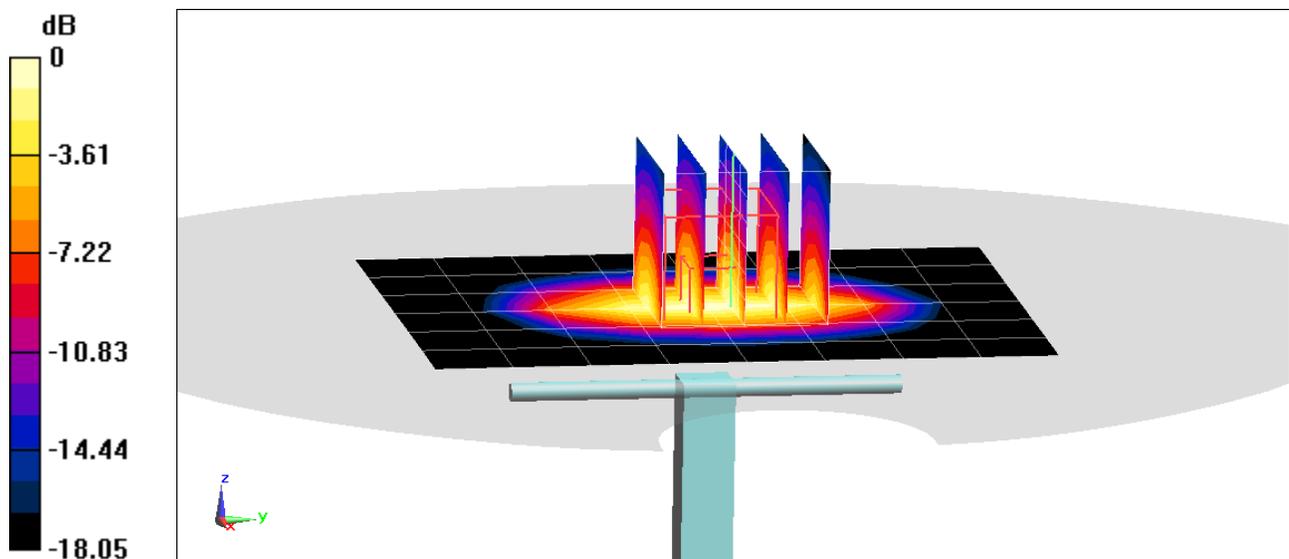
0 dB = 5.84 W/kg = 7.66 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Head Medium parameters used:
f = 1900 MHz; σ = 1.437 S/m; ε_r = 40.242; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/18/2020; Ambient Temp: 22.7°C; Tissue Temp: 21.9°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) = 7.91 W/kg
**SAR(1 g) = 4.26 W/kg**
Deviation(1 g) = 8.95%
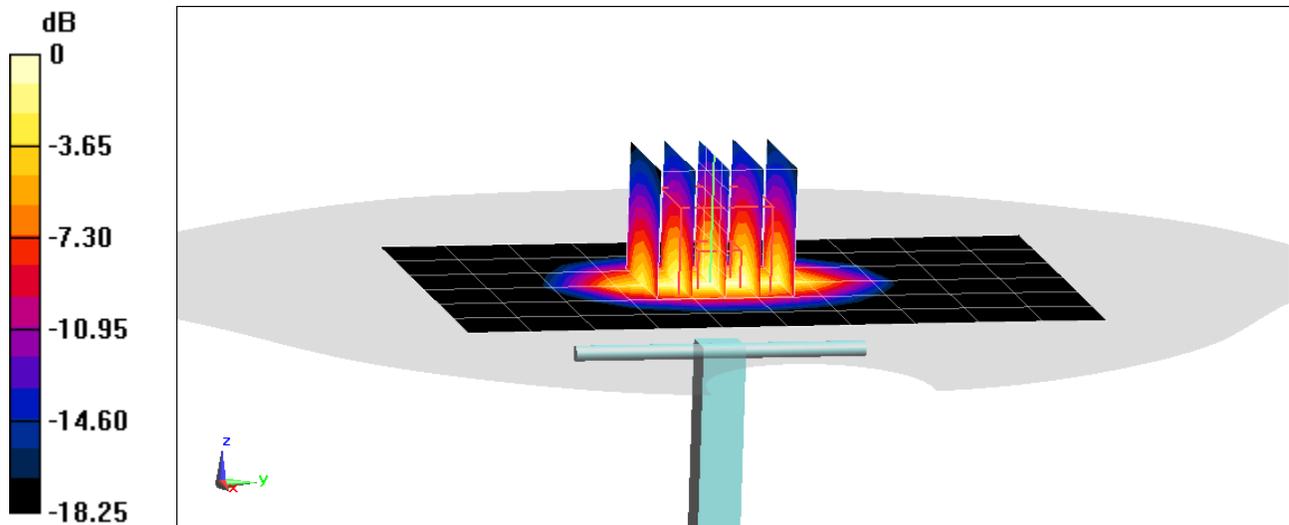
0 dB = 6.65 W/kg = 8.23 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Head; Medium parameters used:
f = 1900 MHz; σ = 1.451 S/m; ε_r = 39.329; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/12/2020; Ambient Temp: 23.9°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7551; ConvF(8.05, 8.05, 8.05) @ 1900 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)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 8.09 W/kg
SAR(1 g) = 4.19 W/kg
Deviation(1 g) = 7.16%
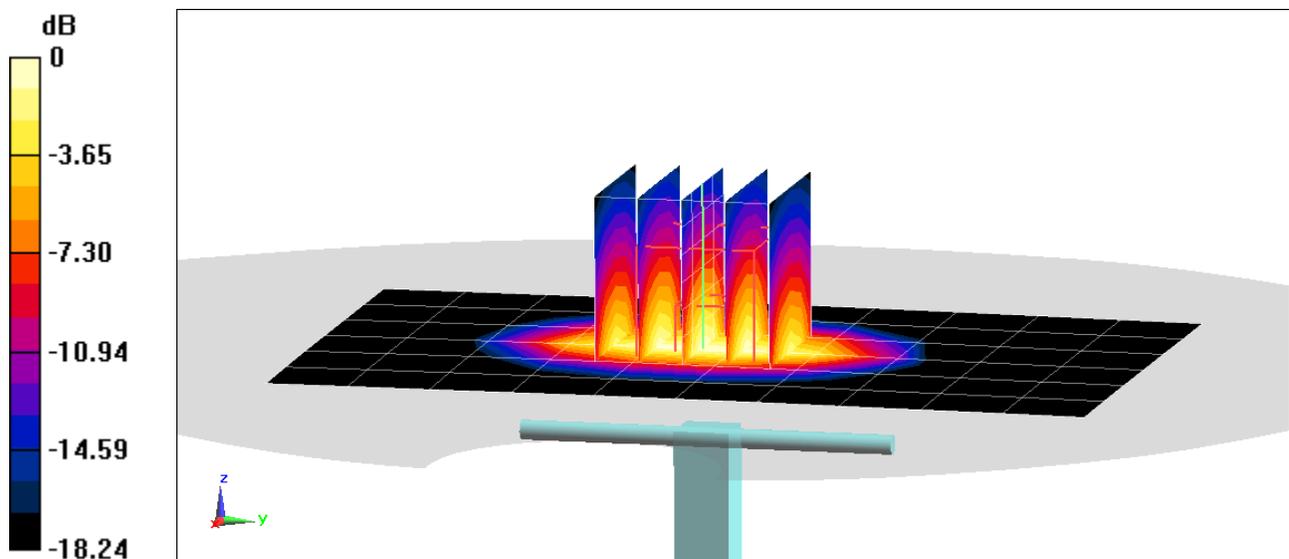
0 dB = 6.12 W/kg = 7.87 dBW/kg

PCTEST

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: 1073

Communication System: UID 0, CW; Frequency: 2300 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2300 MHz; σ = 1.683 S/m; ε_r = 39.462; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0cm

Test Date: 05/10/2020; Ambient Temp: 23.2°C; Tissue Temp: 22.8°C

Probe: EX3DV4 - SN3589; ConvF(7.11, 7.11, 7.11) @ 2300 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)

2300 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) = 9.74 W/kg
SAR(1 g) = 4.81 W/kg
Deviation(1 g) = -2.24%
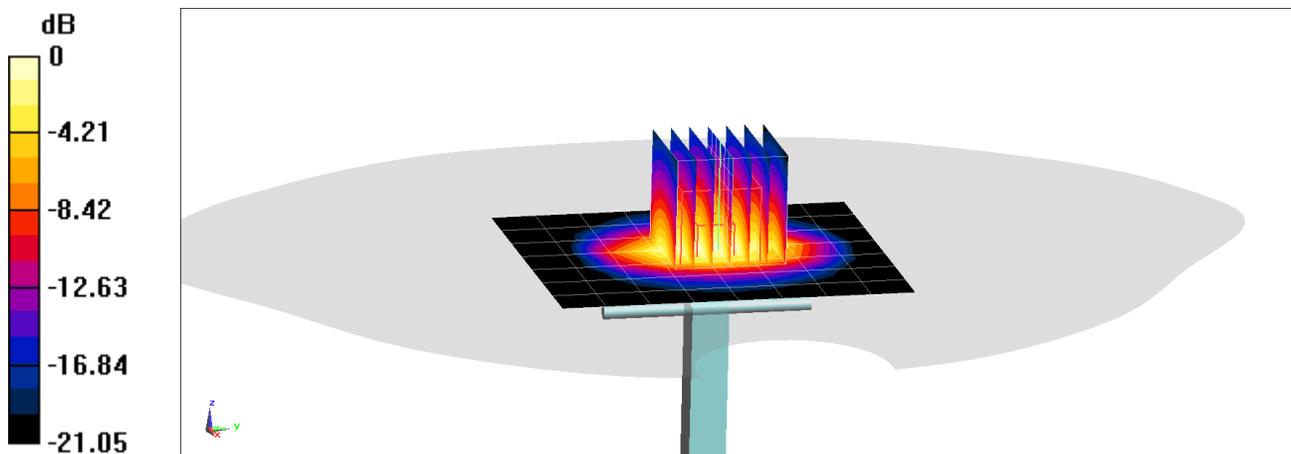
0 dB = 7.86 W/kg = 8.95 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2450 MHz; σ = 1.818 S/m; ε_r = 38.641; ρ = 1000 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=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
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: 719

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2450 MHz; σ = 1.787 S/m; ε_r = 39.278; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/10/2020; Ambient Temp: 23.2°C; Tissue Temp: 22.8°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=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 11.1 W/kg
SAR(1 g) = 5.33 W/kg
Deviation(1 g) = 0.38%
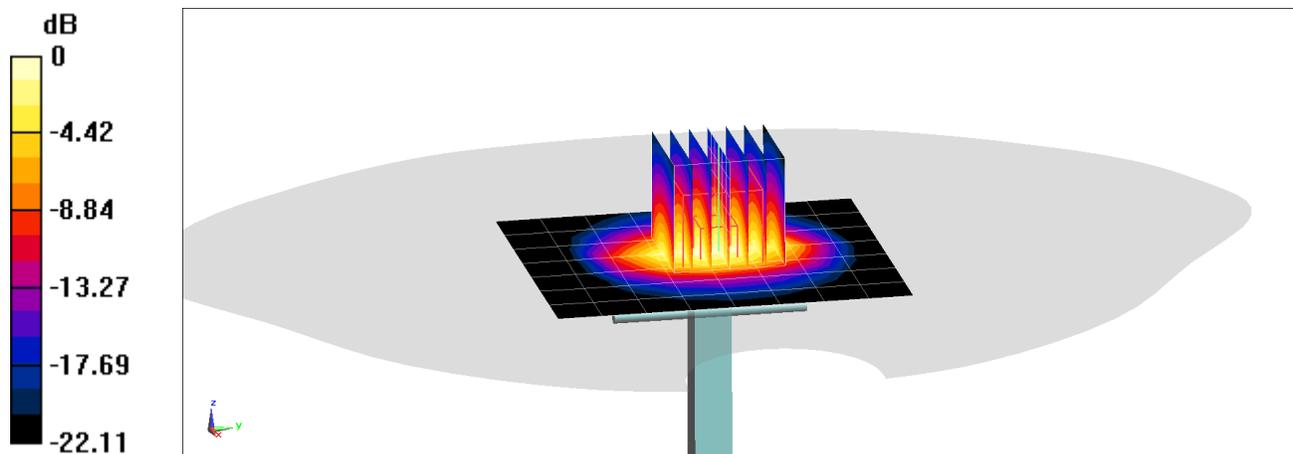
0 dB = 8.93 W/kg = 9.51 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2450 MHz; σ = 1.791 S/m; ε_r = 40.085; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/19/2020; Ambient Temp: 24.9°C; Tissue Temp: 22.5°C

Probe: EX3DV4 - SN7410; ConvF(7.47, 7.47, 7.47) @ 2450 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)

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) = 10.9 W/kg
SAR(1 g) = 5.33 W/kg
Deviation(1 g) = 1.91%
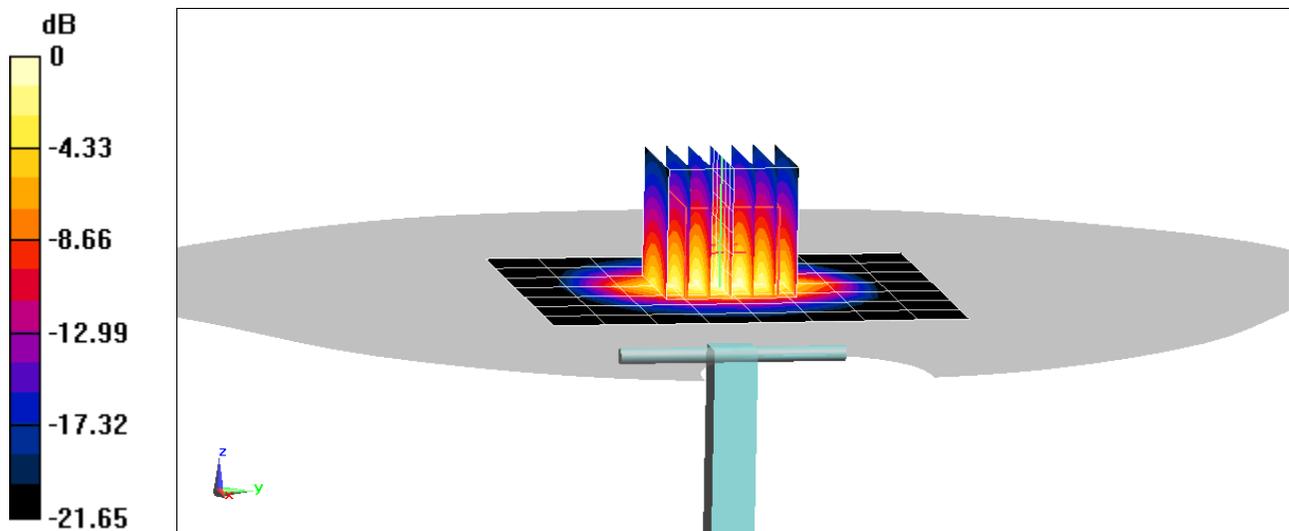
0 dB = 8.86 W/kg = 9.47 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2600 MHz; σ = 1.946 S/m; ε_r = 38.407; ρ = 1000 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(6.6, 6.6, 6.6) @ 2600 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)

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) = 12.4 W/kg
SAR(1 g) = 5.71 W/kg
Deviation(1 g) = -1.72%
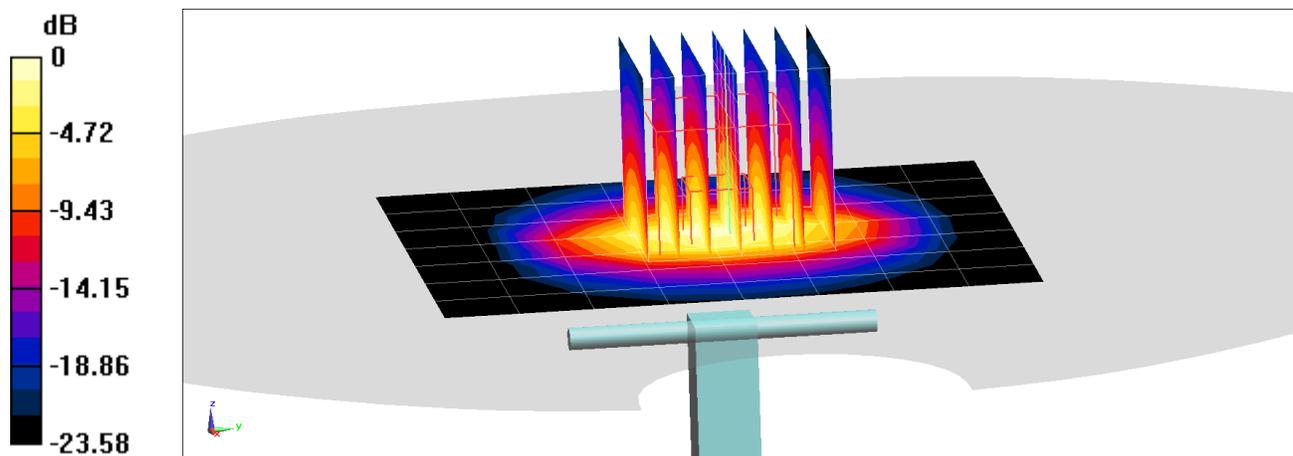
0 dB = 9.72 W/kg = 9.88 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1
Medium: 2450 Head Medium parameters used:
f = 2600 MHz; σ = 1.892 S/m; ε_r = 39.969; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 21.1°C; Tissue Temp: 21.5°C

Probe: EX3DV4 - SN3589; ConvF(6.6, 6.6, 6.6) @ 2600 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)

2600 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 12.3 W/kg
SAR(1 g) = 5.68 W/kg
Deviation(1 g) = -2.24%
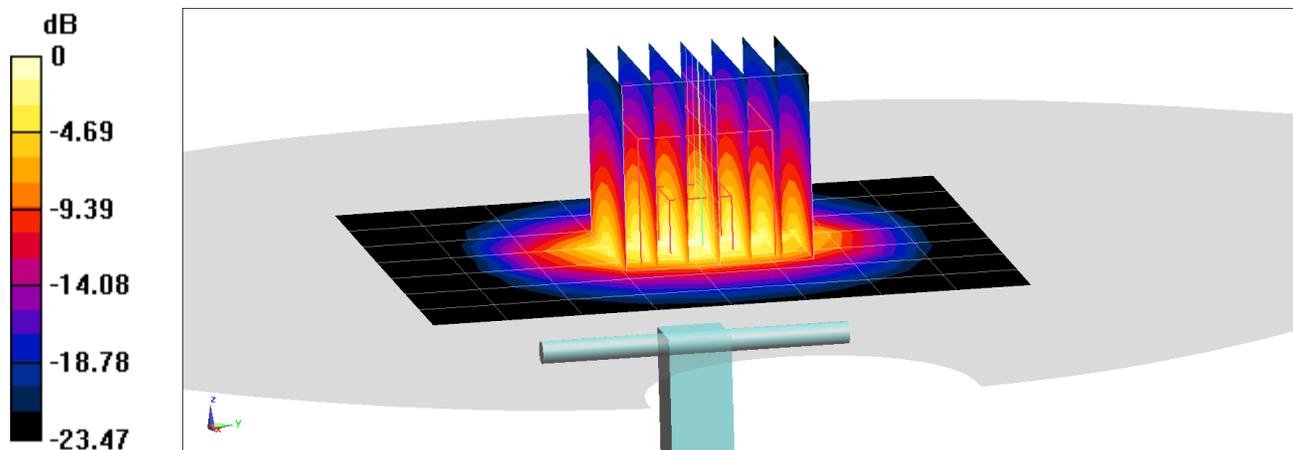
0 dB = 9.79 W/kg = 9.91 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Head Medium parameters used:
f = 5250 MHz; σ = 4.644 S/m; ε_r = 35.124; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/07/2020; Ambient Temp: 22.7°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7357; ConvF(5.5, 5.5, 5.5) @ 5250 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 20; Type: QD 000 P40 CD; Serial: 1715
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) = 14.8 W/kg
SAR(1 g) = 3.69 W/kg
Deviation(1 g) = -6.82%
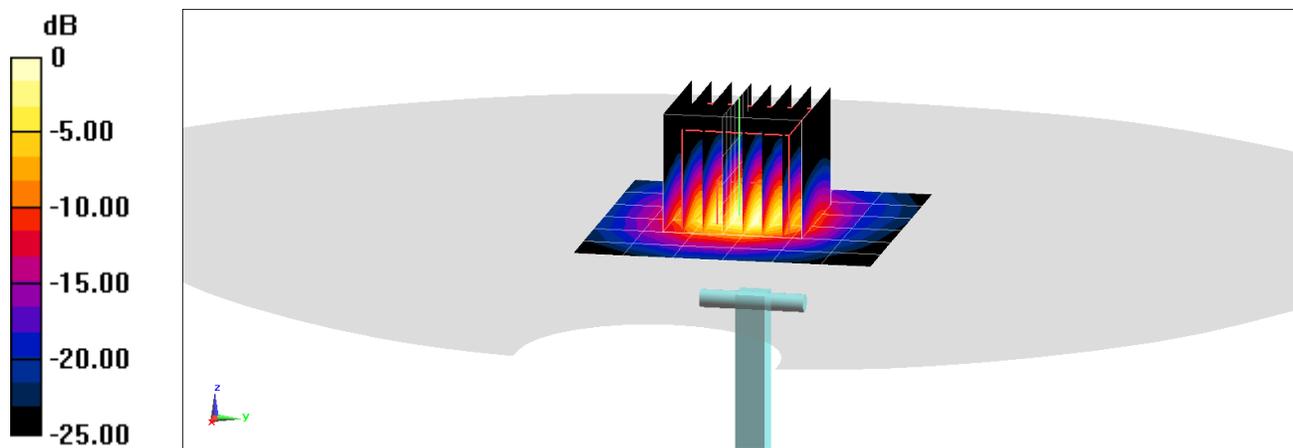
0 dB = 8.57 W/kg = 9.33 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Head Medium parameters used:
|f = 5600 MHz; σ = 5.03 S/m; ε_r = 34.514; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/07/2020; Ambient Temp: 22.7°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7357; ConvF(4.93, 4.93, 4.93) @ 5600 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 20; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)
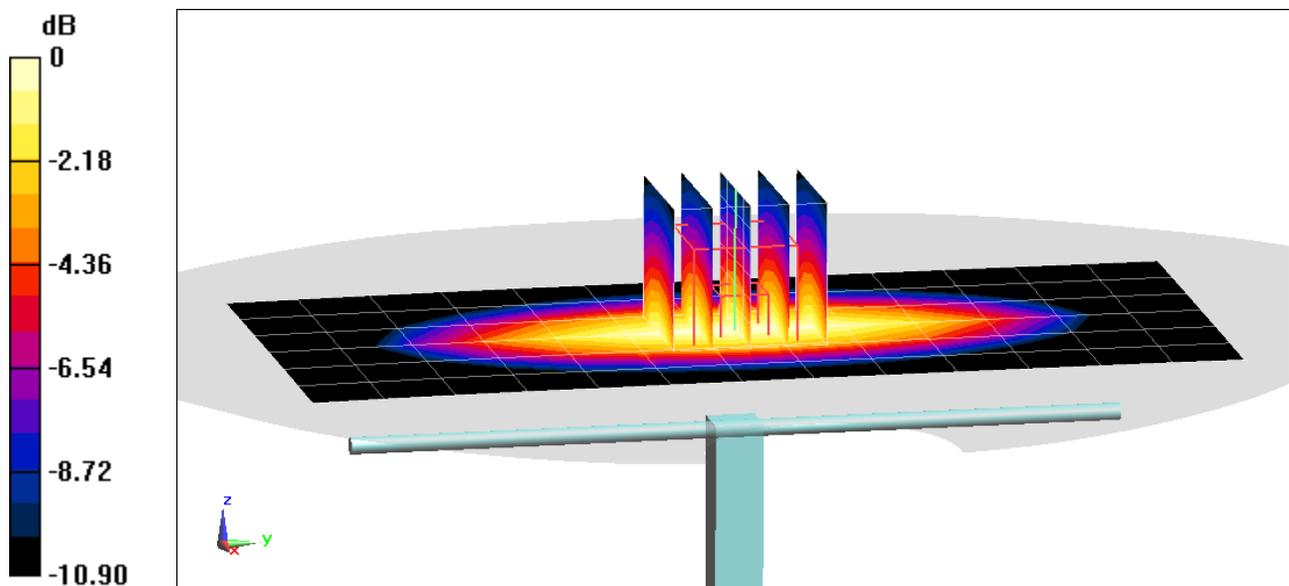
5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 16.6 W/kg
SAR(1 g) = 3.84 W/kg
Deviation(1 g) = -8.68%
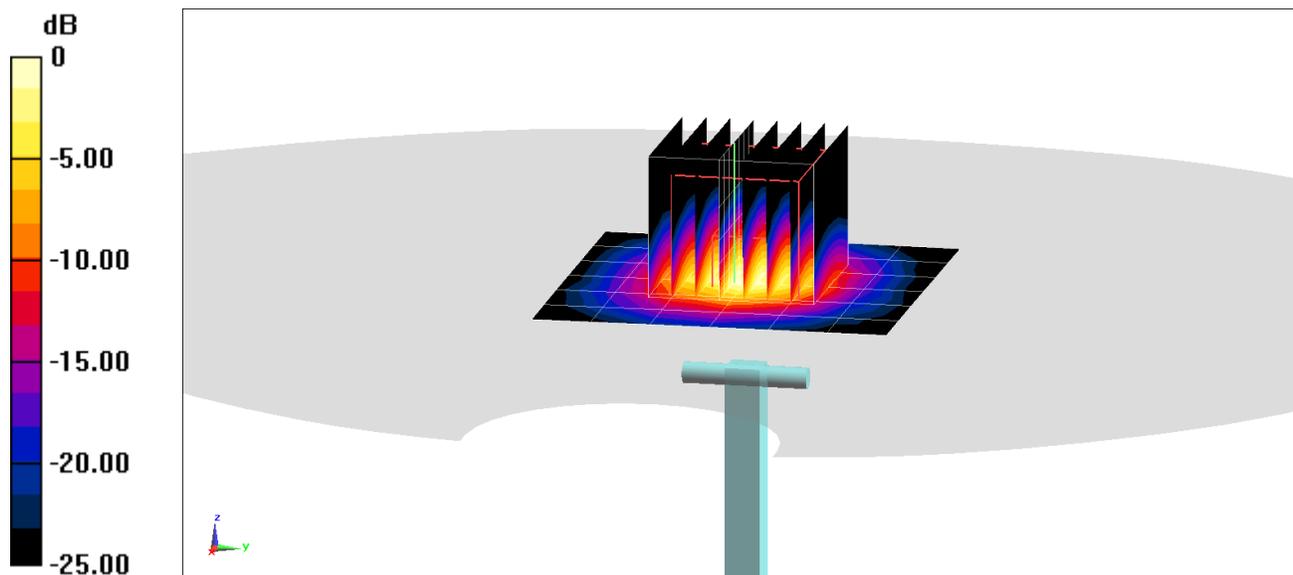
0 dB = 9.18 W/kg = 9.63 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Head Medium parameters used:
f = 5750 MHz; σ = 5.207 S/m; ε_r = 34.257; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/07/2020; Ambient Temp: 22.7°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN7357; ConvF(5.05, 5.05, 5.05) @ 5750 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 20; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)
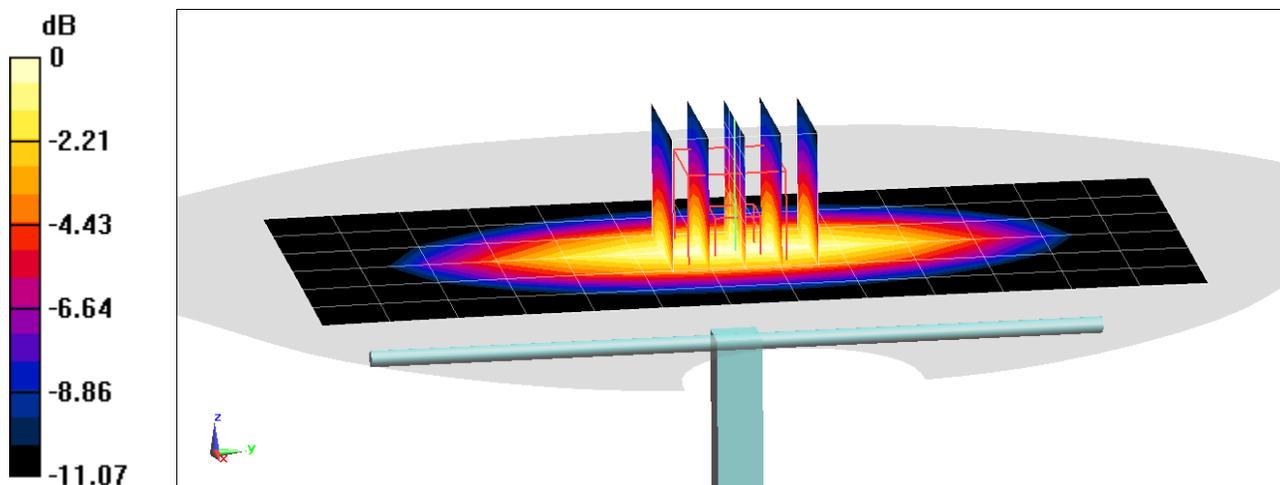
5750 MHz System Verification at 17.0 dBm (50 mW)

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) = 17.1 W/kg
SAR(1 g) = 3.78 W/kg
Deviation(1 g) = -6.09%
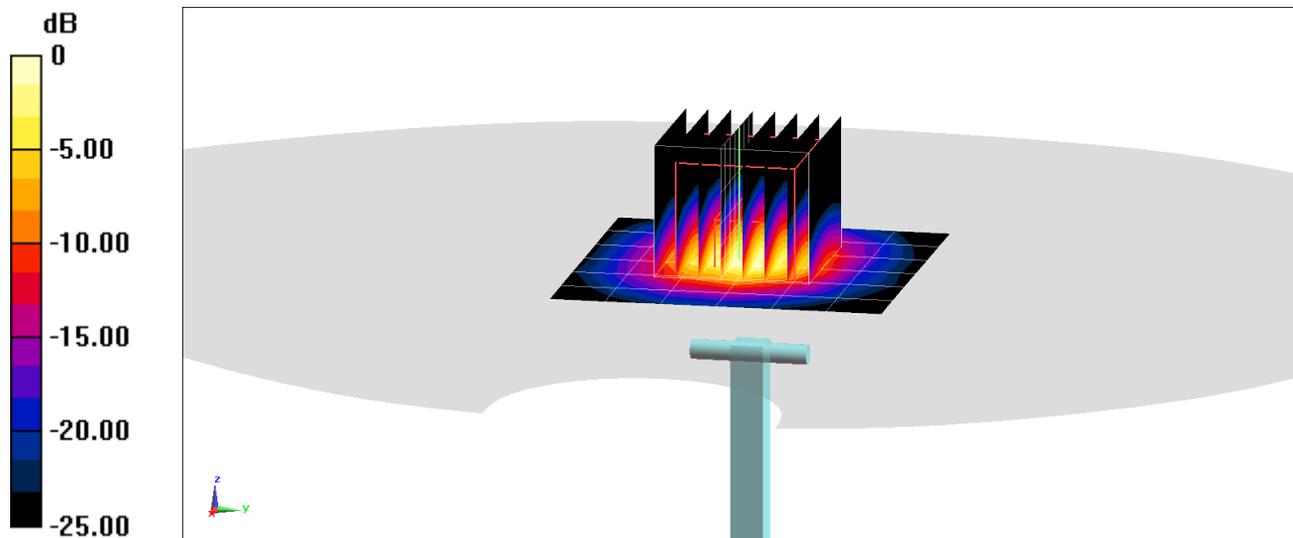
0 dB = 9.13 W/kg = 9.60 dBW/kg

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 MHz; σ = 0.96 S/m; ε_r = 53.912; ρ = 1000 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=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.71 W/kg
SAR(1 g) = 1.81 W/kg
Deviation(1 g) = 7.35%
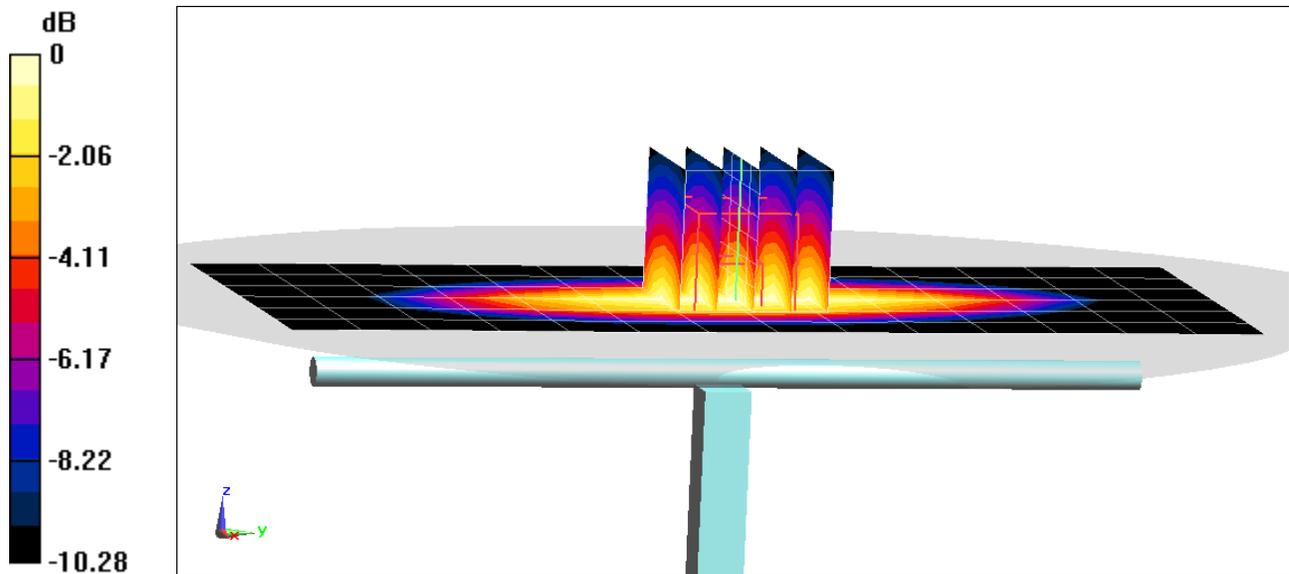
0 dB = 2.41 W/kg = 3.82 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: 750 Body Medium parameters used:
f = 750 MHz; σ = 0.951 S/m; ε_r = 56.673; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5cm

Test Date: 06/22/2020; Ambient Temp: 23.2°C; Tissue Temp: 22.0°C

Probe: EX3DV4 - SN3589; ConvF(8.49, 8.49, 8.49) @ 750 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)

**750 MHz System Verification at 23.0 dBm (200 mW)**

Area Scan (7x15x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.86 W/kg
SAR(1 g) = 1.82 W/kg
Deviation(1 g) = 5.69%
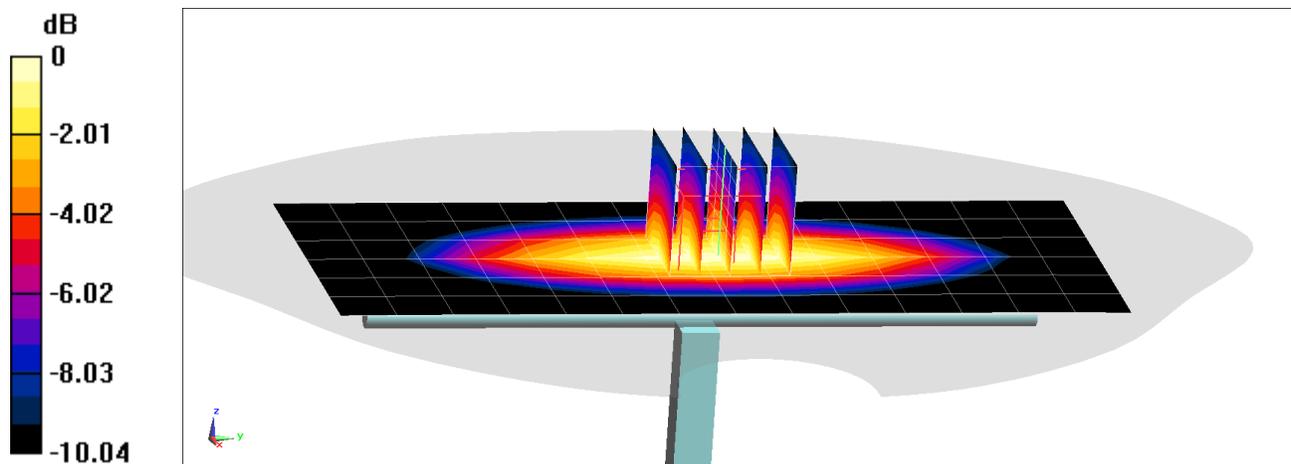
0 dB = 2.46 W/kg = 3.91 dBW/kg

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 MHz; σ = 0.954 S/m; ε_r = 53.587; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 05/26/2020; Ambient Temp: 22.3°C; Tissue Temp: 21.8°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=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.88 W/kg
SAR(1 g) = 1.89 W/kg
Deviation(1 g) = -0.21%
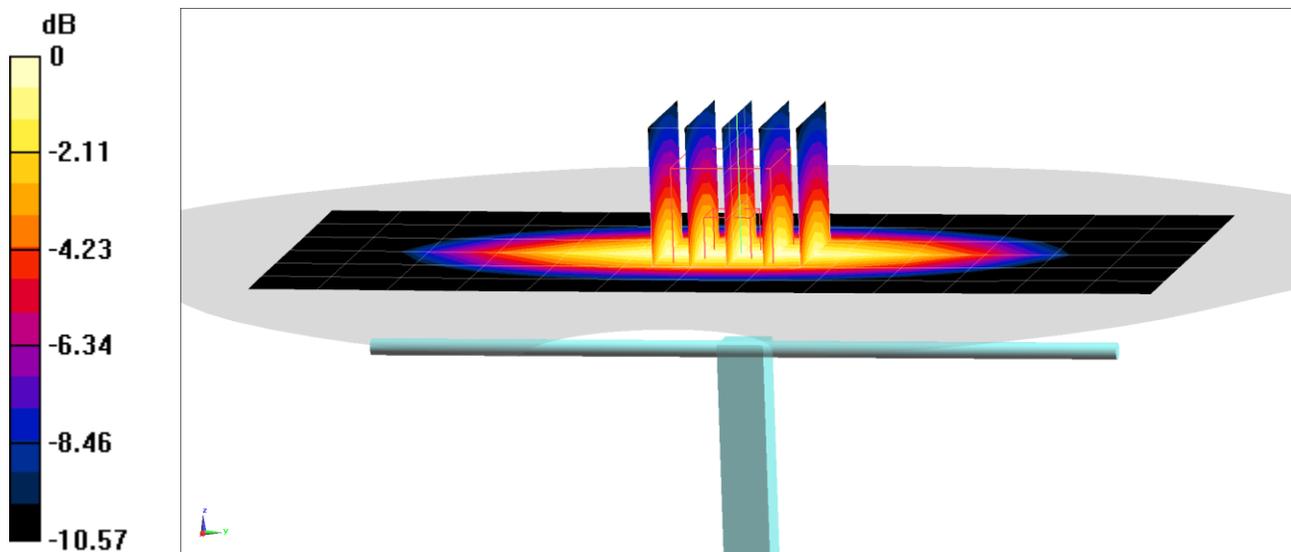
0 dB = 2.52 W/kg = 4.01 dBW/kg

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 MHz; σ = 0.961 S/m; ε_r = 53.41; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.5 cm

Test Date: 06/15/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7551; ConvF(9.92, 9.92, 9.92) @ 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=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 2.98 W/kg
SAR(1 g) = 1.94 W/kg
Deviation(1 g) = -2.61%

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 MHz; σ = 1.532 S/m; ε_r = 51.86; ρ = 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) @ 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=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.82 W/kg
SAR(1 g) = 3.82 W/kg
Deviation(1 g) = 4.37%
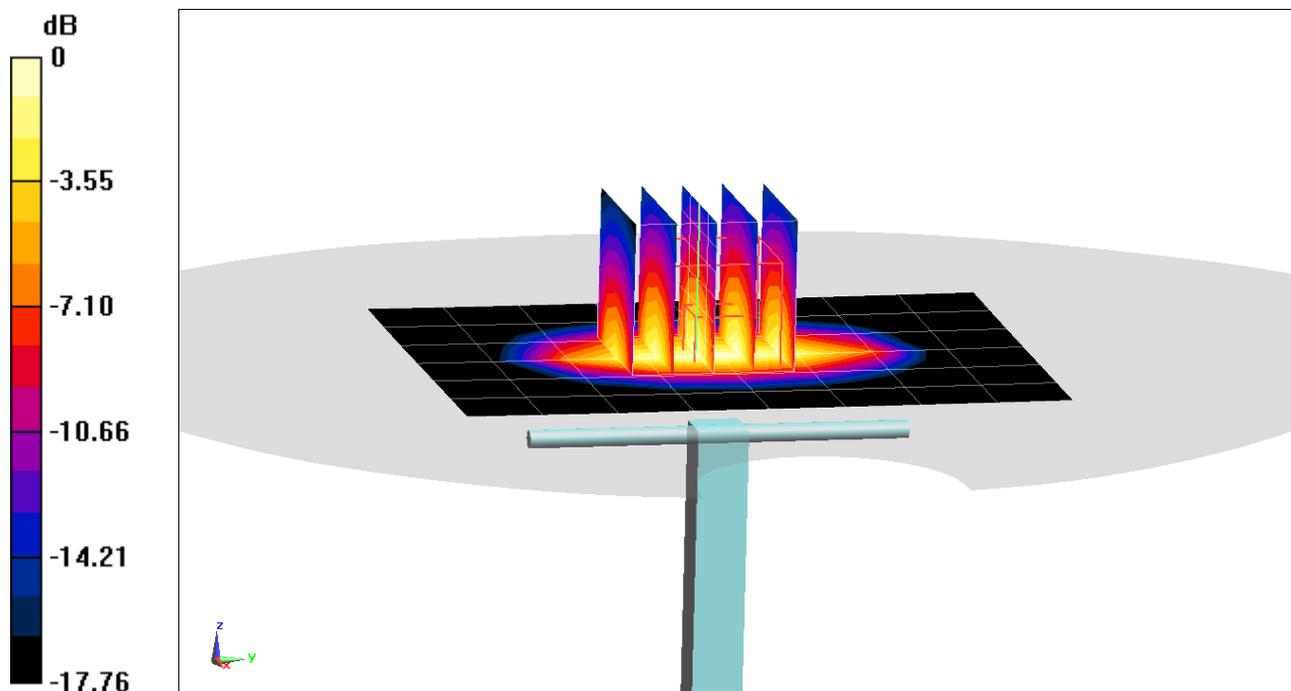
0 dB = 5.74 W/kg = 7.59 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.51 S/m; ε_r = 51.172; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/27/2020; Ambient Temp: 21.9°C; Tissue Temp: 21.6°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=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.01 W/kg
SAR(1 g) = 3.92 W/kg
Deviation(1 g) = 4.81%
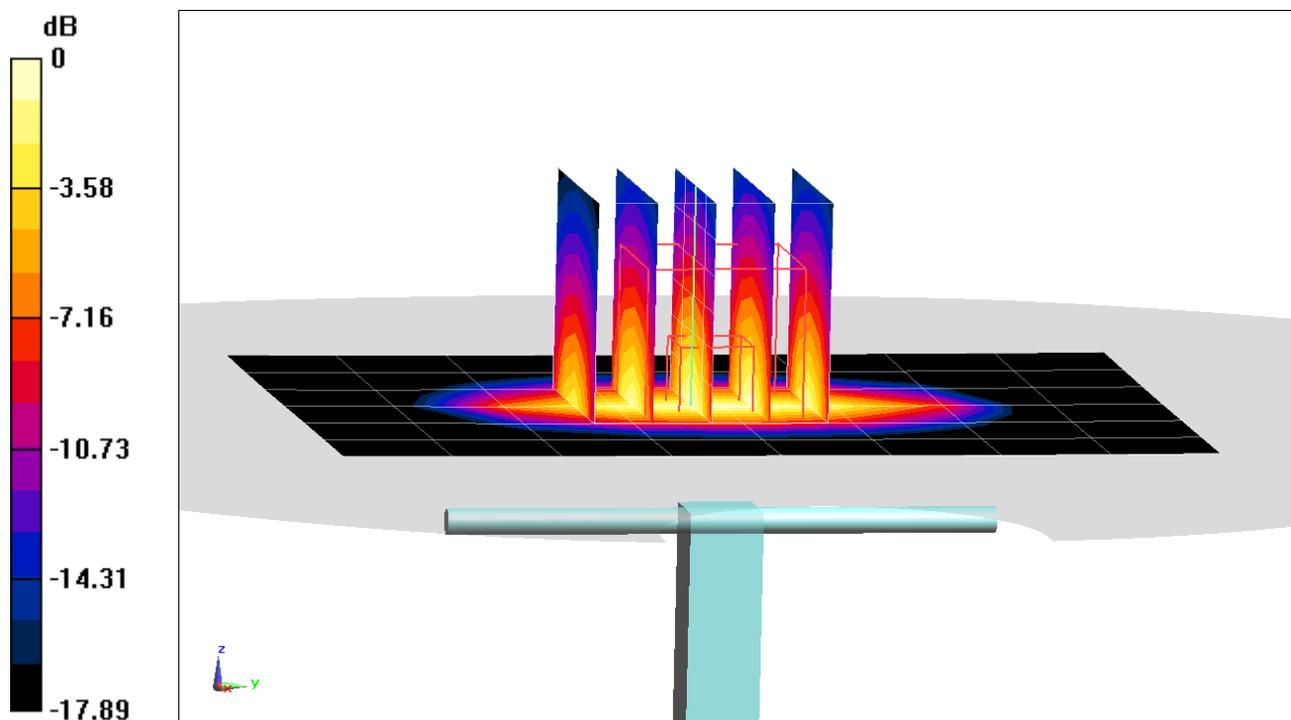
0 dB = 5.93 W/kg = 7.73 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.486 S/m; ε_r = 52.075; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 23.1°C; Tissue Temp: 21.2°C

Probe: EX3DV4 - SN7410; ConvF(8.08, 8.08, 8.08) @ 1750 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)

**1750 MHz System Verification at 20.0 dBm (100 mW)**

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.89 W/kg
SAR(1 g) = 3.8 W/kg; SAR(10 g) = 2.01 W/kg
Deviation(1 g) = 3.83%; Deviation(10 g) = 3.61%

0 dB = 5.76 W/kg = 7.60 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.518 S/m; ε_r = 52.031; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/17/2020; Ambient Temp: 20.5°C; Tissue Temp: 21.1°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

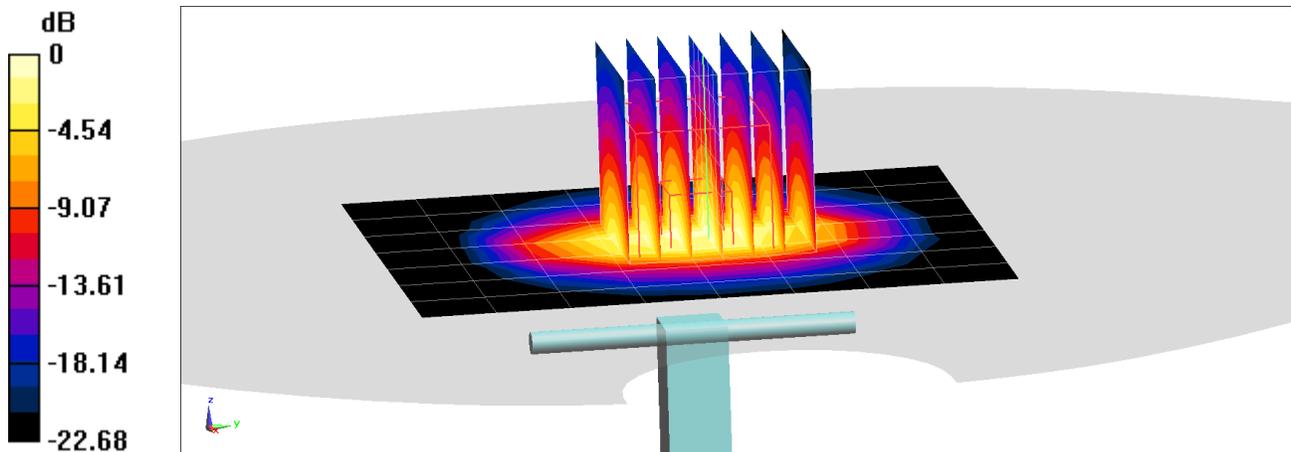**1750 MHz System Verification at 20.0 dBm (100 mW)**

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.87 W/kg
SAR(1 g) = 3.79 W/kg
Deviation(1 g) = 3.55%
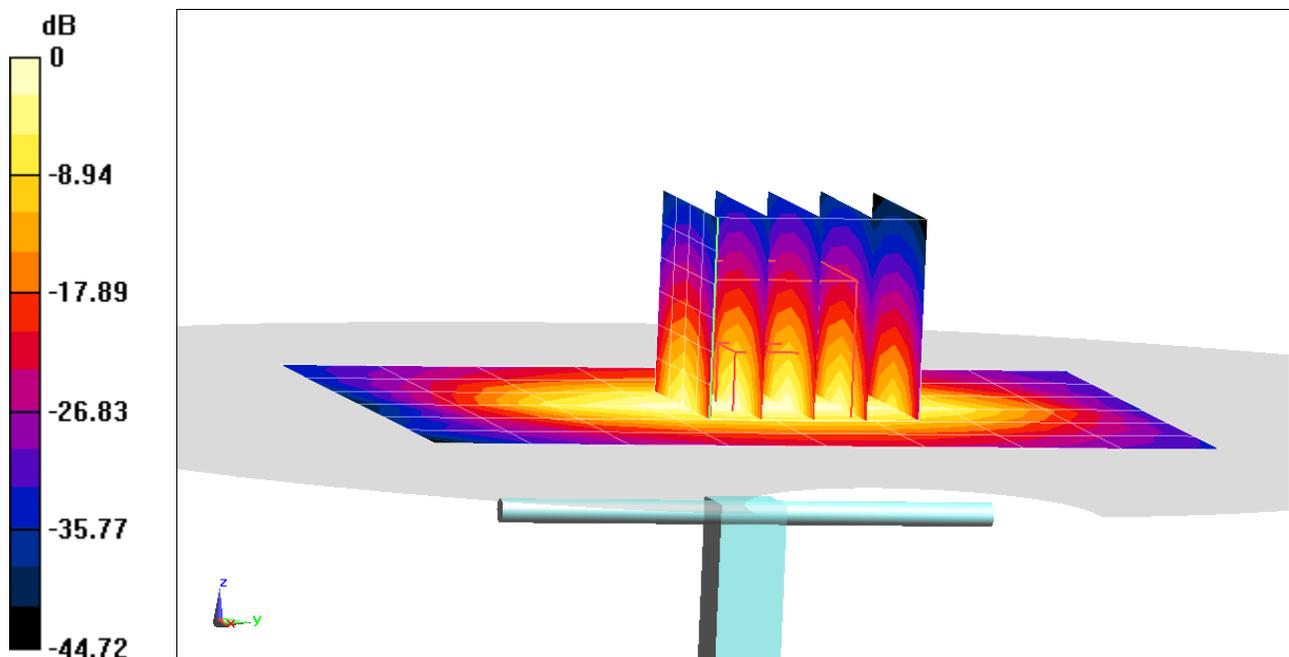
0 dB = 5.69 W/kg = 7.55 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: 1750 Body Medium parameters used:
f = 1750 MHz; σ = 1.512 S/m; ε_r = 52.086; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/21/2020; Ambient Temp: 21.8°C; Tissue Temp: 21.7°C

Probe: EX3DV4 - SN7570; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 12/11/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1368; Calibrated: 3/12/2020
Phantom: Right Back Twin-SAM V5.0 (30); Type: QD 000 P40 CD; Serial: 1692
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1750 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 6.90 W/kg
SAR(10 g) = 2 W/kg
Deviation(10 g) = 3.09%
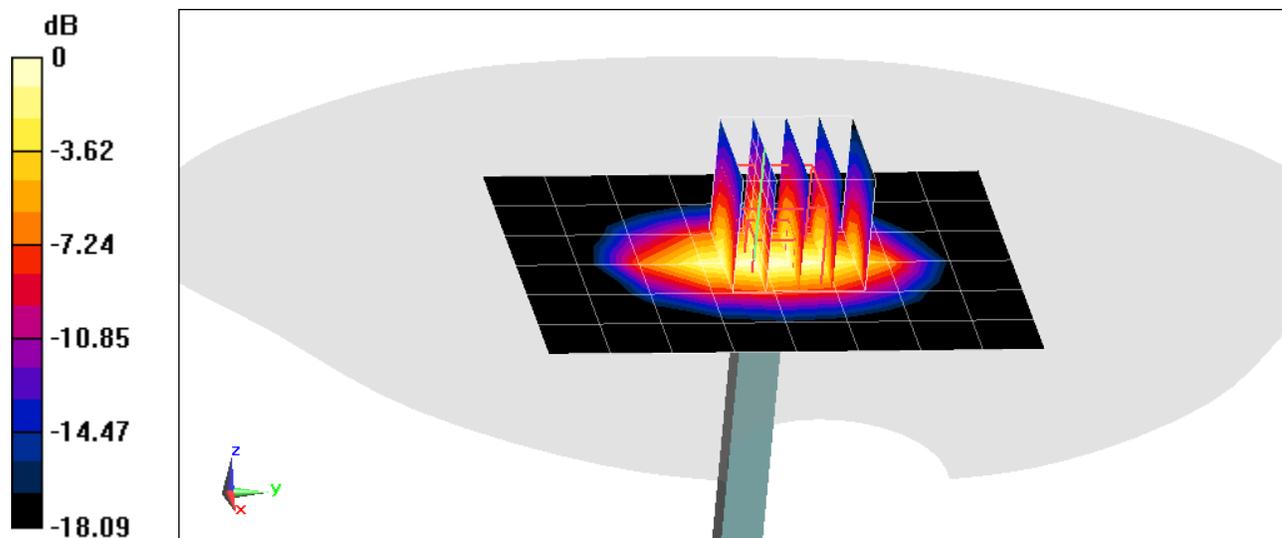
0 dB = 5.76 W/kg = 7.60 dBW/kg

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; σ = 1.582 S/m; ε_r = 52.251; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/10/2020; Ambient Temp: 22.4°C; Tissue Temp: 21.8°C

Probe: EX3DV4 - SN7357; ConvF(7.8, 7.8, 7.8) @ 1900 MHz; Calibrated: 4/21/2020
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1407; Calibrated: 4/15/2020
Phantom: Twin-SAM V5.0 Left 30; Type: QD 000 P40 CD; Serial: 1715
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

1900 MHz System Verification at 20.0 dBm (100 mW)

Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Peak SAR (extrapolated) = 7.55 W/kg
SAR(1 g) = 4.18 W/kg; SAR(10 g) = 2.17 W/kg
Deviation(1 g) = 6.63%; Deviation(10 g) = 5.34%
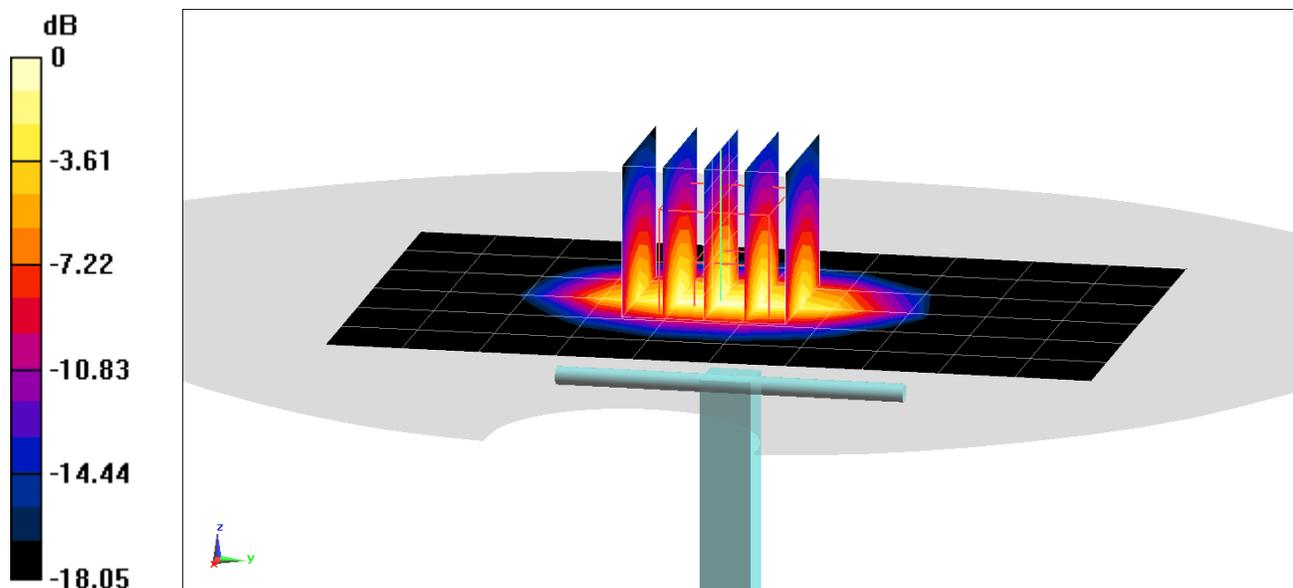
0 dB = 6.42 W/kg = 8.08 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.584 S/m; $ε_r$ = 51.694; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/15/2020; Ambient Temp: 22.1°C; Tissue Temp: 23.2°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) = 7.89 W/kg
SAR(1 g) = 4.26 W/kg; SAR(10 g) = 2.2 W/kg
Deviation(1 g) = 8.67%; Deviation(10 g) =6.80%
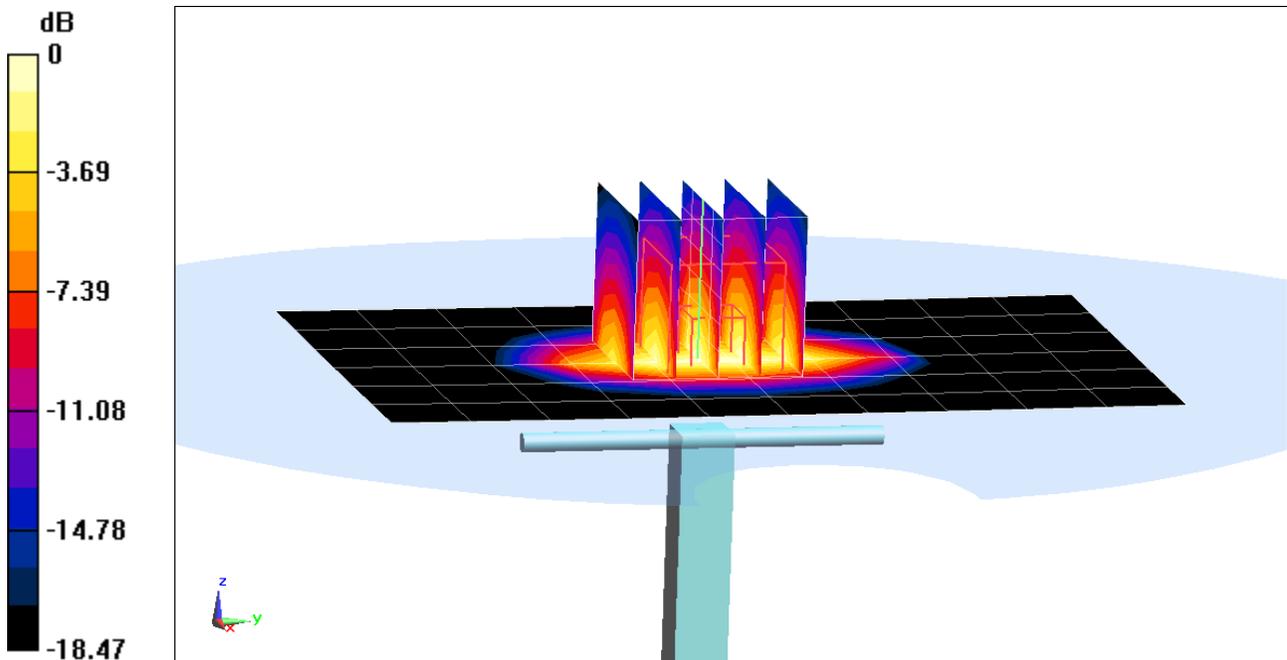
0 dB = 6.55 W/kg = 8.16 dBW/kg

PCTEST

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

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: 1900 Body Medium parameters used:
f = 1900 MHz; σ = 1.582 S/m; ε_r = 51.697; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/18/2020; Ambient Temp: 22.7°C; Tissue Temp: 23.0°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) = 8.01 W/kg
SAR(1 g) = 4.3 W/kg
Deviation(1 g) = 9.14%

0 dB = 6.65 W/kg = 8.23 dBW/kg

PCTEST

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: 1073

Communication System: UID 0, CW; Frequency: 2300 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2300 MHz; σ = 1.867 S/m; ε_r = 52.082; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/06/2020; Ambient Temp: 24.4°C; Tissue Temp: 21.9°C

Probe: EX3DV4 - SN7547; ConvF(7.47, 7.47, 7.47) @ 2300 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)

2300 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) = 9.98 W/kg
SAR(1 g) = 5.08 W/kg
Deviation(1 g) = 6.50%
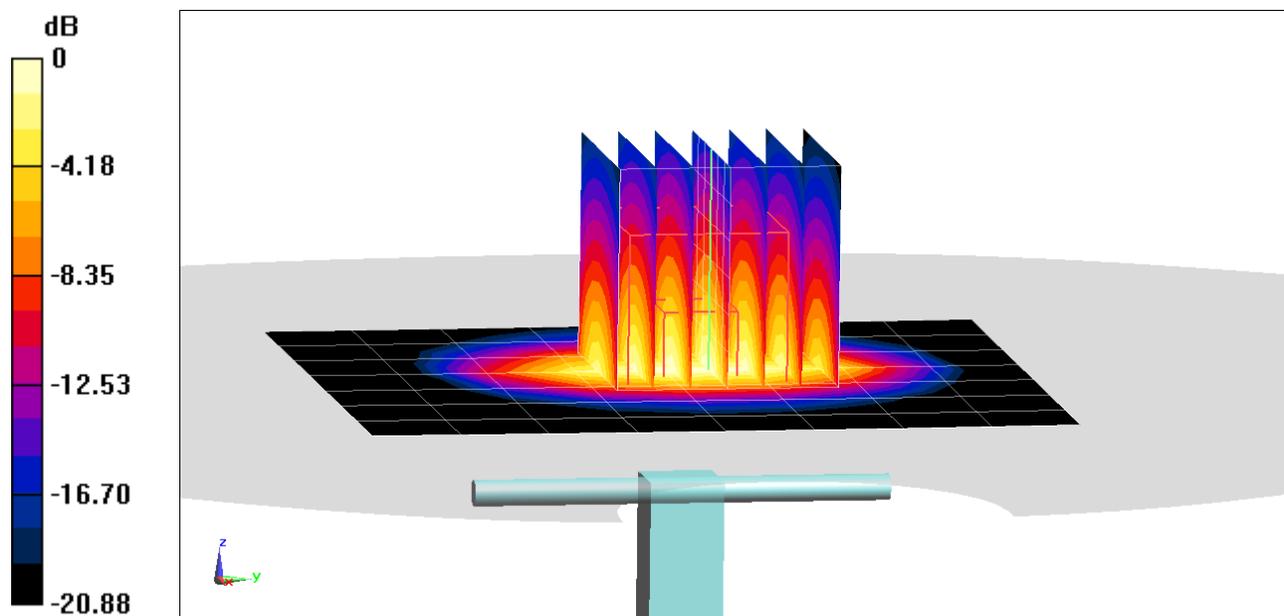
0 dB = 8.22 W/kg = 9.15 dBW/kg

PCTEST

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: 1073

Communication System: UID 0, CW; Frequency: 2300 MHz; Duty Cycle: 1:1
Medium: 2450 Body Medium parameters used:
f = 2300 MHz; σ = 1.853 S/m; ε_r = 51.414; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/14/2020; Ambient Temp: 21.1°C; Tissue Temp: 23.1°C

Probe: EX3DV4 - SN7547; ConvF(7.47, 7.47, 7.47) @ 2300 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)

**2300 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) = 10.1 W/kg
SAR(1 g) = 5.05 W/kg
Deviation(1 g) = 5.87%
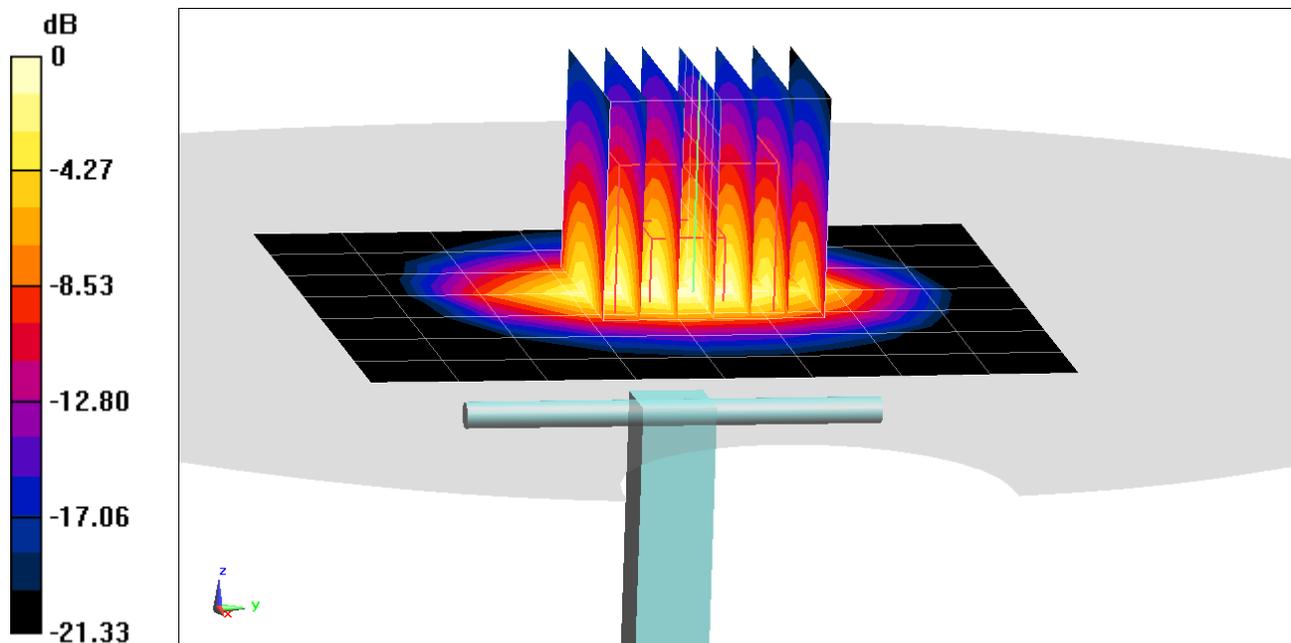
0 dB = 8.20 W/kg = 9.14 dBW/kg

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; σ = 2.012 S/m; ε_r = 52.315; ρ = 1000 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) @ 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) = 5.15 W/kg
Deviation(1 g) = 1.38%
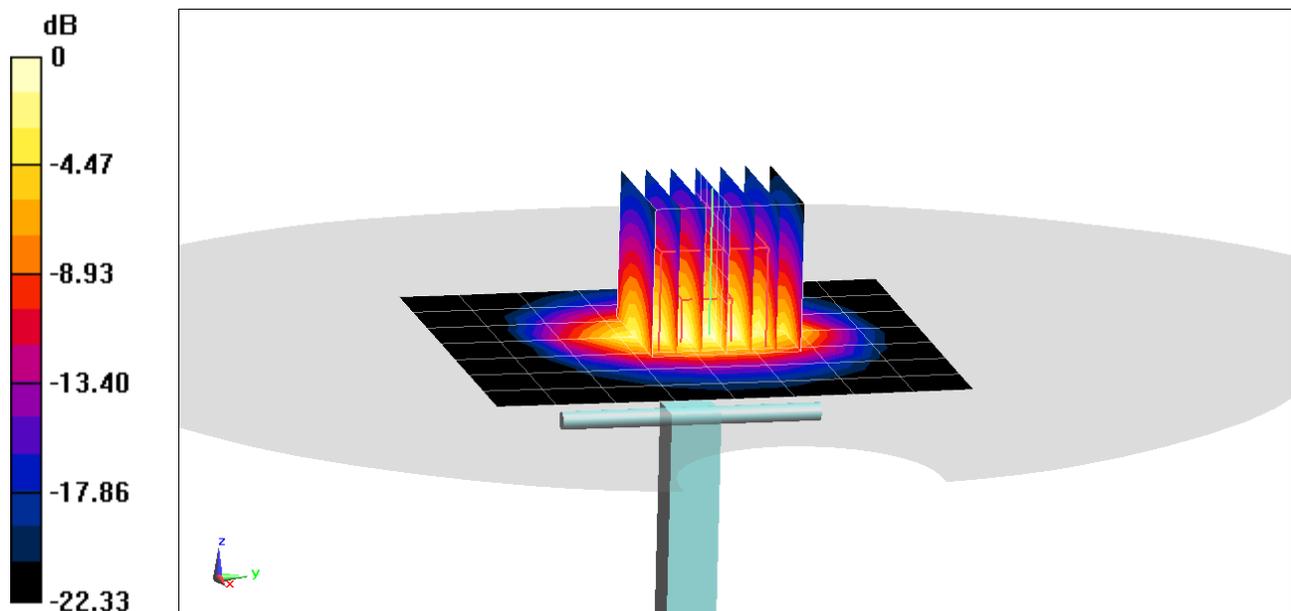
0 dB = 8.65 W/kg = 9.37 dBW/kg

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 MHz; σ = 2.047 S/m; ε_r = 51.61; ρ = 1000 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=12mm, dy=12mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Peak SAR (extrapolated) = 10.5 W/kg
SAR(1 g) = 5 W/kg
Deviation(1 g) = -2.15%
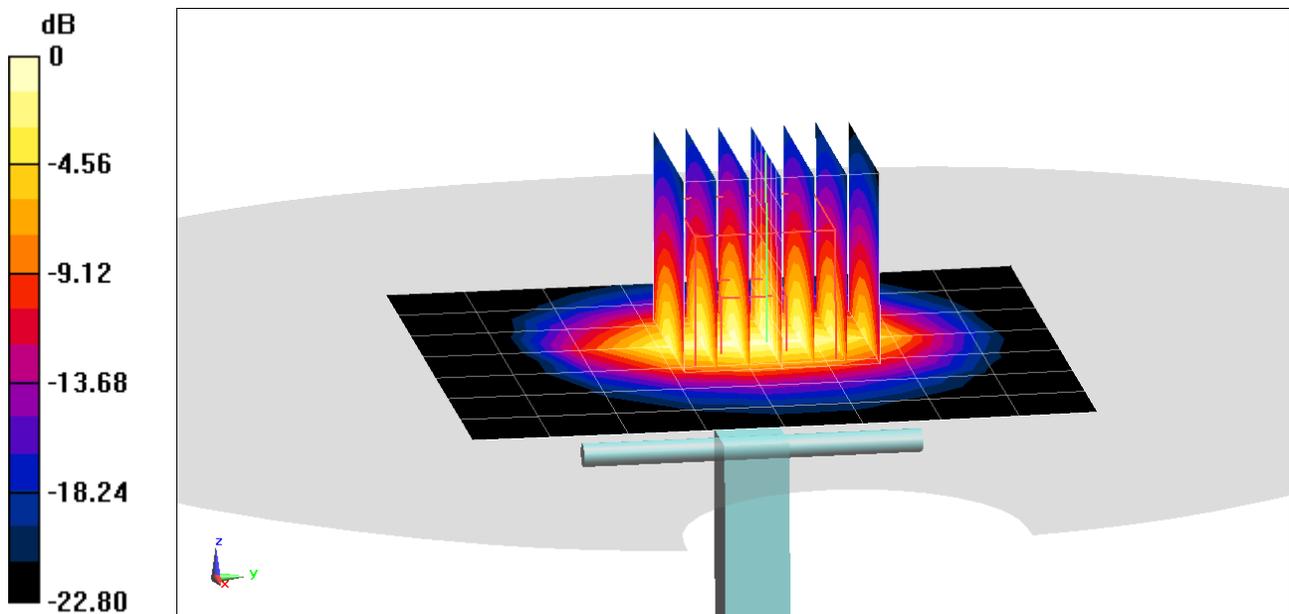
0 dB = 8.33 W/kg = 9.21 dBW/kg

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; σ = 2.011 S/m; $ε_r$ = 52.642; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/18/2020; Ambient Temp: 22.2°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) = 10.8 W/kg
SAR(1 g) = 5.25 W/kg
Deviation(1 g) = 3.35%
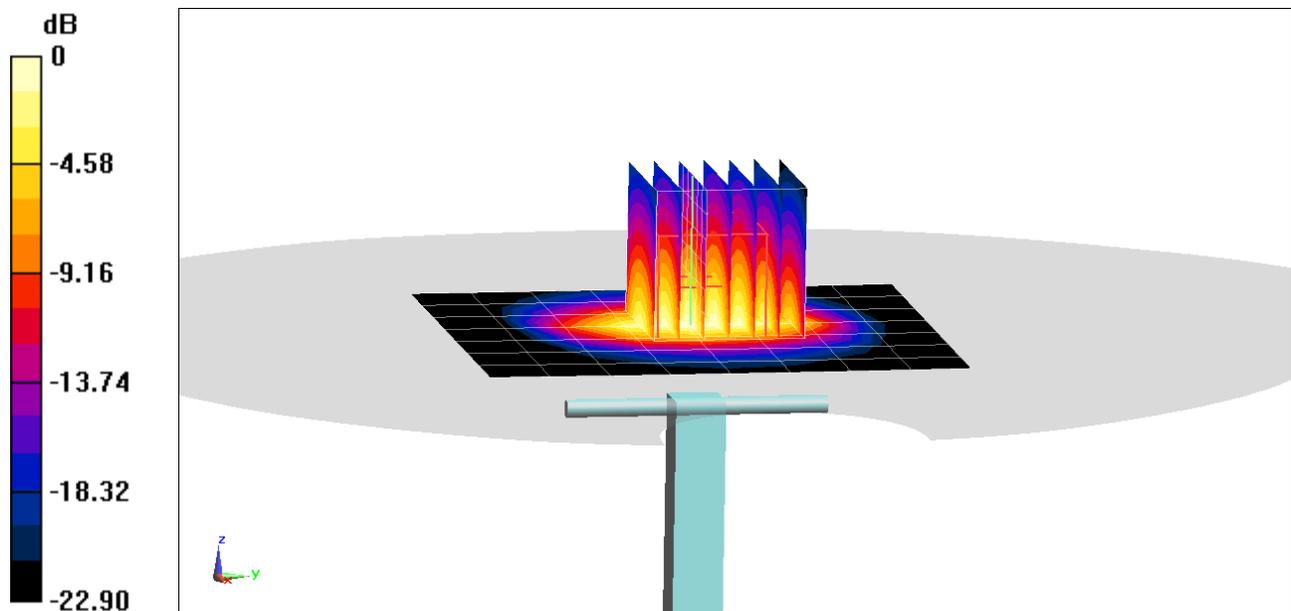
0 dB = 8.72 W/kg = 9.41 dBW/kg

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; σ = 2.045 S/m; ε_r = 50.783; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/27/2020; Ambient Temp: 22.9°C; Tissue Temp: 21.8°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) = 10.9 W/kg
SAR(10 g) = 2.41 W/kg
Deviation(10 g) = 0.42%
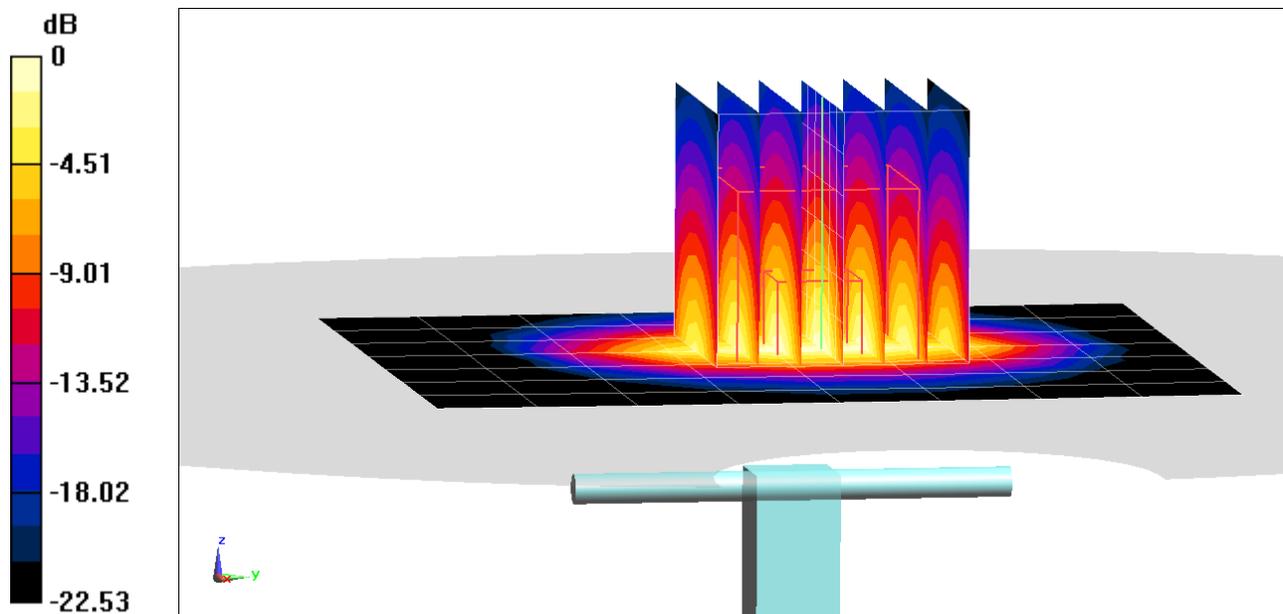
0 dB = 8.82 W/kg = 9.45 dBW/kg

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; σ = 2.025 S/m; ε_r = 51.009; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/14/2020; Ambient Temp: 21.1°C; Tissue Temp: 23.1°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) = 10.8 W/kg
SAR(1 g) = 5.13 W/kg
Deviation(1 g) = 0.98%
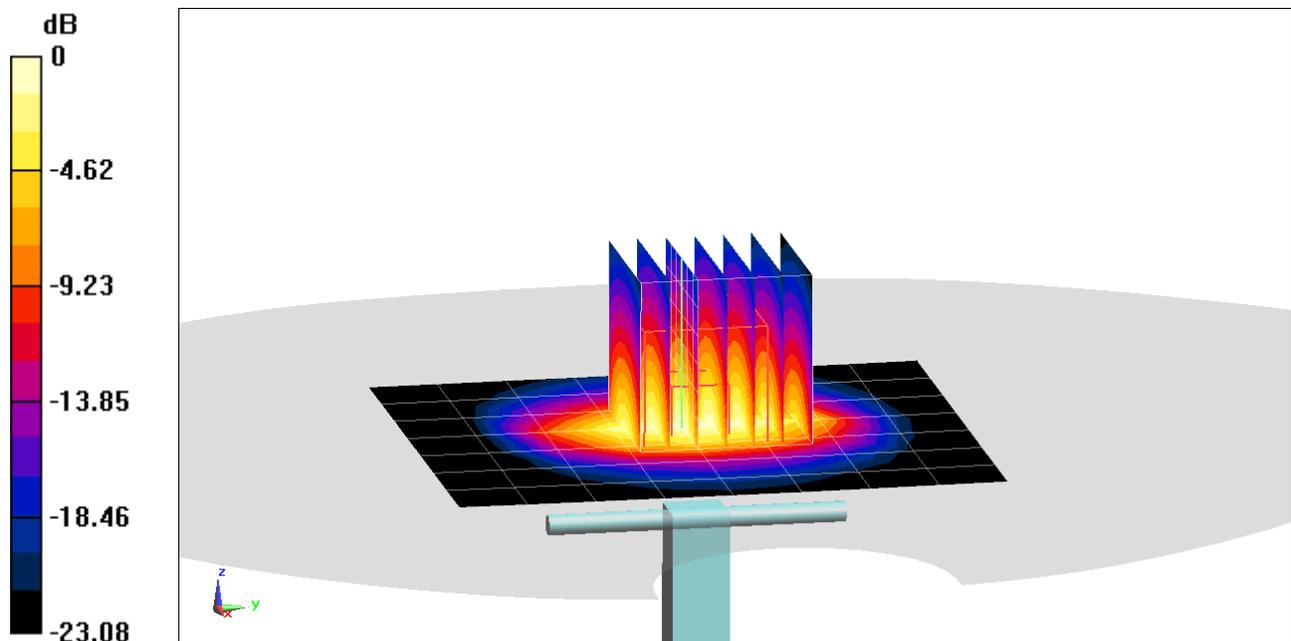
0 dB = 8.56 W/kg = 9.32 dBW/kg

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; σ = 2.187 S/m; ε_r = 51.879; ρ = 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(7.18, 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) = 12.0 W/kg
SAR(1 g) = 5.46 W/kg
Deviation(1 g) = -1.80%
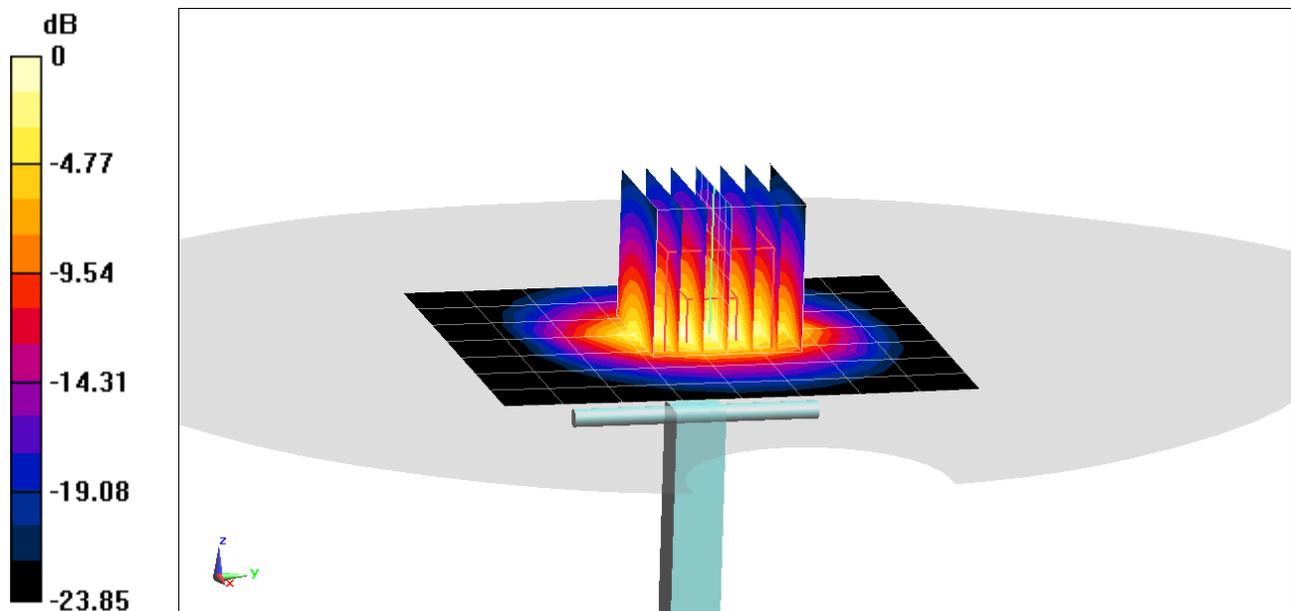
0 dB = 9.46 W/kg = 9.76 dBW/kg

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; σ = 2.189 S/m; ε_r = 52.221; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/18/2020; Ambient Temp: 22.2°C; Tissue Temp: 22.0°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)
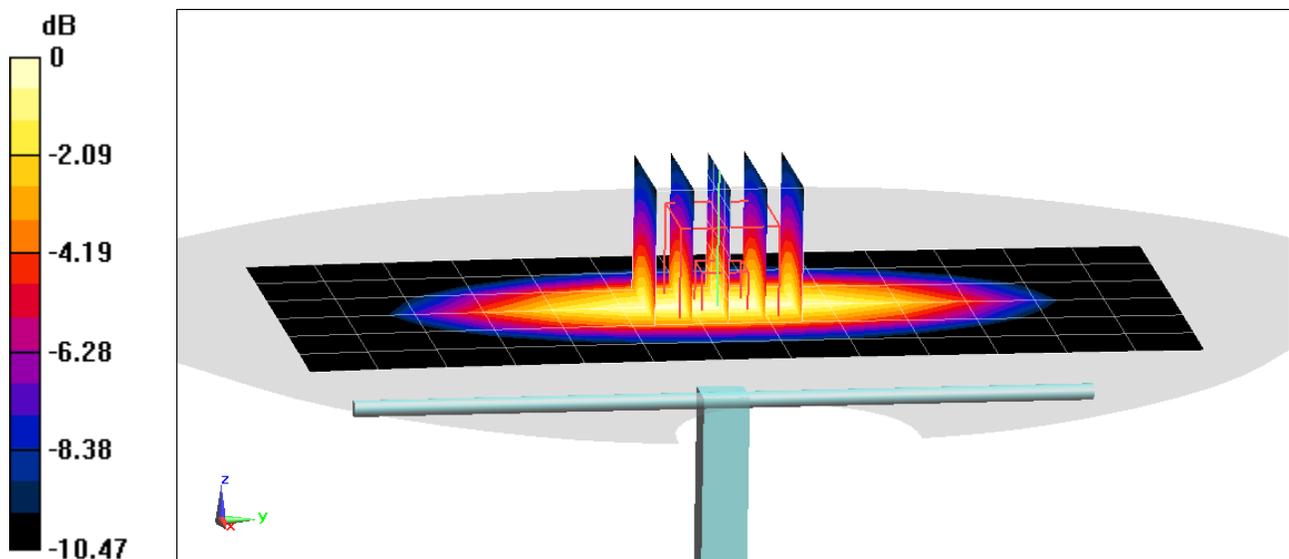
2600 MHz System Verification at 20.0 dBm (100 mW)

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) = 12.0 W/kg
SAR(1 g) = 5.5 W/kg
Deviation(1 g) = -1.08%
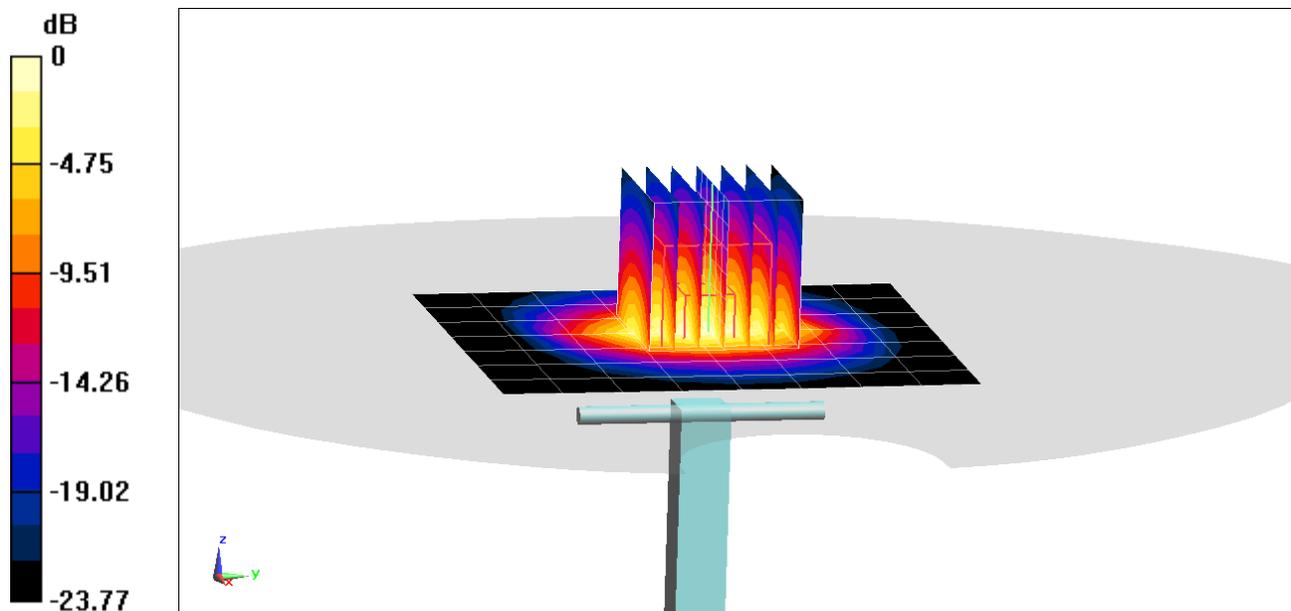
0 dB = 9.52 W/kg = 9.79 dBW/kg

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; σ = 2.22 S/m; $ε_r$ = 50.325; ρ = 1000 kg/m³
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/27/2020; Ambient Temp: 22.9°C; Tissue Temp: 21.8°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) = 12.2 W/kg
SAR(10 g) = 2.39 W/kg
Deviation(10 g) = -4.40%
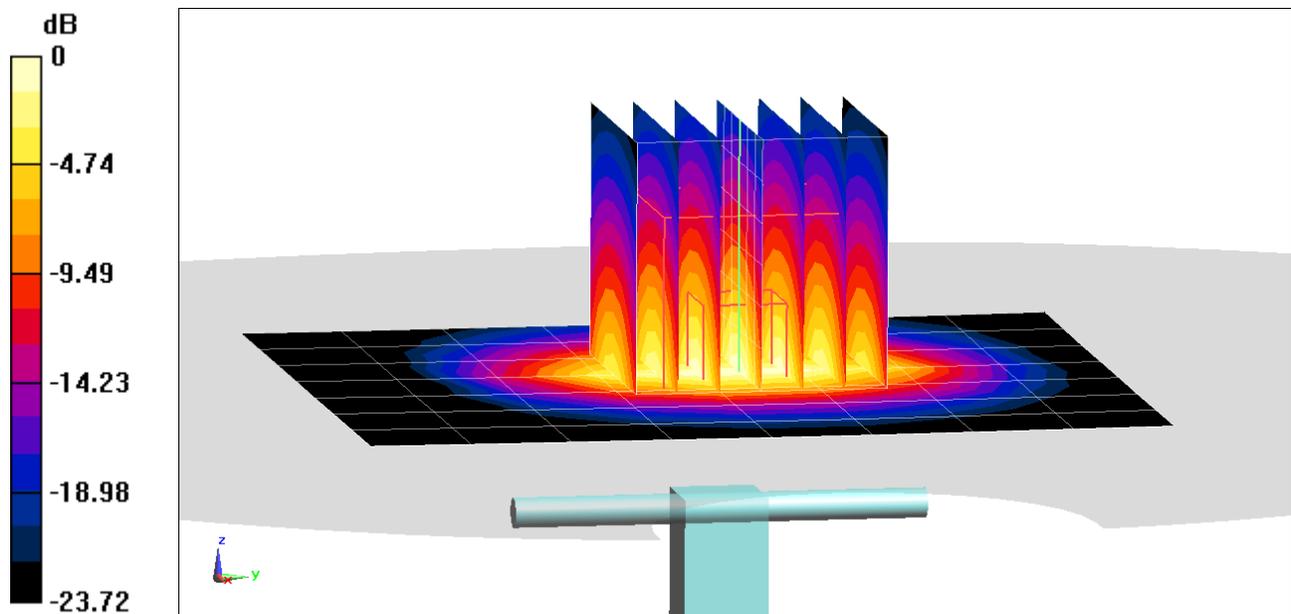
0 dB = 9.54 W/kg = 9.80 dBW/kg

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; σ = 2.212 S/m; ε_r = 50.91; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 06/25/2020; Ambient Temp: 22.0°C; Tissue Temp: 21.7°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)

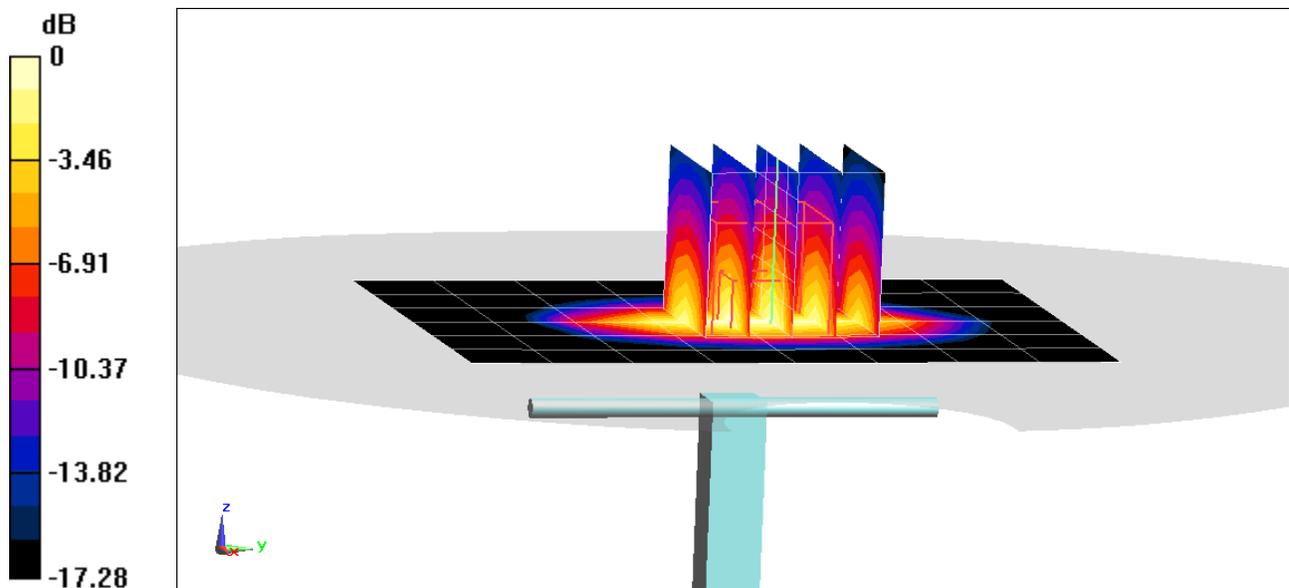**2600 MHz System Verification at 20.0 dBm (100 mW)**

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) = 12.0 W/kg
SAR(1 g) = 5.49 W/kg
Deviation(1 g) = -1.26%
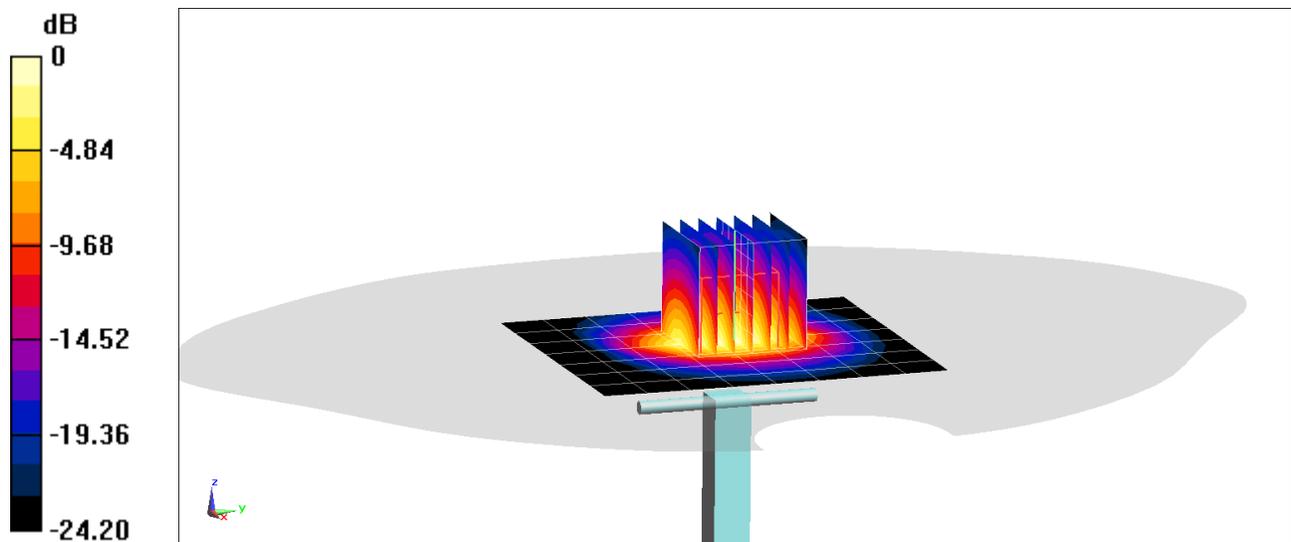
0 dB = 9.38 W/kg = 9.72 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used (interpolated):
f = 5250 MHz; σ = 5.498 S/m; ε_r = 47.444; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/27/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.7, 4.7, 4.7) @ 5250 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 15.8 W/kg
SAR(1 g) = 3.8 W/kg
Deviation(1 g) = 0.13%
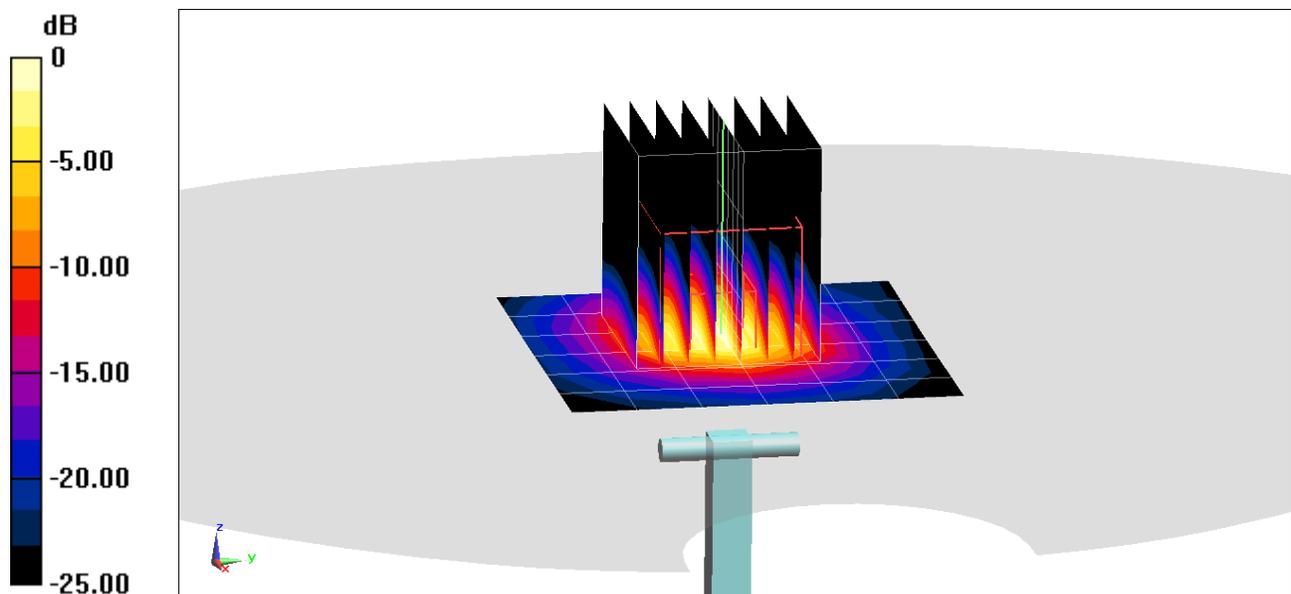
0 dB = 9.11 W/kg = 9.60 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5600 MHz; σ = 5.978 S/m; ε_r = 46.859; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/27/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.22, 4.22, 4.22) @ 5600 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.7 W/kg
SAR(1 g) = 4.09 W/kg
Deviation(1 g) = 2.38%
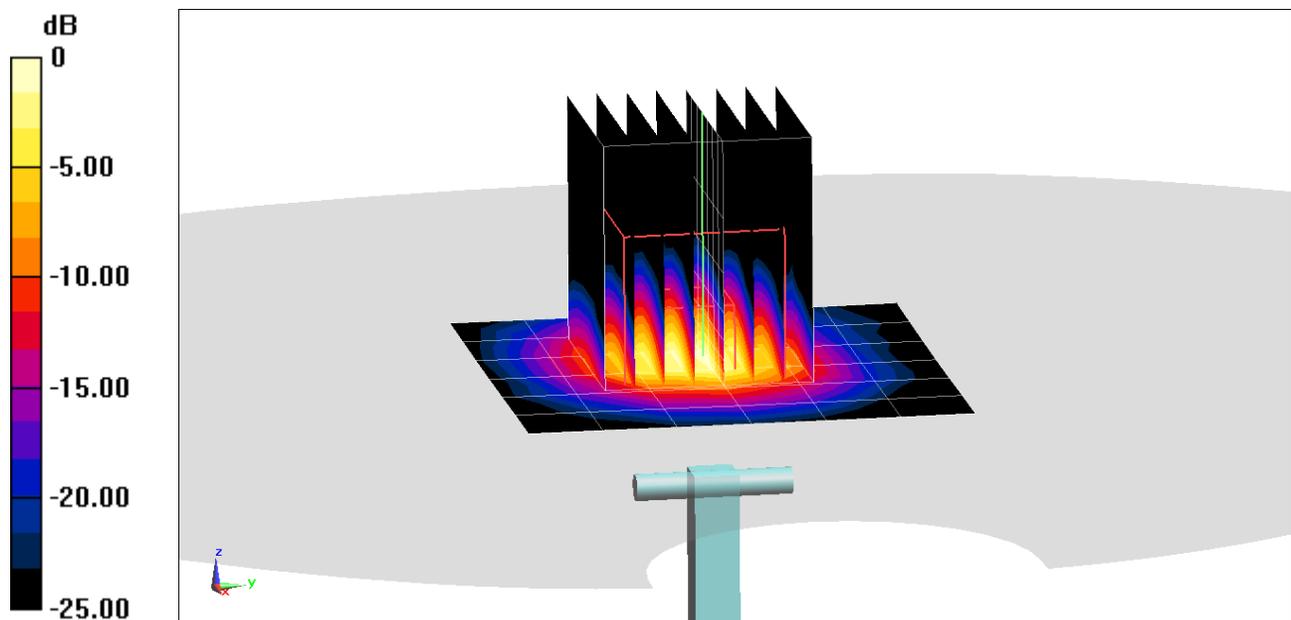
0 dB = 9.97 W/kg = 9.99 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used (interpolated):
f = 5750 MHz; σ = 6.186 S/m; ε_r = 46.626; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 04/27/2020; Ambient Temp: 23.0°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.23, 4.23, 4.23) @ 5750 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 3.82 W/kg
Deviation(1 g) = -0.39%
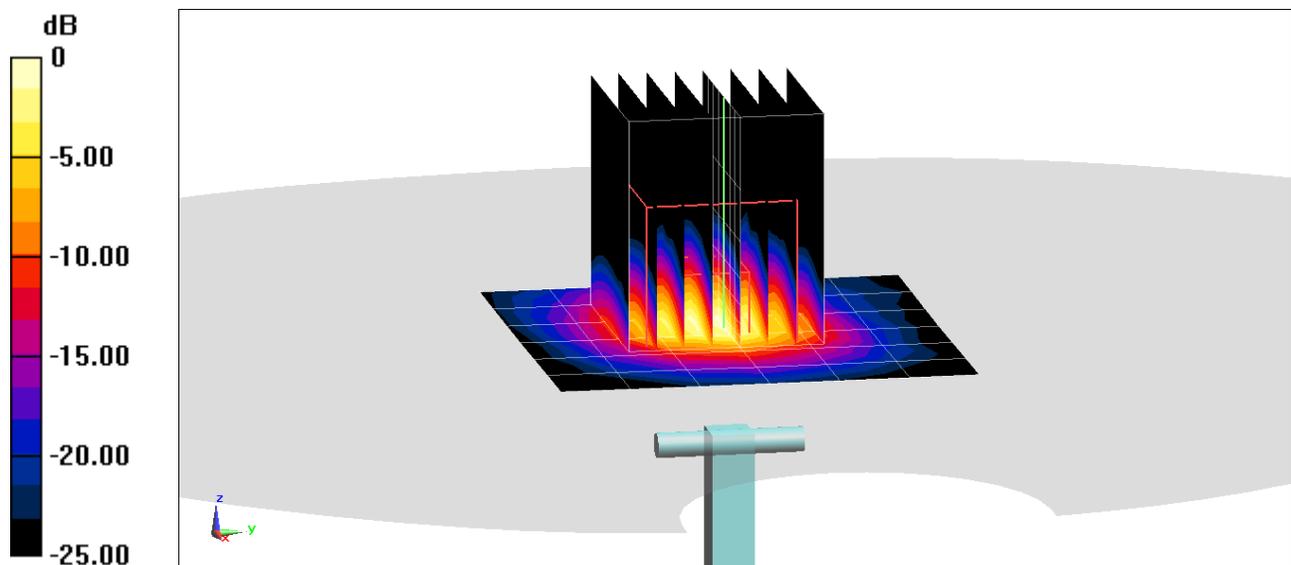
0 dB = 9.49 W/kg = 9.77 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5250 MHz; σ = 5.428 S/m; $ε_r$ = 46.735; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/04/2020; Ambient Temp: 21.3°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.7, 4.7, 4.7) @ 5250 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5250 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 16.7 W/kg
SAR(10 g) = 1.12 W/kg
Deviation(10 g) = 6.16%

0 dB = 9.68 W/kg = 9.86 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5600 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5600 MHz; σ = 5.89 S/m; ε_r = 46.147; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/04/2020; Ambient Temp: 21.3°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.22, 4.22, 4.22) @ 5600 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)

5600 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.6 W/kg
SAR(10 g) = 1.14 W/kg
Deviation(10 g) = 2.24%
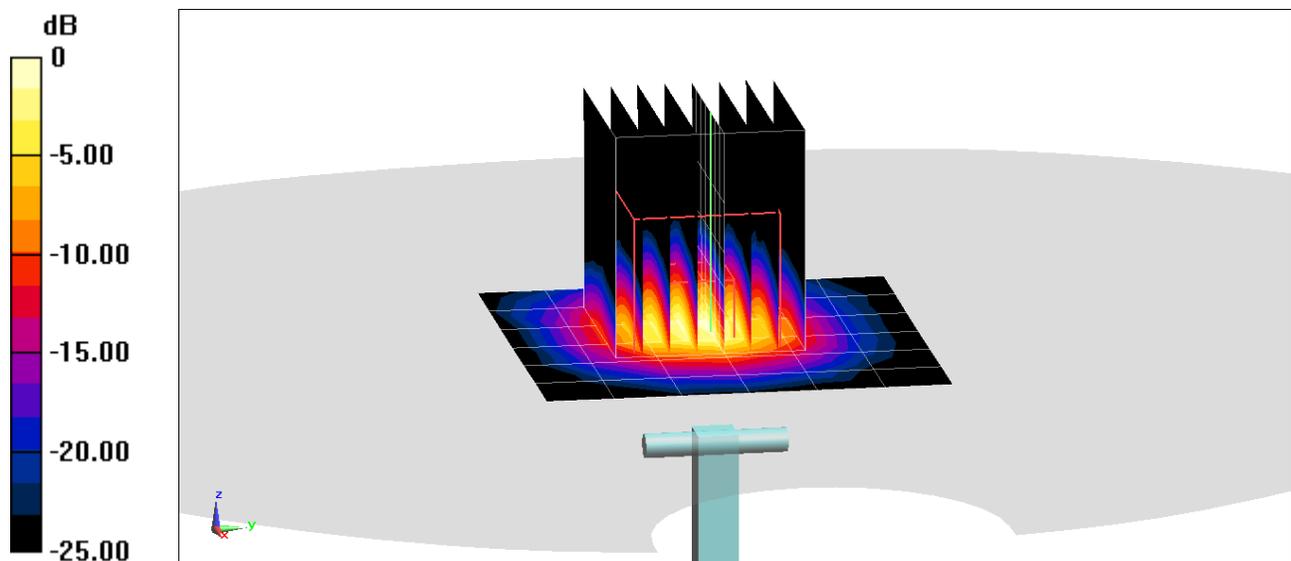
0 dB = 10.2 W/kg = 10.09 dBW/kg

PCTEST

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1057

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1
Medium: 5200-5800 Body Medium parameters used:
f = 5750 MHz; σ = 6.089 S/m; ε_r = 45.895; ρ = 1000 kg/m^3
Phantom section: Flat Section; Space: 1.0 cm

Test Date: 05/04/2020; Ambient Temp: 21.3°C; Tissue Temp: 22.9°C

Probe: EX3DV4 - SN7409; ConvF(4.23, 4.23, 4.23) @ 5750 MHz; Calibrated: 6/19/2019
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1334; Calibrated: 6/20/2019
Phantom: Front; Type: QD 000 P40 CD; Serial: 1686
Measurement SW: DASY52, Version 52.10 (4);SEMCAD X Version 14.6.14 (7483)
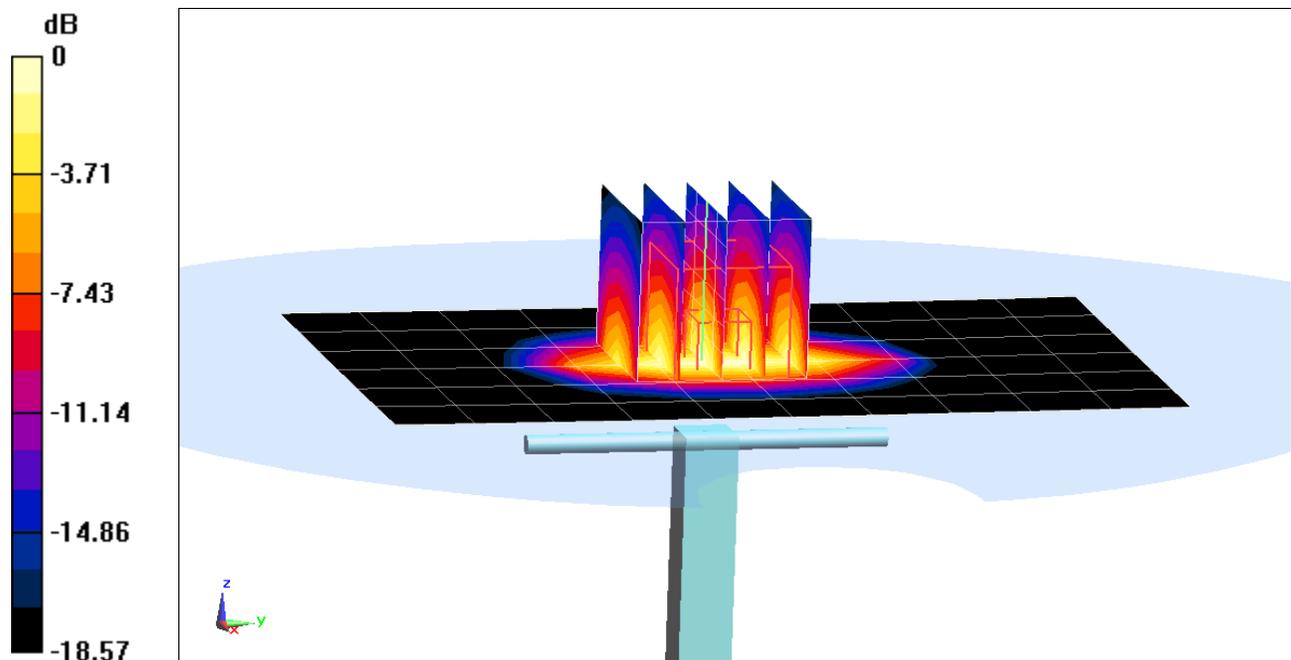
5750 MHz System Verification at 17.0 dBm (50 mW)

Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm; Graded Ratio: 1.4
Peak SAR (extrapolated) = 18.0 W/kg
SAR(10 g) = 1.02 W/kg
Deviation(10 g) = -3.77%
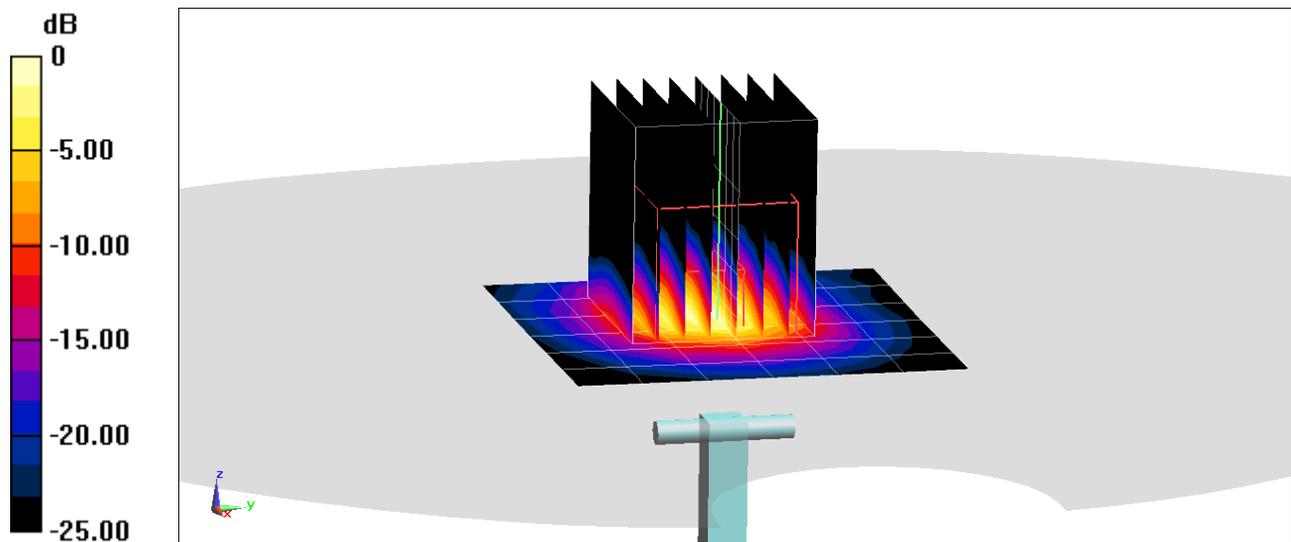
0 dB = 9.63 W/kg = 9.84 dBW/kg

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):

$$Y = \frac{j2\omega\varepsilon_r\varepsilon_0}{\left[\ln(b/a)\right]^2}\int_a^b\int_a^b\int_0^\pi\cos\phi'\frac{\exp\left[-j\omega r(\mu_0\varepsilon_r'\varepsilon_0)^{1/2}\right]}{r}d\phi'd\rho'd\rho$$

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, > C$_{16}$** 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: ZNFG900UM	**PCTEST** Proud to be part of element	SAR EVALUATION REPORT	LG	**Approved by:** Quality Manager
Test Dates: 04/27/20 - 06/25/20	**DUT Type:** Portable Handset			APPENDIX C: Page 1 of 3

Schmid & Partner Engineering AG

s p e a g

Zeughausstrasse 43, 8004 Zurich, Switzerland
Phone +41 44 245 9700, Fax +41 44 245 9779
info@speag.com, http://www.speag.com

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]	e'	e''	sigma	eps	sigma	Δ-eps	Δ-sigma
	Measured			Target		Diff.to Target [%]	
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
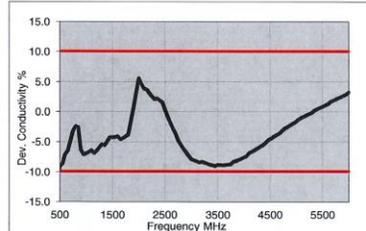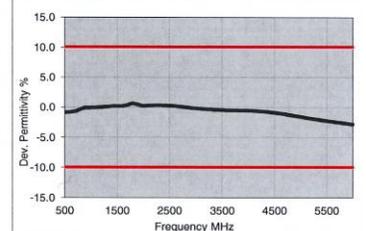
f [MHz]	e'	e''	sigma	eps	sigma	Δ-eps	Δ-sigma
3500	51.1	15.5	3.02	51.3	3.31	-0.4	-8.8
3700	50.8	15.7	3.24	51.1	3.55	-0.5	-8.8
5200	48.1	18.2	5.27	49.0	5.30	-1.8	-0.6
5250	48.0	18.3	5.34	49.0	5.36	-1.9	-0.4
5300	47.9	18.4	5.41	48.9	5.42	-2.0	-0.2
5500	47.5	18.6	5.70	48.6	5.65	-2.2	0.8
5600	47.3	18.8	5.84	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: ZNFG900UM	**PCTEST** Proud to be part of element	SAR EVALUATION REPORT	LG	Approved by: Quality Manager
Test Dates: 04/27/20 - 06/25/20	**DUT Type:** Portable Handset			APPENDIX C: Page 2 of 3

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REV 21.4 M
09/11/2019

s p e a g

Measurement Certificate / Material Test

Item Name	**Head Tissue Simulating Liquid (HBBL600-10000V6)**
Product No.	SL AAH U16 BC (Batch: 181031-2)
Manufacturer	SPEAG

Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

Target Parameters

Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

Test Condition

Ambient Condition	22°C ; 30% humidity
TSL Temperature	22°C
Test Date	31-Oct-18
Operator	CL

Additional Information

TSL Density	
TSL Heat-capacity	

Results

	Measured			Target		Diff.to Target [%]	
f [MHz]	e'	e''	sigma	eps	sigma	Δ-eps	Δ-sigma
800	43.8	20.5	0.91	41.7	0.90	5.1	1.4
825	43.8	20.1	0.92	41.6	0.91	5.3	1.5
835	43.8	19.9	0.93	41.5	0.91	5.4	2.0
850	43.7	19.7	0.93	41.5	0.92	5.3	1.5
900	43.5	18.9	0.95	41.5	0.97	4.8	-2.1
1400	42.5	15.0	1.17	40.6	1.18	4.7	-0.8
1450	42.5	14.8	1.19	40.5	1.20	4.9	-0.8
1600	42.2	14.3	1.27	40.3	1.28	4.7	-1.1
1625	42.2	14.2	1.29	40.3	1.30	4.8	-0.7
1640	42.2	14.2	1.30	40.3	1.31	4.8	-0.5
1650	42.1	14.2	1.30	40.2	1.31	4.6	-1.0
1700	42.1	14.0	1.33	40.2	1.34	4.8	-0.9
1750	42.0	13.9	1.36	40.1	1.37	4.8	-0.8
1800	41.9	13.9	1.39	40.0	1.40	4.7	-0.7
1810	41.9	13.8	1.40	40.0	1.40	4.7	0.0
1825	41.9	13.8	1.41	40.0	1.40	4.7	0.7
1850	41.8	13.8	1.42	40.0	1.40	4.5	1.4
1900	41.8	13.7	1.45	40.0	1.40	4.5	3.6
1950	41.7	13.7	1.48	40.0	1.40	4.3	5.7
2000	41.6	13.6	1.51	40.0	1.40	4.0	7.9
2050	41.6	13.6	1.55	39.9	1.44	4.2	7.3
2100	41.5	13.5	1.58	39.8	1.49	4.2	6.1
2150	41.4	13.5	1.62	39.7	1.53	4.2	5.7
2200	41.4	13.5	1.65	39.6	1.58	4.4	4.6
2250	41.3	13.5	1.69	39.6	1.62	4.4	4.2
2300	41.2	13.5	1.72	39.5	1.67	4.4	3.2
2350	41.1	13.5	1.76	39.4	1.71	4.4	2.9
2400	41.1	13.5	1.80	39.3	1.76	4.6	2.5
2450	41.0	13.5	1.84	39.2	1.80	4.6	2.2
2500	40.9	13.5	1.88	39.1	1.85	4.5	1.4
2550	40.8	13.5	1.92	39.1	1.91	4.4	0.6
2600	40.8	13.6	1.96	39.0	1.96	4.6	-0.2
3500	39.2	14.1	2.74	37.9	2.91	3.3	-5.8
3700	38.9	14.2	2.93	37.7	3.12	3.1	-6.1
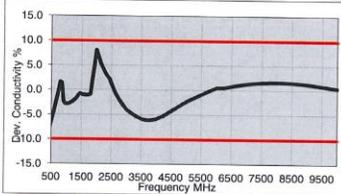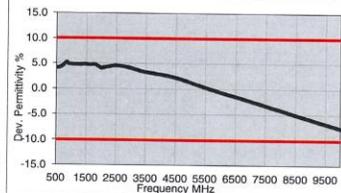
	Measured			Target		Diff.to Target [%]	
5200	36.3	15.8	4.57	36.0	4.66	0.9	-1.7
5250	36.2	15.9	4.63	35.9	4.71	0.8	-1.6
5300	36.1	15.9	4.69	35.9	4.76	0.7	-1.4
5500	35.8	16.1	4.92	35.6	4.96	0.3	-0.9
5600	35.6	16.2	5.04	35.5	5.07	0.1	-0.6
5700	35.4	16.2	5.15	35.4	5.17	0.0	-0.3
5800	35.2	16.3	5.27	35.3	5.27	-0.2	0.0
6000	34.9	16.5	5.50	35.1	5.48	-0.6	0.5
6500	34.0	16.9	6.12	34.5	6.07	-1.4	0.9
7000	33.1	17.3	6.74	33.9	6.65	-2.3	1.3
7500	32.2	17.6	7.36	33.3	7.24	-3.2	1.6
8000	31.4	17.9	7.97	32.7	7.84	-4.1	1.7
8500	30.5	18.2	8.59	32.1	8.45	-5.0	1.6
9000	29.7	18.4	9.20	31.5	9.08	-5.9	1.3
9500	28.9	18.5	9.80	31.0	9.71	-6.8	0.9
10000	28.1	18.7	10.40	30.4	10.36	-7.6	0.4

TSL Dielectric Parameters

Figure C-3
600 – 5800 MHz Head Tissue Equivalent Matter

FCC ID: ZNFG900UM	**PCTEST** Proud to be part of element	SAR EVALUATION REPORT	LG	**Approved by:** Quality Manager
Test Dates: 04/27/20 - 06/25/20	**DUT Type:** Portable Handset			APPENDIX C: Page 3 of 3

APPENDIX D: SAR SYSTEM VALIDATION

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. (εr)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
E	750	2/20/2020	3589	750	Head	0.889	43.647	PASS	PASS	PASS	N/A	N/A	N/A
P	835	10/1/2019	7551	835	Head	0.918	41.180	PASS	PASS	PASS	GMSK	PASS	N/A
L	1750	9/24/2019	7410	1750	Head	1.351	40.190	PASS	PASS	PASS	N/A	N/A	N/A
P	1750	10/2/2019	7551	1750	Head	1.346	39.450	PASS	PASS	PASS	N/A	N/A	N/A
L	1900	9/24/2019	7410	1900	Head	1.442	39.947	PASS	PASS	PASS	GMSK	PASS	N/A
P	1900	10/2/2019	7551	1900	Head	1.444	39.260	PASS	PASS	PASS	GMSK	PASS	N/A
E	2300	2/5/2020	3589	2300	Head	1.717	39.033	PASS	PASS	PASS	N/A	N/A	N/A
E	2450	2/5/2020	3589	2450	Head	1.823	38.835	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
L	2450	9/5/2019	7410	2450	Head	1.850	39.320	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
E	2600	2/5/2020	3589	2600	Head	1.933	38.635	PASS	PASS	PASS	TDD	PASS	N/A
H	5250	5/7/2020	7357	5250	Head	4.644	35.120	PASS	PASS	PASS	OFDM	N/A	PASS
H	5600	5/7/2020	7357	5600	Head	5.030	34.510	PASS	PASS	PASS	OFDM	N/A	PASS
H	5750	5/7/2020	7357	5750	Head	5.207	34.260	PASS	PASS	PASS	OFDM	N/A	PASS
L	750	8/20/2019	7410	750	Body	0.941	54.921	PASS	PASS	PASS	N/A	N/A	N/A
E	750	2/21/2020	3589	750	Body	0.965	53.650	PASS	PASS	PASS	N/A	N/A	N/A
D	835	2/20/2020	7488	835	Body	1.001	53.450	PASS	PASS	PASS	GMSK	PASS	N/A
P	835	9/26/2019	7551	835	Body	0.991	54.104	PASS	PASS	PASS	GMSK	PASS	N/A
I	1750	4/7/2020	7527	1750	Body	1.506	54.990	PASS	PASS	PASS	N/A	N/A	N/A
L	1750	8/16/2019	7410	1750	Body	1.467	53.429	PASS	PASS	PASS	N/A	N/A	N/A
I	1750	6/17/2020	7570	1750	Body	1.518	52.030	PASS	PASS	PASS	N/A	N/A	N/A
H	1900	6/1/2020	7357	1900	Body	1.555	51.210	PASS	PASS	PASS	GMSK	PASS	N/A
J	1900	1/1/2020	7571	1900	Body	1.579	51.919	PASS	PASS	PASS	GMSK	PASS	N/A
K	2300	9/5/2019	7547	2300	Body	1.893	52.450	PASS	PASS	PASS	N/A	N/A	N/A
K	2450	9/6/2019	7547	2450	Body	1.996	51.898	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2600	9/5/2019	7547	2600	Body	2.176	52.040	PASS	PASS	PASS	TDD	PASS	N/A
G	5250	10/4/2019	7409	5250	Body	5.223	47.070	PASS	PASS	PASS	OFDM	N/A	PASS
G	5600	10/7/2019	7409	5600	Body	5.884	47.080	PASS	PASS	PASS	OFDM	N/A	PASS
G	5750	10/7/2019	7409	5750	Body	6.111	46.780	PASS	PASS	PASS	OFDM	N/A	PASS

FCC ID: ZNFG900UM	PCTEST Proud to be part of element	SAR EVALUATION REPORT	LG	**Approved by:** Quality Manager
Test Dates: 04/27/20 - 06/25/20	**DUT Type:** Portable Handset			**APPENDIX D:** Page 1 of 2

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Table D-2
SAR System Validation Summary – 10g

SAR System	Freq. (MHz)	Date	Probe SN	Probe Cal Point		Cond. (σ)	Perm. (εr)	CW VALIDATION			MOD. VALIDATION		
								SENSITIVITY	PROBE LINEARITY	PROBE ISOTROPY	MOD. TYPE	DUTY FACTOR	PAR
L	1750	8/16/2019	7410	1750	Body	1.467	53.429	PASS	PASS	PASS	N/A	N/A	N/A
I	1750	6/17/2020	7570	1750	Body	1.518	52.030	PASS	PASS	PASS	N/A	N/A	N/A
H	1900	6/1/2020	7357	1900	Body	1.555	51.210	PASS	PASS	PASS	GMSK	PASS	N/A
J	1900	1/1/2020	7571	1900	Body	1.579	51.919	PASS	PASS	PASS	GMSK	PASS	N/A
K	2450	9/6/2019	7547	2450	Body	1.996	51.898	PASS	PASS	PASS	OFDM/TDD	PASS	PASS
K	2600	9/5/2019	7547	2600	Body	2.176	52.040	PASS	PASS	PASS	TDD	PASS	N/A
G	5250	10/4/2019	7409	5250	Body	5.223	47.070	PASS	PASS	PASS	OFDM	N/A	PASS
G	5600	10/7/2019	7409	5600	Body	5.884	47.080	PASS	PASS	PASS	OFDM	N/A	PASS
G	5750	10/7/2019	7409	5750	Body	6.111	46.780	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.

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Test Dates: 04/27/20 - 06/25/20	**DUT Type:** Portable Handset			APPENDIX D: Page 2 of 2

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REV 21.4 M
09/11/2019

Per the May 2017 TCBC Workshop Notes, demonstration of proper functioning of the power reduction mechanisms is required to support the corresponding SAR configurations. The verification process was divided into two parts: (1) evaluation of output power levels for individual or multiple triggering mechanisms and (2) evaluation of the triggering distances for proximity-based sensors.

F.1   Power Verification Procedure

The power verification was performed according to the following procedure:

1. A base station simulator was used to establish a conducted RF connection and the output power was monitored. The power measurements were confirmed to be within expected tolerances for all states before and after a power reduction mechanism was triggered. For licensed modes, the device state index as displayed on the device UI was recorded before and after the mechanism was triggered.

2. Step 1 was repeated for all relevant modes and frequency bands for the mechanism being investigated.

3. Steps 1 and 2 were repeated for all individual power reduction mechanisms and combinations thereof. For the licensed modes combination cases, one mechanism was switched to a 'triggered' state at a time; the device state index was confirmed to be corresponding to the 'triggered' state after each additional mechanism was activated.

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Test Dates: 04/27/20 - 06/25/20	**DUT Type:** Portable Handset			APPENDIX F: Page 1 of 4

Table F-1
Power Measurement Verification for Main Antenna

1st	2nd	3rd	Mode/Band	Un-triggered (Max)	Mechanism #1 (Reduced)	Mechanism #2 (Reduced)	Mechanism #3 (Reduced)
Hotspot On			UMTS 1750	1	5		
Hotspot On	Grip		UMTS 1750	1	5	5	
Hotspot On	Grip	DD Cover 180°	UMTS 1750	1	5	5	7
Hotspot On	Grip	DD Cover 360°	UMTS 1750	1	5	5	6
Hotspot On	Grip	DD Cover 0°	UMTS 1750	1	5	5	6
Hotspot On	DD Cover 180°		UMTS 1750	1	5	7	
Hotspot On	DD Cover 180°	Grip	UMTS 1750	1	5	7	7
Hotspot On	DD Cover 360°		UMTS 1750	1	5	6	
Hotspot On	DD Cover 360°	Grip	UMTS 1750	1	5	6	6
Hotspot On	DD Cover 0°		UMTS 1750	1	5	6	
Hotspot On	DD Cover 0°	Grip	UMTS 1750	1	5	6	6
Grip			UMTS 1750	1	8		
Grip	Hotspot On		UMTS 1750	1	8	5	
Grip	Hotspot On	DD Cover 180°	UMTS 1750	1	8	5	7
Grip	Hotspot On	DD Cover 360°	UMTS 1750	1	8	5	6
Grip	Hotspot On	DD Cover 0°	UMTS 1750	1	8	5	6
Grip	DD Cover 180°		UMTS 1750	1	8	7	
Grip	DD Cover 180°	Hotspot On	UMTS 1750	1	8	7	7
Grip	DD Cover 360°		UMTS 1750	1	8	6	
Grip	DD Cover 360°	Hotspot On	UMTS 1750	1	8	6	6
Grip	DD Cover 0°		UMTS 1750	1	8	6	
Grip	DD Cover 0°	Hotspot On	UMTS 1750	1	8	6	6
DD Cover 180°			UMTS 1750	1	7		
DD Cover 180°	Hotspot On		UMTS 1750	1	7	7	
DD Cover 180°	Hotspot On	Grip	UMTS 1750	1	7	7	7
DD Cover 180°	Grip		UMTS 1750	1	7	7	
DD Cover 180°	Grip	Hotspot On	UMTS 1750	1	7	7	7
DD Cover 360°			UMTS 1750	1	6		
DD Cover 360°	Hotspot On		UMTS 1750	1	6	6	
DD Cover 360°	Hotspot On	Grip	UMTS 1750	1	6	6	6
DD Cover 360°	Grip		UMTS 1750	1	6	6	
DD Cover 360°	Grip	Hotspot On	UMTS 1750	1	6	6	6
DD Cover 0°			UMTS 1750	1	6		
DD Cover 0°	Hotspot On		UMTS 1750	1	6	6	
DD Cover 0°	Hotspot On	Grip	UMTS 1750	1	6	6	6
DD Cover 0°	Grip		UMTS 1750	1	6	6	
DD Cover 0°	Grip	Hotspot On	UMTS 1750	1	6	6	6
Hotspot On			UMTS 1900	1	5		
Hotspot On	Grip		UMTS 1900	1	5	5	
Hotspot On	Grip	DD Cover 180°	UMTS 1900	1	5	5	7
Hotspot On	Grip	DD Cover 360°	UMTS 1900	1	5	5	6
Hotspot On	Grip	DD Cover 0°	UMTS 1900	1	5	5	6
Hotspot On	DD Cover 180°		UMTS 1900	1	5	7	
Hotspot On	DD Cover 180°	Grip	UMTS 1900	1	5	7	7
Hotspot On	DD Cover 360°		UMTS 1900	1	5	6	
Hotspot On	DD Cover 360°	Grip	UMTS 1900	1	5	6	6
Hotspot On	DD Cover 0°		UMTS 1900	1	5	6	
Hotspot On	DD Cover 0°	Grip	UMTS 1900	1	5	6	6
Grip			UMTS 1900	1	8		
Grip	Hotspot On		UMTS 1900	1	8	5	
Grip	Hotspot On	DD Cover 180°	UMTS 1900	1	8	5	7
Grip	Hotspot On	DD Cover 360°	UMTS 1900	1	8	5	6
Grip	Hotspot On	DD Cover 0°	UMTS 1900	1	8	5	6
Grip	DD Cover 180°		UMTS 1900	1	8	7	
Grip	DD Cover 180°	Hotspot On	UMTS 1900	1	8	7	7
Grip	DD Cover 360°		UMTS 1900	1	8	6	
Grip	DD Cover 360°	Hotspot On	UMTS 1900	1	8	6	6
Grip	DD Cover 0°		UMTS 1900	1	8	6	
Grip	DD Cover 0°	Hotspot On	UMTS 1900	1	8	6	6
DD Cover 180°			UMTS 1900	1	7		
DD Cover 180°	Hotspot On		UMTS 1900	1	7	7	
DD Cover 180°	Hotspot On	Grip	UMTS 1900	1	7	7	7
DD Cover 180°	Grip		UMTS 1900	1	7	7	
DD Cover 180°	Grip	Hotspot On	UMTS 1900	1	7	7	7
DD Cover 360°			UMTS 1900	1	6		
DD Cover 360°	Hotspot On		UMTS 1900	1	6	6	
DD Cover 360°	Hotspot On	Grip	UMTS 1900	1	6	6	6
DD Cover 360°	Grip		UMTS 1900	1	6	6	
DD Cover 360°	Grip	Hotspot On	UMTS 1900	1	6	6	6
DD Cover 0°			UMTS 1900	1	6		
DD Cover 0°	Hotspot On		UMTS 1900	1	6	6	
DD Cover 0°	Hotspot On	Grip	UMTS 1900	1	6	6	6
DD Cover 0°	Grip		UMTS 1900	1	6	6	
DD Cover 0°	Grip	Hotspot On	UMTS 1900	1	6	6	6
Hotspot On			PCS CDMA	1	5		
Hotspot On	Grip		PCS CDMA	1	5	5	
Hotspot On	Grip	DD Cover 180°	PCS CDMA	1	5	5	7
Hotspot On	Grip	DD Cover 360°	PCS CDMA	1	5	5	6
Hotspot On	Grip	DD Cover 0°	PCS CDMA	1	5	5	6
Hotspot On	DD Cover 180°		PCS CDMA	1	5	7	
Hotspot On	DD Cover 180°	Grip	PCS CDMA	1	5	7	7
Hotspot On	DD Cover 360°		PCS CDMA	1	5	6	
Hotspot On	DD Cover 360°	Grip	PCS CDMA	1	5	6	6
Hotspot On	DD Cover 0°		PCS CDMA	1	5	6	
Hotspot On	DD Cover 0°	Grip	PCS CDMA	1	5	6	6
Grip			PCS CDMA	1	8		
Grip	Hotspot On		PCS CDMA	1	8	5	
Grip	Hotspot On	DD Cover 180°	PCS CDMA	1	8	5	7
Grip	Hotspot On	DD Cover 360°	PCS CDMA	1	8	5	6
Grip	Hotspot On	DD Cover 0°	PCS CDMA	1	8	5	6
Grip	DD Cover 180°		PCS CDMA	1	8	7	
Grip	DD Cover 180°	Hotspot On	PCS CDMA	1	8	7	7
Grip	DD Cover 360°		PCS CDMA	1	8	6	
Grip	DD Cover 360°	Hotspot On	PCS CDMA	1	8	6	6
Grip	DD Cover 0°		PCS CDMA	1	8	6	
Grip	DD Cover 0°	Hotspot On	PCS CDMA	1	8	6	6
DD Cover 180°			PCS CDMA	1	7		
DD Cover 180°	Hotspot On		PCS CDMA	1	7	7	
DD Cover 180°	Hotspot On	Grip	PCS CDMA	1	7	7	7
DD Cover 180°	Grip		PCS CDMA	1	7	7	
DD Cover 180°	Grip	Hotspot On	PCS CDMA	1	7	7	7
DD Cover 360°			PCS CDMA	1	6		
DD Cover 360°	Hotspot On		PCS CDMA	1	6	6	
DD Cover 360°	Hotspot On	Grip	PCS CDMA	1	6	6	6
DD Cover 360°	Grip		PCS CDMA	1	6	6	
DD Cover 360°	Grip	Hotspot On	PCS CDMA	1	6	6	6
DD Cover 0°			PCS CDMA	1	6		
DD Cover 0°	Hotspot On		PCS CDMA	1	6	6	
DD Cover 0°	Hotspot On	Grip	PCS CDMA	1	6	6	6
DD Cover 0°	Grip		PCS CDMA	1	6	6	
DD Cover 0°	Grip	Hotspot On	PCS CDMA	1	6	6	6

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DUT Type: Portable Handset

APPENDIX F:
Page 2 of 4

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11/15/2017

1st	2nd	3rd	Mode/Band	Un-triggered (Max)	Mechanism #1 (Reduced)	Mechanism #2 (Reduced)	Mechanism #3 (Reduced)
Hotspot On			LTE FDD Band 4	1	5		
Hotspot On	Grip		LTE FDD Band 4	1	5	5	
Hotspot On	Grip	DD Cover 180°	LTE FDD Band 4	1	5	5	7
Hotspot On	Grip	DD Cover 360°	LTE FDD Band 4	1	5	5	6
Hotspot On	Grip	DD Cover 0°	LTE FDD Band 4	1	5	5	6
Hotspot On	DD Cover 180°		LTE FDD Band 4	1	5	7	
Hotspot On	DD Cover 180°	Grip	LTE FDD Band 4	1	5	7	7
Hotspot On	DD Cover 360°		LTE FDD Band 4	1	5	6	
Hotspot On	DD Cover 360°	Grip	LTE FDD Band 4	1	5	6	6
Hotspot On	DD Cover 0°		LTE FDD Band 4	1	5	6	
Hotspot On	DD Cover 0°	Grip	LTE FDD Band 4	1	5	6	6
Grip			LTE FDD Band 4	1	8		
Grip	Hotspot On		LTE FDD Band 4	1	8	5	
Grip	Hotspot On	DD Cover 180°	LTE FDD Band 4	1	8	5	7
Grip	Hotspot On	DD Cover 360°	LTE FDD Band 4	1	8	5	6
Grip	Hotspot On	DD Cover 0°	LTE FDD Band 4	1	8	5	6
Grip	DD Cover 180°		LTE FDD Band 4	1	8	7	
Grip	DD Cover 180°	Hotspot On	LTE FDD Band 4	1	8	7	7
Grip	DD Cover 360°		LTE FDD Band 4	1	8	6	
Grip	DD Cover 360°	Hotspot On	LTE FDD Band 4	1	8	6	6
Grip	DD Cover 0°		LTE FDD Band 4	1	8	6	
Grip	DD Cover 0°	Hotspot On	LTE FDD Band 4	1	8	6	6
DD Cover 180°			LTE FDD Band 4	1	7		
DD Cover 180°	Hotspot On		LTE FDD Band 4	1	7	7	
DD Cover 180°	Hotspot On	Grip	LTE FDD Band 4	1	7	7	7
DD Cover 180°	Grip		LTE FDD Band 4	1	7	7	
DD Cover 180°	Grip	Hotspot On	LTE FDD Band 4	1	7	7	7
DD Cover 360°			LTE FDD Band 4	1	6		
DD Cover 360°	Hotspot On		LTE FDD Band 4	1	6	6	
DD Cover 360°	Hotspot On	Grip	LTE FDD Band 4	1	6	6	6
DD Cover 360°	Grip		LTE FDD Band 4	1	6	6	
DD Cover 360°	Grip	Hotspot On	LTE FDD Band 4	1	6	6	6
DD Cover 0°			LTE FDD Band 4	1	6		
DD Cover 0°	Hotspot On		LTE FDD Band 4	1	6	6	
DD Cover 0°	Hotspot On	Grip	LTE FDD Band 4	1	6	6	6
DD Cover 0°	Grip		LTE FDD Band 4	1	6	6	
DD Cover 0°	Grip	Hotspot On	LTE FDD Band 4	1	6	6	6
Hotspot On			LTE FDD Band 66	1	5		
Hotspot On	Grip		LTE FDD Band 66	1	5	5	
Hotspot On	Grip	DD Cover 180°	LTE FDD Band 66	1	5	5	7
Hotspot On	Grip	DD Cover 360°	LTE FDD Band 66	1	5	5	6
Hotspot On	Grip	DD Cover 0°	LTE FDD Band 66	1	5	5	6
Hotspot On	DD Cover 180°		LTE FDD Band 66	1	5	7	
Hotspot On	DD Cover 180°	Grip	LTE FDD Band 66	1	5	7	7
Hotspot On	DD Cover 360°		LTE FDD Band 66	1	5	6	
Hotspot On	DD Cover 360°	Grip	LTE FDD Band 66	1	5	6	6
Hotspot On	DD Cover 0°		LTE FDD Band 66	1	5	6	
Hotspot On	DD Cover 0°	Grip	LTE FDD Band 66	1	5	6	6
Grip			LTE FDD Band 66	1	8		
Grip	Hotspot On		LTE FDD Band 66	1	8	5	
Grip	Hotspot On	DD Cover 180°	LTE FDD Band 66	1	8	5	7
Grip	Hotspot On	DD Cover 360°	LTE FDD Band 66	1	8	5	6
Grip	Hotspot On	DD Cover 0°	LTE FDD Band 66	1	8	5	6
Grip	DD Cover 180°		LTE FDD Band 66	1	8	7	
Grip	DD Cover 180°	Hotspot On	LTE FDD Band 66	1	8	7	7
Grip	DD Cover 360°		LTE FDD Band 66	1	8	6	
Grip	DD Cover 360°	Hotspot On	LTE FDD Band 66	1	8	6	6
Grip	DD Cover 0°		LTE FDD Band 66	1	8	6	
Grip	DD Cover 0°	Hotspot On	LTE FDD Band 66	1	8	6	6
DD Cover 180°			LTE FDD Band 66	1	7		
DD Cover 180°	Hotspot On		LTE FDD Band 66	1	7	7	
DD Cover 180°	Hotspot On	Grip	LTE FDD Band 66	1	7	7	7
DD Cover 180°	Grip		LTE FDD Band 66	1	7	7	
DD Cover 180°	Grip	Hotspot On	LTE FDD Band 66	1	7	7	7
DD Cover 360°			LTE FDD Band 66	1	6		
DD Cover 360°	Hotspot On		LTE FDD Band 66	1	6	6	
DD Cover 360°	Hotspot On	Grip	LTE FDD Band 66	1	6	6	6
DD Cover 360°	Grip		LTE FDD Band 66	1	6	6	
DD Cover 360°	Grip	Hotspot On	LTE FDD Band 66	1	6	6	6
DD Cover 0°			LTE FDD Band 66	1	6		
DD Cover 0°	Hotspot On		LTE FDD Band 66	1	6	6	
DD Cover 0°	Hotspot On	Grip	LTE FDD Band 66	1	6	6	6
DD Cover 0°	Grip		LTE FDD Band 66	1	6	6	
DD Cover 0°	Grip	Hotspot On	LTE FDD Band 66	1	6	6	6
Hotspot On			LTE FDD Band 2	1	5		
Hotspot On	Grip		LTE FDD Band 2	1	5	5	
Hotspot On	Grip	DD Cover 180°	LTE FDD Band 2	1	5	5	7
Hotspot On	Grip	DD Cover 360°	LTE FDD Band 2	1	5	5	6
Hotspot On	Grip	DD Cover 0°	LTE FDD Band 2	1	5	5	6
Hotspot On	DD Cover 180°		LTE FDD Band 2	1	5	7	
Hotspot On	DD Cover 180°	Grip	LTE FDD Band 2	1	5	7	7
Hotspot On	DD Cover 360°		LTE FDD Band 2	1	5	6	
Hotspot On	DD Cover 360°	Grip	LTE FDD Band 2	1	5	6	6
Hotspot On	DD Cover 0°		LTE FDD Band 2	1	5	6	
Hotspot On	DD Cover 0°	Grip	LTE FDD Band 2	1	5	6	6
Grip			LTE FDD Band 2	1	8		
Grip	Hotspot On		LTE FDD Band 2	1	8	5	
Grip	Hotspot On	DD Cover 180°	LTE FDD Band 2	1	8	5	7
Grip	Hotspot On	DD Cover 360°	LTE FDD Band 2	1	8	5	6
Grip	Hotspot On	DD Cover 0°	LTE FDD Band 2	1	8	5	6
Grip	DD Cover 180°		LTE FDD Band 2	1	8	7	
Grip	DD Cover 180°	Hotspot On	LTE FDD Band 2	1	8	7	7
Grip	DD Cover 360°		LTE FDD Band 2	1	8	6	
Grip	DD Cover 360°	Hotspot On	LTE FDD Band 2	1	8	6	6
Grip	DD Cover 0°		LTE FDD Band 2	1	8	6	
Grip	DD Cover 0°	Hotspot On	LTE FDD Band 2	1	8	6	6
DD Cover 180°			LTE FDD Band 2	1	7		
DD Cover 180°	Hotspot On		LTE FDD Band 2	1	7	7	
DD Cover 180°	Hotspot On	Grip	LTE FDD Band 2	1	7	7	7
DD Cover 180°	Grip		LTE FDD Band 2	1	7	7	
DD Cover 180°	Grip	Hotspot On	LTE FDD Band 2	1	7	7	7
DD Cover 360°			LTE FDD Band 2	1	6		
DD Cover 360°	Hotspot On		LTE FDD Band 2	1	6	6	
DD Cover 360°	Hotspot On	Grip	LTE FDD Band 2	1	6	6	6
DD Cover 360°	Grip		LTE FDD Band 2	1	6	6	
DD Cover 360°	Grip	Hotspot On	LTE FDD Band 2	1	6	6	6
DD Cover 0°			LTE FDD Band 2	1	6		
DD Cover 0°	Hotspot On		LTE FDD Band 2	1	6	6	
DD Cover 0°	Hotspot On	Grip	LTE FDD Band 2	1	6	6	6
DD Cover 0°	Grip		LTE FDD Band 2	1	6	6	
DD Cover 0°	Grip	Hotspot On	LTE FDD Band 2	1	6	6	6

FCC ID: ZNFG900UM | PCTEST — Proud to be part of element | **SAR EVALUATION REPORT** | LG | **Reviewed by:** Quality Manager

| **Test Dates:** 04/27/20 - 06/25/20 | **DUT Type:** Portable Handset | | **APPENDIX F:** Page 3 of 4 |

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REV 20.05 M
11/15/2017

| Mechanism(s) | | | Mode/Band | Device System Index | | | |
1st	2nd	3rd		Un-triggered (Max)	Mechanism #1 (Reduced)	Mechanism #2 (Reduced)	Mechanism #3 (Reduced)
Hotspot On			LTE FDD Band 25	1	5		
Hotspot On	Grip		LTE FDD Band 25	1	5	5	
Hotspot On	Grip	DD Cover 180°	LTE FDD Band 25	1	5	5	7
Hotspot On	Grip	DD Cover 360°	LTE FDD Band 25	1	5	5	6
Hotspot On	Grip	DD Cover 0°	LTE FDD Band 25	1	5	5	6
Hotspot On	DD Cover 180°		LTE FDD Band 25	1	5	7	
Hotspot On	DD Cover 180°	Grip	LTE FDD Band 25	1	5	7	7
Hotspot On	DD Cover 360°		LTE FDD Band 25	1	5	6	
Hotspot On	DD Cover 360°	Grip	LTE FDD Band 25	1	5	6	6
Hotspot On	DD Cover 0°		LTE FDD Band 25	1	5	6	
Hotspot On	DD Cover 0°	Grip	LTE FDD Band 25	1	5	6	6
Grip			LTE FDD Band 25	1	8		
Grip	Hotspot On		LTE FDD Band 25	1	8	5	
Grip	Hotspot On	DD Cover 180°	LTE FDD Band 25	1	8	5	7
Grip	Hotspot On	DD Cover 360°	LTE FDD Band 25	1	8	5	6
Grip	Hotspot On	DD Cover 0°	LTE FDD Band 25	1	8	5	6
Grip	DD Cover 180°		LTE FDD Band 25	1	8	7	
Grip	DD Cover 180°	Hotspot On	LTE FDD Band 25	1	8	7	7
Grip	DD Cover 360°		LTE FDD Band 25	1	8	6	
Grip	DD Cover 360°	Hotspot On	LTE FDD Band 25	1	8	6	6
Grip	DD Cover 0°		LTE FDD Band 25	1	8	6	
Grip	DD Cover 0°	Hotspot On	LTE FDD Band 25	1	8	6	6
DD Cover 180°			LTE FDD Band 25	1	7		
DD Cover 180°	Hotspot On		LTE FDD Band 25	1	7	7	
DD Cover 180°	Hotspot On	Grip	LTE FDD Band 25	1	7	7	7
DD Cover 180°	Grip		LTE FDD Band 25	1	7	7	
DD Cover 180°	Grip	Hotspot On	LTE FDD Band 25	1	7	7	7
DD Cover 360°			LTE FDD Band 25	1	6		
DD Cover 360°	Hotspot On		LTE FDD Band 25	1	6	6	
DD Cover 360°	Hotspot On	Grip	LTE FDD Band 25	1	6	6	6
DD Cover 360°	Grip		LTE FDD Band 25	1	6	6	
DD Cover 360°	Grip	Hotspot On	LTE FDD Band 25	1	6	6	6
DD Cover 0°			LTE FDD Band 25	1	6		
DD Cover 0°	Hotspot On		LTE FDD Band 25	1	6	6	
DD Cover 0°	Hotspot On	Grip	LTE FDD Band 25	1	6	6	6
DD Cover 0°	Grip		LTE FDD Band 25	1	6	6	
DD Cover 0°	Grip	Hotspot On	LTE FDD Band 25	1	6	6	6
Hotspot On			LTE FDD Band 7	1	5		
Hotspot On	Grip		LTE FDD Band 7	1	5	5	
Hotspot On	Grip	DD Cover 180°	LTE FDD Band 7	1	5	5	7
Hotspot On	Grip	DD Cover 360°	LTE FDD Band 7	1	5	5	6
Hotspot On	Grip	DD Cover 0°	LTE FDD Band 7	1	5	5	6
Hotspot On	DD Cover 180°		LTE FDD Band 7	1	5	7	
Hotspot On	DD Cover 180°	Grip	LTE FDD Band 7	1	5	7	7
Hotspot On	DD Cover 360°		LTE FDD Band 7	1	5	6	
Hotspot On	DD Cover 360°	Grip	LTE FDD Band 7	1	5	6	6
Hotspot On	DD Cover 0°		LTE FDD Band 7	1	5	6	
Hotspot On	DD Cover 0°	Grip	LTE FDD Band 7	1	5	6	6
Grip			LTE FDD Band 7	1	8		
Grip	Hotspot On		LTE FDD Band 7	1	8	5	
Grip	Hotspot On	DD Cover 180°	LTE FDD Band 7	1	8	5	7
Grip	Hotspot On	DD Cover 360°	LTE FDD Band 7	1	8	5	6
Grip	Hotspot On	DD Cover 0°	LTE FDD Band 7	1	8	5	6
Grip	DD Cover 180°		LTE FDD Band 7	1	8	7	
Grip	DD Cover 180°	Hotspot On	LTE FDD Band 7	1	8	7	7
Grip	DD Cover 360°		LTE FDD Band 7	1	8	6	
Grip	DD Cover 360°	Hotspot On	LTE FDD Band 7	1	8	6	6
Grip	DD Cover 0°		LTE FDD Band 7	1	8	6	
Grip	DD Cover 0°	Hotspot On	LTE FDD Band 7	1	8	6	6
DD Cover 180°			LTE FDD Band 7	1	7		
DD Cover 180°	Hotspot On		LTE FDD Band 7	1	7	7	
DD Cover 180°	Hotspot On	Grip	LTE FDD Band 7	1	7	7	7
DD Cover 180°	Grip		LTE FDD Band 7	1	7	7	
DD Cover 180°	Grip	Hotspot On	LTE FDD Band 7	1	7	7	7
DD Cover 360°			LTE FDD Band 7	1	6		
DD Cover 360°	Hotspot On		LTE FDD Band 7	1	6	6	
DD Cover 360°	Hotspot On	Grip	LTE FDD Band 7	1	6	6	6
DD Cover 360°	Grip		LTE FDD Band 7	1	6	6	
DD Cover 360°	Grip	Hotspot On	LTE FDD Band 7	1	6	6	6
DD Cover 0°			LTE FDD Band 7	1	6		
DD Cover 0°	Hotspot On		LTE FDD Band 7	1	6	6	
DD Cover 0°	Hotspot On	Grip	LTE FDD Band 7	1	6	6	6
DD Cover 0°	Grip		LTE FDD Band 7	1	6	6	
DD Cover 0°	Grip	Hotspot On	LTE FDD Band 7	1	6	6	6
Hotspot On			LTE TDD Band 41	1	5		
Hotspot On	Grip		LTE TDD Band 41	1	5	5	
Hotspot On	Grip	DD Cover 180°	LTE TDD Band 41	1	5	5	7
Hotspot On	Grip	DD Cover 360°	LTE TDD Band 41	1	5	5	6
Hotspot On	Grip	DD Cover 0°	LTE TDD Band 41	1	5	5	6
Hotspot On	DD Cover 180°		LTE TDD Band 41	1	5	7	
Hotspot On	DD Cover 180°	Grip	LTE TDD Band 41	1	5	7	7
Hotspot On	DD Cover 360°		LTE TDD Band 41	1	5	6	
Hotspot On	DD Cover 360°	Grip	LTE TDD Band 41	1	5	6	6
Hotspot On	DD Cover 0°		LTE TDD Band 41	1	5	6	
Hotspot On	DD Cover 0°	Grip	LTE TDD Band 41	1	5	6	6
Grip			LTE TDD Band 41	1	8		
Grip	Hotspot On		LTE TDD Band 41	1	8	5	
Grip	Hotspot On	DD Cover 180°	LTE TDD Band 41	1	8	5	7
Grip	Hotspot On	DD Cover 360°	LTE TDD Band 41	1	8	5	6
Grip	Hotspot On	DD Cover 0°	LTE TDD Band 41	1	8	5	6
Grip	DD Cover 180°		LTE TDD Band 41	1	8	7	
Grip	DD Cover 180°	Hotspot On	LTE TDD Band 41	1	8	7	7
Grip	DD Cover 360°		LTE TDD Band 41	1	8	6	
Grip	DD Cover 360°	Hotspot On	LTE TDD Band 41	1	8	6	6
Grip	DD Cover 0°		LTE TDD Band 41	1	8	6	
Grip	DD Cover 0°	Hotspot On	LTE TDD Band 41	1	8	6	6
DD Cover 180°			LTE TDD Band 41	1	7		
DD Cover 180°	Hotspot On		LTE TDD Band 41	1	7	7	
DD Cover 180°	Hotspot On	Grip	LTE TDD Band 41	1	7	7	7
DD Cover 180°	Grip		LTE TDD Band 41	1	7	7	
DD Cover 180°	Grip	Hotspot On	LTE TDD Band 41	1	7	7	7
DD Cover 360°			LTE TDD Band 41	1	6		
DD Cover 360°	Hotspot On		LTE TDD Band 41	1	6	6	
DD Cover 360°	Hotspot On	Grip	LTE TDD Band 41	1	6	6	6
DD Cover 360°	Grip		LTE TDD Band 41	1	6	6	
DD Cover 360°	Grip	Hotspot On	LTE TDD Band 41	1	6	6	6
DD Cover 0°			LTE TDD Band 41	1	6		
DD Cover 0°	Hotspot On		LTE TDD Band 41	1	6	6	
DD Cover 0°	Hotspot On	Grip	LTE TDD Band 41	1	6	6	6
DD Cover 0°	Grip		LTE TDD Band 41	1	6	6	
DD Cover 0°	Grip	Hotspot On	LTE TDD Band 41	1	6	6	6

*Note: This device uses different Device State Indices (DSI) to configure different time averaged power levels based on certain exposure scenarios. For this device, DSI = 8 represents the case when the grip sensor is active, and DSI = 5 represents the case when hotspot mode is active. DSI = 1 is configured at max power when the device cannot detect the use condition. DSI = 6 represents the case when the device is using the Dual Display Accessory in Position #1 or Position #3 (0° or 360°). DSI = 7 represents the case when the device is using the Dual Display Accessory in Position #2 (180°).

FCC ID: ZNFG900UM	PCTEST Proud to be part of element	**SAR EVALUATION REPORT**	LG	**Reviewed by:** Quality Manager
Test Dates: 04/27/20 - 06/25/20	**DUT Type:** Portable Handset			APPENDIX F: Page 4 of 4

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S	Schweizerischer Kalibrierdienst
C	Service suisse d'étalonnage
	Servizio svizzero di taratura
S	Swiss Calibration Service

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The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client   . **PC Test**

Certificate No: **D5GHzV2-1057_Jan18**

CALIBRATION CERTIFICATE

Object	D5GHzV2 - SN:1057
Calibration procedure(s)	QA CAL-22.v2
	Calibration procedure for dipole validation kits between 3-6 GHz
Calibration date:	January 16, 2018

BN ✓
01-25-2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

BN ✓
02/06/2019

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

BN ✓
01/17/2020

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Reference Probe EX3DV4	SN: 3503	30-Dec-17 (No. EX3-3503_Dec17)	Dec-18
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	in house check: Oct-18
Power sensor HP 8481A	SN: US37292763	07-Oct-15 (in house check Oct-16)	in house check: Oct-18
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	in house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	in house check: Oct-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-17)	in house check: Oct-18

	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: January 18, 2018

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

S   Schweizerischer Kalibrierdienst
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S   Servizio svizzero di taratura
S   Swiss Calibration Service

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The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016

c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	5200 MHz ± 1 MHz 5250 MHz ± 1 MHz 5600 MHz ± 1 MHz 5750 MHz ± 1 MHz 5800 MHz ± 1 MHz	

Head TSL parameters at 5250 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.71 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	36.2 ± 6 %	4.55 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5250 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.91 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	79.2 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.28 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.8 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.8 ± 6 %	4.90 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**84.1 W/kg ± 19.9 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.40 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**24.0 W/kg ± 19.5 % (k=2)**

Head TSL parameters at 5750 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.4	5.22 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.5 ± 6 %	5.06 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL at 5750 MHz

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.06 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**80.5 W/kg ± 19.9 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.30 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**23.0 W/kg ± 19.5 % (k=2)**

Body TSL parameters at 5200 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	49.0	5.30 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.3 ± 6 %	5.41 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL at 5200 MHz

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.36 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	73.1 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.06 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.4 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5250 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.9	5.36 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	47.2 ± 6 %	5.48 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL at 5250 MHz

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.64 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	75.9 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.13 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	21.1 W/kg ± 19.5 % (k=2)

Body TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.5	5.77 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.6 ± 6 %	5.94 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL at 5600 MHz

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	8.05 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**79.9 W/kg ± 19.9 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.25 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**22.3 W/kg ± 19.5 % (k=2)**

Body TSL parameters at 5750 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.3	5.94 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.3 ± 6 %	6.15 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL at 5750 MHz

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.72 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**76.7 W/kg ± 19.9 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.14 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**21.2 W/kg ± 19.5 % (k=2)**

Body TSL parameters at 5800 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	48.2	6.00 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	46.2 ± 6 %	6.22 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL at 5800 MHz

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	7.68 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**76.3 W/kg ± 19.9 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.13 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**21.1 W/kg ± 19.5 % (k=2)**

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL at 5250 MHz

Impedance, transformed to feed point	50.0 Ω - 5.5 jΩ
Return Loss	- 25.2 dB

Antenna Parameters with Head TSL at 5600 MHz

Impedance, transformed to feed point	54.7 Ω - 2.1 jΩ
Return Loss	- 26.2 dB

Antenna Parameters with Head TSL at 5750 MHz

Impedance, transformed to feed point	52.7 Ω + 0.0 jΩ
Return Loss	- 31.5 dB

Antenna Parameters with Body TSL at 5200 MHz

Impedance, transformed to feed point	49.3 Ω - 6.7 jΩ
Return Loss	- 23.4 dB

Antenna Parameters with Body TSL at 5250 MHz

Impedance, transformed to feed point	48.4 Ω - 3.9 jΩ
Return Loss	- 27.4 dB

Antenna Parameters with Body TSL at 5600 MHz

Impedance, transformed to feed point	55.3 Ω - 1.6 jΩ
Return Loss	- 25.6 dB

Antenna Parameters with Body TSL at 5750 MHz

Impedance, transformed to feed point	52.6 Ω + 1.1 jΩ
Return Loss	- 31.2 dB

Antenna Parameters with Body TSL at 5800 MHz

Impedance, transformed to feed point	51.8 Ω - 0.4 jΩ
Return Loss	- 34.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.203 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	November 27, 2006

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions (f=5200 MHz)

DASY system configuration, as far as not given on page 1 and 3.

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L

SAR result with SAM Head (Top)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.24 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**82.6 W/kg ± 20.3 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.35 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**23.6 W/kg ± 19.9 % (k=2)**

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.54 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**85.6 W/kg ± 20.3 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.37 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**23.7 W/kg ± 19.9 % (k=2)**

SAR result with SAM Head (Neck)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.14 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**81.6 W/kg ± 20.3 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.37 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**23.7 W/kg ± 19.9 % (k=2)**

SAR result with SAM Head (Ear)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	5.16 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**51.7 W/kg ± 20.3 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	1.76 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**17.7 W/kg ± 19.9 % (k=2)**

Measurement Conditions (f=5800 MHz)

DASY system configuration, as far as not given on page 1 and 3.

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L

SAR result with SAM Head (Top)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.62 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	86.3 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.1 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.88 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	88.9 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.44 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.4 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Neck)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.33 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	83.4 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.35 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.5 W/kg ± 19.9 % (k=2)

SAR result with SAM Head (Ear)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	5.68 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	56.8 W/kg ± 20.3 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	1.89 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	18.9 W/kg ± 19.9 % (k=2)

DASY5 Validation Report for Head TSL

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1057

Communication System: UID 0 - CW; Frequency: 5250 MHz, Frequency: 5600 MHz, Frequency: 5750 MHz
Medium parameters used: f = 5250 MHz; σ = 4.55 S/m; ε_r = 36.2; ρ = 1000 kg/m³ ,
Medium parameters used: f = 5600 MHz; σ = 4.9 S/m; ε_r = 35.8; ρ = 1000 kg/m³ ,
Medium parameters used: f = 5750 MHz; σ = 5.06 S/m; ε_r = 35.5; ρ = 1000 kg/m³
Phantom section: Flat Section
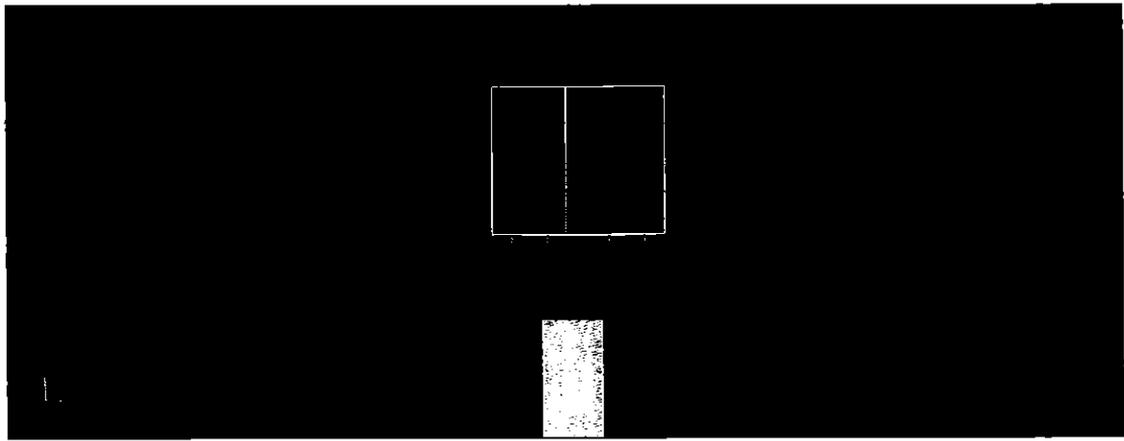Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(5.51, 5.51, 5.51); Calibrated: 30.12.2017, ConvF(5.05, 5.05, 5.05); Calibrated: 30.12.2017, ConvF(4.98, 4.98, 4.98); Calibrated: 30.12.2017;

- Sensor-Surface: 1.4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn601 - modified; Calibrated: 26.10.2017

- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001

- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 72.54 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 27.5 W/kg
SAR(1 g) = 7.91 W/kg; SAR(10 g) = 2.28 W/kg
Maximum value of SAR (measured) = 17.7 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 72.77 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 32.2 W/kg
SAR(1 g) = 8.41 W/kg; SAR(10 g) = 2.4 W/kg
Maximum value of SAR (measured) = 19.7 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 70.93 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 31.4 W/kg
SAR(1 g) = 8.06 W/kg; SAR(10 g) = 2.3 W/kg
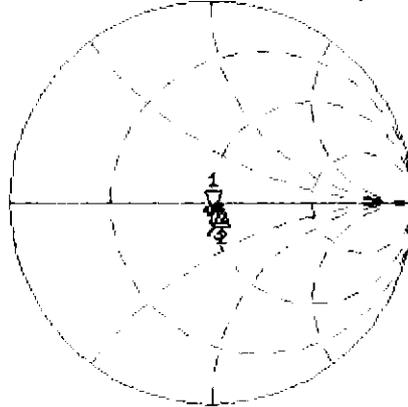Maximum value of SAR (measured) = 18.9 W/kg

0 dB = 18.9 W/kg = 12.76 dBW/kg

Impedance Measurement Plot for Head TSL
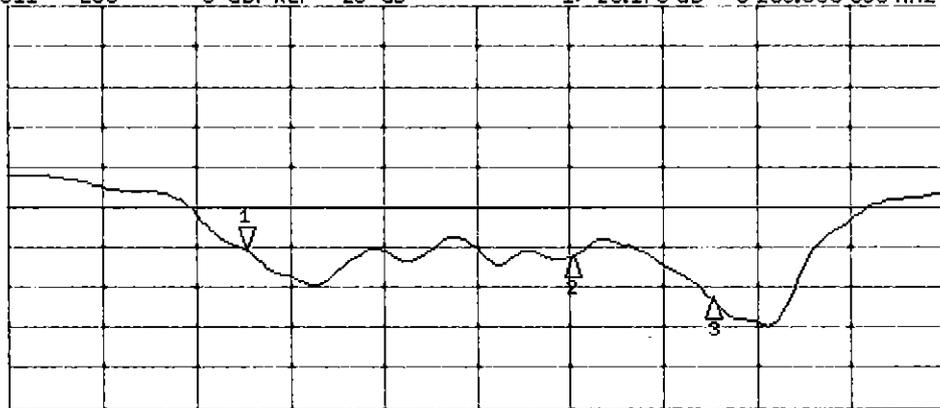
Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1057

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5250 MHz, Frequency: 5600 MHz, Frequency: 5750 MHz, Frequency: 5800 MHz
Medium parameters used: f = 5200 MHz; σ = 5.41 S/m; ε_r = 47.3; ρ = 1000 kg/m^3 ,
Medium parameters used: f = 5250 MHz; σ = 5.48 S/m; ε_r = 47.2; ρ = 1000 kg/m^3 ,
Medium parameters used: f = 5600 MHz; σ = 5.94 S/m; ε_r = 46.6; ρ = 1000 kg/m^3 ,
Medium parameters used: f = 5750 MHz; σ = 6.15 S/m; ε_r = 46.3; ρ = 1000 kg/m^3 ,
Medium parameters used: f = 5800 MHz; σ = 6.22 S/m; ε_r = 46.2; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(5.35, 5.35, 5.35); Calibrated: 30.12.2017, ConvF(5.26, 5.26, 5.26); Calibrated: 30.12.2017, ConvF(4.65, 4.65, 4.65); Calibrated: 30.12.2017, ConvF(4.57, 4.57, 4.57); Calibrated: 30.12.2017, ConvF(4.53, 4.53, 4.53); Calibrated: 30.12.2017;

- Sensor-Surface: 1.4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn601; Calibrated: 26.10.2017

- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002

- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 64.05 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 27.6 W/kg
SAR(1 g) = 7.36 W/kg; SAR(10 g) = 2.06 W/kg
Maximum value of SAR (measured) = 17.1 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 64.53 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 29.4 W/kg
SAR(1 g) = 7.64 W/kg; SAR(10 g) = 2.13 W/kg
Maximum value of SAR (measured) = 17.9 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 65.09 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 34.0 W/kg
SAR(1 g) = 8.05 W/kg; SAR(10 g) = 2.25 W/kg
Maximum value of SAR (measured) = 19.5 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.45 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 32.9 W/kg
SAR(1 g) = 7.72 W/kg; SAR(10 g) = 2.14 W/kg
Maximum value of SAR (measured) = 18.9 W/kg

Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 63.14 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 33.3 W/kg
SAR(1 g) = 7.68 W/kg; SAR(10 g) = 2.13 W/kg

0 dB = 18.9 W/kg = 12.76 dBW/kg

Impedance Measurement Plot for Body TSL
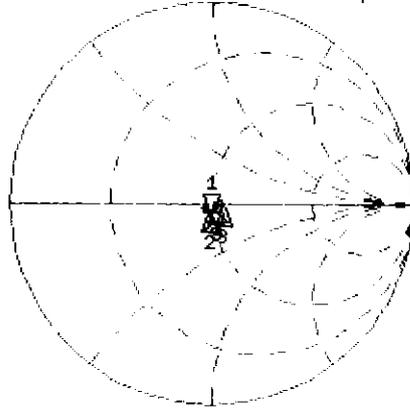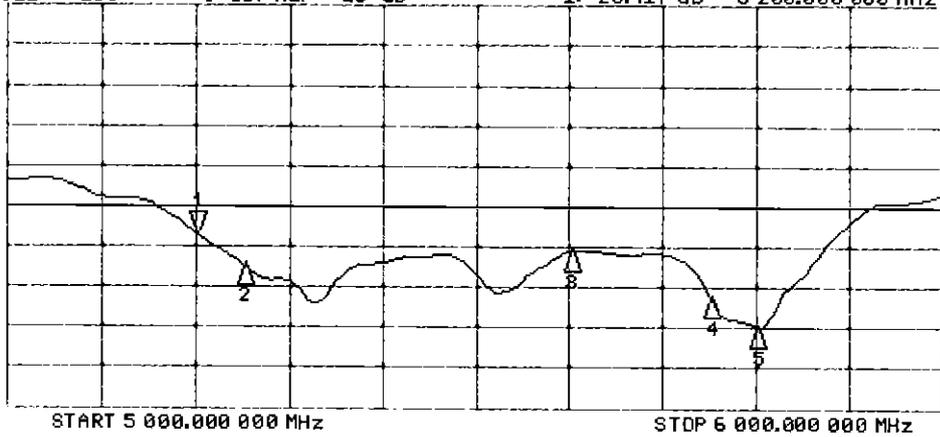
DASY5 Validation Report for SAM Head

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1057

Communication System: UID 0 - CW; Frequency: 5200 MHz, Frequency: 5800 MHz
Medium parameters used: f = 5200 MHz; σ = 4.59 S/m; εr = 36.5; ρ = 1000 kg/m3 ,
Medium parameters used: f = 5800 MHz; σ = 5.28 S/m; εr = 35.4; ρ = 1000 kg/m3
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: EX3DV4 - SN3503; ConvF(5.75, 5.75, 5.75); Calibrated: 30.12.2017, ConvF(4.96, 4.96, 4.96); Calibrated: 30.12.2017;

- Sensor-Surface: 1.4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn601; Calibrated: 26.10.2017

- Phantom: SAM Head

- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

SAM Head/Top - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 72.99 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 30.6 W/kg
SAR(1 g) = 8.24 W/kg; SAR(10 g) = 2.35 W/kg
Maximum value of SAR (measured) = 19.7 W/kg

SAM Head/Top - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 73.00 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 36.5 W/kg
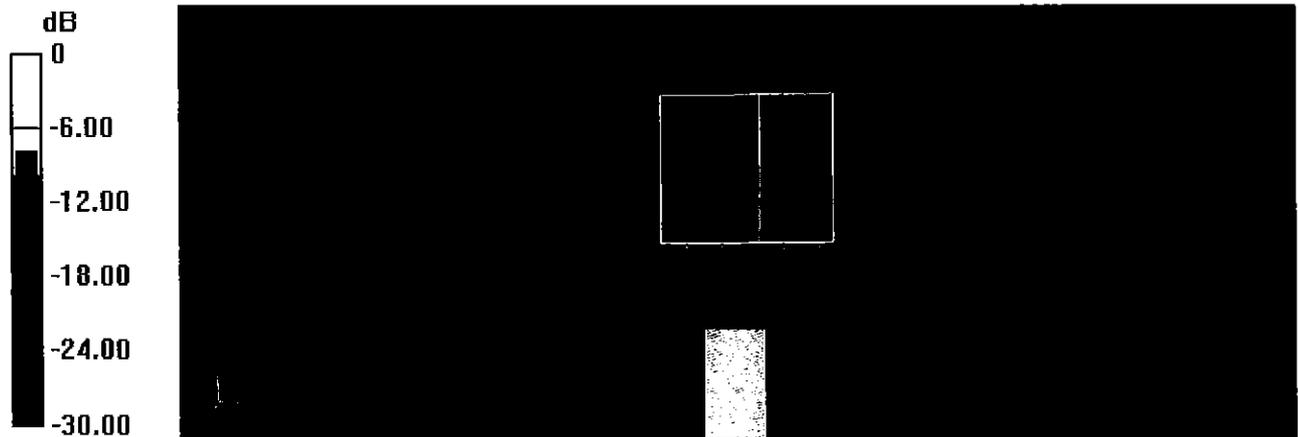**SAR(1 g) = 8.62 W/kg; SAR(10 g) = 2.41 W/kg**
Maximum value of SAR (measured) = 21.9 W/kg

SAM Head/Mouth - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 72.79 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 29.5 W/kg
SAR(1 g) = 8.54 W/kg; SAR(10 g) = 2.37 W/kg
Maximum value of SAR (measured) = 20.7 W/kg

SAM Head/Mouth - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 71.69 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 34.9 W/kg
SAR(1 g) = 8.88 W/kg; SAR(10 g) = 2.44 W/kg
Maximum value of SAR (measured) = 23.0 W/kg

SAM Head/Neck - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 72.48 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 27.9 W/kg
SAR(1 g) = 8.14 W/kg; SAR(10 g) = 2.37 W/kg
Maximum value of SAR (measured) = 19.3 W/kg

SAM Head/Neck - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 72.90 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 33.4 W/kg
SAR(1 g) = 8.33 W/kg; SAR(10 g) = 2.35 W/kg
Maximum value of SAR (measured) = 21.8 W/kg

SAM Head/Ear - 5200/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 54.68 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 16.3 W/kg
**SAR(1 g) = 5.16 W/kg; SAR(10 g) = 1.76 W/kg**
Maximum value of SAR (measured) = 11.1 W/kg

SAM Head/Ear - 5800/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 56.96 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 21.2 W/kg
SAR(1 g) = 5.68 W/kg; SAR(10 g) = 1.89 W/kg
Maximum value of SAR (measured) = 13.8 W/kg
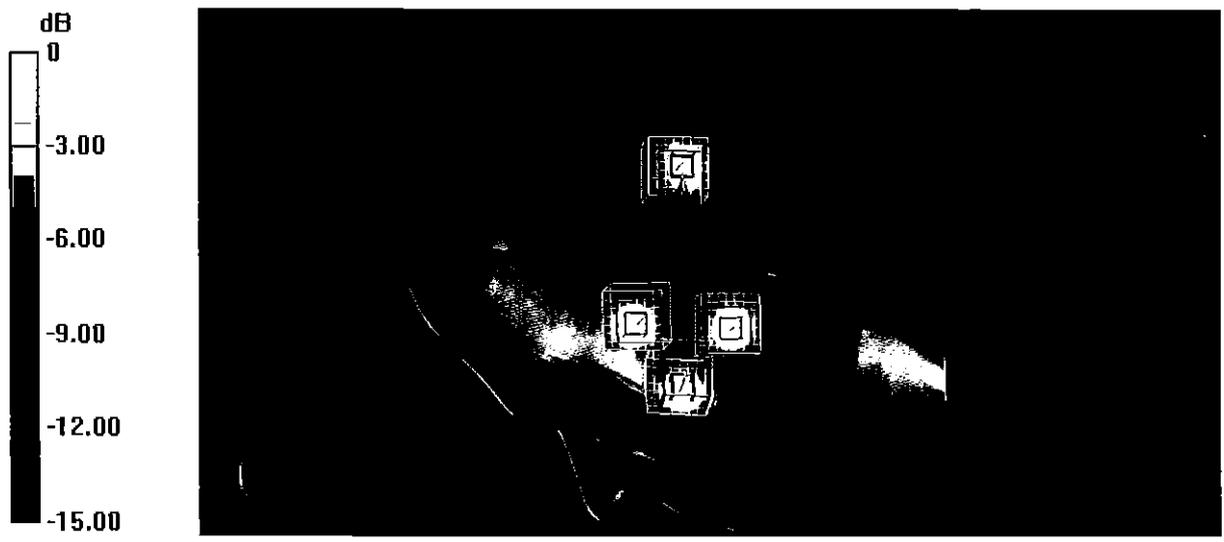
0 dB = 13.8 W/kg = 11.40 dBW/kg

Certification of Calibration

Object	D5GHzV2 – SN: 1057
Calibration procedure(s)	Procedure for Calibration Extension for SAR Dipoles.
Extension Calibration date:	1/16/2019
Description:	SAR Validation Dipole at 5250, 5600, and 5750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Network Analyzer	2/8/2018	Annual	2/8/2019	US39170122
Agilent	N5182A	MXG Vector Signal Generator	4/18/2018	Annual	4/18/2019	MY47420800
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1207364
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1339018
Anritsu	ML2495A	Power Meter	10/21/2018	Annual	10/21/2019	941001
Control Company	4040	Therm./Clock/Humidity Monitor	3/31/2017	Biennial	3/31/2019	170232394
Control Company	4352	Ultra Long Stem Thermometer	5/2/2017	Biennial	5/2/2019	170330156
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	6/4/2018	Annual	6/4/2019	MY53401181
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Seekonk	NC-100	Torque Wrench	7/11/2018	Annual	7/11/2019	N/A
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/3/2018	Annual	10/3/2019	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/18/2018	Annual	6/18/2019	1334
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2018	Annual	9/11/2019	1091
SPEAG	EX3DV4	SAR Probe	8/23/2018	Annual	8/23/2019	7308
SPEAG	EX3DV4	SAR Probe	6/25/2018	Annual	6/25/2019	7409

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Brodie Halbfoster	Test Engineer	*BRODIE HALBFOSTER*
Approved By:	Kaitlin O'Keefe	Senior Technical Manager	*KOK*

DIPOLE CALIBRATION EXTENSION

Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.
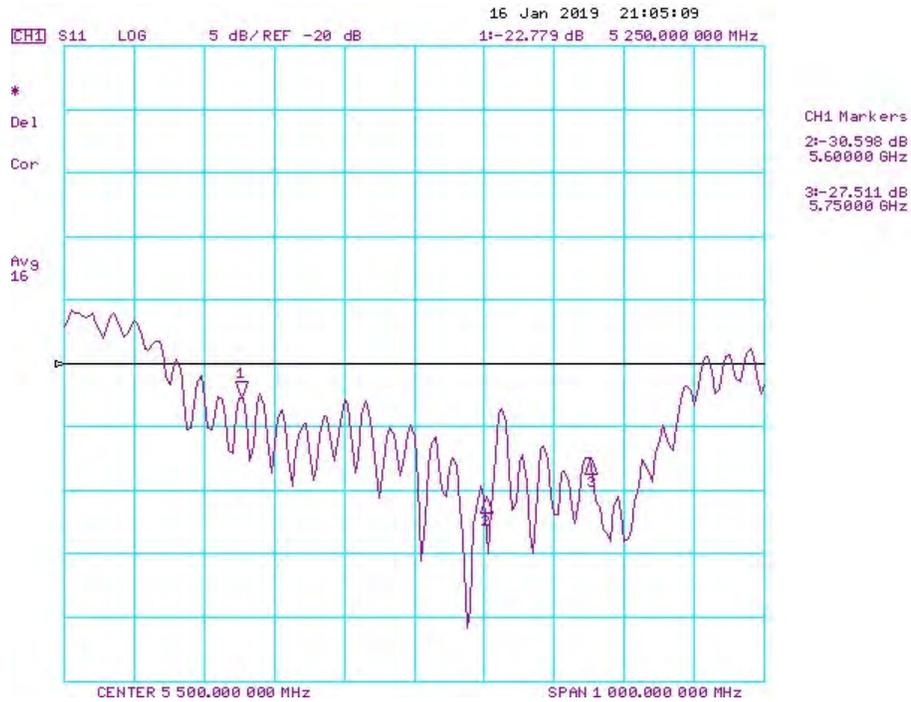
The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

Frequency (MHz)	Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 17.0 dBm	Measured Head SAR (1g) W/kg @ 17.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 17.0 dBm	Measured Head SAR (10g) W/kg @ 17.0 dBm	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
5250	1/16/2018	1/16/2019	1.203	3.96	3.63	-8.33%	1.14	1.04	-8.77%	50	47.6	2.4	-5.5	-6.7	1.2	-25.2	-22.8	9.60%	PASS
5600	1/16/2018	1/16/2019	1.203	4.205	3.84	-8.68%	1.2	1.09	-9.17%	54.7	52.5	2.2	-2.1	1.6	3.7	-26.2	-30.6	-16.80%	PASS
5750	1/16/2018	1/16/2019	1.203	4.025	3.76	-6.58%	1.15	1.07	-6.96%	52.7	54.4	1.7	0	0.1	0.1	-31.5	-27.5	12.70%	PASS
Frequency (MHz)	Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 17.0 dBm	Measured Body SAR (1g) W/kg @ 17.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 17.0 dBm	Measured Body SAR (10g) W/kg @ 17.0 dBm	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary	Measured Impedance Body (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
5250	1/16/2018	1/16/2019	1.203	3.795	3.73	-1.71%	1.06	1.03	-2.37%	48.4	45.9	2.5	-3.9	-4	0.1	-27.4	-24.5	10.50%	PASS
5600	1/16/2018	1/16/2019	1.203	3.995	4.06	1.63%	1.12	1.12	0.45%	55.3	51	4.3	-1.6	2.8	4.4	-25.6	-30.7	-20.00%	PASS
5750	1/16/2018	1/16/2019	1.203	3.835	3.65	-4.82%	1.06	1.02	-3.77%	52.6	52.9	0.3	1.1	0.6	0.5	-31.2	-30.7	1.60%	PASS

Impedance & Return-Loss Measurement Plot for Head TSL

16 Jan 2019 21:05:31

CH1 S11 1 U FS 1: 47.617 Ω −6.7051 Ω 4.5212 pF 5 250.000 000 MHz

*
Del

Cor

Avg
16

↑

CH1 Markers
2: 52.529 Ω
1.6055 Ω
5.60000 GHz

3: 54.420 Ω
0.1289 Ω
5.75000 GHz

CENTER 5 500.000 000 MHz   SPAN 1 000.000 000 MHz

16 Jan 2019 21:05:09

CH1 S11 LOG 5 dB/REF −20 dB 1:−22.779 dB 5 250.000 000 MHz

*
Del

Cor

Avg
16

CH1 Markers
2:−30.598 dB
5.60000 GHz

3:−27.511 dB
5.75000 GHz

CENTER 5 500.000 000 MHz   SPAN 1 000.000 000 MHz

Object:	Date Issued:	
D5GHzV2 – SN: 1057	01/16/2019	Page 3 of 4
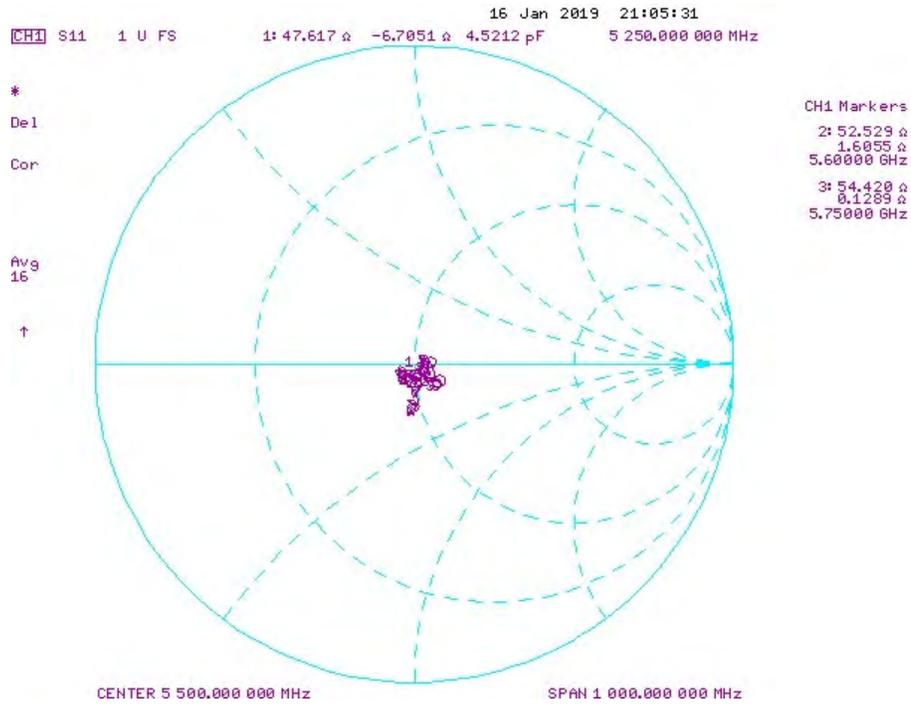
Impedance & Return-Loss Measurement Plot for Body TSL
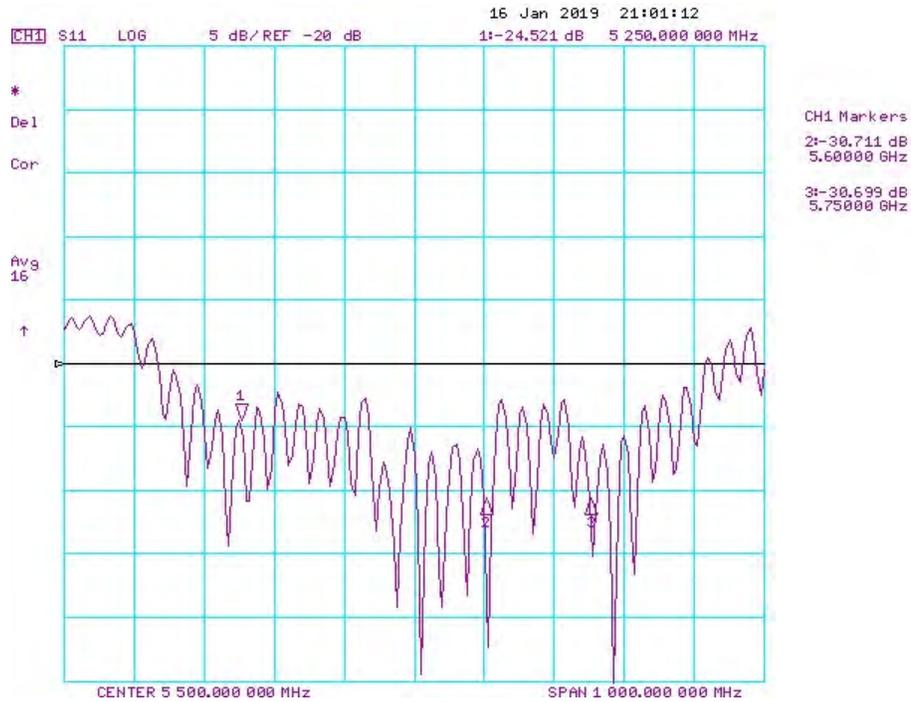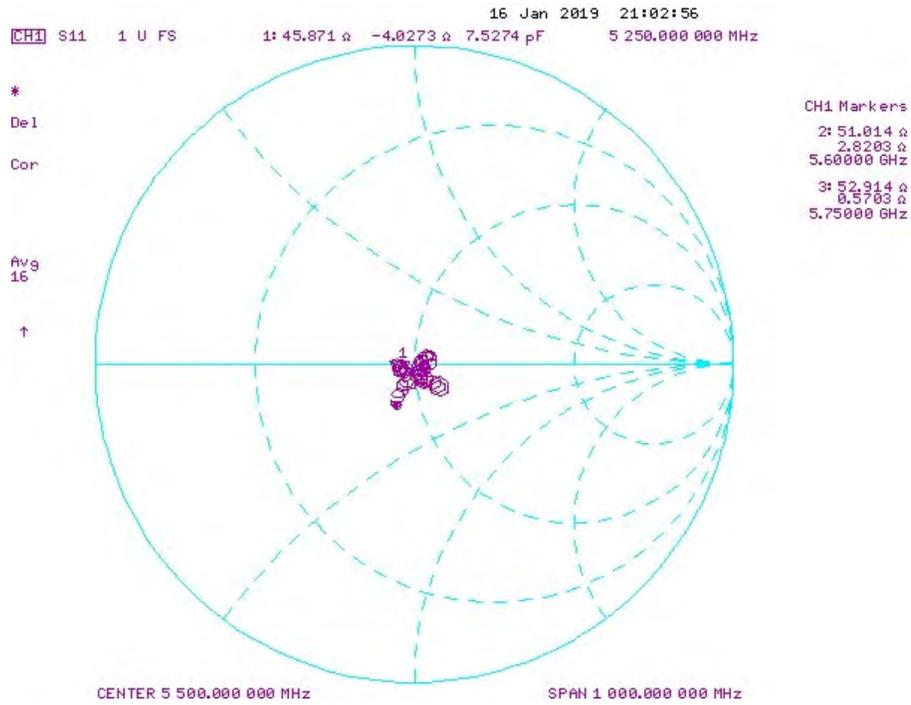
Certification of Calibration

Object	D5GHzV2 – SN: 1057
Calibration procedure(s)	Procedure for Calibration Extension for SAR Dipoles.
Extension Calibration date:	1/16/2020
Description:	SAR Validation Dipole at 5250, 5600, and 5750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Control Company	4040	Therm./Clock/Humidity Monitor	6/29/2019	Biennial	6/29/2021	192291470
Control Company	4352	Ultra Long Stem Thermometer	8/2/2018	Biennial	8/2/2020	181334684
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	7/2/2019	Annual	7/2/2020	MY53401181
Rohde & Schwarz	ZNLE6	Vector Network Analyzer	10/11/2019	Annual	10/11/2020	101307
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
SPEAG	DAKS-3.5	Portable DAK	9/10/2019	Annual	9/10/2020	1045
Anritsu	MA2411B	Pulse Power Sensor	8/14/2019	Annual	8/14/2020	1315051
Anritsu	MA2411B	Pulse Power Sensor	8/8/2019	Annual	8/8/2020	1339008
Anritsu	ML2495A	Power Meter	1/15/2020	Annual	1/15/2021	1328004
Agilent	N5182A	MXG Vector Signal Generator	8/19/2019	Annual	8/19/2020	MY47420837
Seekonk	NC-100	Torque Wrench	5/9/2018	Biennial	5/9/2020	22217
MiniCircuits	ZHDC-16-63-S+	Bidirectional Coupler	CBT	N/A	CBT	N/A
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
SPEAG	EX3DV4	SAR Probe	5/16/2019	Annual	5/16/2020	7406
SPEAG	EX3DV4	SAR Probe	6/19/2019	Annual	6/19/2020	7409
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/20/2019	Annual	6/20/2020	1334
SPEAG	DAE4	Dasy Data Acquisition Electronics	5/8/2019	Annual	5/8/2020	728

Measurement Uncertainty = ±23% (k=2)

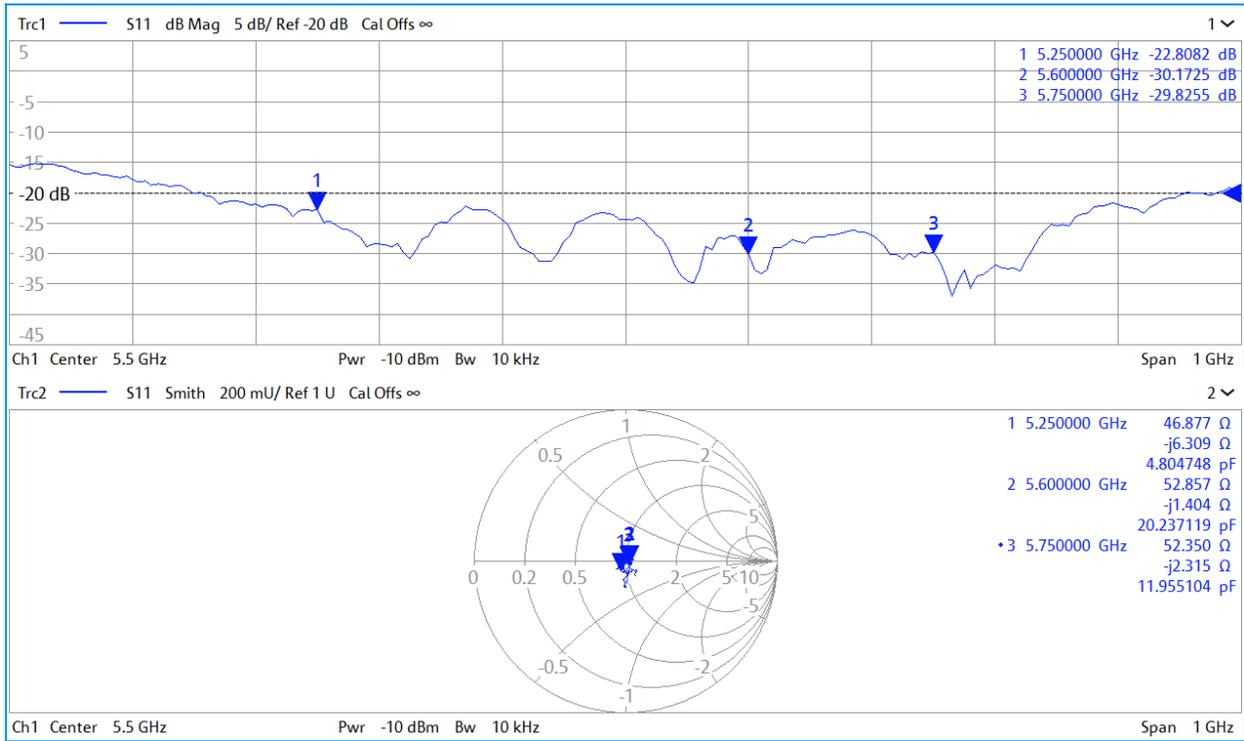|	Name	Function	Signature
Calibrated By:	Brodie Halbfoster	Test Engineer	*BRODIE HALBFOSTER*
Approved By:	Kaitlin O'Keefe	Senior Technical Manager	

DIPOLE CALIBRATION EXTENSION

Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.
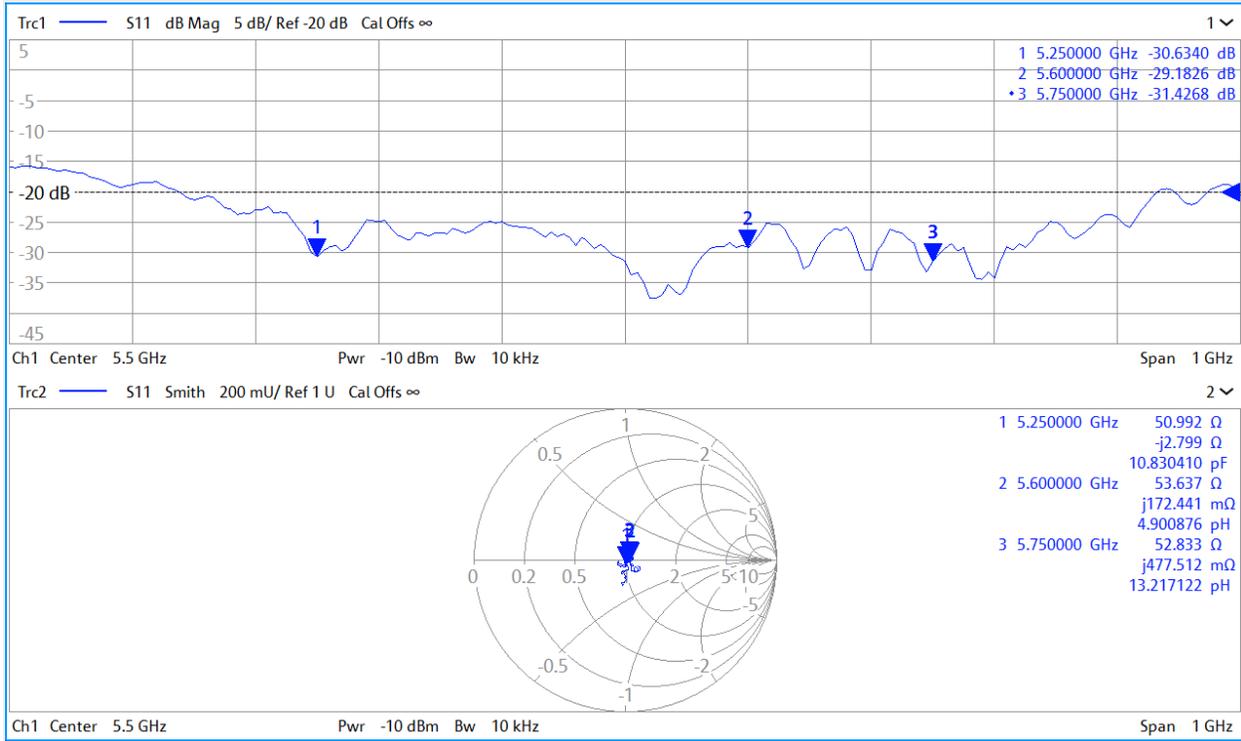
The following dipole was checked to pass the above 3 requirements to have 3-year calibration period from the calibration date:

Frequency (MHz)	Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 17.0 dBm	Measured Head SAR (1g) W/kg @ 17.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 17.0 dBm	Measured Head SAR (10g) W/kg @ 17.0 dBm	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
5250	1/16/2018	1/16/2020	1.203	3.96	3.72	-6.06%	1.14	1.05	-7.89%	50	46.9	3.1	-5.5	-6.3	0.8	-25.2	-22.8	9.50%	PASS
5600	1/16/2018	1/16/2020	1.203	4.205	3.91	-7.02%	1.2	1.11	-7.50%	54.7	52.9	1.8	-2.1	-1.4	0.7	-26.2	-30.2	-15.20%	PASS
5750	1/16/2018	1/16/2020	1.203	4.025	3.72	-7.58%	1.15	1.05	-8.70%	52.7	52.4	0.4	0	-2.3	2.3	-31.5	-29.8	5.30%	PASS

Frequency (MHz)	Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 17.0 dBm	Measured Body SAR (1g) W/kg @ 17.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 17.0 dBm	Measured Body SAR (10g) W/kg @ 17.0 dBm	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary	Measured Impedance Body (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
5250	1/16/2018	1/16/2020	1.203	3.795	3.75	-1.19%	1.06	1.04	-1.42%	48.4	51	2.6	-3.9	-2.8	1.1	-27.4	-30.6	-11.80%	PASS
5600	1/16/2018	1/16/2020	1.203	3.995	3.98	-0.38%	1.12	1.1	-1.35%	55.3	53.6	1.7	-1.6	0.2	1.8	-25.6	-29.2	-14.00%	PASS
5750	1/16/2018	1/16/2020	1.203	3.835	3.87	0.91%	1.06	1.06	0.00%	52.6	52.8	0.2	1.1	0.5	0.6	-31.2	-31.4	-0.20%	PASS

Impedance & Return-Loss Measurement Plot for Head TSL

Trc1 ——— S11 dB Mag 5 dB/ Ref -20 dB Cal Offs ∞   1 ⌄

5								1 5.250000 GHz -22.8082 dB
								2 5.600000 GHz -30.1725 dB
-5								3 5.750000 GHz -29.8255 dB
-10								

Ch1 Center 5.5 GHz   Pwr -10 dBm Bw 10 kHz   Span 1 GHz

Trc2 ——— S11 Smith 200 mU/ Ref 1 U Cal Offs ∞   2 ⌄

1 5.250000 GHz   46.877 Ω
                       -j6.309 Ω
                       4.804748 pF
2 5.600000 GHz   52.857 Ω
                       -j1.404 Ω
                       20.237119 pF
• 3 5.750000 GHz   52.350 Ω
                       -j2.315 Ω
                       11.955104 pF

Ch1 Center 5.5 GHz   Pwr -10 dBm Bw 10 kHz   Span 1 GHz

Impedance & Return-Loss Measurement Plot for Body TSL

Trc1 ——— S11 dB Mag 5 dB/ Ref -20 dB Cal Offs ∞	1 ∨

1	5.250000 GHz -30.6340 dB
2	5.600000 GHz -29.1826 dB
• 3	5.750000 GHz -31.4268 dB

Ch1 Center 5.5 GHz   Pwr -10 dBm   Bw 10 kHz   Span 1 GHz

Trc2 ——— S11 Smith 200 mU/ Ref 1 U Cal Offs ∞	2 ∨

1	5.250000 GHz	50.992 Ω
		-j2.799 Ω
		10.830410 pF
2	5.600000 GHz	53.637 Ω
		j172.441 mΩ
		4.900876 pH
3	5.750000 GHz	52.833 Ω
		j477.512 mΩ
		13.217122 pH

Ch1 Center 5.5 GHz   Pwr -10 dBm   Bw 10 kHz   Span 1 GHz

Object:	Date Issued:	
D5GHzV2 – SN: 1057	01/16/2020	Page 4 of 4

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S Swiss Calibration Service

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The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client   **PC Test**

Certificate No: **D750V3-1003_Mar20**

CALIBRATION CERTIFICATE

Object	**D750V3 - SN:1003**
Calibration procedure(s)	**QA CAL-05.v11** **Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**
Calibration date:	**March 16, 2020**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-19 (No. 217-02894)	Apr-20
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-19 (No. 217-02895)	Apr-20
Reference Probe EX3DV4	SN: 7349	31-Dec-19 (No. EX3-7349_Dec19)	Dec-20
DAE4	SN: 601	27-Dec-19 (No. DAE4-601_Dec19)	Dec-20

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-19)	In house check: Oct-20

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: March 16, 2020

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016

c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.5 ± 6 %	0.88 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.17 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.78 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.43 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.77 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.7 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.16 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	8.61 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.42 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	5.67 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.9 Ω - 0.1 jΩ
Return Loss	- 26.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	51.8 Ω - 2.4 jΩ
Return Loss	- 30.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.043 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

Test Laboratory: SPEAG, Zurich, Switzerland

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

Communication System: UID 0 - CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.88 S/m; ε_r = 42.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.07, 10.07, 10.07) @ 750 MHz; Calibrated: 31.12.2019

- Sensor-Surface: 1.4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn601; Calibrated: 27.12.2019

- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001

- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
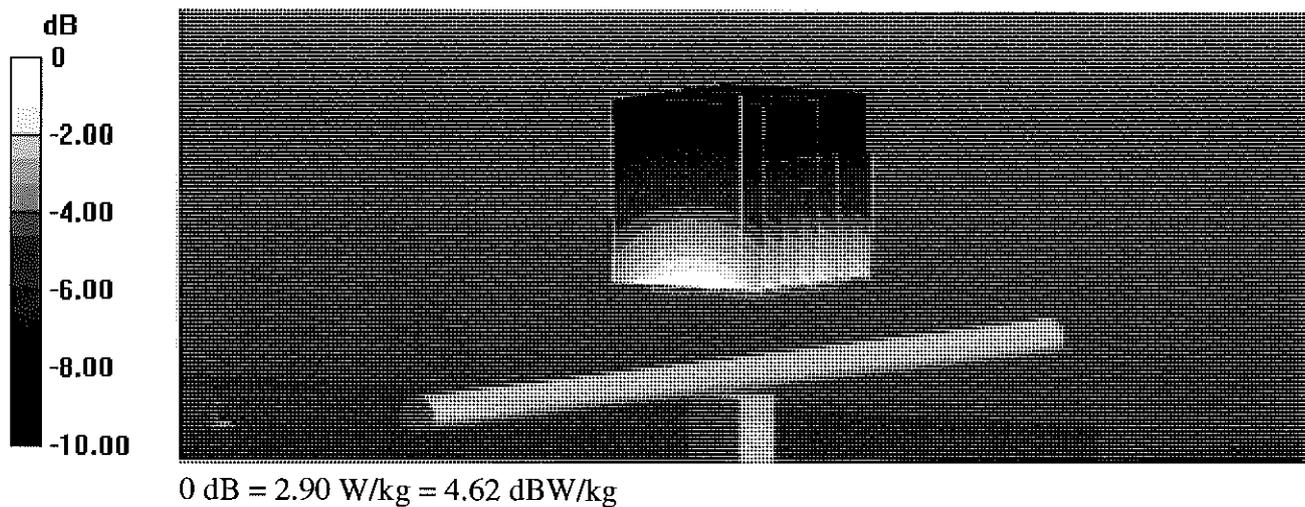Reference Value = 60.72 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.27 W/kg
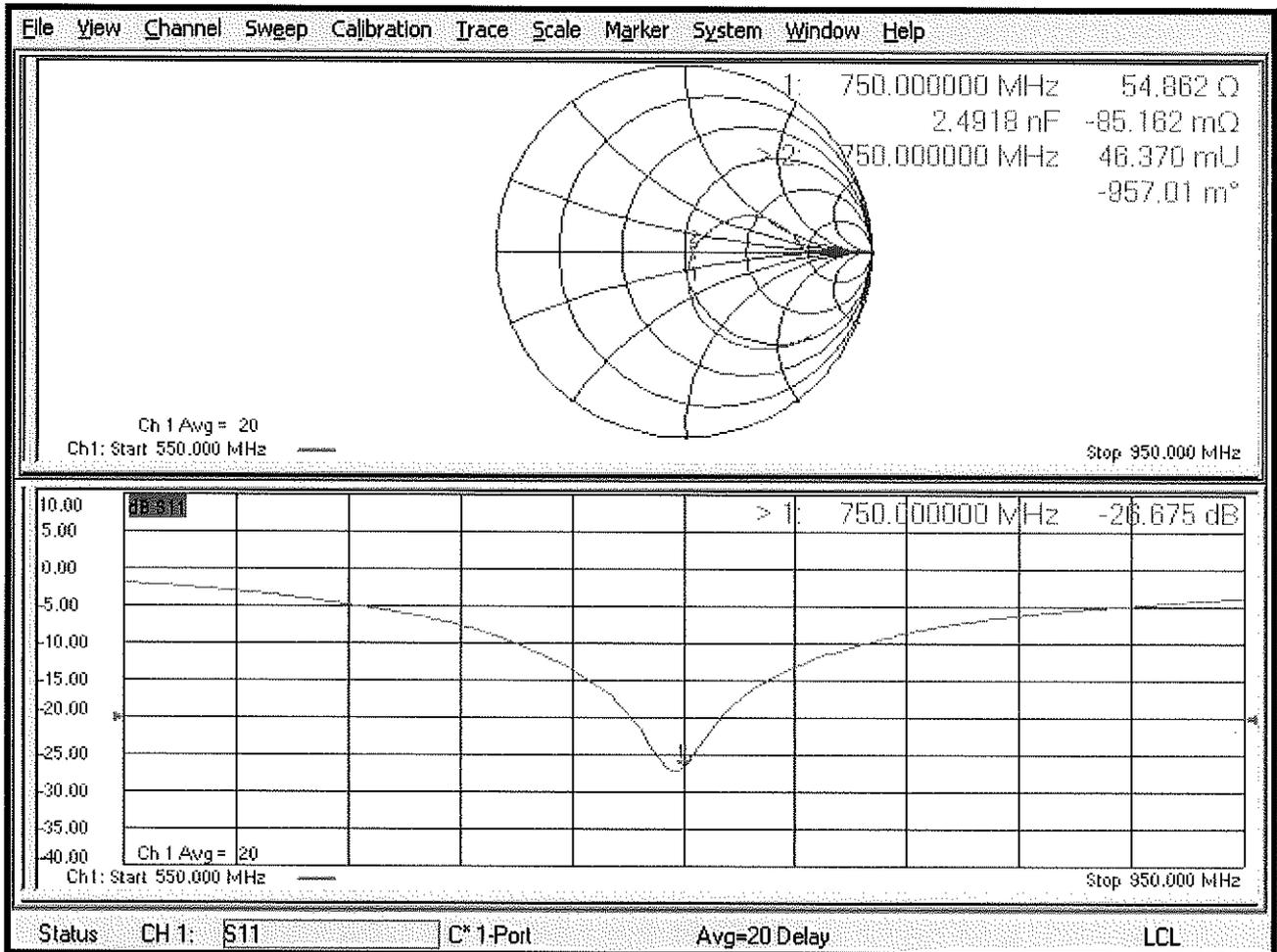**SAR(1 g) = 2.17 W/kg; SAR(10 g) = 1.43 W/kg**
Smallest distance from peaks to all points 3 dB below = 16.5 mm
Ratio of SAR at M2 to SAR at M1 = 66.2%
Maximum value of SAR (measured) = 2.90 W/kg

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

Impedance Measurement Plot for Head TSL

DASY5 Validation Report for Body TSL

Test Laboratory: SPEAG, Zurich, Switzerland

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

Communication System: UID 0 - CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.96 S/m; ε_r = 54.7; ρ = 1000 kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.61, 10.61, 10.61) @ 750 MHz; Calibrated: 31.12.2019

- Sensor-Surface: 1.4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn601; Calibrated: 27.12.2019

- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005

- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
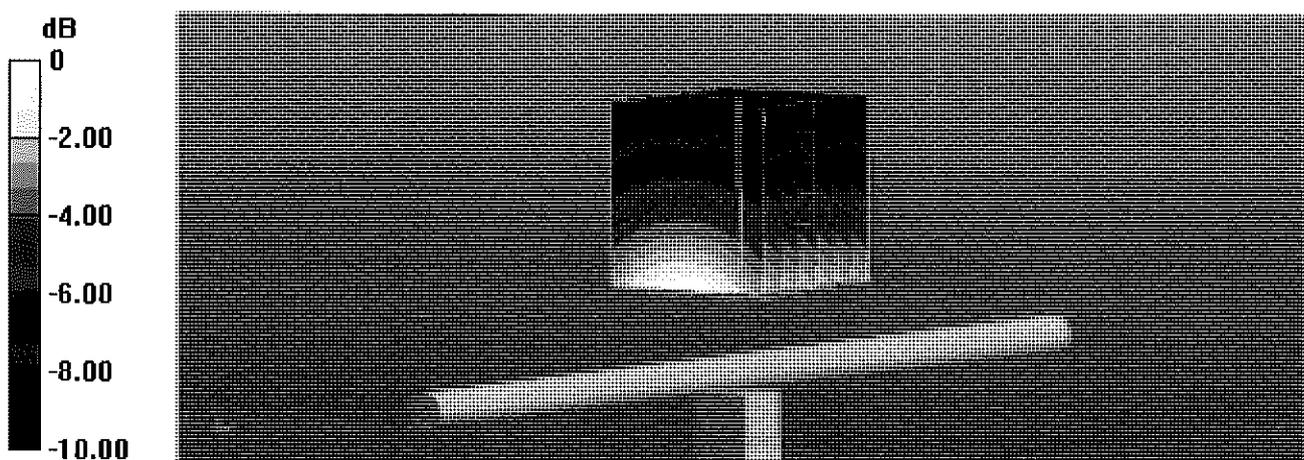Reference Value = 57.60 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 3.23 W/kg
SAR(1 g) = 2.16 W/kg; SAR(10 g) = 1.42 W/kg
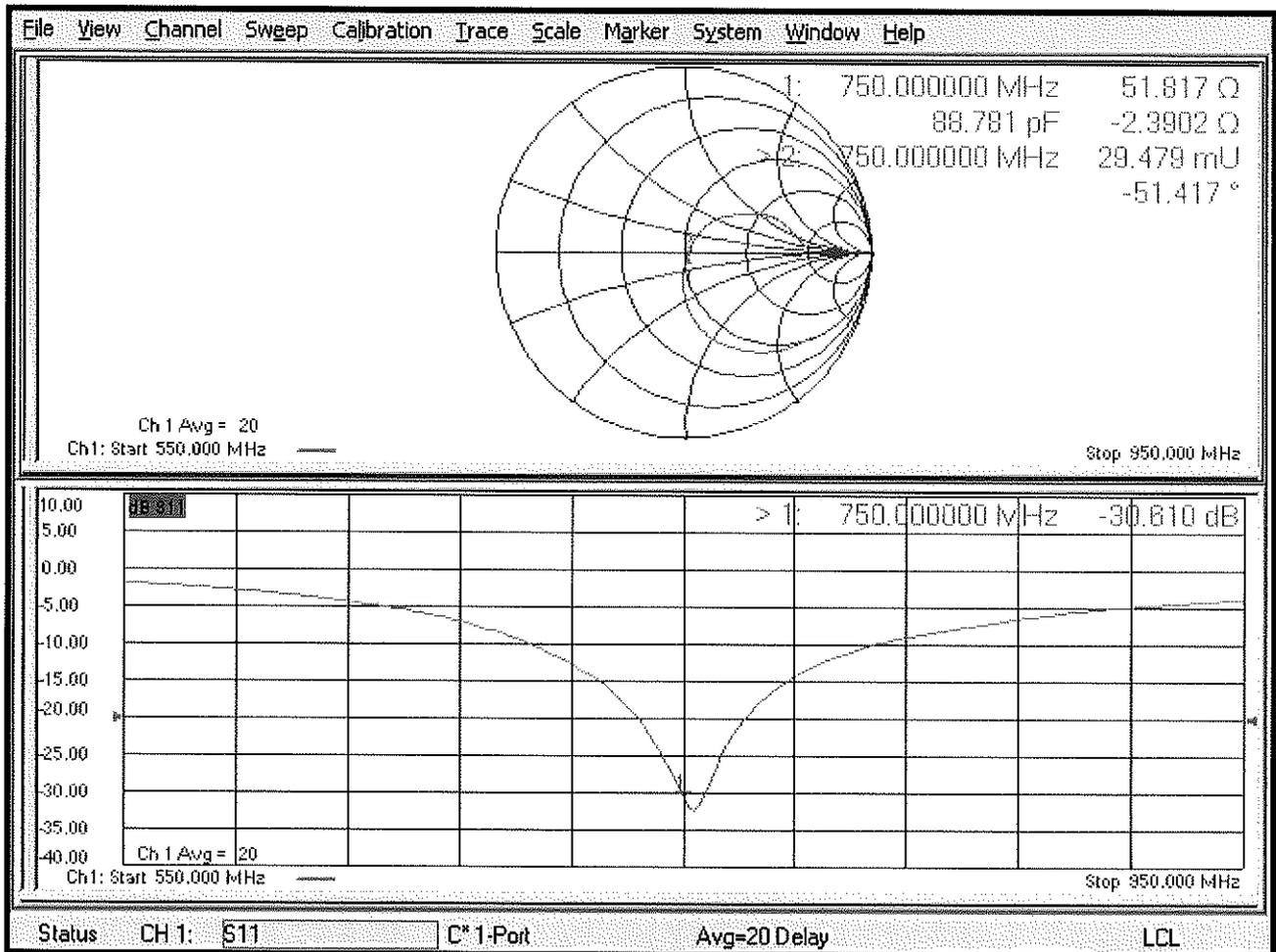Smallest distance from peaks to all points 3 dB below = 21.2 mm
Ratio of SAR at M2 to SAR at M1 = 66.6%
Maximum value of SAR (measured) = 2.87 W/kg

0 dB = 2.87 W/kg = 4.58 dBW/kg

Impedance Measurement Plot for Body TSL

Calibration Laboratory of
Schmid & Partner
  Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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C Service suisse d'étalonnage
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S Swiss Calibration Service

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The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client   **PC Test**

Certificate No: **D750V3-1054_Mar20**

CALIBRATION CERTIFICATE

Object	**D750V3 - SN:1054**
Calibration procedure(s)	**QA CAL-05.v11** **Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**
Calibration date:	**March 11, 2020**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-19 (No. 217-02894)	Apr-20
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-19 (No. 217-02895)	Apr-20
Reference Probe EX3DV4	SN: 7349	31-Dec-19 (No. EX3-7349_Dec19)	Dec-20
DAE4	SN: 601	27-Dec-19 (No. DAE4-601_Dec19)	Dec-20

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Feb-19)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-19)	In house check: Oct-20

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: March 19, 2020

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

		S	Schweizerischer Kalibrierdienst
		C	Service suisse d'étalonnage
			Servizio svizzero di taratura
		S	Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)   Accreditation No.: **SCS 0108**
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016

c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.

- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.

- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.

- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.

- *SAR measured:* SAR measured at the stated antenna input power.

- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.

- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.5 ± 6 %	0.88 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.13 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**8.63 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**5.69 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.7 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.14 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**8.53 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.41 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**5.63 W/kg ± 16.5 % (k=2)**

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	53.6 Ω - 1.9 jΩ
Return Loss	- 28.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.8 Ω - 4.7 jΩ
Return Loss	- 26.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.035 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1054

Communication System: UID 0 - CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.88 S/m; $ε_r$ = 42.5; ρ = 1000 kg/m³
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.07, 10.07, 10.07) @ 750 MHz; Calibrated: 31.12.2019

- Sensor-Surface: 1.4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn601; Calibrated: 27.12.2019

- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001

- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
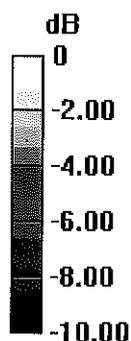Reference Value = 59.98 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.19 W/kg
SAR(1 g) = 2.13 W/kg; SAR(10 g) = 1.41 W/kg
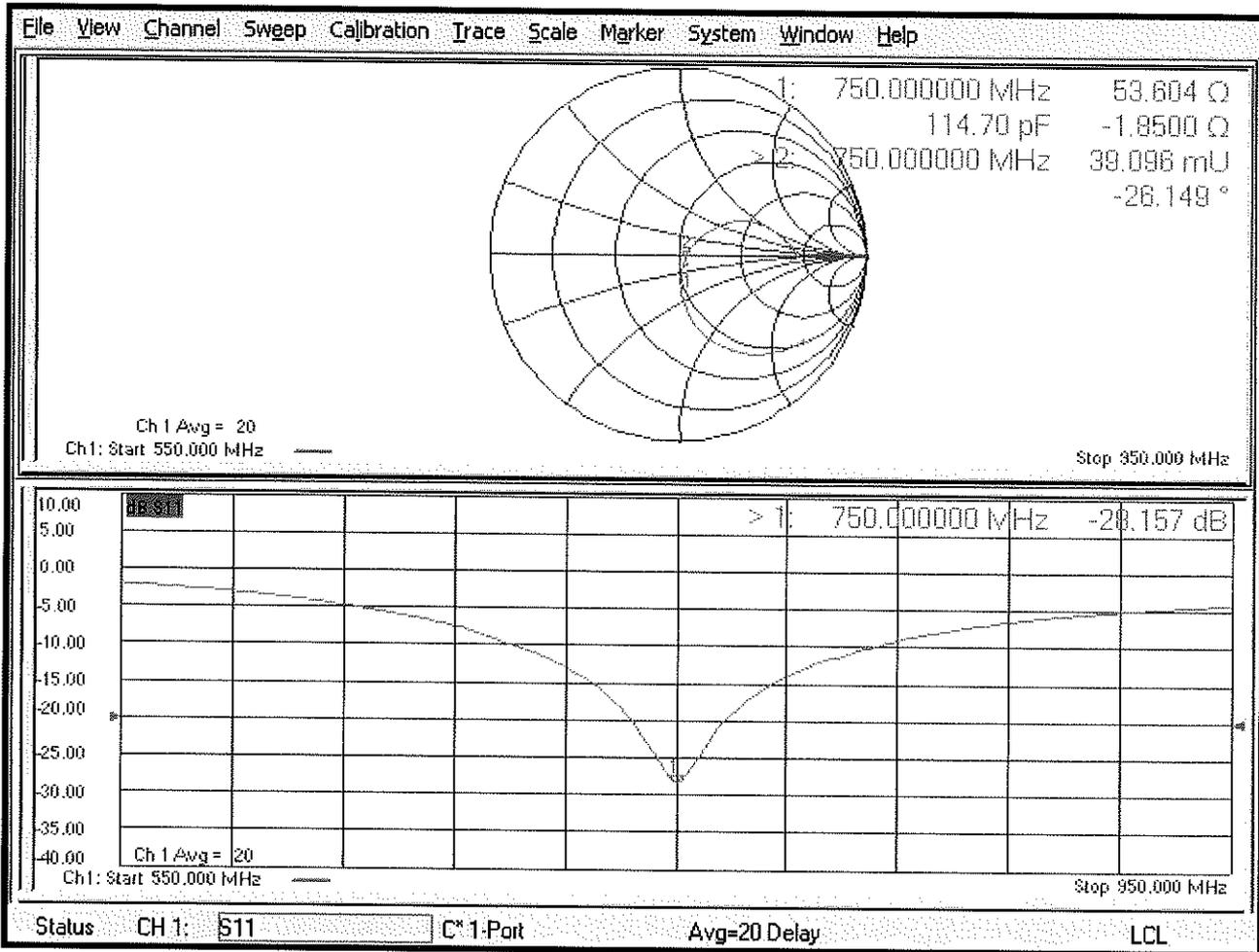Smallest distance from peaks to all points 3 dB below = 17.1 mm
Ratio of SAR at M2 to SAR at M1 = 66.8%
Maximum value of SAR (measured) = 2.82 W/kg
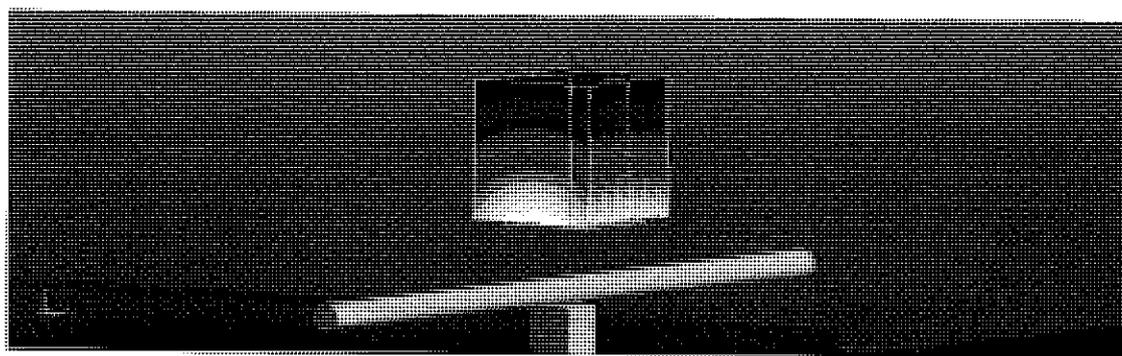
0 dB = 2.82 W/kg = 4.50 dBW/kg

Impedance Measurement Plot for Head TSL

DASY5 Validation Report for Body TSL

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1054

Communication System: UID 0 - CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.96 S/m; ε_r = 54.7; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.61, 10.61, 10.61) @ 750 MHz; Calibrated: 31.12.2019

- Sensor-Surface: 1.4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn601; Calibrated: 27.12.2019

- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005

- DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
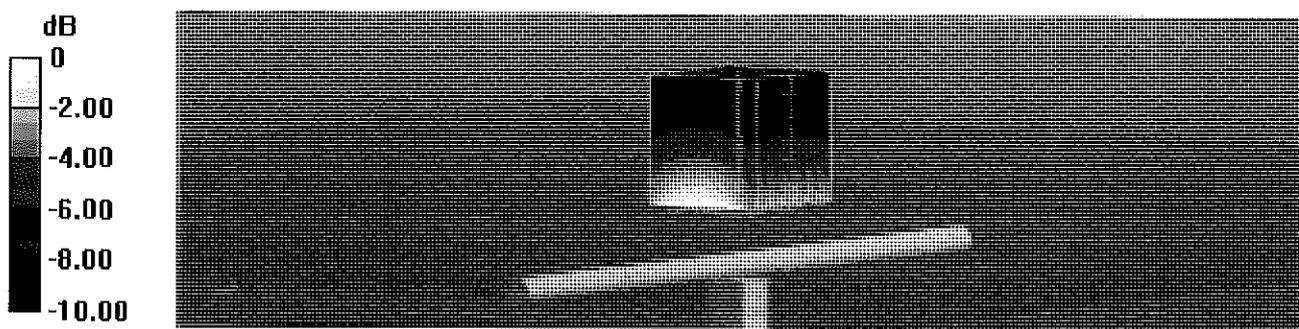Reference Value = 56.15 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.22 W/kg
SAR(1 g) = 2.14 W/kg; SAR(10 g) = 1.41 W/kg
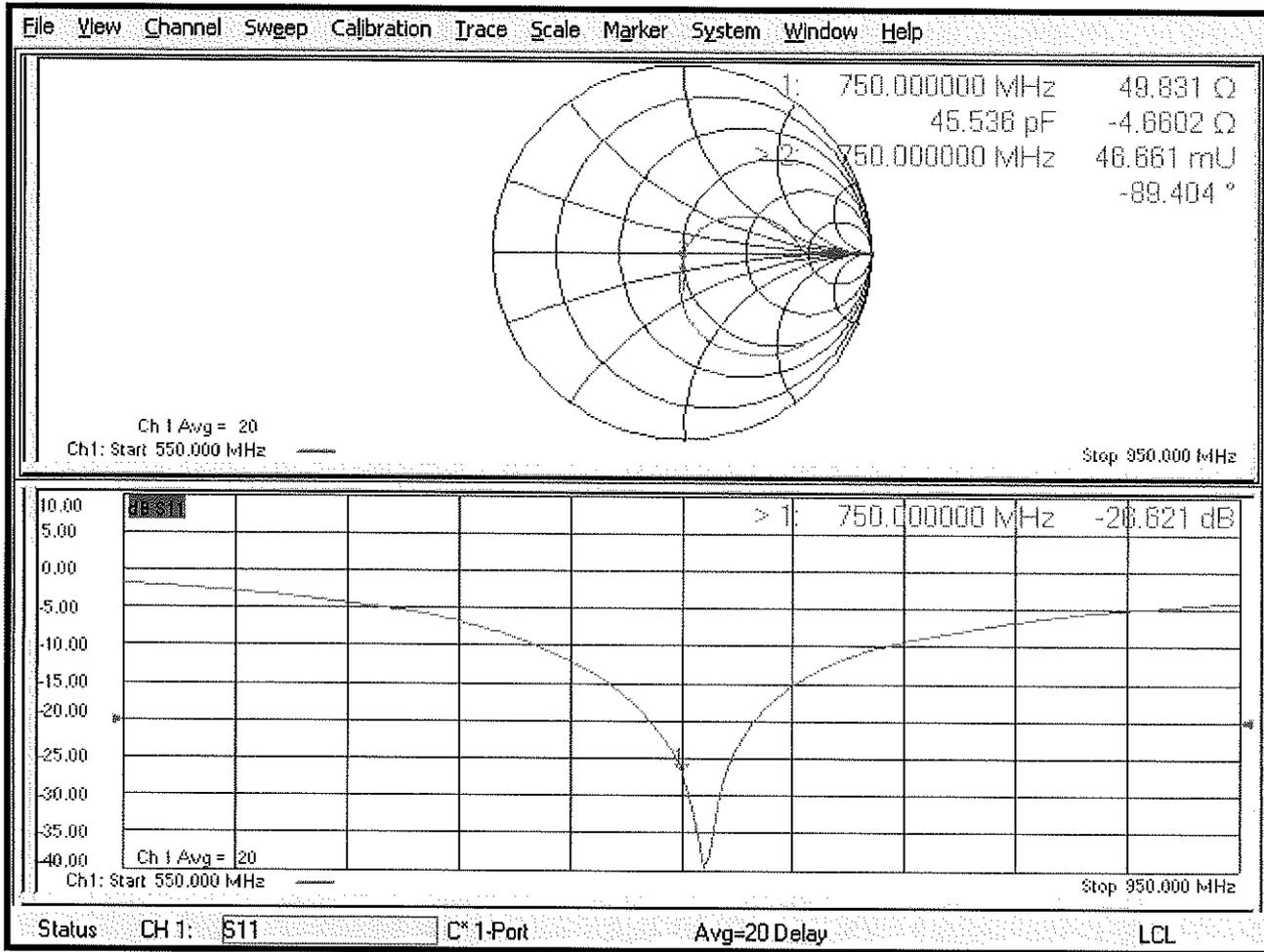Smallest distance from peaks to all points 3 dB below = 16.1 mm
Ratio of SAR at M2 to SAR at M1 = 66.7%
Maximum value of SAR (measured) = 2.85 W/kg

0 dB = 2.85 W/kg = 4.55 dBW/kg

Impedance Measurement Plot for Body TSL

Appendix: Transfer Calibration at Four Validation Locations on SAM Head[1]

Evaluation Condition

Phantom	SAM Head Phantom	For usage with cSAR3DV2-R/L

SAR result with SAM Head (Top ≅ C0)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR for nominal Head TSL parameters	normalized to 1W	7.66 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR for nominal Head TSL parameters	normalized to 1W	5.14 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Mouth ≅ F90)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR for nominal Head TSL parameters	normalized to 1W	8.42 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR for nominal Head TSL parameters	normalized to 1W	5.69 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Neck ≅ H0)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR for nominal Head TSL parameters	normalized to 1W	7.89 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR for nominal Head TSL parameters	normalized to 1W	5.40 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Ear ≅ D90)

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR for nominal Head TSL parameters	normalized to 1W	6.82 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR for nominal Head TSL parameters	normalized to 1W	4.63 W/kg ± 16.9 % (k=2)

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[1] Additional assessments outside the current scope of SCS 0108