Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.10

System Check_Body_5600MHz

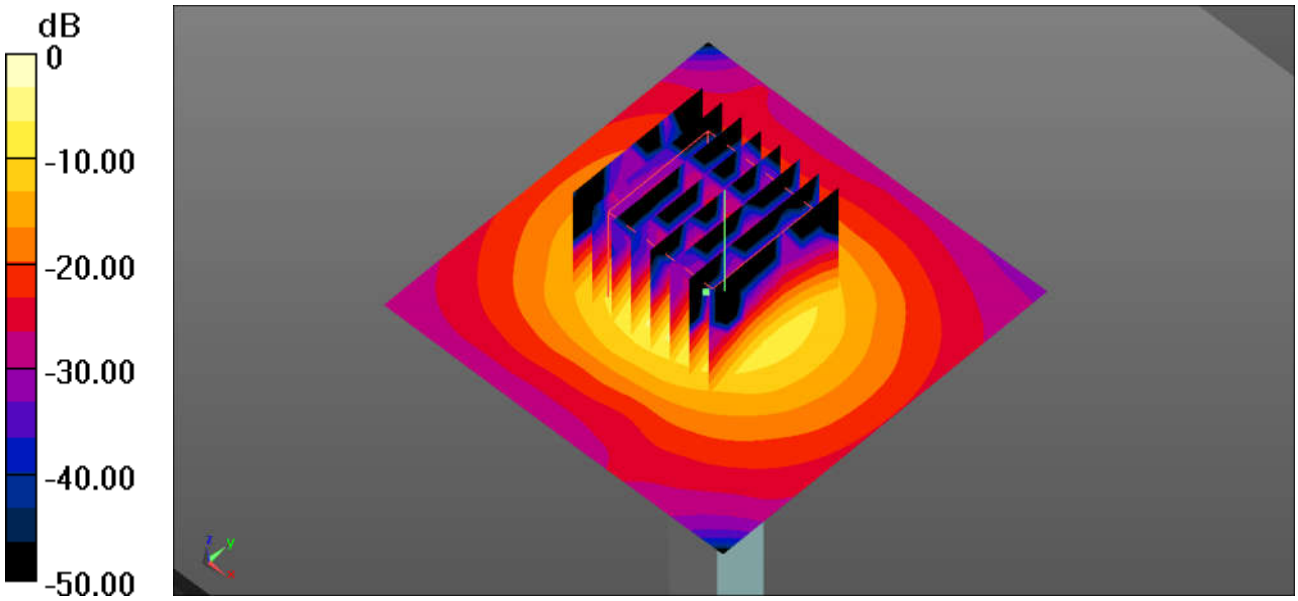
DUT: D5GHzV2-SN:1006

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: MSL_5000 3 Medium parameters used: f = 5600 MHz; σ = 5.954 S/m; ε_r = 47.367; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(3.98, 3.98, 3.98); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.9 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 40.11 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 35.2 W/kg
SAR(1 g) = 8.13 W/kg; SAR(10 g) = 2.28 W/kg
Maximum value of SAR (measured) = 20.1 W/kg



0 dB = 20.1 W/kg = 13.03 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.10

System Check_Body_5750MHz

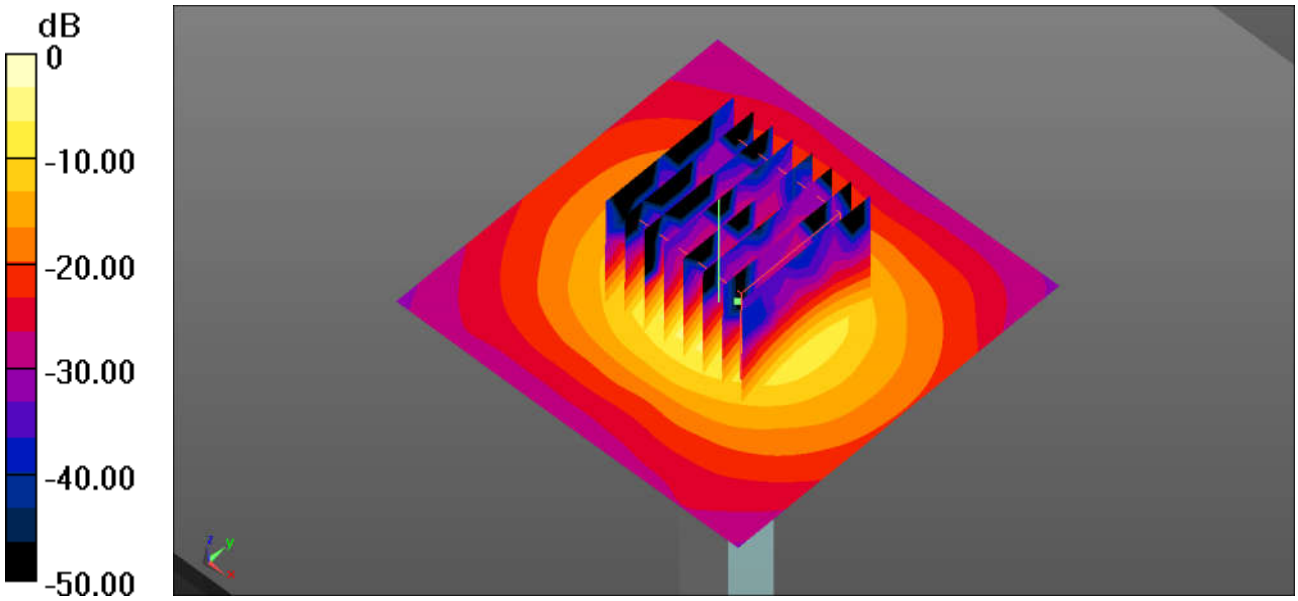
DUT: D5GHzV2-SN:1006

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: MSL_5000 Medium parameters used: f = 5750 MHz; σ = 6.212 S/m; ε_r = 46.182; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(4.31, 4.31, 4.31); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.1 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 36.85 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 33.9 W/kg
SAR(1 g) = 7.51 W/kg; SAR(10 g) = 2.11 W/kg
Maximum value of SAR (measured) = 18.2 W/kg



0 dB = 18.2 W/kg = 12.60 dBW/kg

Appendix B. Plots of High SAR Measurement

The plots are shown as follows.

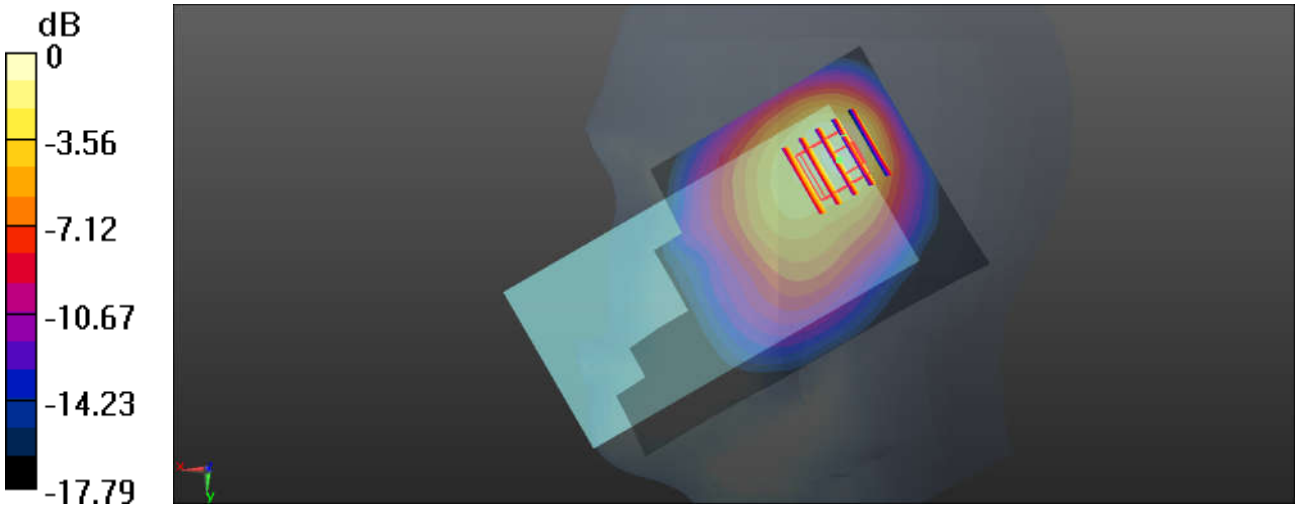
01_GSM 850_GPRS (4 Tx slots)_Right Cheek_0mm_UAT_Ch251

Communication System: UID 0, GPRS/EDGE (4 Tx slots) (0); Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium: HSL_835 Medium parameters used: f = 848.8 MHz; σ = 0.928 S/m; ε_r = 42.597; ρ = 1000kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.51, 9.51, 9.51); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM3; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch251/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.438 W/kg

Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.28 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.702 W/kg
SAR(1 g) = 0.322 W/kg; SAR(10 g) = 0.203 W/kg
Maximum value of SAR (measured) = 0.523 W/kg



0 dB = 0.523 W/kg = -2.81 dBW/kg

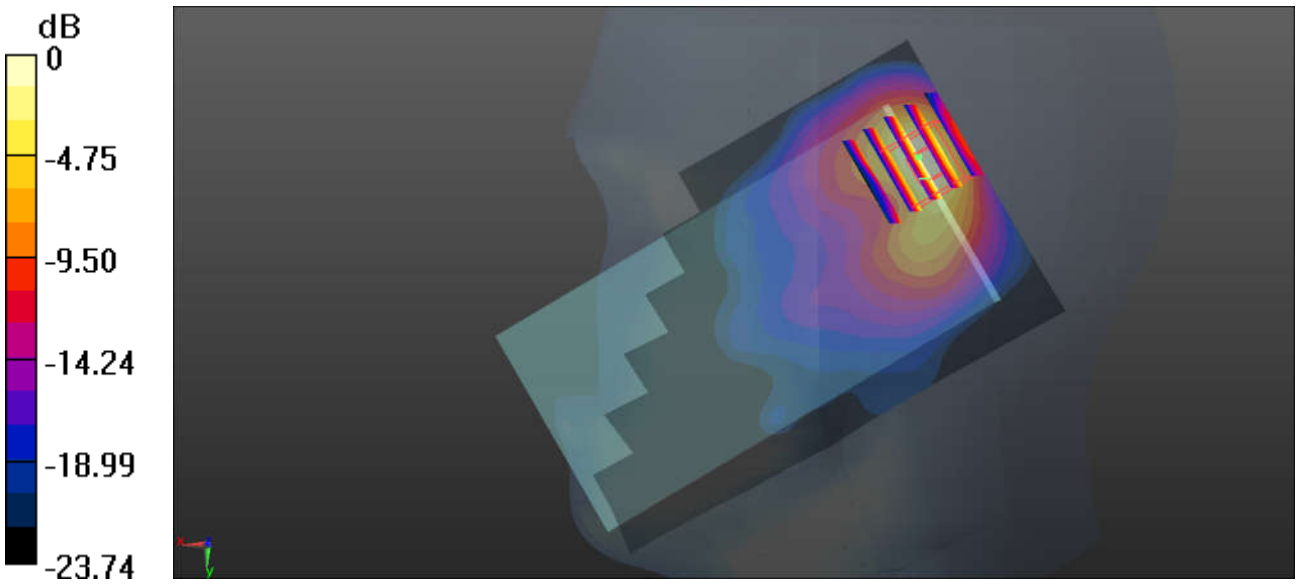
02_GSM 1900_GPRS 4 Tx slots_Right Tilted_0mm_UAT_Ch512

Communication System: UID 0, GPRS/EDGE (4 Tx slots) (0); Frequency: 1850.2 MHz;Duty Cycle: 1:2.0797
Medium: HSL_1900 Medium parameters used: f = 1850.2 MHz; σ = 1.374 S/m; ε_r =41.32; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.04, 8.04, 8.04); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM2; Type: SAM; Serial: TP-1644
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch512/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.936 W/kg

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.38 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.26 W/kg
SAR(1 g) = 0.585 W/kg; SAR(10 g) = 0.254 W/kg
Maximum value of SAR (measured) = 1.03 W/kg



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

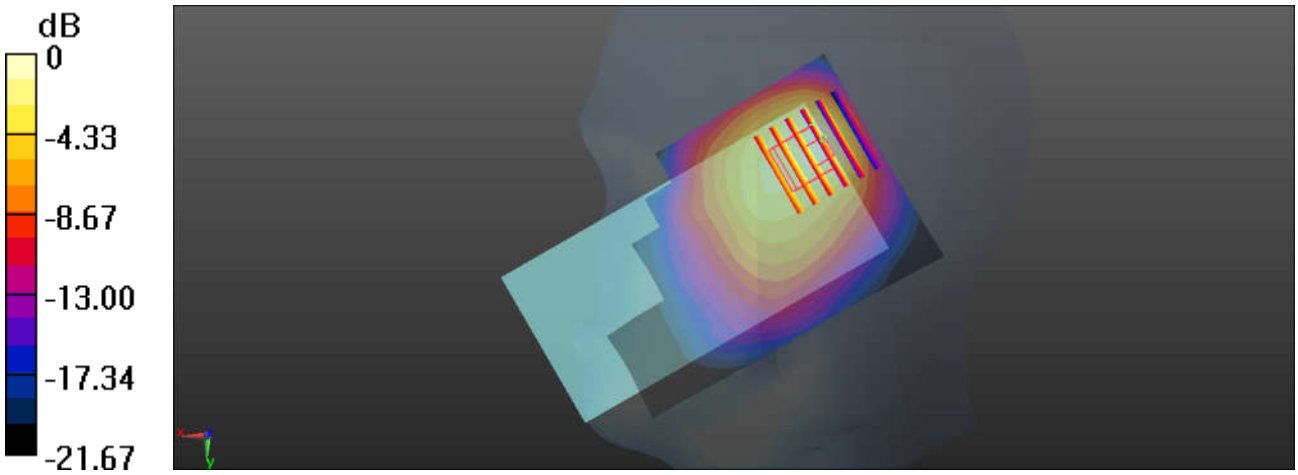
03_WCDMA V_RMC 12.2Kbps_Right Cheek_0mm_UAT_Ch4233

Communication System: UID 0, UMTS (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 846.6 MHz; σ = 0.926 S/m; ε_r = 42.625; ρ = 1000kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.51, 9.51, 9.51); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM3; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch4233/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.387 W/kg

Ch4233/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.06 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.544 W/kg
SAR(1 g) = 0.248 W/kg; SAR(10 g) = 0.157 W/kg
Maximum value of SAR (measured) = 0.409 W/kg



0 dB = 0.409 W/kg = -3.88 dBW/kg

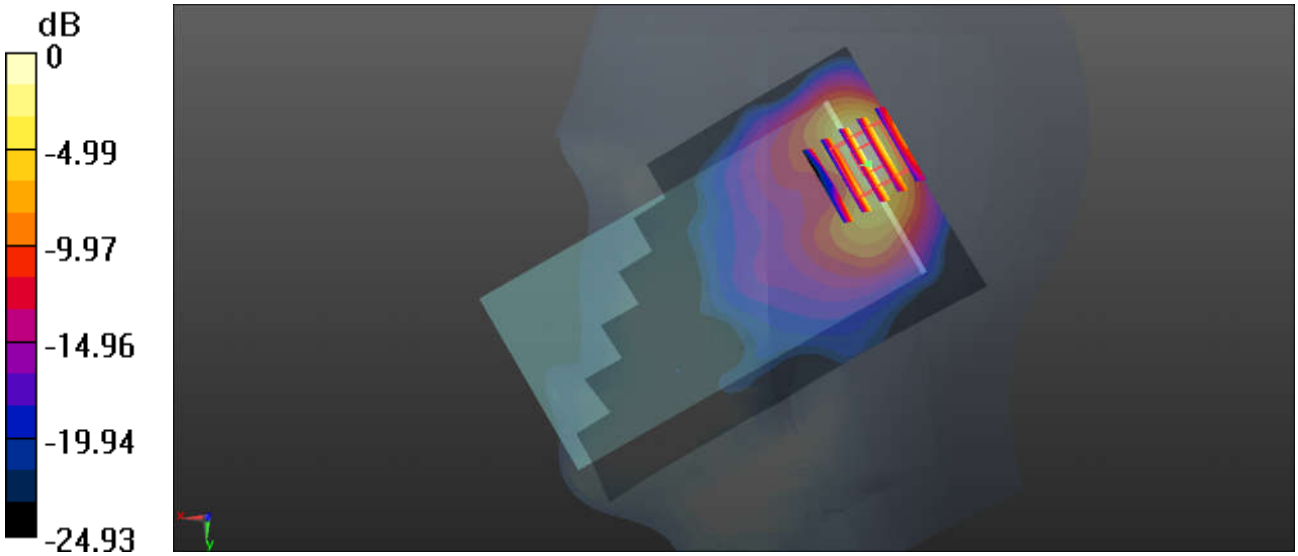
04_WCDMA IV_RMC 12.2Kbps_Right Tilted_0mm_UAT_Ch1413

Communication System: UID 0, UMTS (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1732.6 MHz; σ = 1.335 S/m; ε_r = 40.703; ρ = 1000kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.29, 8.29, 8.29); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM2; Type: SAM; Serial: TP-1644
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1413/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.847 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.87 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.474 W/kg; SAR(10 g) = 0.208 W/kg
Maximum value of SAR (measured) = 0.873 W/kg



0 dB = 0.873 W/kg = -0.59 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.6

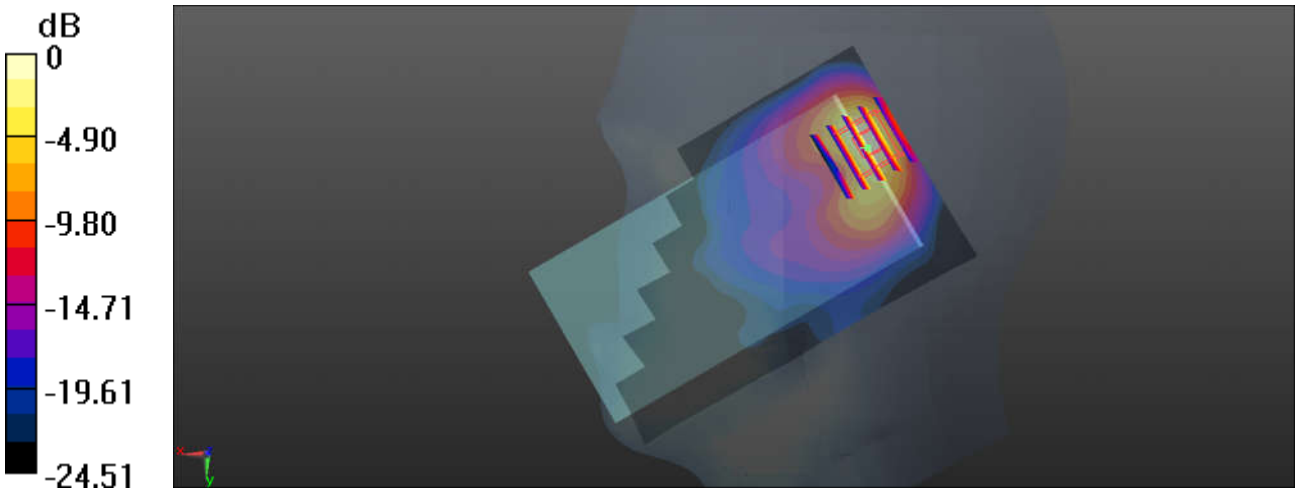
05_WCDMA II_RMC 12.2Kbps_Right Tilted_0mm_UAT_Ch9262

Communication System: UID 0, UMTS (0); Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1852.4 MHz; σ = 1.377 S/m; ε_r = 41.314; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.04, 8.04, 8.04); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM2; Type: SAM; Serial: TP-1644
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9262/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.04 W/kg

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.35 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 0.658 W/kg; SAR(10 g) = 0.283 W/kg
Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.23 W/kg = 0.90 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.4

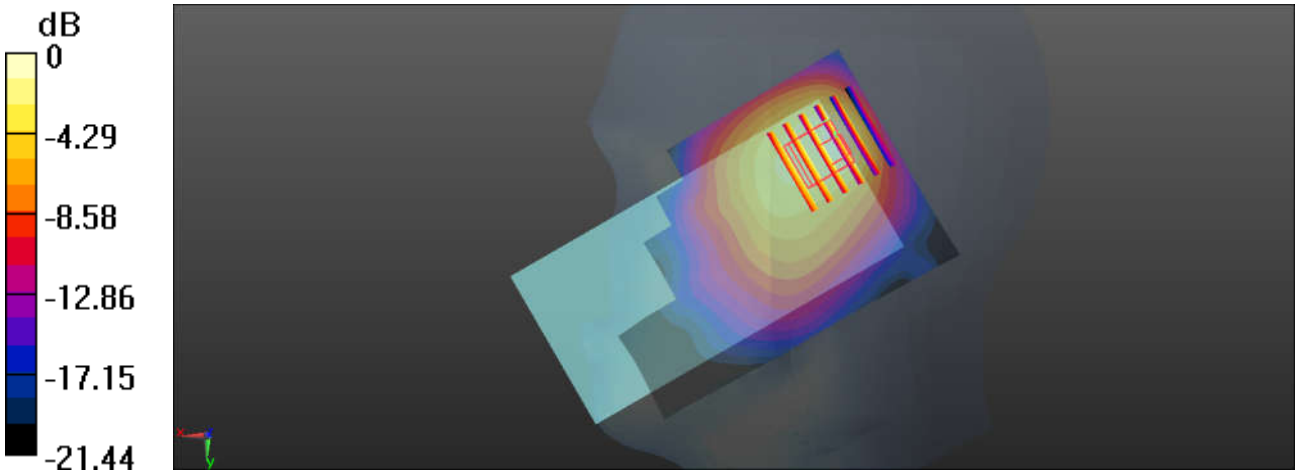
06_LTE Band 5_10M_QPSK_1RB_0Offset_Right Cheek_0mm_UAT_Ch20525

Communication System: UID 0, FDD_LTE (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 836.5 MHz; σ = 0.916 S/m; ε_r = 42.751; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.51, 9.51, 9.51); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM3; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20525/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.336 W/kg

Ch20525/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.66 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.479 W/kg
SAR(1 g) = 0.211 W/kg; SAR(10 g) = 0.133 W/kg
Maximum value of SAR (measured) = 0.359 W/kg



0 dB = 0.359 W/kg = -4.45 dBW/kg

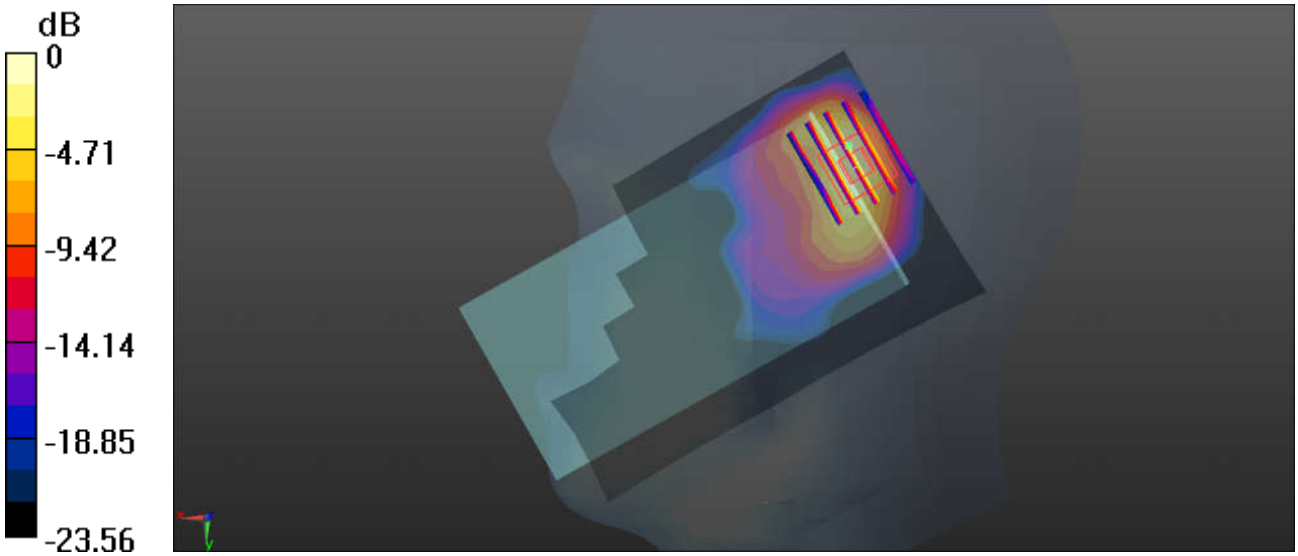
07_LTE Band 4_20M_QPSK_1RB_0Offset_Right Tilted_0mm_UAT_Ch20175

Communication System: UID 0, FDD_LTE (0); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1732.5 MHz; σ = 1.334 S/m; ε_r = 40.704; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.29, 8.29, 8.29); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM2; Type: SAM; Serial: TP-1644
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20175/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.616 W/kg

Ch20175/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.31 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.938 W/kg
SAR(1 g) = 0.439 W/kg; SAR(10 g) = 0.195 W/kg
Maximum value of SAR (measured) = 0.760 W/kg



0 dB = 0.760 W/kg = -1.19 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.7

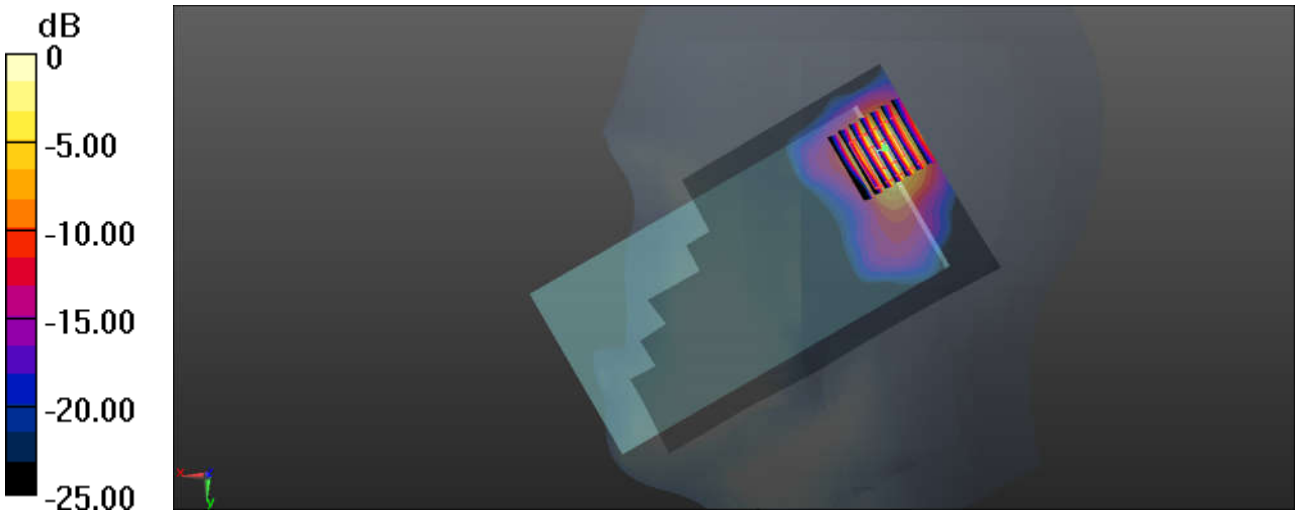
08_LTE Band 7_20M_QPSK_1RB_99Offset_Right Tilted_0mm_UAT_Ch21350

Communication System: UID 0, FDD_LTE (0); Frequency: 2560 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2560 MHz; σ = 1.973 S/m; ε_r = 38.542; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.44, 7.44, 7.44); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM3; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch21350/Area Scan (81x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.05 W/kg

Ch21350/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.18 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.645 W/kg; SAR(10 g) = 0.233 W/kg
Maximum value of SAR (measured) = 1.18 W/kg



0 dB = 1.18 W/kg = 0.72 dBW/kg

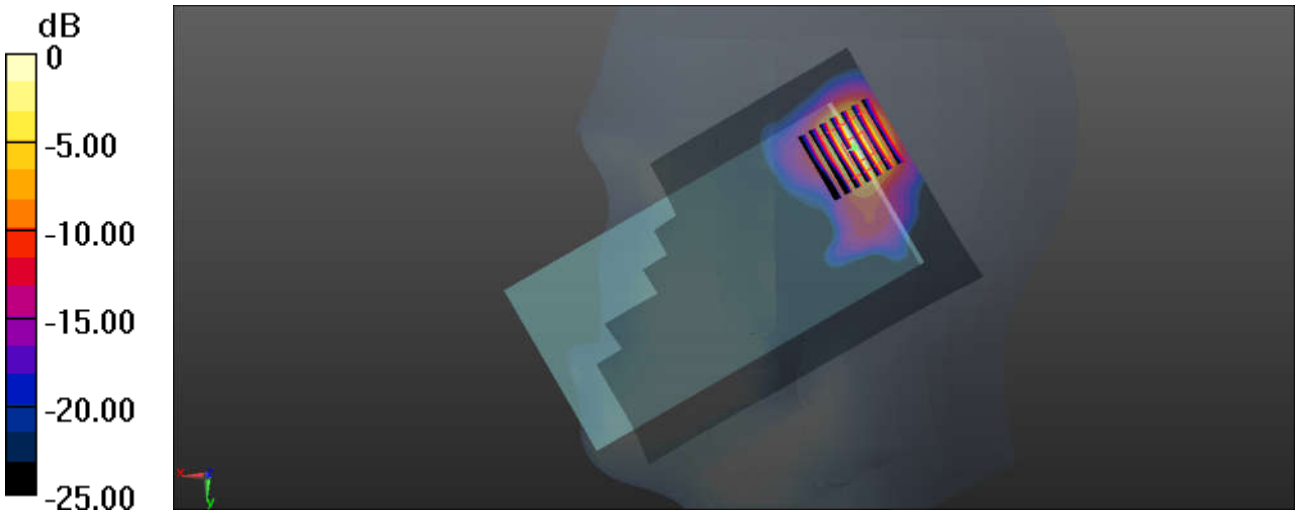
09_LTE Band 38_20M_QPSK_1RB_49Offset_Right Tilted_0mm_UAT_Ch38000

Communication System: UID 0, TDD_LTE (0); Frequency: 2595 MHz;Duty Cycle: 1:1.59
Medium: HSL_2600 Medium parameters used: f = 2595 MHz; σ = 2.015 S/m; ε_r = 38.394; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.44, 7.44, 7.44); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM3; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch38000/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.725 W/kg

Ch38000/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.43 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.431 W/kg; SAR(10 g) = 0.153 W/kg
Maximum value of SAR (measured) = 0.826 W/kg



0 dB = 0.826 W/kg = -0.83 dBW/kg

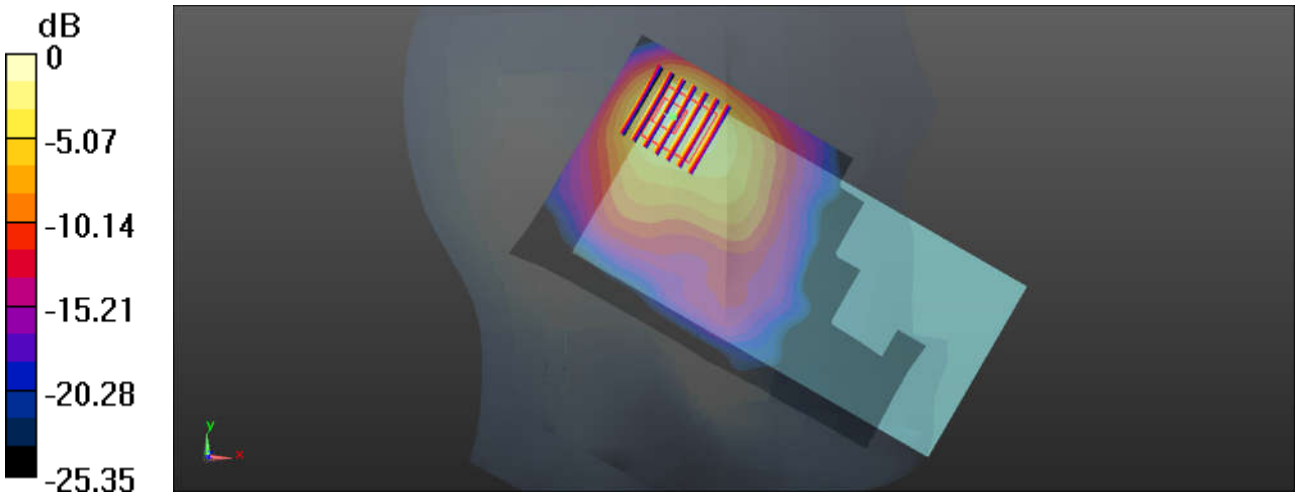
10_WLAN 2.4GHz_802.11b 1Mbps_Left Cheek_0mm_Ch11

Communication System: UID 0, WIFI (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: HSL_2450 Medium parameters used: f = 2462 MHz; σ = 1.861 S/m; ε_r = 38.951; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.56, 7.56, 7.56); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM3; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch11/Area Scan (81x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.803 W/kg

Ch11/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 19.76 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.08 W/kg
SAR(1 g) = 0.463 W/kg; SAR(10 g) = 0.214 W/kg
Maximum value of SAR (measured) = 0.824 W/kg



0 dB = 0.824 W/kg = -0.84 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.8

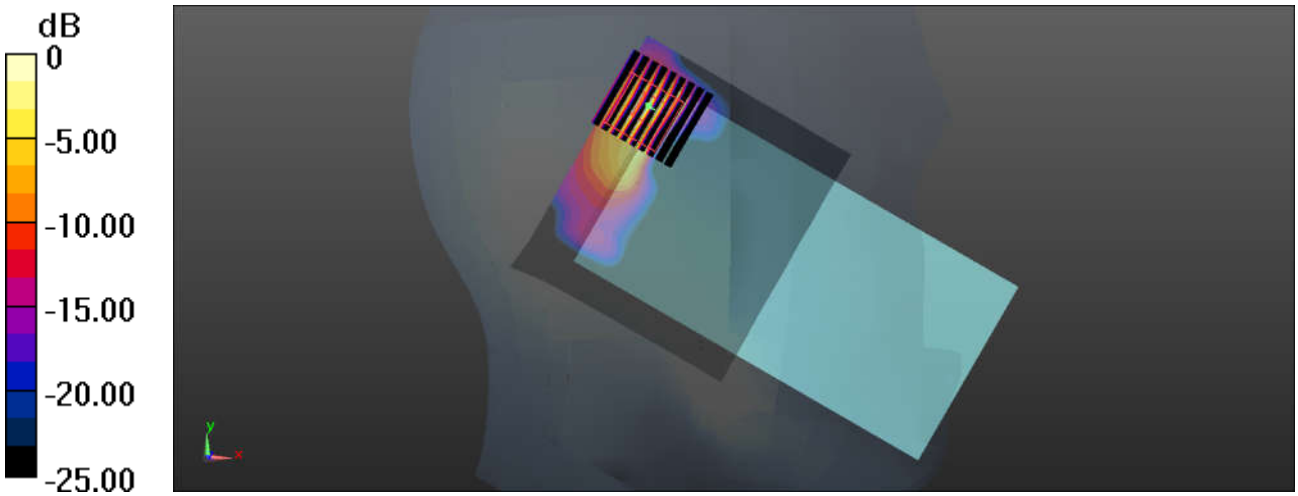
11_WLAN 5GHz_802.11a 6Mbps_Left Tilted_0mm_Ch52

Communication System: UID 0, WIFI (0); Frequency: 5260 MHz;Duty Cycle: 1:1.053
Medium: HSL_5000 Medium parameters used: f = 5260 MHz; σ = 4.871 S/m; ε_r = 37.105; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(5.2, 5.2, 5.2); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM2; Type: SAM; Serial: TP-1644
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch52/Area Scan (101x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.23 W/kg

Ch52/Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 20.28 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 2.94 W/kg
SAR(1 g) = 0.651 W/kg; SAR(10 g) = 0.163 W/kg
Maximum value of SAR (measured) = 1.80 W/kg



0 dB = 1.80 W/kg = 2.55 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.8

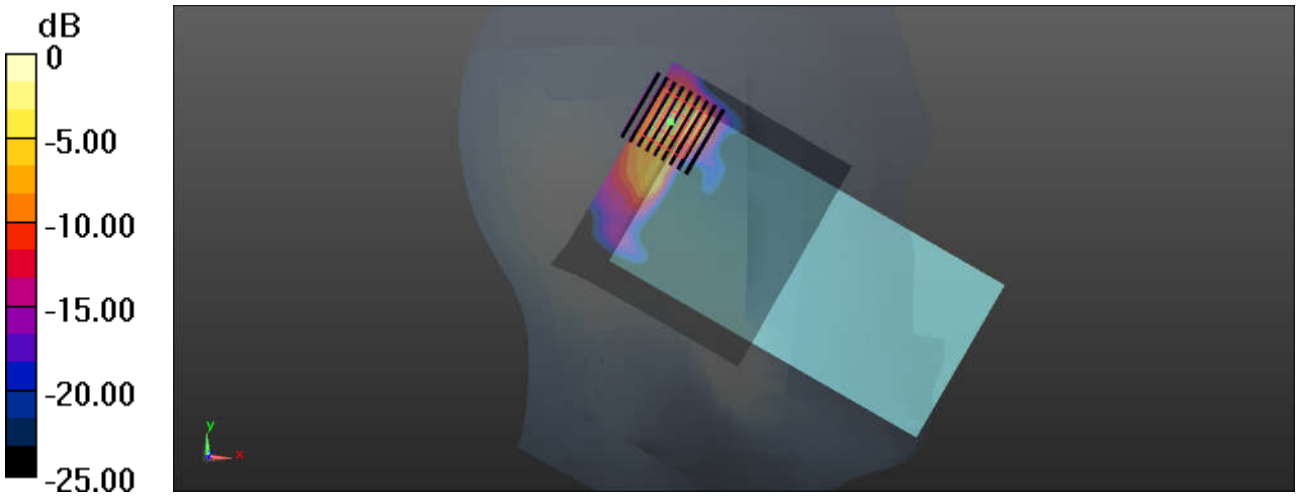
12_WLAN 5GHz_802.11a 6Mbps_Left Tilted_0mm_Ch100

Communication System: UID 0, WIFI (0); Frequency: 5500 MHz;Duty Cycle: 1:1.053
Medium: HSL_5000 Medium parameters used: f = 5500 MHz; σ = 5.104 S/m; ε_r = 36.731; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(4.94, 4.94, 4.94); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM2; Type: SAM; Serial: TP-1644
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch100/Area Scan (101x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.979 W/kg

Ch100/Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 16.24 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 2.37 W/kg
SAR(1 g) = 0.469 W/kg; SAR(10 g) = 0.117 W/kg
Maximum value of SAR (measured) = 1.31 W/kg



0 dB = 1.31 W/kg = 1.17 dBW/kg

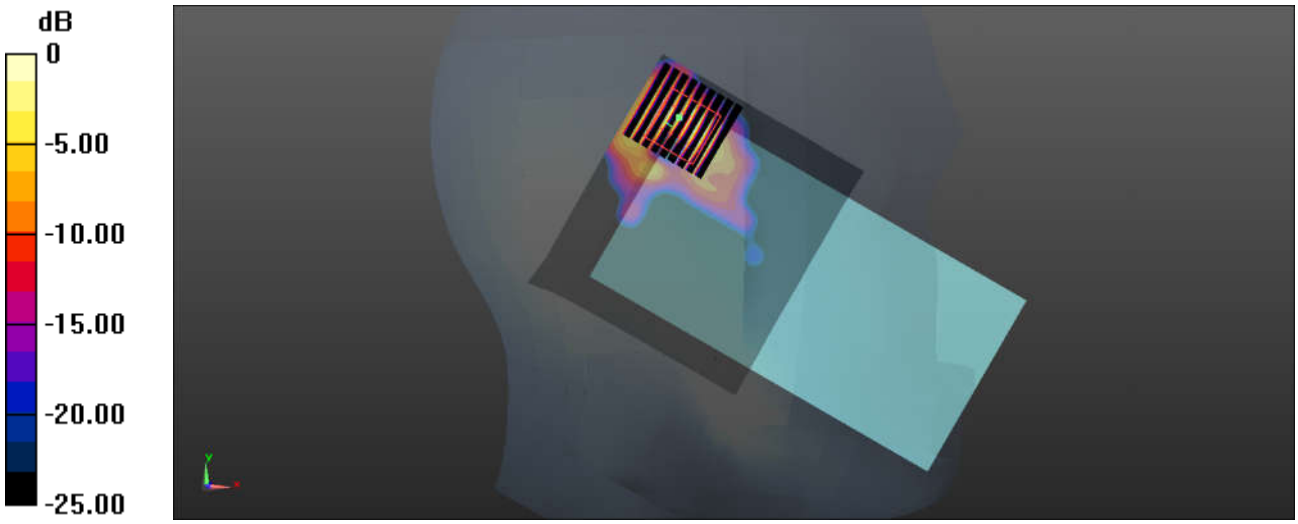
13_WLAN 5GHz_802.11a 6Mbps_Left Tilted_0mm_Ant 1_Ch161

Communication System: UID 0, WIFI (0); Frequency: 5805 MHz;Duty Cycle: 1:1.053
Medium: HSL_5000 Medium parameters used: f = 5805 MHz; σ = 5.419 S/m; ε_r = 36.295; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(5.23, 5.23, 5.23); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM2; Type: SAM; Serial: TP-1644
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch161/Area Scan (101x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.775 W/kg

Ch161/Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 13.44 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 0.303 W/kg; SAR(10 g) = 0.084 W/kg
Maximum value of SAR (measured) = 0.903 W/kg



0 dB = 0.903 W/kg = -0.44 dBW/kg

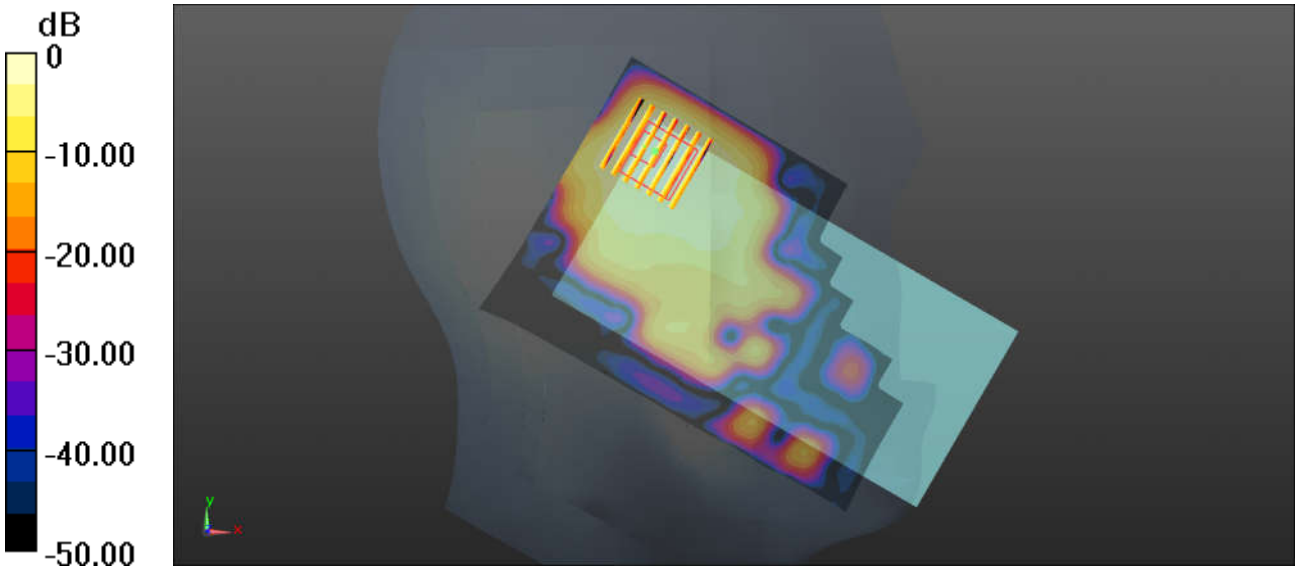
14_ Bluetooth_1Mbps_Left Cheek_0mm_Ch38

Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.305
Medium: HSL_2450 Medium parameters used: f = 2441 MHz; σ = 1.838 S/m; ε_r = 39.049; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.56, 7.56, 7.56); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM3; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch38/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.101 W/kg

Ch38/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.915 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.135 W/kg
SAR(1 g) = 0.056 W/kg; SAR(10 g) = 0.026 W/kg
Maximum value of SAR (measured) = 0.101 W/kg



0 dB = 0.101 W/kg = -9.96 dBW/kg

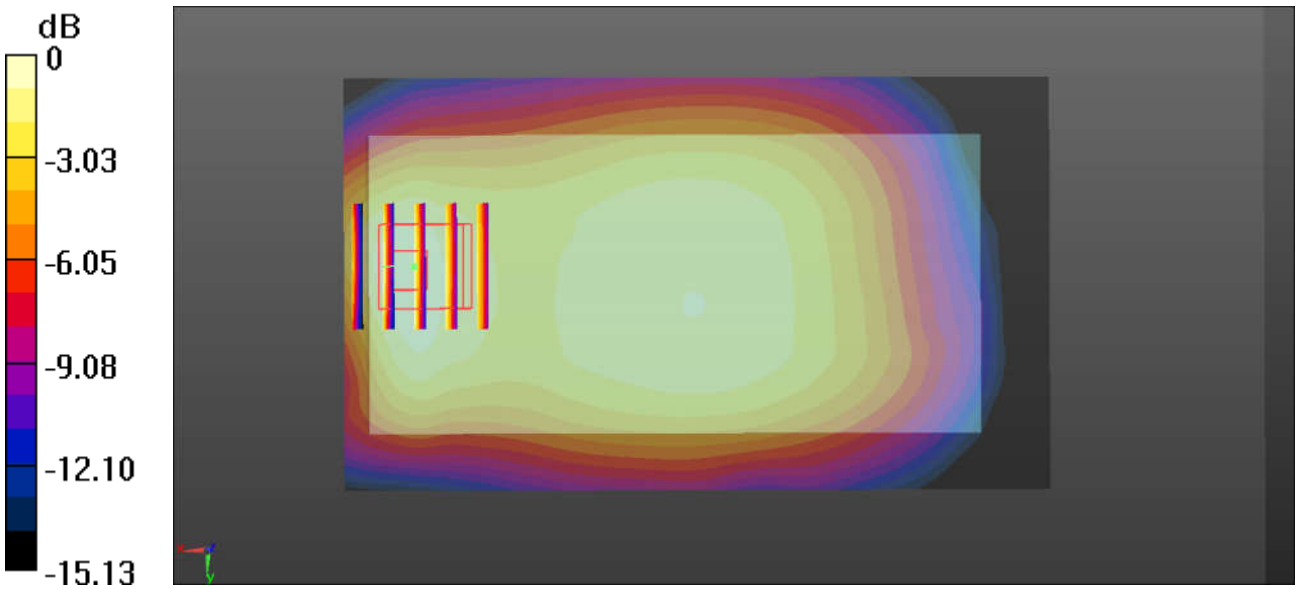
15_GSM 850_GPRS (4 Tx slots)_Back_10mm_LAT_Ch251

Communication System: UID 0, GPRS/EDGE (4 Tx slots) (0); Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium: MSL_835 Medium parameters used: f = 848.8 MHz; σ = 0.999 S/m; ε_r = 56.388; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.49, 9.49, 9.49); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch251/Area Scan (121x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.257 W/kg

Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.11 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.313 W/kg
SAR(1 g) = 0.182 W/kg; SAR(10 g) = 0.114 W/kg
Maximum value of SAR (measured) = 0.251 W/kg



0 dB = 0.251 W/kg = -6.00 dBW/kg

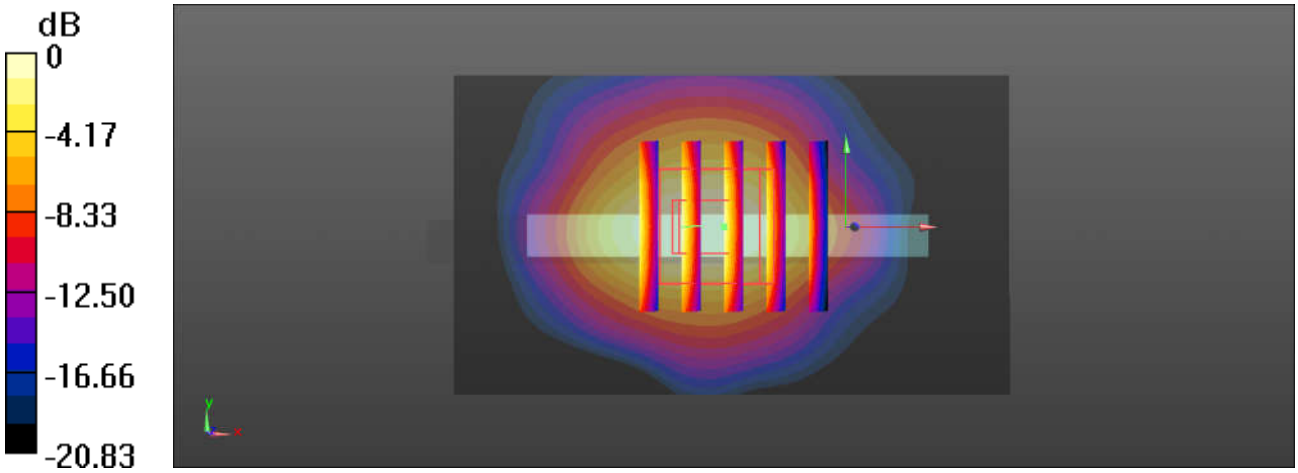
16_GSM 1900_GPRS (4 Tx slots)_Bottom Side_10mm_LAT_Ch512

Communication System: UID 0, GPRS/EDGE (4 Tx slots) (0); Frequency: 1850.2 MHz;Duty Cycle: 1:2.08
Medium: MSL_1900 Medium parameters used: f = 1850.2 MHz; σ = 1.479 S/m; ε_r = 53.659; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.82, 7.82, 7.82); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch512/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.789 W/kg

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.51 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.871 W/kg
SAR(1 g) = 0.512 W/kg; SAR(10 g) = 0.274 W/kg
Maximum value of SAR (measured) = 0.731 W/kg



0 dB = 0.731 W/kg = -1.36 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.7

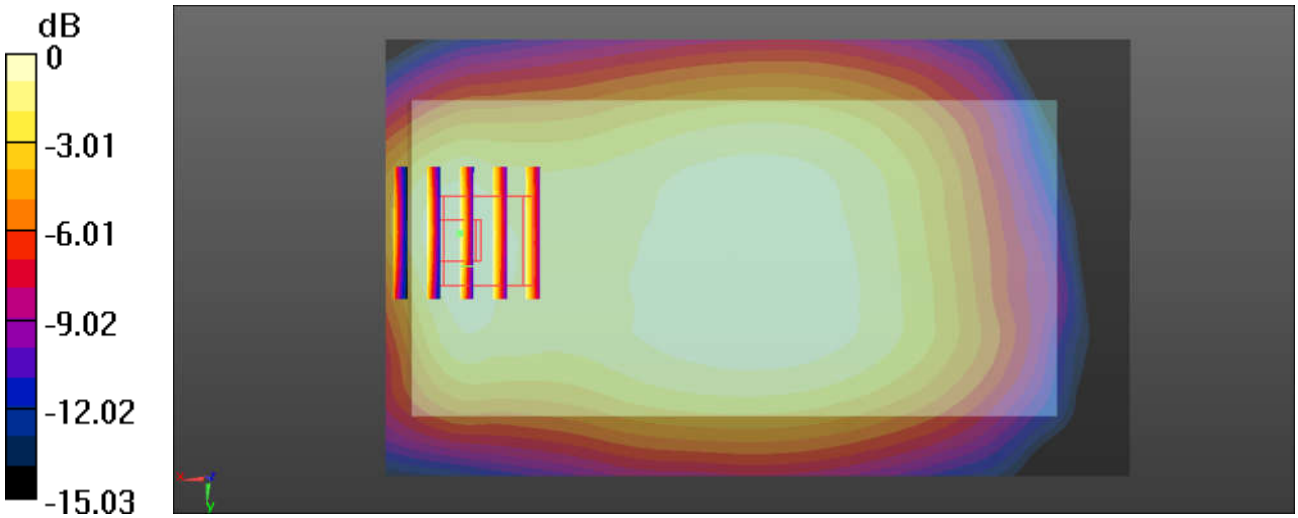
17_WCDMA V_RMC 12.2Kbps_Back_10mm_LAT_Ch4233

Communication System: UID 0, UMTS (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: MSL_835 Medium parameters used: f = 846.6 MHz; σ = 0.997 S/m; ε_r = 56.409; ρ = 1000kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.49, 9.49, 9.49); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch4233/Area Scan (121x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.163 W/kg

Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.87 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.192 W/kg
SAR(1 g) = 0.118 W/kg; SAR(10 g) = 0.077 W/kg
Maximum value of SAR (measured) = 0.157 W/kg



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

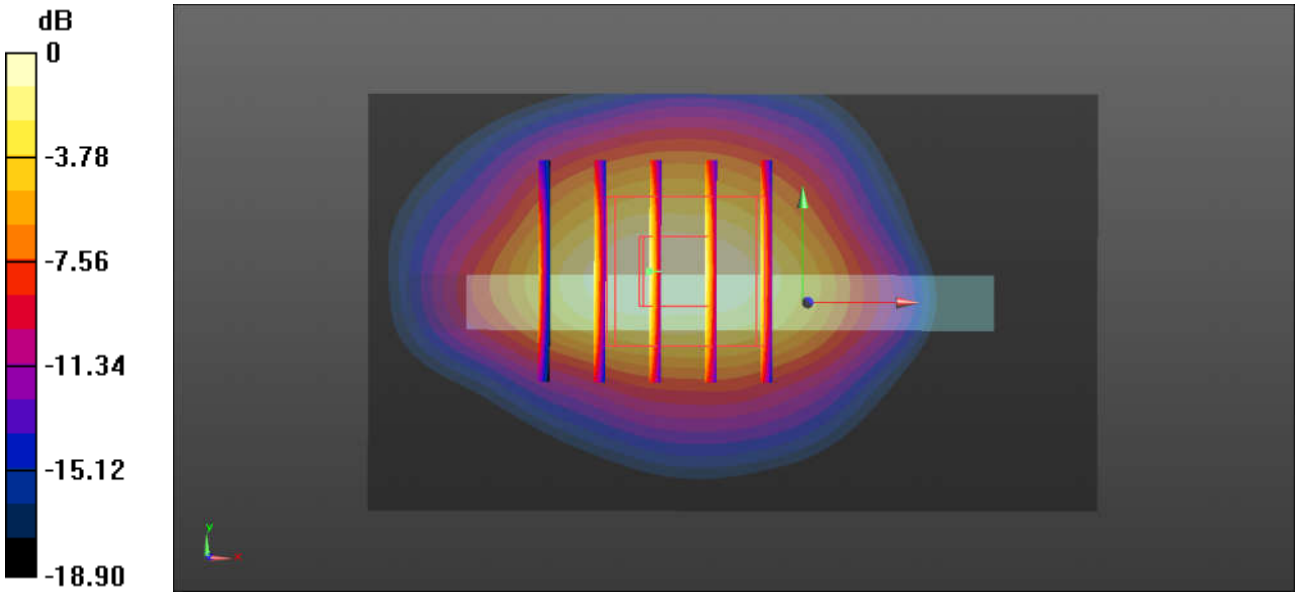
18_WCDMA IV_RMC 12.2Kbps_Bottom Side_10mm_LAT_Ch1312

Communication System: UID 0, UMTS (0); Frequency: 1712.4 MHz;Duty Cycle: 1:1
Medium: MSL_1750 Medium parameters used: f = 1712.4 MHz; σ = 1.447 S/m; ε_r = 54.847; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.15, 8.15, 8.15); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1312/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.21 W/kg

Ch1312/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.46 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.820 W/kg; SAR(10 g) = 0.449 W/kg
Maximum value of SAR (measured) = 1.15 W/kg



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

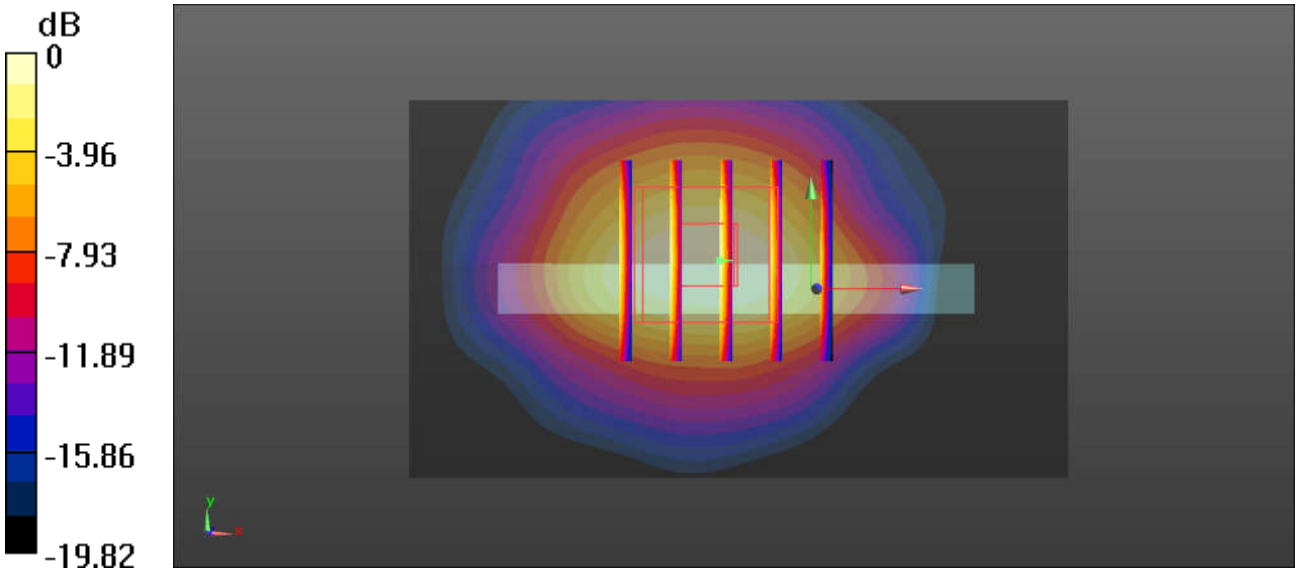
19_WCDMA II_RMC 12.2Kbps_Bottom Side_10mm_LAT_Ch9262

Communication System: UID 0, UMTS (0); Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium: MSL_1900 Medium parameters used: f = 1852.4 MHz; σ = 1.482 S/m; ε_r = 53.653; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.82, 7.82, 7.82); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9262/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.780 W/kg

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.15 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.871 W/kg
SAR(1 g) = 0.514 W/kg; SAR(10 g) = 0.275 W/kg
Maximum value of SAR (measured) = 0.734 W/kg



0 dB = 0.734 W/kg = -1.34 dBW/kg

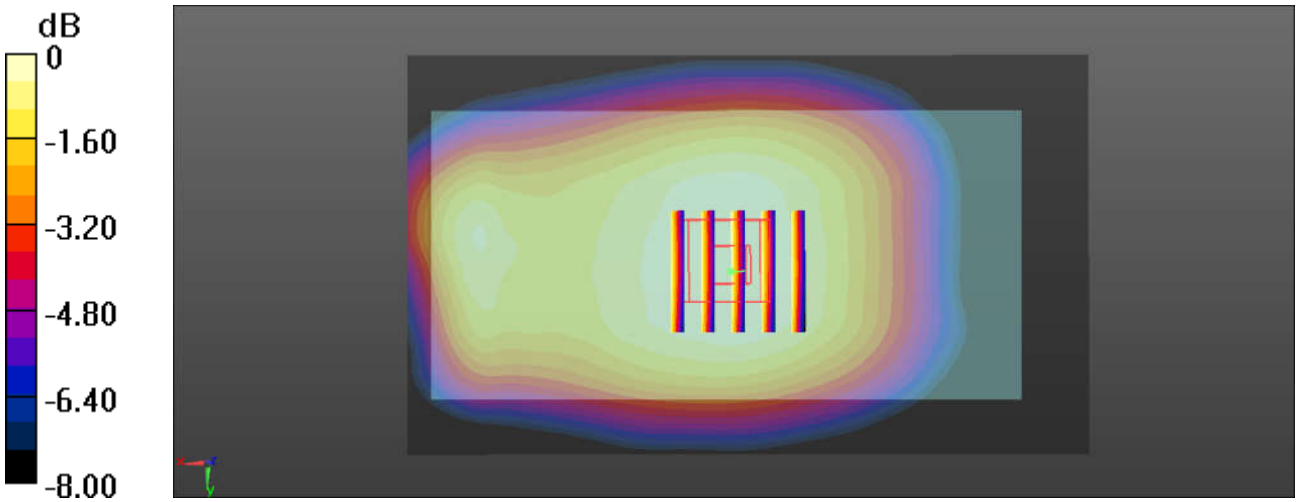
20_LTE Band 5_10M_QPSK_1RB_0Offset_Back_10mm_LAT_Ch20525

Communication System: UID 0, FDD_LTE (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium: MSL_835 Medium parameters used: f = 836.5 MHz; σ = 0.986 S/m; ε_r = 56.499; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.49, 9.49, 9.49); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20525/Area Scan (121x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.142 W/kg

Ch20525/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.52 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.157 W/kg
SAR(1 g) = 0.119 W/kg; SAR(10 g) = 0.093 W/kg
Maximum value of SAR (measured) = 0.143 W/kg



0 dB = 0.143 W/kg = -8.45 dBW/kg

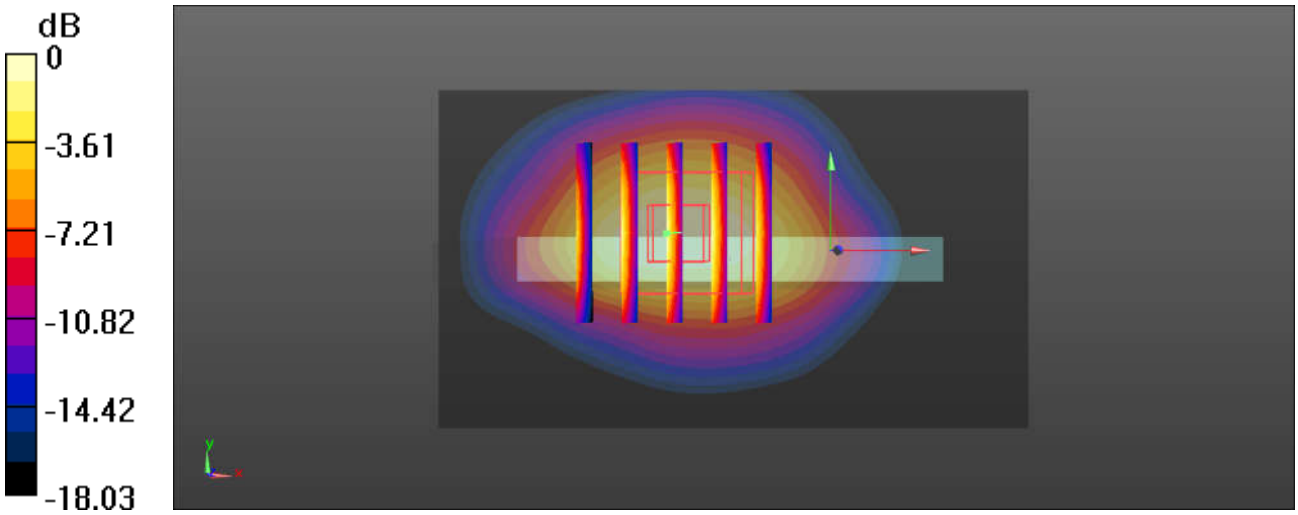
21_LTE Band 4_20M_QPSK_1RB_0Offset_Bottom Side_10mm_LAT_Ch20175

Communication System: UID 0, FDD_LTE (0); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: MSL_1750 Medium parameters used: f = 1732.5 MHz; σ = 1.47 S/m; ε_r = 54.775; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.15, 8.15, 8.15); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20175/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.10 W/kg

Ch20175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.11 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.736 W/kg; SAR(10 g) = 0.405 W/kg
Maximum value of SAR (measured) = 1.05 W/kg



0 dB = 1.05 W/kg = 0.21 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.8

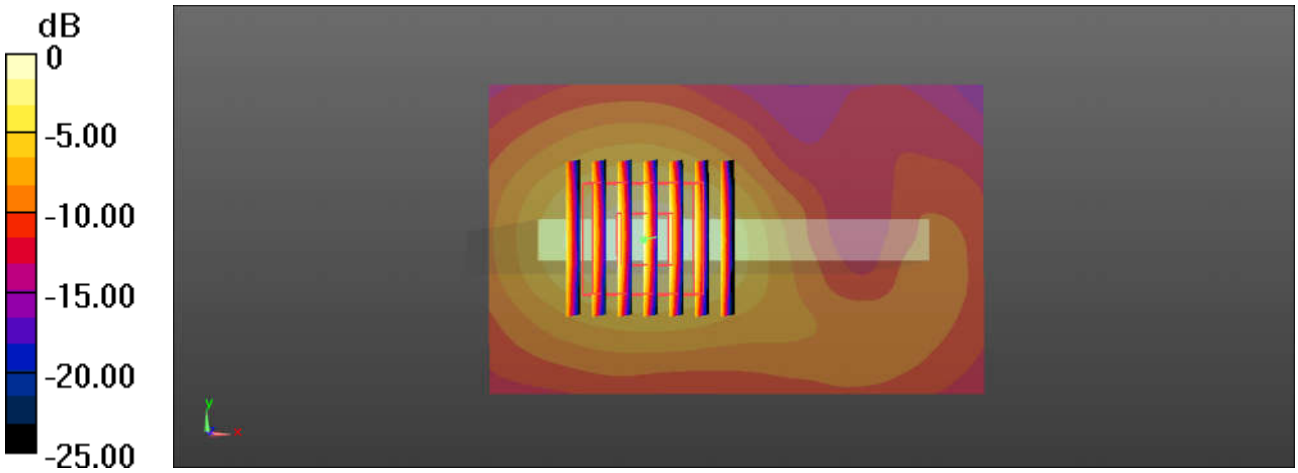
22_LTE Band 7_20M_QPSK_1RB_99Offset_Bottom Side_10mm_LAT_Ch21350

Communication System: UID 0, FDD_LTE (0); Frequency: 2560 MHz;Duty Cycle: 1:1
Medium: MSL_2600 Medium parameters used: f = 2560 MHz; σ = 2.173 S/m; ε_r = 52.578; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.38, 7.38, 7.38); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch21350/Area Scan (51x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.315 W/kg

Ch21350/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.97 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.404 W/kg
SAR(1 g) = 0.203 W/kg; SAR(10 g) = 0.094 W/kg
Maximum value of SAR (measured) = 0.331 W/kg



0 dB = 0.331 W/kg = -4.80 dBW/kg

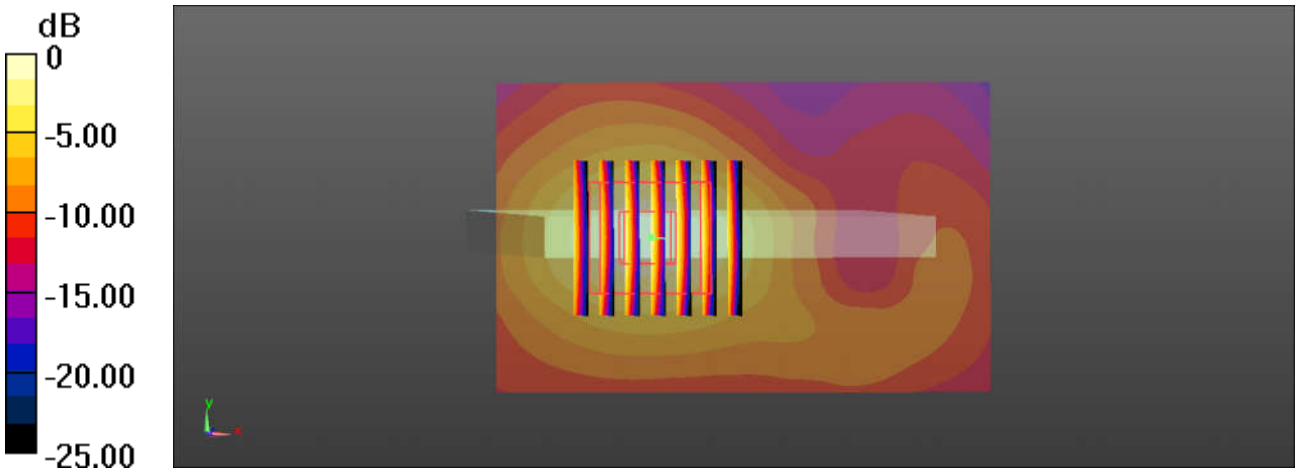
23_LTE Band 38_20M_QPSK_1RB_49Offset_Bottom Side_10mm_LAT_Ch38000

Communication System: UID 0, TDD_LTE (0); Frequency: 2595 MHz;Duty Cycle: 1:1.59
Medium: MSL_2600 Medium parameters used: f = 2595 MHz; σ = 2.224 S/m; ε_r = 52.44; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.38, 7.38, 7.38); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch38000/Area Scan (51x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.253 W/kg

Ch38000/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.36 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.320 W/kg
SAR(1 g) = 0.157 W/kg; SAR(10 g) = 0.072 W/kg
Maximum value of SAR (measured) = 0.261 W/kg



0 dB = 0.261 W/kg = -5.83 dBW/kg

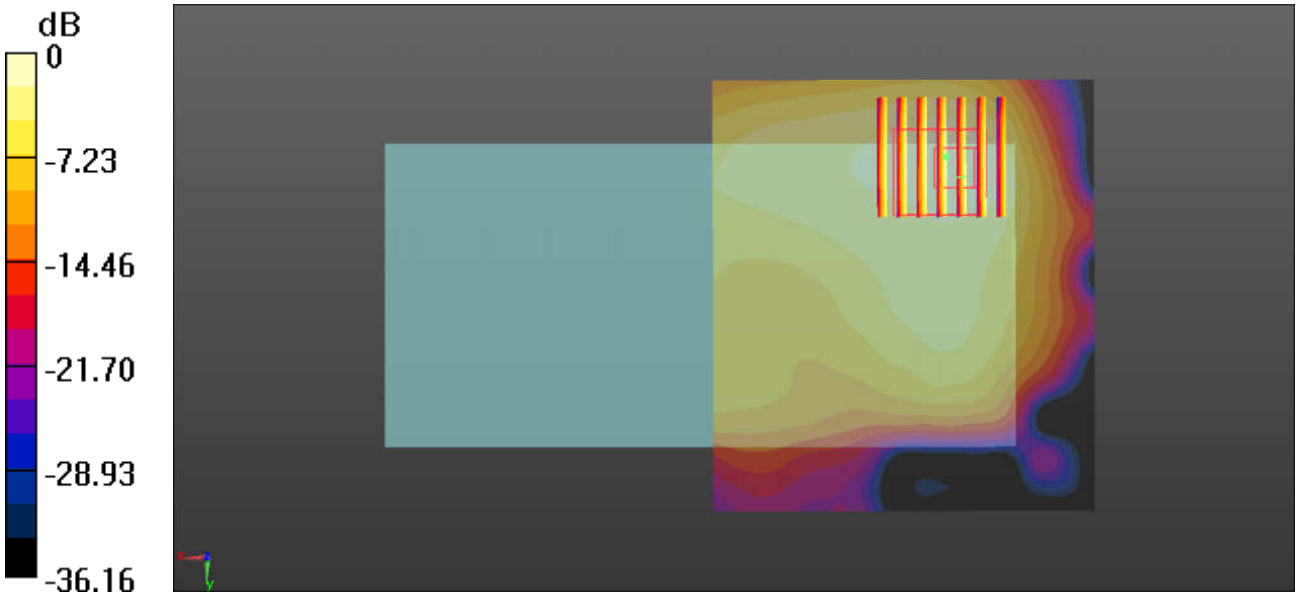
24_WLAN 2.4GHz_802.11b 1Mbps_Back_10mm_Ch11

Communication System: UID 0, WIFI (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2462 MHz; σ = 2.038 S/m; ε_r = 52.98; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.42, 7.42, 7.42); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch11/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.236 W/kg

Ch11/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.10 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.315 W/kg
SAR(1 g) = 0.151 W/kg; SAR(10 g) = 0.076 W/kg
Maximum value of SAR (measured) = 0.247 W/kg



0 dB = 0.247 W/kg = -6.07 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.9

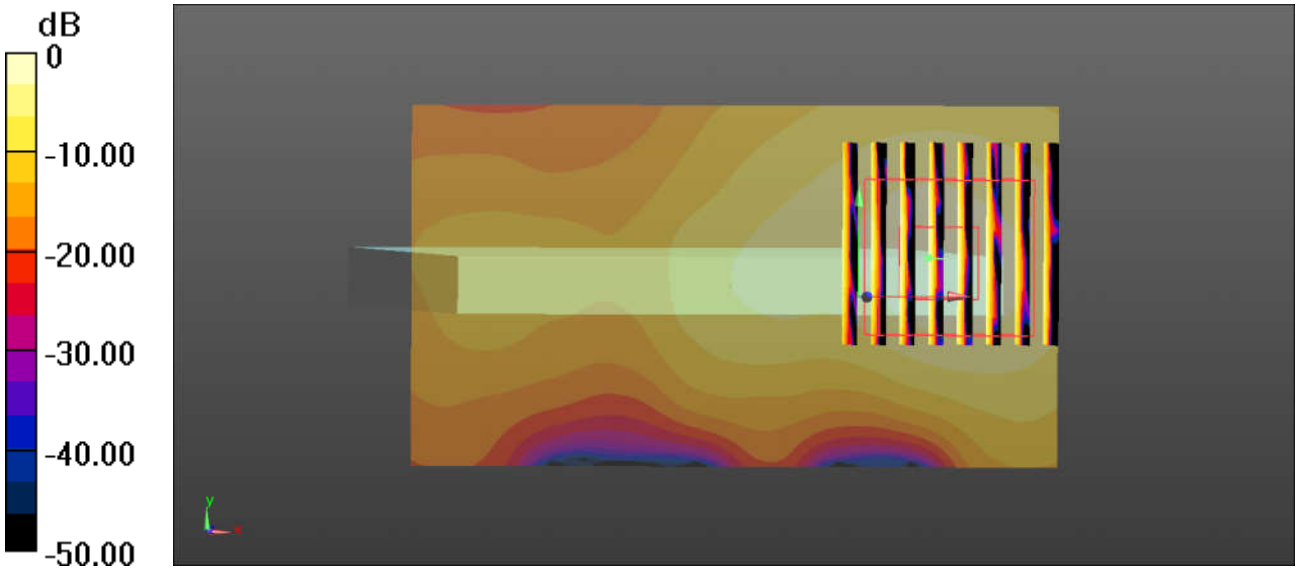
25_WLAN 5GHz_802.11a 6Mbps_Top Side_10mm_Ch48

Communication System: UID 0, WIFI (0); Frequency: 5240 MHz;Duty Cycle: 1:1.053
Medium: MSL_5000 Medium parameters used: f = 5240 MHz; σ = 5.493 S/m; ε_r = 47.962; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(4.4, 4.4, 4.4); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch48/Area Scan (51x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.571 W/kg

Ch48/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 11.43 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.977 W/kg
SAR(1 g) = 0.261 W/kg; SAR(10 g) = 0.087 W/kg
Maximum value of SAR (measured) = 0.625 W/kg



0 dB = 0.625 W/kg = -2.04 dBW/kg

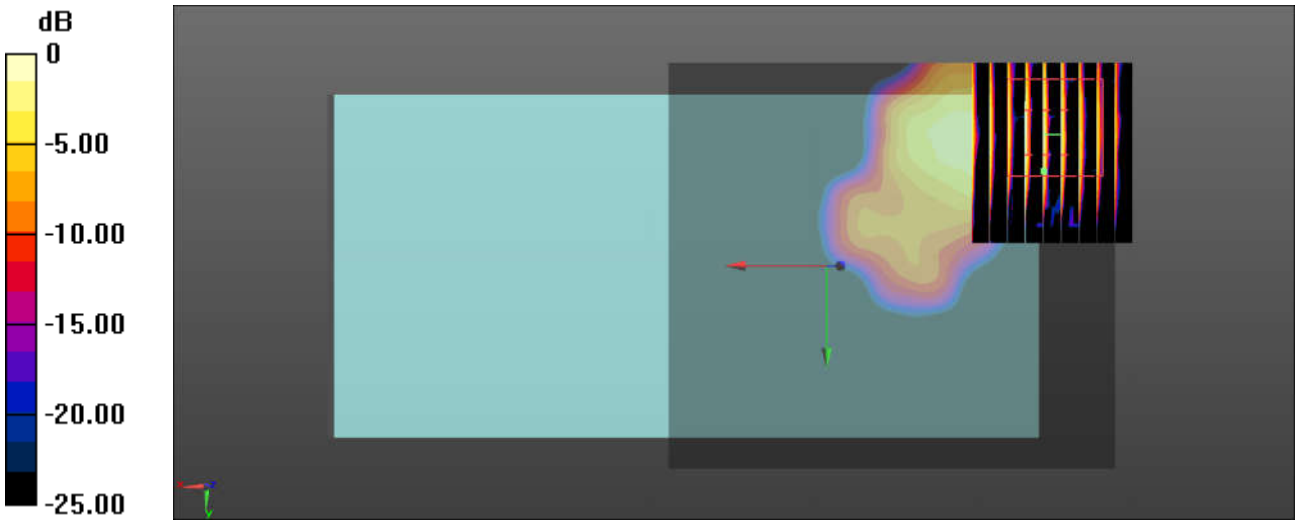
26_WLAN 5GHz_802.11a 6Mbps_Back_10mm_Ant 1_Ch161

Communication System: UID 0, WIFI (0); Frequency: 5805 MHz;Duty Cycle: 1:1.053
Medium: MSL_5000 Medium parameters used : f = 5805 MHz; σ = 6.285 S/m; ε_r = 46.041; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(4.31, 4.31, 4.31); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch161/Area Scan (101x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.276 W/kg

Ch161/Zoom Scan (11x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 6.931 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.424 W/kg
SAR(1 g) = 0.092 W/kg; SAR(10 g) = 0.032 W/kg
Maximum value of SAR (measured) = 0.266 W/kg



0 dB = 0.266 W/kg = -5.75 dBW/kg

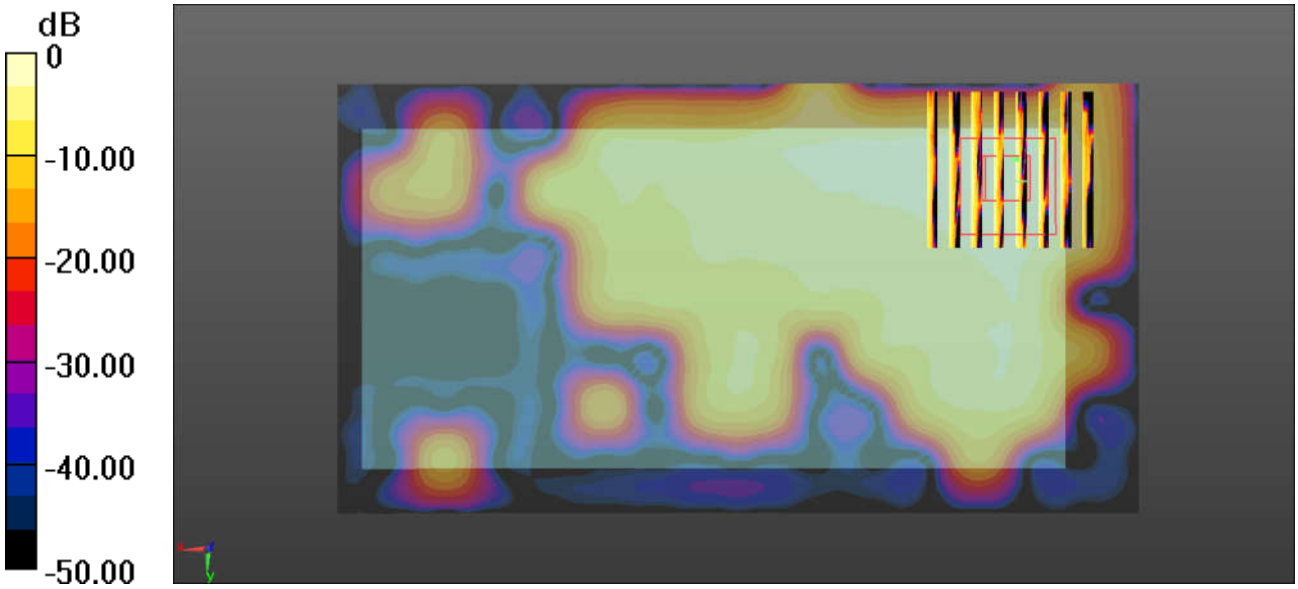
27_ Bluetooth_1Mbps_Back_10mm_Ch78

Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz;Duty Cycle: 1:1.305
Medium: MSL_2450 Medium parameters used: f = 2480 MHz; σ = 2.064 S/m; ε_r = 52.904; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.42, 7.42, 7.42); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch78/Area Scan (151x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0484 W/kg

Ch78/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.221 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.0440 W/kg
SAR(1 g) = 0.021 W/kg; SAR(10 g) = 0.00864 W/kg
Maximum value of SAR (measured) = 0.0378 W/kg



0 dB = 0.0378 W/kg = -14.23 dBW/kg

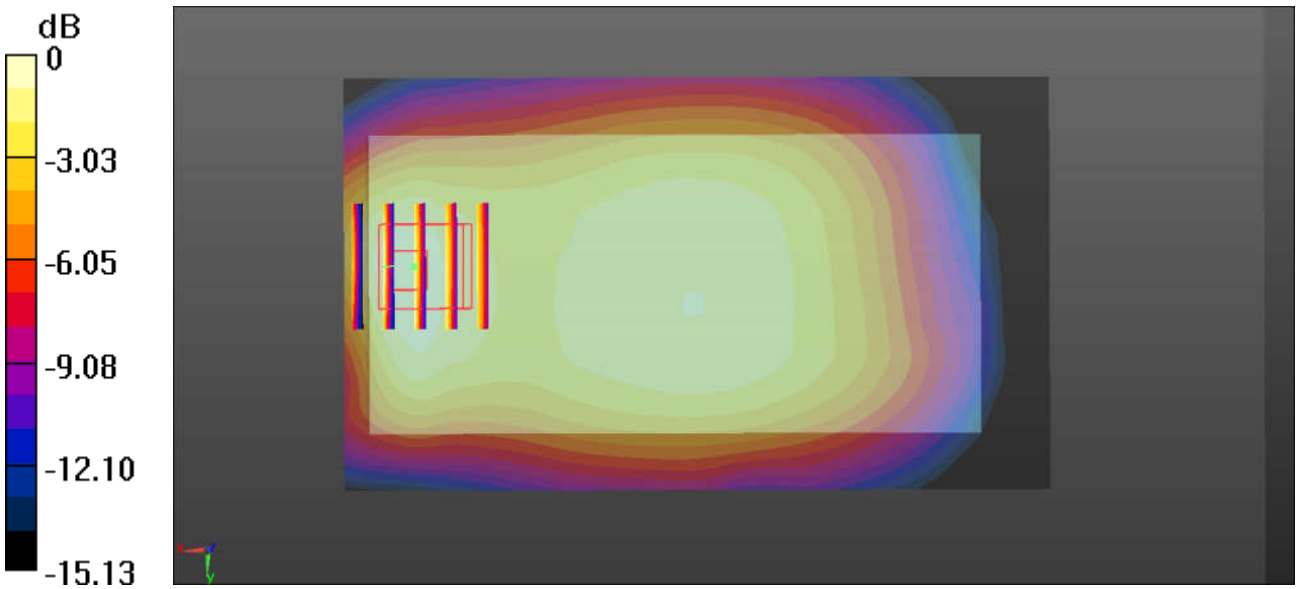
28_GSM 850_GPRS (4 Tx slots)_Back_10mm_LAT_Ch251

Communication System: UID 0, GPRS/EDGE (4 Tx slots) (0); Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium: MSL_835 Medium parameters used: f = 848.8 MHz; σ = 0.999 S/m; ε_r = 56.388; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.49, 9.49, 9.49); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch251/Area Scan (121x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.257 W/kg

Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.11 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.313 W/kg
SAR(1 g) = 0.182 W/kg; SAR(10 g) = 0.114 W/kg
Maximum value of SAR (measured) = 0.251 W/kg



0 dB = 0.251 W/kg = -6.00 dBW/kg

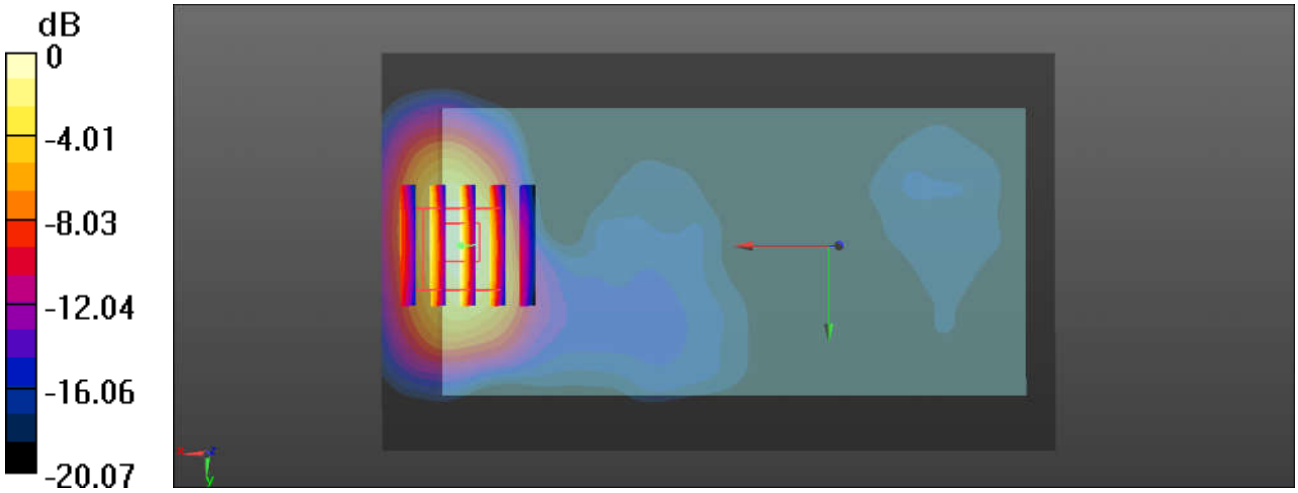
29_GSM 1900_GPRS (4 Tx slots)_Back_10mm_LAT_Ch512

Communication System: UID 0, GPRS/EDGE (4 Tx slots) (0); Frequency: 1850.2 MHz;Duty Cycle: 1:2.08
Medium: MSL_1900 Medium parameters used: f = 1850.2 MHz; σ = 1.479 S/m; ε_r = 53.659; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.82, 7.82, 7.82); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch512/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.659 W/kg

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.69 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.758 W/kg
SAR(1 g) = 0.423 W/kg; SAR(10 g) = 0.216 W/kg
Maximum value of SAR (measured) = 0.642 W/kg



0 dB = 0.642 W/kg = -1.92 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.7

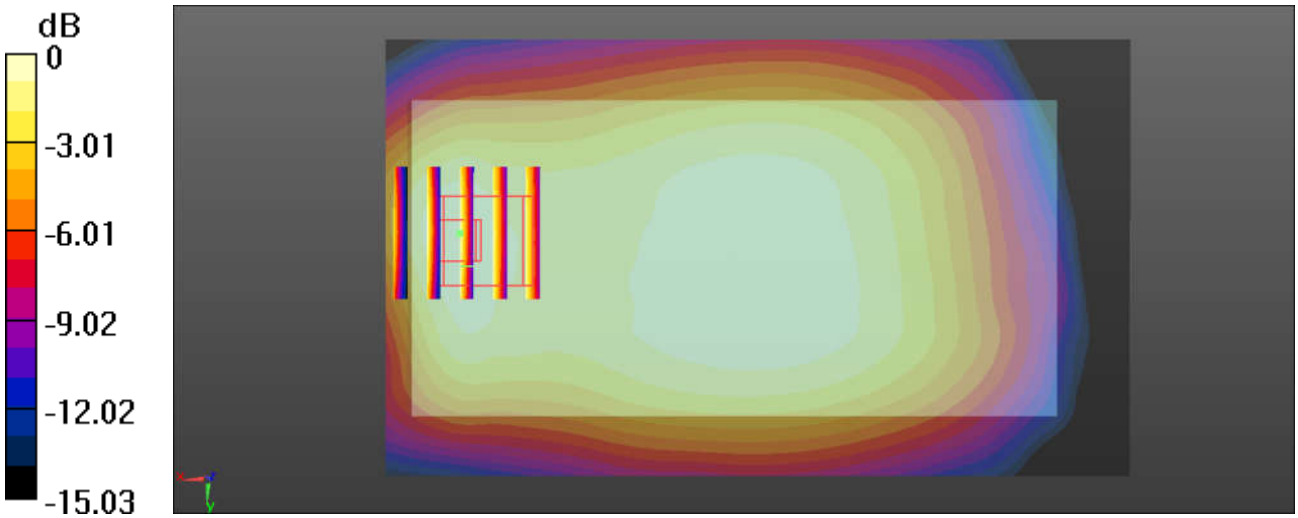
30_WCDMA V_RMC 12.2Kbps_Back_10mm_LAT_Ch4233

Communication System: UID 0, UMTS (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: MSL_835 Medium parameters used: f = 846.6 MHz; σ = 0.997 S/m; ε_r = 56.409; ρ = 1000kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.49, 9.49, 9.49); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch4233/Area Scan (121x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.163 W/kg

Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.87 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.192 W/kg
SAR(1 g) = 0.118 W/kg; SAR(10 g) = 0.077 W/kg
Maximum value of SAR (measured) = 0.157 W/kg



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

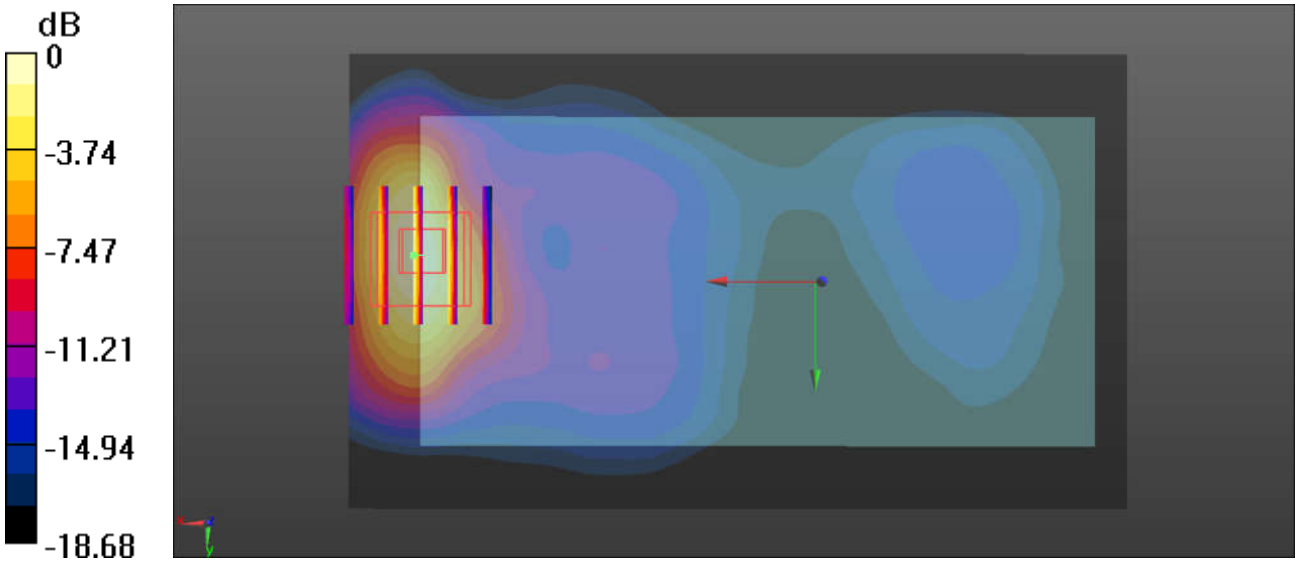
31_WCDMA IV_RMC 12.2Kbps_Back_10mm_LAT_Ch1413

Communication System: UID 0, UMTS (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: MSL_1750 Medium parameters used: f = 1732.6 MHz; σ = 1.471 S/m; ε_r = 54.773; ρ = 1000kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.15, 8.15, 8.15); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch1413/Area Scan (121x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.829 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.46 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.585 W/kg; SAR(10 g) = 0.298 W/kg
Maximum value of SAR (measured) = 0.814 W/kg



0 dB = 0.814 W/kg = -0.89 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.9

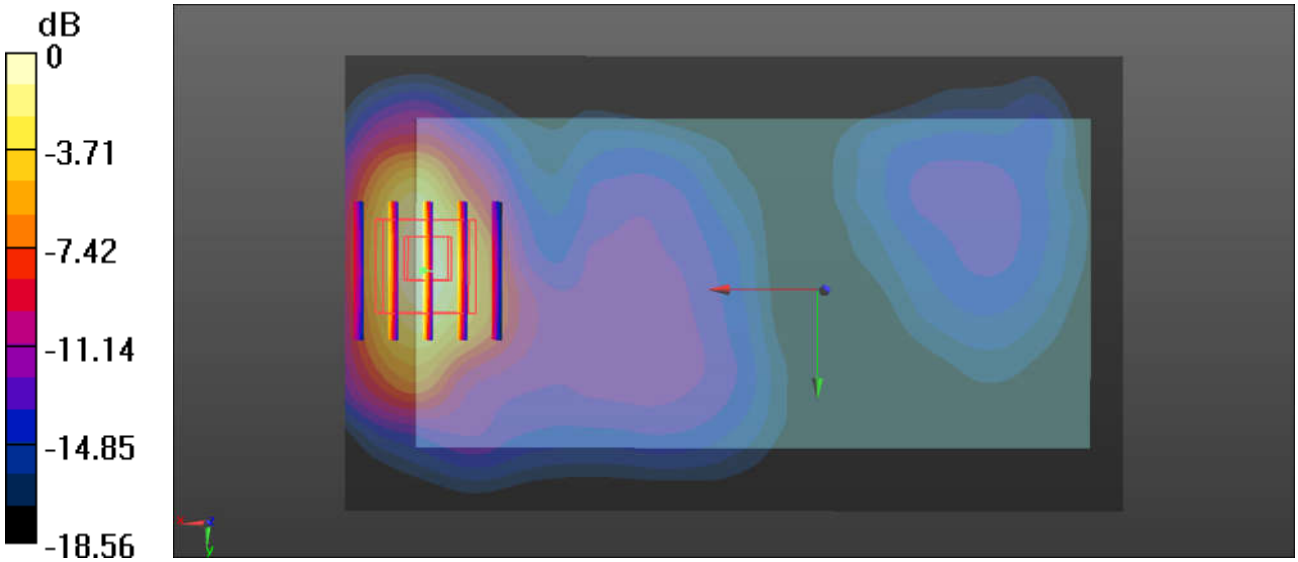
32_WCDMA II_RMC 12.2Kbps_Back_10mm_LAT_Ch9262

Communication System: UID 0, UMTS (0); Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium: MSL_1900 Medium parameters used: f = 1852.4 MHz; σ = 1.482 S/m; ε_r = 53.653; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.82, 7.82, 7.82); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch9262/Area Scan (121x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.619 W/kg

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.43 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.780 W/kg
SAR(1 g) = 0.430 W/kg; SAR(10 g) = 0.221 W/kg
Maximum value of SAR (measured) = 0.627 W/kg



0 dB = 0.627 W/kg = -2.03 dBW/kg

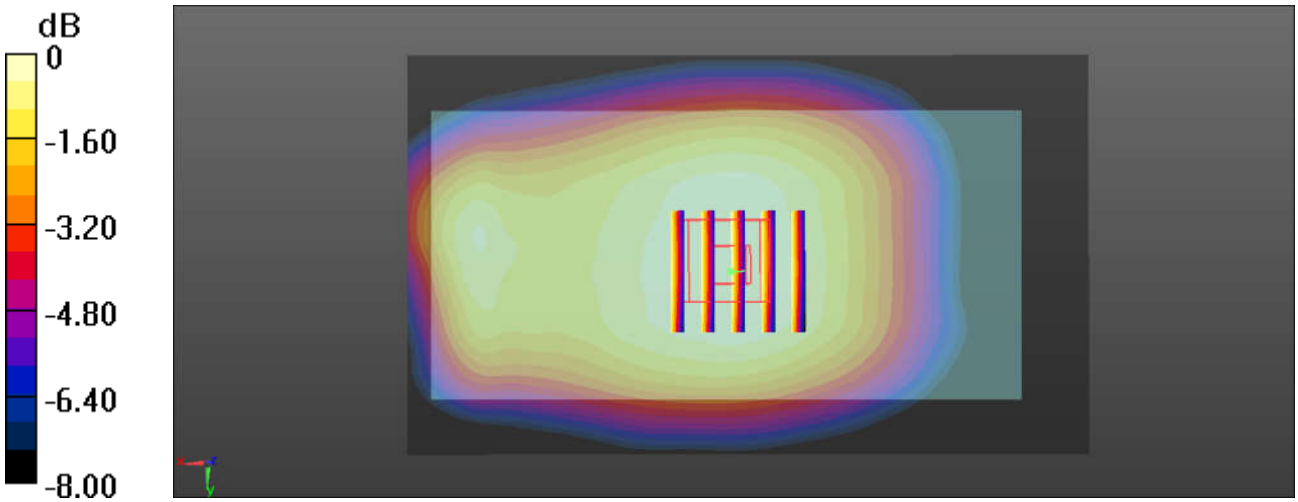
33_LTE Band 5_10M_QPSK_1RB_0Offset_Back_10mm_LAT_Ch20525

Communication System: UID 0, FDD_LTE (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium: MSL_835 Medium parameters used: f = 836.5 MHz; σ = 0.986 S/m; ε_r = 56.499; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.49, 9.49, 9.49); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20525/Area Scan (121x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.142 W/kg

Ch20525/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.52 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.157 W/kg
SAR(1 g) = 0.119 W/kg; SAR(10 g) = 0.093 W/kg
Maximum value of SAR (measured) = 0.143 W/kg



0 dB = 0.143 W/kg = -8.45 dBW/kg

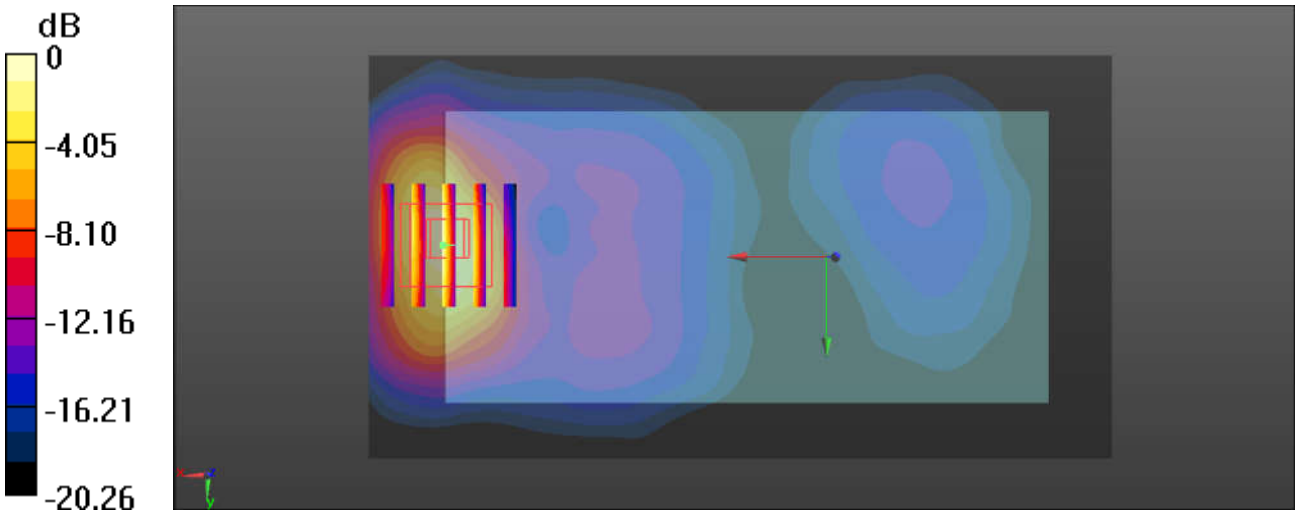
34_LTE Band 4_20M_QPSK_1RB_0Offset_Back_10mm_LAT_Ch20175

Communication System: UID 0, FDD_LTE (0); Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: MSL_1750 Medium parameters used: f = 1732.5 MHz; σ = 1.47 S/m; ε_r = 54.775; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.15, 8.15, 8.15); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch20175/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.782 W/kg

Ch20175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.97 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.591 W/kg; SAR(10 g) = 0.301 W/kg
Maximum value of SAR (measured) = 0.851 W/kg



0 dB = 0.851 W/kg = -0.70 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.8

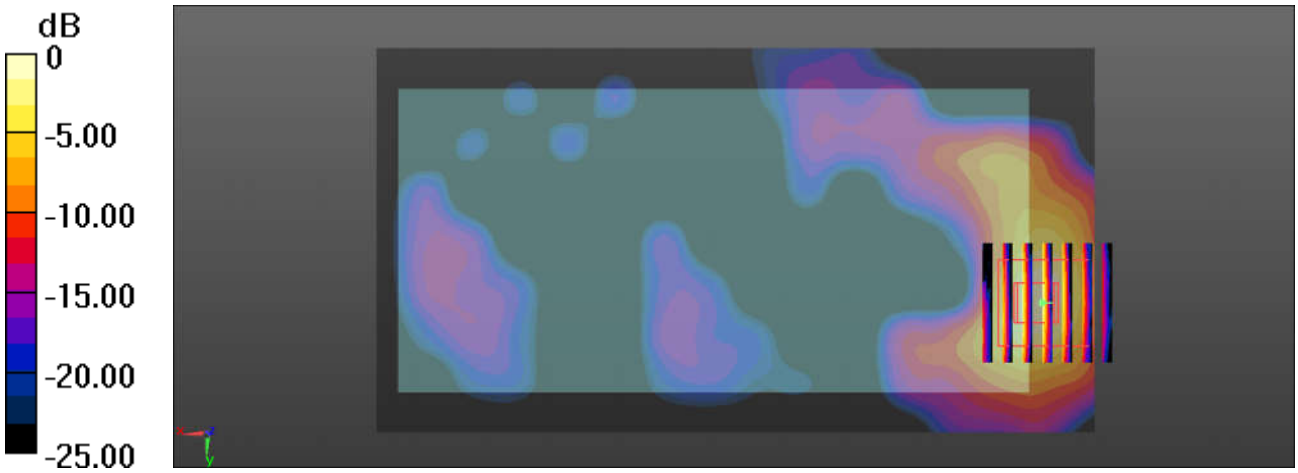
35_LTE Band7_20M_QPSK_1RB_99Offset_Back_10mm_UAT_Ch21350

Communication System: UID 0, FDD_LTE (0); Frequency: 2560 MHz;Duty Cycle: 1:1
Medium: MSL_2600 Medium parameters used: f = 2560 MHz; σ = 2.173 S/m; ε_r = 52.578; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.38, 7.38, 7.38); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch21350/Area Scan (81x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.268 W/kg

Ch21350/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.12 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.390 W/kg
SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.064 W/kg
Maximum value of SAR (measured) = 0.286 W/kg



0 dB = 0.286 W/kg = -5.44 dBW/kg

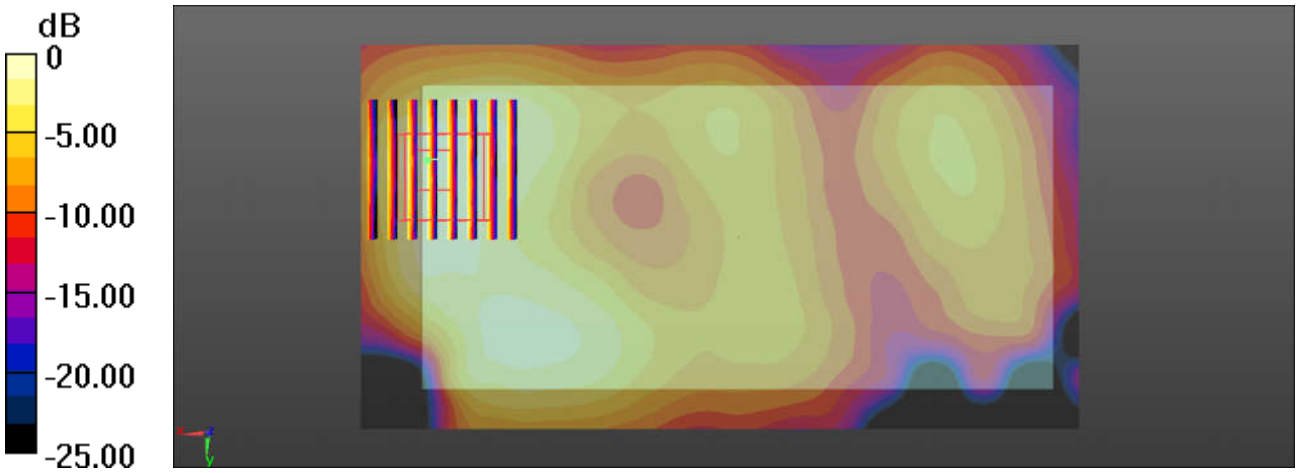
36_LTE Band 38_20M_QPSK_1RB_49Offset_Back_10mm_LAT_Ch38000

Communication System: UID 0, TDD_LTE (0); Frequency: 2595 MHz;Duty Cycle: 1:1.59
Medium: MSL_2600 Medium parameters used: f = 2595 MHz; σ = 2.224 S/m; ε_r = 52.44; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.38, 7.38, 7.38); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch38000/Area Scan (81x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.153 W/kg

Ch38000/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.633 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.198 W/kg
SAR(1 g) = 0.099 W/kg; SAR(10 g) = 0.052 W/kg
Maximum value of SAR (measured) = 0.159 W/kg



0 dB = 0.159 W/kg = -7.99 dBW/kg

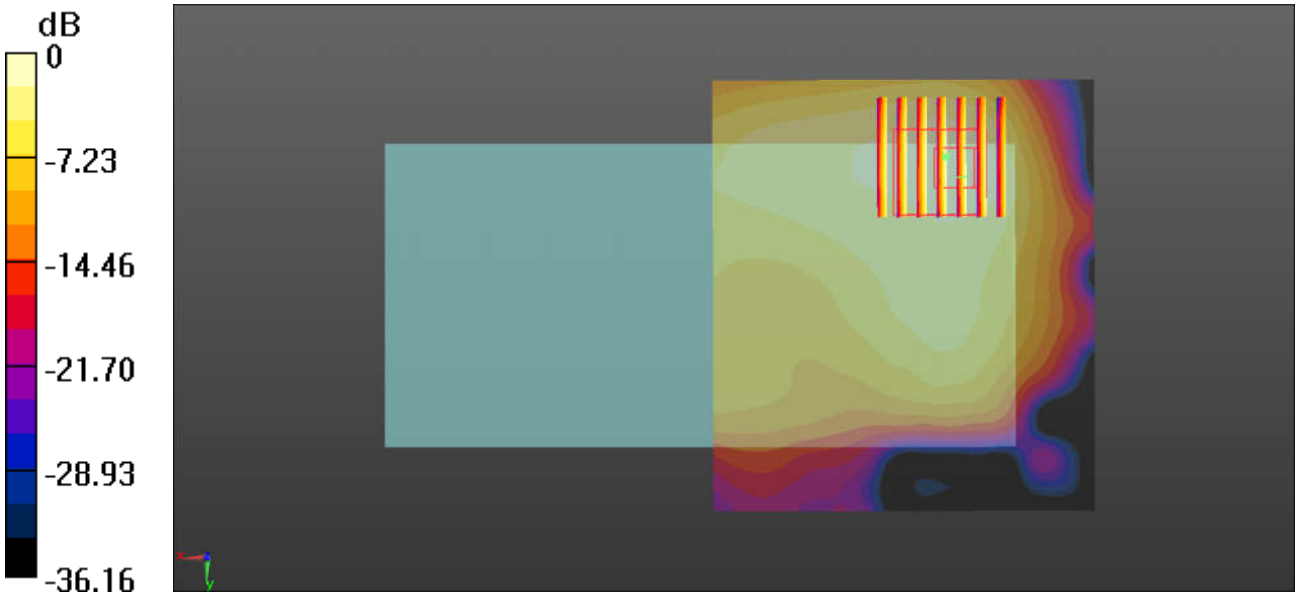
37_WLAN 2.4GHz_802.11b 1Mbps_Back_10mm_Ch11

Communication System: UID 0, WIFI (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2462 MHz; σ = 2.038 S/m; ε_r = 52.98; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.42, 7.42, 7.42); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch11/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.236 W/kg

Ch11/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.10 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.315 W/kg
SAR(1 g) = 0.151 W/kg; SAR(10 g) = 0.076 W/kg
Maximum value of SAR (measured) = 0.247 W/kg



0 dB = 0.247 W/kg = -6.07 dBW/kg

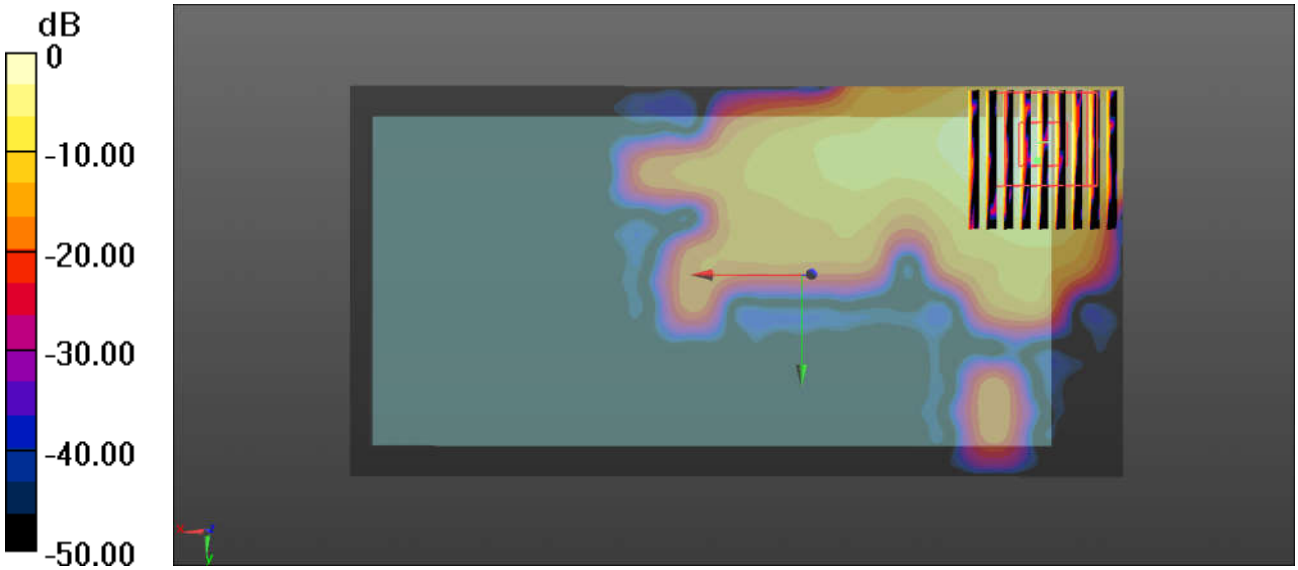
38_WLAN 5GHz_802.11a 6Mbps_Back_10mm_Ch52

Communication System: UID 0, WIFI (0); Frequency: 5260 MHz;Duty Cycle: 1:1.053
Medium: MSL_5000 Medium parameters used: f = 5260 MHz; σ = 5.517 S/m; ε_r = 47.95; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(4.4, 4.4, 4.4); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch52/Area Scan (181x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.510 W/kg

Ch52/Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 10.94 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.733 W/kg
SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.061 W/kg
Maximum value of SAR (measured) = 0.484 W/kg



0 dB = 0.484 W/kg = -3.15 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.10

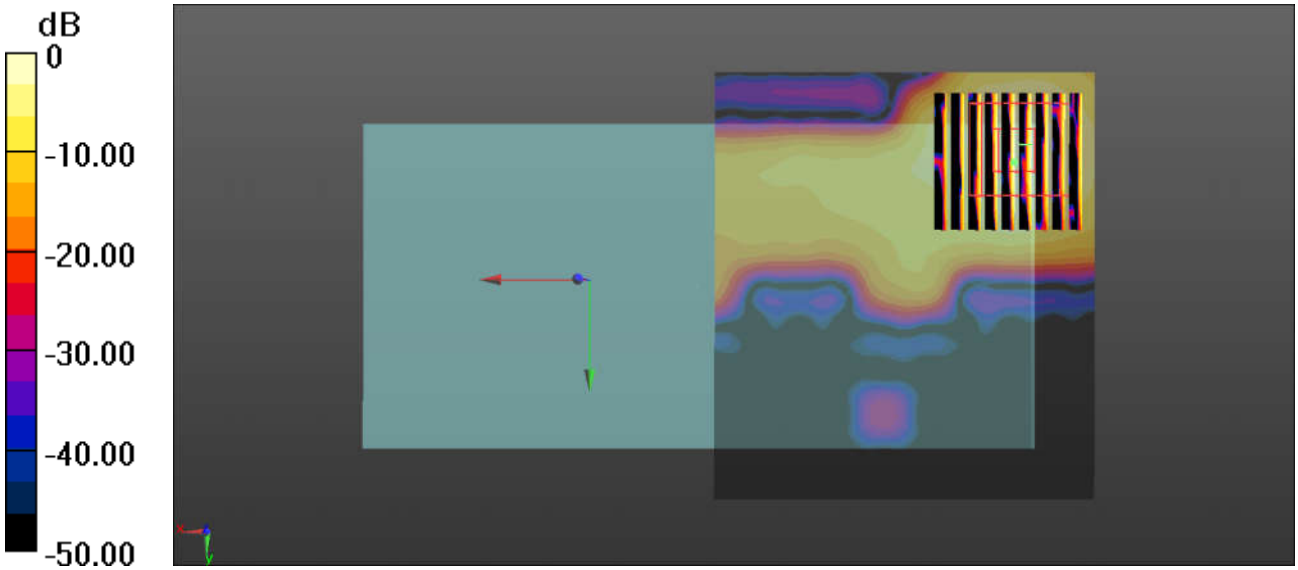
39_WLAN 5GHz_802.11a 6Mbps_Back_10mm_Ch100

Communication System: UID 0, WIFI (0); Frequency: 5500 MHz;Duty Cycle: 1:1.053
Medium: MSL_5000 Medium parameters used: f = 5500 MHz; σ = 5.823 S/m; ε_r = 47.531; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(3.98, 3.98, 3.98); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch100/Area Scan (91x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.441 W/kg

Ch100/Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 10.08 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.053 W/kg
Maximum value of SAR (measured) = 0.416 W/kg



0 dB = 0.416 W/kg = -3.81 dBW/kg

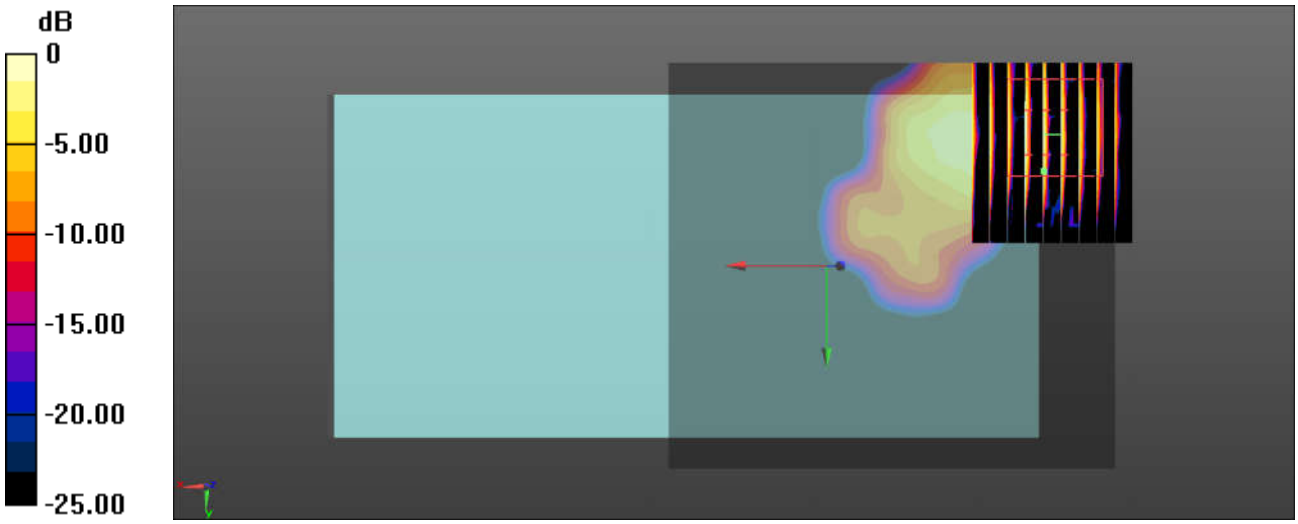
40_WLAN 5GHz_802.11a 6Mbps_Back_10mm_Ant 1_Ch161

Communication System: UID 0, WIFI (0); Frequency: 5805 MHz;Duty Cycle: 1:1.053
Medium: MSL_5000 Medium parameters used : f = 5805 MHz; σ = 6.285 S/m; ε_r = 46.041; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(4.31, 4.31, 4.31); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch161/Area Scan (101x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.276 W/kg

Ch161/Zoom Scan (11x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 6.931 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.424 W/kg
SAR(1 g) = 0.092 W/kg; SAR(10 g) = 0.032 W/kg
Maximum value of SAR (measured) = 0.266 W/kg



0 dB = 0.266 W/kg = -5.75 dBW/kg

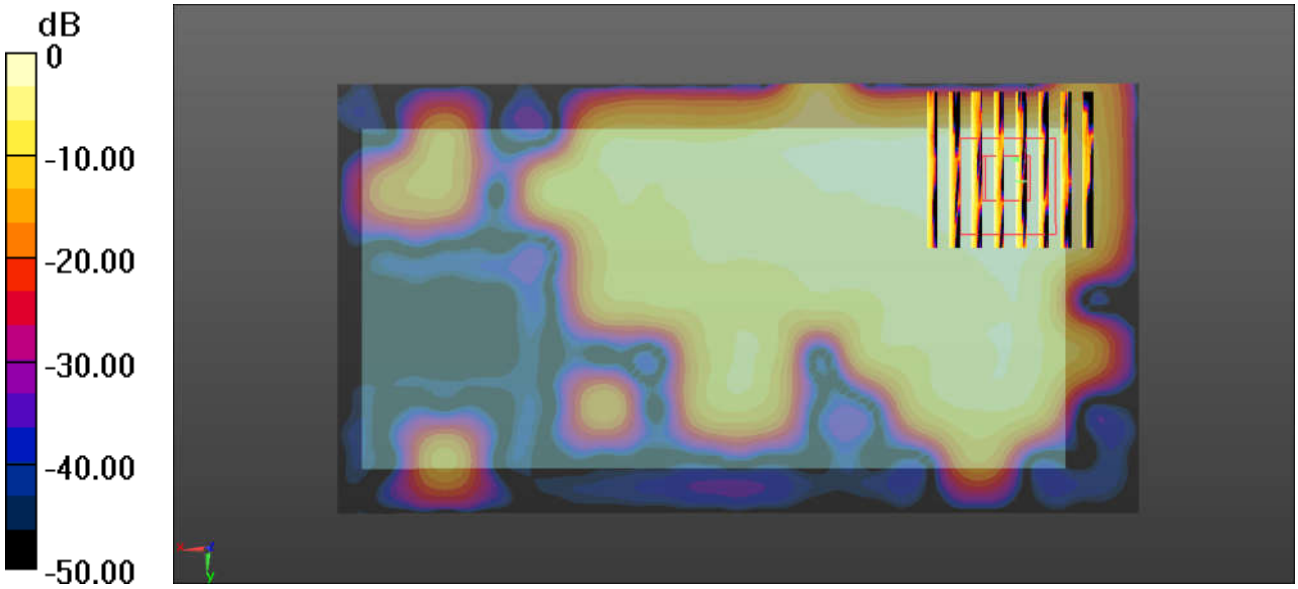
41_ Bluetooth_1Mbps_Back_10mm_Ch78

Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz;Duty Cycle: 1:1.305
Medium: MSL_2450 Medium parameters used: f = 2480 MHz; σ = 2.064 S/m; ε_r = 52.904; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.42, 7.42, 7.42); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch78/Area Scan (151x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0484 W/kg

Ch78/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.221 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.0440 W/kg
SAR(1 g) = 0.021 W/kg; SAR(10 g) = 0.00864 W/kg
Maximum value of SAR (measured) = 0.0378 W/kg



0 dB = 0.0378 W/kg = -14.23 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.9

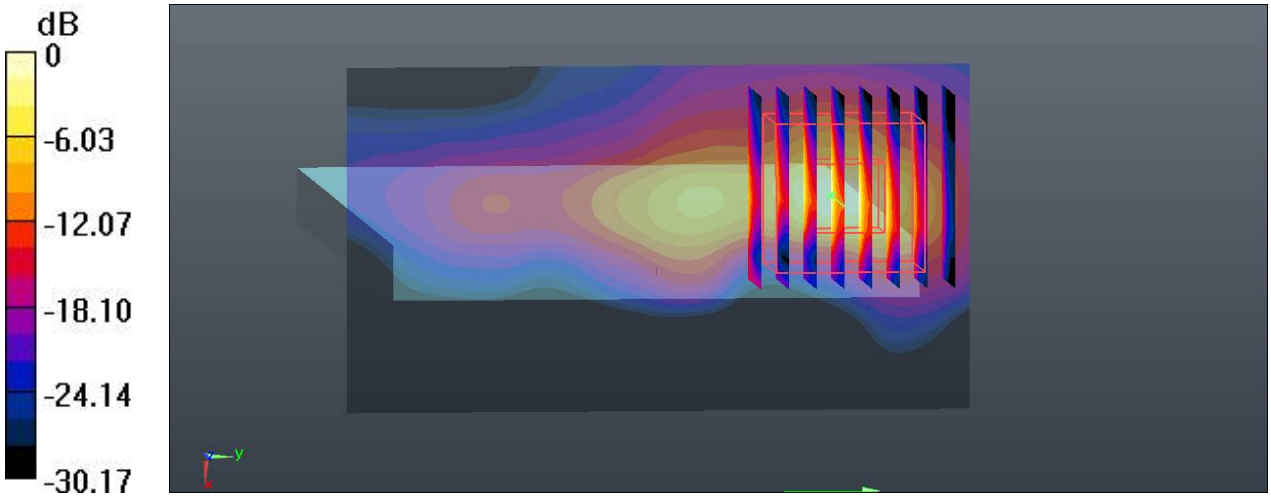
42_WLAN5GHz_802.11a 6Mbps_Top Side_0mm_Ch52

Communication System: UID 0, WIFI (0); Frequency: 5260 MHz;Duty Cycle: 1:1.053
Medium: MSL_5000 Medium parameters used: f = 5260 MHz; σ = 5.562 S/m; ε_r = 46.996; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(4.4, 4.4, 4.4); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch52/Area Scan (51x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 7.83 W/kg

Ch52/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 40.55 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 13.7 W/kg
SAR(1 g) = 2.74 W/kg; SAR(10 g) = 0.629 W/kg
Maximum value of SAR (measured) = 7.65 W/kg



0 dB = 7.65 W/kg = 8.84 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2018.7.10

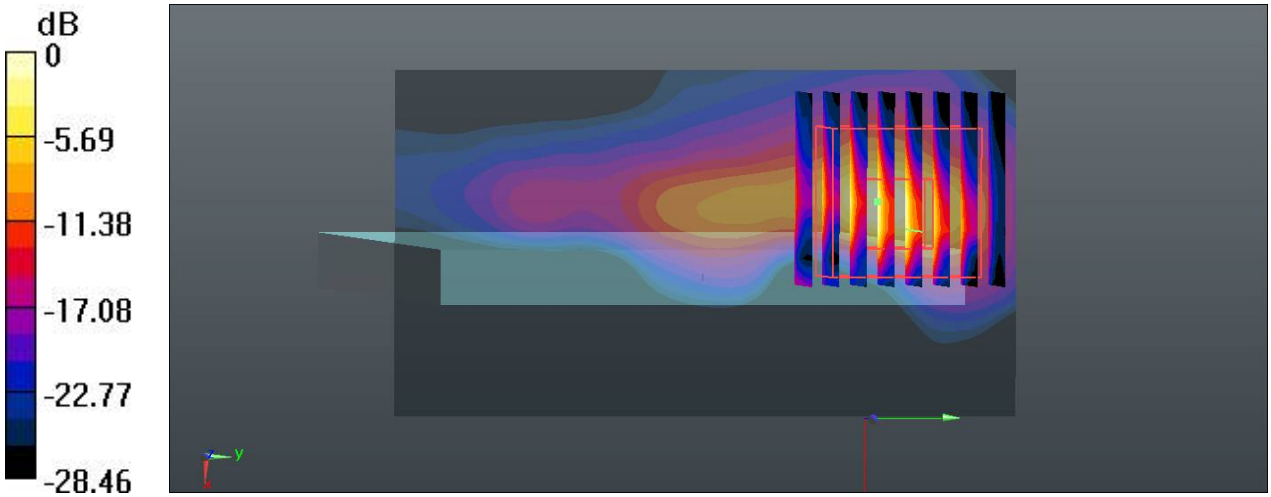
43_WLAN5GHz_802.11a 6Mbps_Top Side_0mm_Ch100

Communication System: UID 0, WIFI (0); Frequency: 5500 MHz;Duty Cycle: 1:1.053
Medium: MSL_5000 Medium parameters used: f = 5500 MHz; σ = 5.879 S/m; ε_r = 46.568; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(3.98, 3.98, 3.98); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2018.5.28
- Phantom: SAM1; Type: SAM; Serial: TP-1164
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Ch100/Area Scan (51x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 5.85 W/kg

Ch100/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 31.68 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 11.4 W/kg
SAR(1 g) = 1.96 W/kg; SAR(10 g) = 0.417 W/kg
Maximum value of SAR (measured) = 5.22 W/kg



0 dB = 5.22 W/kg = 7.18 dBW/kg

Appendix C. DASY Calibration Certificate

The DASY calibration certificates are shown as follows.

In Collaboration with
s p e a g
CALIBRATION LABORATORY
Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com http://www.chinattl.cn

中国认可
国际互认
校准
CALIBRATION
CNAS L0570

Client **Sporton** **Certificate No: Z17-97259**

CALIBRATION CERTIFICATE

Object	D835V2 - SN: 4d091
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	December 5, 2017

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)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRVD	102196	02-Mar-17 (CTTL, No.J17X01254)	Mar-18
Power sensor NRV-Z5	100596	02-Mar-17 (CTTL, No.J17X01254)	Mar-18
Reference Probe EX3DV4	SN 3617	23-Jan-17(SPEAG,No.EX3-3617_Jan17)	Jan-18
DAE3	SN 536	09-Oct-17(CTTL-SPEAG,No.Z17-97198)	Oct-18
Secondary Standards	**ID #**	**Cal Date(Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	13-Jan-17 (CTTL, No.J17X00286)	Jan-18
Network Analyzer E5071C	MY46110673	13-Jan-17 (CTTL, No.J17X00285)	Jan-18

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: December 9, 2017

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

Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com http://www.chinattl.cn

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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 assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices- Part 1: Device used next to the ear (Frequency range of 300MHz to 6GHz)", July 2016

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

d) KDB865664, 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%.