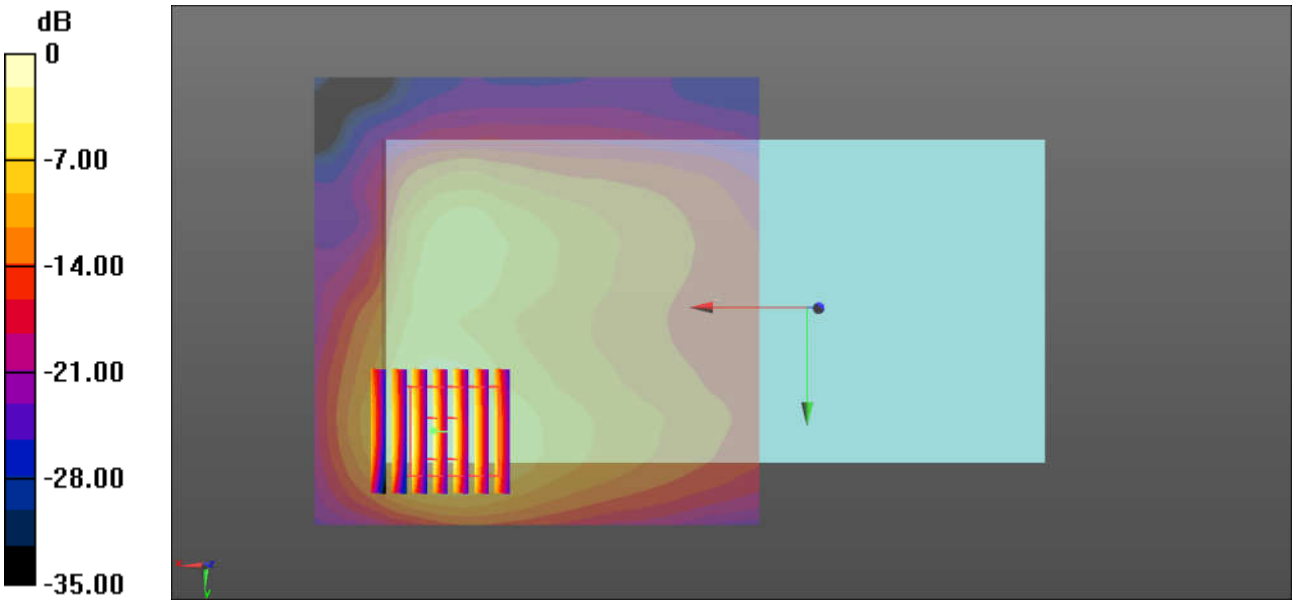
38_LTE Band 41_Class3_20M_QPSK_1RB_0offset_Back_5mm_Sensor on_Ch40185

Communication System: UID 0, LTE-TDD (0); Frequency: 2549.5 MHz;Duty Cycle: 1:1.59
Medium: MSL_2600 Medium parameters used: f = 2549.5 MHz; σ = 2.168 S/m; ε_r = 52.63; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch40185/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.63 W/kg

Ch40185/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.193 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 2.38 W/kg
SAR(1 g) = 0.963 W/kg; SAR(10 g) = 0.416 W/kg
Maximum value of SAR (measured) = 1.71 W/kg



0 dB = 1.63 W/kg = 2.12 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

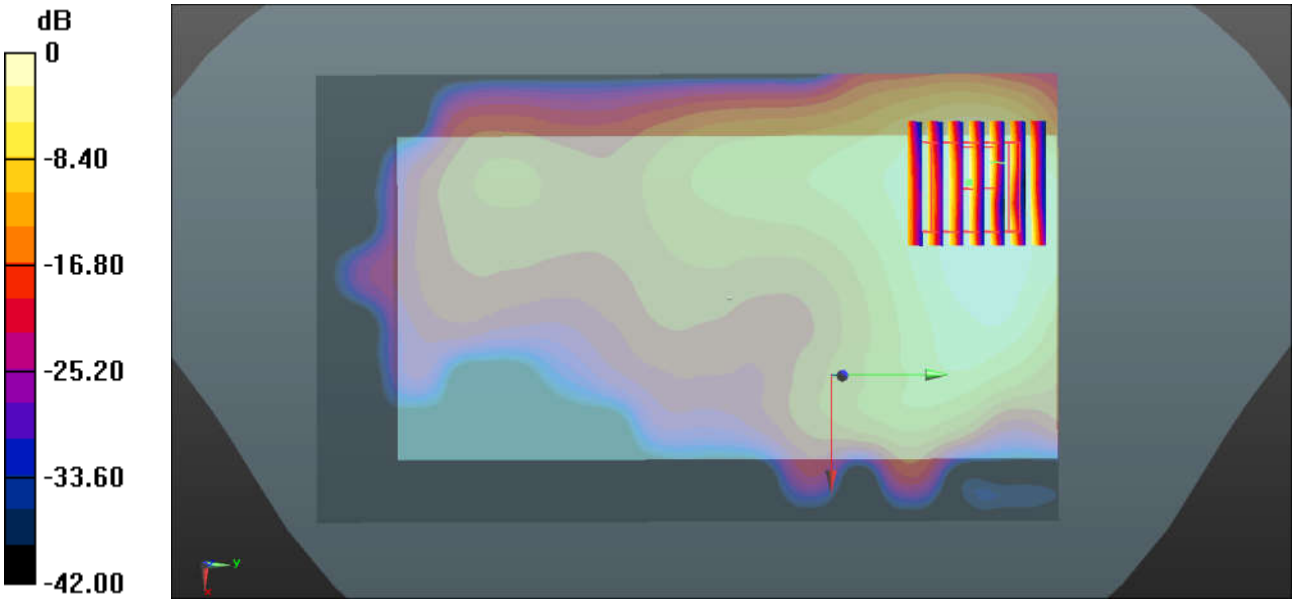
40_WLAN2.4GHz_802.11b 1Mbps_Back_5mm_Ch6

Communication System: UID 0, 802.11b (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2437 MHz; σ = 2.008 S/m; ε_r = 53.08; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; 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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

802.11b/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.894 W/kg

802.11b/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.496 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.568 W/kg; SAR(10 g) = 0.243 W/kg
Maximum value of SAR (measured) = 0.978 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.6

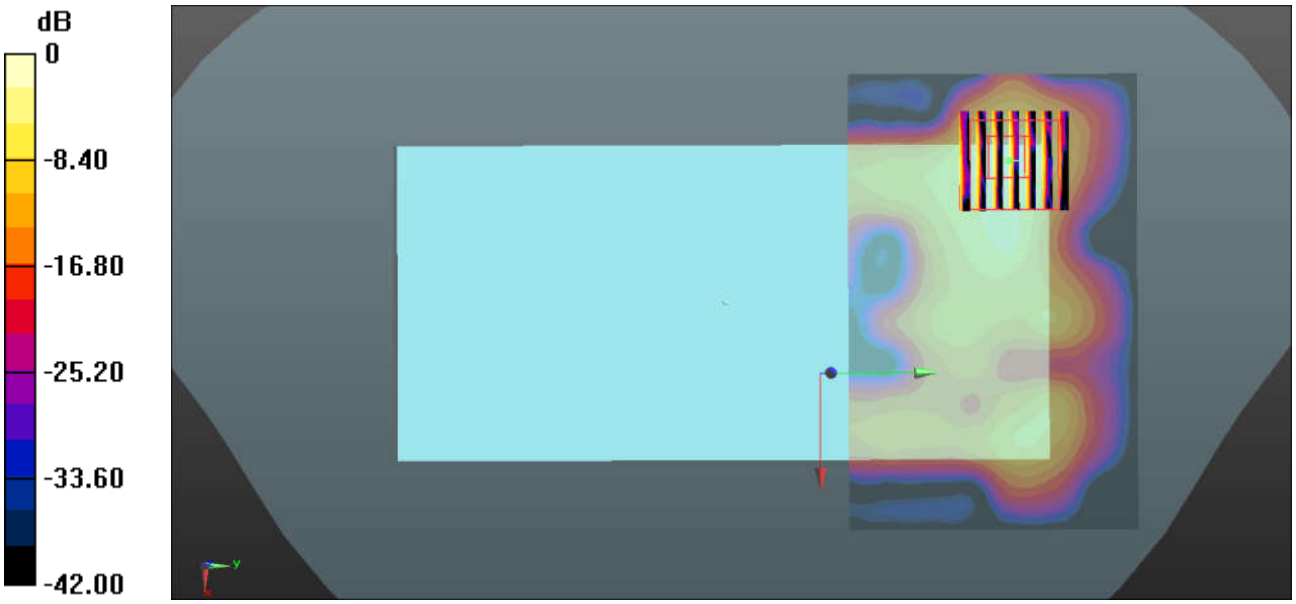
41_WLAN 5GHz _802.11a 6Mbps_Back_5mm_Ch36

Communication System: UID 0, 802.11a (0); Frequency: 5180 MHz;Duty Cycle: 1:1.018
Medium: MSL_5000 Medium parameters used: f = 5180 MHz; σ = 5.397 S/m; ε_r = 48.029; 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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch36/Area Scan (111x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.23 W/kg

Ch36/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 3.72 W/kg
SAR(1 g) = 0.747 W/kg; SAR(10 g) = 0.190 W/kg
Maximum value of SAR (measured) = 2.13 W/kg



0 dB = 2.23 W/kg = 3.48 dBW/kg

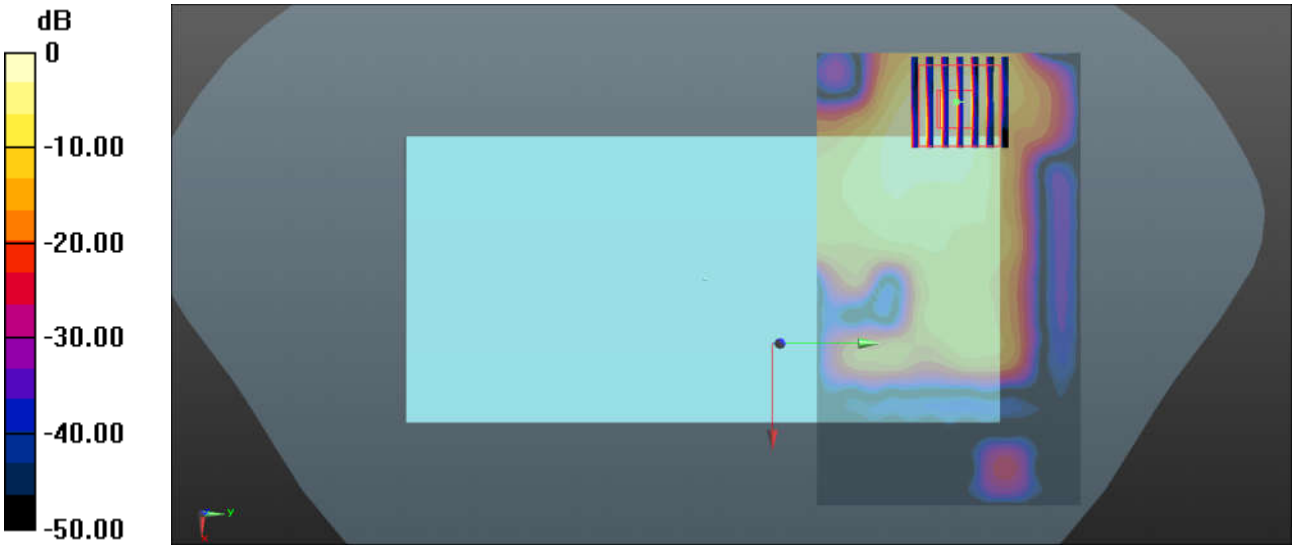
42_WLAN 5GHz _802.11a 6Mbps_Back_5mm_Ch149

Communication System: UID 0, 802.11a (0); Frequency: 5745 MHz;Duty Cycle: 1:1.018
Medium: MSL_5000 Medium parameters used: f = 5745 MHz; σ = 6.152 S/m; ε_r = 47.083; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch149/Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.53 W/kg

Ch149/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.361 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 2.66 W/kg
SAR(1 g) = 0.537 W/kg; SAR(10 g) = 0.140 W/kg
Maximum value of SAR (measured) = 1.35 W/kg



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

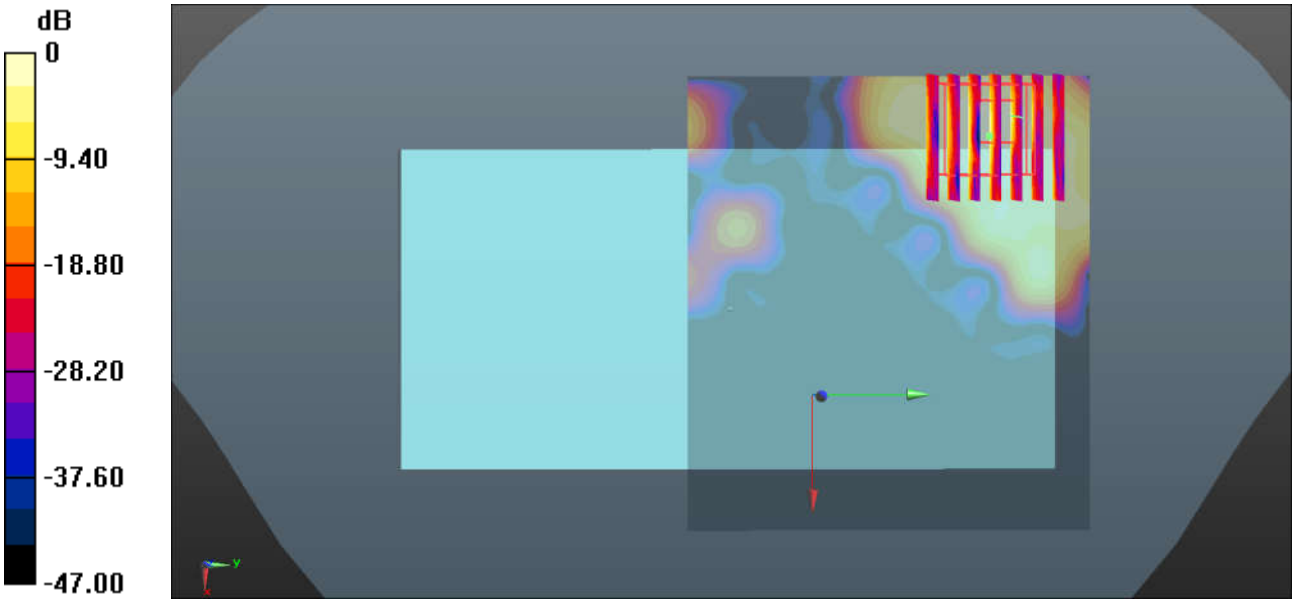
43_Bluetooth_DH5 1Mbps_Back_5mm_Ch78

Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz;Duty Cycle: 1:1.30
Medium: MSL_2450 Medium parameters used: f = 2480 MHz; σ = 2.067 S/m; ε_r = 52.912; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; 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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch78/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0380 W/kg

Ch78/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.130 W/kg
SAR(1 g) = 0.022 W/kg; SAR(10 g) = 0.00904 W/kg
Maximum value of SAR (measured) = 0.0373 W/kg



0 dB = 0.0380 W/kg = -14.20 dBW/kg

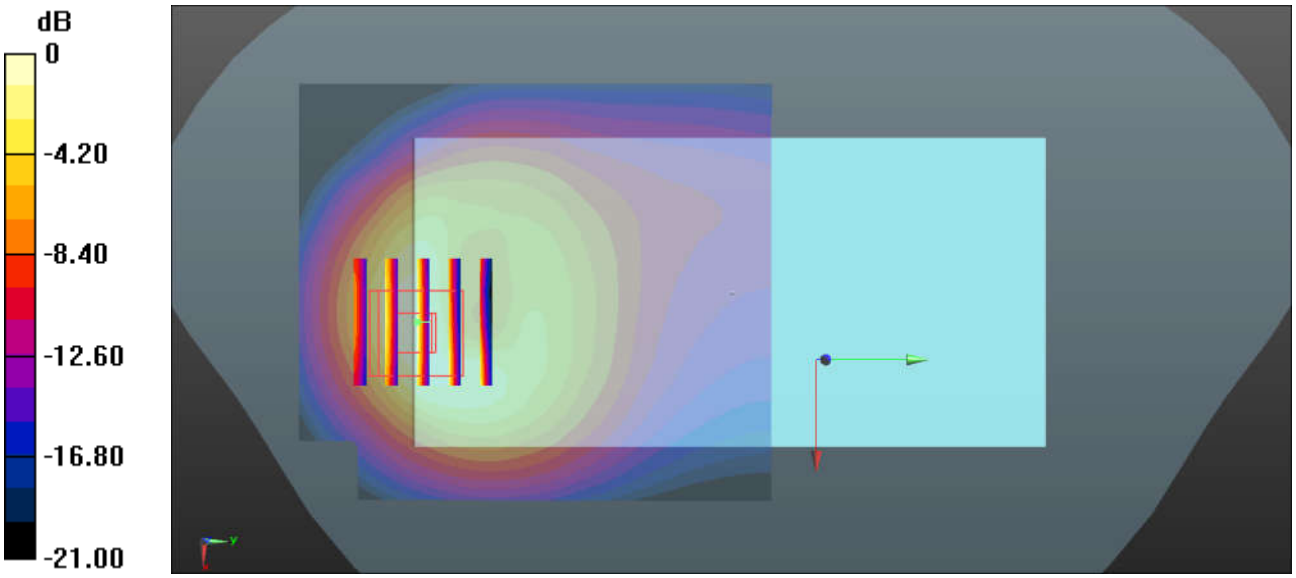
44_GSM850_GPRS (2 Tx slots)_Back_5mm_Ch128

Communication System: UID 0, GSM850 (0); Frequency: 824.2 MHz;Duty Cycle: 1:4.15
Medium: MSL_850 Medium parameters used: f = 824.2 MHz; σ = 0.981 S/m; ε_r = 56.132; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch850/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.53 W/kg

Ch850/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.10 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 2.28 W/kg
SAR(1 g) = 1.16 W/kg; SAR(10 g) = 0.595 W/kg
Maximum value of SAR (measured) = 1.56 W/kg



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

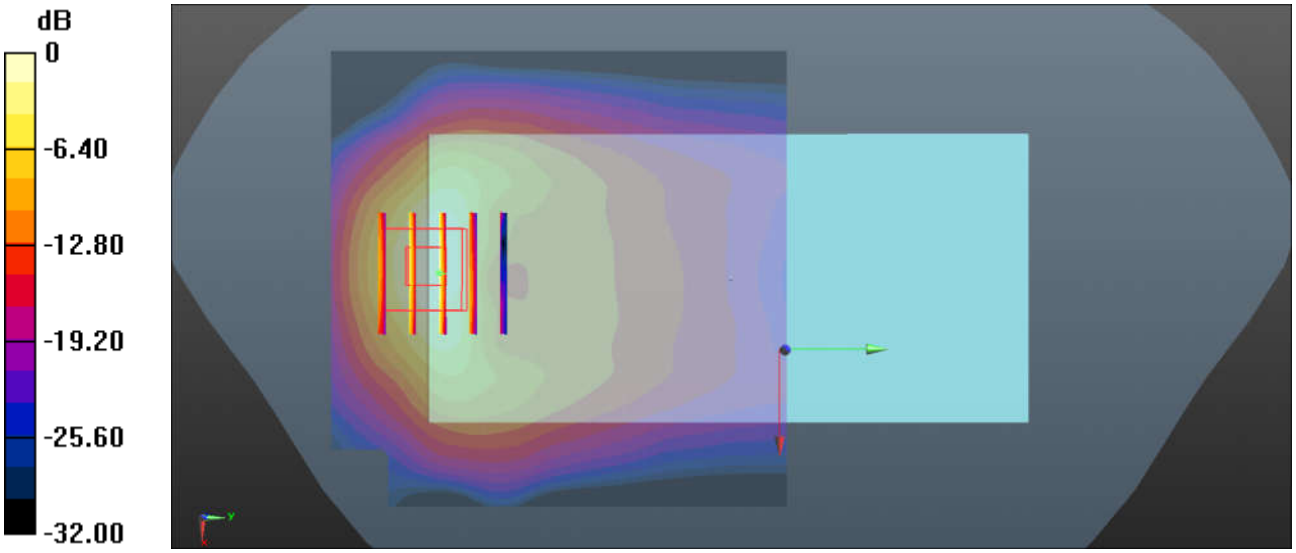
45_GSM1900_GPRS 2 Tx slots_Back_5mm_Sensor On_Ch661

Communication System: UID 0, PCS-2UP (0); Frequency: 1880 MHz;Duty Cycle: 1:4.15
Medium: MSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.51 S/m; ε_r = 53.094; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch661/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.48 W/kg

Ch661/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.372 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.39 W/kg
SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.507 W/kg
Maximum value of SAR (measured) = 1.75 W/kg



0 dB = 1.48 W/kg = 1.70 dBW/kg

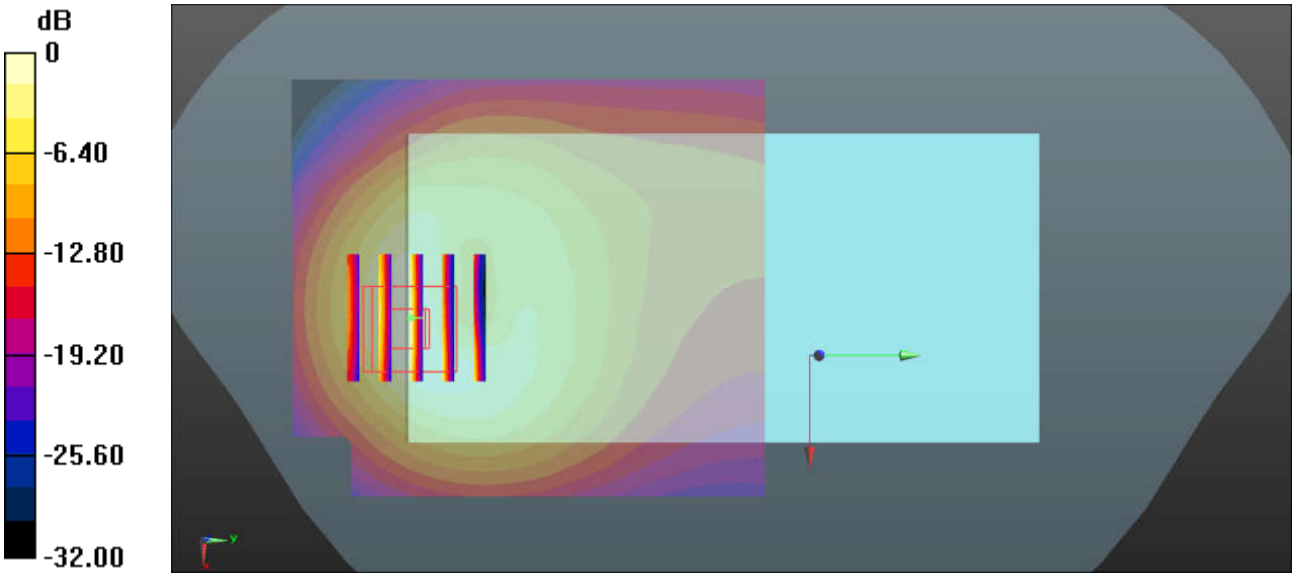
46_WCDMA V_RMC 12.2Kbps_Back_5mm_Ch4233

Communication System: UID 0, WCDMA (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: MSL_850 Medium parameters used: f = 846.6 MHz; σ = 1.002 S/m; ε_r = 55.87; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch4233/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.49 W/kg

Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.23 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 2.16 W/kg
SAR(1 g) = 1.1 W/kg; SAR(10 g) = 0.560 W/kg
Maximum value of SAR (measured) = 1.48 W/kg



0 dB = 1.49 W/kg = 1.73 dBW/kg

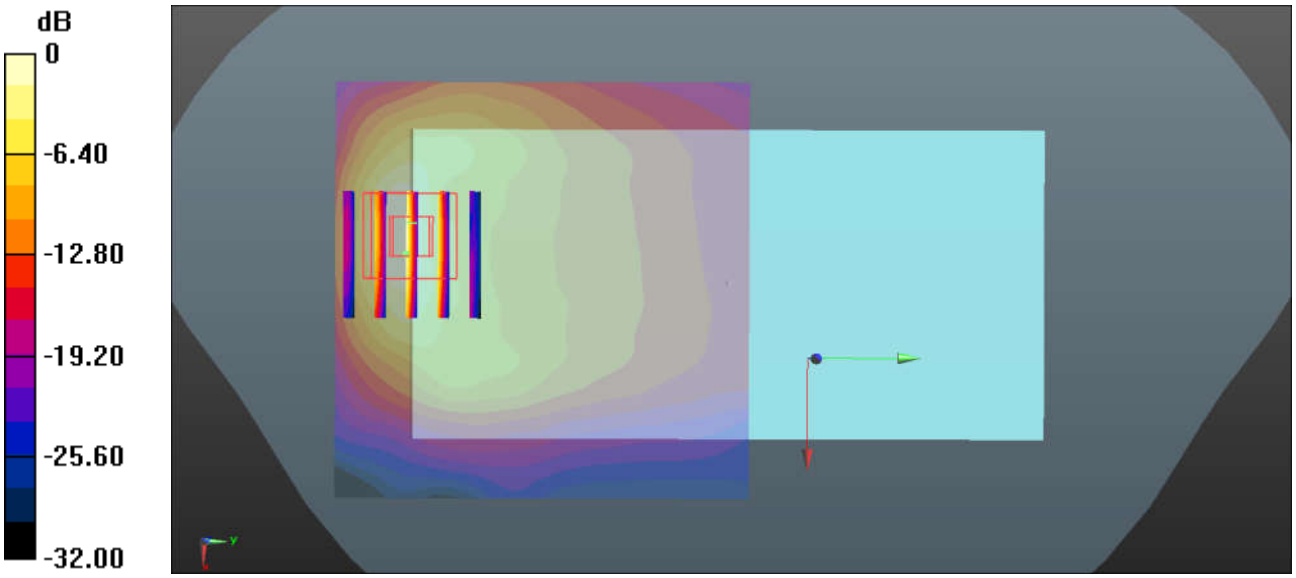
47_WCDMA IV_RMC12.2Kbps_Back_5mm_Ch1413

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: MSL_1750 Medium parameters used: f = 1732.6 MHz; σ = 1.436 S/m; ε_r = 51.633; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1413/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.08 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.611 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.81 W/kg
SAR(1 g) = 0.913 W/kg; SAR(10 g) = 0.421 W/kg
Maximum value of SAR (measured) = 1.38 W/kg



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

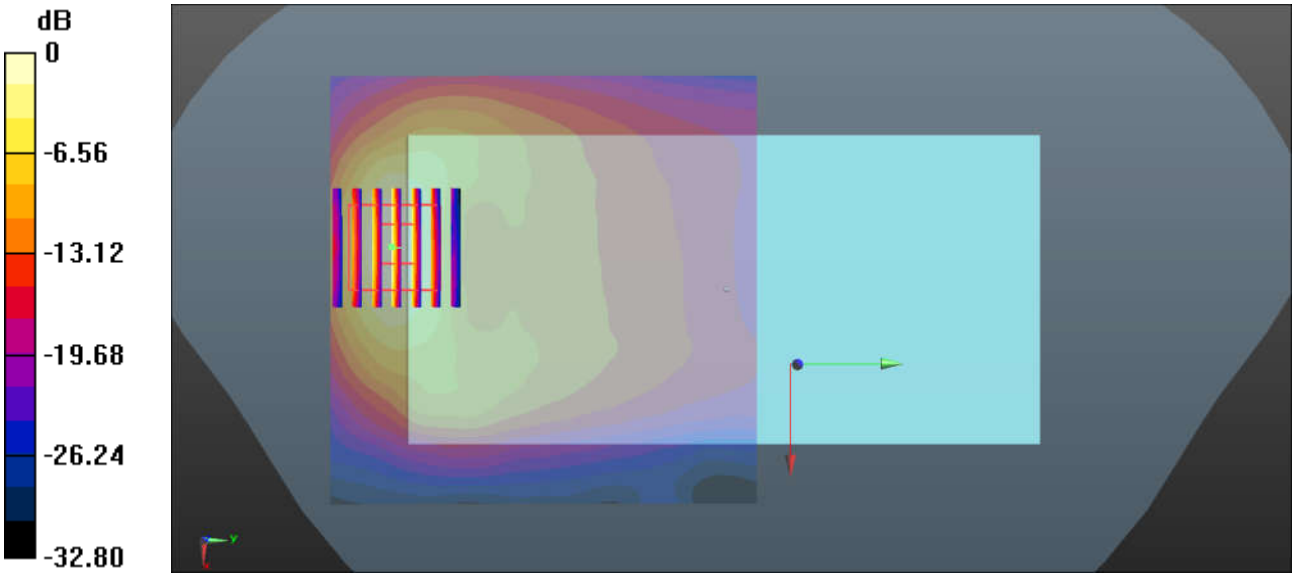
48_WCDMA II_RMC 12.2Kbps_Back_5mm_Ch9400

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: MSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.51 S/m; ε_r = 53.094; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch9400/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.07 W/kg

Ch9400/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.814 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.56 W/kg
SAR(1 g) = 0.780 W/kg; SAR(10 g) = 0.360 W/kg
Maximum value of SAR (measured) = 1.24 W/kg



0 dB = 1.07 W/kg = 0.29 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

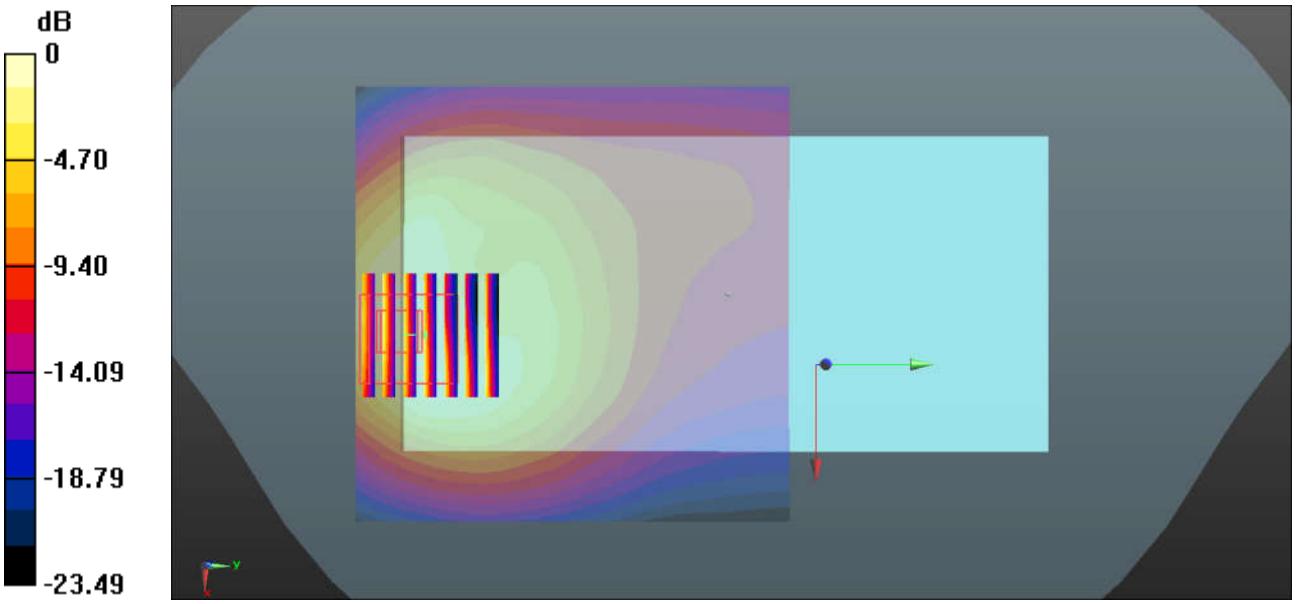
49_CDMA2000 BC10-_RC3 SO32 (F+SCH) _Back_5mm_Ch684

Communication System: UID 0, CDMA (0); Frequency: 823.1 MHz;Duty Cycle: 1:1
Medium: MSL_850 Medium parameters used: f = 823.1 MHz; σ = 0.98 S/m; ε_r = 56.13; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch684/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.33 W/kg

Ch684/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.11 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.96 W/kg
SAR(1 g) = 0.889 W/kg; SAR(10 g) = 0.440 W/kg
Maximum value of SAR (measured) = 1.52 W/kg



0 dB = 1.33 W/kg = 1.24 dBW/kg

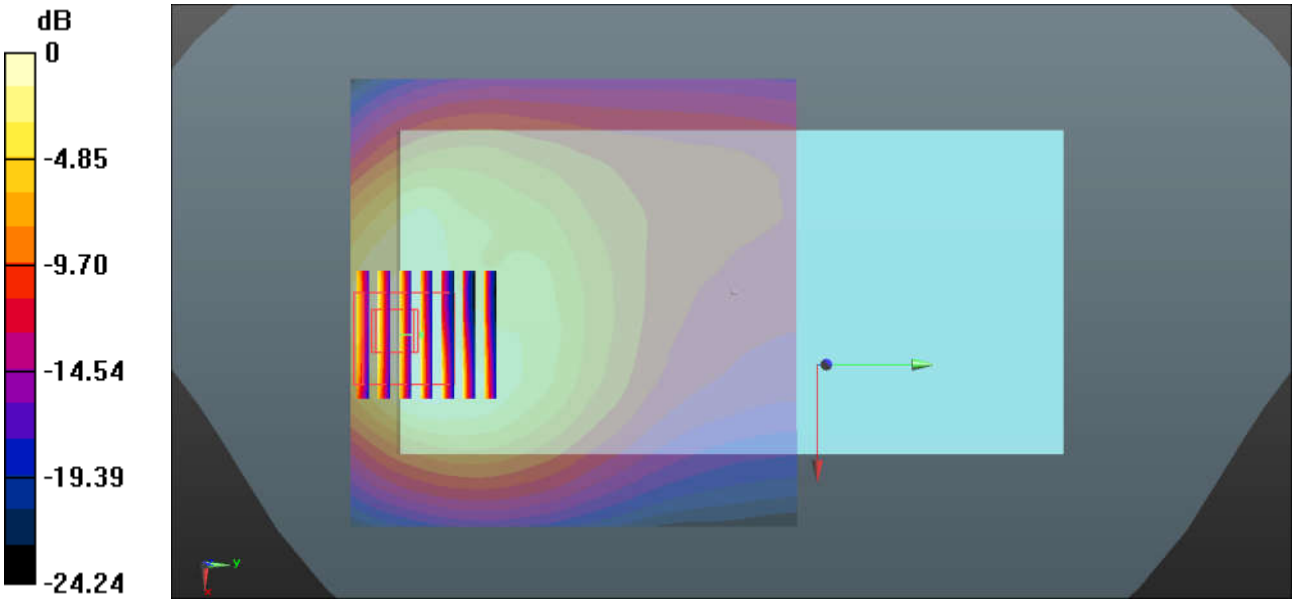
50_CDMA2000 BC0-_RC3 SO32 (F+SCH)_Back_5mm_Ch384

Communication System: UID 0, CDMA (0); Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: MSL_850 Medium parameters used: f = 836.52 MHz; σ = 0.992 S/m; ε_r = 55.979; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch384/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.37 W/kg

Ch384/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.994 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 2.06 W/kg
SAR(1 g) = 0.944 W/kg; SAR(10 g) = 0.468 W/kg
Maximum value of SAR (measured) = 1.60 W/kg



0 dB = 1.37 W/kg = 1.37 dBW/kg

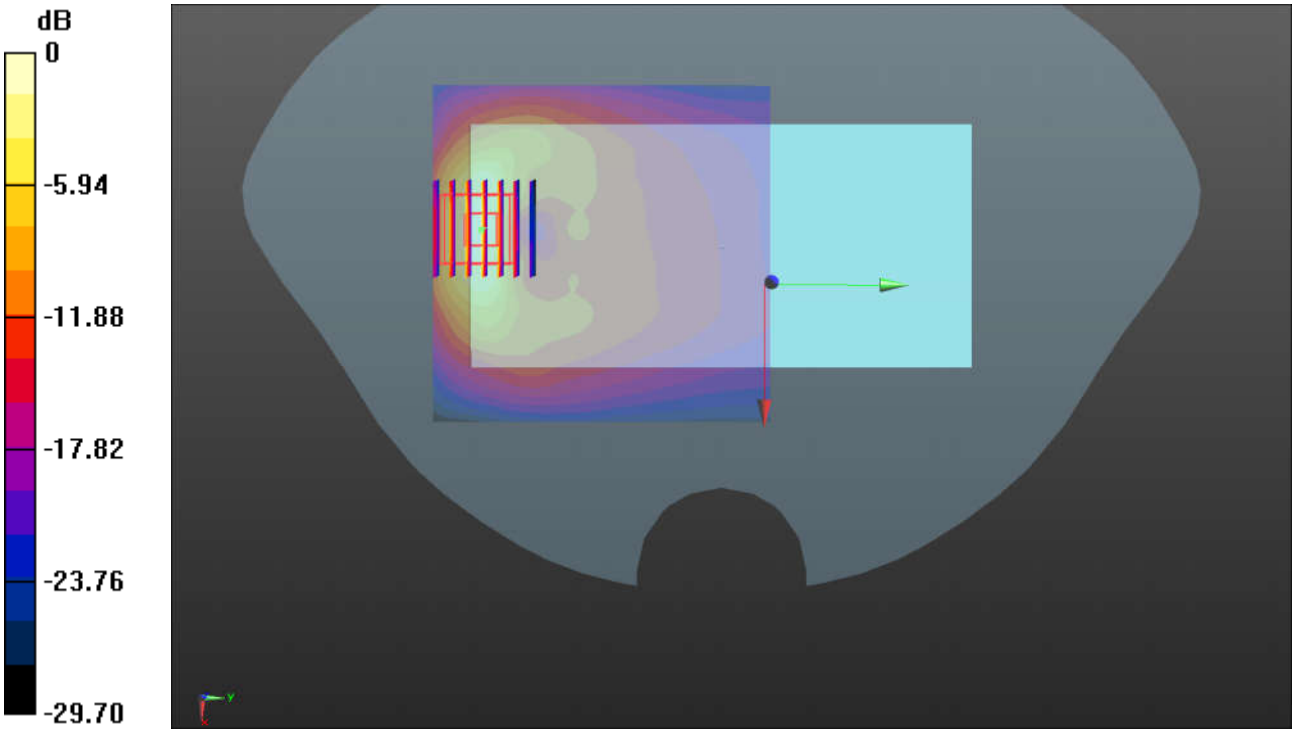
51_CDMA2000 BC1-_RC3 SO32 (F+SCH) _Back_5mm_Ch25

Communication System: UID 0, CDMA (0); Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium: MSL_1900 Medium parameters used: f = 1851.25 MHz; σ = 1.479 S/m; ε_r = 53.183; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch25/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.98 W/kg

Ch25/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.202 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.42 W/kg
SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.537 W/kg
Maximum value of SAR (measured) = 1.98 W/kg



0 dB = 1.98 W/kg = 2.97 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

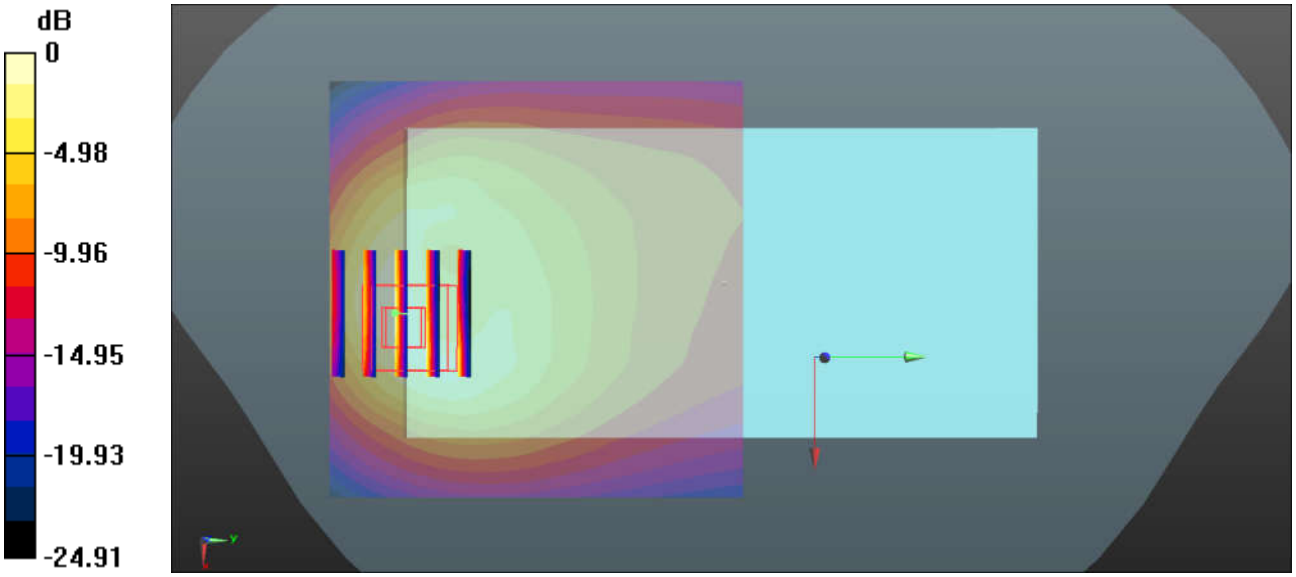
52_LTE Band 71_20M_QPSK_1RB_0Offset_Back_5mm_Ch133322

Communication System: UID 0, LTE-FDD (0); Frequency: 683 MHz;Duty Cycle: 1:1
Medium: MSL_750 Medium parameters used: f = 683 MHz; σ = 0.906 S/m; ε_r = 56.682; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.7, 9.7, 9.7); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch133322/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.45 W/kg

Ch133322/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.10 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.96 W/kg
SAR(1 g) = 0.758 W/kg; SAR(10 g) = 0.409 W/kg
Maximum value of SAR (measured) = 1.50 W/kg



0 dB = 1.45 W/kg = 1.61 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

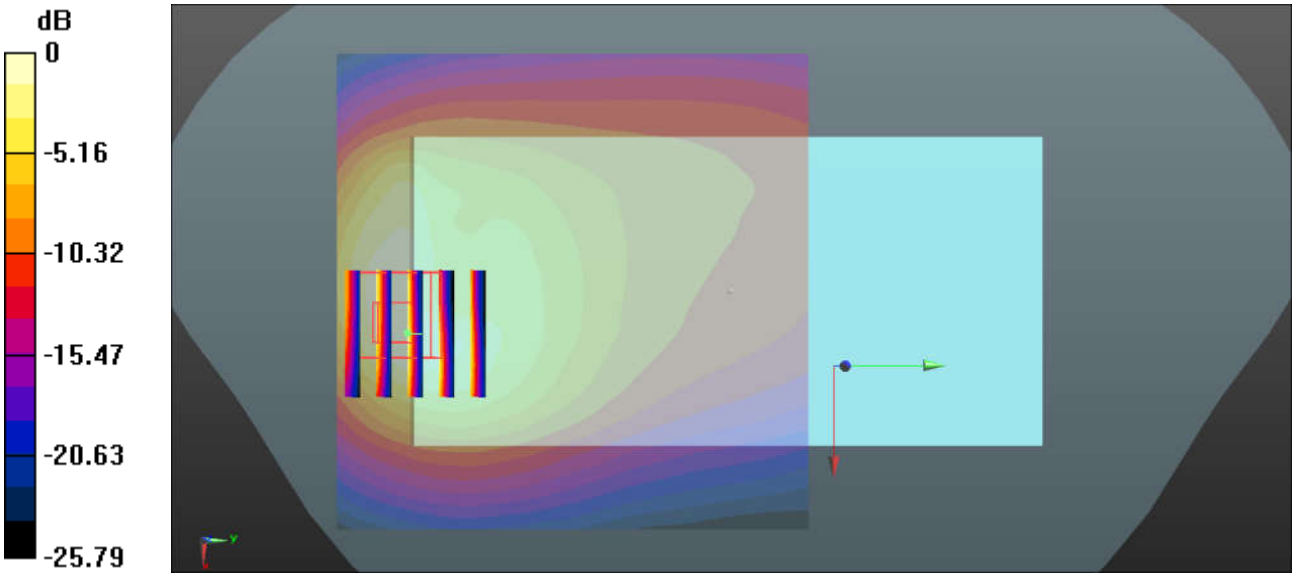
53_LTE Band 12_10M_QPSK_1RB_0Offset_Back_5mm_Ch23095

Communication System: UID 0, FDD_LTE (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium: MSL_750 Medium parameters used: f = 707.5 MHz; σ = 0.93 S/m; ε_r = 56.429; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.7, 9.7, 9.7); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch23095/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.42 W/kg

Ch23095/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.023 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 1.82 W/kg
SAR(1 g) = 0.829 W/kg; SAR(10 g) = 0.433 W/kg
Maximum value of SAR (measured) = 1.41 W/kg



0 dB = 1.42 W/kg = 1.52 dBW/kg

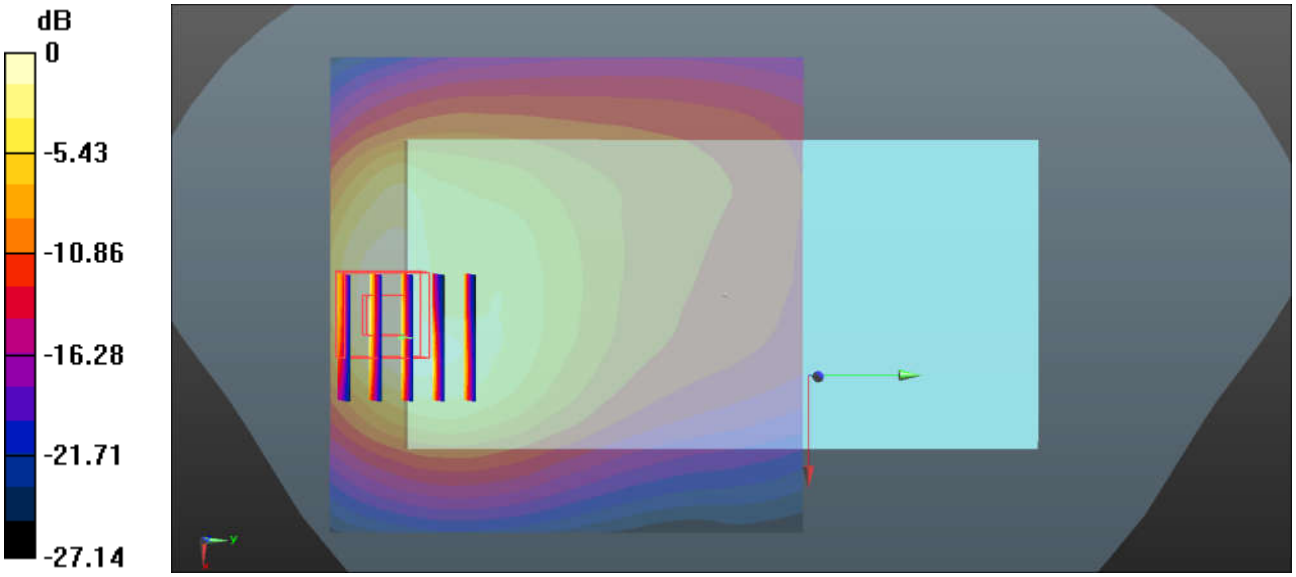
54_LTE Band 13_10M_QPSK_1RB_0Offset_Back_5mm_Ch23230

Communication System: UID 0, FDD_LTE (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium: MSL_750 Medium parameters used: f = 782 MHz; σ = 0.999 S/m; ε_r = 55.757; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.7, 9.7, 9.7); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch23230/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.53 W/kg

Ch23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.748 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.96 W/kg
SAR(1 g) = 0.919 W/kg; SAR(10 g) = 0.478 W/kg
Maximum value of SAR (measured) = 1.52 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

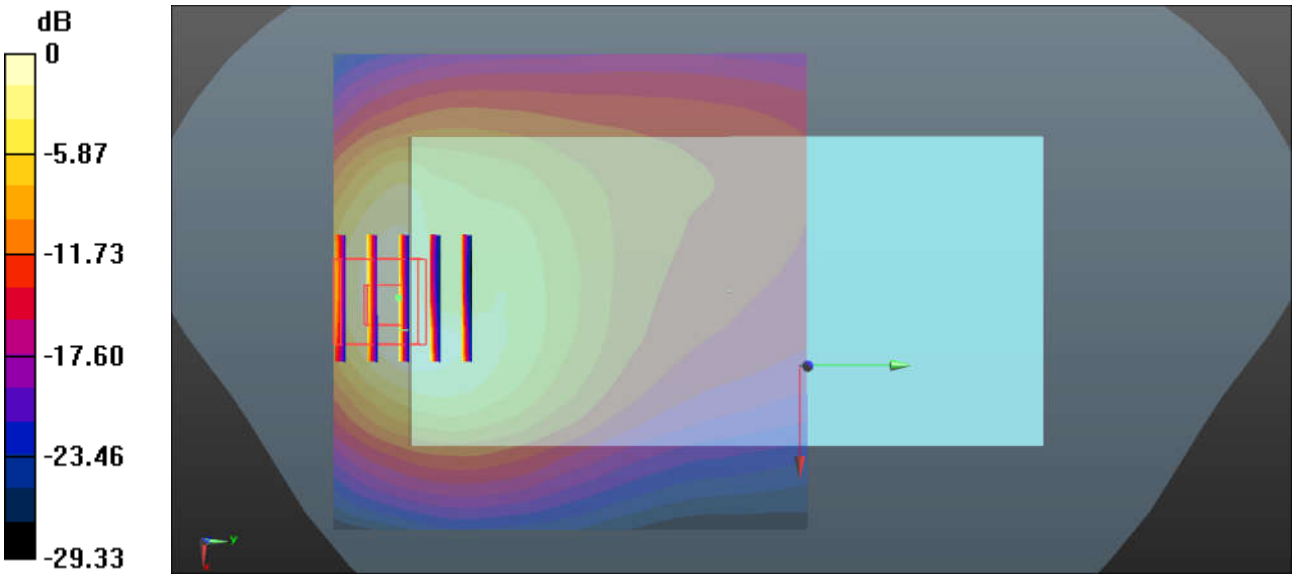
55_LTE Band 26_15M_QPSK_75RB_0Offset_Back_5mm_Ch26865

Communication System: UID 0, FDD_LTE (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium: MSL_850 Medium parameters used: f = 831.5 MHz; σ = 0.987 S/m; ε_r = 56.041; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch26865/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.61 W/kg

Ch26865/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.639 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 2.06 W/kg
SAR(1 g) = 0.945 W/kg; SAR(10 g) = 0.479 W/kg
Maximum value of SAR (measured) = 1.57 W/kg



0 dB = 1.61 W/kg = 2.07 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

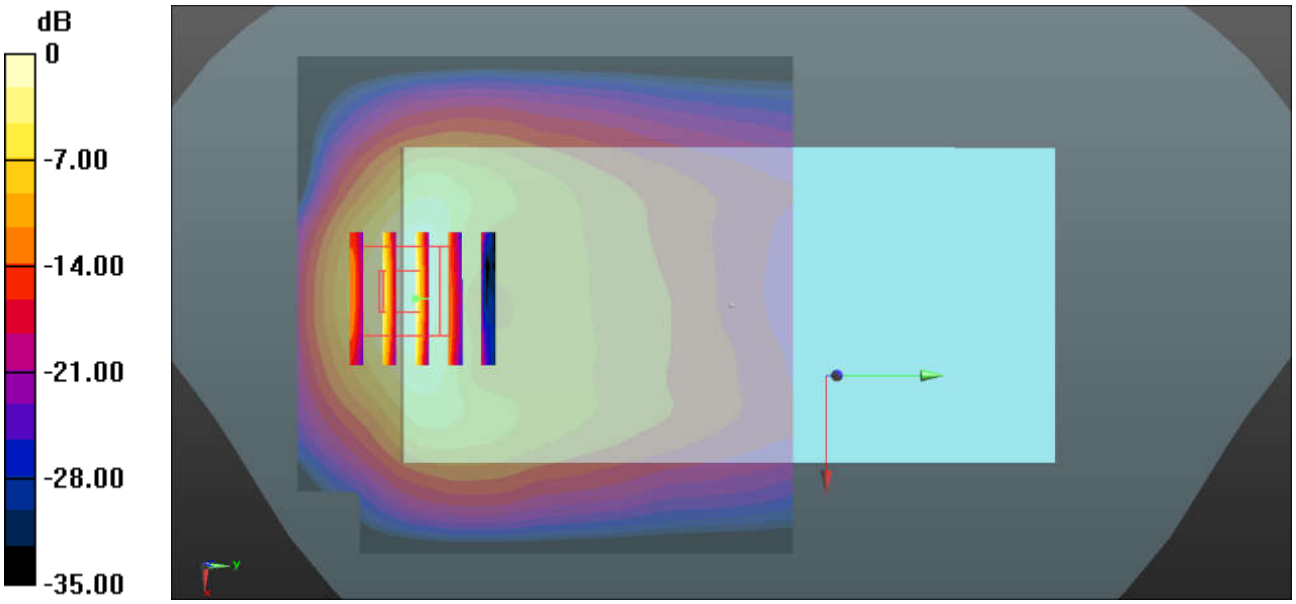
56_LTE Band 66_20M_QPSK_50RB_24Offset_Back_5mm_Sensor On _Ch132072

Communication System: UID 0, LTE-FDD (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium: MSL_1750 Medium parameters used: f = 1720 MHz; σ = 1.422 S/m; ε_r = 51.666; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch132072/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.920 W/kg

Ch132072/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.5100 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.723 W/kg; SAR(10 g) = 0.334 W/kg
Maximum value of SAR (measured) = 1.07 W/kg



0 dB = 0.920 W/kg = -0.36 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

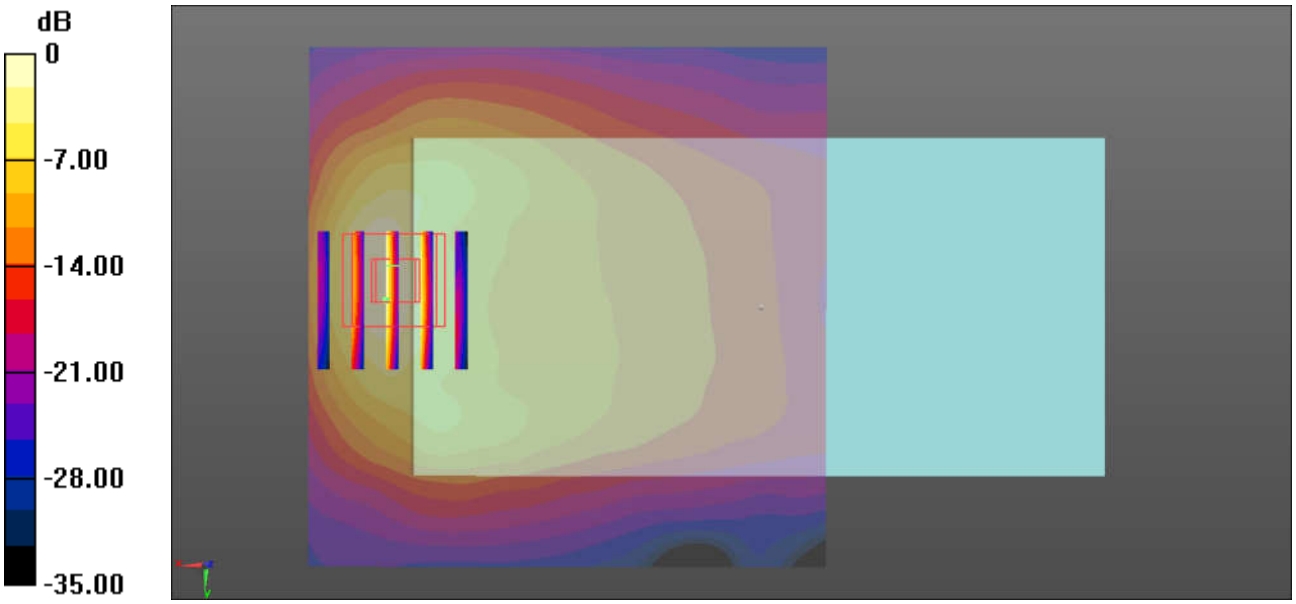
57_LTE Band 25_20M_QPSK_50RB_0offset_Back_5mm_Sensor on_Ch26340

Communication System: UID 0, LTE-FDD (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: MSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.51 S/m; ε_r = 53.094; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch26340/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.20 W/kg

Ch26340/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.878 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.476 W/kg
Maximum value of SAR (measured) = 1.56 W/kg



0 dB = 1.20 W/kg = 0.79 dBW/kg

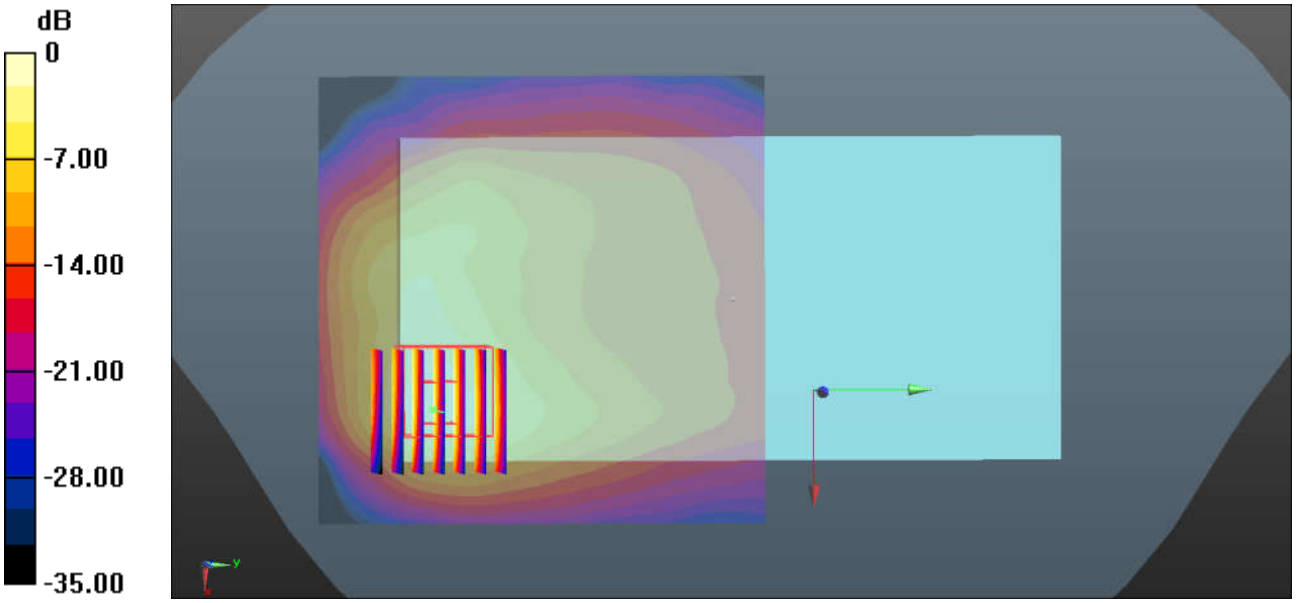
58_LTE Band 30_10M_QPSK_1RB_0offset_Back_5mm_Sensor on_Ch27710

Communication System: UID 0, LTE-FDD (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium: MSL_2300 Medium parameters used: f = 2310 MHz; σ = 1.831 S/m; ε_r = 53.551; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.66, 7.66, 7.66); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch21100/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.02 W/kg

Ch21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.914 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.544 W/kg; SAR(10 g) = 0.261 W/kg
Maximum value of SAR (measured) = 0.939 W/kg



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

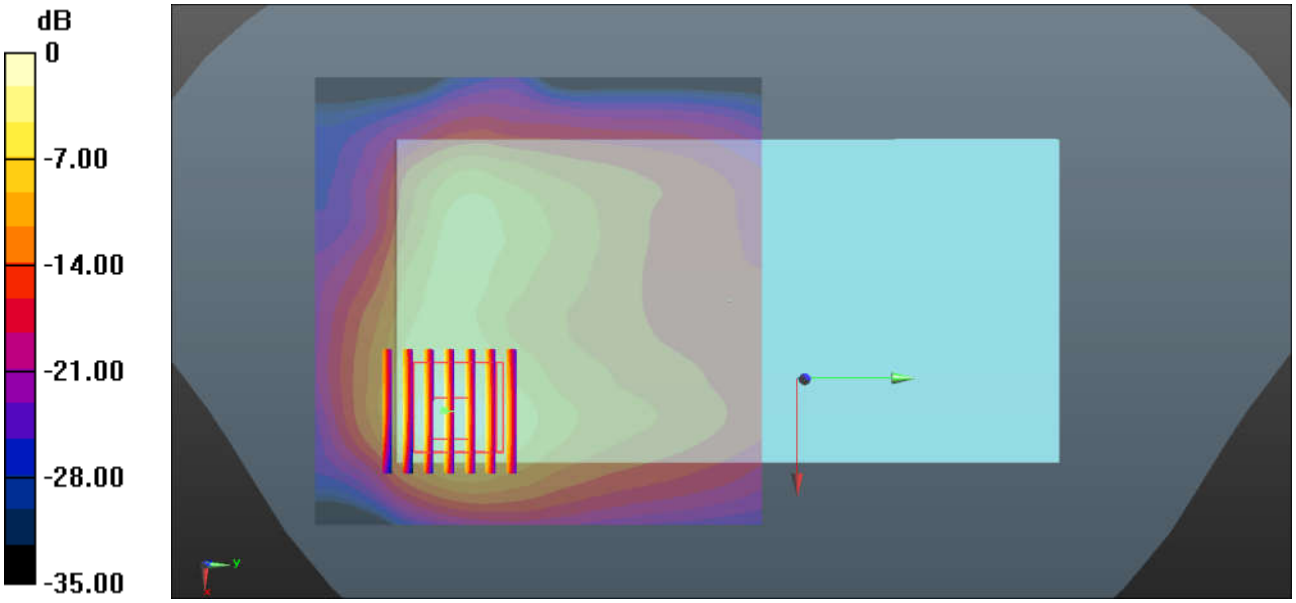
59_LTE Band 7_20M_QPSK_100RB_0offset_Back_5mm_Sensor on_Headset_Ch21100

Communication System: UID 0, LTE-FDD (0); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: MSL_2600 Medium parameters used: f = 2535 MHz; σ = 2.146 S/m; ε_r = 52.686; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch21100/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.43 W/kg

Ch21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.390 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.90 W/kg
SAR(1 g) = 0.755 W/kg; SAR(10 g) = 0.316 W/kg
Maximum value of SAR (measured) = 1.40 W/kg



0 dB = 1.43 W/kg = 1.55 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

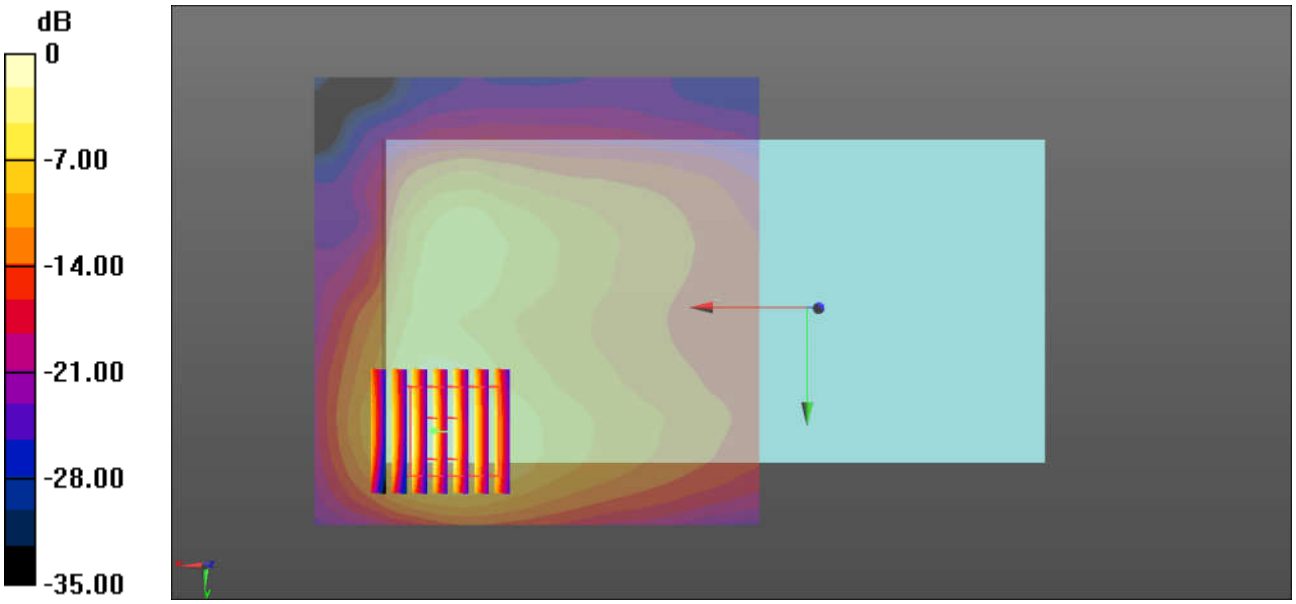
60_LTE Band 41_Class3_20M_QPSK_1RB_0offset_Back_5mm_Sensor on_Ch40185

Communication System: UID 0, LTE-TDD (0); Frequency: 2549.5 MHz;Duty Cycle: 1:1.59
Medium: MSL_2600 Medium parameters used: f = 2549.5 MHz; σ = 2.168 S/m; ε_r = 52.63; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch40185/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.63 W/kg

Ch40185/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.193 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 2.38 W/kg
SAR(1 g) = 0.963 W/kg; SAR(10 g) = 0.416 W/kg
Maximum value of SAR (measured) = 1.71 W/kg



0 dB = 1.63 W/kg = 2.12 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

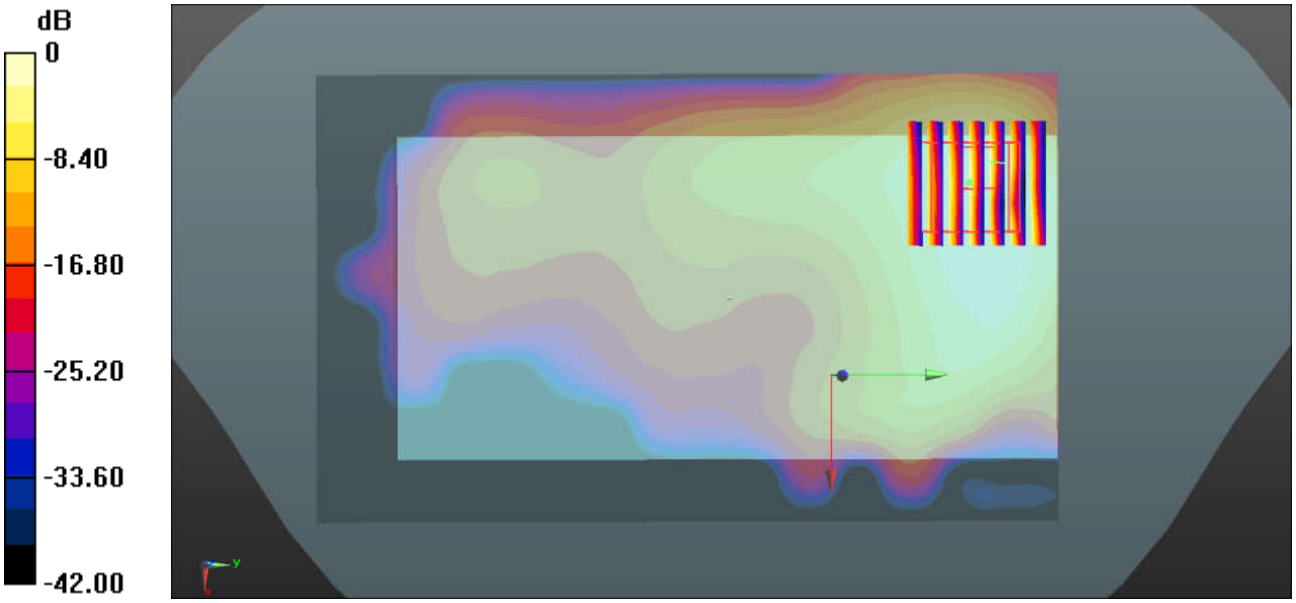
61_WLAN2.4GHz_802.11b 1Mbps_Back_5mm_Ch6

Communication System: UID 0, 802.11b (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: MSL_2450 Medium parameters used: f = 2437 MHz; σ = 2.008 S/m; ε_r = 53.08; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; 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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

802.11b/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.894 W/kg

802.11b/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.496 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.568 W/kg; SAR(10 g) = 0.243 W/kg
Maximum value of SAR (measured) = 0.978 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.6

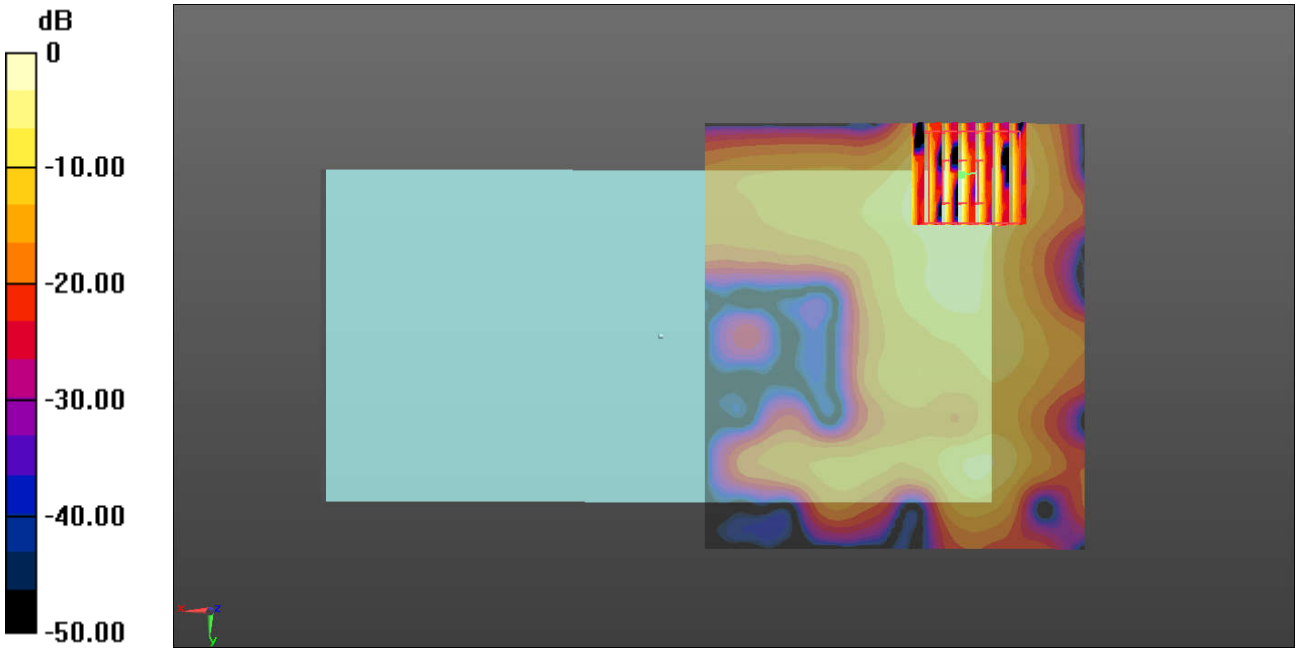
62_WLAN5GHz_802.11a 6Mbps_Back_5mm_Ant 1_Ch64

Communication System: UID 0, WIFI (0); Frequency: 5320 MHz;Duty Cycle: 1:1.018
Medium: MSL_5000 Medium parameters used: f = 5320 MHz; σ = 5.586 S/m; ε_r = 47.423; 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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch64/Area Scan (101x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.82 W/kg

Ch64/Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0.8940 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 3.63 W/kg
SAR(1 g) = 0.709 W/kg; SAR(10 g) = 0.191 W/kg
Maximum value of SAR (measured) = 1.98 W/kg



0 dB = 1.98 W/kg = 2.97 dBW/kg

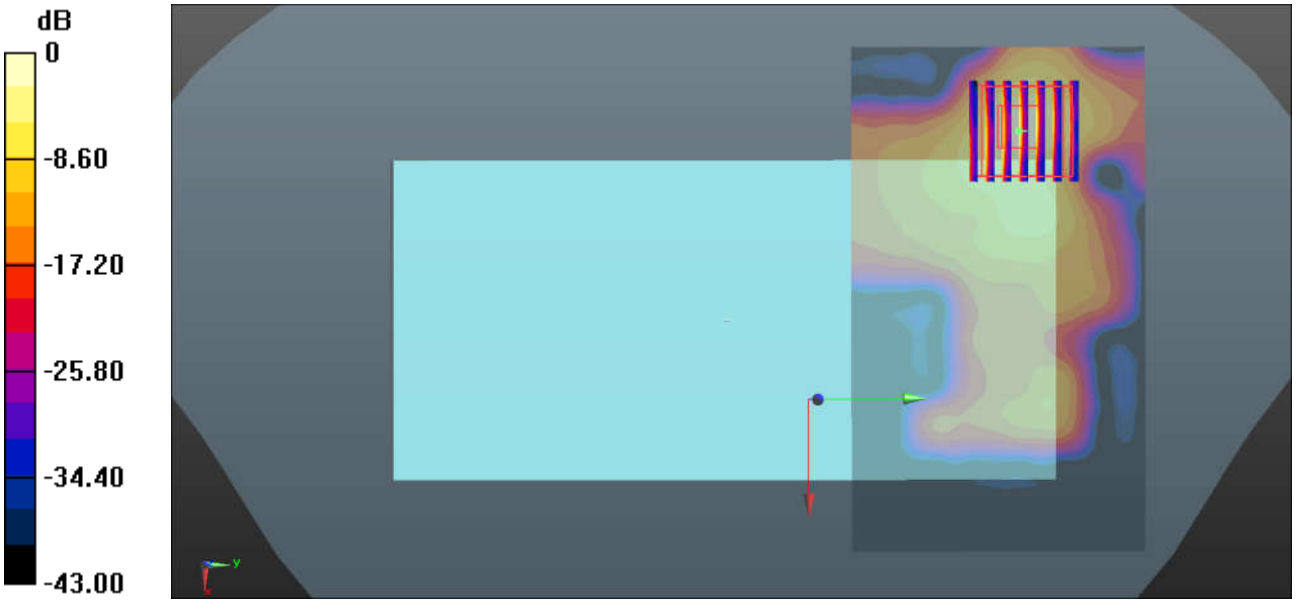
63_WLAN 5GHz _802.11n-HT40 MCS0_Back_5mm_Ch102

Communication System: UID 0, 802.11n (0); Frequency: 5510 MHz;Duty Cycle: 1:1.038
Medium: MSL_5000 Medium parameters used: f = 5510 MHz; σ = 5.825 S/m; ε_r = 47.473; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch102/Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.10 W/kg

Ch102/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.078 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.80 W/kg
SAR(1 g) = 0.733 W/kg; SAR(10 g) = 0.175 W/kg
Maximum value of SAR (measured) = 2.13 W/kg



0 dB = 2.10 W/kg = 3.22 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.6

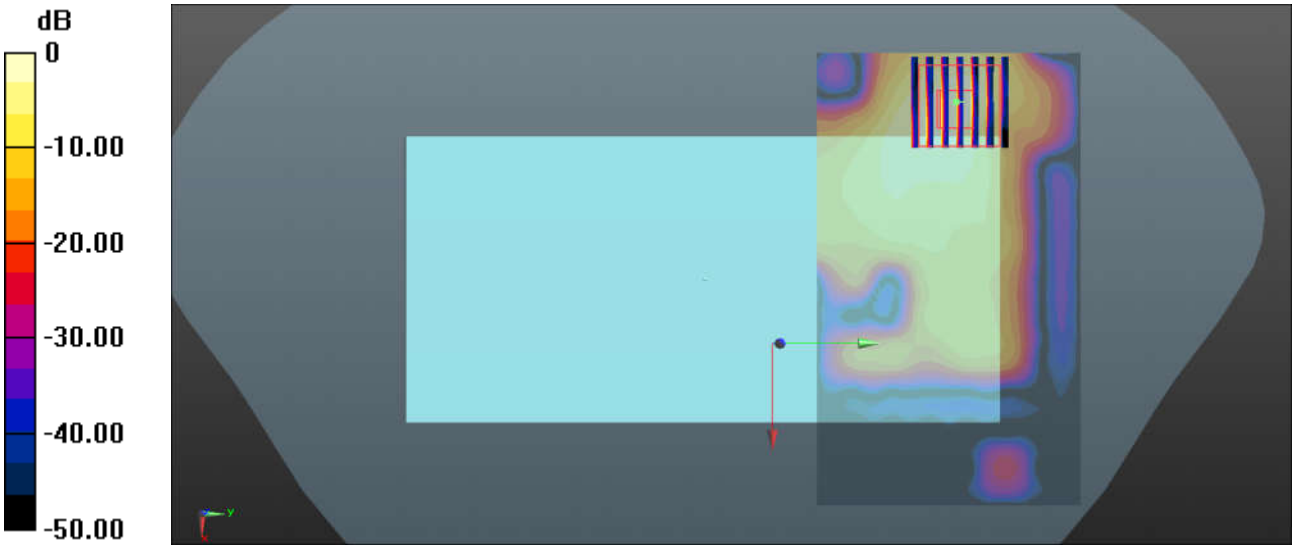
64_WLAN 5GHz _802.11a 6Mbps_Back_5mm_Ch149

Communication System: UID 0, 802.11a (0); Frequency: 5745 MHz;Duty Cycle: 1:1.018
Medium: MSL_5000 Medium parameters used: f = 5745 MHz; σ = 6.152 S/m; ε_r = 47.083; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch149/Area Scan (121x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.53 W/kg

Ch149/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.361 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 2.66 W/kg
SAR(1 g) = 0.537 W/kg; SAR(10 g) = 0.140 W/kg
Maximum value of SAR (measured) = 1.35 W/kg



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

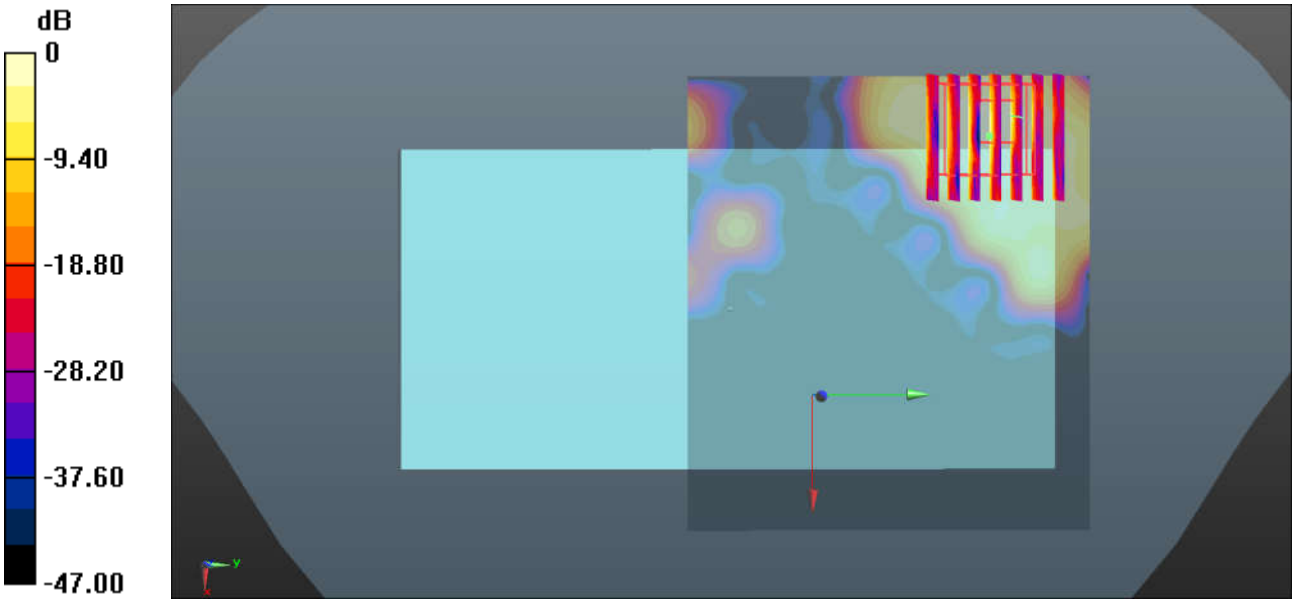
65_Bluetooth_DH5 1Mbps_Back_5mm_Ch78

Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz;Duty Cycle: 1:1.30
Medium: MSL_2450 Medium parameters used: f = 2480 MHz; σ = 2.067 S/m; ε_r = 52.912; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; 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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch78/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0380 W/kg

Ch78/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.130 W/kg
SAR(1 g) = 0.022 W/kg; SAR(10 g) = 0.00904 W/kg
Maximum value of SAR (measured) = 0.0373 W/kg



0 dB = 0.0380 W/kg = -14.20 dBW/kg

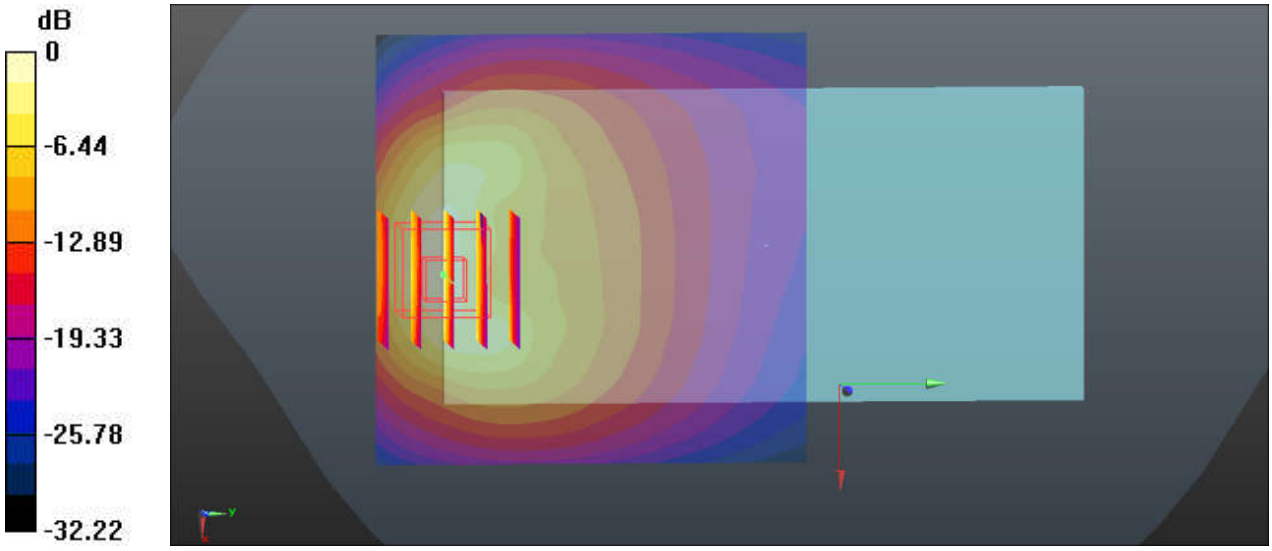
66_GSM 850_GPRS (2 Tx slots)_Back_0mm_Ch251

Communication System: UID 0, GSM850 (0); Frequency: 848.8 MHz;Duty Cycle: 1:4.15
Medium: MSL_850 Medium parameters used: f = 849 MHz; σ = 1.004 S/m; ε_r = 55.844; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch251/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 7.84 W/kg

Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.987 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 10.9 W/kg
SAR(1 g) = 4.66 W/kg; SAR(10 g) = 2.26 W/kg
Maximum value of SAR (measured) = 8.95 W/kg



0 dB = 7.84 W/kg = 8.94 dBW/kg

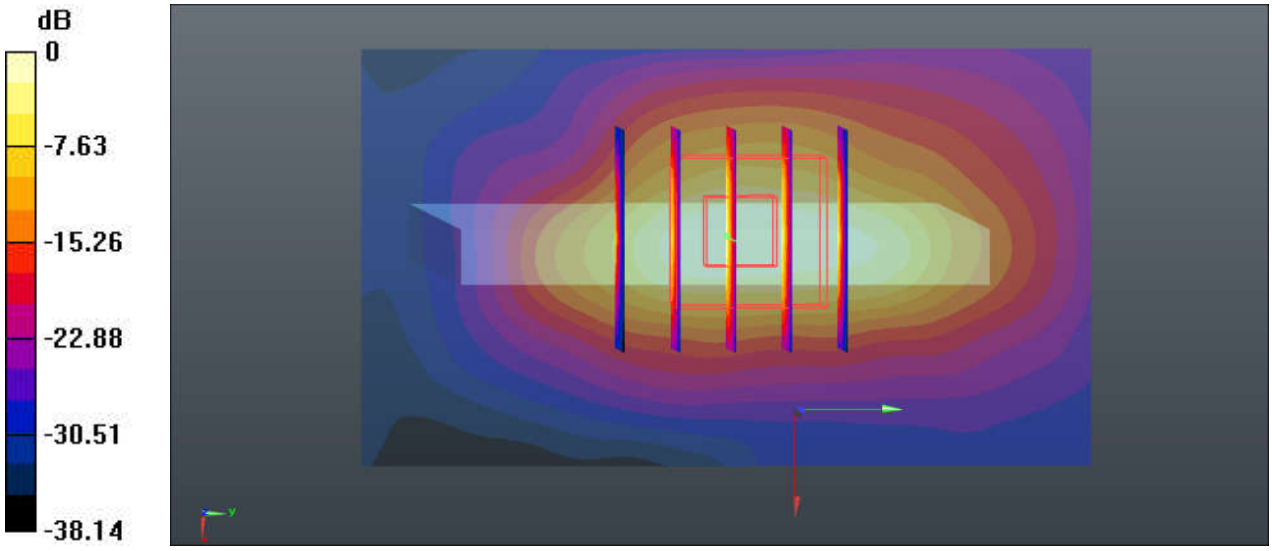
67_GSM 1900_GPRS(2 Tx slots)_Bottom Side_0mm_Handheld On_Ch512

Communication System: UID 0, PCS (0); Frequency: 1850.2 MHz;Duty Cycle: 1:4.15
Medium: MSL_1900 Medium parameters used: f = 1850.2 MHz; σ = 1.478 S/m; ε_r =53.187; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch512/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 8.54 W/kg

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 71.80 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 12.0 W/kg
SAR(1 g) = 5.03 W/kg; SAR(10 g) = 2.05 W/kg
Maximum value of SAR (measured) = 10.0 W/kg



0 dB = 8.54 W/kg = 9.31 dBW/kg

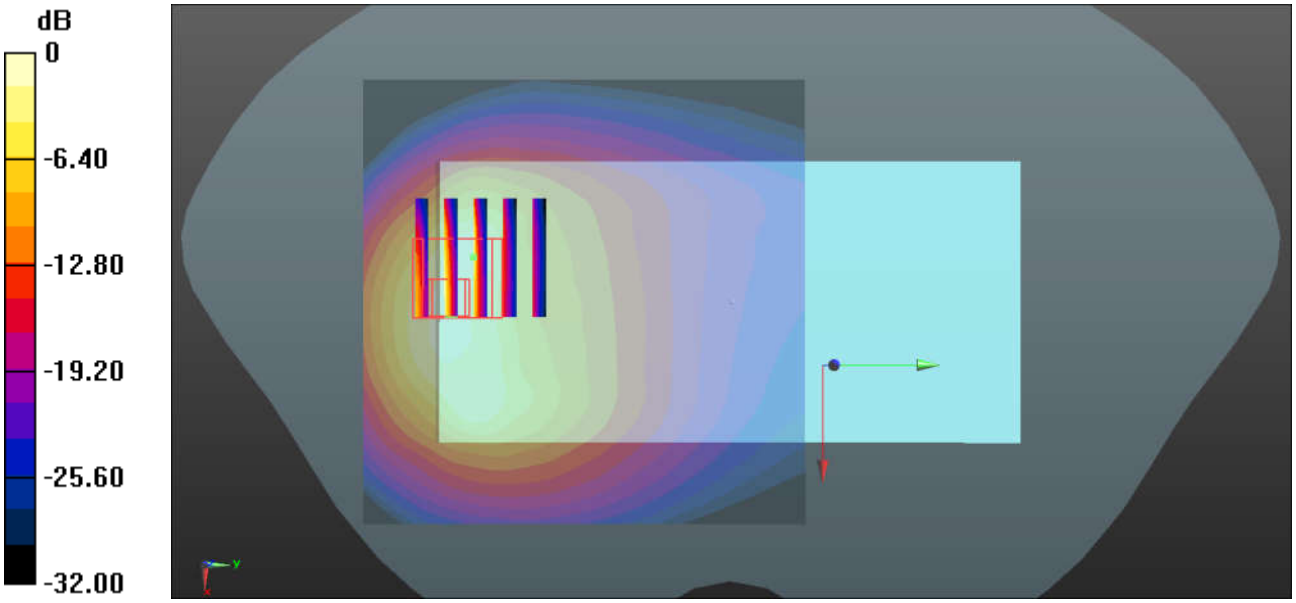
68_WCDMA V_RMC 12.2Kbps_Back_0mm_Ch4182

Communication System: UID 0, WCDMA (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: MSL_850 Medium parameters used: f = 836.4 MHz; σ = 0.992 S/m; ε_r = 55.986; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch4182/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 8.05 W/kg

Ch4182/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.75 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 12.7 W/kg
SAR(1 g) = 5.09 W/kg; SAR(10 g) = 2.38 W/kg
Maximum value of SAR (measured) = 9.90 W/kg



0 dB = 8.05 W/kg = 9.06 dBW/kg

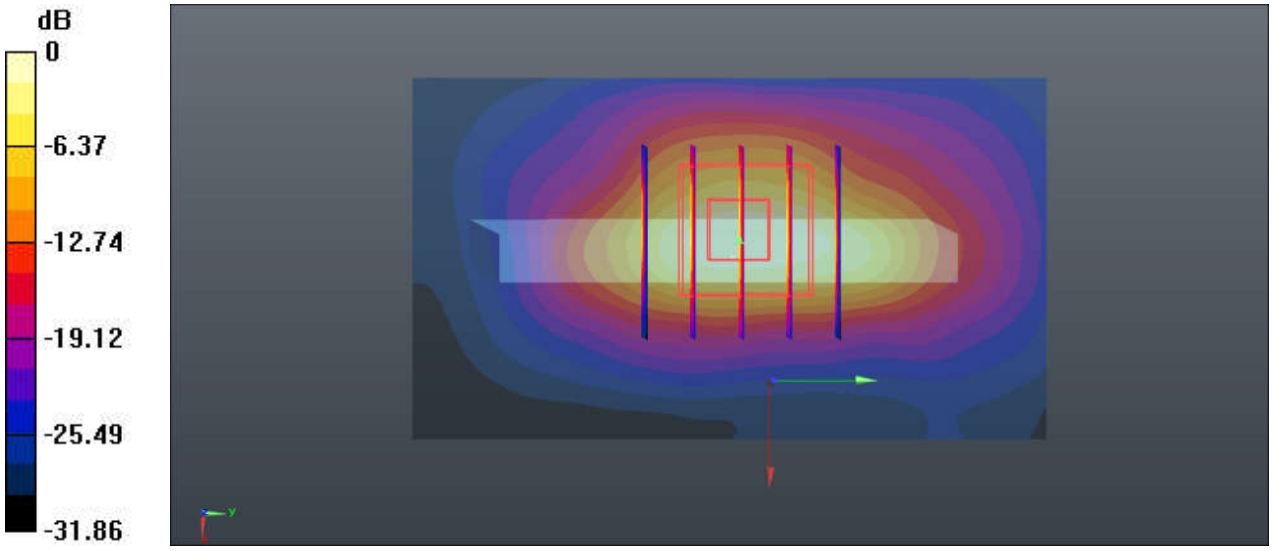
69_WCDMA IV_RMC 12.2Kbps_Bottom Side_0mm_Handheld On_Ch1413

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: MSL_1750 Medium parameters used: f = 1732.6 MHz; σ = 1.436 S/m; ε_r = 51.633; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1413/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 6.73 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 61.76 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 10.7 W/kg
SAR(1 g) = 4.51 W/kg; SAR(10 g) = 1.84 W/kg
Maximum value of SAR (measured) = 8.47 W/kg



0 dB = 6.73 W/kg = 8.28 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

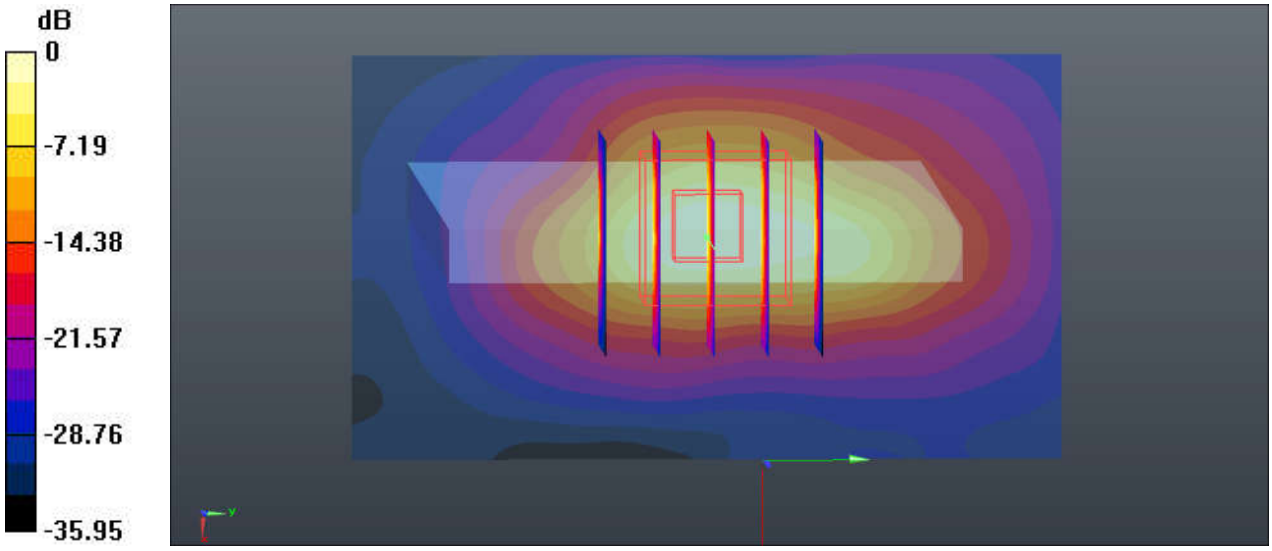
70_WCDMA II_RMC 12.2Kbps_Bottom Side_0mm_Handheld On_Ch9262

Communication System: UID 0, WCDMA (0); Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium: MSL_1900 Medium parameters used: f = 1852.4 MHz; σ = 1.48 S/m; ε_r = 53.181; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch9262/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 8.99 W/kg

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 70.67 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 14.3 W/kg
SAR(1 g) = 5.8 W/kg; SAR(10 g) = 2.31 W/kg
Maximum value of SAR (measured) = 11.2 W/kg



0 dB = 8.99 W/kg = 9.54 dBW/kg

71_CDMA2000 BC10_RTAP 153.6Kbps_Back_0mm_Ch580

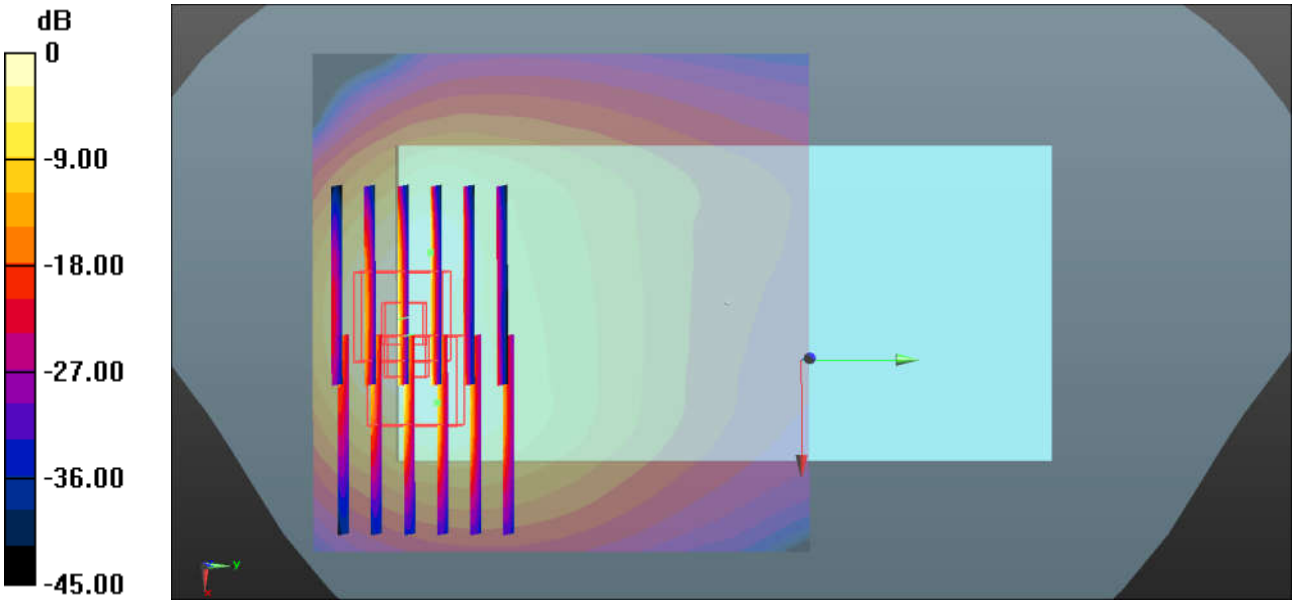
Communication System: UID 0, CDMA (0); Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium: MSL_850 Medium parameters used: f = 820.5 MHz; σ = 0.978 S/m; ε_r = 56.165; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch580/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 6.23 W/kg

Ch580/Zoom Scan (7x6x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.40 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 12.3 W/kg
SAR(1 g) = 4.89 W/kg; SAR(10 g) = 2.39 W/kg
Maximum value of SAR (measured) = 8.26 W/kg

Ch580/Zoom Scan (7x6x5)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.40 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 13.1 W/kg
SAR(1 g) = 4.72 W/kg; SAR(10 g) = 2 W/kg
Maximum value of SAR (measured) = 10.1 W/kg



0 dB = 6.23 W/kg = 7.94 dBW/kg

72_CDMA2000 BC0_RTAP 153.6Kbps_Back_0mm_Ch384

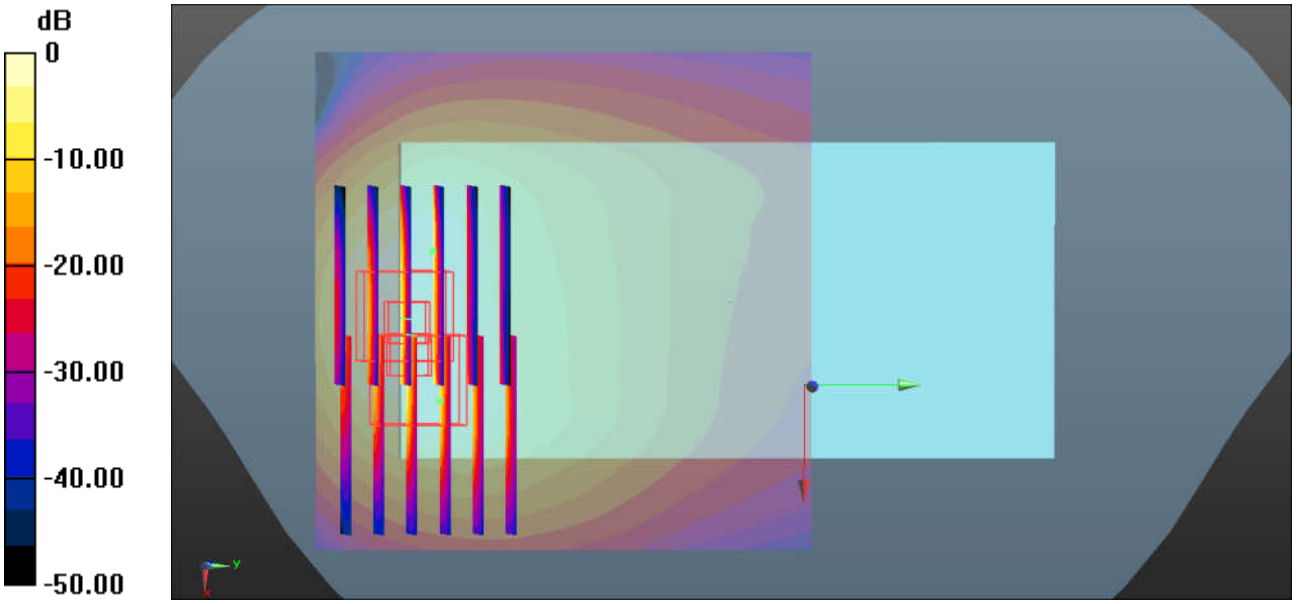
Communication System: UID 0, CDMA (0); Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium: MSL_850 Medium parameters used: f = 837 MHz; σ = 0.992 S/m; ε_r = 55.979; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch384/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 5.93 W/kg

Ch384/Zoom Scan (7x6x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.97 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 12.2 W/kg
SAR(1 g) = 5.03 W/kg; SAR(10 g) = 2.44 W/kg
Maximum value of SAR (measured) = 8.61 W/kg

Ch384/Zoom Scan (7x6x5)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.97 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 13.6 W/kg
SAR(1 g) = 4.81 W/kg; SAR(10 g) = 2.03 W/kg
Maximum value of SAR (measured) = 10.4 W/kg



0 dB = 5.93 W/kg = 7.73 dBW/kg

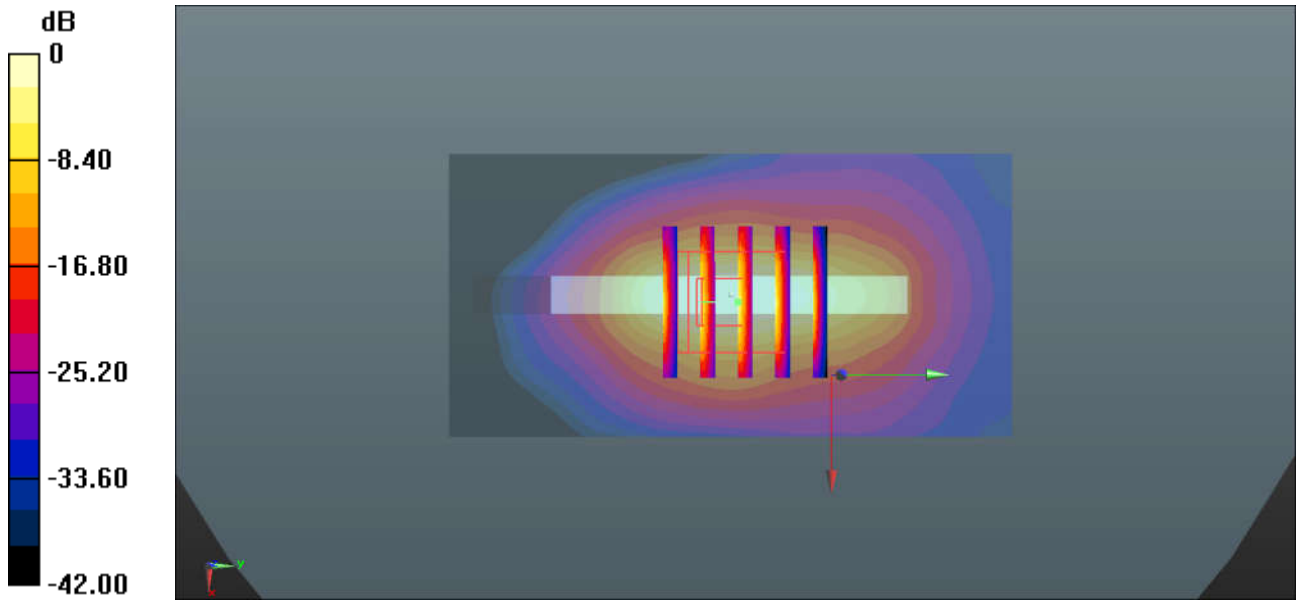
73_CDMA2000 BC1_RTAP 153.6Kbps_Bottom Side_0mm_Handheld On_Ch1175

Communication System: UID 0, CDMA (0); Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium: MSL_1900 Medium parameters used: f = 1909 MHz; σ = 1.544 S/m; ε_r = 53.004; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1175/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 12.3 W/kg

Ch1175/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 16.6 W/kg
SAR(1 g) = 6.6 W/kg; SAR(10 g) = 2.67 W/kg
Maximum value of SAR (measured) = 12.9 W/kg



0 dB = 12.3 W/kg = 10.90 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

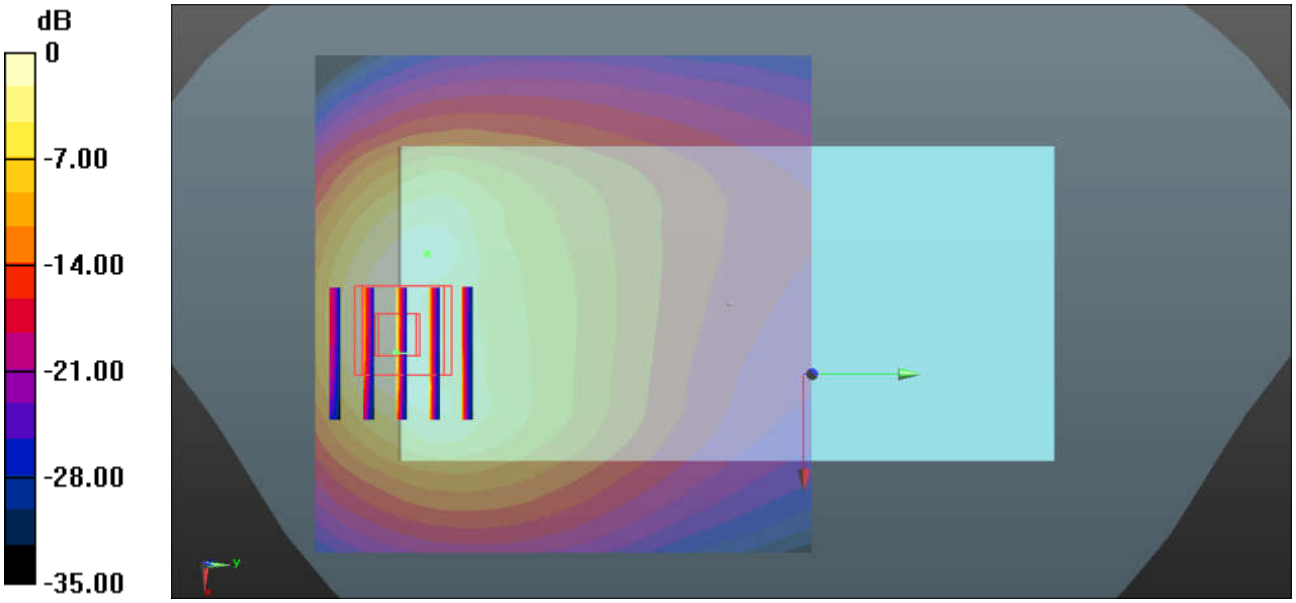
74_LTE Band 12 _10M_QPSK_1RB_0offset_Back_0mm_Ch23095

Communication System: UID 0, LTE-FDD (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium: MSL_750 Medium parameters used: f = 707.5 MHz; σ = 0.93 S/m; ε_r = 56.429; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.7, 9.7, 9.7); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch23095/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 4.35 W/kg

Ch23095/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.09 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 9.23 W/kg
SAR(1 g) = 3.54 W/kg; SAR(10 g) = 1.71 W/kg
Maximum value of SAR (measured) = 7.00 W/kg



0 dB = 4.35 W/kg = 6.38 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

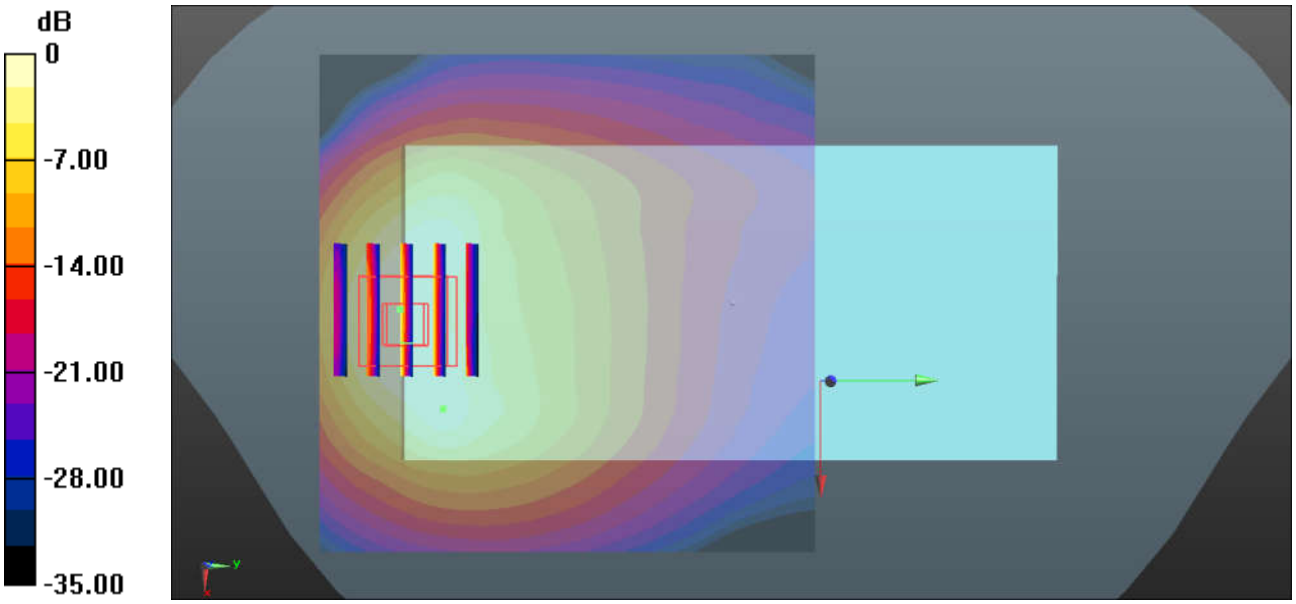
75_LTE Band 13 _10M_QPSK_1RB_0offset_Back_0mm_Ch23230

Communication System: UID 0, LTE-FDD (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium: MSL_750 Medium parameters used: f = 782 MHz; σ = 0.999 S/m; ε_r = 55.757; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.7, 9.7, 9.7); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch23230/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.83 W/kg

Ch23230/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.53 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 6.78 W/kg
SAR(1 g) = 2.54 W/kg; SAR(10 g) = 1.28 W/kg
Maximum value of SAR (measured) = 4.42 W/kg



0 dB = 2.83 W/kg = 4.52 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

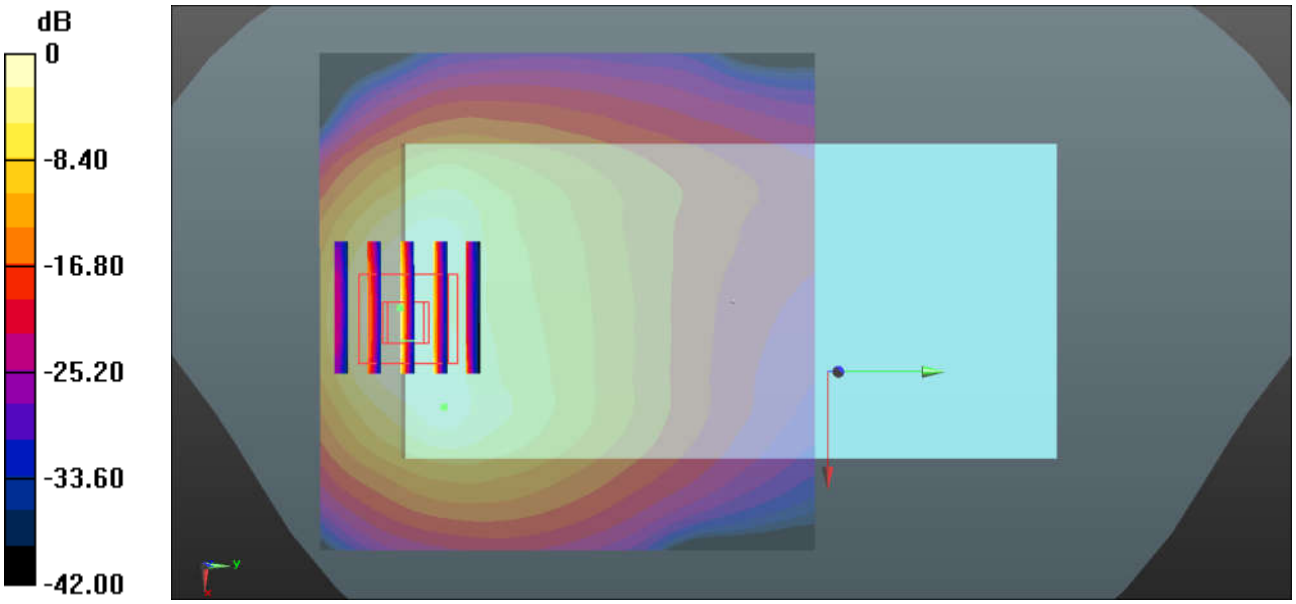
76_LTE Band 26_15M_QPSK_1RB_0offset_Back_0mm_Ch26865

Communication System: UID 0, LTE-FDD (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium: MSL_850 Medium parameters used: f = 831.5 MHz; σ = 0.987 S/m; ε_r = 56.041; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch26865/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.78 W/kg

Ch26865/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.43 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 6.16 W/kg
SAR(1 g) = 2.52 W/kg; SAR(10 g) = 1.24 W/kg
Maximum value of SAR (measured) = 4.35 W/kg



0 dB = 2.78 W/kg = 4.44 dBW/kg

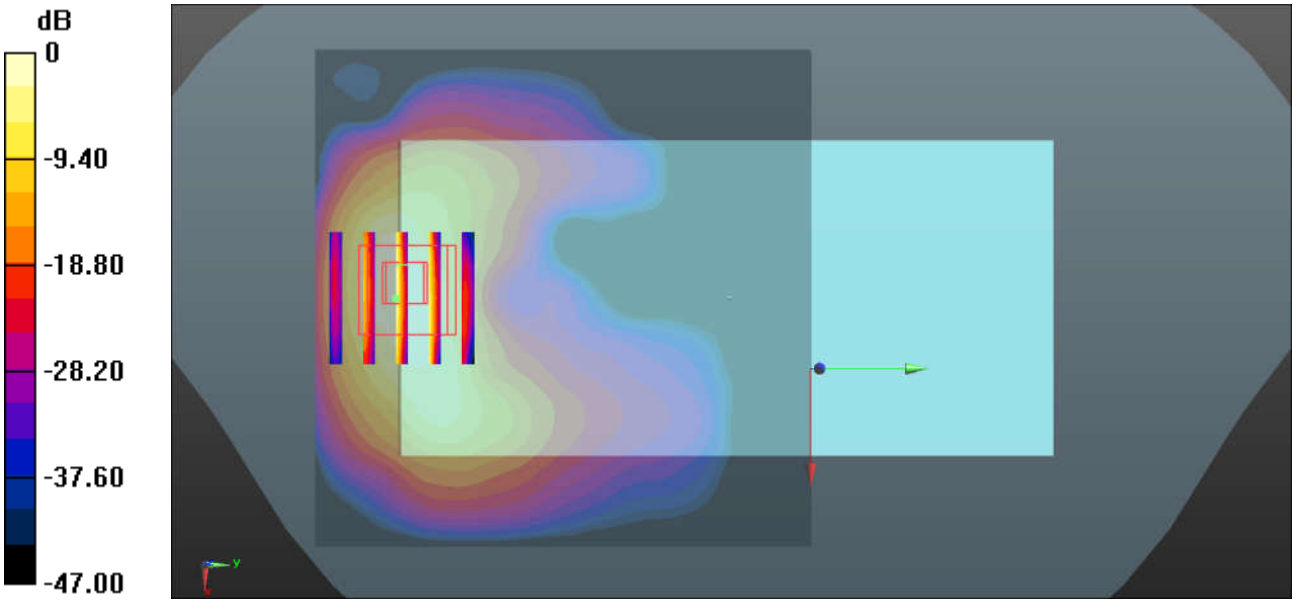
77_LTE Band 66_20M_QPSK_50RB_24Offset_Back_0mm_Handheld On_Ch132322

Communication System: UID 0, LTE-FDD (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium: MSL_1750 Medium parameters used: f = 1745 MHz; σ = 1.449 S/m; ε_r = 51.592; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch132322/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 4.45 W/kg

Ch132322/Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 7.90 W/kg
SAR(1 g) = 3.63 W/kg; SAR(10 g) = 1.62 W/kg
Maximum value of SAR (measured) = 5.87 W/kg



0 dB = 4.45 W/kg = 6.48 dBW/kg

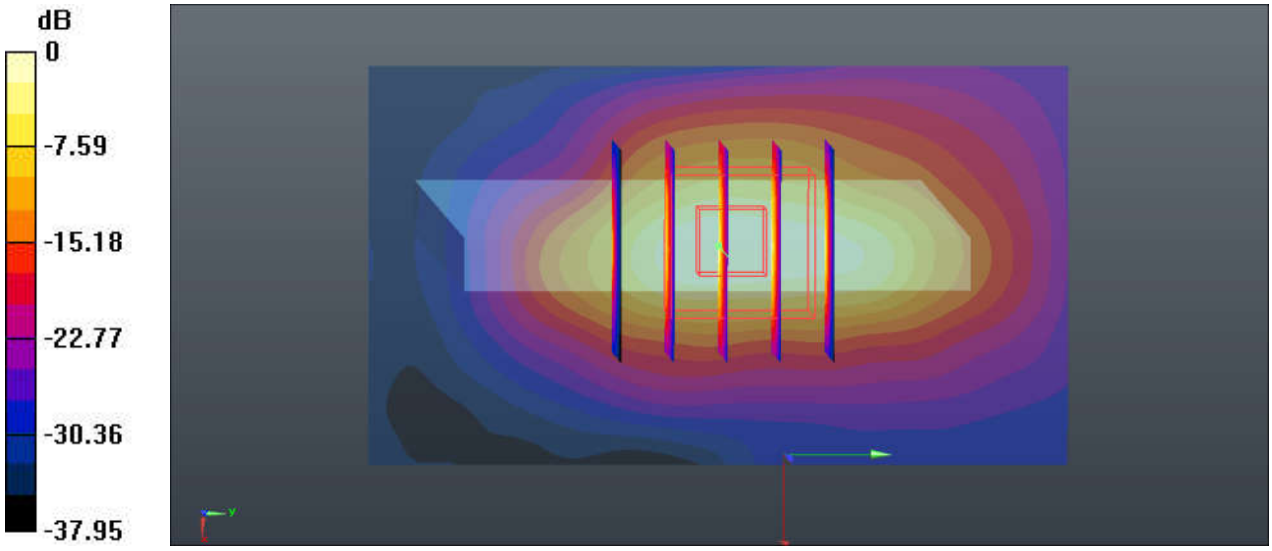
78_LTE Band 25_20M_QPSK_50RB_0offset_Bottom Side_0mm_Handheld On_Ch26590

Communication System: UID 0, LTE-FDD (0); Frequency: 1905 MHz;Duty Cycle: 1:1
Medium: MSL_1900 Medium parameters used: f = 1905 MHz; σ = 1.54 S/m; ε_r = 53.018; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch26590/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 9.56 W/kg

Ch26590/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 74.63 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 13.8 W/kg
SAR(1 g) = 5.5 W/kg; SAR(10 g) = 2.22 W/kg
Maximum value of SAR (measured) = 11.2 W/kg



0 dB = 9.56 W/kg = 9.80 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

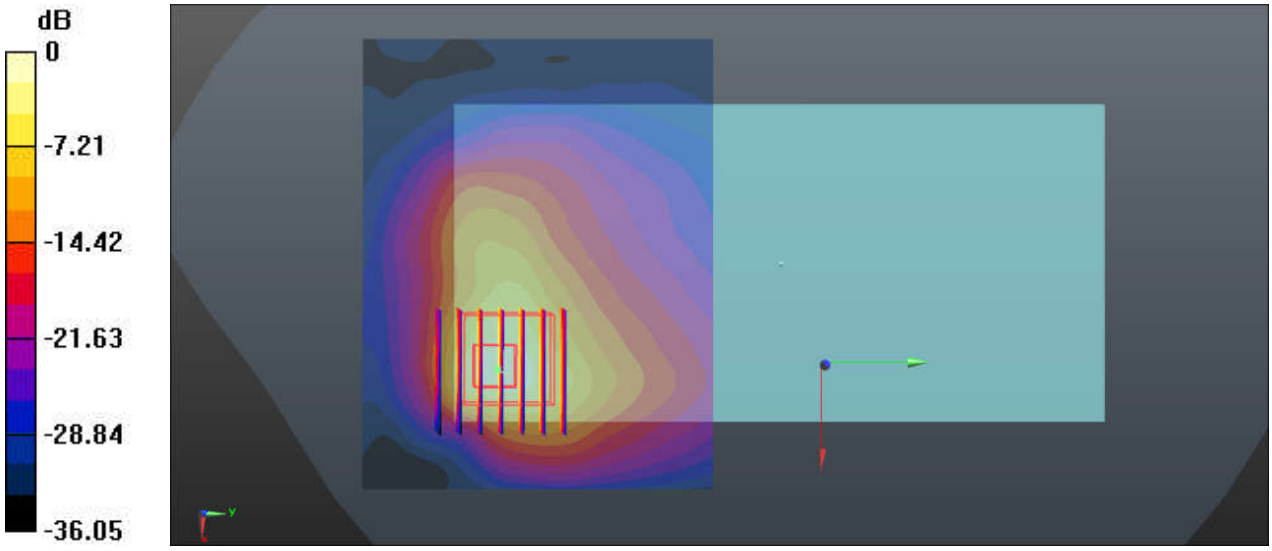
79_LTE Band 30_10M_QPSK_25RB_0offset_Back_0mm_Handheld On_Ch27710

Communication System: UID 0, LTE-FDD (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium: MSL_2300 Medium parameters used: f = 2310 MHz; σ = 1.831 S/m; ε_r = 53.551; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.66, 7.66, 7.66); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch27710/Area Scan (91x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 12.8 W/kg

Ch27710/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.512 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 18.2 W/kg
SAR(1 g) = 5.78 W/kg; SAR(10 g) = 2.24 W/kg
Maximum value of SAR (measured) = 10.9 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

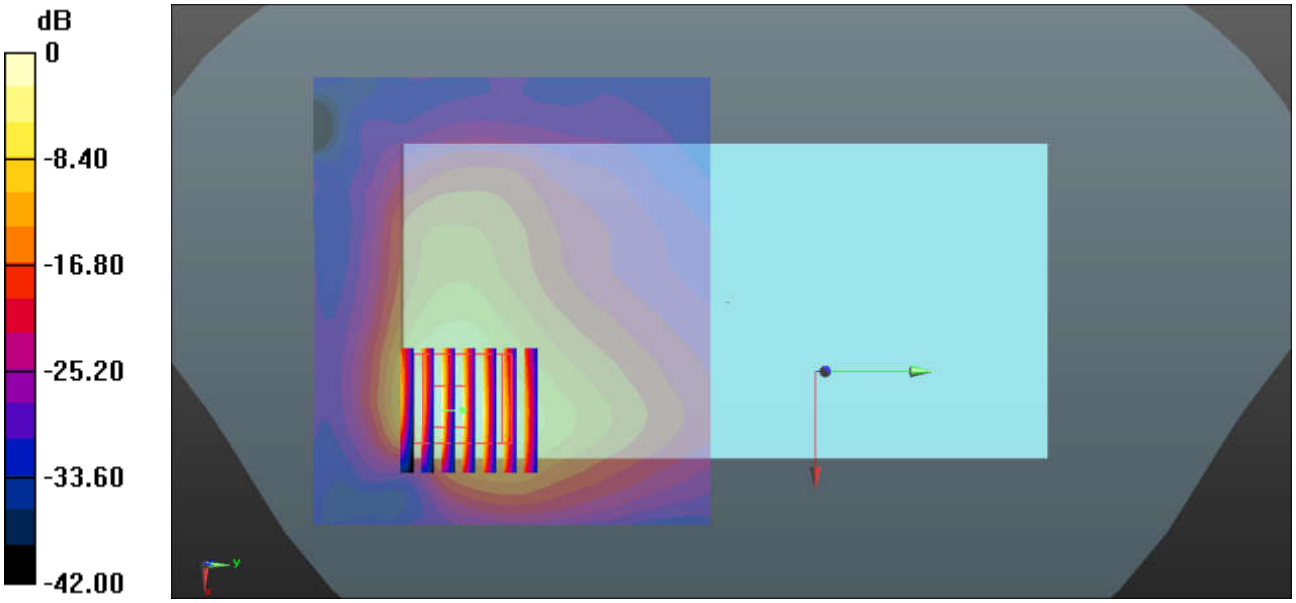
80_LTE Band 7_20M_QPSK_1RB_0offset_Back_0mm_Handheld On_Ch20850

Communication System: UID 0, LTE-FDD (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium: MSL_2600 Medium parameters used: f = 2510 MHz; σ = 2.111 S/m; ε_r = 52.789; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch20850/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 9.88 W/kg

Ch20850/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.503 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 16.6 W/kg
SAR(1 g) = 5.01 W/kg; SAR(10 g) = 1.79 W/kg
Maximum value of SAR (measured) = 11.3 W/kg



0 dB = 9.88 W/kg = 9.95 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.4

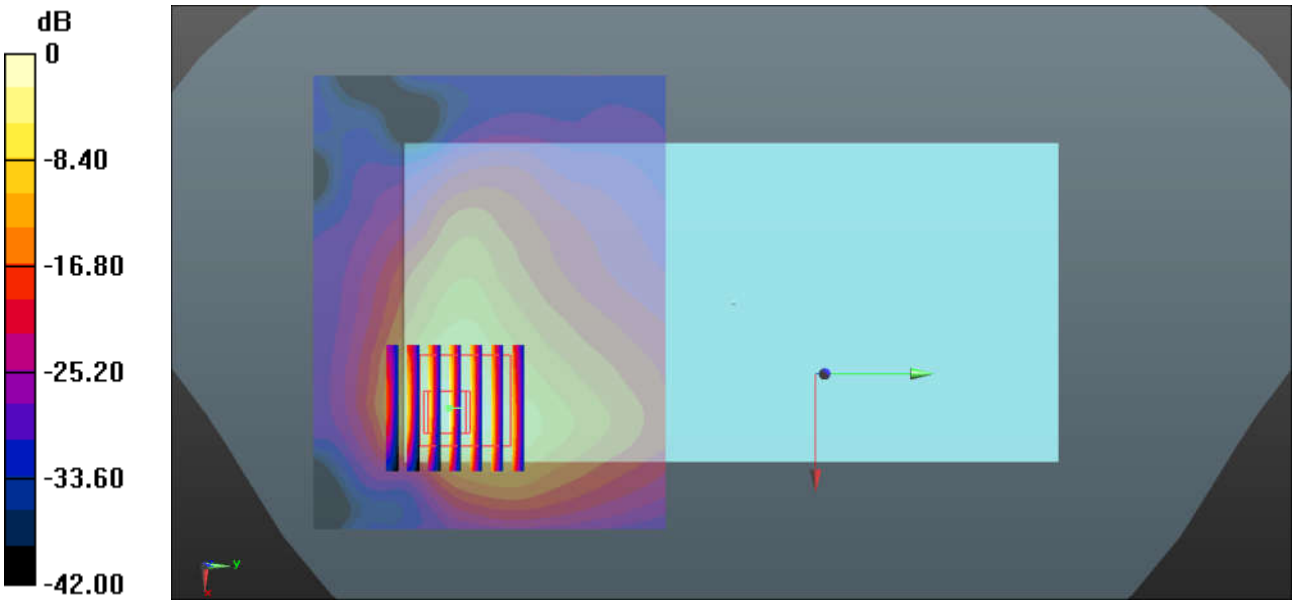
81_LTE Band 41_Class3_20M_QPSK_1RB_0offset_Back_0mm_Ch41490

Communication System: UID 0, LTE-TDD (0); Frequency: 2680 MHz;Duty Cycle: 1:1.59
Medium: MSL_2600 Medium parameters used: f = 2680 MHz; σ = 2.35 S/m; ε_r = 52.112; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch41490/Area Scan (91x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 12.3 W/kg

Ch41490/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.394 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 20.4 W/kg
SAR(1 g) = 5.79 W/kg; SAR(10 g) = 2.02 W/kg
Maximum value of SAR (measured) = 12.3 W/kg



0 dB = 12.3 W/kg = 10.90 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.4.6

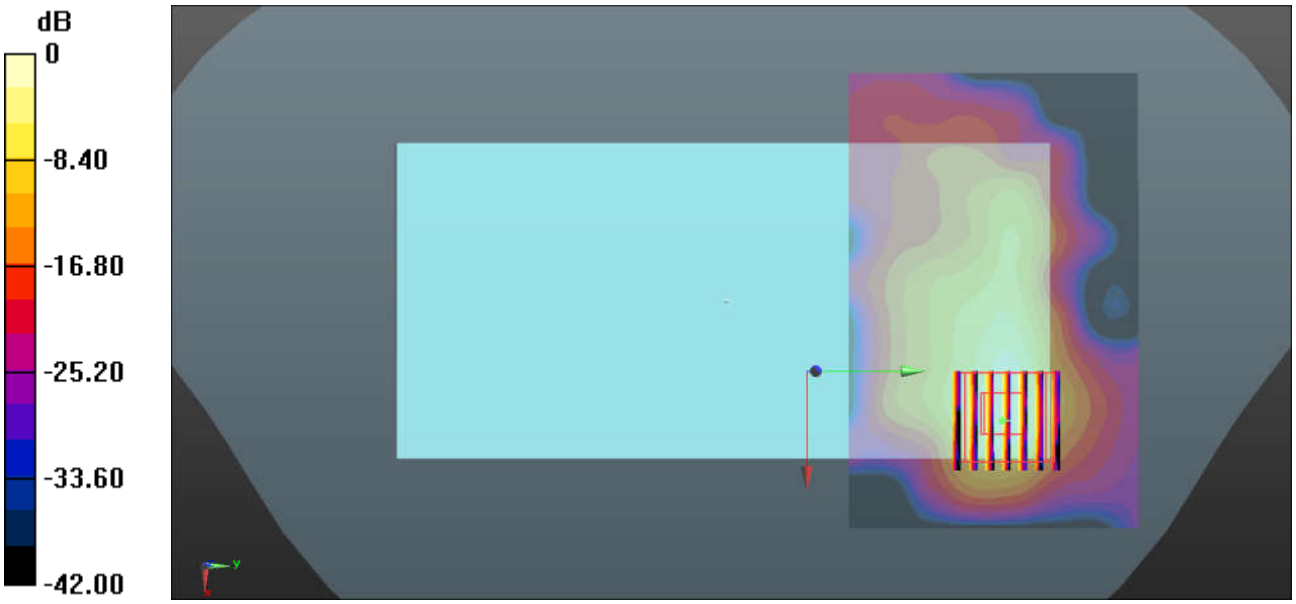
82_WLAN 5GHz _802.11a 6Mbps_Front_0mm_Ch56

Communication System: UID 0, 802.11a (0); Frequency: 5280 MHz;Duty Cycle: 1:1.018
Medium: MSL_5000 Medium parameters used: f = 5280 MHz; σ = 5.528 S/m; ε_r = 47.861; 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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch56/Area Scan (111x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 6.60 W/kg

Ch56/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 9.48 W/kg
SAR(1 g) = 2.25 W/kg; SAR(10 g) = 0.667 W/kg
Maximum value of SAR (measured) = 5.69 W/kg



0 dB = 6.60 W/kg = 8.20 dBW/kg

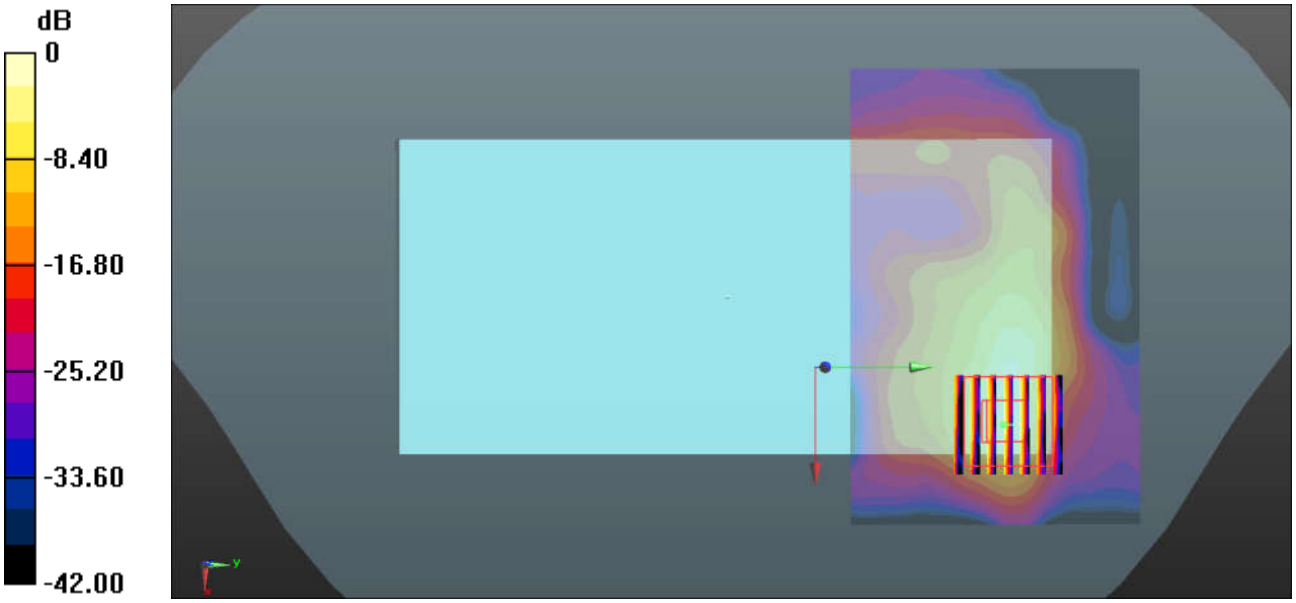
83_WLAN 5GHz _802.11n-HT40 MCS0_Front_0mm_Ch110

Communication System: UID 0, 802.11n (0); Frequency: 5550 MHz;Duty Cycle: 1:1.038
Medium: MSL_5000 Medium parameters used: f = 5550 MHz; σ = 5.886 S/m; ε_r = 47.402; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

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 Sn1279; Calibrated: 2018.10.22
- Phantom: SAM2; Type: QD000P40CD; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch110/Area Scan (111x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 19.5 W/kg

Ch110/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 30.8 W/kg
SAR(1 g) = 6.09 W/kg; SAR(10 g) = 1.57 W/kg
Maximum value of SAR (measured) = 16.6 W/kg



0 dB = 19.5 W/kg = 12.90 dBW/kg

Appendix C. Supplemental Tuner Head & Body SAR Results

The results are shown as follows.

Head																	
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	1	19	37	55	73	91	109	127
GSM850	GPRS 2 Tx slots	128	824.2	N/A	N/A	Right Cheek	0mm	0.286	0.285	0.005	0.204	0.025	0.073	0.272	0.089	0.239	0.086
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	2	20	38	56	74	92	110	128
GSM1900	GPRS 2 Tx slots	661	1880	N/A	N/A	Left Cheek	0mm	0.08	0.122	0.076	0.052	0.072	0.042	0.027	0.031	0.006	0.004
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	3	21	39	57	75	93	111	129
WCDMA V	RMC 12.2Kbps	4233	846.6	N/A	N/A	Right Cheek	0mm	0.282	0.311	0.0124	0.139	0.134	0.024	0.076	0.14	0.102	0.134
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	4	22	40	58	76	94	112	130
WCDMA IV	RMC 12.2Kbps	1413	1732.6	N/A	N/A	Left Cheek	0mm	0.232	0.331	0.138	0.208	0.216	0.108	0.113	0.128	0.023	0.011
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	5	23	41	59	77	95	113	131
WCDMA II	RMC 12.2Kbps	9262	1852.4	N/A	N/A	Left Cheek	0mm	0.134	0.195	0.122	0.107	0.15	0.086	0.054	0.061	0.012	0.006
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	6	24	42	60	78	96	114	132
CDMA BC10	RC3 SO55	684	823.1	N/A	N/A	Right Cheek	0mm	0.302	0.401	0.014	0.246	0.042	0.247	0.321	0.075	0.026	0.135
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	7	25	43	61	79	97	115	133
CDMA BC0	RC3 SO55	1013	824.7	N/A	N/A	Right Cheek	0mm	0.287	0.327	0.011	0.175	0.031	0.096	0.214	0.043	0.017	0.097
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	8	26	44	62	80	98	116	134
CDMA BC1	RTAP 153.6Kbps	25	1851.25	N/A	N/A	Left Cheek	0mm	0.155	0.233	0.124	0.092	0.102	0.056	0.062	0.009	0.012	0.041
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	9	27	45	63	81	99	117	135
LTE B71	QPSK	133322	683	1	0	Right Cheek	0mm	0.104	0.116	0	0.072	0	0	0	0	0.0214	0.001
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	10	28	46	64	82	100	118	136
LTE B12	QPSK	23095	707.5	1	0	Right Cheek	0 mm	0.216	0.242	0.009	0.239	0.032	0.007	0.001	0.012	0.159	0.035
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	11	29	47	65	83	101	119	137
LTE B17	QPSK	23790	710	1	0	Right Cheek	0 mm	0.216	0.242	0.0109	0.235	0.046	0.012	0.002	0.013	0.18	0.042
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	12	30	48	66	84	102	120	138
LTE B13	QPSK	23230	782	1	0	Right Cheek	0 mm	0.232	0.262	0.0516	0.134	0.253	0.049	0.012	0.082	0.056	0.247
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	13	31	49	67	85	103	121	139
LTE B 26	QPSK	26865	831.5	1	0	Right Cheek	0 mm	0.268	0.304	0.198	0.086	0.098	0.174	0.031	0.254	0.234	0.095
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	14	32	50	68	86	104	122	140
LTE B 5	QPSK	20525	836.5	1	0	Right Cheek	0 mm	0.268	0.304	0.269	0.102	0.0929	0.232	0.048	0.264	0.245	0.09
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	15	33	51	69	87	105	123	141
LTE B66	QPSK	132322	1745	1	0	Left Cheek	0 mm	0.251	0.303	0.224	0.16	0.234	0.15	0.163	0.023	0.014	0.015
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	16	34	52	70	88	106	124	142
LTE B4	QPSK	20175	1732.5	1	0	Left Cheek	0 mm	0.251	0.303	0.241	0.146	0.251	0.169	0.182	0.028	0.019	0.016
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	17	35	53	71	89	107	125	143
LTE B25	QPSK	26140	1860	1	0	Left Cheek	0 mm	0.137	0.169	0.11	0.144	0.112	0.078	0.089	0.014	0.015	0.013
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	18	36	54	72	90	108	126	144
LTE B2	QPSK	18900	1880	1	0	Left Cheek	0 mm	0.137	0.169	0.121	0.144	0.115	0.089	0.083	0.015	0.01	0.012

Body																	
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	1	19	37	55	73	91	109	127
GSM850	GPRS 2 Tx slots	128	824.2	N/A	N/A	Back	5 mm	1.24	1.51	0.019	1.44	0.117	0.348	1.41	0.432	1.077	1.277
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	2	20	38	56	74	92	110	128
GSM1900	GPRS 2 Tx slots	661	1880	N/A	N/A	Back	5 mm	1.13	1.28	0.605	0.373	0.517	0.509	0.249	0.253	0.047	0.034
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	3	21	39	57	75	93	111	129
WCDMA V	RMC 12.2Kbps	4233	846.6	N/A	N/A	Back	5 mm	1.27	1.47	0.102	0.844	0.973	0.242	0.492	0.998	0.806	0.921
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	4	22	40	58	76	94	112	130
WCDMA IV	RMC 12.2Kbps	1413		N/A	N/A	Back	5 mm	1.37	1.6	0.824	0.982	0.935	0.768	0.886	0.841	0.138	0.067
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	5	23	41	59	77	95	113	131
WCDMA II	RMC 12.2Kbps	9400		N/A	N/A	Back	5 mm	1.17	1.39	1.027	0.672	0.892	0.729	0.468	0.483	0.0902	0.054
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	6	24	42	60	78	96	114	132
CDMA BC10	RC3 SO32 (F+SCH)	684	823.1	N/A	N/A	Back	5 mm	1.13	1.52	0.173	0.633	0.933	0.209	0.569	1.363	1.254	1.274
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	7	25	43	61	79	97	115	133
CDMA BC0	RC3 SO32 (F+SCH)	384	836.52	N/A	N/A	Back	5 mm	1.1	1.47	0.278	0.575	1.45	0.345	0.495	0.854	0.671	0.996
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	8	26	44	62	80	98	116	134
CDMA BC1	RTAP 153.6Kbps	1175	1908.75	N/A	N/A	Bottom Side	5 mm	1.32	2.16	0.355	0.815	0.792	0.432	0.383	0.03	0.046	0.067
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	9	27	45	63	81	99	117	135
LTE B71	QPSK	133322	683	1	0	Back	5 mm	0.807	1.2	0	0.854	0.094	0	0.023	0.051	0.517	0.149
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	10	28	46	64	82	100	118	136
LTE B12	QPSK	23095	707.5	1	0	Back	5 mm	0.907	1.45	0.061	1.22	0.199	0.0574	0.014	0.097	1.004	0.256
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	11	29	47	65	83	101	119	137
LTE B17	QPSK	23790	710	1	0	Back	5 mm	0.907	1.45	0.076	1.25	0.282	0.0709	0.0787	0.108	1.098	0.302
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	12	30	48	66	84	102	120	138
LTE B13	QPSK	23230	782	1	0	Back	5 mm	1.04	1.53	0.356	0.635	1.252	0.357	0.071	0.651	0.446	1.254
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	13	31	49	67	85	103	121	139
LTE B 26	QPSK	26865	831.5	75	0	Back	5 mm	1.18	1.6	0.975	0.355	0.392	0.998	0.178	1.286	1.191	0.449
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	14	32	50	68	86	104	122	140
LTE B 5	QPSK	20525	836.5	50	0	Back	5 mm	1.18	1.6	1.23	0.402	0.391	1.238	0.271	1.305	1.243	0.432
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	15	33	51	69	87	105	123	141
LTE B66	QPSK	132072	1720	50	24	Back	5 mm	1.24	1.37	1.004	0.441	0.887	0.758	0.781	0.103	0.0706	0.0606
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	16	34	52	70	88	106	124	142
LTE B4	QPSK	20175	1732.5	1	0	Back	5 mm	1.24	1.37	0.978	0.444	0.87	0.824	0.823	0.112	0.0715	0.0678
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	17	35	53	71	89	107	125	143
LTE B25	QPSK	26340	1880	100	0	Back	5 mm	1.24	1.4	1.006	0.955	0.905	0.63	0.706	0.096	0.0702	0.074
Mode	Service/ Modulation	Channel	Frequency (MHz)	RB Size	RB Offset	Test Position	Spacing	Measured 1g SAR (W/kg)	Average Value of Time Sweep (W/kg)								
									Auto-Tune	18	36	54	72	90	108	126	144
LTE B2	QPSK	18900	1880	1	0	Back	5 mm	1.24	1.4	1.025	0.923	0.89	0.602	0.667	0.096	0.065	0.064

Appendix D. DASY Calibration Certificate

The DASY calibration certificates are shown as follows.

In Collaboration with
speag
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: Z19-60081**

CALIBRATION CERTIFICATE

Object	D750V3 - SN: 1087
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	March 27, 2019

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 NRP2	106277	20-Aug-18 (CTTL, No.J18X06862)	Aug-19
Power sensor NRP8S	104291	20-Aug-18 (CTTL, No.J18X06862)	Aug-19
Reference Probe EX3DV4	SN 3617	31-Jan-19(SPEAG,No.EX3-3617_Jan19)	Jan-20
DAE4	SN 1331	06-Feb-19(SPEAG,No.DAE4-1331_Feb19)	Feb-20
Secondary Standards	**ID #**	**Cal Date(Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	23-Jan-19 (CTTL, No.J19X00336)	Jan-20
NetworkAnalyzer E5071C	MY46110673	24-Jan-19 (CTTL, No.J19X00547)	Jan-20

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

Issued: March 29, 2019

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

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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%.

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Measurement Conditions

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

DASY Version	DASY52	52.10.2.1495
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
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	43.0 ± 6 %	0.90 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.10 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**8.36 W/kg ± 18.8 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.42 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**5.65 W/kg ± 18.7 % (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	56.9 ± 6 %	0.94 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.09 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**8.58 W/kg ± 18.8 % (k=2)**
SAR averaged over 10 cm^3 (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	**5.75 W/kg ±18.7 % (k=2)**