Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.4

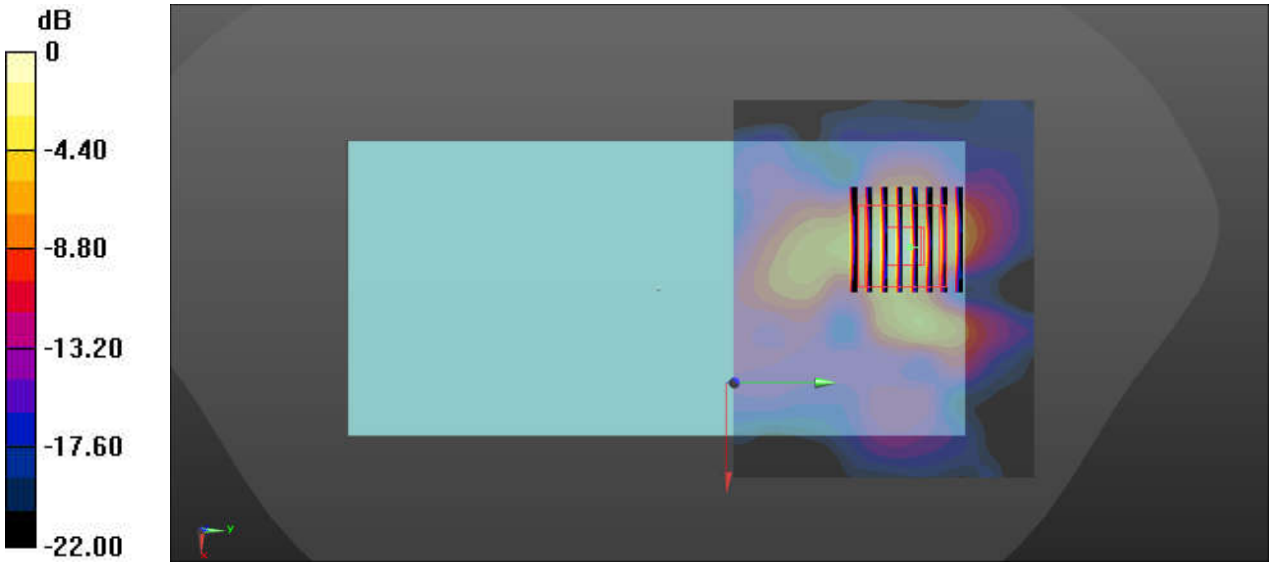
46_WLAN5.8GHz_802.11a 6Mbps_Back_5mm_Ch149

Communication System: UID 0, 802.11a (0); Frequency: 5745 MHz;Duty Cycle: 1:1.018
Medium: HSL_5000 Medium parameters used: f = 5745 MHz; σ = 5.153 S/m; ε_r = 35.581; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(5.17, 5.17, 5.17); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch149/Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.26 W/kg

Ch149/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.552 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.63 W/kg
SAR(1 g) = 0.875 W/kg; SAR(10 g) = 0.261 W/kg
Maximum value of SAR (measured) = 2.17 W/kg



0 dB = 2.26 W/kg = 3.54 dBW/kg

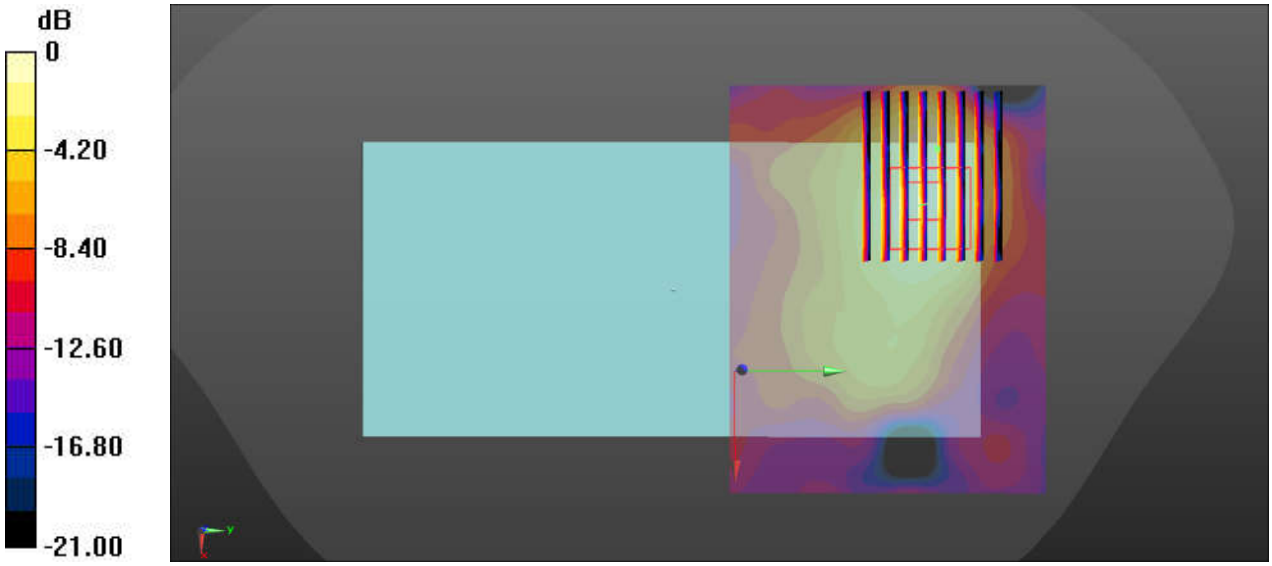
47_ Bluetooth_1Mbps_Back_5mm_Ch78

Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz;Duty Cycle: 1:1.292
Medium: HSL_2450 Medium parameters used: f = 2480 MHz; σ = 1.787 S/m; ε_r = 39.948; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.50 ,7.50 ,7.50); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch78/Area Scan (91x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0801 W/kg

Ch78/Zoom Scan (10x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.471 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.105 W/kg
SAR(1 g) = 0.054 W/kg; SAR(10 g) = 0.026 W/kg
Maximum value of SAR (measured) = 0.0824 W/kg



0 dB = 0.0801 W/kg = -10.96 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.19

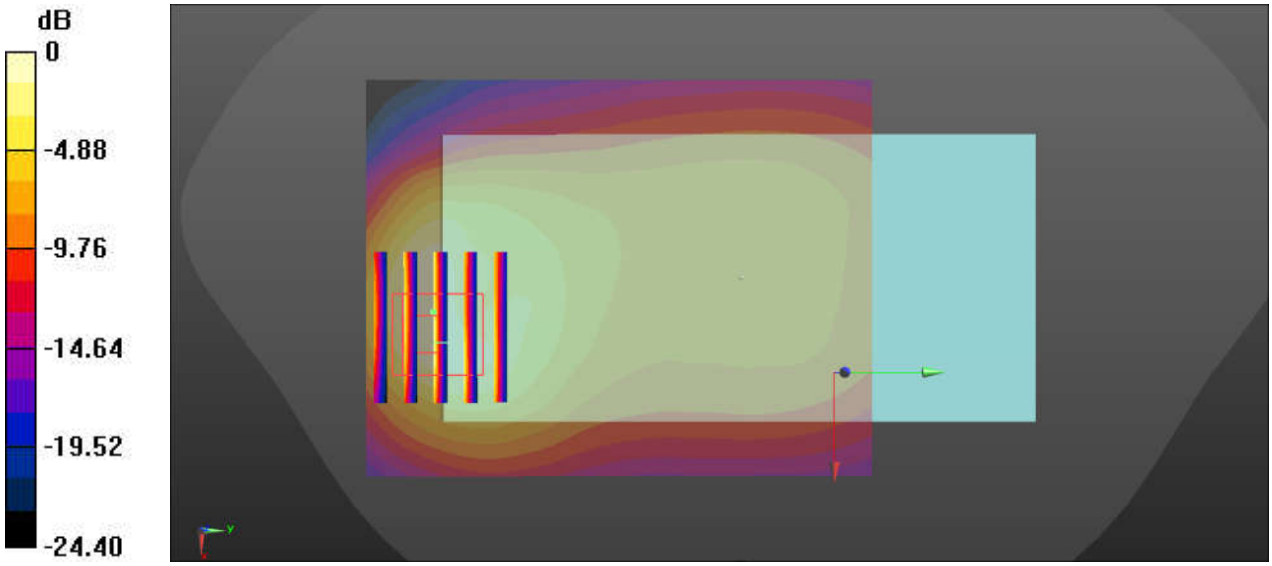
48_GSM850_GPRS 2 Tx slots_Back_5mm_Ch251

Communication System: UID 0, GSM850 (0); Frequency: 848.8 MHz;Duty Cycle: 1:4.15
Medium: HSL_835 Medium parameters used: f = 848.8 MHz; σ = 0.943 S/m; ε_r = 42.081; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.48, 9.48, 9.48); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch251/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.46 W/kg

Ch251/Zoom Scan (6x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.83 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 2.39 W/kg
SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.563 W/kg
Maximum value of SAR (measured) = 1.85 W/kg



0 dB = 1.46 W/kg = 1.64 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

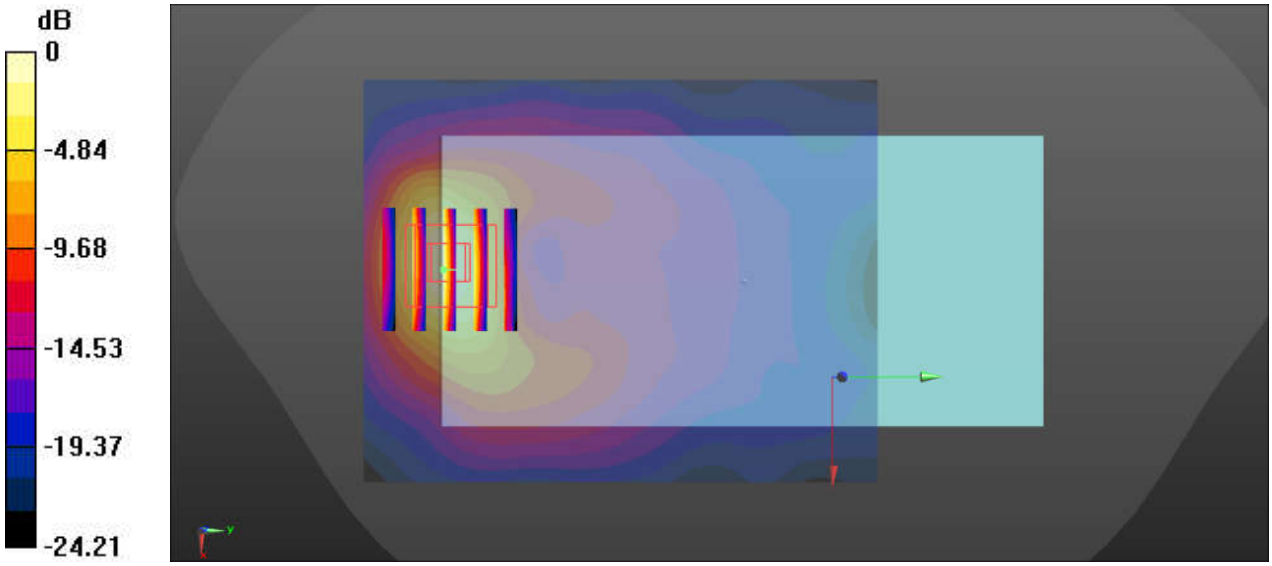
49_GSM1900_GPRS 4 Tx slots_Back_5mm_Ch810

Communication System: UID 0, PCS (0); Frequency: 1909.8 MHz;Duty Cycle: 1:2.08
Medium: HSL_1900 Medium parameters used: f = 1909.8 MHz; σ = 1.436 S/m; ε_r = 38.337; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.10, 8.10, 8.10); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch810/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.35 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.901 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.70 W/kg
SAR(1 g) = 0.927 W/kg; SAR(10 g) = 0.456 W/kg
Maximum value of SAR (measured) = 1.39 W/kg



0 dB = 1.35 W/kg = 1.30 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.19

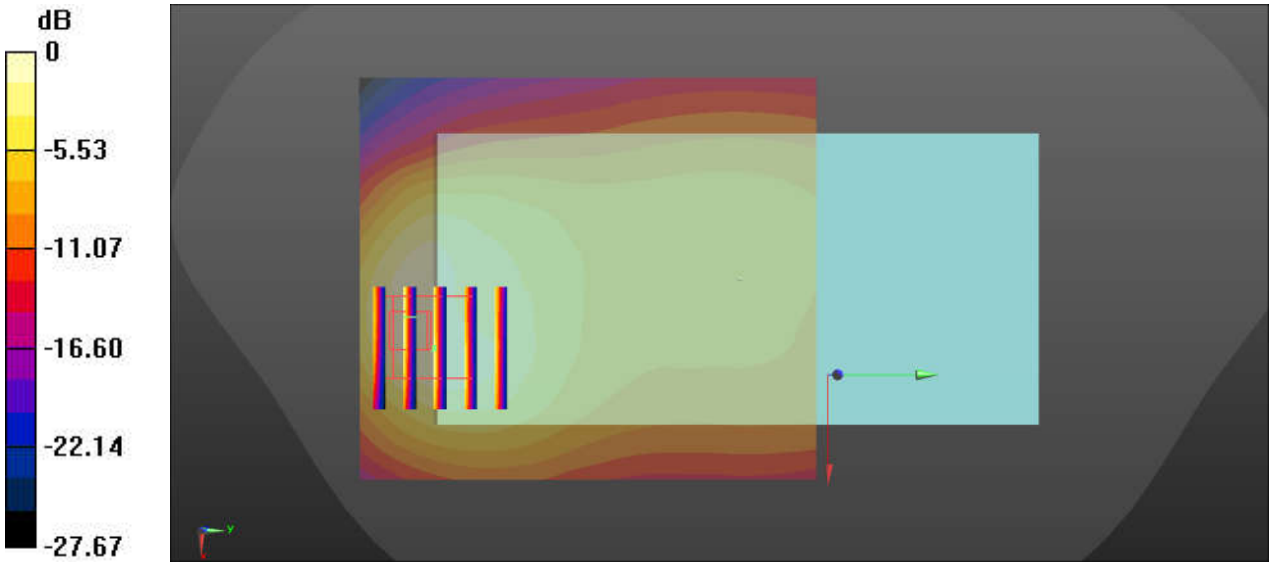
50_WCDMA V_RMC 12.2Kbps_Back_5mm_Ch4182

Communication System: UID 0, WCDMA (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 836.4 MHz; σ = 0.931 S/m; ε_r = 42.194; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.48, 9.48, 9.48); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch4182/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.62 W/kg

Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.97 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 2.40 W/kg
SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.618 W/kg
Maximum value of SAR (measured) = 1.47 W/kg



0 dB = 1.62 W/kg = 2.10 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.23

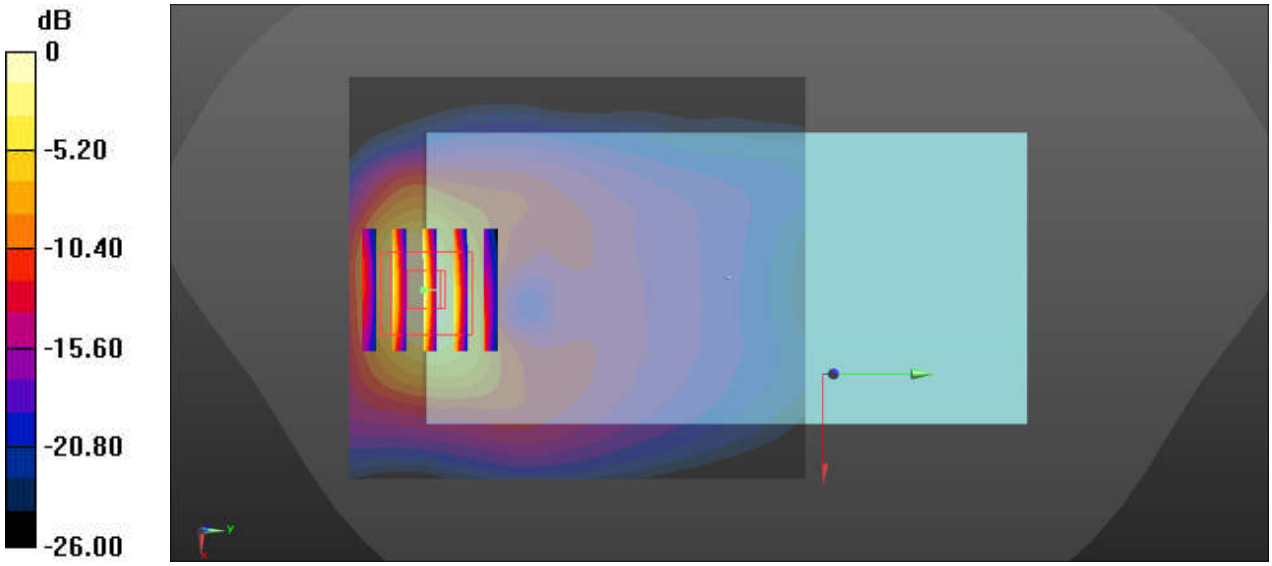
51_WCDMA IV_RMC 12.2Kbps_Back_5mm_Ch1513_Headset

Communication System: UID 0, WCDMA (0); Frequency: 1752.6 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1752.6 MHz; σ = 1.385 S/m; ε_r = 39.686; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.46, 8.46, 8.46); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1513/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.35 W/kg

Ch1513/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.789 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.89 W/kg
SAR(1 g) = 1.07 W/kg; SAR(10 g) = 0.525 W/kg
Maximum value of SAR (measured) = 1.36 W/kg



0 dB = 1.35 W/kg = 1.30 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

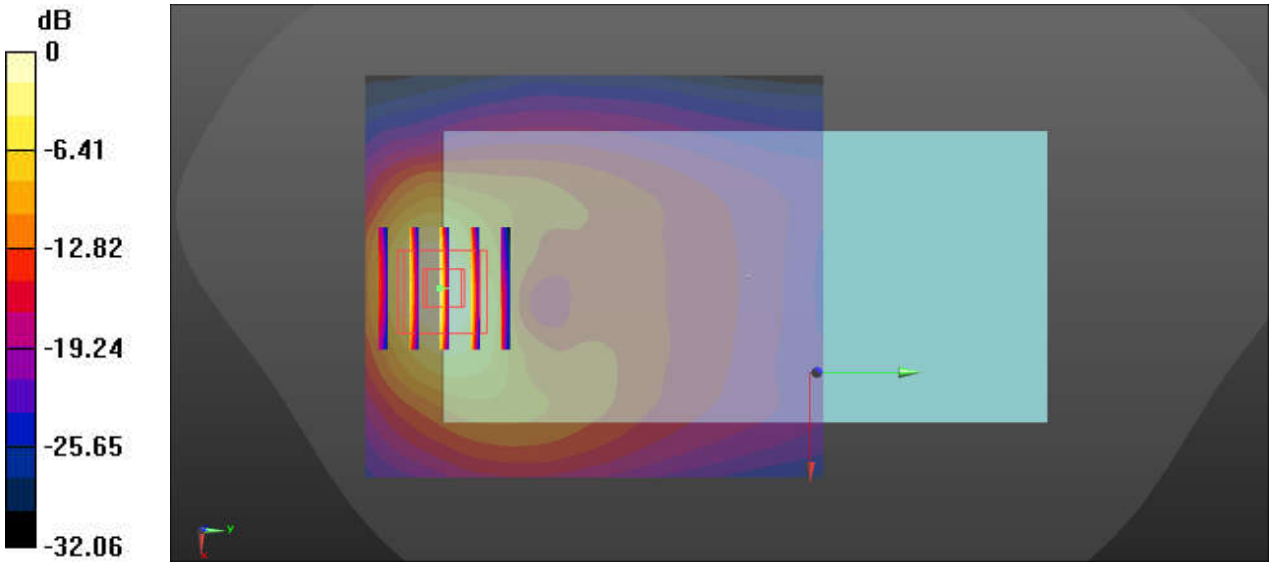
52_WCDMA II_RMC 12.2Kbps_Back_5mm_Ch9538

Communication System: UID 0, WCDMA (0); Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1907.6 MHz; σ = 1.434 S/m; ε_r = 38.343; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.10, 8.10, 8.10); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch9538/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.16 W/kg

Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.170 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.66 W/kg
SAR(1 g) = 0.926 W/kg; SAR(10 g) = 0.453 W/kg
Maximum value of SAR (measured) = 1.18 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.19

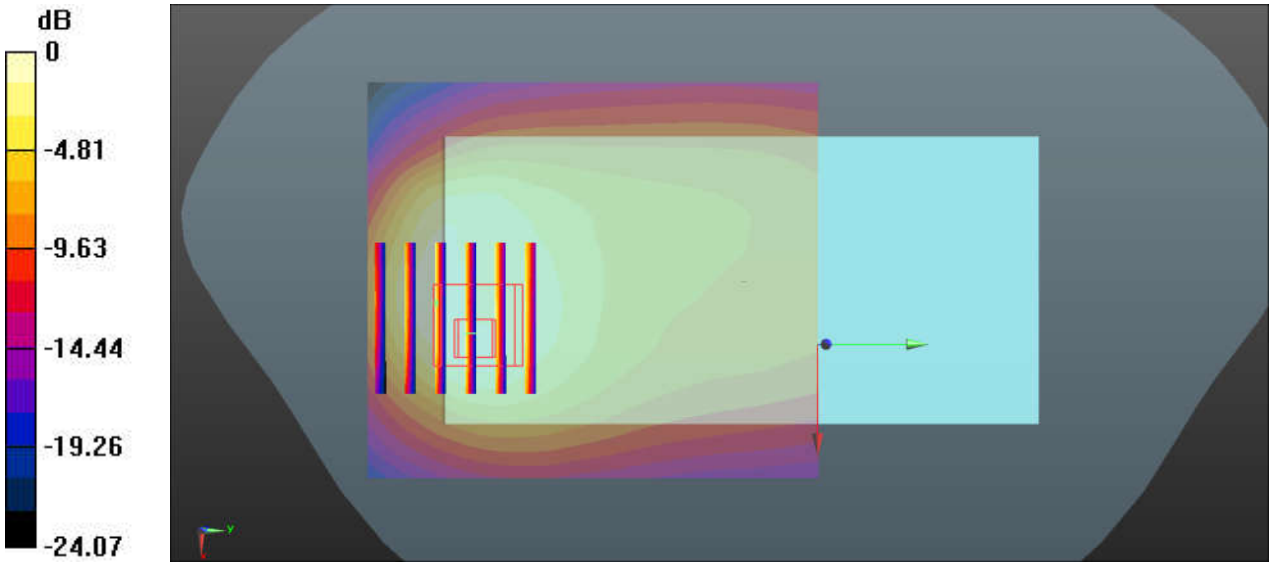
53_CDMA2000 BC10_RC3 SO32 (F+SCH) _Back_5mm_Ch580

Communication System: UID 0, CDMA (0); Frequency: 820.5 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 820.5 MHz; σ = 0.914 S/m; ε_r = 42.378; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.48, 9.48, 9.48); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch580/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.71 W/kg

Ch580/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.13 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 2.45 W/kg
SAR(1 g) = 1.07 W/kg; SAR(10 g) = 0.595 W/kg
Maximum value of SAR (measured) = 1.85 W/kg



0 dB = 1.71 W/kg = 2.33 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.19

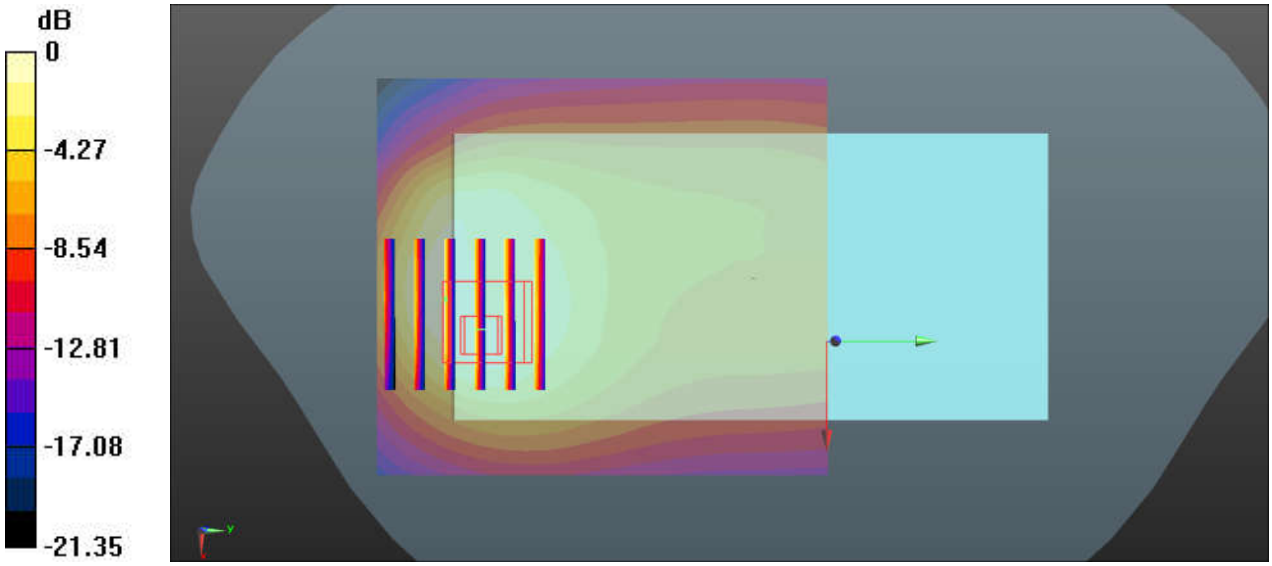
54_CDMA2000 BC0_RC3 SO32 (F+SCH)_Back_5mm_Ch1013

Communication System: UID 0, CDMA (0); Frequency: 824.7 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 824.7 MHz; σ = 0.918 S/m; ε_r = 42.321; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.48, 9.48, 9.48); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1013/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.73 W/kg

Ch1013/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.05 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 2.72 W/kg
SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.606 W/kg
Maximum value of SAR (measured) = 1.97 W/kg



0 dB = 1.73 W/kg = 2.38 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

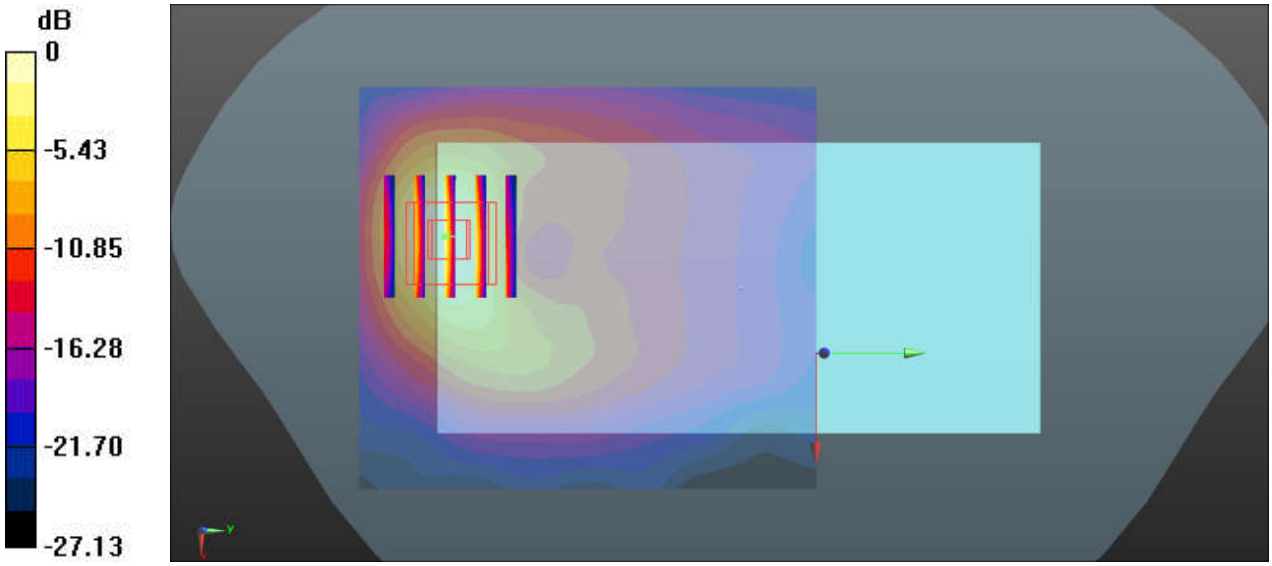
55_CDMA2000 BC1_RC3 SO32 (F+SCH)_Back_5mm_Ch25

Communication System: UID 0, CDMA (0); Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1851.25 MHz; σ = 1.374 S/m; ε_r = 38.58; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.10, 8.10, 8.10); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch25/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.49 W/kg

Ch25/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.189 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.82 W/kg
SAR(1 g) = 1.000 W/kg; SAR(10 g) = 0.499 W/kg
Maximum value of SAR (measured) = 1.53 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.5

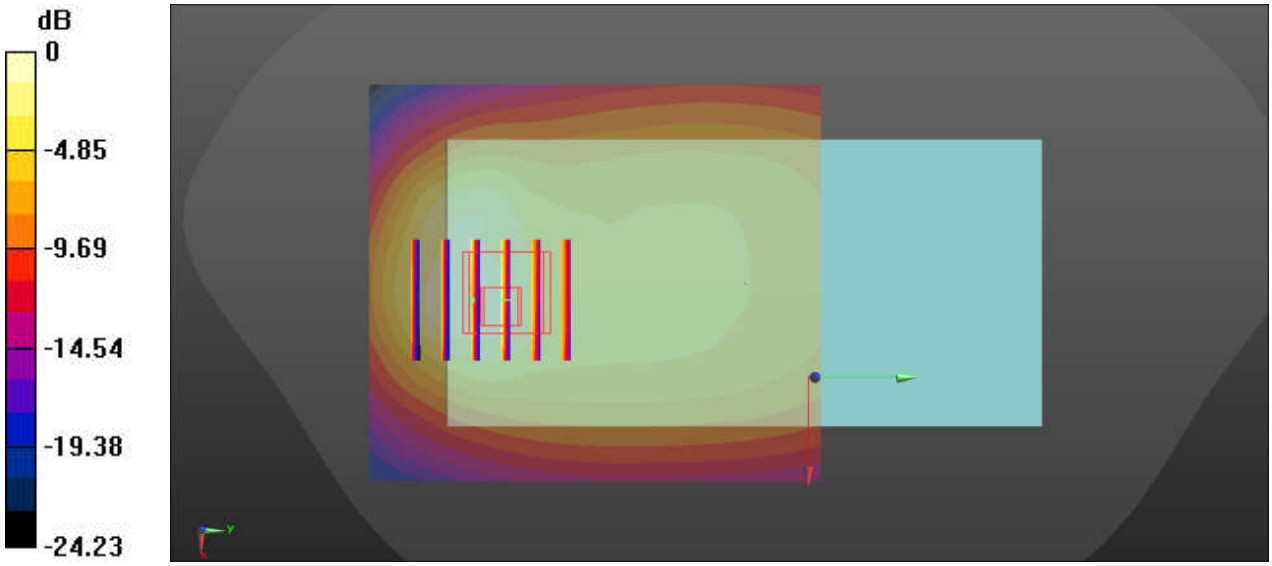
56_LTE Band 71_20M_QPSK_1RB_0offset_Back_5mm_Ch133322

Communication System: UID 0, LTE-FDD (0); Frequency: 683 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 683 MHz; σ = 0.846 S/m; ε_r = 42.816; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.77, 9.77, 9.77); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch133322/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.05 W/kg

Ch133322/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.25 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.588 W/kg; SAR(10 g) = 0.320 W/kg
Maximum value of SAR (measured) = 1.08 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.17

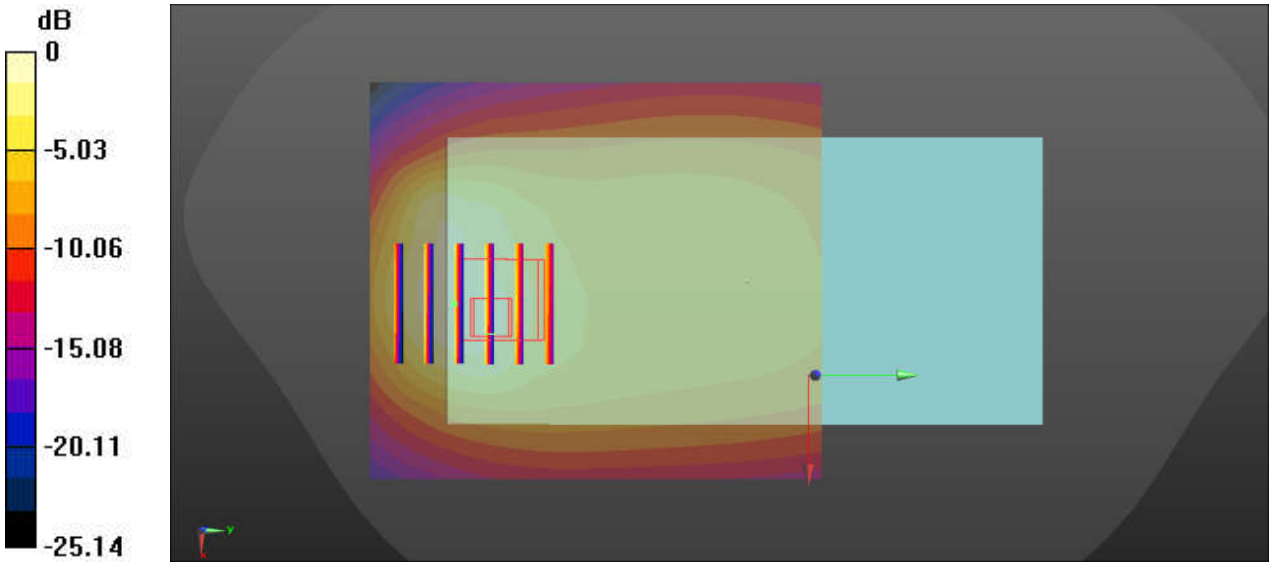
57_LTE Band 12_10M_QPSK_1RB_0offset_Back_5mm_Ch23095

Communication System: UID 0, LTE-FDD (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 707.5 MHz; σ = 0.853 S/m; ε_r = 42.316; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.77, 9.77, 9.77); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch23095/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.50 W/kg

Ch23095/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.00 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.95 W/kg
SAR(1 g) = 0.818 W/kg; SAR(10 g) = 0.448 W/kg
Maximum value of SAR (measured) = 1.47 W/kg



0 dB = 1.50 W/kg = 1.76 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.17

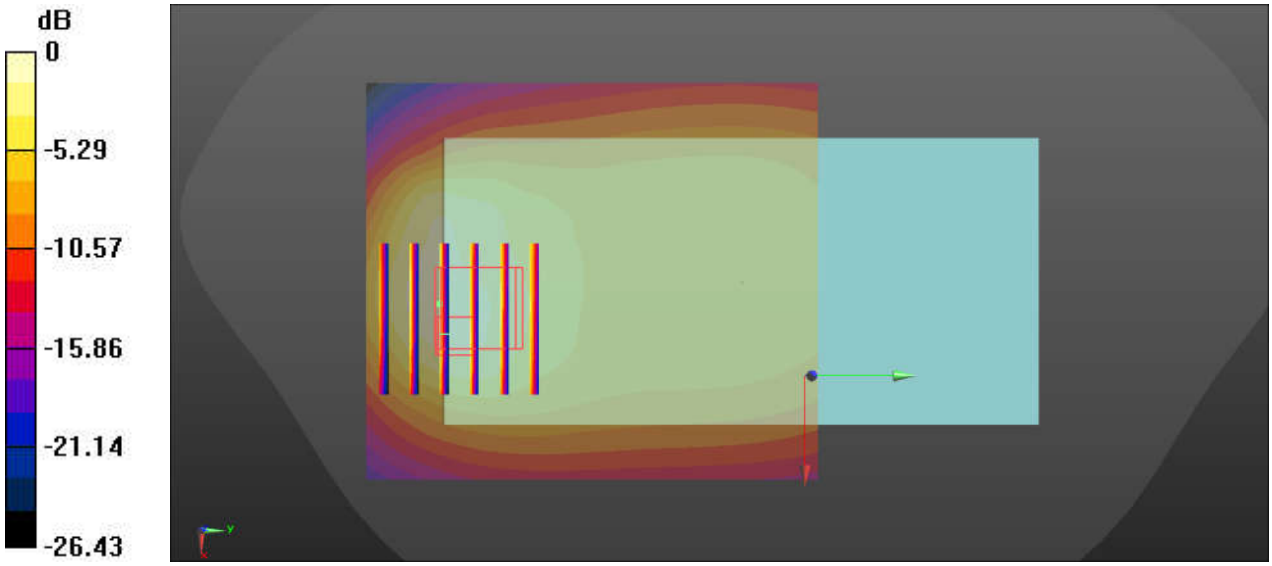
58_LTE Band 13_10M_QPSK_1RB_0offset_Back_5mm_Ch23230

Communication System: UID 0, LTE-FDD (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 782 MHz; σ = 0.924 S/m; ε_r = 41.333; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.77, 9.77, 9.77); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch23230/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.74 W/kg

Ch23230/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.10 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.95 W/kg
SAR(1 g) = 0.805 W/kg; SAR(10 g) = 0.459 W/kg
Maximum value of SAR (measured) = 1.42 W/kg



0 dB = 1.74 W/kg = 2.41 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.17

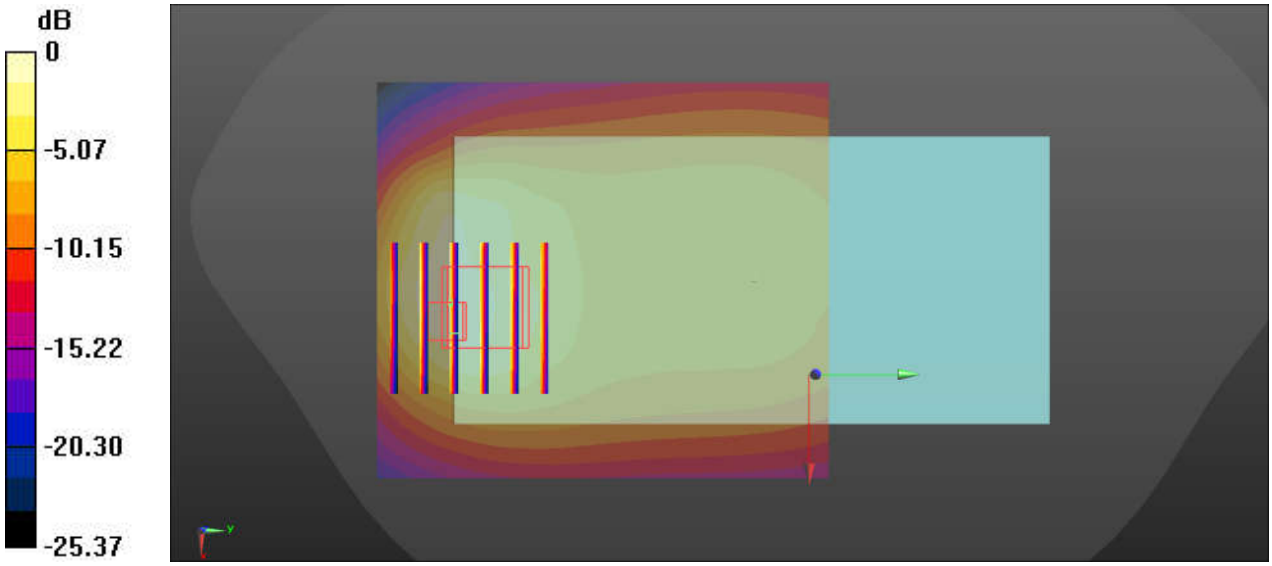
59_LTE Band 14_10M_QPSK_1RB_0offset_Back_5mm_Ch23330

Communication System: UID 0, LTE-FDD (0); Frequency: 793 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 793 MHz; σ = 0.935 S/m; ε_r = 41.185; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.77, 9.77, 9.77); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch23330/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.46 W/kg

Ch23330/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.43 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.66 W/kg
SAR(1 g) = 0.685 W/kg; SAR(10 g) = 0.389 W/kg
Maximum value of SAR (measured) = 1.21 W/kg



0 dB = 1.46 W/kg = 1.64 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.19

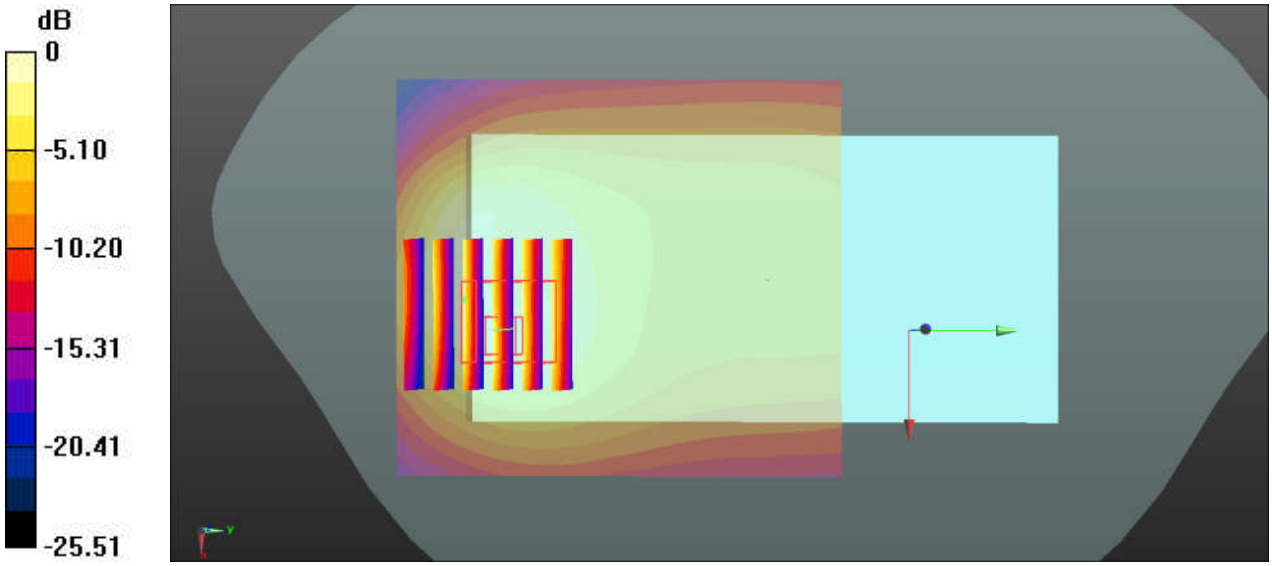
60_LTE Band 26_15M_QPSK_1RB_37offset_Back_5mm_Ch26865_Headset

Communication System: UID 0, LTE-FDD (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 831.5 MHz; σ = 0.925 S/m; ε_r = 42.251; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.48, 9.48, 9.48); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch26865/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.59 W/kg

Ch26865/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.75 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 2.41 W/kg
SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.570 W/kg
Maximum value of SAR (measured) = 1.83 W/kg



0 dB = 1.59 W/kg = 2.01 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.23

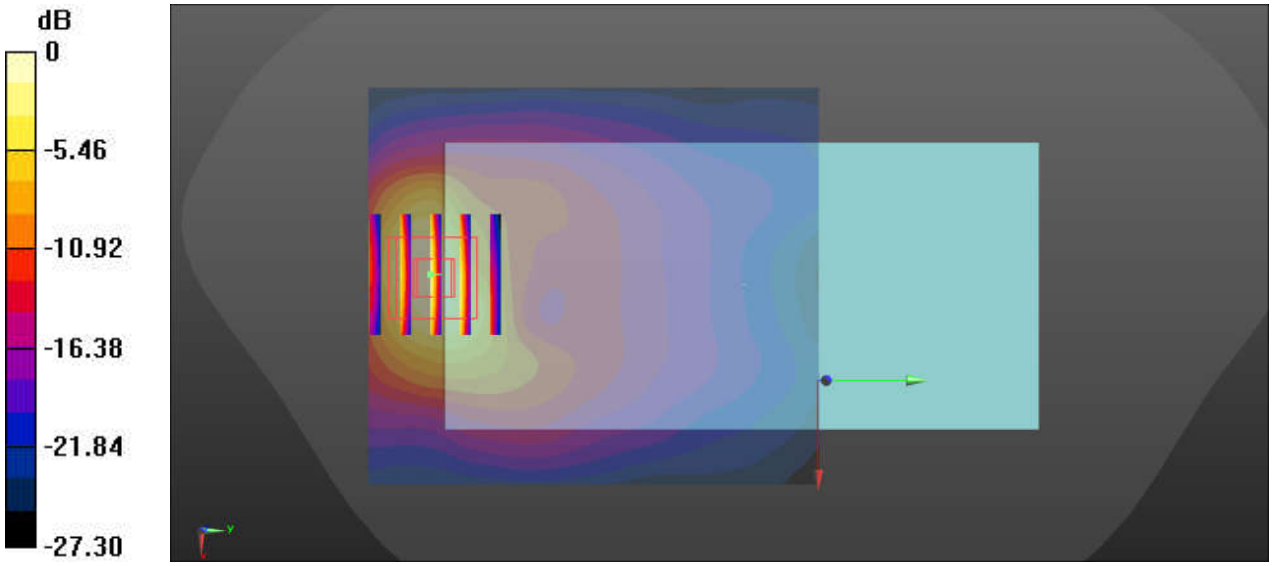
61_LTE Band 66_20M_QPSK_50RB_0offset_Back_5mm_Headset_Ch132572

Communication System: UID 0, LTE-FDD (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1770 MHz; σ = 1.4 S/m; ε_r = 39.627; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.46, 8.46, 8.46); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch132572/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.39 W/kg

Ch132572/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.140 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.89 W/kg
SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.538 W/kg
Maximum value of SAR (measured) = 1.37 W/kg



0 dB = 1.39 W/kg = 1.43 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

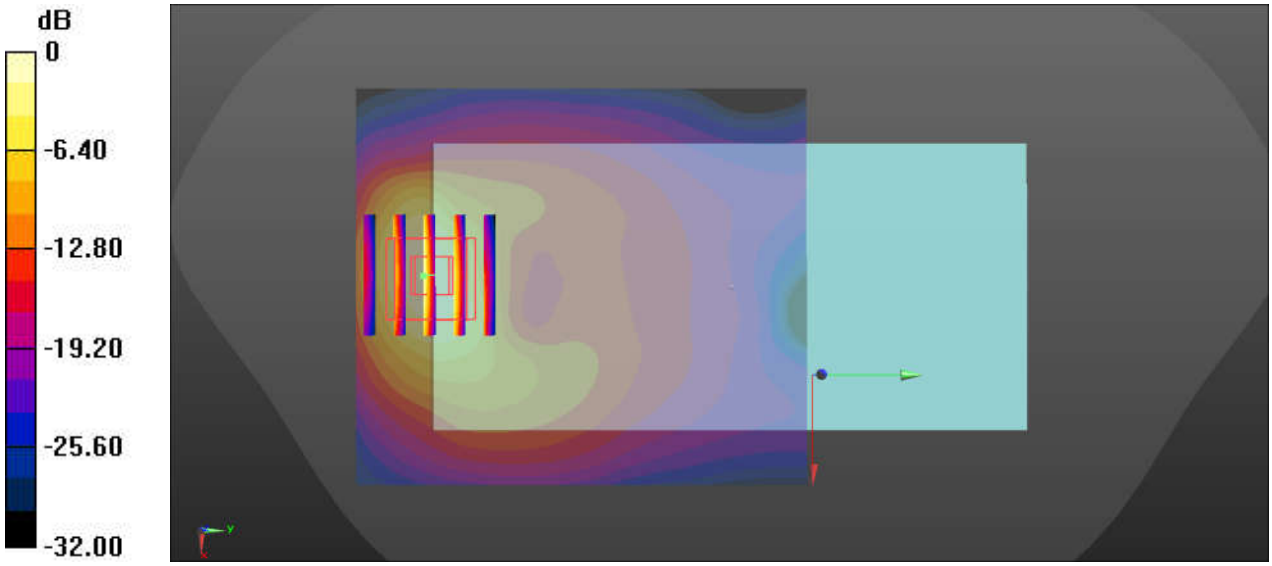
62_LTE Band 25_20M_QPSK_1RB_0offset_Back_5mm_Ch26590

Communication System: UID 0, LTE-FDD (0); Frequency: 1905 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1905 MHz; σ = 1.431 S/m; ε_r = 38.355; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.10, 8.10, 8.10); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch26590/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.68 W/kg

Ch26590/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.034 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 2.04 W/kg
SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.526 W/kg
Maximum value of SAR (measured) = 1.66 W/kg



0 dB = 1.68 W/kg = 2.25 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.29

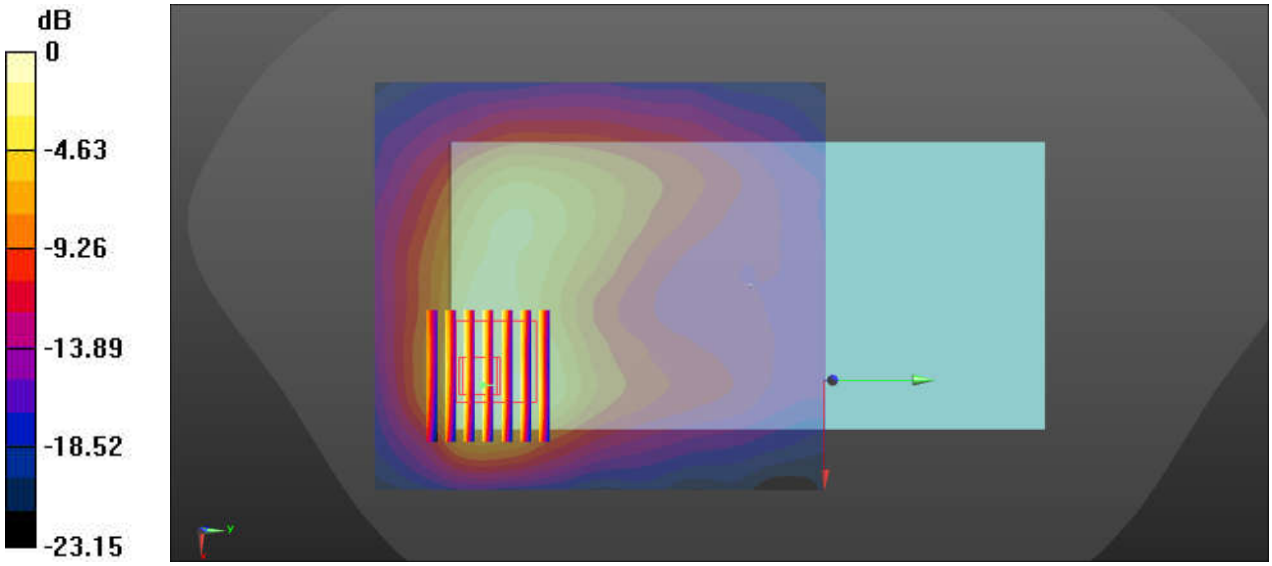
63_LTE Band 30_10M_QPSK_1RB_0offset_Back_5mm_Ch27710

Communication System: UID 0, LTE-FDD (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium: HSL_2300 Medium parameters used: f = 2310 MHz; σ = 1.704 S/m; ε_r = 41.361; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.88 ,7.88 ,7.88); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch27710/Area Scan (91x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.55 W/kg

Ch27710/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.402 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.90 W/kg
SAR(1 g) = 0.955 W/kg; SAR(10 g) = 0.520 W/kg
Maximum value of SAR (measured) = 1.17 W/kg



0 dB = 1.55 W/kg = 1.90 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

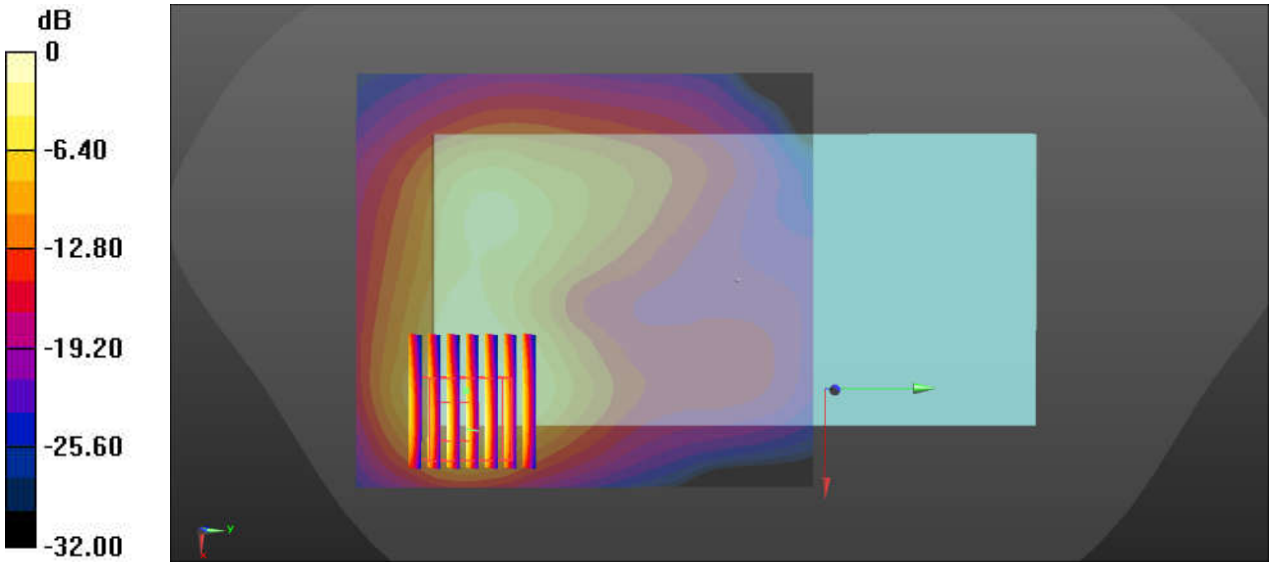
64_LTE Band 7_20M_QPSK_1RB_0offset_Back_5mm_Headset_Ch21350

Communication System: UID 0, LTE-FDD (0); Frequency: 2560 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2560 MHz; σ = 1.829 S/m; ε_r = 39.788; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.31 ,7.31 ,7.31); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch21350/Area Scan (91x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 2.13 W/kg

Ch21350/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.451 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.50 W/kg
SAR(1 g) = 1.1 W/kg; SAR(10 g) = 0.489 W/kg
Maximum value of SAR (measured) = 1.92 W/kg



0 dB = 2.13 W/kg = 3.28 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

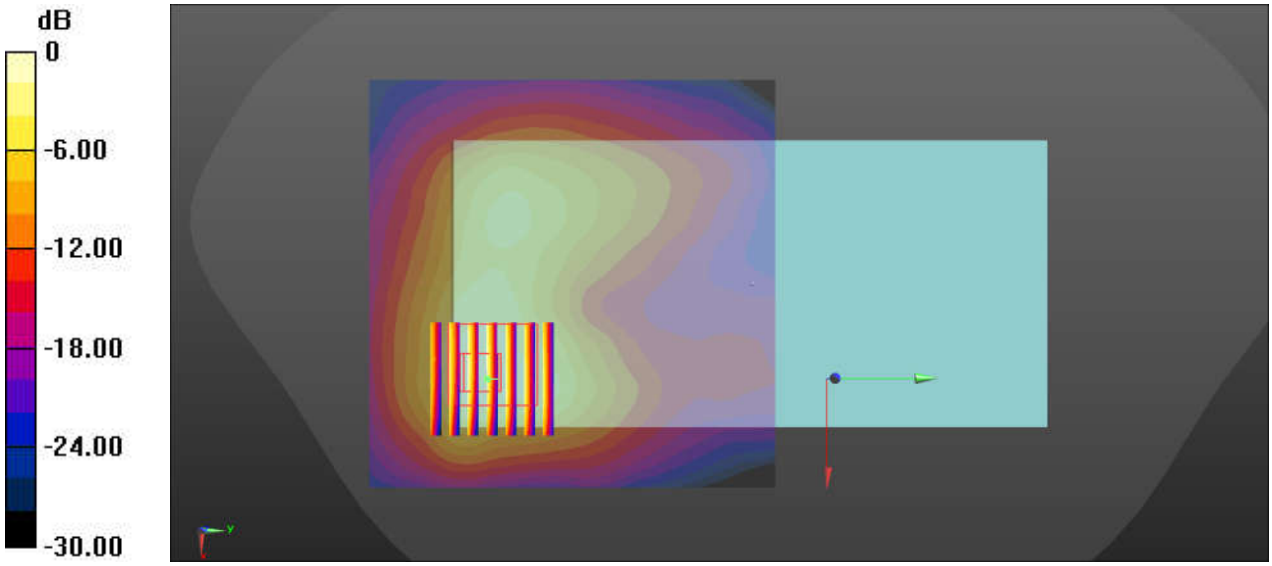
65_LTE Band 41_20M_QPSK_1RB_0offset_Back_5mm_Ch41490

Communication System: UID 0, LTE-TDD (0); Frequency: 2680 MHz;Duty Cycle: 1:1.59
Medium: HSL_2600 Medium parameters used: f = 2680 MHz; σ = 1.96 S/m; ε_r = 39.369; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.31 ,7.31 ,7.31); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch41490/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.72 W/kg

Ch41490/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.624 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.38 W/kg
SAR(1 g) = 1.2 W/kg; SAR(10 g) = 0.595 W/kg
Maximum value of SAR (measured) = 1.51 W/kg



0 dB = 1.72 W/kg = 2.36 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

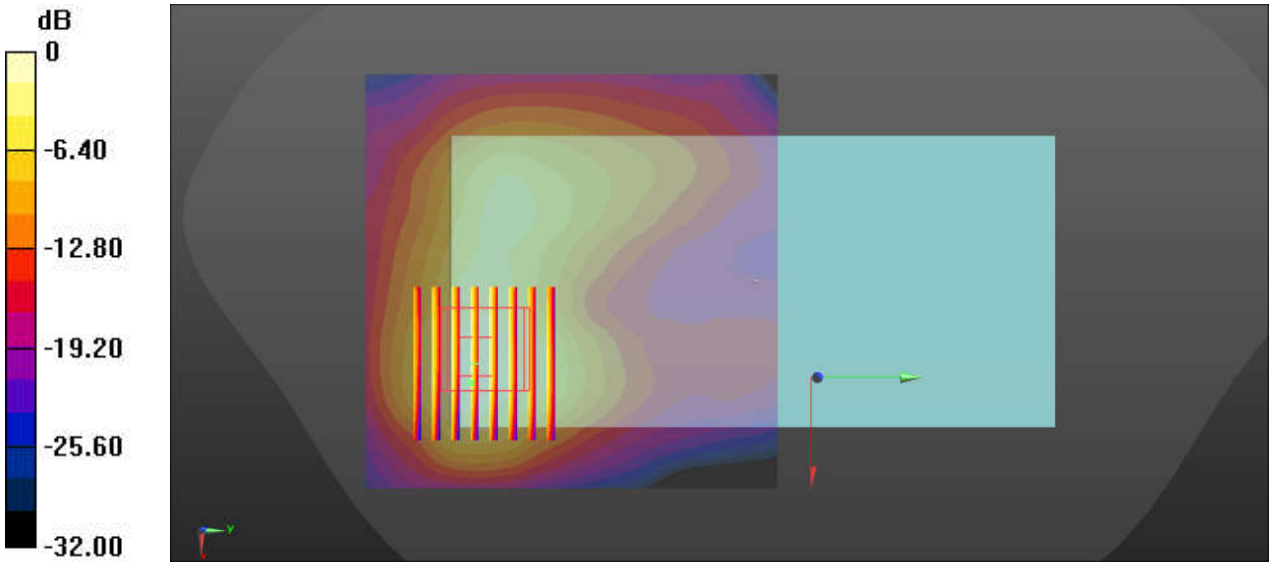
66_LTE Band 41-HPUE_20M_QPSK_50RB_0offset_Back_5mm_Ch41055

Communication System: UID 0, LTE-HPUE (0); Frequency: 2636.5 MHz;Duty Cycle: 1:2.331
Medium: HSL_2600 Medium parameters used: f = 2636.5 MHz; σ = 1.916 S/m; ε_r = 39.515; ρ = 1000kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.31 ,7.31 ,7.31); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch41055/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.33 W/kg

Ch41055/Zoom Scan (9x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.324 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 1.80 W/kg
SAR(1 g) = 0.908 W/kg; SAR(10 g) = 0.459 W/kg
Maximum value of SAR (measured) = 1.18 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.3

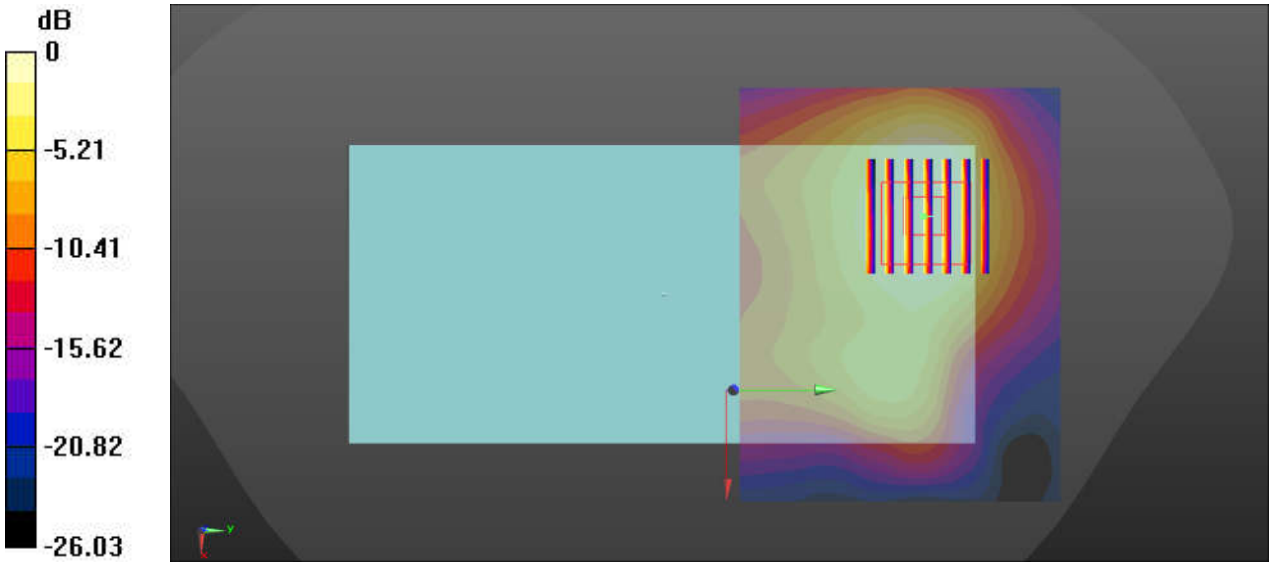
67_WLAN2.4GHz_802.11b 1Mbps_Back_5mm_Ch1

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz;Duty Cycle: 1:1.011
Medium: HSL_2450 Medium parameters used: f = 2412 MHz; σ = 1.715 S/m; ε_r = 40.207; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.50 ,7.50 ,7.50); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1/Area Scan (91x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.67 W/kg

Ch1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.461 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.567 W/kg
Maximum value of SAR (measured) = 1.68 W/kg



0 dB = 1.67 W/kg = 2.23 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.4

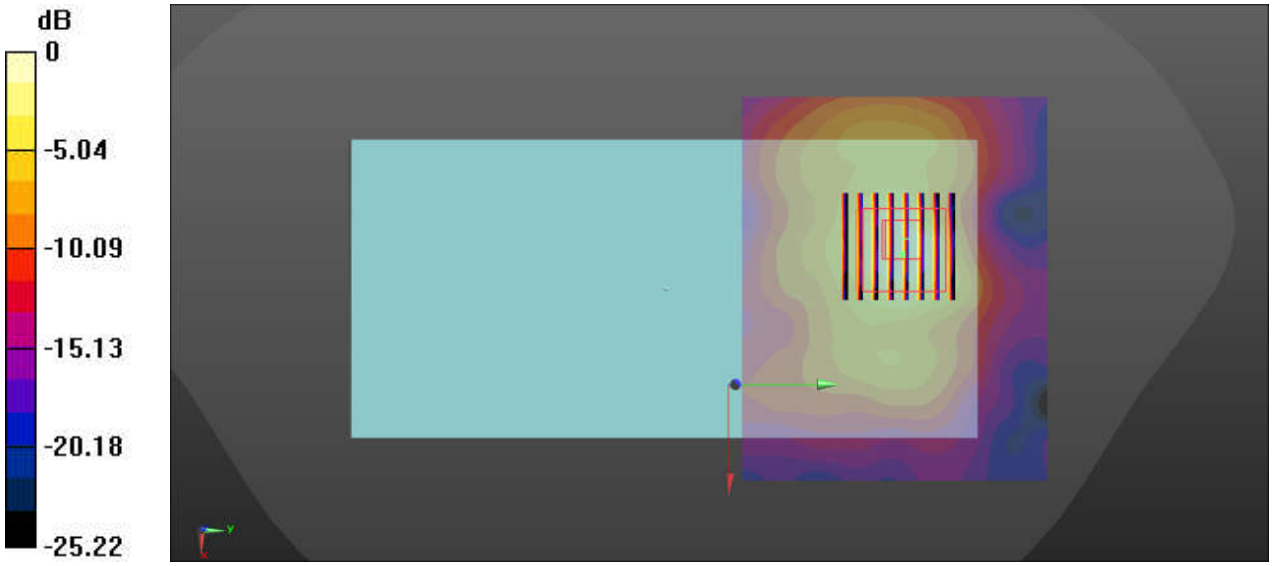
68_WLAN5.2GHz_802.11n-HT40 MCS0_Back_5mm_Ch46

Communication System: UID 0, 802.11n (0); Frequency: 5230 MHz;Duty Cycle: 1:1.038
Medium: HSL_5000 Medium parameters used: f = 5230 MHz; σ = 4.569 S/m; ε_r = 36.45; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(5.19, 5.19, 5.19); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch46/Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.78 W/kg

Ch46/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.520 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.14 W/kg
SAR(1 g) = 0.872 W/kg; SAR(10 g) = 0.293 W/kg
Maximum value of SAR (measured) = 2.03 W/kg



0 dB = 1.78 W/kg = 2.50 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.4

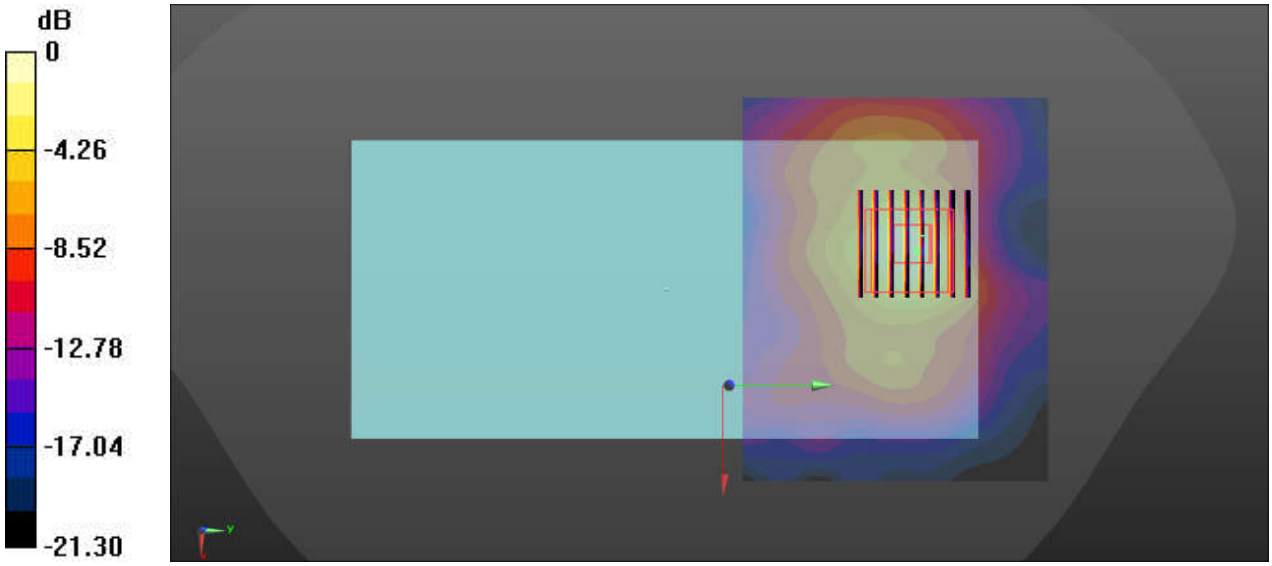
69_WLAN 5.3GHz_802.11n-HT40 MCS0_Back_5mm_Ch54

Communication System: UID 0, 802.11n (0); Frequency: 5270 MHz;Duty Cycle: 1:1.038
Medium: HSL_5000 Medium parameters used: f = 5270 MHz; σ = 4.622 S/m; ε_r = 36.391; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(5.19, 5.19, 5.19); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch54/Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.90 W/kg

Ch54/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.163 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.16 W/kg
SAR(1 g) = 0.859 W/kg; SAR(10 g) = 0.281 W/kg
Maximum value of SAR (measured) = 1.98 W/kg



0 dB = 1.90 W/kg = 2.79 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.4

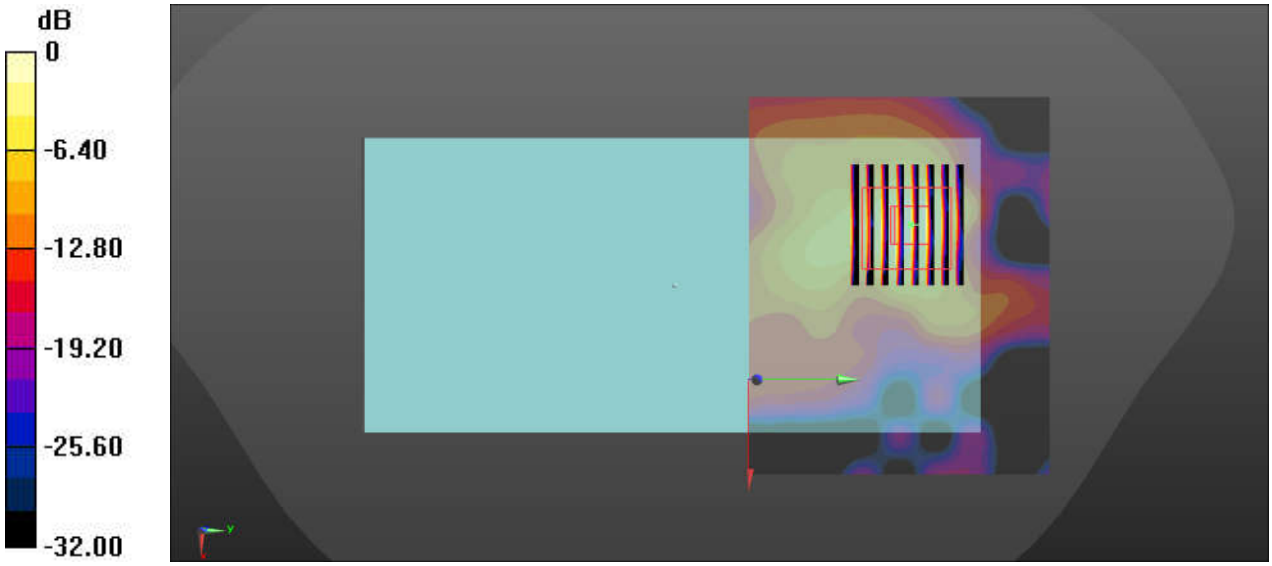
70_WLAN5.5GHz_802.11n-HT40 MCS0_Back_5mm_Ch110

Communication System: UID 0, 802.11n (0); Frequency: 5550 MHz;Duty Cycle: 1:1.038
Medium: HSL_5000 Medium parameters used: f = 5550 MHz; σ = 4.931 S/m; ε_r = 35.897; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(4.92, 4.92, 4.92); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch110/Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.79 W/kg

Ch110/Zoom Scan (9x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.606 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.18 W/kg
SAR(1 g) = 0.773 W/kg; SAR(10 g) = 0.227 W/kg
Maximum value of SAR (measured) = 1.95 W/kg



0 dB = 1.79 W/kg = 2.53 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.4

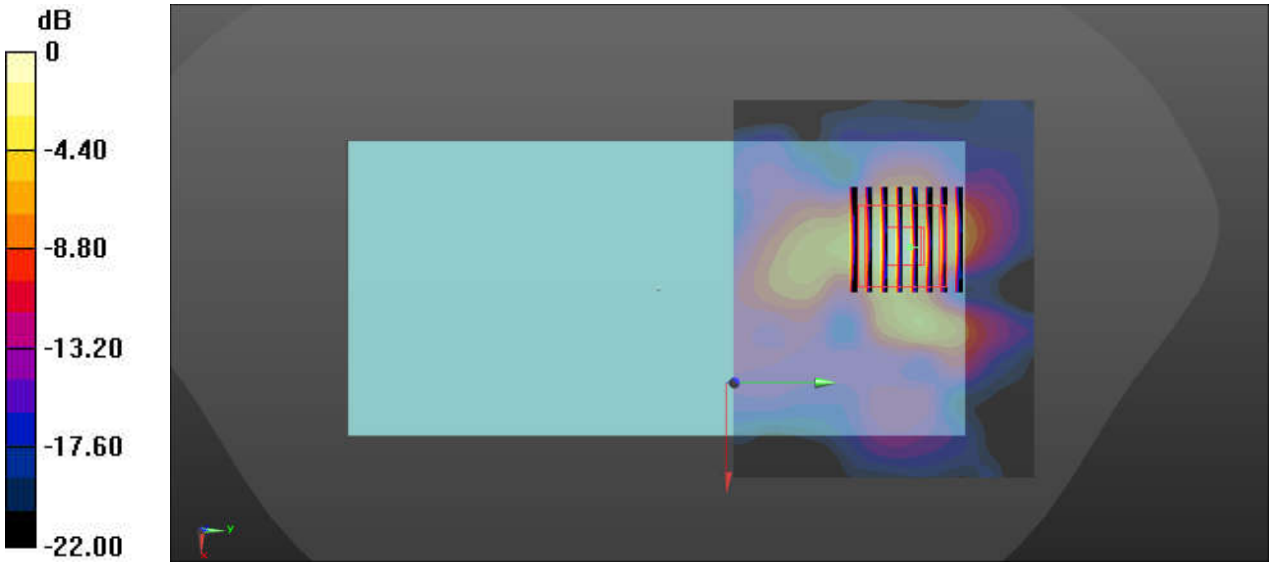
71_WLAN5.8GHz_802.11a 6Mbps_Back_5mm_Ch149

Communication System: UID 0, 802.11a (0); Frequency: 5745 MHz;Duty Cycle: 1:1.018
Medium: HSL_5000 Medium parameters used: f = 5745 MHz; σ = 5.153 S/m; ε_r = 35.581; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(5.17, 5.17, 5.17); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch149/Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.26 W/kg

Ch149/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.552 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.63 W/kg
SAR(1 g) = 0.875 W/kg; SAR(10 g) = 0.261 W/kg
Maximum value of SAR (measured) = 2.17 W/kg



0 dB = 2.26 W/kg = 3.54 dBW/kg

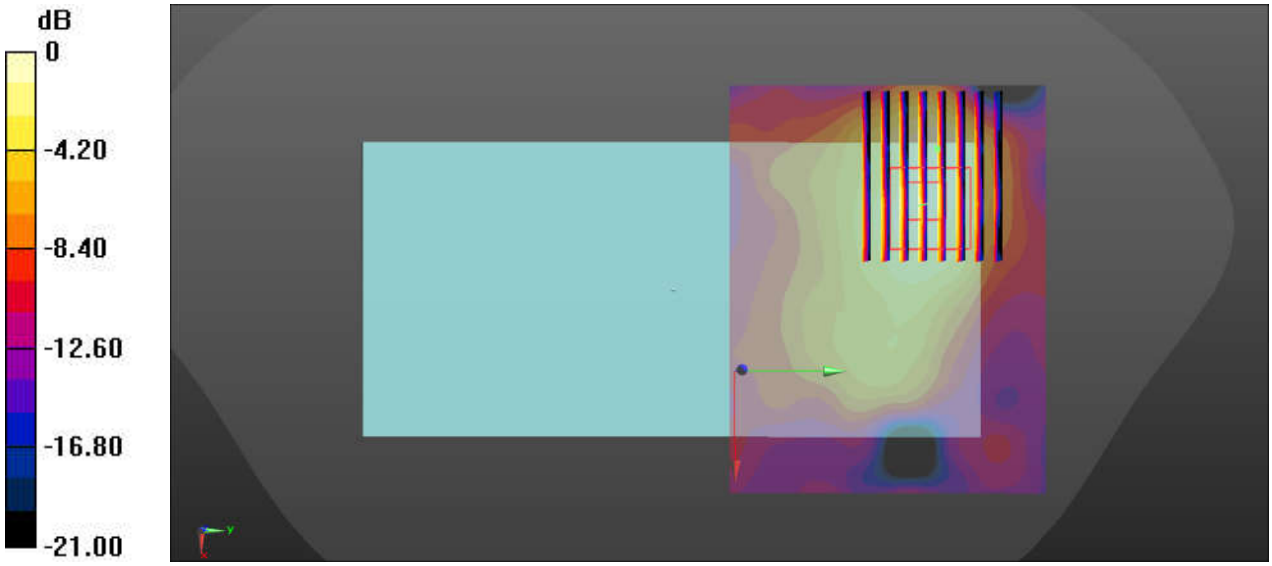
72_ Bluetooth_1Mbps_Back_5mm_Ch78

Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz;Duty Cycle: 1:1.292
Medium: HSL_2450 Medium parameters used: f = 2480 MHz; σ = 1.787 S/m; ε_r = 39.948; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.50 ,7.50 ,7.50); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch78/Area Scan (91x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0801 W/kg

Ch78/Zoom Scan (10x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.471 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.105 W/kg
SAR(1 g) = 0.054 W/kg; SAR(10 g) = 0.026 W/kg
Maximum value of SAR (measured) = 0.0824 W/kg



0 dB = 0.0801 W/kg = -10.96 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.19

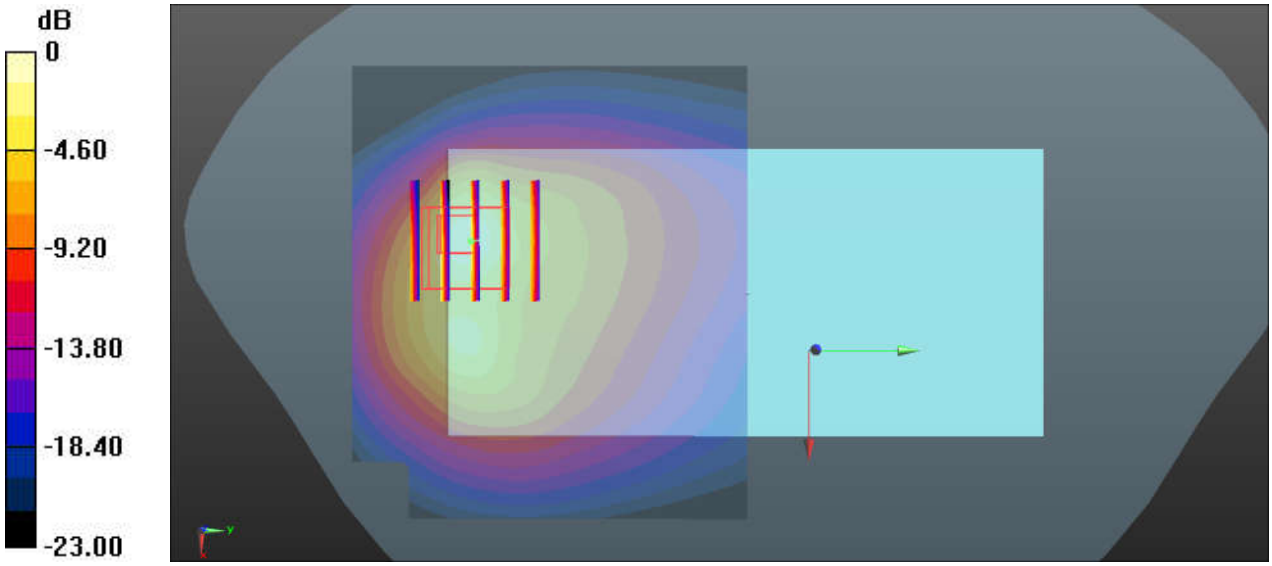
73_GSM850_GPRS 2 Tx slots_Back_0mm_Ch251

Communication System: UID 0, GSM850-2UP (0); Frequency: 848.8 MHz;Duty Cycle: 1:4.15
Medium: HSL_850 Medium parameters used: f = 848.8 MHz; σ = 0.943 S/m; ε_r = 42.081; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.48, 9.48, 9.48); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch251/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 4.31 W/kg

Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.53 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 9.60 W/kg
SAR(1 g) = 2.94 W/kg; SAR(10 g) = 1.27 W/kg
Maximum value of SAR (measured) = 3.41 W/kg



0 dB = 4.31 W/kg = 6.34 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

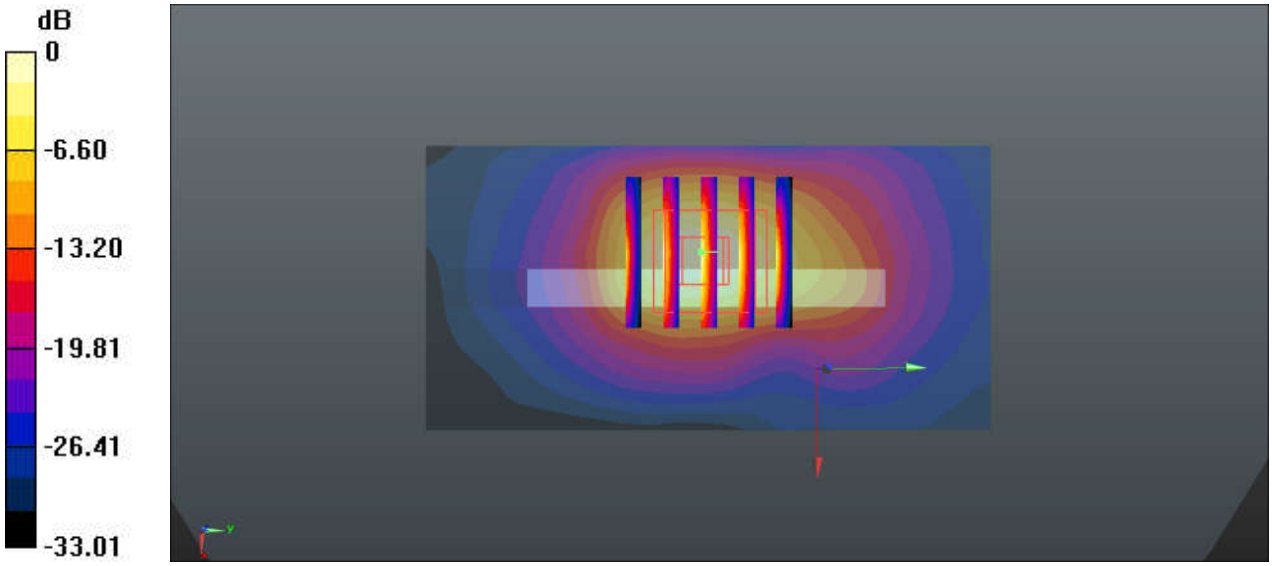
74_GSM1900_GPRS 4 Tx slots_Bottom Side_0mm_Ch661

Communication System: UID 0, PCS (0); Frequency: 1880 MHz;Duty Cycle: 1:2.08
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.403 S/m; ε_r = 38.465; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.10, 8.10, 8.10); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch661/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 9.86 W/kg

Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 72.41 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 17.3 W/kg
SAR(1 g) = 7.23 W/kg; SAR(10 g) = 2.96 W/kg
Maximum value of SAR (measured) = 13.6 W/kg



0 dB = 9.86 W/kg = 9.94 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.19

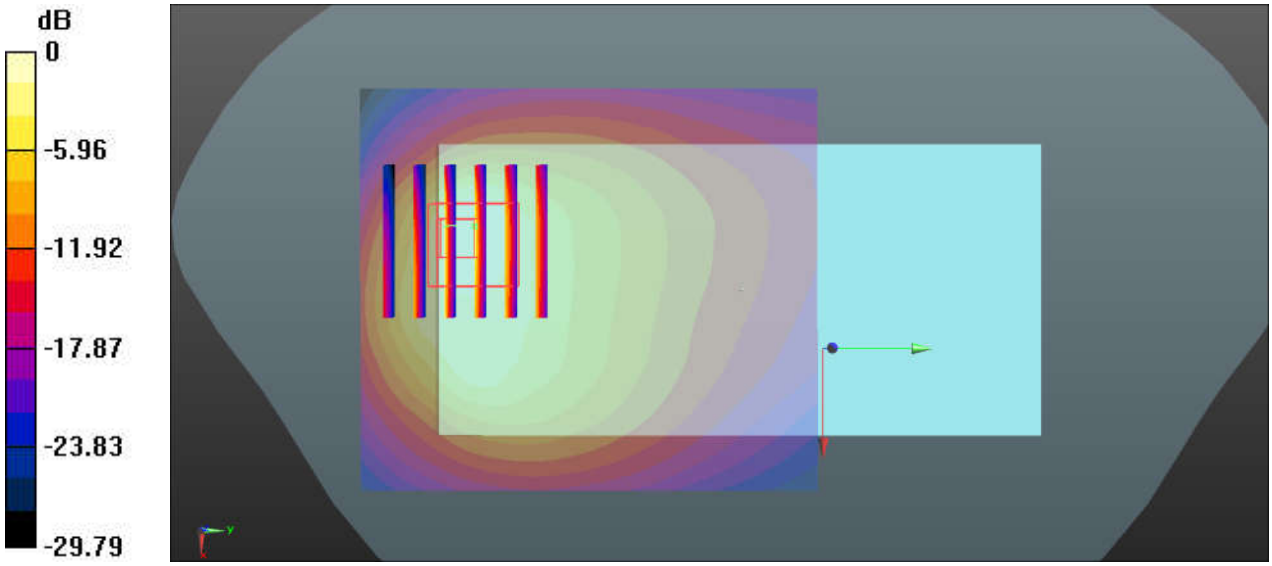
75_WCDMA V_RMC 12.2Kbps_Back_0mm_Ch4132

Communication System: UID 0, WCDMA (0); Frequency: 826.4 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 826.4 MHz; σ = 0.92 S/m; ε_r = 42.309; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.48, 9.48, 9.48); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch4132/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 6.10 W/kg

Ch4132/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.35 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 17.9 W/kg
SAR(1 g) = 4.65 W/kg; SAR(10 g) = 2.06 W/kg
Maximum value of SAR (measured) = 9.57 W/kg



0 dB = 6.10 W/kg = 7.85 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.23

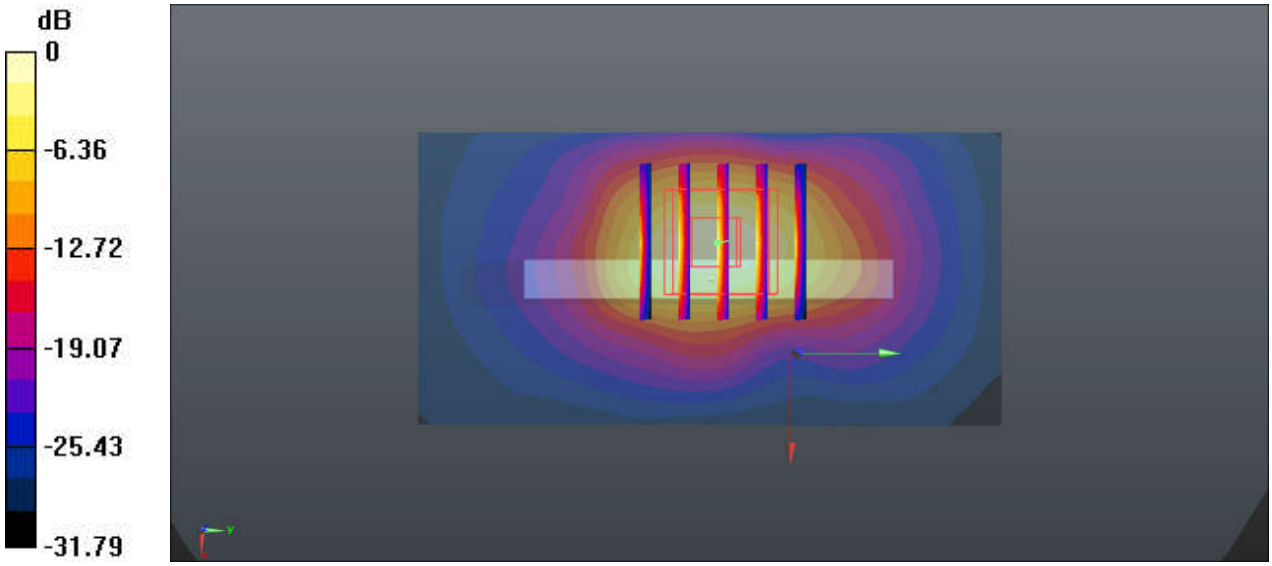
76_WCDMA IV_RMC 12.2Kbps_Bottom Side_0mm_Ch1413

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1732.6 MHz; σ = 1.363 S/m; ε_r = 39.775; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.46, 8.46, 8.46); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1413/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 9.86 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 63.81 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 17.4 W/kg
SAR(1 g) = 7.14 W/kg; SAR(10 g) = 2.97 W/kg
Maximum value of SAR (measured) = 14.2 W/kg



0 dB = 9.86 W/kg = 9.94 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

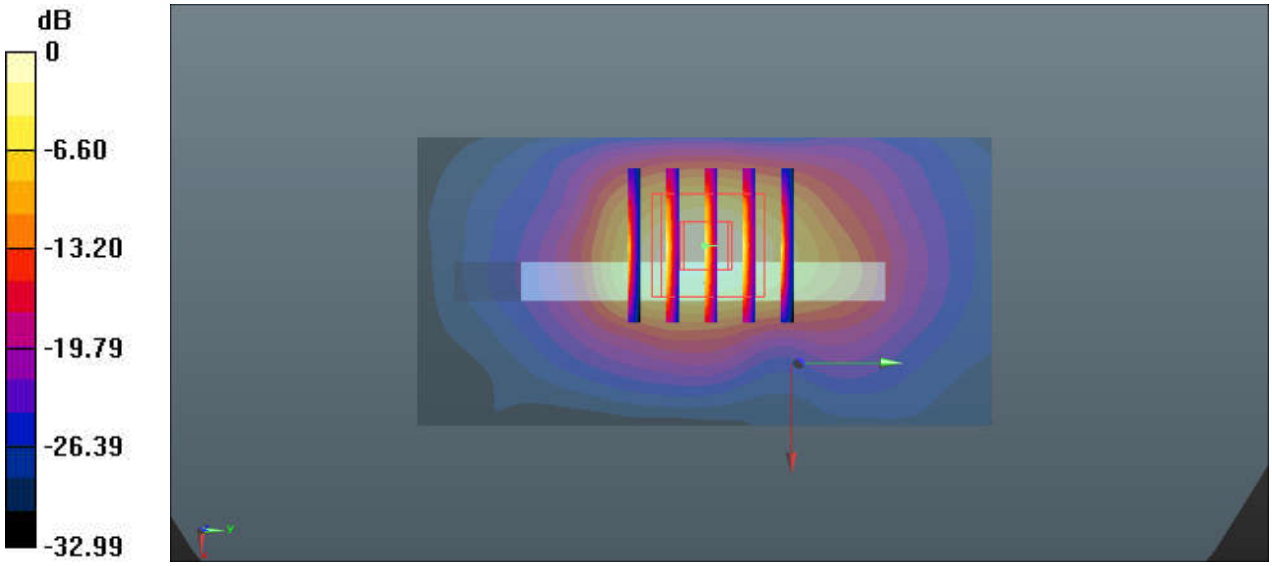
77_WCDMA II_RMC 12.2Kbps_Bottom Side_0mm_Ch9400

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.403 S/m; ε_r = 38.465; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.10, 8.10, 8.10); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch9400/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 11.6 W/kg

Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 70.46 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 21.3 W/kg
SAR(1 g) = 8.28 W/kg; SAR(10 g) = 3.31 W/kg
Maximum value of SAR (measured) = 17.1 W/kg



0 dB = 11.6 W/kg = 10.64 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.19

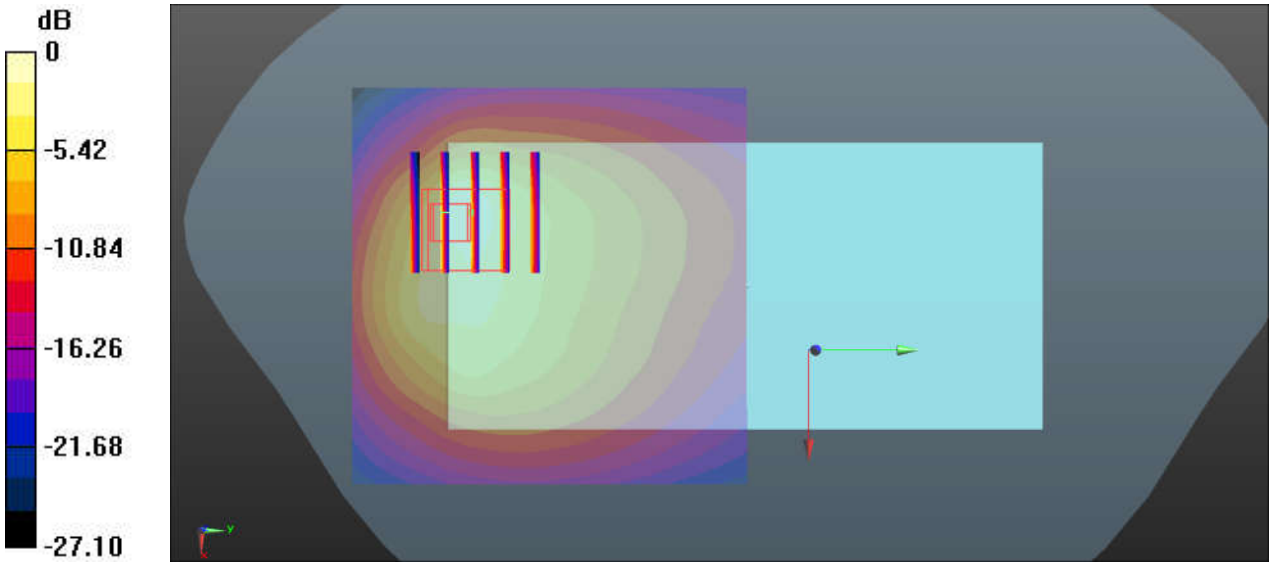
78_CDMA2000 BC10_RTAP 153.6Kbps_Back_0mm_Ch684

Communication System: UID 0, CDMA (0); Frequency: 823.1 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 823.1 MHz; σ = 0.916 S/m; ε_r = 42.346; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.48, 9.48, 9.48); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- 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) = 5.43 W/kg

Ch684/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.89 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 15.7 W/kg
SAR(1 g) = 4.59 W/kg; SAR(10 g) = 2 W/kg
Maximum value of SAR (measured) = 6.00 W/kg



0 dB = 5.43 W/kg = 7.35 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.19

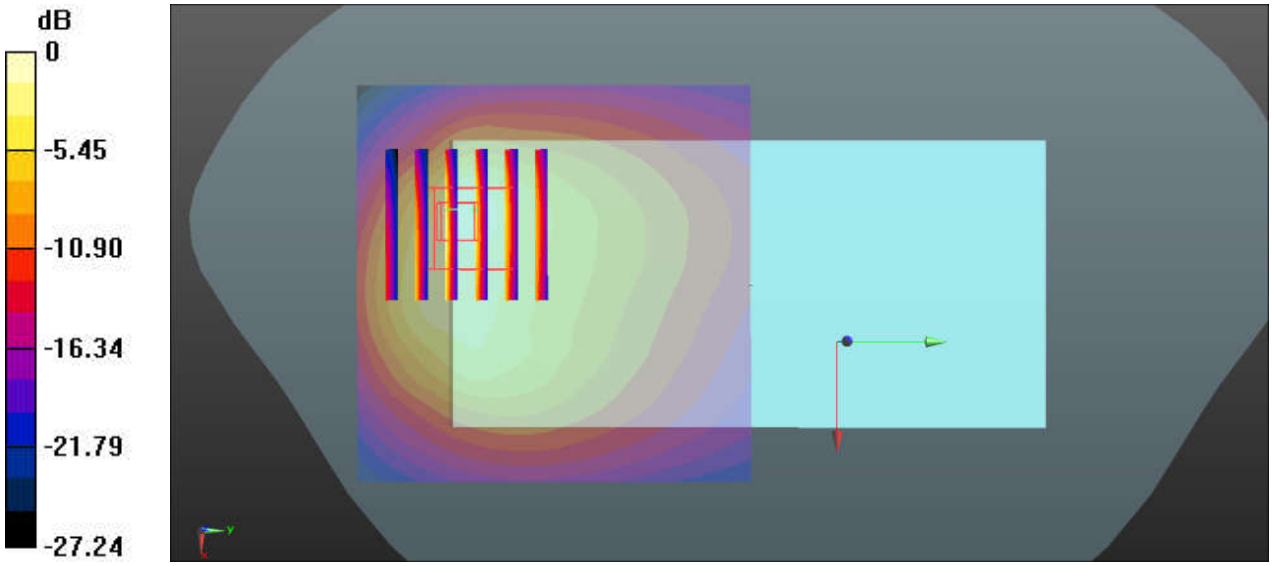
79_CDMA2000 BC0_RTAP 153.6Kbps_Back_0mm_Ch777

Communication System: UID 0, CDMA (0); Frequency: 848.31 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 848.31 MHz; σ = 0.943 S/m; ε_r = 42.09; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.48, 9.48, 9.48); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch777/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 5.19 W/kg

Ch777/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.17 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 14.9 W/kg
SAR(1 g) = 4.43 W/kg; SAR(10 g) = 1.9 W/kg
Maximum value of SAR (measured) = 5.94 W/kg



0 dB = 5.19 W/kg = 7.15 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

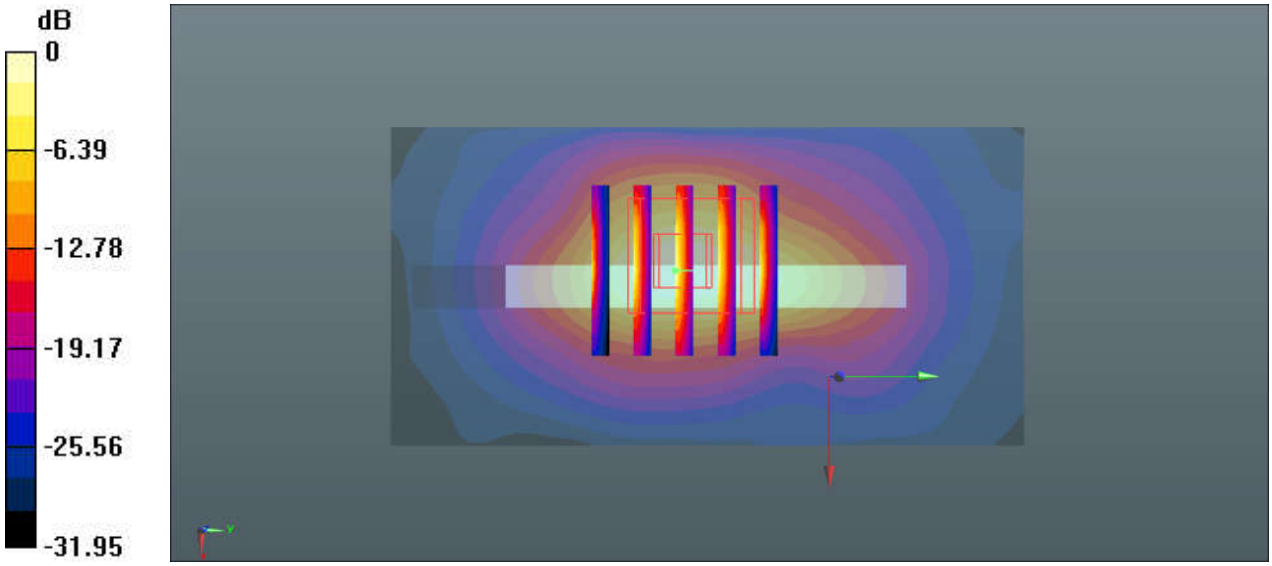
80_CDMA2000 BC1_RTAP 153.6Kbps_Bottom Side_0mm_Ch25

Communication System: UID 0, CDMA (0); Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1851.25 MHz; σ = 1.374 S/m; ε_r = 38.58; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.10, 8.10, 8.10); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch25/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 12.6 W/kg

Ch25/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.38 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 20.5 W/kg
SAR(1 g) = 8.01 W/kg; SAR(10 g) = 3.21 W/kg
Maximum value of SAR (measured) = 15.8 W/kg



0 dB = 12.6 W/kg = 11.00 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.19

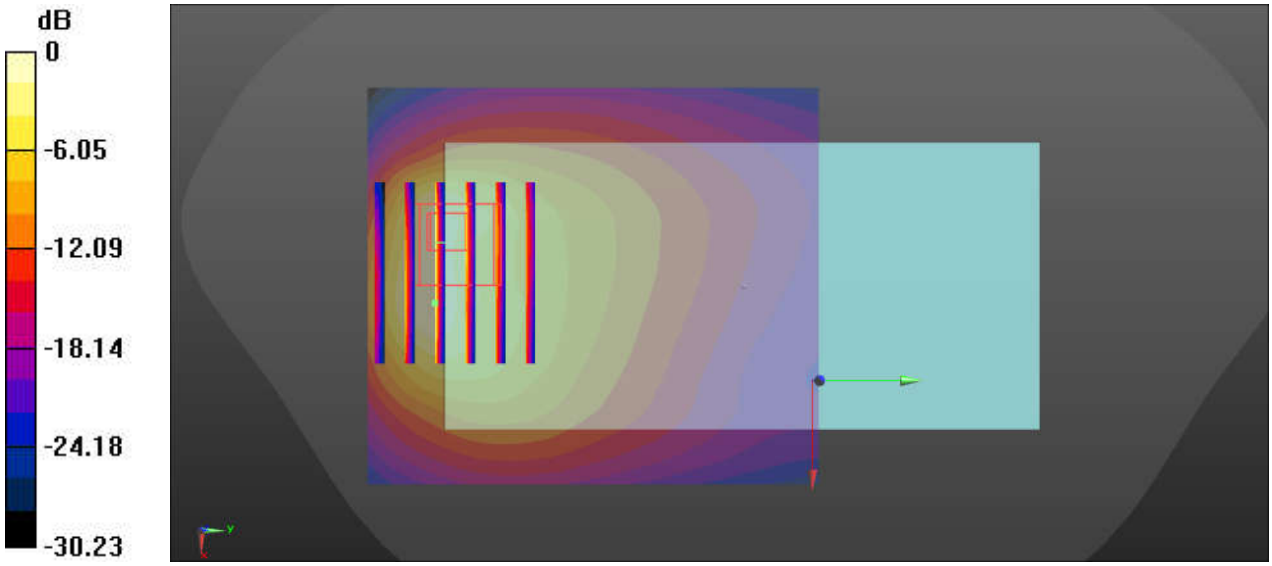
81_LTE Band 26_15M_QPSK_1RB_37offset_Back_0mm_Ch26865

Communication System: UID 0, LTE-FDD (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium: HSL_835 Medium parameters used: f = 831.5 MHz; σ = 0.924 S/m; ε_r = 42.267; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(9.48, 9.48, 9.48); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch26865/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 6.49 W/kg

Ch26865/Zoom Scan (7x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.48 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 13.4 W/kg
SAR(1 g) = 3.7 W/kg; SAR(10 g) = 1.62 W/kg
Maximum value of SAR (measured) = 7.82 W/kg



0 dB = 6.49 W/kg = 8.12 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.23

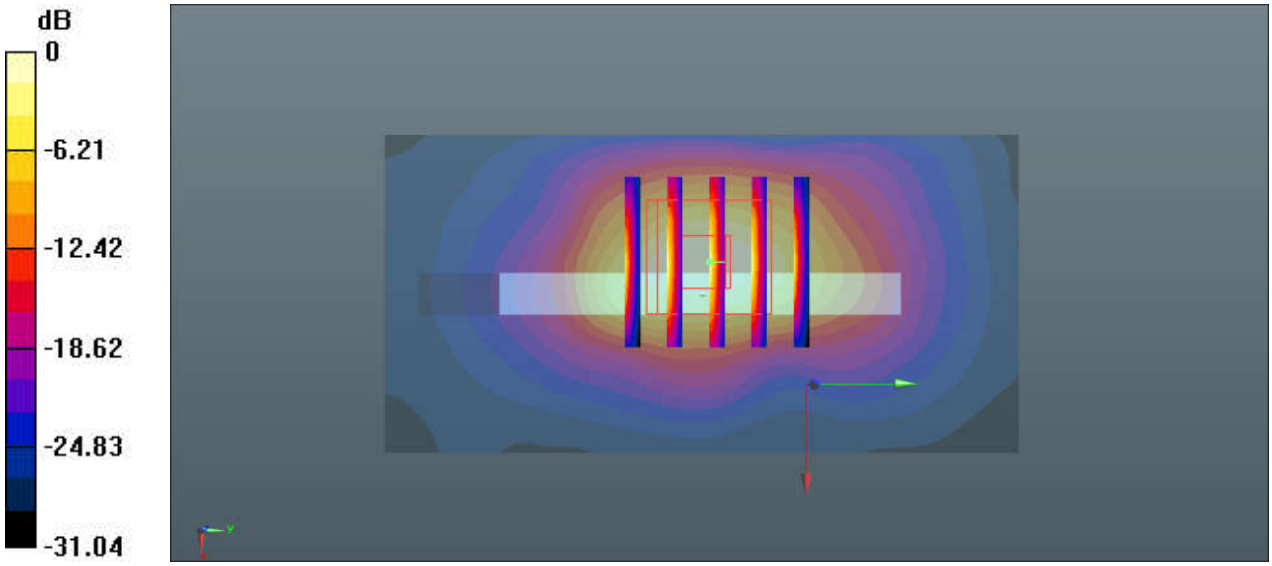
82_LTE Band 66_20M_QPSK_100RB_0offset_Bottom Side_0mm_Ch132322

Communication System: UID 0, LTE-FDD (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1745 MHz; σ = 1.376 S/m; ε_r = 39.72; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.46, 8.46, 8.46); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch132322/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 11.3 W/kg

Ch132322/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 73.81 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 20.5 W/kg
SAR(1 g) = 7.95 W/kg; SAR(10 g) = 3.23 W/kg
Maximum value of SAR (measured) = 16.5 W/kg



0 dB = 11.3 W/kg = 10.53 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.26

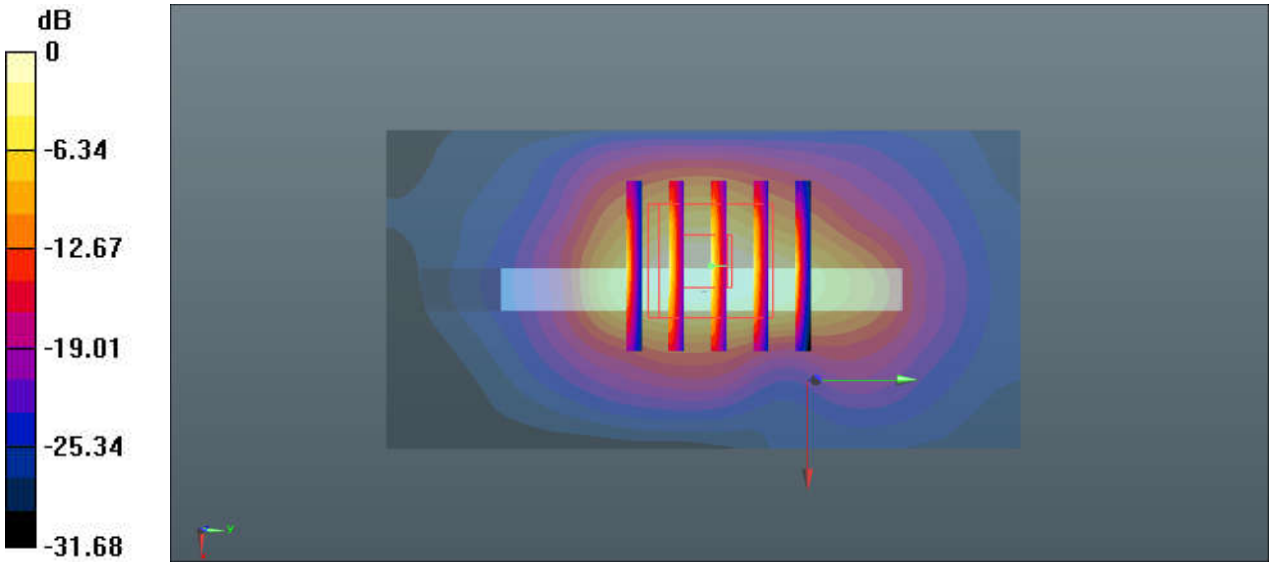
83_LTE Band 25_20M_QPSK_50RB_24offset_Bottom Side_0mm_Ch26590

Communication System: UID 0, LTE-FDD (0); Frequency: 1905 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1905 MHz; σ = 1.431 S/m; ε_r = 38.355; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(8.10, 8.10, 8.10); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch26590/Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 10.8 W/kg

Ch26590/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 82.91 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 18.4 W/kg
SAR(1 g) = 7.2 W/kg; SAR(10 g) = 2.84 W/kg
Maximum value of SAR (measured) = 14.8 W/kg



0 dB = 10.8 W/kg = 10.33 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.29

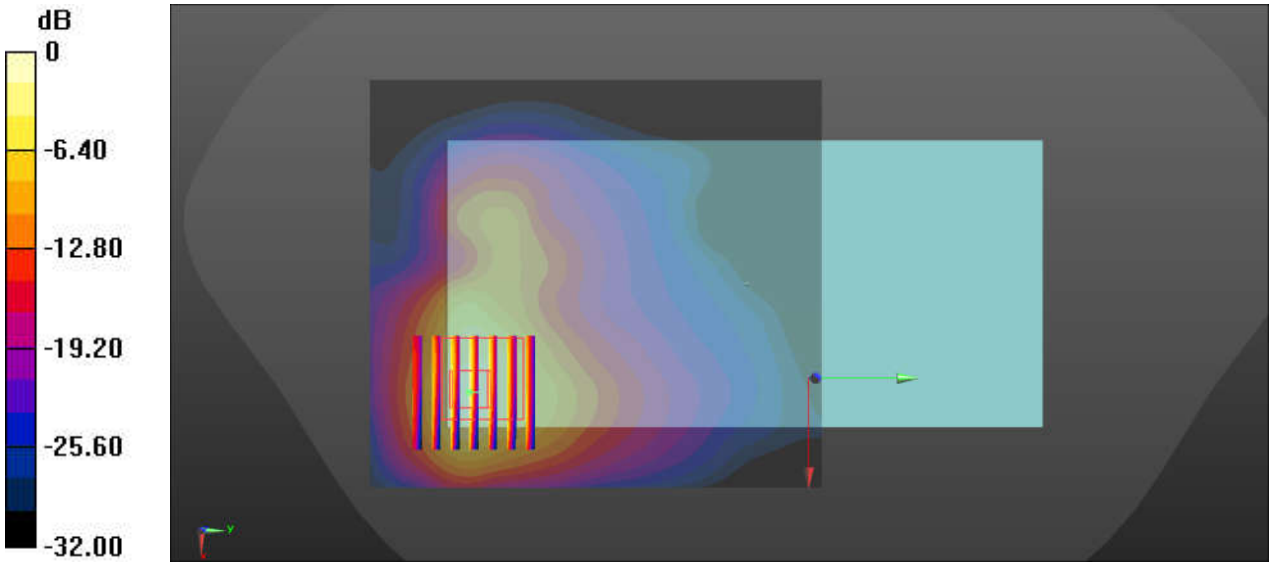
84_LTE Band 30_10M_QPSK_1RB_0offset_Back_0mm_Ch27710

Communication System: UID 0, LTE-FDD (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium: HSL_2300 Medium parameters used: f = 2310 MHz; σ = 1.704 S/m; ε_r = 41.361; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.88 ,7.88 ,7.88); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch27710/Area Scan (91x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 13.7 W/kg

Ch27710/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.255 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 15.6 W/kg
SAR(1 g) = 6.52 W/kg; SAR(10 g) = 2.88 W/kg
Maximum value of SAR (measured) = 12.0 W/kg



0 dB = 13.7 W/kg = 11.37 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.30

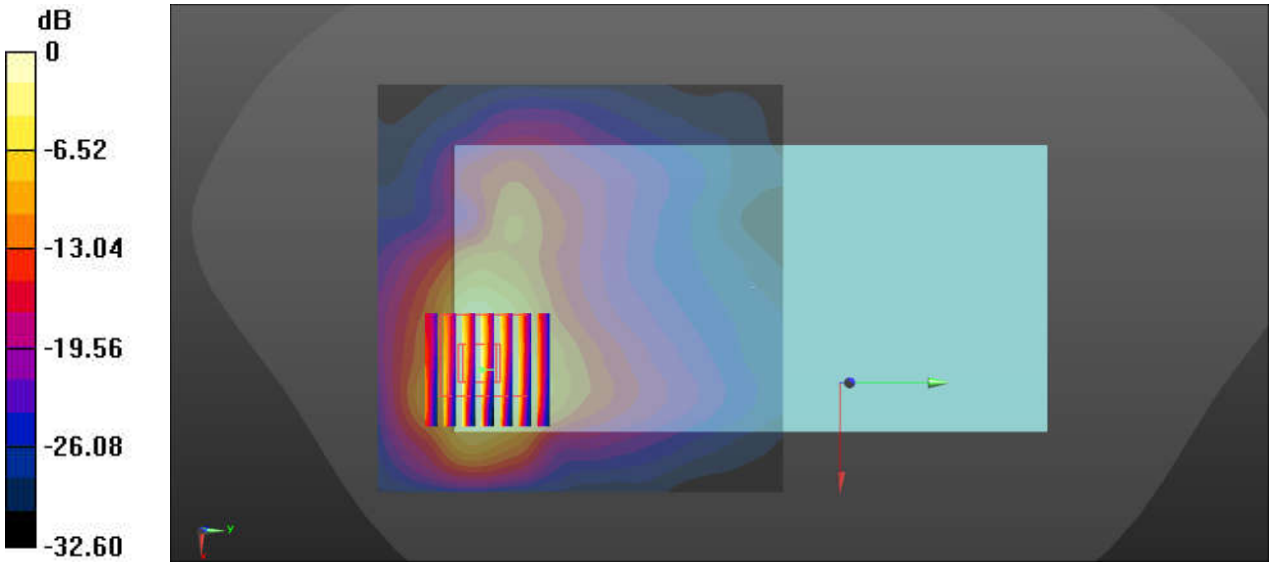
85_LTE Band 7_20M_QPSK_1RB_0offset_Back_0mm_Ch21350

Communication System: UID 0, LTE-FDD (0); Frequency: 2560 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2560 MHz; σ = 1.829 S/m; ε_r = 39.788; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.31 ,7.31 ,7.31); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch21350/Area Scan (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 13.0 W/kg

Ch21350/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.784 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 17.5 W/kg
SAR(1 g) = 7.05 W/kg; SAR(10 g) = 2.9 W/kg
Maximum value of SAR (measured) = 13.5 W/kg



0 dB = 13.0 W/kg = 11.14 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.30

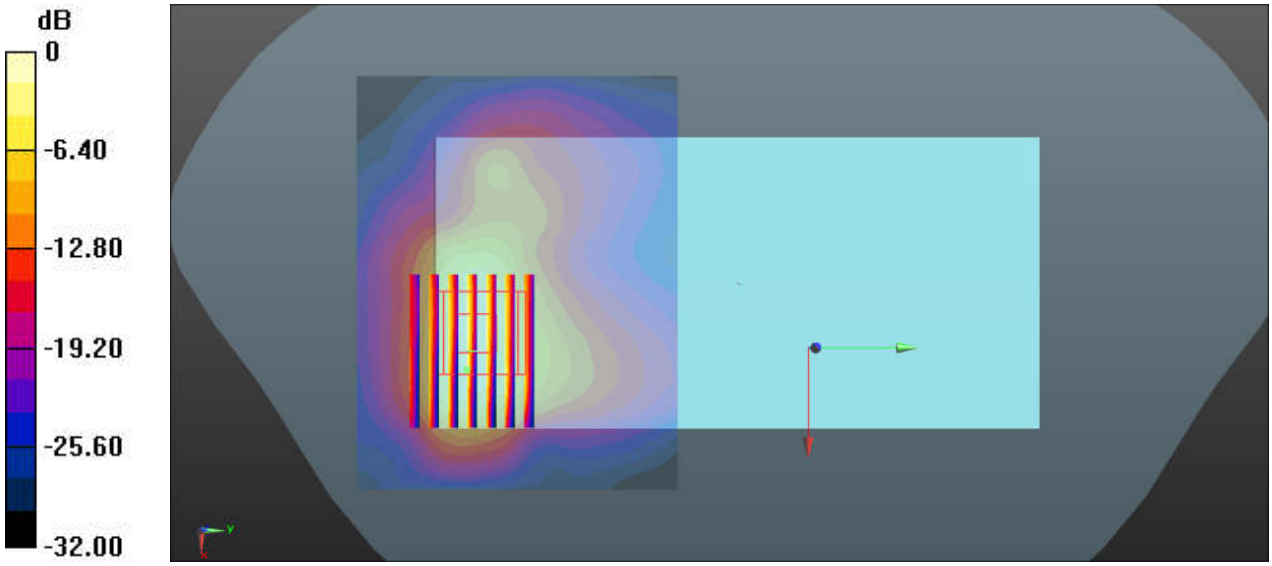
86_LTE Band 41_20M_QPSK_1RB_0offset_Back_0mm_Ch41055

Communication System: UID 0, LTE-TDD (0); Frequency: 2636.5 MHz;Duty Cycle: 1:1.59
Medium: HSL_2600 Medium parameters used: f = 2636.5 MHz; σ = 1.916 S/m; ε_r = 39.515; ρ = 1000kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.31 ,7.31 ,7.31); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch41055/Area Scan (91x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 10.5 W/kg

Ch41055/Zoom Scan (9x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.478 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 16.0 W/kg
SAR(1 g) = 5.97 W/kg; SAR(10 g) = 2.41 W/kg
Maximum value of SAR (measured) = 11.7 W/kg



0 dB = 10.5 W/kg = 10.21 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.30

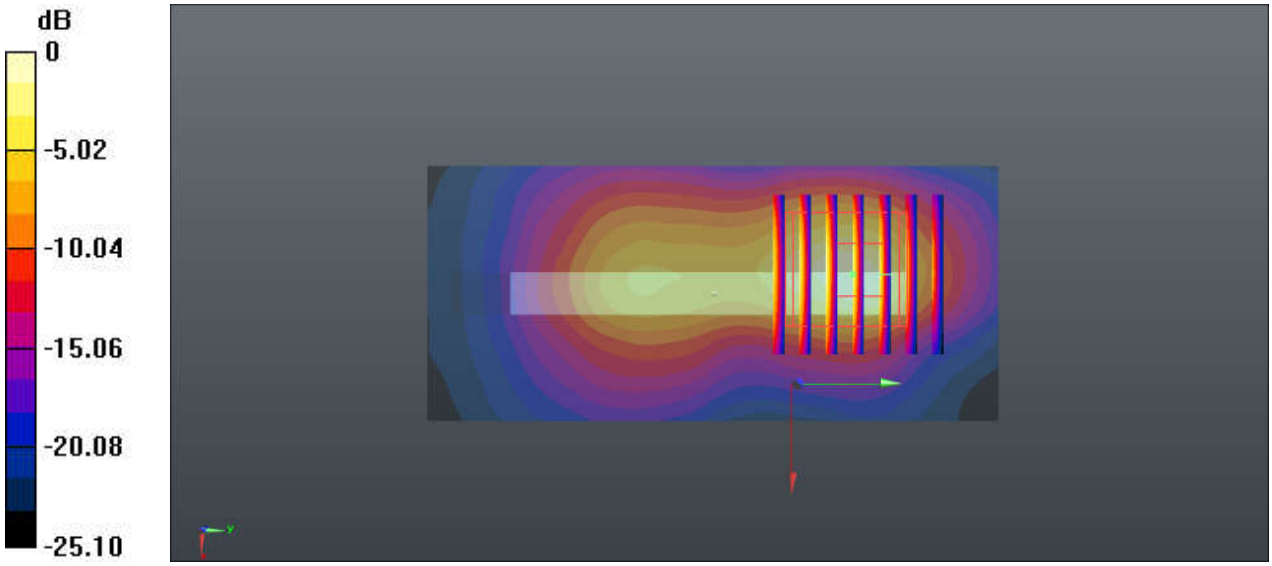
87_LTE Band 41-HPUE_20M_QPSK_1RB_0offset_Bottom Side_0mm_Ch40185

Communication System: UID 0, LTE-HPUE (0); Frequency: 2549.5 MHz;Duty Cycle: 1:2.331
Medium: HSL_2600 Medium parameters used: f = 2549.5 MHz; σ = 1.819 S/m; ε_r = 39.818; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.31 ,7.31 ,7.31); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch40185/Area Scan (41x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 13.7 W/kg

Ch40185/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 45.51 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 24.4 W/kg
SAR(1 g) = 7.31 W/kg; SAR(10 g) = 2.56 W/kg
Maximum value of SAR (measured) = 16.3 W/kg



0 dB = 13.7 W/kg = 11.37 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.3

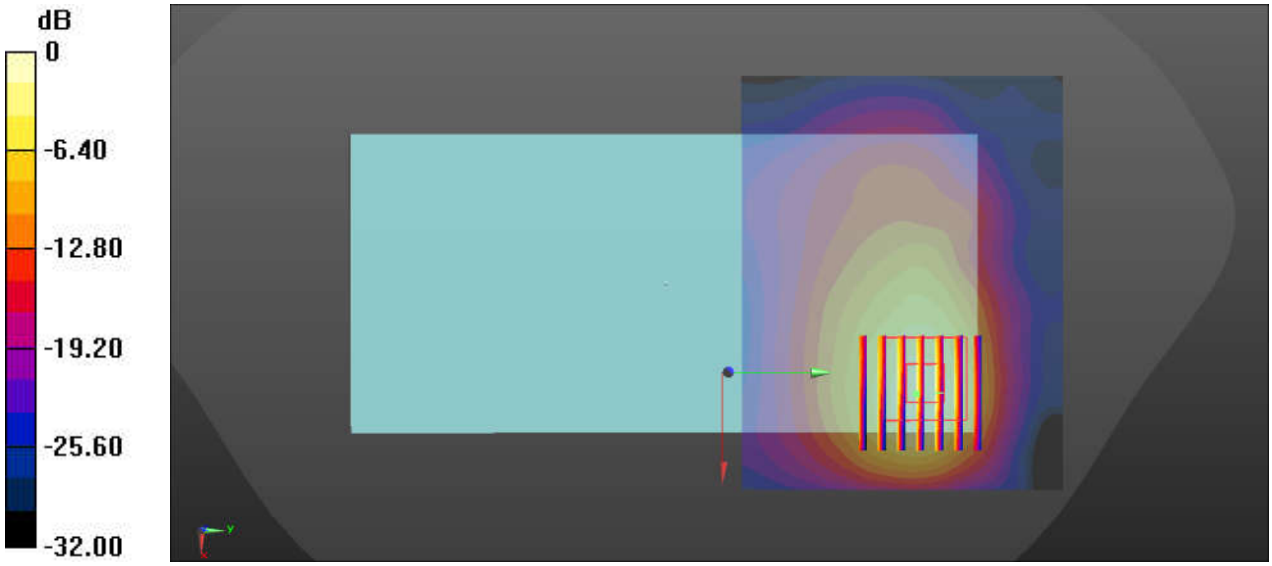
88_WLAN2.4GHz_802.11b 1Mbps_Front_0mm_Ant 1_Ch1

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz;Duty Cycle: 1:1.011
Medium: HSL_2450 Medium parameters used: f = 2412 MHz; σ = 1.715 S/m; ε_r = 40.207; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃； Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(7.50 ,7.50 ,7.50); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1/Area Scan (91x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 5.25 W/kg

Ch1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.5740 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 6.61 W/kg
SAR(1 g) = 3.13 W/kg; SAR(10 g) = 1.4 W/kg
Maximum value of SAR (measured) = 5.17 W/kg



0 dB = 5.25 W/kg = 7.20 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.4

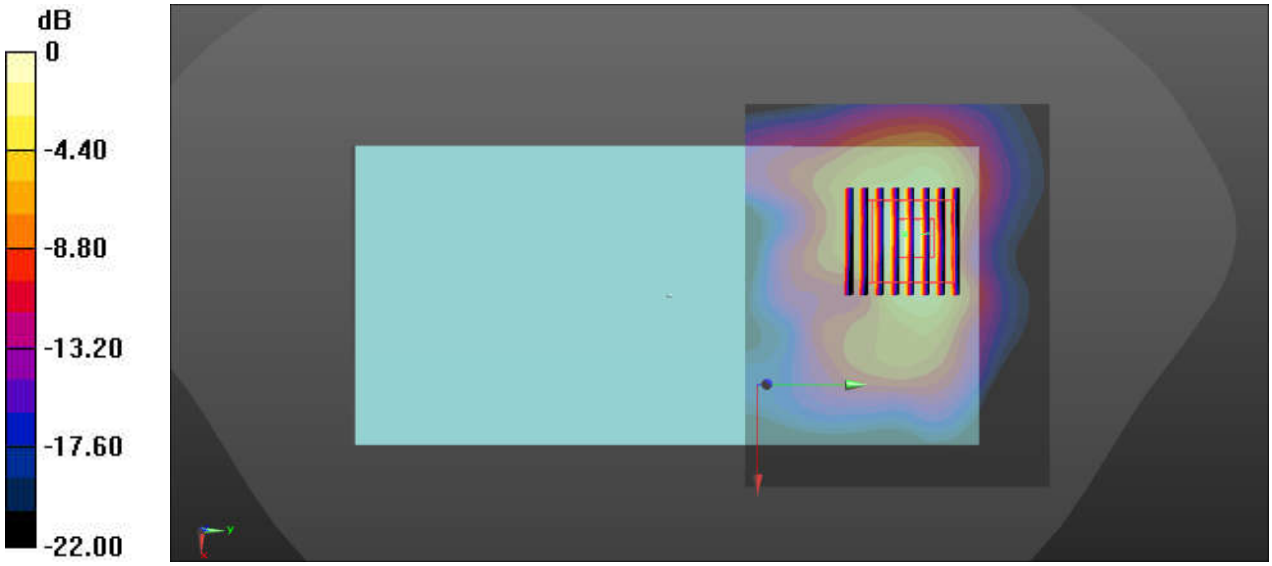
89_WLAN5.2GHz_802.11n-HT40 MCS0_Back_0mm_Ant 1_Ch46

Communication System: UID 0, 802.11n (0); Frequency: 5230 MHz;Duty Cycle: 1:1.038
Medium: HSL_5000 Medium parameters used: f = 5230 MHz; σ = 4.569 S/m; ε_r = 36.45; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(5.19, 5.19, 5.19); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch46/Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.37 W/kg

Ch46/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 21.6 W/kg
SAR(1 g) = 5.12 W/kg; SAR(10 g) = 1.49 W/kg
Maximum value of SAR (measured) = 12.3 W/kg



0 dB = 8.37 W/kg = 9.23 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.4

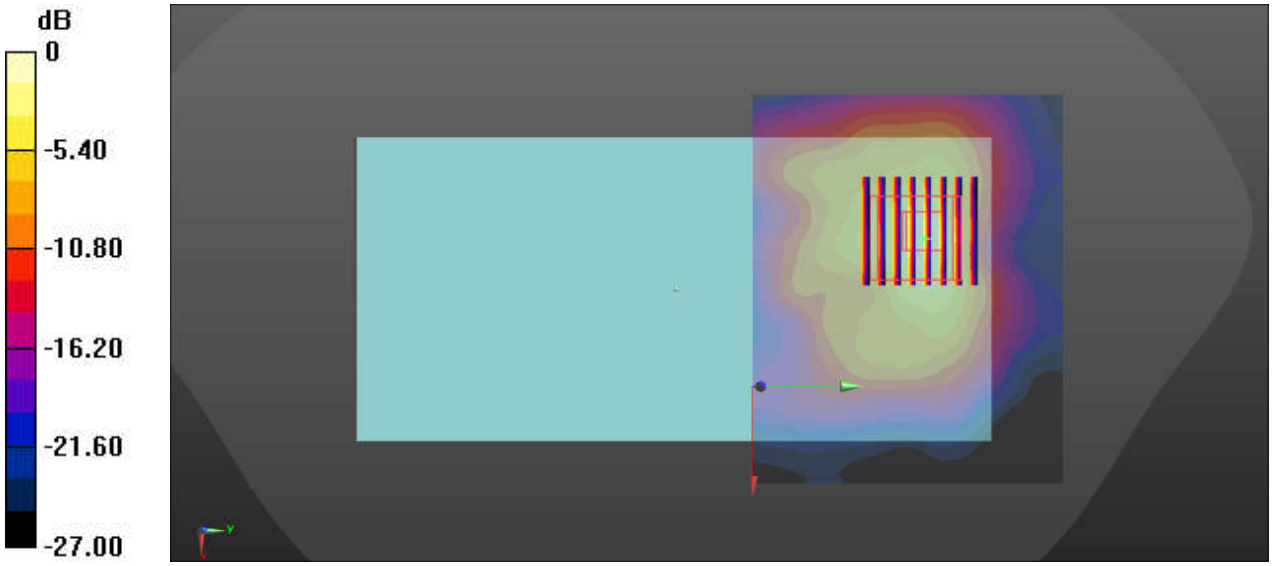
90_WLAN5.3GHz_802.11n-HT40 MCS0_Back_0mm_Ant 1_Ch54

Communication System: UID 0, 802.11n (0); Frequency: 5270 MHz;Duty Cycle: 1:1.038
Medium: HSL_5000 Medium parameters used: f = 5270 MHz; σ = 4.622 S/m; ε_r = 36.391; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(5.19, 5.19, 5.19); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch54/Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.0 W/kg

Ch54/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.455 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 42.6 W/kg
SAR(1 g) = 8.77 W/kg; SAR(10 g) = 2.44 W/kg
Maximum value of SAR (measured) = 22.6 W/kg



0 dB = 15.0 W/kg = 11.76 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.4

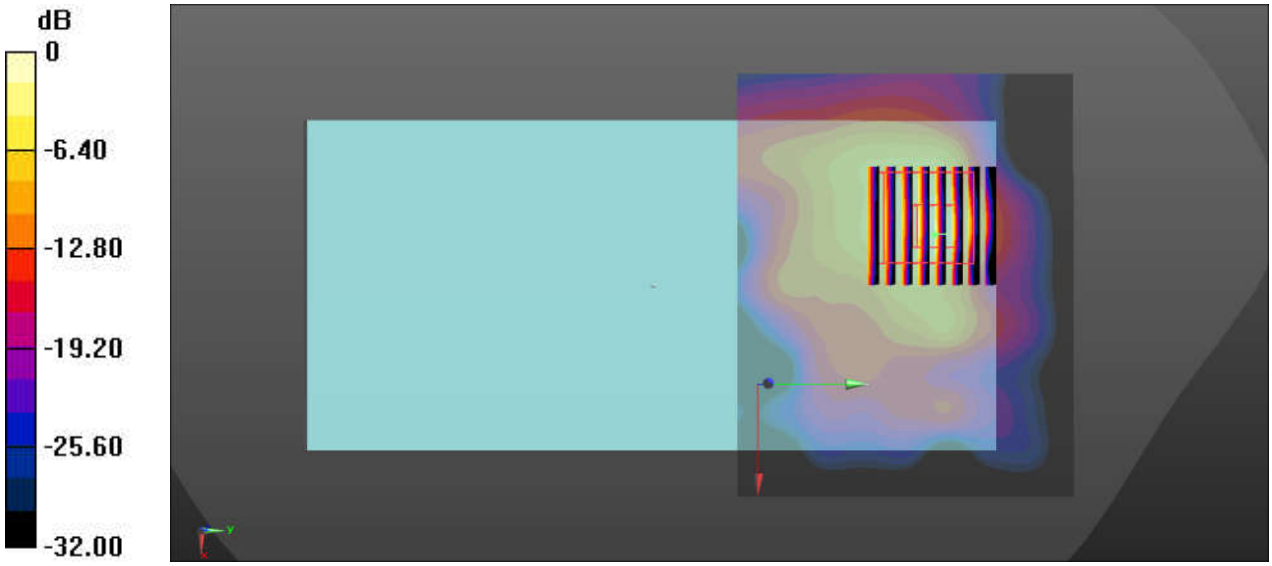
91_WLAN5.5GHz_802.11n-HT40 MCS0_Back_0mm_Ant 1_Ch134

Communication System: UID 0, 802.11n (0); Frequency: 5670 MHz;Duty Cycle: 1:1.038
Medium: HSL_5000 Medium parameters used: f = 5670 MHz; σ = 5.076 S/m; ε_r = 35.722; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(4.92, 4.92, 4.92); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch134/Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 14.8 W/kg

Ch134/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 30.8 W/kg
SAR(1 g) = 5.99 W/kg; SAR(10 g) = 1.9 W/kg
Maximum value of SAR (measured) = 15.3 W/kg



0 dB = 14.8 W/kg = 11.70 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.12.4

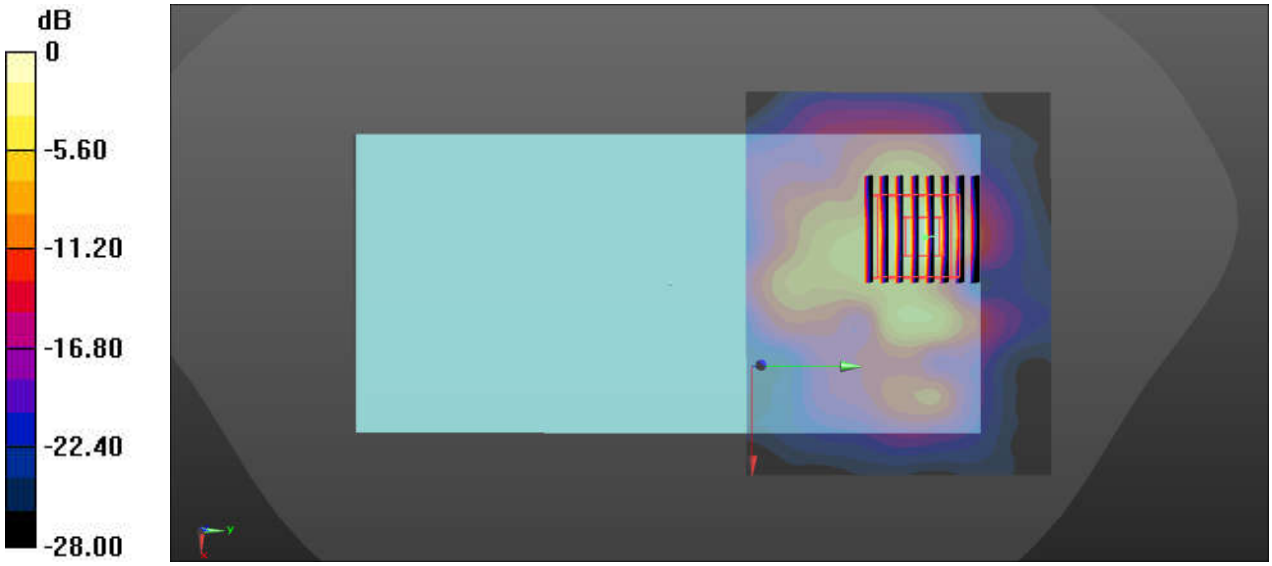
92_WLAN5.8GHz_802.11a 6Mbps_Back_0mm_Ant 1_Ch165

Communication System: UID 0, 802.11a (0); Frequency: 5825 MHz;Duty Cycle: 1:1.018
Medium: HSL_5000 Medium parameters used: f = 5825 MHz; σ = 5.244 S/m; ε_r = 35.46; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3857; ConvF(5.17, 5.17, 5.17); Calibrated: 2019.5.27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1697
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch165/Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 23.0 W/kg

Ch165/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0.9800 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 56.8 W/kg
SAR(1 g) = 9.17 W/kg; SAR(10 g) = 2.49 W/kg
Maximum value of SAR (measured) = 29.1 W/kg



0 dB = 23.0 W/kg = 13.62 dBW/kg

Appendix C. Supplemental Tuner Head & Body SAR Results

The results are shown as follows.

Head SAR

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	0	15	30	45	60	75	90	105	120	135
GSM850	GPRS 2 Tx slots	251	848.8	N/A	N/A	Right Cheek	0mm	0.417	0.492	0.049	0.392	0.346	0.011	0.347	0.204	0.028	0.273	0.045	0.007

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	16	31	46	61	76	91	106	121	136
GSM1900	GPRS 4 Tx slots	512	1850.2	N/A	N/A	Right Cheek	0mm	0.071	0.101	0.02	0.087	0.092	0.026	0.066	0.039	0.039	0.078	0.016	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	2	17	32	47	62	77	92	107	122	137
WCDMA V	RMC 12.2Kbps	4182	836.4	N/A	N/A	Right Cheek	0mm	0.376	0.447	0.079	0.421	0.419	0.087	0.439	0.302	0.084	0.054	0.154	0.066

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	18	33	48	63	78	93	108	123	138
WCDMA IV	RMC 12.2Kbps	1312	1712.4	N/A	N/A	Right Cheek	0mm	0.168	0.231	0.230	0.230	0.087	0.030	0.047	0.221	0.185	0.031	0.019	0.019

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	19	34	49	64	79	94	109	124	139
WCDMA II	RMC 12.2Kbps	9400	1880	N/A	N/A	Right Cheek	0mm	0.105	0.147	0.059	0.053	0.139	0.070	0.053	0.081	0.087	0.044	0.046	0.036

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	20	35	50	65	80	95	110	125	140
CDMA2000 BC10	RC3 SO55	684	823.1	N/A	N/A	Right Cheek	0mm	0.376	0.453	0.238	0.109	0.443	0.199	0.114	0.396	0.351	0.014	0.289	0.139

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	21	36	51	66	81	96	111	126	141
CDMA2000 BC0	RC3 SO55	384	836.52	N/A	N/A	Right Cheek	0mm	0.385	0.479	0.217	0.168	0.008	0.289	0.126	0.055	0.363	0.043	0.006	0.199

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	22	37	52	67	82	97	112	127	142
CDMA2000 BC1	RC3 SO55	25	1851.25	N/A	N/A	Right Cheek	0mm	0.1	0.145	0.058	0.063	0.042	0.032	0.023	0.128	0.090	0.047	0.020	0.014

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	23	38	53	68	83	98	113	128	143
LTE Band 71	QPSK	133322	683	1	0	Right Cheek	0mm	0.205	0.238	0.103	0.093	0.038	0.004	0.040	0.122	0.028	0.011	0.073	0.002

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	24	39	54	69	84	99	114	129	
LTE Band 12	QPSK	23095	707.5	1	0	Right Cheek	0mm	0.201	0.236	0.058	0.170	0.035	0.123	0.031	0.171	0.016	0.022	0.047	

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	25	40	55	70	85	100	115	130	
LTE Band 13	QPSK	23230	782	1	0	Left Cheek	0mm	0.272	0.312	0.263	0.251	0.058	0.022	0.070	0.205	0.305	0.063	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	11	26	41	56	71	86	101	116	131	
LTE Band 14	QPSK	23330	793	1	0	Right Cheek	0mm	0.236	0.277	0.231	0.271	0.076	0.021	0.067	0.247	0.267	0.149	0.047	

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	27	42	57	72	87	102	117	132	
LTE Band 26	QPSK	26865	831.5	1	37	Right Cheek	0mm	0.344	0.417	0.245	0.116	0.268	0.074	0.027	0.408	0.276	0.009	0.170	

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	28	43	58	73	88	103	118	133	
LTE Band 66	QPSK	132072	1720	1	0	Right Cheek	0mm	0.113	0.130	0.072	0.062	0.037	0.030	0.117	0.045	0.035	0.017	0.018	

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	29	44	59	74	89	104	119	134	
LTE Band 25	QPSK	26340	1905	1	0	Left Cheek	0mm	0.103	0.124	0.116	0.113	0.113	0.123	0.071	0.121	0.121	0.042	0.103	

Body SAR

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	0	15	30	45	60	75	90	105	120	135
GSM850	GPRS 2 Tx slots	251	848.8	N/A	N/A	Back	5mm	1.06	1.46	0.160	1.137	1.076	0.041	0.903	0.662	0.089	1.389	0.147	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	1	16	31	46	61	76	91	106	121	136
GSM1900	GPRS 4 Tx slots	810	1909.8	N/A	N/A	Back	5mm	0.927	1.35	0.409	1.143	1.176	0.467	0.985	0.666	0.692	1.066	0.345	0.281

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	17	32	47	62	77	92	107	122	137
WCDMA V	RMC 12.2Kbps	4182	836.4	N/A	N/A	Back	5mm	1.13	1.620	0.293	1.246	1.344	0.303	1.334	1.107	0.305	1.554	0.604	0.222

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	18	33	48	63	78	93	108	123	138
WCDMA IV	RMC 12.2Kbps	1513	1752.6	N/A	N/A	Bottom Side	5mm	1.21	1.910	1.431	1.411	0.755	0.265	0.373	1.563	1.411	0.265	0.170	0.165

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	19	34	49	64	79	94	109	124	139
WCDMA II	RMC 12.2Kbps	9538	1907.6	N/A	N/A	Bottom Side	5mm	1.16	1.640	0.713	0.645	1.587	0.781	0.625	0.955	1.033	0.558	0.529	0.419

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	20	35	50	65	80	95	110	125	140
CDMA2000 BC10	RTAP 153.6Kbps	684	823.1	N/A	N/A	Back	5mm	1.18	1.690	0.720	0.296	1.463	0.775	0.369	1.031	1.103	0.064	1.117	0.557

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	21	36	51	66	81	96	111	126	141
CDMA2000 BC0	RTAP 153.6Kbps	1013	824.7	N/A	N/A	Back	5mm	1.2	2.050	1.288	1.142	0.648	1.486	1.004	0.767	1.662	0.748	0.638	1.215

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	22	37	52	67	82	97	112	127	142
CDMA2000 BC1	RTAP 153.6Kbps	25	1851.25	N/A	N/A	Bottom Side	5mm	1.13	1.49	0.748	0.807	0.706	0.602	0.384	1.348	1.023	0.754	0.437	0.26

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	23	38	53	68	83	98	113	128	143
LTE Band 71	QPSK	133322	683	1	0	Back	5mm	0.588	1.050	0.535	0.471	0.134	0.038	0.198	0.673	0.152	0.063	0.339	0.025

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	24	39	54	69	84	99	114	129	
LTE Band 12	QPSK	23095	707.5	1	0	Back	5mm	0.818	1.150	0.392	0.848	0.152	0.388	0.165	0.842	0.111	0.113	0.179	

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	25	40	55	70	85	100	115	130	
LTE Band 13	QPSK	23230	782	1	0	Back	5mm	0.805	1.140	0.744	0.986	0.274	0.088	0.404	0.863	0.890	0.341	0.213	

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	26	41	56	71	86	101	116	131	
LTE Band 14	QPSK	23330	793	1	0	Right Side	5mm	0.698	0.929	0.632	0.812	0.152	0.057	0.164	0.648	0.682	0.420	0.105	

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	27	42	57	72	87	102	117	132	
LTE Band 26	QPSK	26865	831.5	1	37	Back+Headset	5mm	1.03	1.590	0.546	0.236	1.100	0.327	0.117	1.018	0.816	0.044	0.834	

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	28	43	58	73	88	103	118	133	
LTE Band 66	QPSK	132572	1770	50	0	Bottom Side	5mm	1.23	2.290	1.173	0.944	0.626	0.508	1.400	0.815	0.619	0.219	0.333	

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	29	44	59	74	89	104	119	134	
LTE Band 25	QPSK	26140	1860	100	0	Bottom Side	5mm	1.08	1.870	1.664	1.657	1.516	1.299	1.130	1.627	1.439	0.668	1.058	

Verified single SAR >1.2W/Kg

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										0.160	0.249	0.346	0.685	0.810	0.821	0.795	0.757	0.568	0.262	0.522	0.848	0.981	1.131	1.152	1.137	1.095	0.870	0.184	0.293	0.393
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										0.752	0.898	0.909	0.874	0.838	0.653	0.307	0.591	1.035	1.076	1.231	1.252	1.226	1.178	0.965	0.030	0.040	0.053	0.186	0.452	0.671
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										1.140	1.334	0.704	0.041	0.077	0.172	0.250	0.526	0.711	1.076	1.205	1.031	0.033	0.044	0.060	0.203	0.471	0.677	0.903	1.281	0.794
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
GSM850	GPRS 2 Tx slots	251	848.8	N/A	N/A	Back	5mm	1.06	1.46	0.047	0.089	0.196	0.279	0.561	0.721	0.734	1.127	0.920	0.076	0.114	0.174	0.662	1.050	1.141	1.142	1.069	0.634	0.110	0.252	0.472
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										0.840	1.273	1.381	1.422	1.382	0.924	0.089	0.133	0.198	0.708	1.142	1.223	1.239	1.177	0.733	0.129	0.292	0.679	0.917	1.335	1.456
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										1.389	1.438	1.029	0.026	0.028	0.037	0.111	0.249	0.374	0.718	0.957	0.755	0.027	0.050	0.104	0.147	0.306	0.423	0.688	0.845	0.869
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.025	0.030	0.040	0.122	0.268	0.390	0.699	0.709	0.914	0.034	0.057	0.118	0.166	0.285	0.446	0.680	0.798	0.827			

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										0.390	0.409	0.422	0.449	0.465	0.465	0.460	0.471	0.476	0.990	1.030	1.045	1.051	1.089	1.113	1.126	1.143	1.136	0.441	0.460	0.475
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										0.502	0.517	0.522	0.529	0.530	0.535	1.142	1.173	1.174	1.162	1.176	1.175	1.174	1.179	1.168	0.499	0.628	0.732	0.940	1.010	1.024
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										1.057	1.064	1.051	0.427	0.467	0.494	0.499	0.513	0.513	0.519	0.523	0.524	0.480	0.591	0.681	0.871	0.966	0.952	0.992	0.985	1.012
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
GSM1900	GPRS 4 Tx slots	810	1909.8	N/A	N/A	Back	5mm	0.927	1.35	0.410	0.403	0.407	0.398	0.408	0.404	0.396	0.392	0.398	0.614	0.628	0.650	0.659	0.666	0.668	0.661	0.644	0.643	1.099	1.116	1.135
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										1.148	1.154	1.182	1.160	1.149	1.151	0.650	0.692	0.692	0.707	0.716	0.711	0.714	0.714	0.713	0.706	1.103	1.073	1.095	1.066	1.064
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										1.089	1.066	1.059	0.289	0.374	0.445	0.634	0.726	0.751	0.795	0.838	0.897	0.289	0.314	0.334	0.338	0.345	0.350	0.347	0.349	0.361
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.287	0.353	0.414	0.571	0.649	0.662	0.712	0.728	0.780	0.279	0.281	0.277	0.279	0.276	0.278	0.277	0.276	0.276			

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										0.171	0.230	0.293	0.541	0.686	0.735	0.804	0.833	0.800	0.293	0.493	0.750	0.859	1.067	1.143	1.246	1.262	1.246	0.204	0.276	0.349
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										0.631	0.793	0.851	0.941	0.978	0.950	0.377	0.621	0.990	1.040	1.263	1.344	1.419	1.434	1.428	0.050	0.069	0.094	0.301	0.631	0.852
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										1.300	1.497	1.190	0.081	0.150	0.303	0.415	0.745	0.929	1.248	1.394	1.440	0.057	0.079	0.109	0.338	0.675	0.889	1.295	1.482	1.334
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
WCDMA V	RMC 12.2Kbps	4182	836.4	N/A	N/A	Back	5mm	1.13	1.62	0.095	0.181	0.361	0.479	0.802	0.961	1.216	1.324	1.376	0.125	0.182	0.258	0.694	1.024	1.107	1.199	1.199	0.957	0.203	0.409	0.653
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										0.959	1.331	1.441	1.560	1.583	1.421	0.149	0.220	0.305	0.787	1.135	1.241	1.342	1.348	1.129	0.255	0.503	0.897	1.096	1.450	1.550
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										1.561	1.600	1.554	0.038	0.047	0.061	0.182	0.378	0.531	0.898	1.139	1.280	0.051	0.091	0.186	0.256	0.468	0.604	0.870	1.018	1.312
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.039	0.052	0.070	0.206	0.411	0.562	0.895	1.108	1.355	0.061	0.112	0.222	0.298	0.516	0.643	0.862	0.977	1.189			

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										1.272	1.32	1.36	1.431	1.466	1.474	1.49	1.5	1.517	1.312	1.216	1.151	1.133	1.095	1.089	1.07	1.061	1.044	1.411	1.451	1.472
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										1.517	1.537	1.541	1.550	1.557	1.565	0.951	0.874	0.807	0.801	0.775	0.771	0.755	0.748	0.735	0.435	0.465	0.487	0.533	0.556	0.559
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										0.570	0.570	0.584	0.389	0.315	0.275	0.265	0.246	0.244	0.235	0.231	0.224	0.418	0.434	0.442	0.457	0.464	0.466	0.470	0.471	0.476
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
WCDMA IV	RMC 12.2Kbps	1513	1752.6	N/A	N/A	Bottom Side	5mm	1.21	1.91	0.373	0.277	0.231	0.220	0.200	0.197	0.187	0.180	0.174	1.348	1.398	1.444	1.596	1.541	1.550	1.563	1.572	1.588	0.970	0.862	0.807
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										0.770	0.738	0.734	0.720	0.712	0.694	1.336	1.362	1.378	1.411	1.421	1.422	1.432	1.433	1.440	0.767	0.655	0.592	0.571	0.541	0.537
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										0.524	0.516	0.499	0.265	0.280	0.292	0.317	0.321	0.331	0.339	0.343	0.353	0.288	0.227	0.203	0.190	0.181	0.174	0.170	0.165	0.159
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.262	0.270	0.283	0.293	0.287	0.288	0.292	0.291	0.296	0.294	0.214	0.174	0.165	0.149	0.147	0.139	0.139	0.129			

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										0.570	0.605	0.633	0.685	0.713	0.712	0.727	0.728	0.741	1.406	0.481	1.532	1.546	1.569	1.570	0.159	1.591	1.605	0.630	0.645	0.697
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										0.739	0.772	0.782	0.790	0.798	0.807	1.636	1.633	1.588	0.684	1.588	1.589	1.591	1.587	1.589	0.756	0.934	1.070	1.361	1.475	1.489
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										1.530	1.563	1.581	0.671	0.724	0.755	0.764	0.781	0.786	0.792	0.801	0.803	0.728	0.886	1.002	1.280	1.369	1.386	1.431	1.446	1.486
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
WCDMA II	RMC 12.2Kbps	9538	1907.6	N/A	N/A	Bottom Side	5mm	1.16	1.64	0.628	0.625	0.621	0.614	0.610	0.609	0.605	0.623	0.602	0.805	0.854	0.883	0.931	0.945	0.951	0.954	0.955	0.958	1.502	1.571	1.607
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										1.621	1.640	1.631	1.634	1.568	1.638	0.883	0.928	0.961	1.012	1.033	1.031	1.038	1.039	1.040	1.542	1.540	1.535	1.528	1.530	1.527
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										1.523	1.520	1.514	0.452	0.558	0.656	0.916	1.064	1.081	1.161	1.201	1.282	0.441	0.472	0.499	0.503	0.516	0.519	0.526	0.529	0.541
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.436	0.534	0.619	0.836	0.892	0.969	1.033	1.068	1.136	0.436	0.425	0.428	0.424	0.419	0.422	0.421	0.421	0.421			

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										0.126	0.177	0.236	0.517	0.669	0.720	0.788	0.814	0.828	0.247	0.442	0.745	0.856	1.057	1.122	1.211	1.246	1.308	0.164	0.225	0.296
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										0.631	0.805	0.864	0.943	0.972	1.005	0.333	0.580	0.990	1.036	1.236	1.300	1.383	1.418	1.463	0.054	0.071	0.095	0.272	0.527	0.695
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										1.035	1.215	1.297	0.089	0.161	0.303	0.398	0.646	0.775	0.998	1.107	1.314	0.062	0.084	0.113	0.314	0.574	0.733	1.037	1.197	1.371
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
CDMA2000 BC10	RTAP 153.6Kbps	684	823.1	N/A	N/A	Back	5mm	1.18	1.69	0.114	0.204	0.369	0.467	0.700	0.804	0.965	1.040	1.154	0.102	0.145	0.198	0.523	0.863	0.971	1.099	1.138	1.031	0.183	0.345	0.535
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										0.797	1.153	1.266	1.408	1.464	1.470	0.126	0.178	0.239	0.616	0.985	1.103	1.250	1.300	1.233	0.241	0.447	0.782	0.962	1.288	1.389
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										1.505	1.552	1.550	0.042	0.051	0.064	0.174	0.333	0.449	0.715	0.892	1.337	0.059	0.103	0.194	0.255	0.424	0.524	0.704	0.803	1.117
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.039	0.054	0.073	0.199	0.366	0.481	0.719	0.871	1.311	0.074	0.130	0.237	0.303	0.470	0.557	0.678	0.766	0.949			

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										0.729	0.779	0.833	1.054	1.187	1.230	1.288	1.306	1.321	0.847	1.024	1.251	1.349	1.522	1.579	1.661	1.690	1.743	0.767	0.828	0.886
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										1.142	1.290	1.359	1.422	1.451	1.476	0.934	1.137	1.445	1.488	1.658	1.716	1.821	1.848	1.893	0.648	0.662	0.683	0.841	1.058	1.207
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										1.504	1.668	1.708	0.677	0.740	0.866	0.947	1.171	1.286	1.486	1.584	1.763	0.655	0.673	0.698	0.873	1.103	1.244	1.513	1.651	1.789
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
CDMA2000 BC0	RTAP 153.6Kbps	1013	824.7	N/A	N/A	Back	5mm	1.2	2.05	0.696	0.775	0.918	1.004	1.211	1.299	1.455	1.520	1.625	0.694	0.734	0.786	1.094	1.341	1.433	1.543	1.575	1.470	0.767	0.922	1.104
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										1.326	1.595	1.689	1.812	1.861	1.845	0.716	0.764	0.826	1.176	1.441	1.540	1.662	1.695	1.636	0.821	1.012	1.307	1.445	1.700	1.777
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										1.885	1.917	1.909	0.635	0.643	0.655	0.748	0.887	0.988	1.219	1.375	1.733	0.650	0.689	0.745	0.822	0.972	1.061	1.211	1.299	1.592
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.638	0.649	0.664	0.773	0.912	1.019	1.233	1.347	1.709	0.663	0.710	0.803	0.861	1.009	1.085	1.215	1.276	1.440			

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										0.561	0.622	0.683	0.709	0.711	0.726	0.737	0.748	0.750	1.418	1.434	1.446	1.440	1.444	1.443	1.450	1.448	1.441	0.639	0.677	0.708
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										0.783	0.807	0.808	0.820	0.821	0.835	1.470	1.441	1.400	1.395	1.375	1.375	1.366	1.363	1.342	0.628	0.706	0.816	1.008	1.037	1.045
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										1.088	1.100	1.136	0.631	0.619	0.611	0.609	0.605	0.606	0.603	0.602	0.599	0.674	0.741	0.793	0.895	0.951	0.960	0.982	0.997	1.022
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
CDMA2000 BC1	RC3 SO32 (F+SCH)	25	1851.25	N/A	N/A	Back	5mm	1	1.49	0.488	0.438	0.407	0.399	0.384	0.381	0.374	0.370	0.362	0.812	0.845	0.876	0.921	0.943	0.947	0.953	0.962	0.968	1.360	1.348	1.356
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										1.325	1.322	1.323	1.321	1.315	1.320	0.883	0.917	0.928	0.987	1.006	1.009	1.020	1.023	1.029	1.240	1.217	1.140	1.127	1.106	1.103
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										1.057	1.053	1.037	0.505	0.555	0.595	0.701	0.754	0.762	0.797	0.809	0.851	0.357	0.347	0.388	0.386	0.381	0.367	0.332	0.330	0.329
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.394	0.437	0.413	0.557	0.591	0.597	0.624	0.628	0.664	0.354	0.315	0.290	0.284	0.271	0.269	0.263	0.260	0.255			

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										0.121	0.160	0.203	0.362	0.453	0.485	0.534	0.555	0.620	0.193	0.323	0.480	0.546	0.667	0.710	0.772	0.798	0.881	0.142	0.192	0.241
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										0.422	0.523	0.558	0.613	0.636	0.708	0.236	0.387	0.608	0.637	0.767	0.811	0.877	0.903	0.985	0.045	0.063	0.088	0.290	0.601	0.792
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										1.100	1.187	0.849	0.067	0.134	0.286	0.394	0.704	0.859	1.076	1.150	0.977	0.053	0.073	0.102	0.327	0.644	0.820	1.103	1.195	0.923
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
LTE B26	QPSK	26865	831.5	1	37	Back+headset	5mm	1.03	1.59	0.079	0.157	0.329	0.445	0.747	0.880	1.052	1.100	0.949	0.117	0.174	0.237	0.517	0.679	0.721	0.763	0.771	0.715	0.178	0.353	0.525
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										0.720	0.913	0.962	1.018	1.030	0.985	0.137	0.203	0.274	0.586	0.762	0.809	0.857	0.865	0.815	0.212	0.417	0.693	0.816	1.009	1.060
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										1.112	1.121	1.076	0.033	0.043	0.057	0.178	0.374	0.516	0.829	0.995	0.887	0.044	0.083	0.174	0.243	0.456	0.587	0.808	0.915	0.913
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.035	0.048	0.065	0.200	0.406	0.548	0.834	0.974	0.925	0.050	0.096	0.202	0.279	0.496	0.618	0.804	0.882	0.852			

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										0.822	0.863	0.893	0.931	0.978	0.978	0.999	1.000	1.019	1.598	1.633	1.663	1.665	1.665	1.664	1.671	1.680	1.689	0.834	0.867	0.897
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										0.950	0.982	0.982	0.999	1.002	1.089	1.706	1.679	1.657	1.654	1.651	1.650	1.640	1.633	1.621	0.918	1.026	1.116	1.305	1.400	1.406
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										1.447	1.472	1.516	0.851	0.844	0.838	0.835	0.831	0.831	0.830	0.829	0.828	0.894	0.989	1.068	1.218	1.290	1.299	1.343	1.365	1.398
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
LTE B25	QPSK	26140	1860	100	0	Bottom Side	5mm	1.08	1.87	0.819	0.770	0.742	0.734	0.721	0.720	0.711	0.707	0.700	1.051	1.096	1.130	1.200	1.220	1.225	1.236	1.250	1.251	1.603	1.615	1.628
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										1.622	1.617	1.617	1.620	1.622	1.627	1.134	1.179	1.204	1.273	1.299	1.305	1.314	1.326	1.336	1.557	1.513	1.468	1.470	1.440	1.439
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										1.428	1.426	1.422	0.683	0.754	0.807	0.960	1.034	1.052	1.104	1.122	1.182	0.678	0.673	0.668	0.667	0.665	0.667	0.665	0.664	0.666
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.670	0.726	0.812	0.893	0.951	0.965	0.997	1.015	1.058	0.672	0.638	0.620	0.610	0.598	0.597	0.591	0.587	0.583			

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	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
										1.179	1.220	1.261	1.339	1.368	1.372	1.389	1.399	1.421	1.365	1.285	1.226	1.209	1.173	1.167	1.154	1.144	1.123	1.316	1.365	1.395
										21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
										1.449	1.450	1.474	1.486	1.489	1.500	1.024	0.944	0.874	0.869	0.838	0.833	0.818	0.813	0.797	0.451	0.488	0.513	0.570	0.571	0.600
										42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62
										0.615	0.626	0.644	0.407	0.337	0.298	0.288	0.270	0.267	0.258	0.254	0.245	0.434	0.455	0.470	0.497	0.508	0.510	0.516	0.519	0.528
										63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
LTE B66	QPSK	132572	1770	50	0	Bottom Side	5mm	1.23	1.78	0.392	0.297	0.250	0.238	0.217	0.215	0.205	0.200	0.191	1.330	1.400	1.456	1.536	1.553	1.563	1.588	1.600	1.605	1.084	0.971	0.920
										84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
										0.885	0.848	0.845	0.827	0.815	0.800	1.356	1.405	1.437	1.454	1.506	1.510	1.518	1.514	0.850	0.742	0.675	0.656	0.623	0.619	0.600
										105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
										0.591	0.576	0.281	0.302	0.318	0.354	0.372	0.376	0.386	0.360	0.406	0.303	0.249	0.219	0.218	0.210	0.196	0.195	0.188	0.185	0.180
										126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143			
										0.278	0.292	0.301	0.317	0.326	0.328	0.332	0.333	0.342	0.310	0.231	0.191	0.181	0.165	0.163	0.155	0.151	0.144			

Appendix D. DASY Calibration Certificate

The DASY calibration certificates are shown as follows.

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中国认可
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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	林皓
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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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)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.4Ω- 2.59jΩ
Return Loss	- 29.3dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	51.6Ω- 3.86jΩ
Return Loss	- 27.7dB

General Antenna Parameters and Design

Electrical Delay (one direction)	0.898 ns

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

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

Additional EUT Data

Manufactured by	SPEAG

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DASY5 Validation Report for Head TSL Date: 03.26.2019

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1087

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

Medium parameters used: f = 750 MHz; σ = 0.903 S/m; ε_r = 43.01; ρ = 1000 kg/m3

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(10.03, 10.03, 10.03) @ 750 MHz; Calibrated: 1/31/2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2/6/2019
- Phantom: MFP_V5.1C ; Type: QD 000 P51CA; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

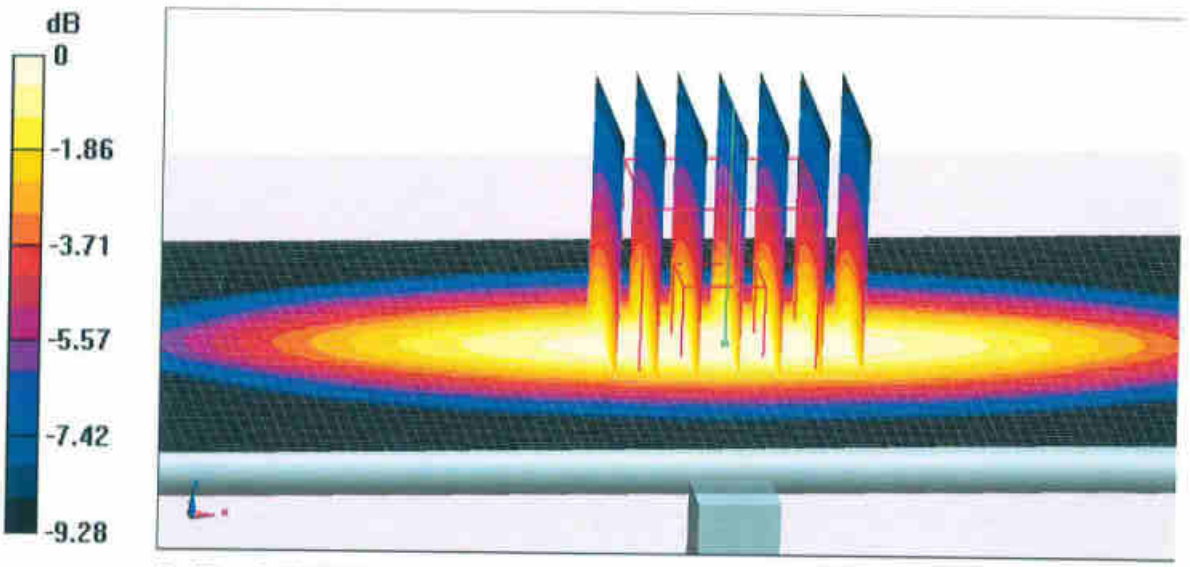
Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 55.05 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.00 W/kg

SAR(1 g) = 2.1 W/kg; SAR(10 g) = 1.42 W/kg

Maximum value of SAR (measured) = 2.72 W/kg



0 dB = 2.72 W/kg = 4.35 dBW/kg

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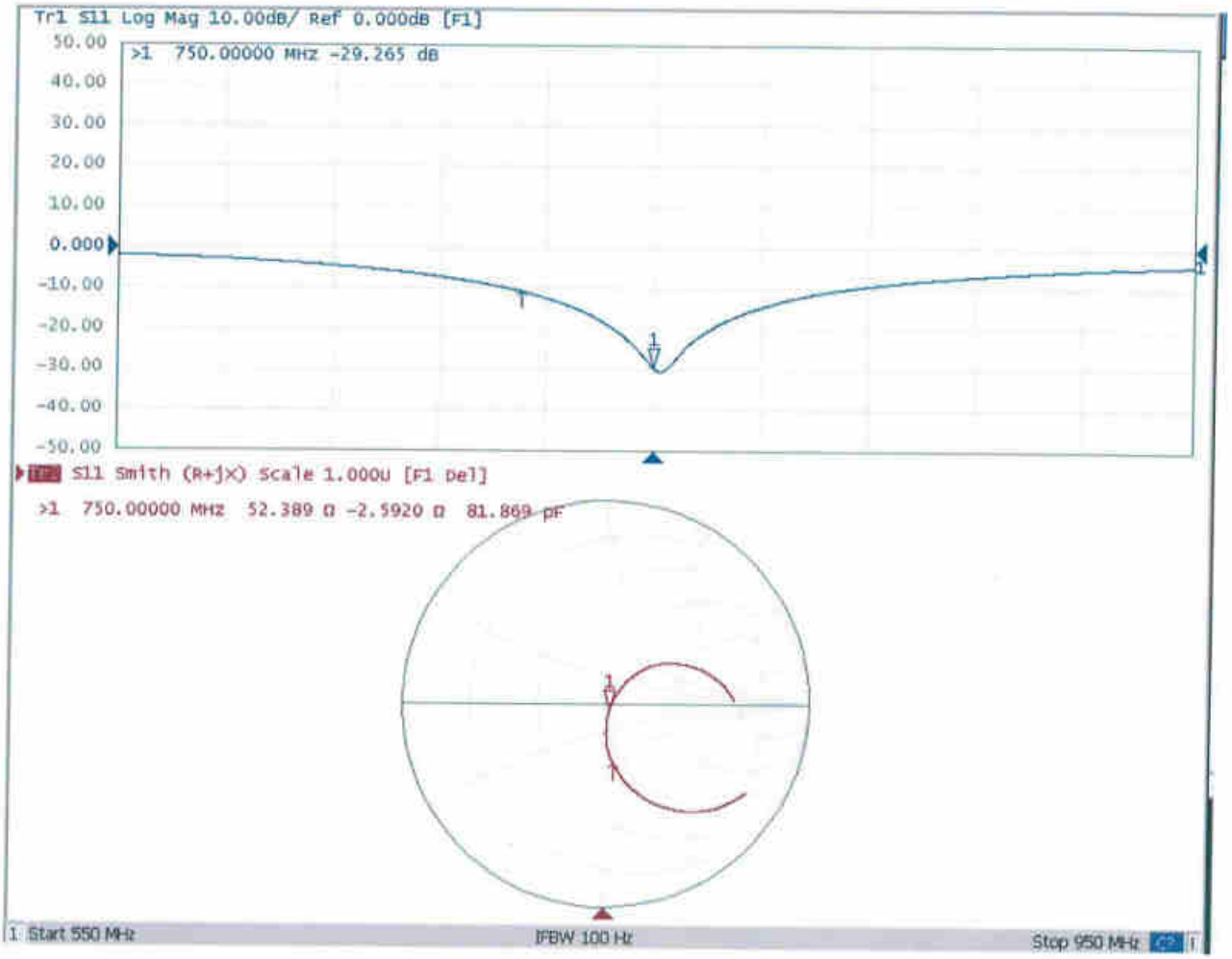
Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL Date: 03.26.2019

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1087

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

Medium parameters used: f = 750 MHz; σ = 0.935 S/m; ε_r = 56.85; ρ = 1000 kg/m3

Phantom section: Center Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(9.85, 9.85, 9.85) @ 750 MHz; Calibrated: 1/31/2019
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1331; Calibrated: 2/6/2019
- Phantom: MFP_V5.1C ; Type: QD 000 P51CA; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

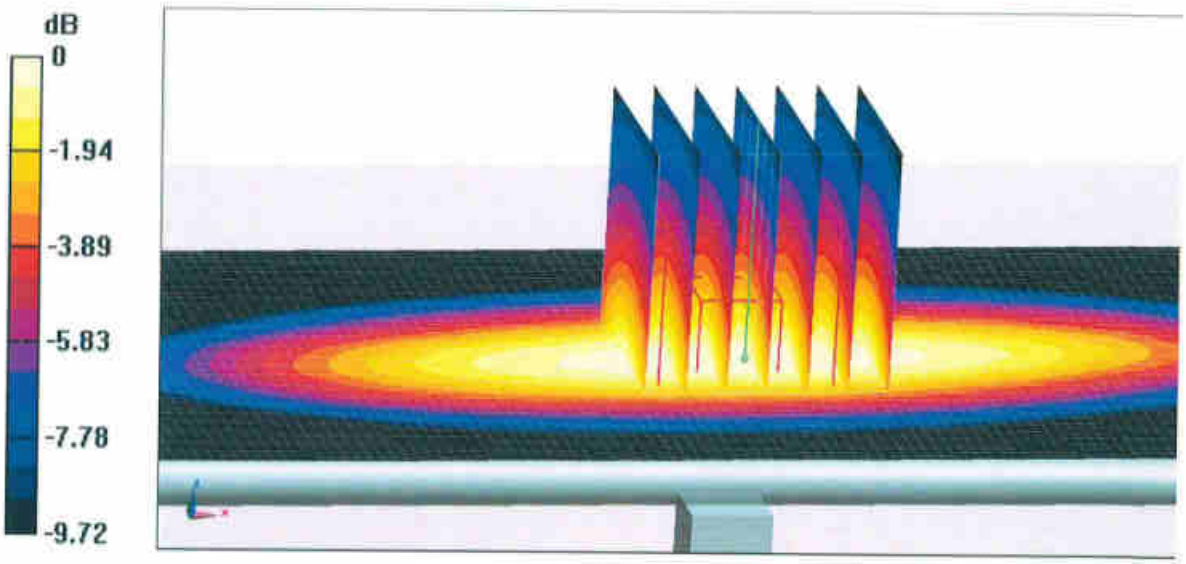
Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 53.71 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.08 W/kg

SAR(1 g) = 2.09 W/kg; SAR(10 g) = 1.41 W/kg

Maximum value of SAR (measured) = 2.75 W/kg



0 dB = 2.75 W/kg = 4.39 dBW/kg

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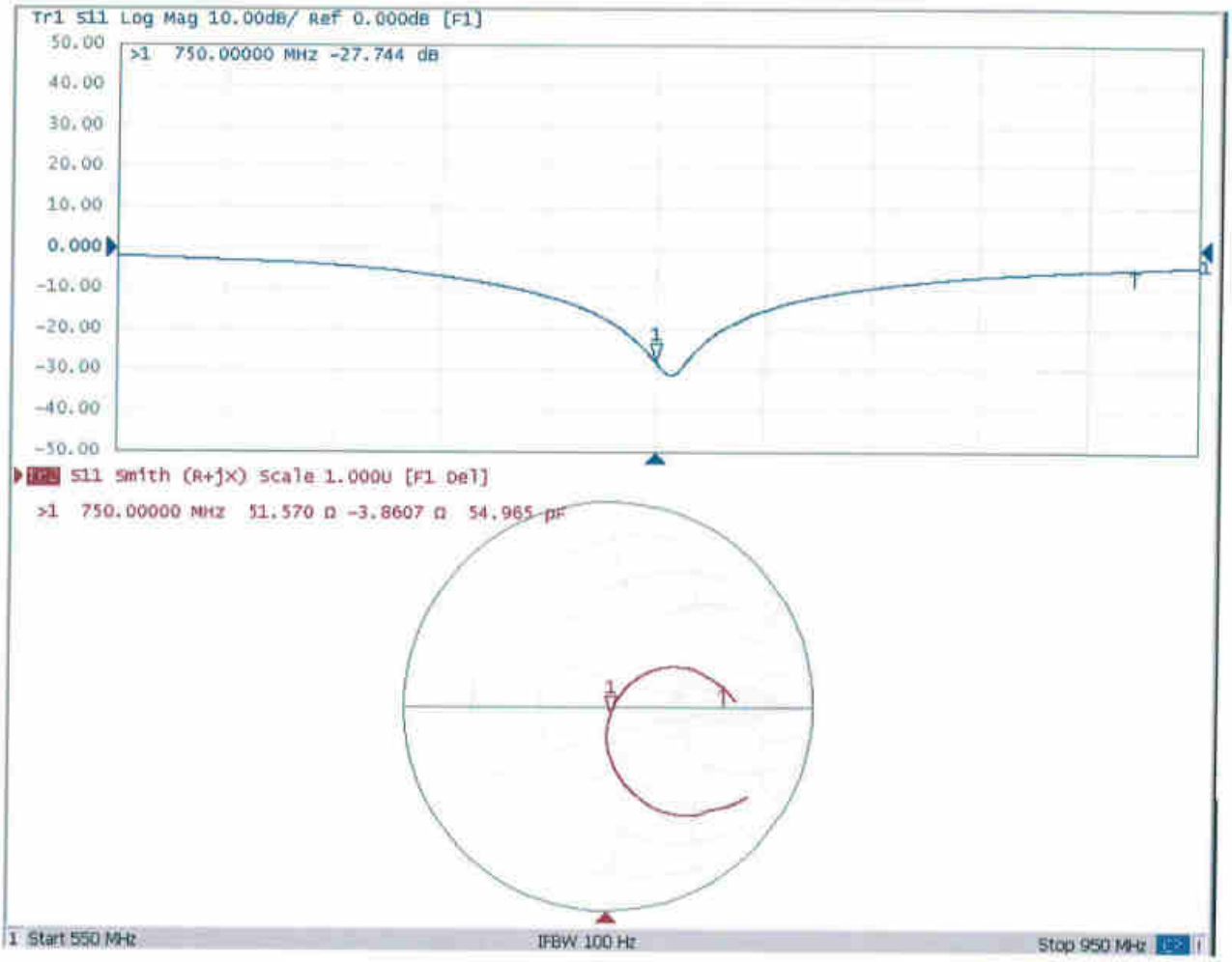
Impedance Measurement Plot for Body TSL