Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.11.03

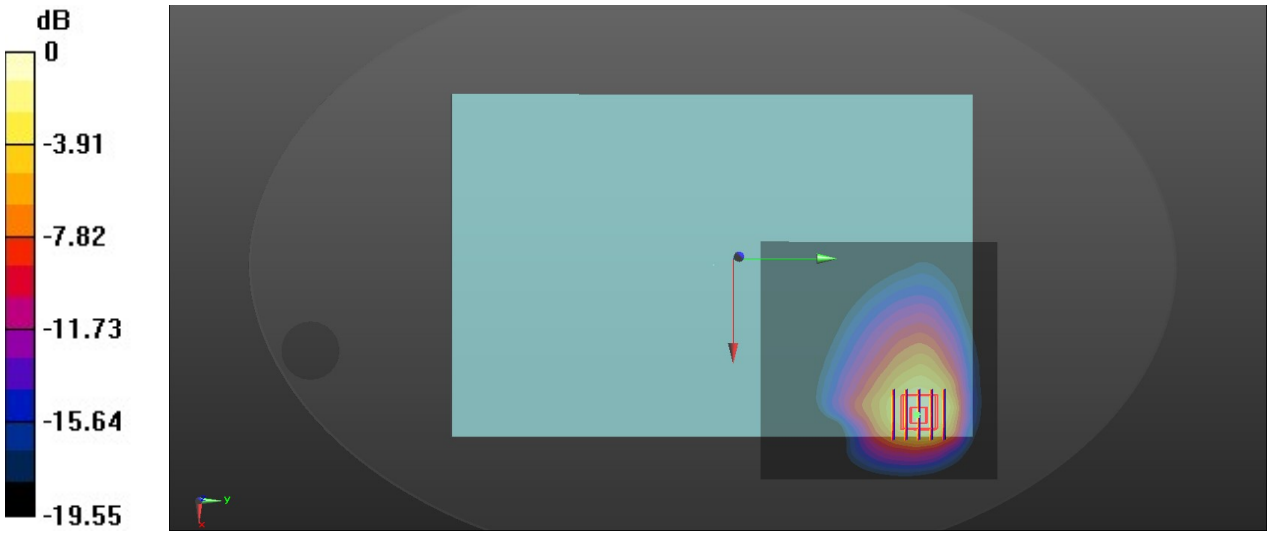
01_WCDMA II_RMC 12.2Kbps_Bottom of Laptop_0mm_Ch9538

Communication System: UID 0, UMTS (0); Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium: HSL_1900_191103 Medium parameters used: f = 1908 MHz; σ = 1.397 S/m; ε_r = 38.723; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(5.14, 5.14, 5.14); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch9538/Area Scan (101x101x1): Interpolated grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.09 W/kg

Ch9538/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.5020 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.84 W/kg
SAR(1 g) = 0.905 W/kg; SAR(10 g) = 0.462 W/kg
Maximum value of SAR (measured) = 1.17 W/kg



0 dB = 1.09 W/kg

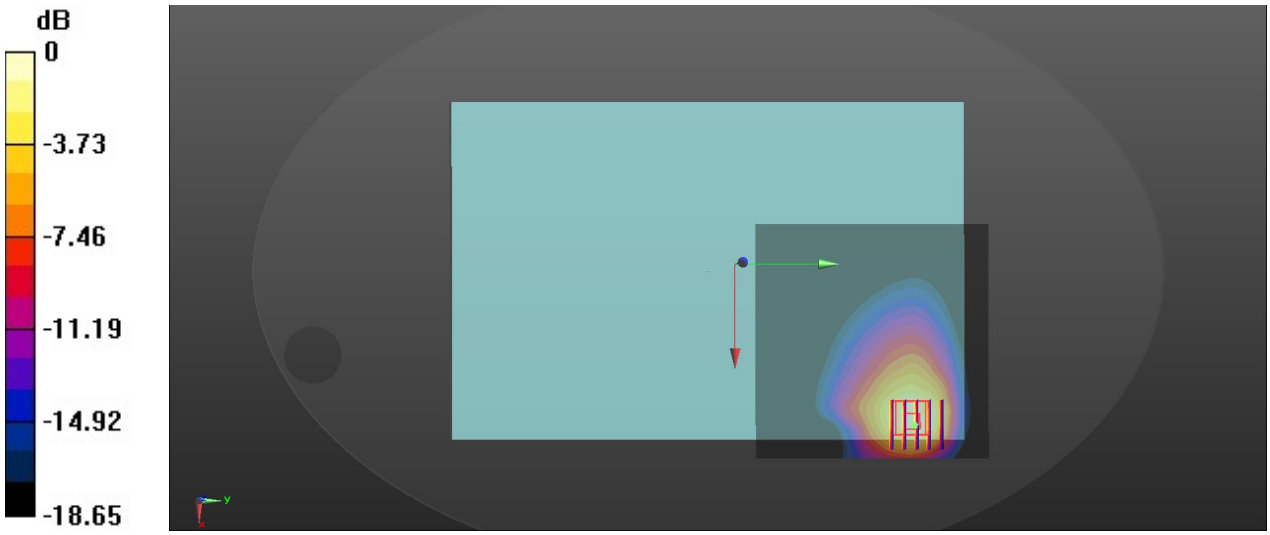
02_WCDMA IV_RMC 12.2Kbps_Bottom of Laptop_0mm_Ch1312

Communication System: UID 0, UMTS (0); Frequency: 1712.4 MHz;Duty Cycle: 1:1
Medium: HSL_1750_191103 Medium parameters used: f = 1712.4 MHz; σ = 1.303 S/m; ε_r = 39.009; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(5.34, 5.34, 5.34); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch1312/Area Scan (101x101x1): Interpolated grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.26 W/kg

Ch1312/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.3400 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.86 W/kg
SAR(1 g) = 0.999 W/kg; SAR(10 g) = 0.546 W/kg
Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 1.26 W/kg

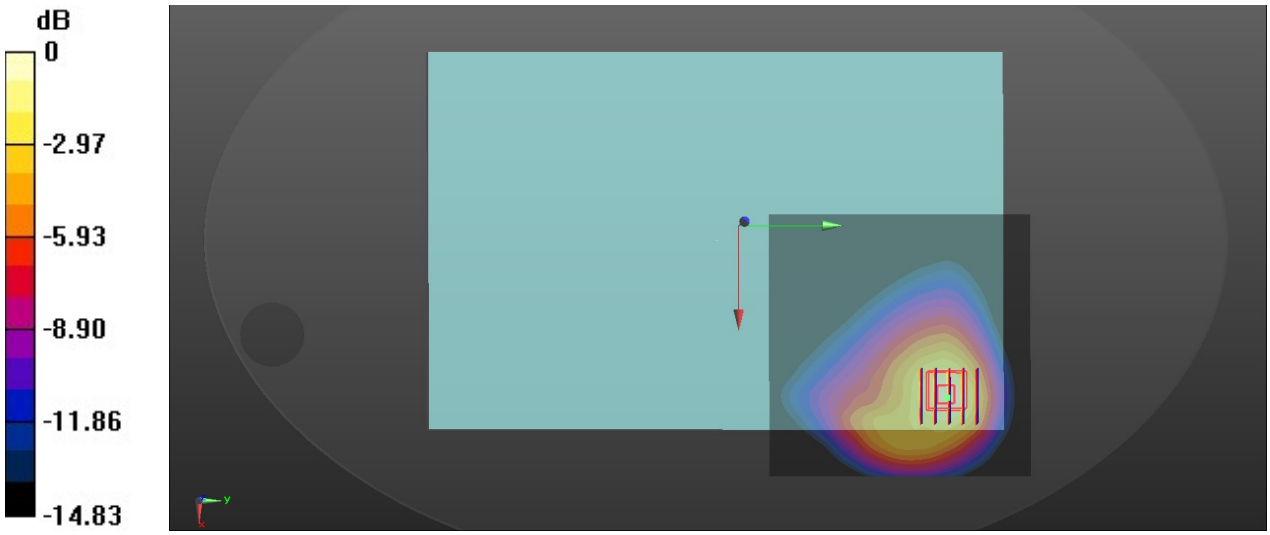
03_WCDMA V_RMC 12.2Kbps_Bottom of Laptop_0mm_Ch4182

Communication System: UID 0, UMTS (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: HSL_835_191102 Medium parameters used: f = 836.5 MHz; σ = 0.92 S/m; ε_r = 41.511; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(6.42, 6.42, 6.42); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch4182/Area Scan (101x101x1): Interpolated grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.12 W/kg

Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 0.907 W/kg; SAR(10 g) = 0.521 W/kg
Maximum value of SAR (measured) = 1.12 W/kg



0 dB = 1.12 W/kg

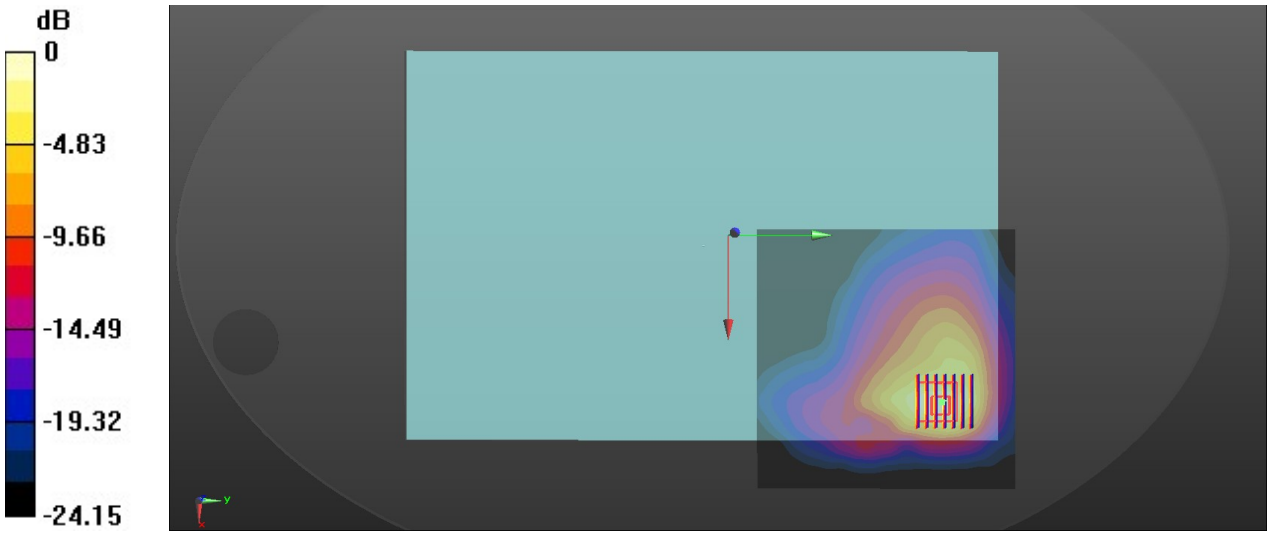
04_LTE Band 7_20M_QPSK_1RB_0Offset_Bottom of Laptop_0mm_Ch20850

Communication System: UID 0, LTE (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium: HSL_2600_191104 Medium parameters used: f = 2510 MHz; σ = 1.95 S/m; ε_r = 38.647; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(4.38, 4.38, 4.38); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch20850/Area Scan (121x121x1): Interpolated grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 1.21 W/kg

Ch20850/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.1120 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 2.76 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.425 W/kg
Maximum value of SAR (measured) = 1.41 W/kg



0 dB = 1.21 W/kg

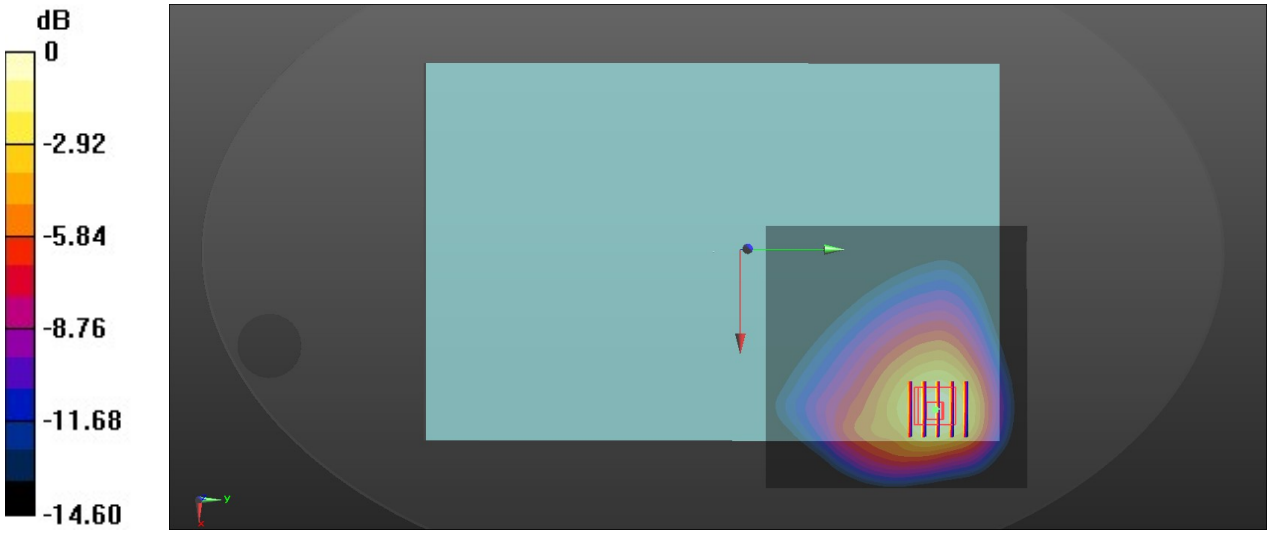
05_LTE Band 12_10M_QPSK_50RB_0Offset_Bottom of Laptop_0mm_Ch23095

Communication System: UID 0, LTE (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium: HSL_750_191102 Medium parameters used: f = 707.5 MHz; σ = 0.856 S/m; ε_r = 41.885; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(6.68, 6.68, 6.68); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch23095/Area Scan (101x101x1): Interpolated grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.905 W/kg

Ch23095/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.320 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.38 W/kg
SAR(1 g) = 0.784 W/kg; SAR(10 g) = 0.462 W/kg
Maximum value of SAR (measured) = 0.963 W/kg



0 dB = 0.905 W/kg

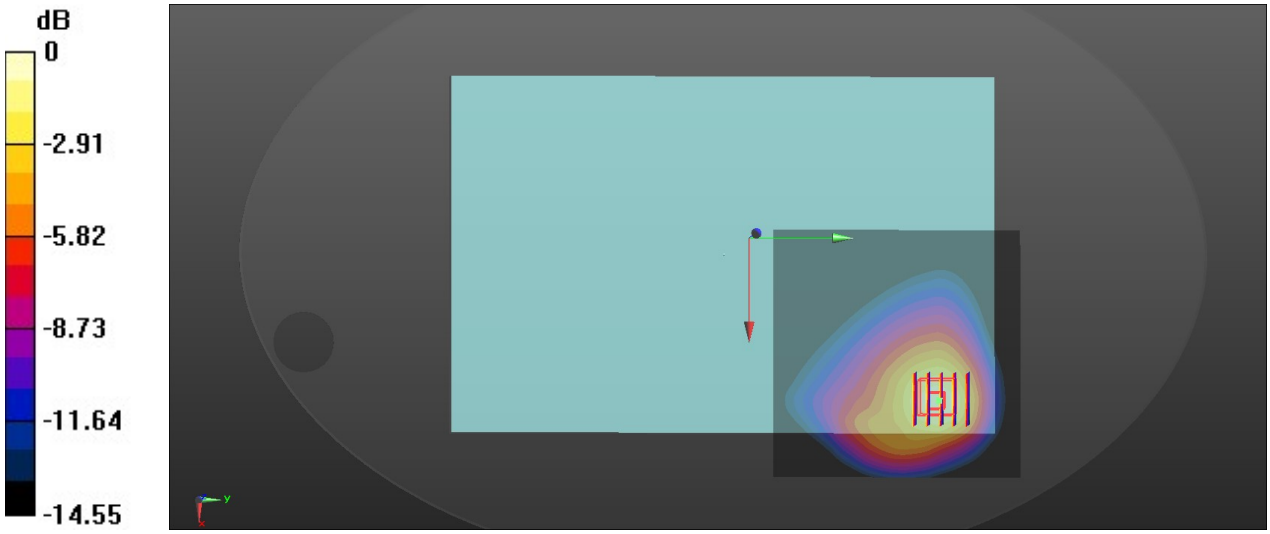
06_LTE Band 13_10M_QPSK_50RB_0Offset_Bottom of Laptop_0mm_Ch23230

Communication System: UID 0, LTE (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium: HSL_750_191102 Medium parameters used: f = 782 MHz; σ = 0.897 S/m; ε_r = 40.237; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(6.68, 6.68, 6.68); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch23230/Area Scan (101x101x1): Interpolated grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.03 W/kg

Ch23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.253 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 0.856 W/kg; SAR(10 g) = 0.501 W/kg
Maximum value of SAR (measured) = 1.05 W/kg



0 dB = 1.03 W/kg

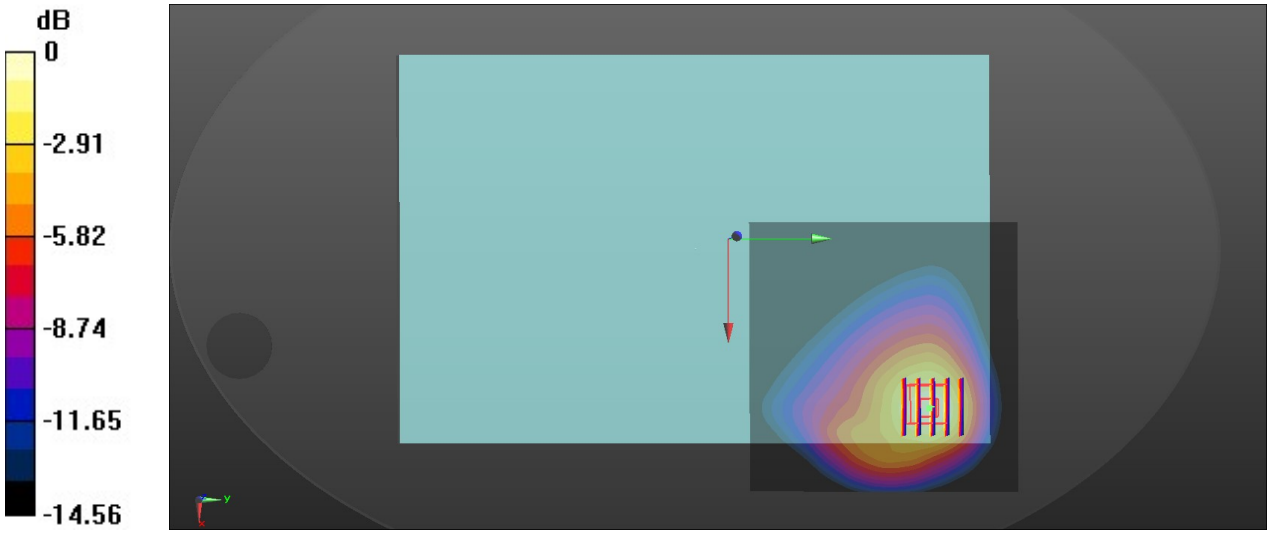
07_LTE Band 14_10M_QPSK_25RB_0Offset_Bottom of Laptop_0mm_Ch23330

Communication System: UID 0, LTE (0); Frequency: 793 MHz;Duty Cycle: 1:1
Medium: HSL_750_191102 Medium parameters used: f = 793 MHz; σ = 0.91 S/m; ε_r = 40.111; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(6.68, 6.68, 6.68); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch23330/Area Scan (101x101x1): Interpolated grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.05 W/kg

Ch23330/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.239 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.52 W/kg
SAR(1 g) = 0.874 W/kg; SAR(10 g) = 0.510 W/kg
Maximum value of SAR (measured) = 1.08 W/kg



0 dB = 1.05 W/kg

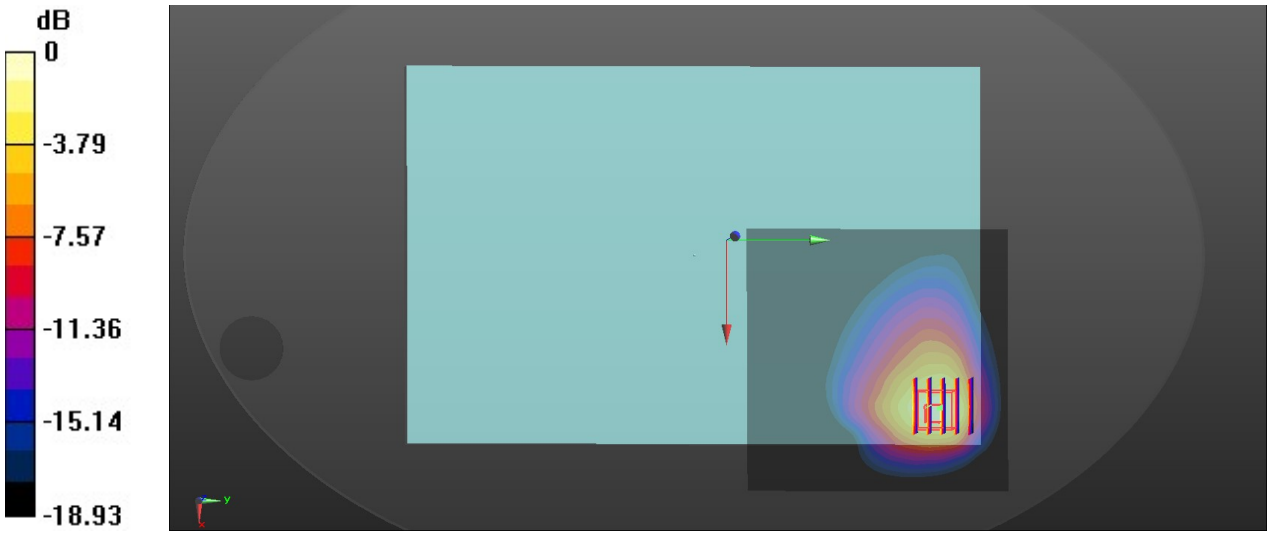
08_LTE Band 25_20M_QPSK_1RB_0Offset_Bottom of Laptop_0mm_Ch26140

Communication System: UID 0, LTE (0); Frequency: 1860 MHz;Duty Cycle: 1:1
Medium: HSL_1900_191103 Medium parameters used: f = 1860 MHz; σ = 1.354 S/m; ε_r = 38.916; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(5.14, 5.14, 5.14); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch26140/Area Scan (101x101x1): Interpolated grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.18 W/kg

Ch26140/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.5410 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.71 W/kg
SAR(1 g) = 0.861 W/kg; SAR(10 g) = 0.453 W/kg
Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 1.18 W/kg

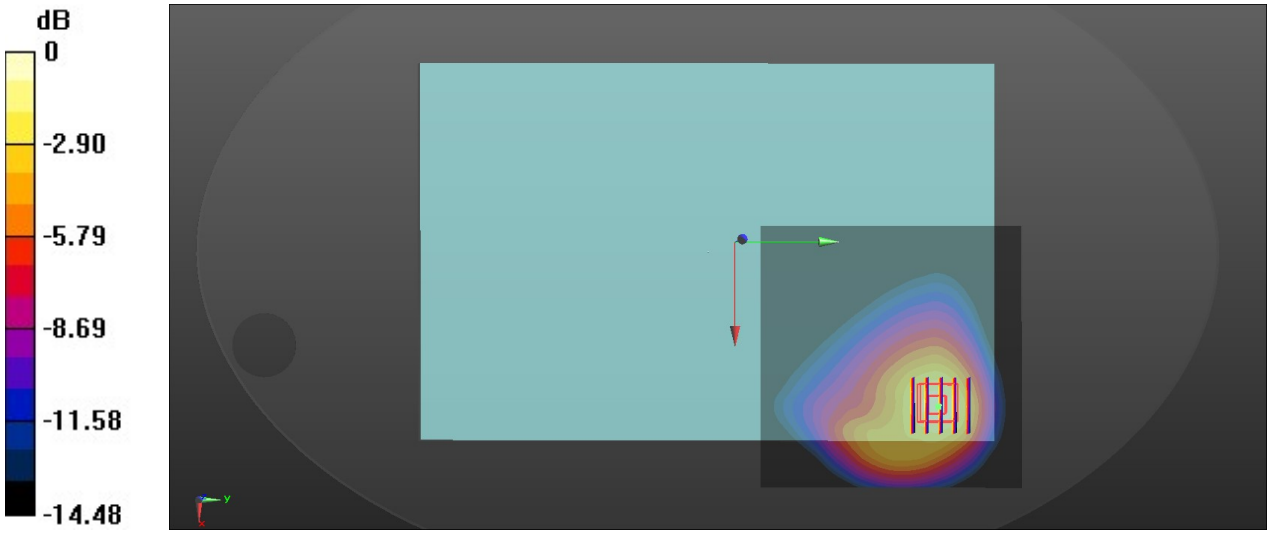
09_LTE Band 26_15M_QPSK_1RB_0Offset_Bottom of Laptop_0mm_Ch26865

Communication System: UID 0, LTE (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium: HSL_835_191102 Medium parameters used: f = 831.5 MHz; σ = 0.881 S/m; ε_r = 39.653; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(6.42, 6.42, 6.42); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch26865/Area Scan (101x101x1): Interpolated grid: dx=15mm, dy=15mmMaximum value of SAR (interpolated) = 1.18 W/kg

Ch26865/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.6160 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.70 W/kg
SAR(1 g) = 0.919 W/kg; SAR(10 g) = 0.556 W/kg
Maximum value of SAR (measured) = 1.19 W/kg



0 dB = 1.18 W/kg

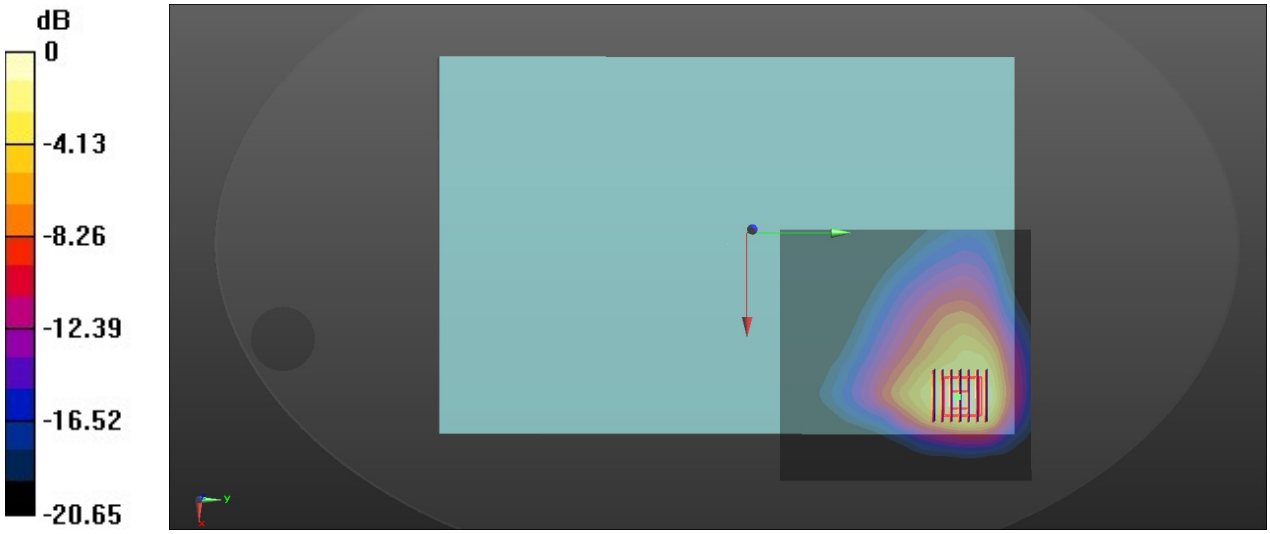
10_LTE Band 30_10M_QPSK_1RB_0Offset_Bottom of Laptop_0mm_Ch27710

Communication System: UID 0, LTE (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium: HSL_2300_191104 Medium parameters used: f = 2310 MHz; σ = 1.665 S/m; ε_r = 38.825; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(4.8, 4.8, 4.8); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch27710/Area Scan (121x121x1): Interpolated grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 0.992 W/kg

Ch27710/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.4780 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.92 W/kg
SAR(1 g) = 0.822 W/kg; SAR(10 g) = 0.382 W/kg
Maximum value of SAR (measured) = 1.10 W/kg



0 dB = 0.992 W/kg

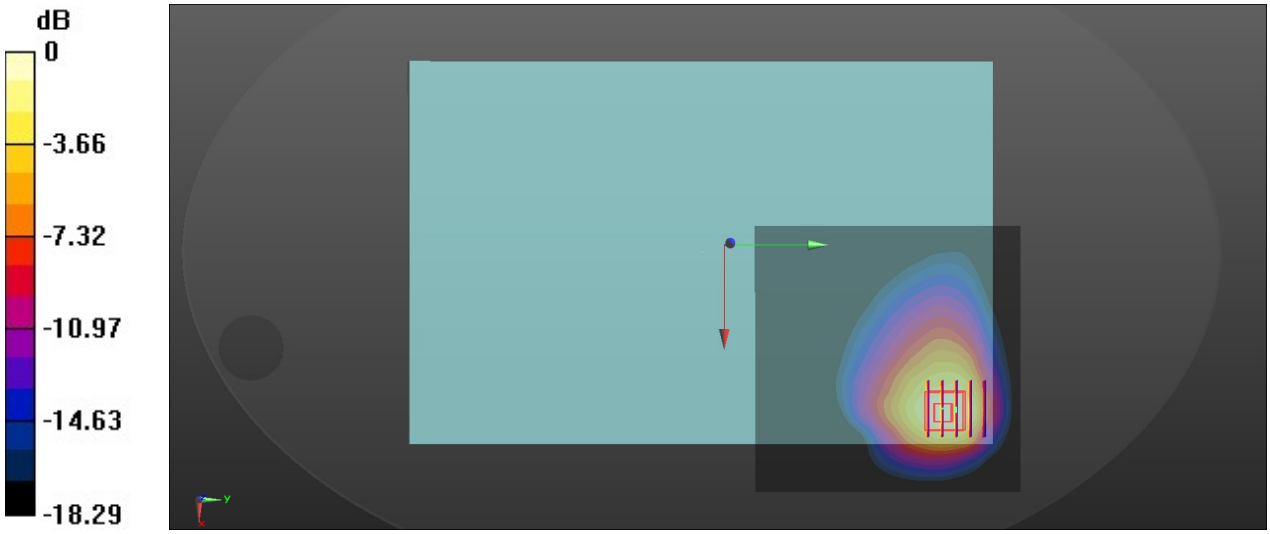
11_LTE Band 66_20M_QPSK_1RB_0Offset_Bottom of Laptop_0mm_Ch132322

Communication System: UID 0, LTE (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium: HSL_1750_191103 Medium parameters used: f = 1745 MHz; σ = 1.346 S/m; ε_r = 38.82; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(5.34, 5.34, 5.34); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch132322/Area Scan (101x101x1): Interpolated grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.30 W/kg

Ch132322/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.4940 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.79 W/kg
SAR(1 g) = 0.971 W/kg; SAR(10 g) = 0.527 W/kg
Maximum value of SAR (measured) = 1.21 W/kg



0 dB = 1.21 W/kg

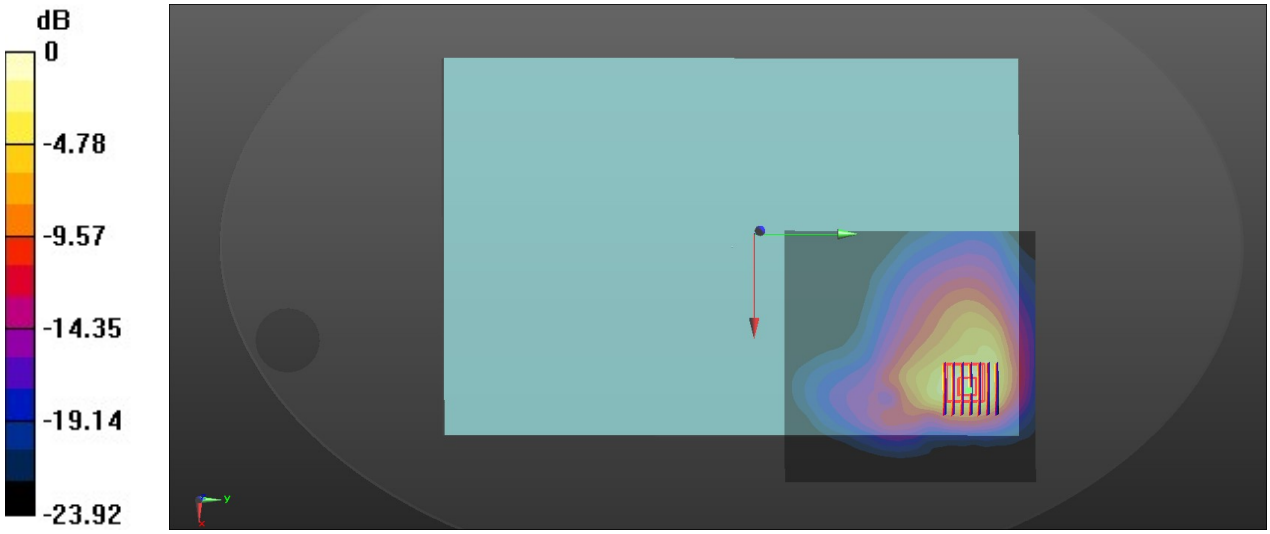
12_LTE Band 41_20M_QPSK_1RB_0Offset_Bottom of Laptop_0mm_Ch39750

Communication System: UID 0, LTE (0); Frequency: 2506 MHz;Duty Cycle: 1:1.59
Medium: HSL_2600_191104 Medium parameters used: f = 2506 MHz; σ = 1.945 S/m; ε_r = 38.663; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: ES3DV3 - SN3169; ConvF(4.38, 4.38, 4.38); Calibrated: 2019.05.24
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1303; Calibrated: 2019.01.03
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax; Serial: 1233
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Ch39750/Area Scan (121x121x1): Interpolated grid: dx=12mm, dy=12mm
Maximum value of SAR (interpolated) = 1.05 W/kg

Ch39750/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.3900 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 2.24 W/kg
SAR(1 g) = 0.823 W/kg; SAR(10 g) = 0.344 W/kg
Maximum value of SAR (measured) = 1.14 W/kg



0 dB = 1.05 W/kg