Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019/5/3

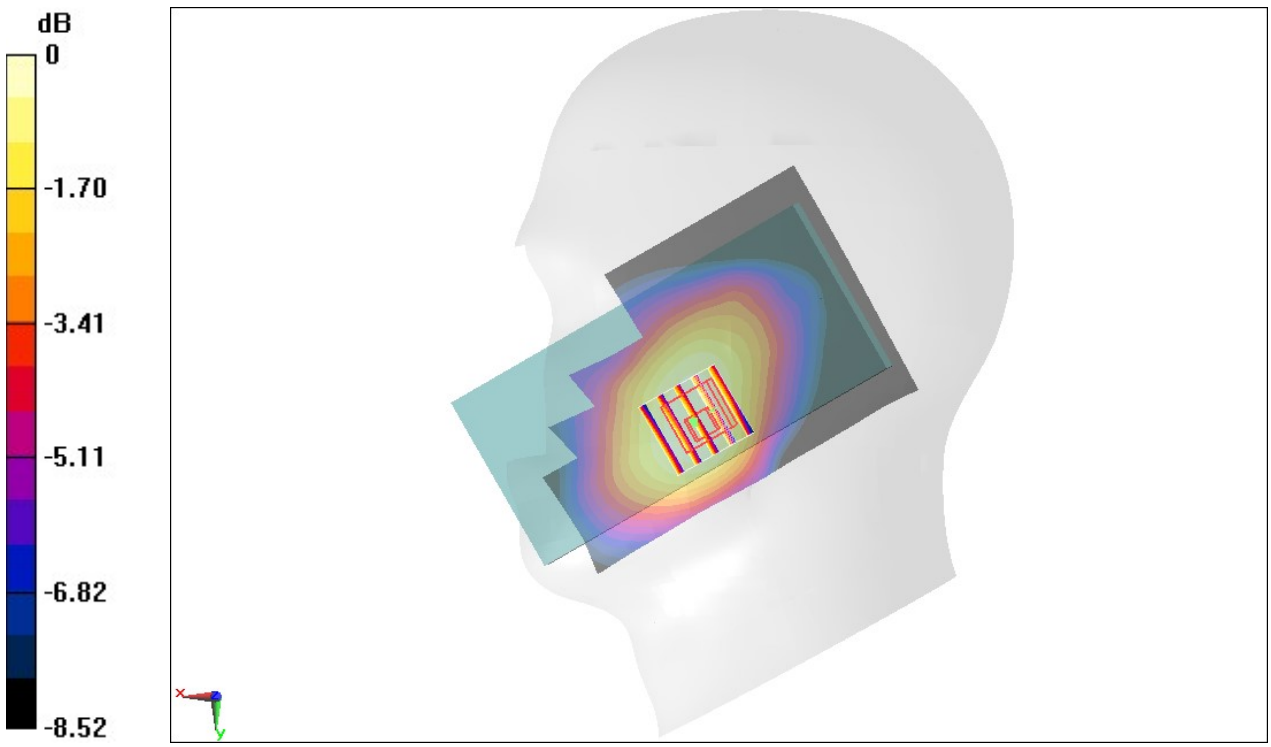
#01_GSM850_GPRS (1 Tx slot)_Right Cheek_Ch251

Communication System: GSM850 ; Frequency: 848.8 MHz;Duty Cycle: 1:8.3
Medium: HSL_850_190503 Medium parameters used: f = 849 MHz; σ = 0.903 S/m; ε_r = 41.864; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(5.97, 5.97, 5.97) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.190 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.69 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.228 W/kg
SAR(1 g) = 0.174 W/kg; SAR(10 g) = 0.134 W/kg
Maximum value of SAR (measured) = 0.189 W/kg



0 dB = 0.189 W/kg = -7.24 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019/5/4

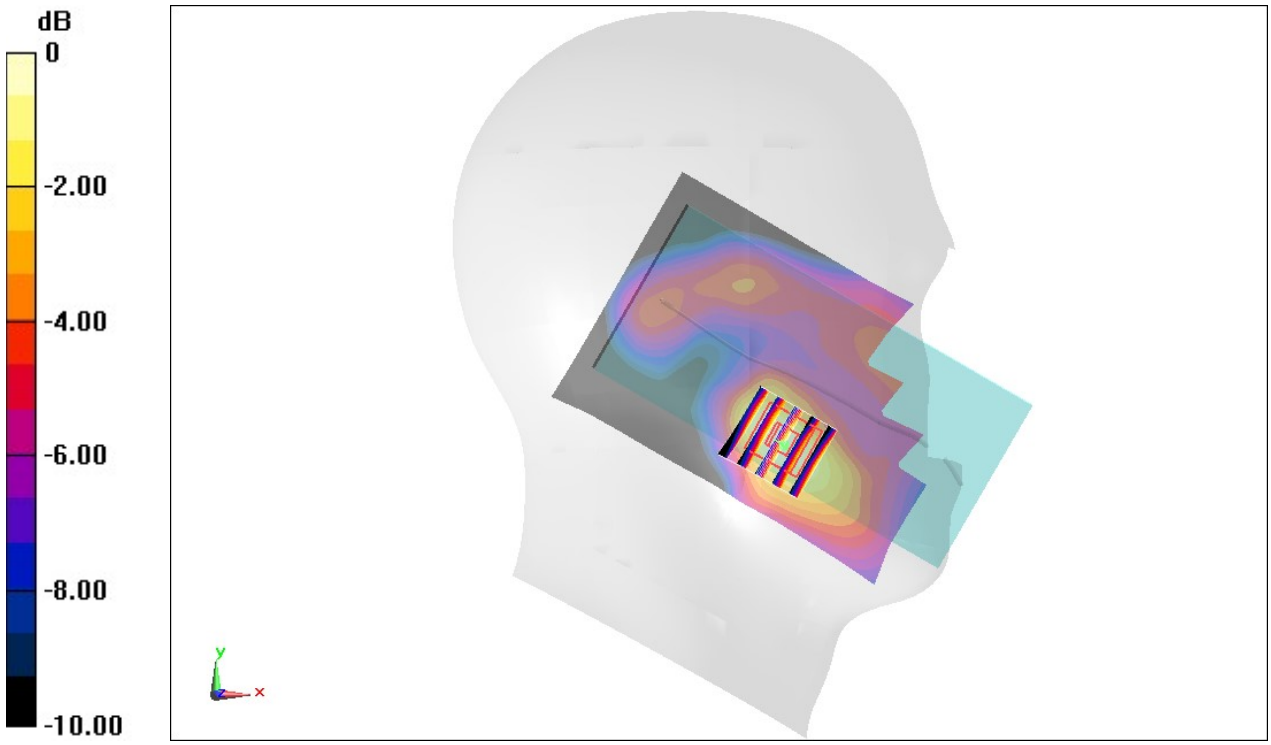
#02_GSM1900_GPRS (4 Tx slots)_Left Cheek_Ch512

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:2.08
Medium: HSL_1900_190504 Medium parameters used : f = 1850.2 MHz; σ = 1.352 S/m; ε_r = 40.806; ρ = 1000 kg/m^3
Ambient Temperature：23.7 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(4.95, 4.95, 4.95) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.102 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.313 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.127 W/kg
SAR(1 g) = 0.085 W/kg; SAR(10 g) = 0.056 W/kg
Maximum value of SAR (measured) = 0.100 W/kg



0 dB = 0.100 W/kg = -10.00 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019/5/4

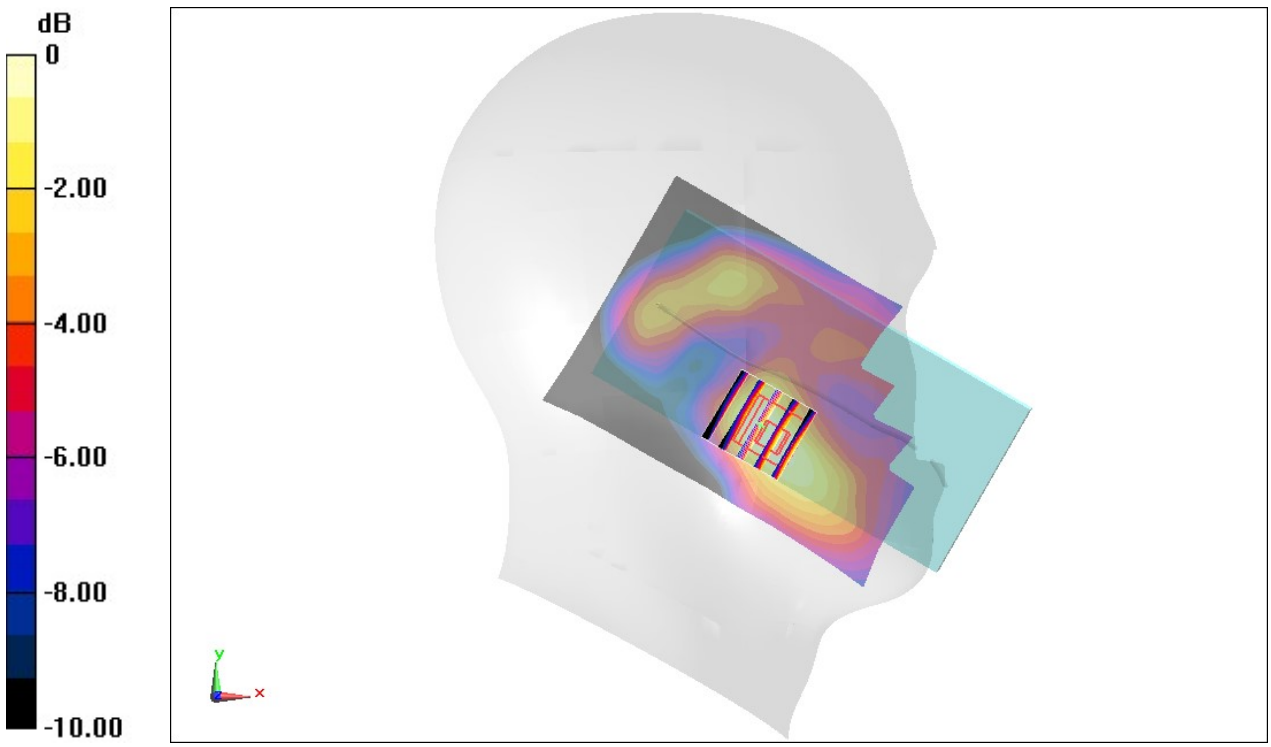
#03_WCDMA II_RMC 12.2Kbps_Left Cheek_Ch9262

Communication System: WCDMA; Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium: HSL_1900_190504 Medium parameters used : f = 1852.4 MHz; σ = 1.374 S/m; ε_r = 40.745; ρ = 1000 kg/m^3
Ambient Temperature：23.7 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(4.95, 4.95, 4.95) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.221 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.98 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.275 W/kg
SAR(1 g) = 0.186 W/kg; SAR(10 g) = 0.123 W/kg
Maximum value of SAR (measured) = 0.211 W/kg



0 dB = 0.211 W/kg = -6.76 dBW/kg

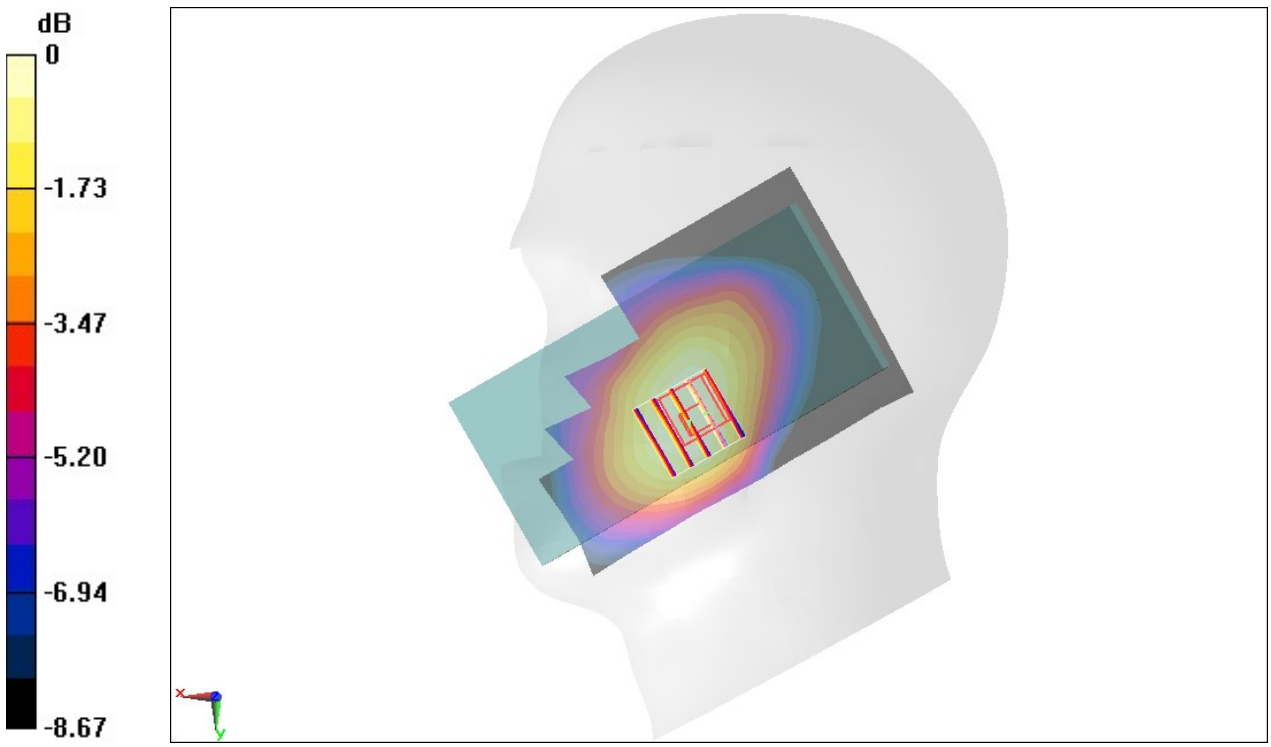
#04_WCDMA V_RMC 12.2Kbps_Right Cheek_Ch4182

Communication System: WCDMA ; Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: HSL_850_190503 Medium parameters used : f = 836.4 MHz; σ = 0.891 S/m; ε_r = 42.026; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(5.97, 5.97, 5.97) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.203 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.29 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.243 W/kg
SAR(1 g) = 0.183 W/kg; SAR(10 g) = 0.141 W/kg
Maximum value of SAR (measured) = 0.199 W/kg



0 dB = 0.199 W/kg = -7.01 dBW/kg

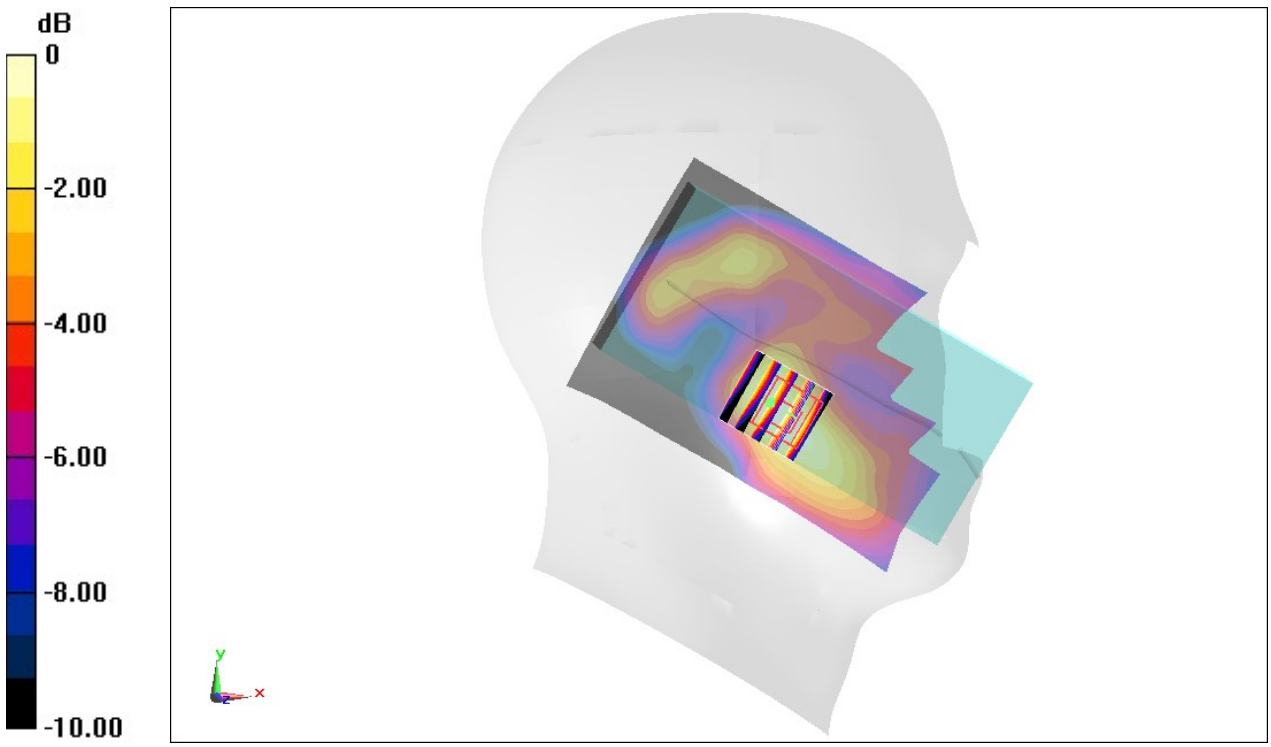
#05_LTE Band 2_20M_QPSK_1_99_Left Cheek_Ch18700

Communication System: LTE; Frequency: 1860 MHz;Duty Cycle: 1:1
Medium: HSL_1900_190504 Medium parameters used: f = 1860 MHz; σ = 1.361 S/m; ε_r = 40.87; ρ = 1000 kg/m^3
Ambient Temperature：23.7 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(4.95, 4.95, 4.95) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.208 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.07 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.260 W/kg
SAR(1 g) = 0.175 W/kg; SAR(10 g) = 0.116 W/kg
Maximum value of SAR (measured) = 0.196 W/kg



0 dB = 0.196 W/kg = -7.08 dBW/kg

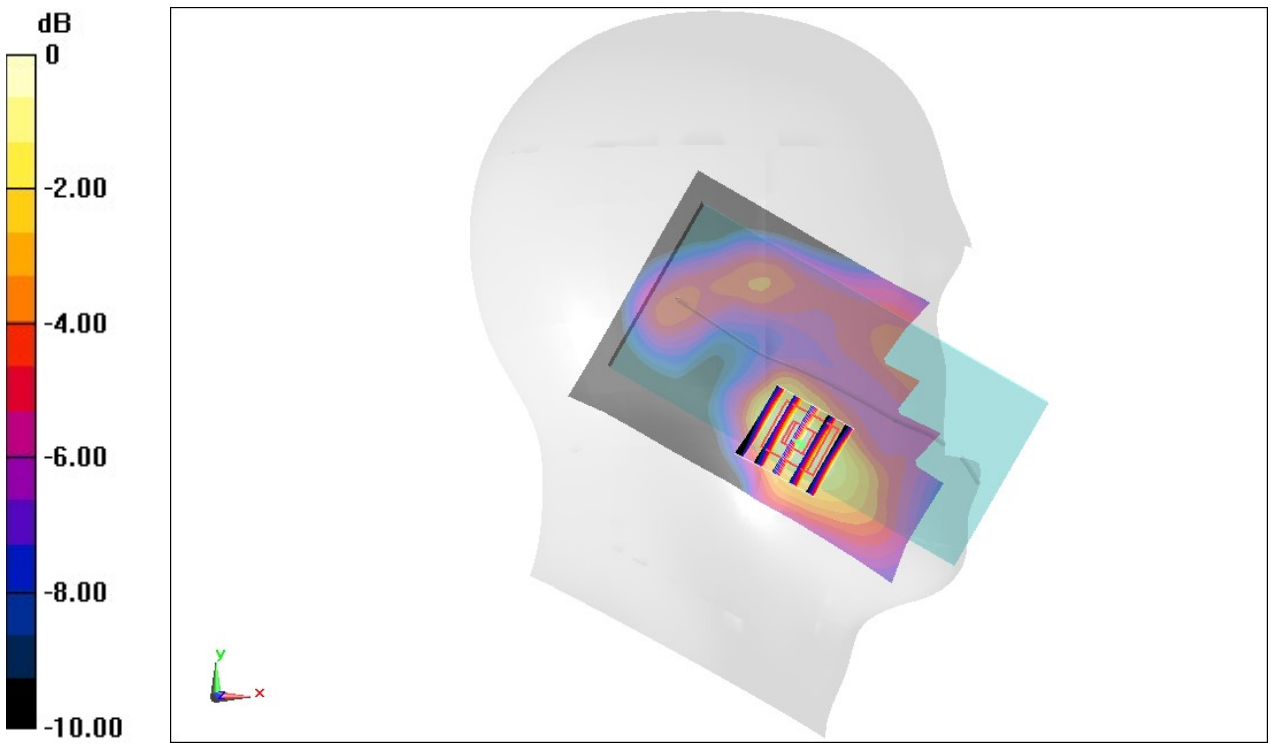
#06_LTE Band 4_20M_QPSK_1_49_Left Cheek_Ch20175

Communication System: LTE; Frequency: 1732.5 MHz;Duty Cycle: 1:1
Medium: HSL_1750_190504 Medium parameters used: f = 1733 MHz; σ = 1.339 S/m; ε_r = 39.341; ρ = 1000 kg/m^3
Ambient Temperature：23.7 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(5.18, 5.18, 5.18) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0974 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.201 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.121 W/kg
SAR(1 g) = 0.081 W/kg; SAR(10 g) = 0.053 W/kg
Maximum value of SAR (measured) = 0.0958 W/kg



0 dB = 0.0958 W/kg = -10.19 dBW/kg

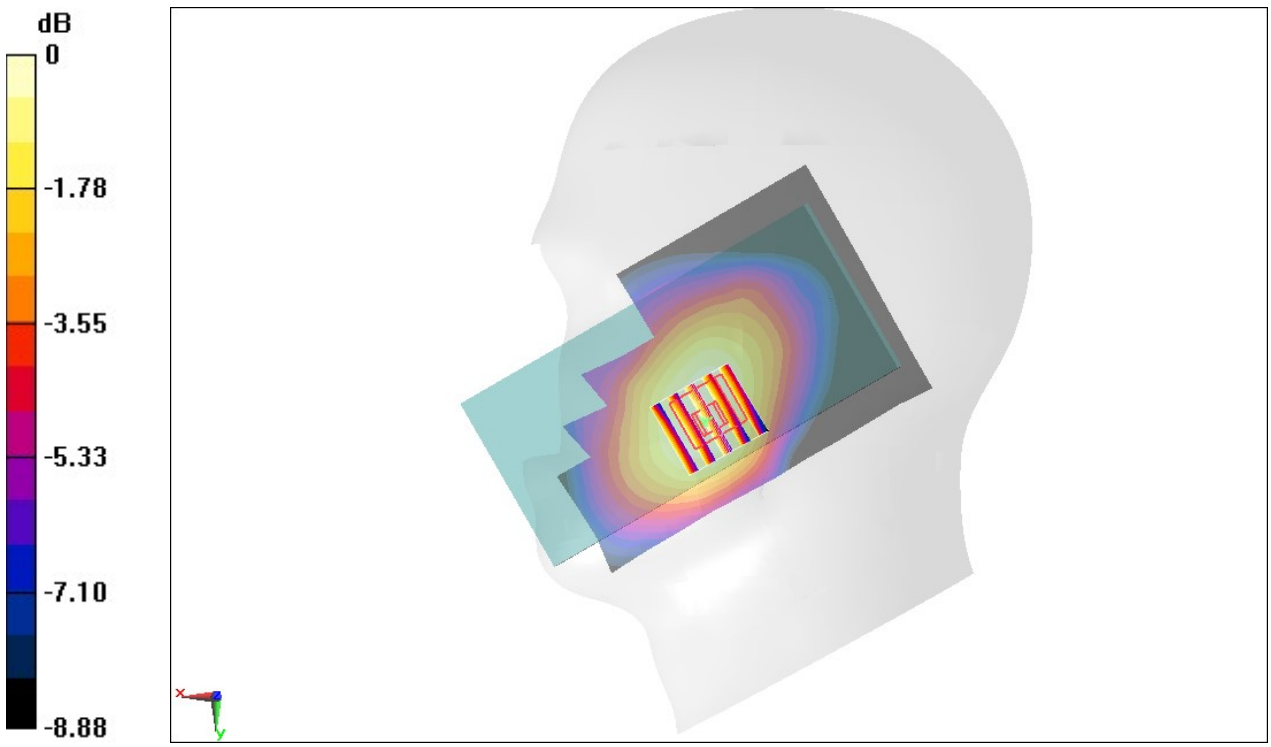
#07_LTE Band 5_10M_QPSK_1_25_Right Cheek_Ch20525

Communication System: LTE; Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium: HSL_850_190503 Medium parameters used : f = 836.5 MHz; σ = 0.891 S/m; ε_r = 42.024; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(5.97, 5.97, 5.97) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.165 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.55 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.199 W/kg
SAR(1 g) = 0.148 W/kg; SAR(10 g) = 0.113 W/kg
Maximum value of SAR (measured) = 0.162 W/kg



0 dB = 0.162 W/kg = -7.90 dBW/kg

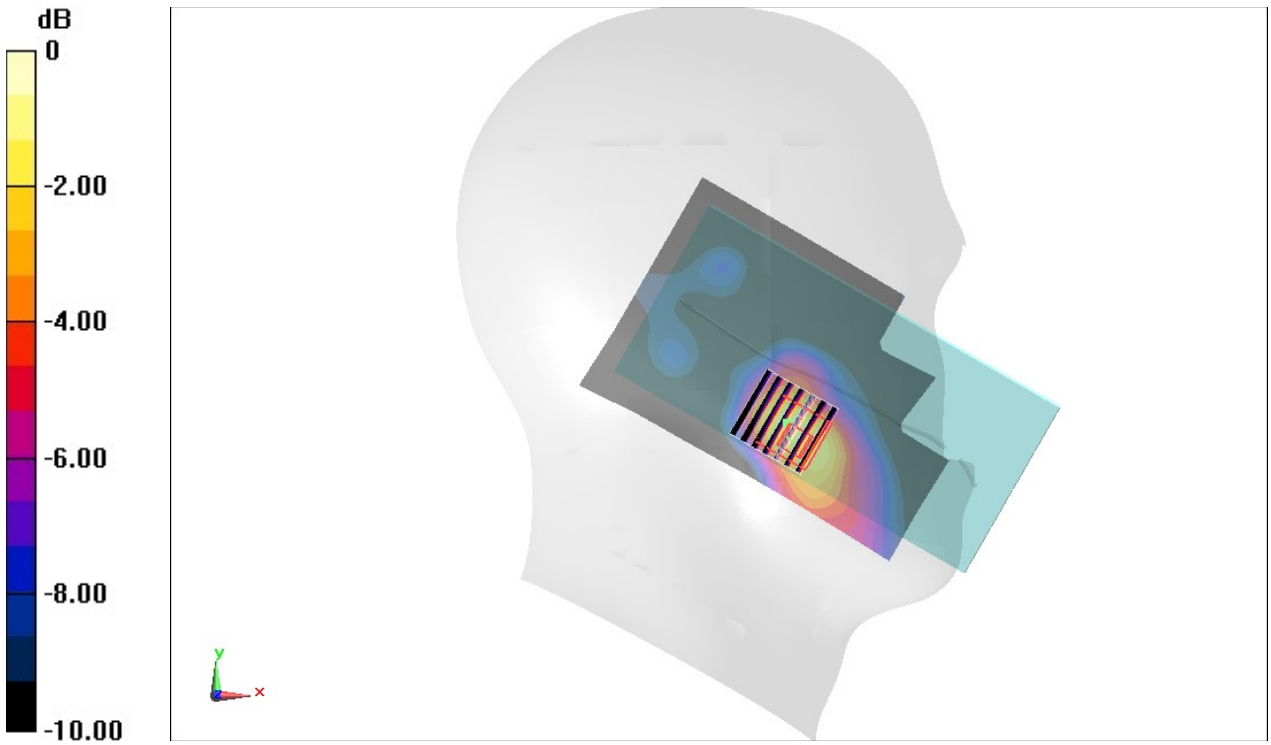
#08_LTE Band 7_20M_QPSK_1_99_Left Cheek_Ch21100

Communication System: LTE; Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: HSL_2600_190502 Medium parameters used : f = 2535 MHz; σ = 1.914 S/m; ε_r = 38.164; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(4.37, 4.37, 4.37) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (81x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.559 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.64 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.768 W/kg
SAR(1 g) = 0.465 W/kg; SAR(10 g) = 0.267 W/kg
Maximum value of SAR (measured) = 0.554 W/kg



0 dB = 0.554 W/kg = -2.56 dBW/kg

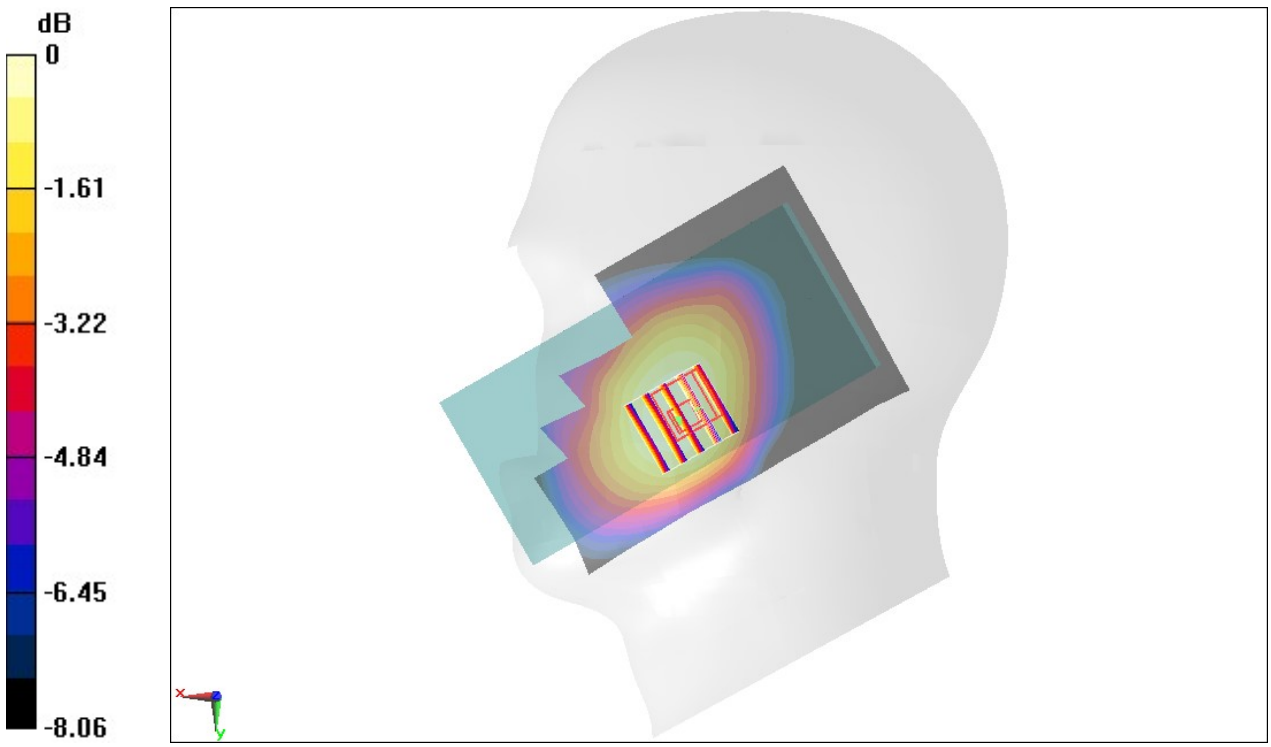
#09_LTE Band 17_10M_QPSK_1_49_Right Cheek_Ch23790

Communication System: LTE; Frequency: 710 MHz;Duty Cycle: 1:1
Medium: HSL_750_190503 Medium parameters used: f = 710 MHz; σ = 0.855 S/m; ε_r = 41.014; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃； Liquid Temperature：22.6 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(6.15, 6.15, 6.15) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0746 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.292 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.0930 W/kg
SAR(1 g) = 0.068 W/kg; SAR(10 g) = 0.053 W/kg
Maximum value of SAR (measured) = 0.0745 W/kg



0 dB = 0.0745 W/kg = -11.28 dBW/kg

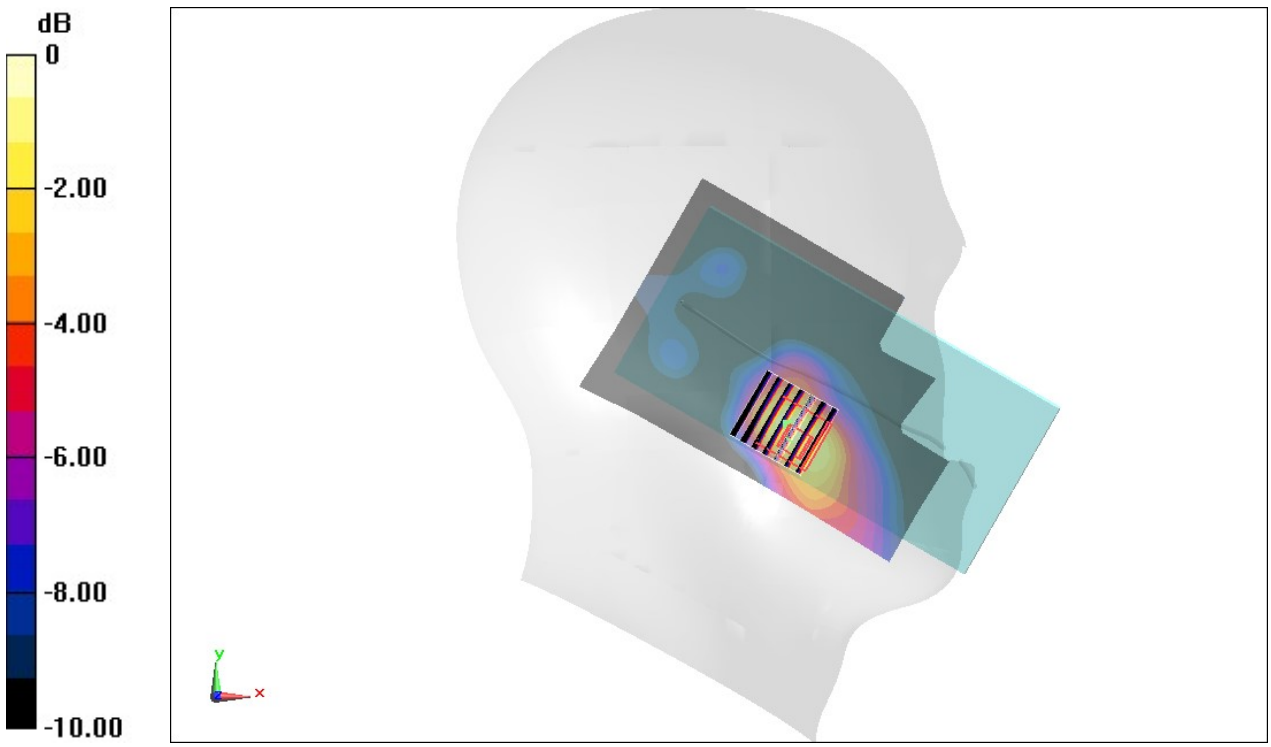
#10_LTE Band 41_20M_QPSK_1_0_Left Cheek_Ch40340

Communication System: LTE; Frequency: 2565 MHz;Duty Cycle: 1:1.59
Medium: HSL_2600_190502 Medium parameters used : f = 2565 MHz; σ = 1.947 S/m; ε_r = 38.048; ρ = 1000 kg/m^3
Ambient Temperature：23.5 ℃; Liquid Temperature：22.5 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(4.37, 4.37, 4.37) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (81x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.348 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.25 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.612 W/kg
SAR(1 g) = 0.360 W/kg; SAR(10 g) = 0.207 W/kg
Maximum value of SAR (measured) = 0.436 W/kg



0 dB = 0.436 W/kg = -3.61 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019/5/7

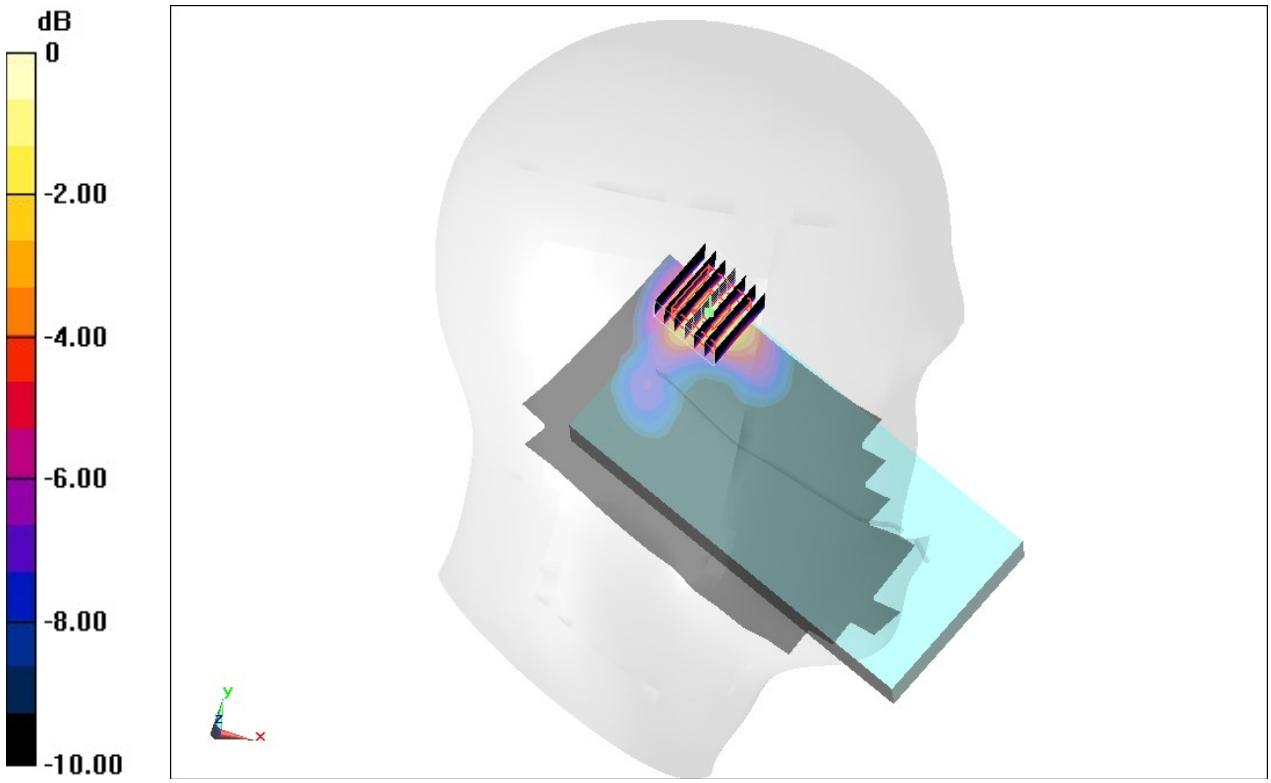
#11_WLAN2.4GHz_802.11b 1Mbps_Left Cheek _0mm_Ch6;Ant 2

Communication System: 802.11b; Frequency: 2437 MHz;Duty Cycle: 1:1.008
Medium: HSL_2450_190507 Medium parameters used : f = 2437 MHz; σ = 1.807 S/m; ε_r = 39.724; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(4.49, 4.49, 4.49) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (81x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.411 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.13 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.735 W/kg
SAR(1 g) = 0.349 W/kg; SAR(10 g) = 0.163 W/kg
Maximum value of SAR (measured) = 0.458 W/kg



0 dB = 0.458 W/kg = -3.39 dBW/kg

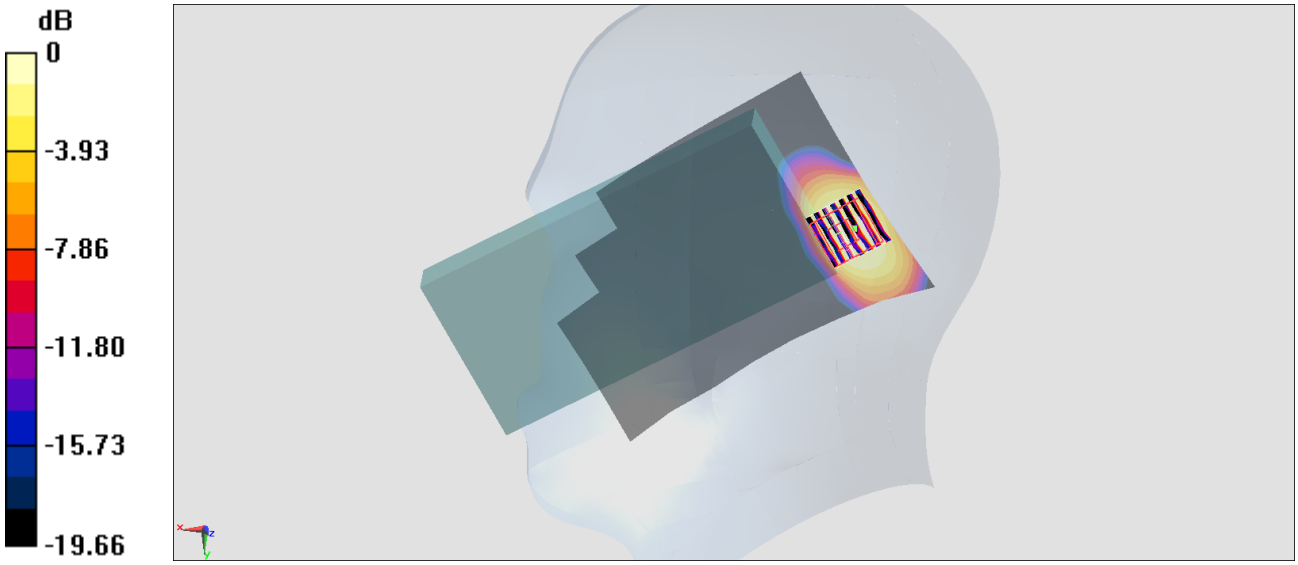
#12_WLAN5GHz_802.11n-HT40 MCS0_Right Tilted_Ch62;Ant 2

Communication System: 802.11n; Frequency: 5310 MHz;Duty Cycle: 1:1.122
Medium: HSL_5G_190505 Medium parameters used: f = 5310 MHz; σ = 4.596 S/m; ε_r = 36.87; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN7306;ConvF(5.38, 5.38, 5.38); Calibrated: 2018/7/26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn495; Calibrated: 2018/5/24
- Phantom: SAM_Right; Type: QD000P40CD; Serial: 1884
- Measurement SW: DASY52, Version 52.8 (8);SEMCAD X Version 14.6.10 (7373)

Area Scan (101x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.0717 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.990 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.170 W/kg
SAR(1 g) = 0.035 W/kg; SAR(10 g) = 0.012 W/kg
Maximum value of SAR (measured) = 0.0884 W/kg



0 dB = 0.0884 W/kg = -10.54 dBW/kg

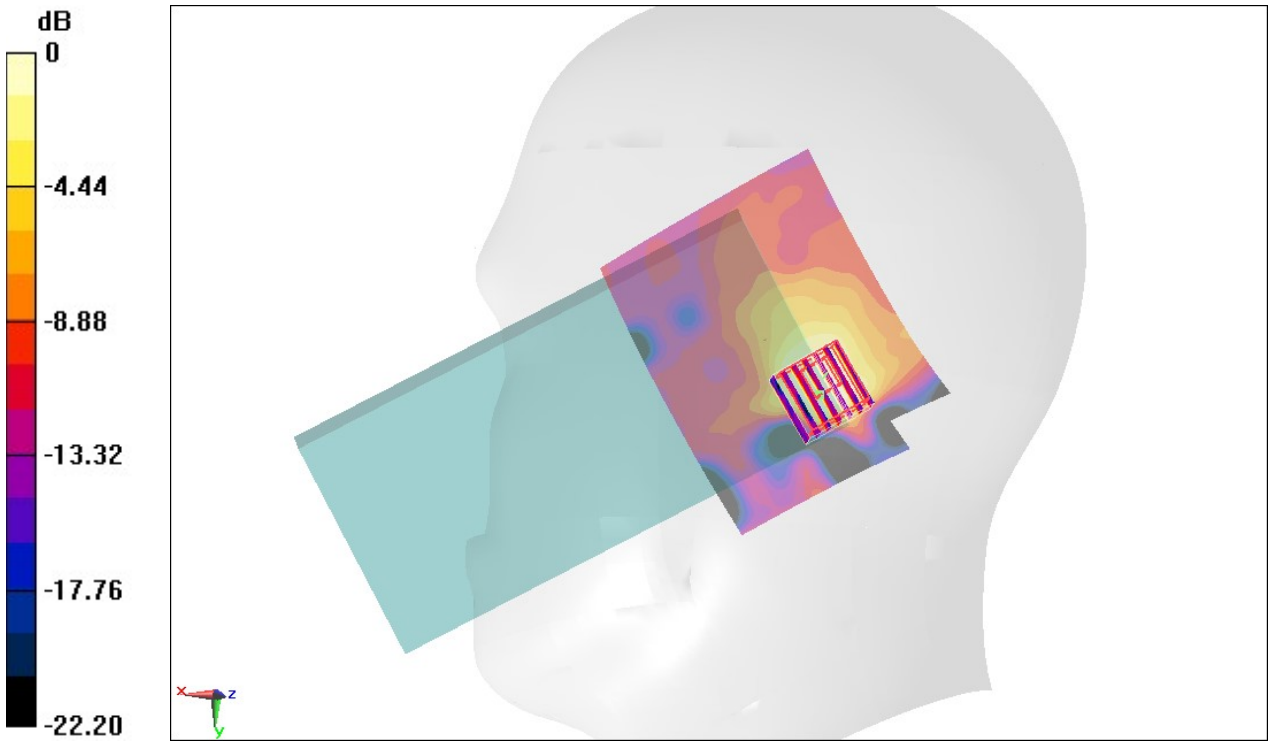
#13_WLAN5GHz_802.11n-HT40 MCS0_Right Tilted_Ch110;Ant 2

Communication System: 802.11n; Frequency: 5550 MHz;Duty Cycle: 1:1.122
Medium: HSL_5G_190506 Medium parameters used: f = 5550 MHz; σ = 5.021 S/m; ε_r = 35.599; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration
- Probe: EX3DV4 - SN3728;ConvF(4.2, 4.2, 4.2) ;Calibrated: 2019/1/15
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn854; Calibrated: 2018/6/14
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.234 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 4.552 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.320 W/kg
SAR(1 g) = 0.085 W/kg; SAR(10 g) = 0.031 W/kg
Maximum value of SAR (measured) = 0.194 W/kg



0 dB = 0.194 W/kg = -7.12 dBW/kg

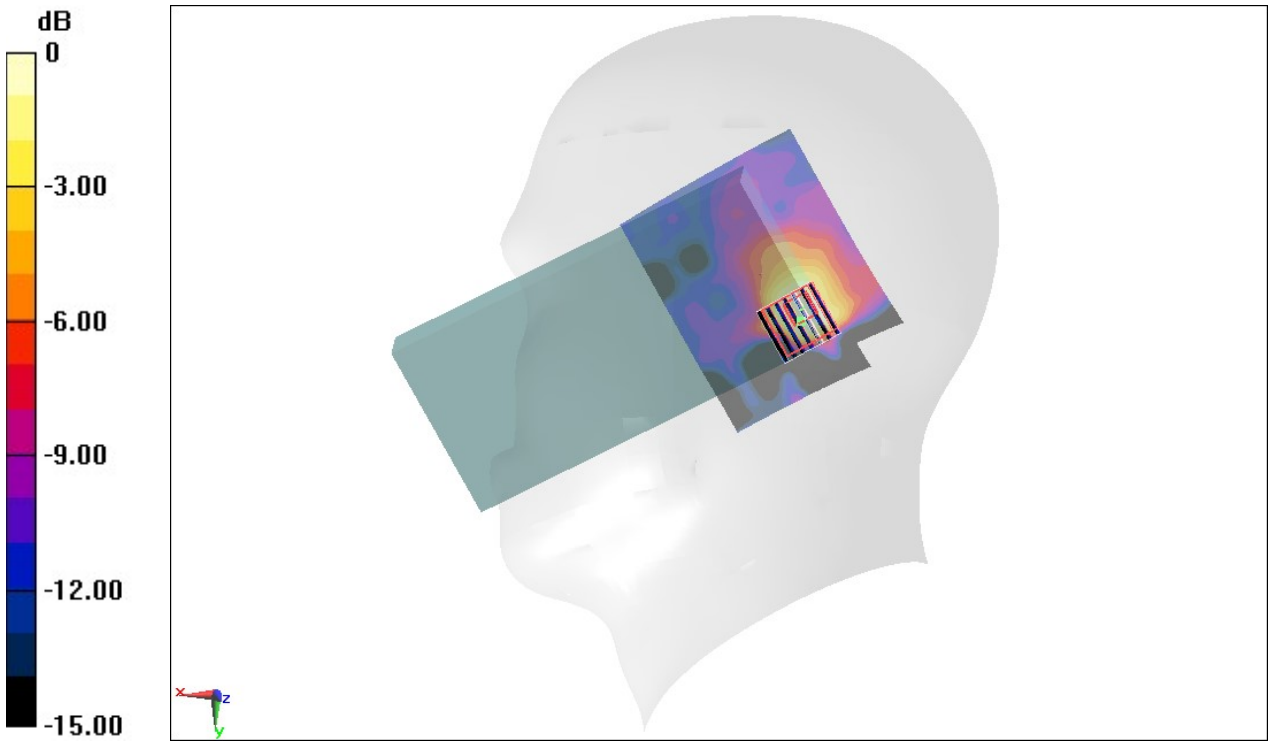
#14_WLAN5GHz_802.11n-HT40 MCS0_Right Tilted_Ch151;Ant 2

Communication System: 802.11n; Frequency: 5755 MHz;Duty Cycle: 1:1.122
Medium: HSL_5G_190506 Medium parameters used : f = 5755 MHz; σ = 5.228 S/m; ε_r = 35.376; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration
- Probe: EX3DV4 - SN3728;ConvF(4.26, 4.26, 4.26) ;Calibrated: 2019/1/15
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn854; Calibrated: 2018/6/14
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (101x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.246 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 4.561 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.336 W/kg
SAR(1 g) = 0.089 W/kg; SAR(10 g) = 0.032 W/kg
Maximum value of SAR (measured) = 0.204 W/kg



0 dB = 0.204 W/kg = -6.90 dBW/kg

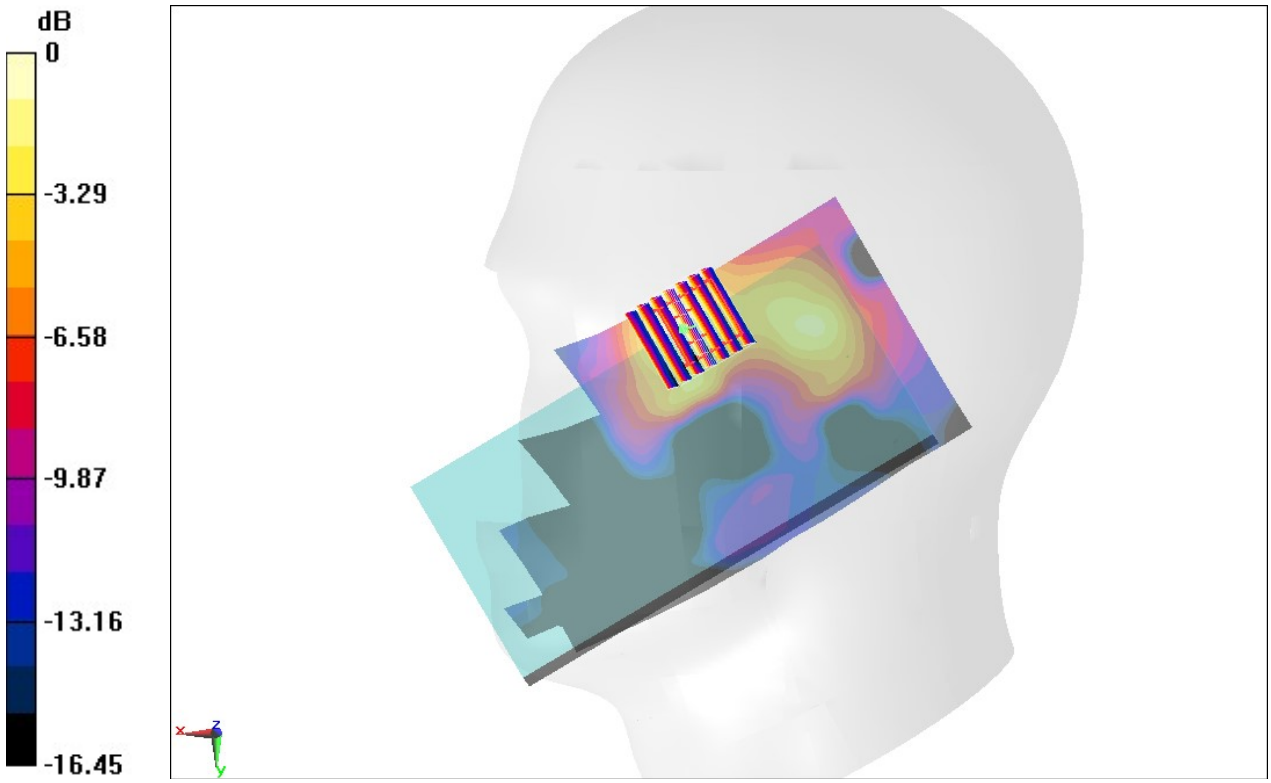
#15_Bluetooth_1Mbps_Right Cheek _0mm_Ch0;Ant 1

Communication System: Bluetooth; Frequency: 2402 MHz;Duty Cycle: 1:1.297
Medium: HSL_2450_190507 Medium parameters used: f = 2402 MHz; σ = 1.77 S/m; ε_r = 39.858; ρ = 1000 kg/m^3
Ambient Temperature：23.6 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration
- Probe: ES3DV3 - SN3124;ConvF(4.49, 4.49, 4.49) ;Calibrated: 2019/1/15
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 2019/1/3
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: 1885
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7450)

Area Scan (81x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0533 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.7440 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.0900 W/kg
SAR(1 g) = 0.014 W/kg; SAR(10 g) = 0.007 W/kg
Maximum value of SAR (measured) = 0.0548 W/kg



0 dB = 0.0548 W/kg = -12.61 dBW/kg