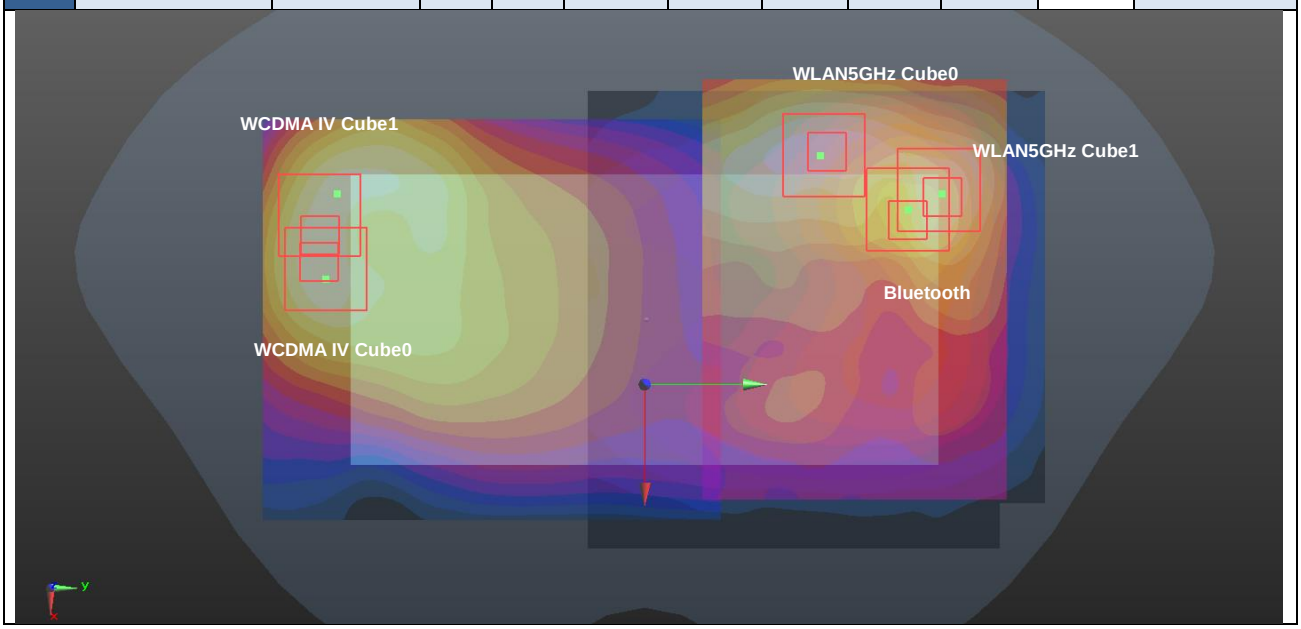
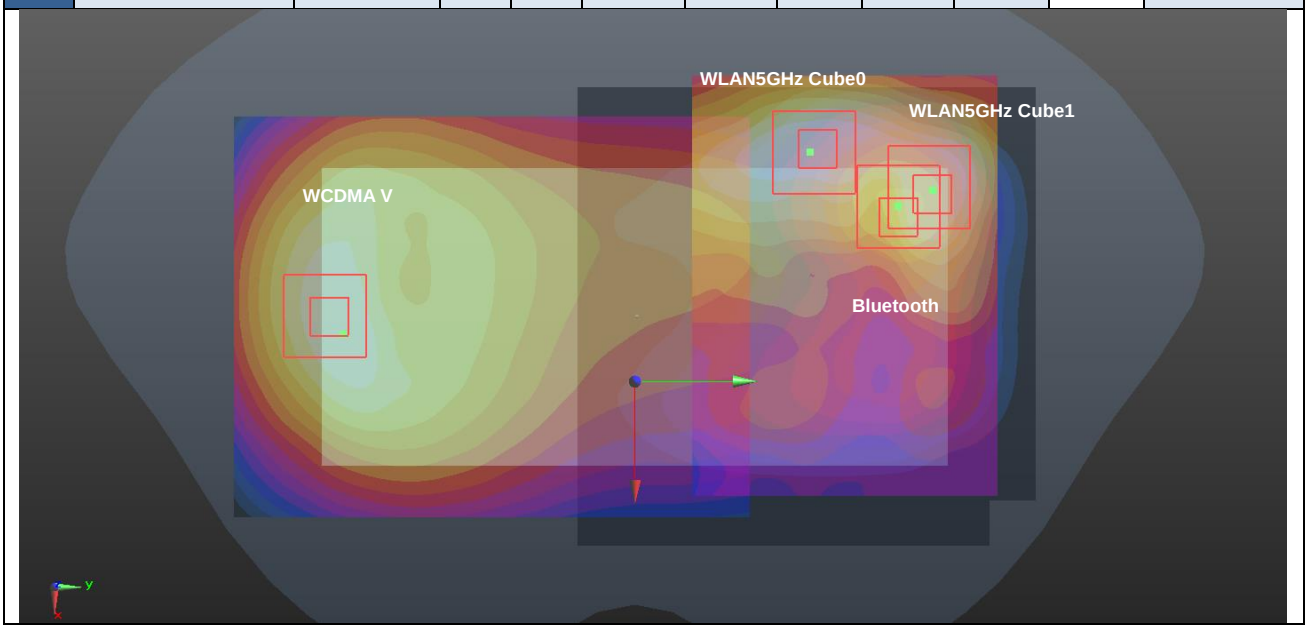
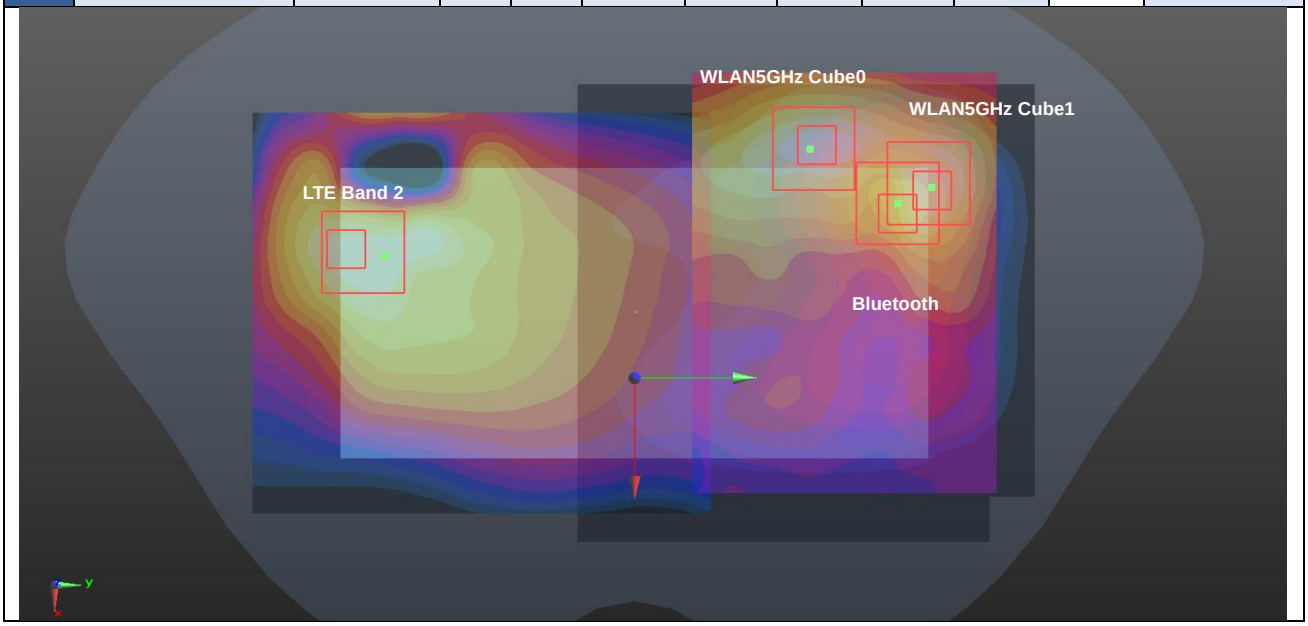
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case #32	WCDMA IV Cube0	Back	1.276	5mm	-10.5	-83.5	-1.43	154.2	2.51	0.03	Not required
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WCDMA IV Cube0	Back	1.276	5mm	-10.5	-83.5	-1.43	135.1	2.51	0.03	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	WCDMA IV Cube0	Back	1.276	5mm	-10.5	-83.5	-1.43	154.2	2.47	0.03	Not required
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WCDMA IV Cube0	Back	1.276	5mm	-10.5	-83.5	-1.43	162.1	2.47	0.02	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	WCDMA IV Cube1	Back	1.176	5mm	-17	-83.7	-1.48	153.9	2.41	0.02	Not required
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WCDMA IV Cube1	Back	1.176	5mm	-17	-83.7	-1.48	134.3	2.41	0.03	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	WCDMA IV Cube1	Back	1.176	5mm	-17	-83.7	-1.48	153.9	2.37	0.02	Not required
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WCDMA IV Cube1	Back	1.176	5mm	-17	-83.7	-1.48	161.9	2.37	0.02	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				



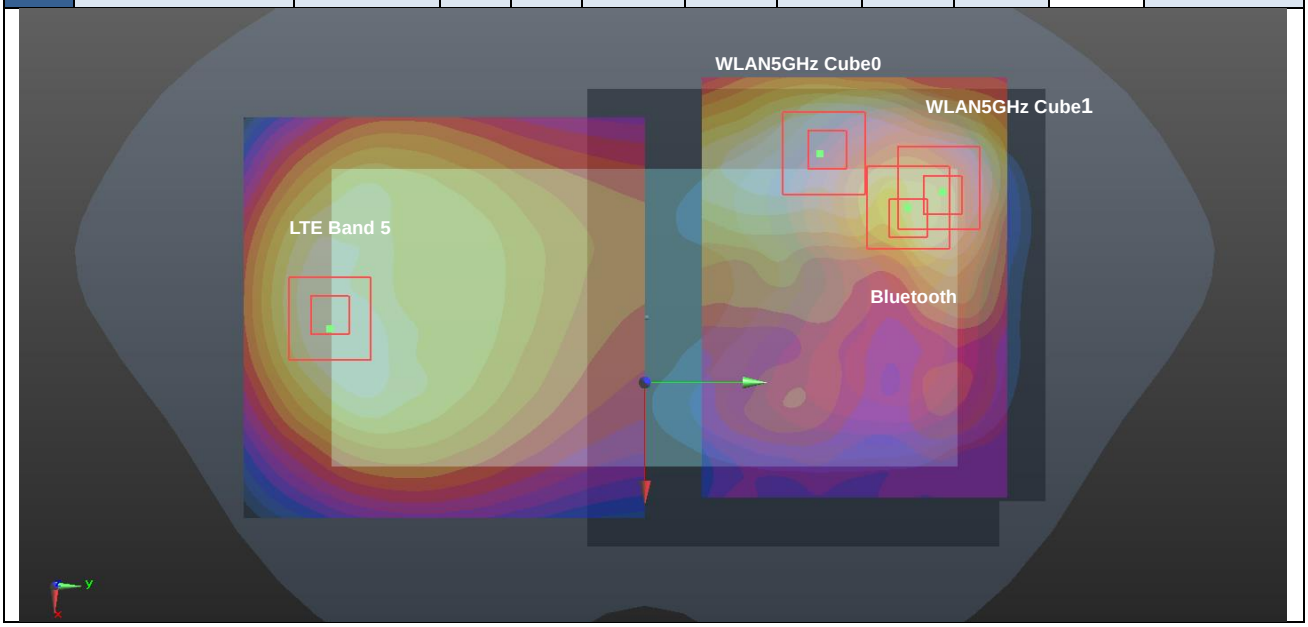
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case #33	WCDMA V	Back	1.278	5mm	1.3	-79.7	-1.27	152.0	2.51	0.03	Not required
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WCDMA V	Back	1.278	5mm	1.3	-79.7	-1.27	134.2	2.51	0.03	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	WCDMA V	Back	1.278	5mm	1.3	-79.7	-1.27	152.0	2.47	0.03	Not required
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WCDMA V	Back	1.278	5mm	1.3	-79.7	-1.27	159.8	2.47	0.02	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				



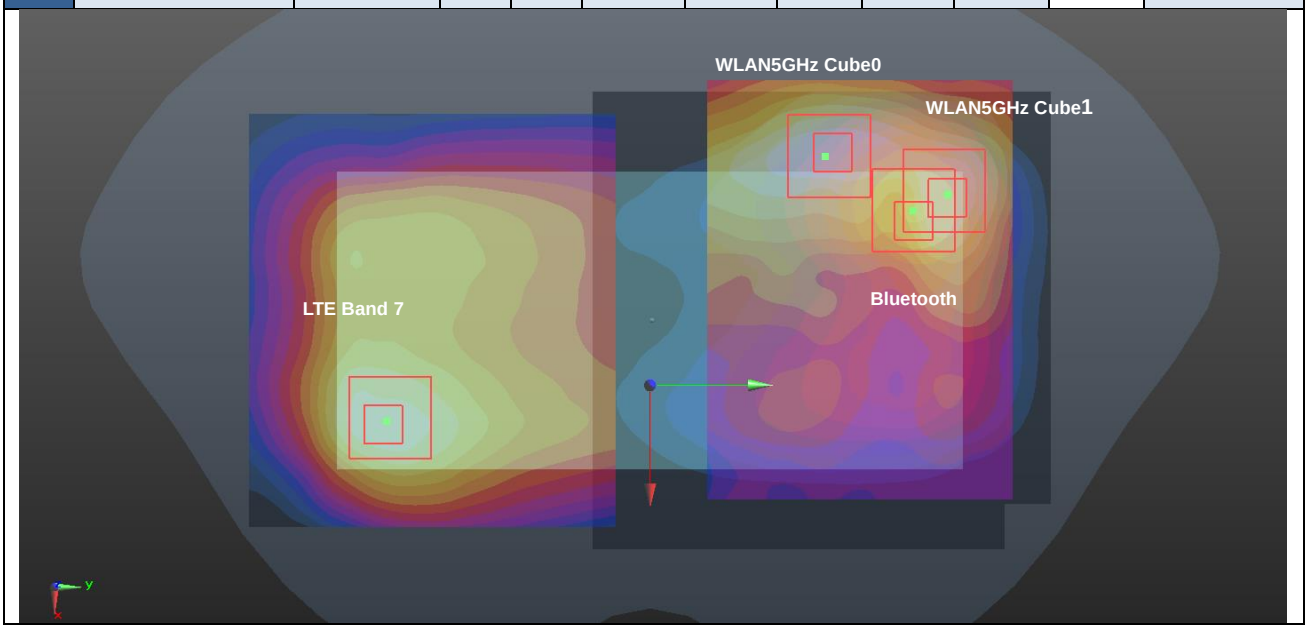
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case #34	LTE Band 2	Back	1.397	5mm	-15	-75.1	-1.48	145.4	2.63	0.03	Not required
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 2	Back	1.397	5mm	-15	-75.1	-1.48	126.1	2.63	0.03	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	LTE Band 2	Back	1.397	5mm	-15	-75.1	-1.48	145.4	2.59	0.03	Not required
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 2	Back	1.397	5mm	-15	-75.1	-1.48	153.4	2.59	0.03	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				



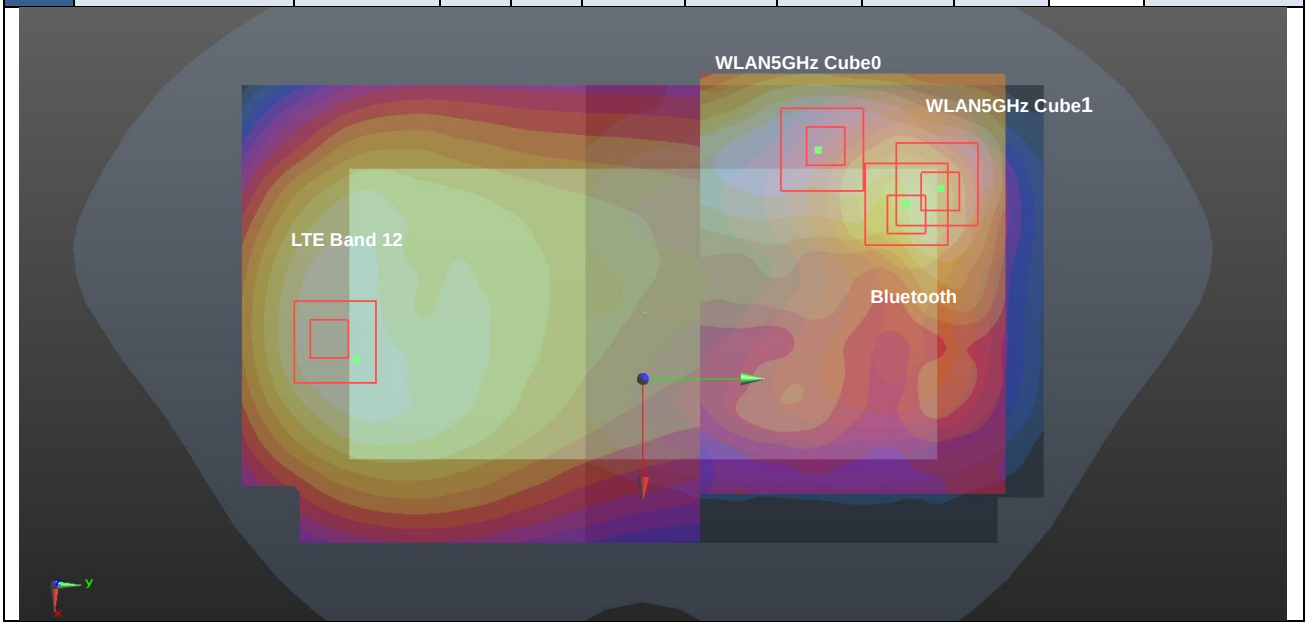
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case #35	LTE Band 5	Back	1.299	5mm	-0.2	-82.5	-1.25	154.5	2.53	0.03	Not required
	WLAN5GHz		1.034	5mm	-35.8	49.2	1.81				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 5	Back	1.299	5mm	-0.2	-82.5	-1.25	136.5	2.53	0.03	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz		1.034	5mm	-35.8	49.2	1.81				
	LTE Band 5	Back	1.299	5mm	-0.2	-82.5	-1.25	154.5	2.49	0.03	Not required
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 5	Back	1.299	5mm	-0.2	-82.5	-1.25	162.3	2.49	0.02	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				



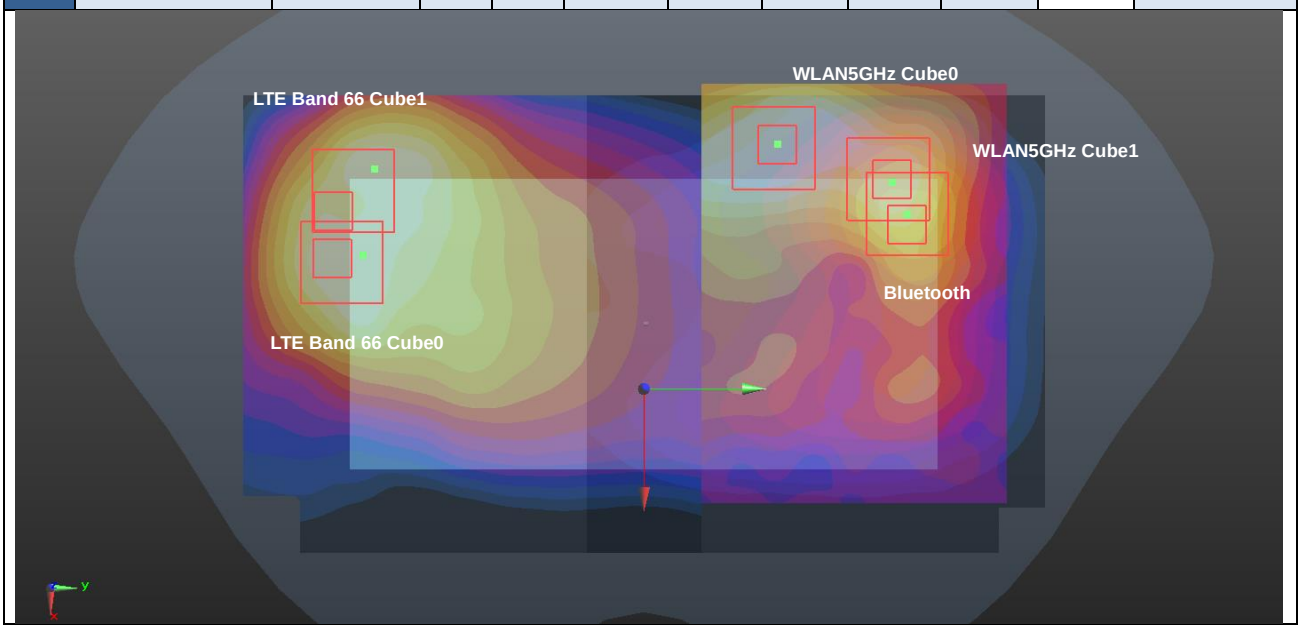
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case #36	LTE Band 7	Back	1.391	5mm	27.4	-72	-1.08	151.3	2.62	0.03	Not required
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 7	Back	1.391	5mm	27.4	-72	-1.08	136.7	2.62	0.03	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	LTE Band 7	Back	1.391	5mm	27.4	-72	-1.08	151.3	2.58	0.03	Not required
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 7	Back	1.391	5mm	27.4	-72	-1.08	158.7	2.58	0.03	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				



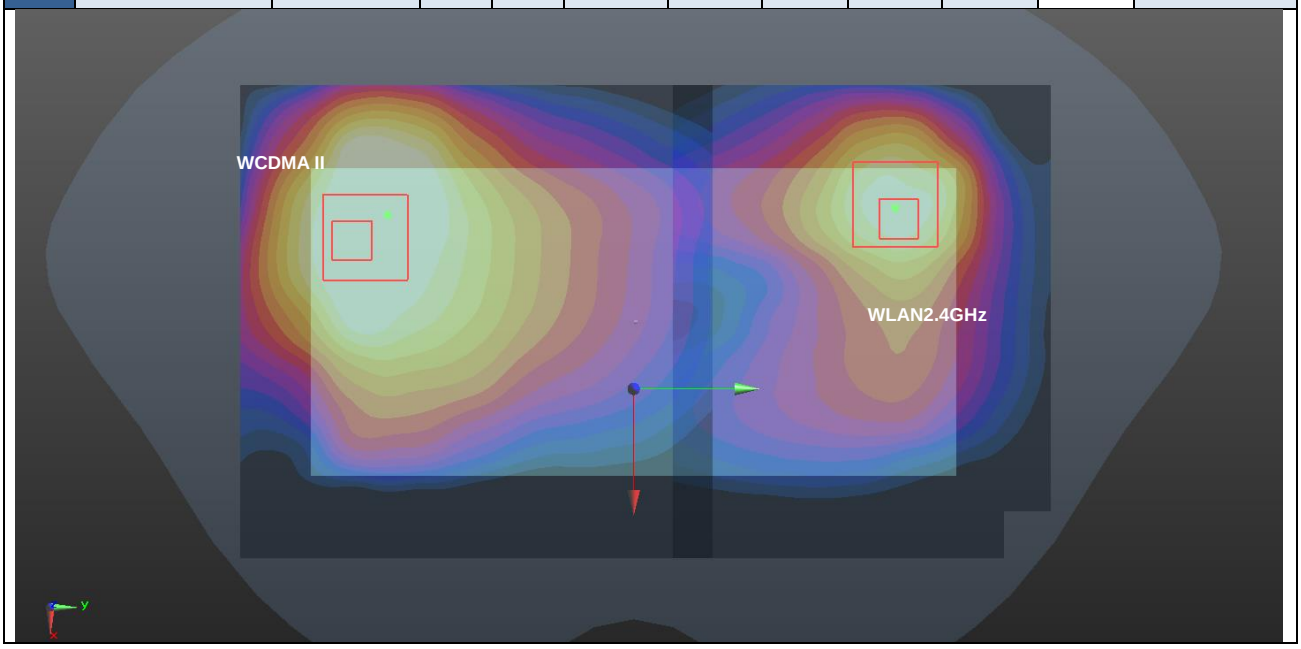
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case #37	LTE Band 12	Back	1.016	5mm	8.8	-81.4	-0.48	155.1	2.25	0.02	Not required
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 12	Back	1.016	5mm	8.8	-81.4	-0.48	138.0	2.25	0.02	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	LTE Band 12	Back	1.016	5mm	8.8	-81.4	-0.48	155.1	2.21	0.02	Not required
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 12	Back	1.016	5mm	8.8	-81.4	-0.48	162.8	2.21	0.02	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				



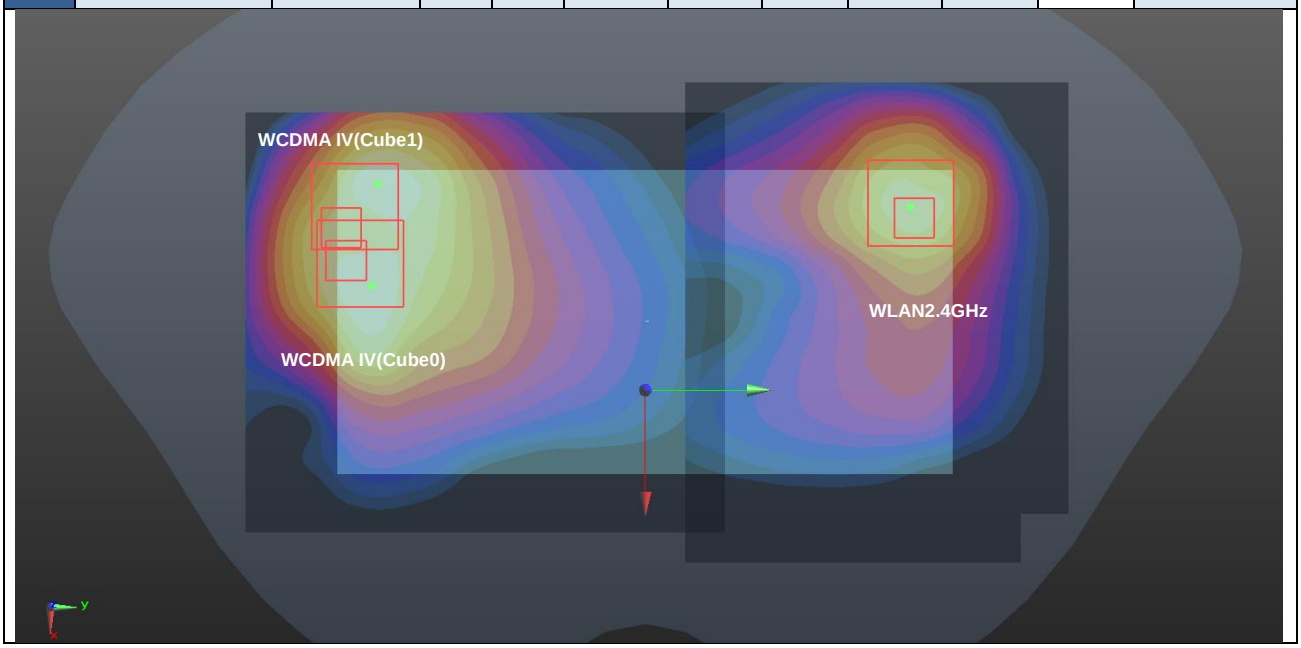
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case #38	LTE Band 66 Cube0	Back	1.065	5mm	-24.5	-81.7	-1.66	151.7	2.29	0.02	Not required
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 66 Cube0	Back	1.065	5mm	-24.5	-81.7	-1.66	131.4	2.29	0.03	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	LTE Band 66 Cube0	Back	1.065	5mm	-24.5	-81.7	-1.66	151.7	2.26	0.02	Not required
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 66 Cube0	Back	1.065	5mm	-24.5	-81.7	-1.66	159.7	2.26	0.02	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	LTE Band 66 Cube1	Back	1.299	5mm	-18	-81.5	-1.62	151.7	2.53	0.03	Not required
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 66 Cube1	Back	1.299	5mm	-18	-81.5	-1.62	132.0	2.53	0.03	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube0		1.034	5mm	-35.8	49.2	1.81				
	LTE Band 66 Cube1	Back	1.299	5mm	-18	-81.5	-1.62	151.7	2.49	0.03	Not required
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	LTE Band 66 Cube1	Back	1.299	5mm	-18	-81.5	-1.62	159.7	2.49	0.02	Not required
	Bluetooth		0.195	5mm	-24.8	70	-1.41				
	WLAN5GHz Cube1		0.995	5mm	-24.2	78	1.83				



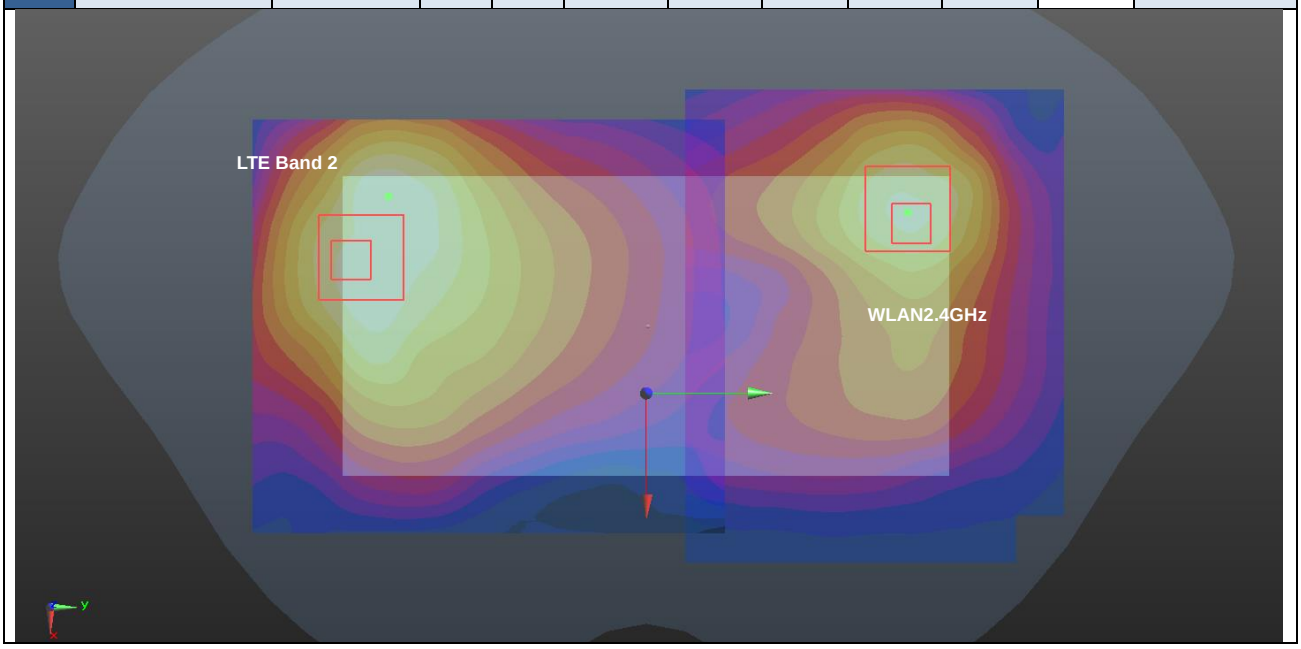
Case #39	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	WCDMA II	Back	2.976	0mm	-43	-67.3	-1.62	137.7	4.52	0.07	Not required
	WLAN2.4GHz		1.546	0mm	-26.8	69.4	-1.01				



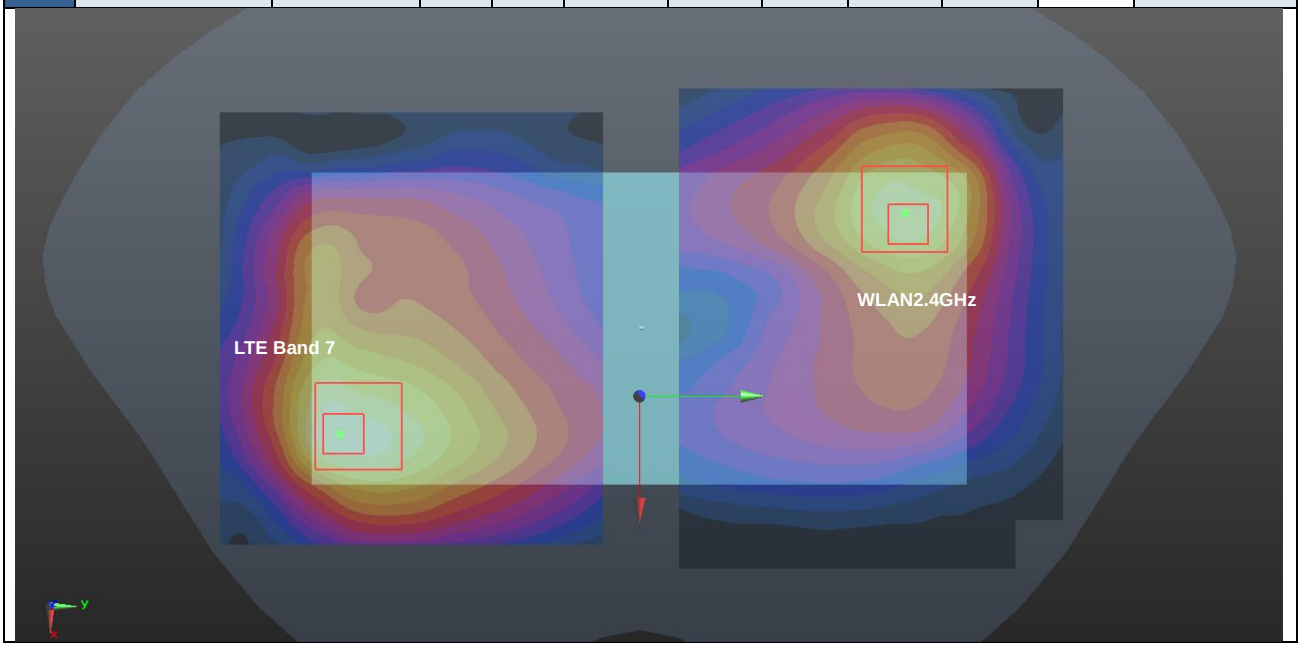
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
Case #40	WCDMA IV(Cube0)	Back	3.057	0mm	-15.4	-74.9	-1.39	144.8	4.60	0.07	Not required
	WLAN2.4GHz		1.546	0mm	-26.8	69.4	-1.01				
	WCDMA IV(Cube1)	Back	3.057	0mm	-18.5	-75	-1.4	144.6	4.60	0.07	Not required
	WLAN2.4GHz		1.546	0mm	-26.8	69.4	-1.01				



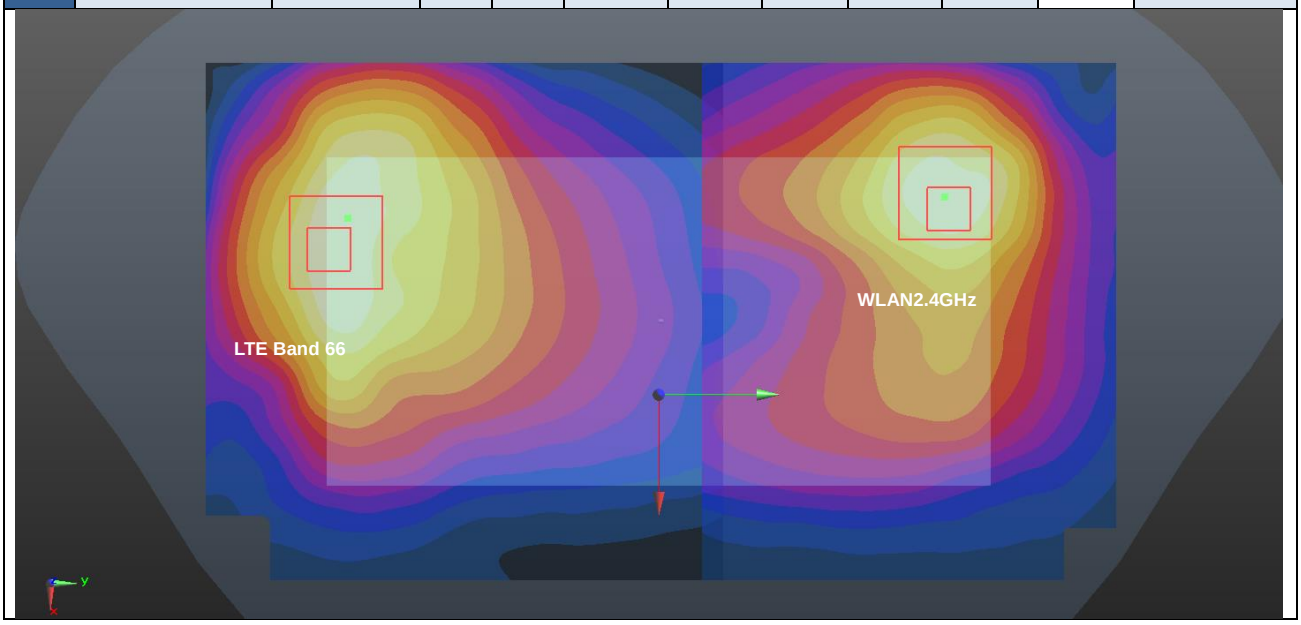
Case #41	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 2	Back	3.064	0mm	-21.8	-76.7	-1.41	146.2	4.61	0.07	Not required
	WLAN2.4GHz		1.546	0mm	-26.8	69.4	-1.01				



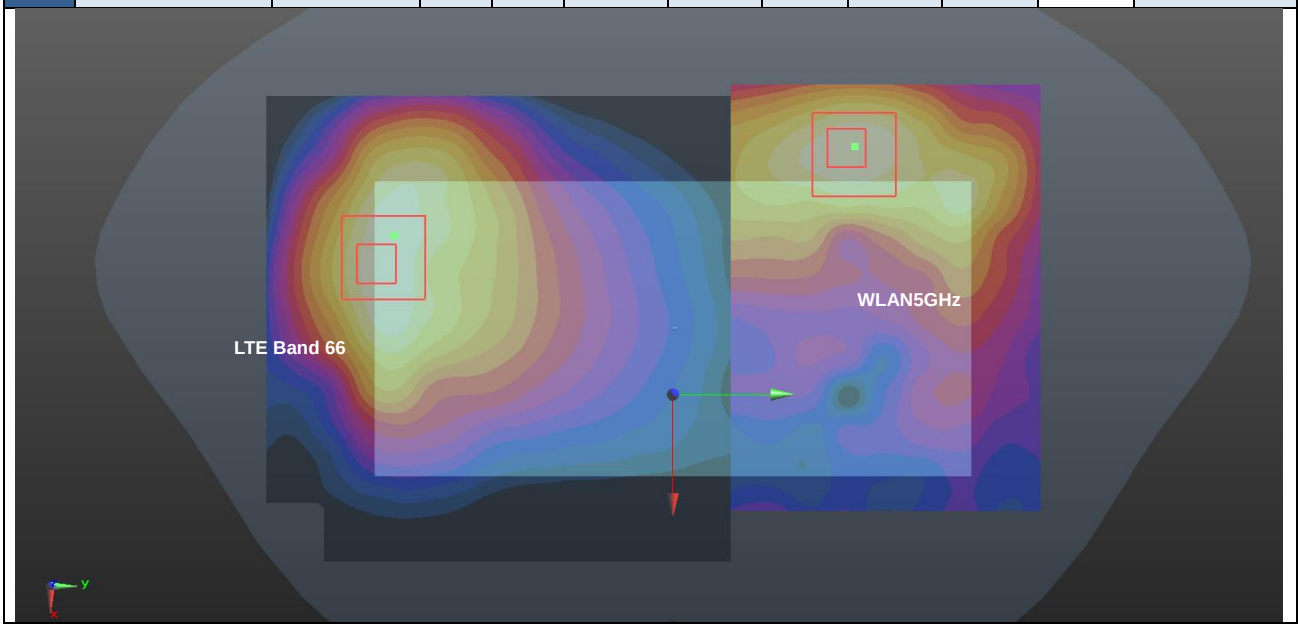
Case #42	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 7	Back	2.931	0mm	27.4	-77	-0.74	156.1	4.48	0.06	Not required
	WLAN2.4GHz		1.546	0mm	-26.8	69.4	-1.01				



Case #43	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 66	Back	3.429	0mm	-8	-73.6	-1.18	144.2	4.98	0.08	Not required
	WLAN2.4GHz		1.546	0mm	-26.8	69.4	-1.01				



Case #44	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm) X	Y	Z	3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	LTE Band 66	Back	3.429	0mm	-8	-73.6	-1.18	123.0	4.28	0.07	Not required
	WLAN5GHz		0.847	0mm	-39	45.4	0.92				



17. Supplemental Tuner Tests Results

General Note:

1. The following test procedure was followed to demonstrate that the SAR results in this report represent the appropriate SAR test conditions. For bands with dynamic tuning implemented, SAR will be measured according to the required FCC SAR test procedures with the dynamic tuner active to allow the device to automatically tune to the antenna state for the respective RF exposure test configurations. Additional single point SAR time-sweep measurements will be evaluated for other tuner states to determine that the other tuner configurations would result in equivalent or lower SAR values. The additional tuner hardware has no influence to the antenna characteristics, other than impedance matching.
2. To evaluate all of the tuner states, the 144 tuner states are divided evenly among bands (except for LTE band7), mode and exposure combinations so that at least one single point SAR measurement is measured in each configuration. Single point time-sweep measurements will be performed at the peak SAR location determined by the zoom scan of the configuration with the highest reported SAR for each combination. The tuner state will be established remotely so that the device is not moved for the entire series of single point SAR for the tuner states in each combination. The SAR probe will remain stationary at the same position throughout the entire series of single point measurements for each combination.
3. This device supports LTE B4 / B17 and B66 / B12. Since the supported frequency span for LTE B4 / B17 falls completely within the supports frequency span for LTE B66 / B12, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, chose LTE B66 / B12 for dynamic antenna analysis.
4. According to workshop 2019, if any single point SAR measurement result is > 1.2 W/kg for a band/exposure condition combination set, all supported tuner states are evaluated with single point SAR measurements for the combination. So we verified the single point SAR that bands with SAR value high than 1.2W/Kg.
5. The operational decryption contains more information about the design and implementation of the dynamic antenna tuning.

17.1 Supplemental Tuner Head & Body SAR Results

Please refer to Appendix C.

Test Engineer: Nick Hu, Yuan Zhao, Jiaxing Chang, Yuankai Kong

18. Uncertainty Assessment

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg and highest measured 10-g SAR is less 3.75W/kg. Therefore, the measurement uncertainty table is not required in this report.

19. References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”

[2] ANSI/IEEE Std. C95.1-1992, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, September 1992

[3] IEEE Std. 1528-2013, “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”, Sep 2013

[4] SPEAG DASY System Handbook

[5] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.

[6] FCC KDB 865664 D02 v01r02, “RF Exposure Compliance Reporting and Documentation Considerations” Oct 2015.

[7] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015

[8] FCC KDB 648474 D04 v01r03, “SAR Evaluation Considerations for Wireless Handsets”, Oct 2015.

[9] FCC KDB 248227 D01 v02r02, “SAR Guidance for IEEE 802.11 (WiFi) Transmitters”, Oct 2015.

[10] FCC KDB 616217 D04 v01r02, “SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers”, Oct 2015

[11] FCC KDB 941225 D01 v03r01, “3G SAR MEAUREMENT PROCEDURES”, Oct 2015

[12] FCC KDB 941225 D05 v02r05, “SAR Evaluation Considerations for LTE Devices”, Dec 2015

[13] FCC KDB 941225 D05A v01r02, “Rel. 10 LTE SAR Test Guidance and KDB Inquiries”, Oct 2015

[14] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.

------THE END------

Appendix A. Plots of System Performance Check

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.17

System Check_Head_750MHz

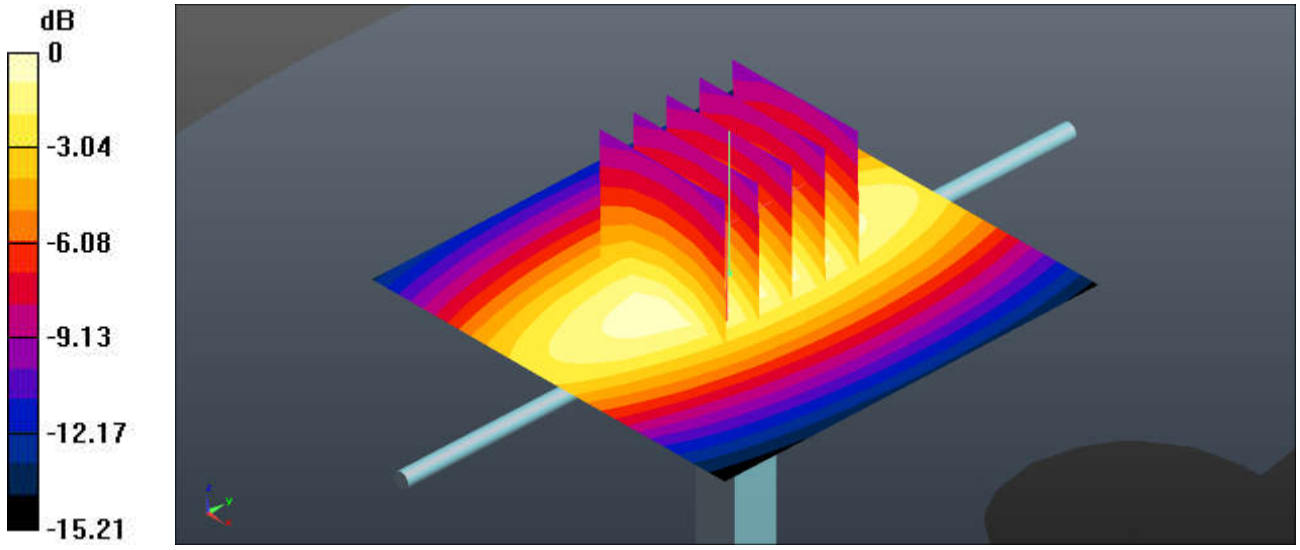
DUT: D750V3 - SN:1087

Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium: HSL_750 Medium parameters used: f = 750 MHz; σ = 0.879 S/m; ε_r = 43.088; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.83, 10.83, 10.83); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.65 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 57.70 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 2.92 W/kg
SAR(1 g) = 2.02 W/kg; SAR(10 g) = 1.35 W/kg
Maximum value of SAR (measured) = 2.64 W/kg



0 dB = 2.65 W/kg = 4.23 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.18

System Check_Head_835MHz

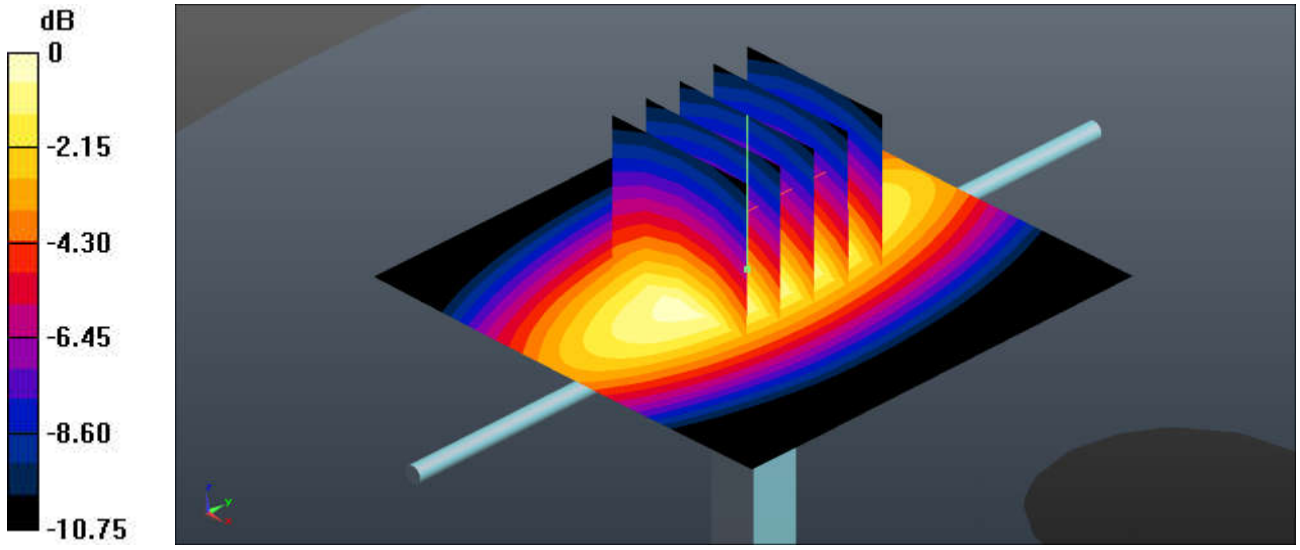
DUT: D835V2 - SN:4d151

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 835 MHz; σ = 0.939 S/m; ε_r = 41.947; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.48, 10.48, 10.48); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.35 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 61.33 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 3.78 W/kg
SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.63 W/kg
Maximum value of SAR (measured) = 3.34 W/kg



0 dB = 3.34 W/kg = 5.24 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.19

System Check_Head_1750MHz

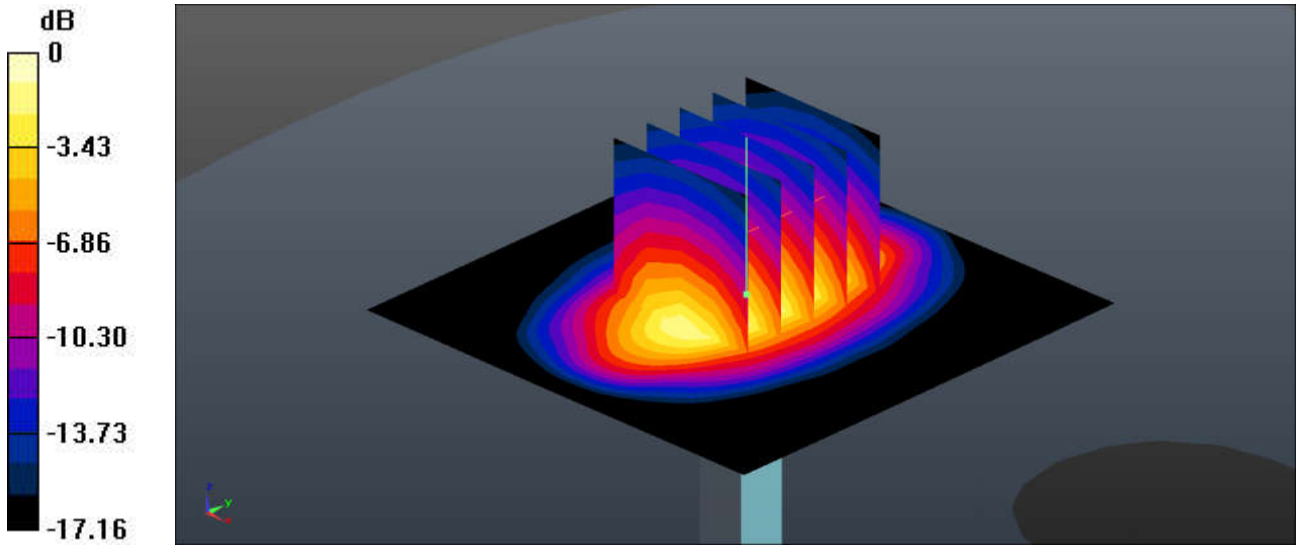
DUT: D1750V2 - SN:1090

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1750 MHz; σ = 1.413 S/m; ε_r = 39.148; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.91, 8.91, 8.91); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.9 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 85.64 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 17.4 W/kg
SAR(1 g) = 9.52 W/kg; SAR(10 g) = 5.06 W/kg
Maximum value of SAR (measured) = 13.7 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.20

System Check_Head_1900MHz

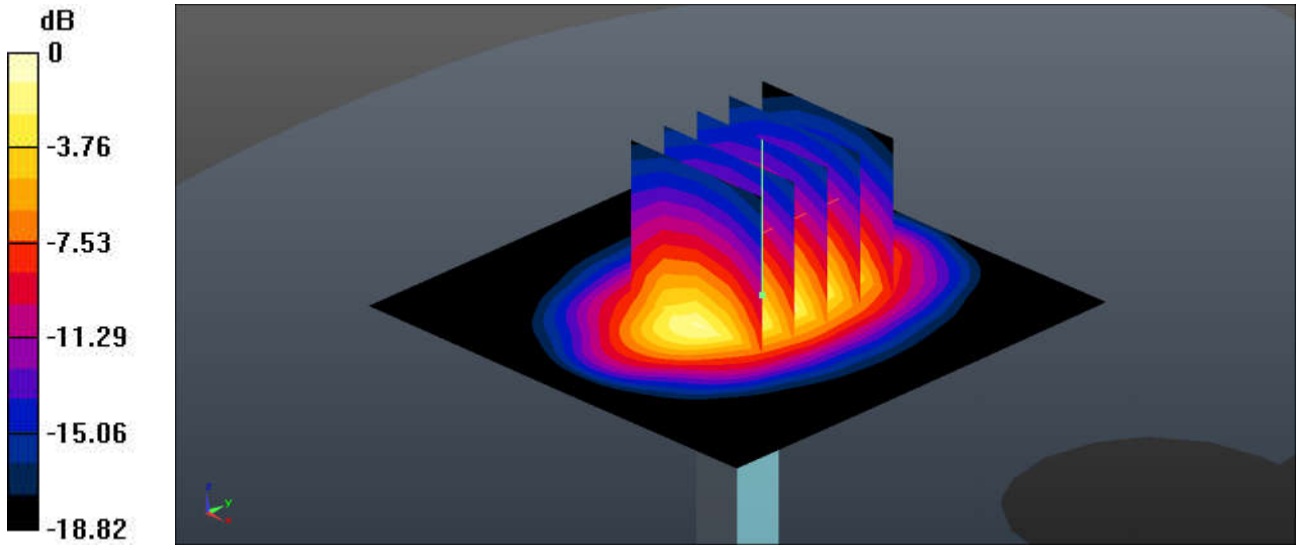
DUT: D1900V2 - SN:5d170

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1900 MHz; σ = 1.43 S/m; ε_r = 40.387; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.5, 8.5, 8.5); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Pin=250mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.0 W/kg

Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 89.36 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 17.6 W/kg
SAR(1 g) = 9.37 W/kg; SAR(10 g) = 4.79 W/kg
Maximum value of SAR (measured) = 13.6 W/kg



0 dB = 13.6 W/kg = 11.34 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.22

System Check_Head_2450MHz

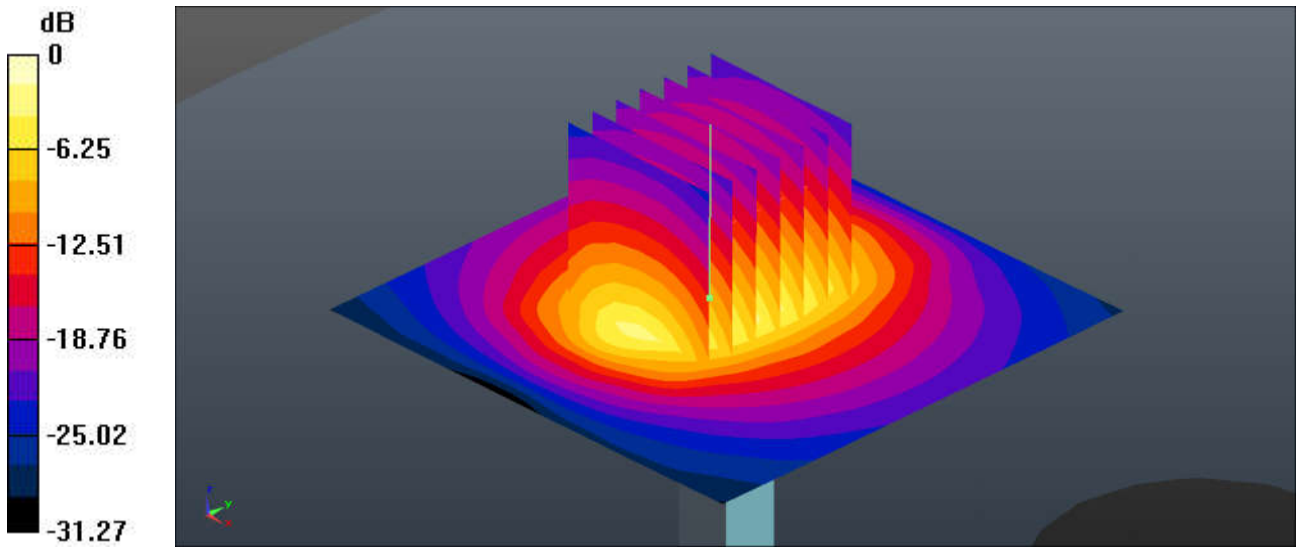
DUT: D2450V2 - SN:908

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: HSL_2450 Medium parameters used: f = 2450 MHz; σ = 1.858 S/m; ε_r = 38.649; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.69, 7.69, 7.69); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Pin=250mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 20.6 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 81.43 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 28.8 W/kg
SAR(1 g) = 13.1 W/kg; SAR(10 g) = 5.85 W/kg
Maximum value of SAR (measured) = 20.6 W/kg



0 dB = 20.6 W/kg = 13.14 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.21

System Check_Head_2600MHz

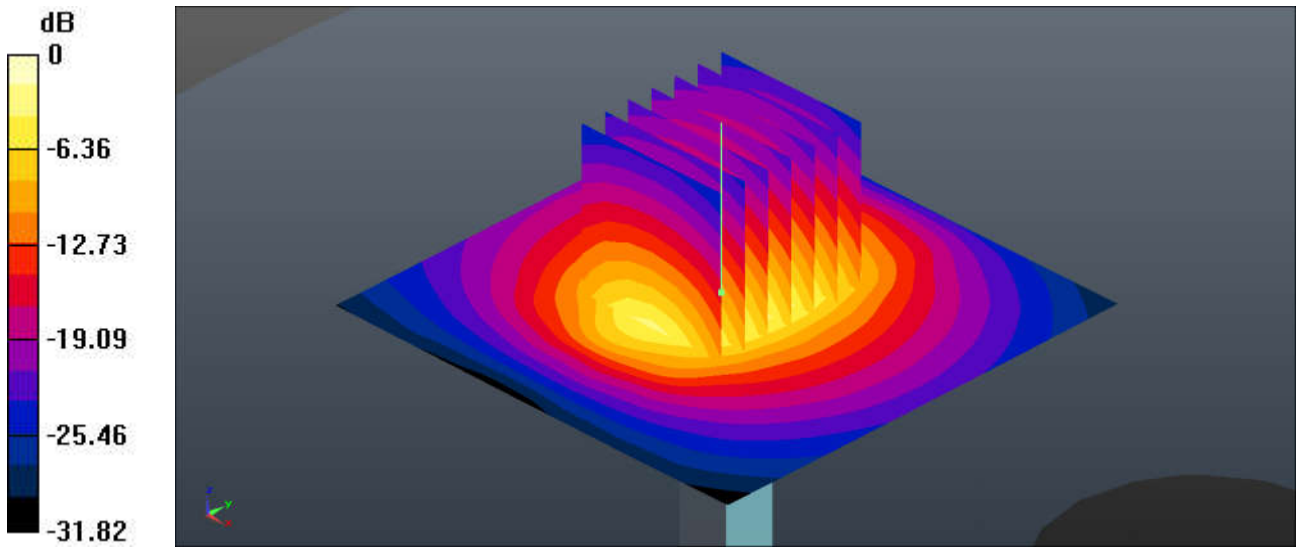
DUT: D2600V2 - SN:1061

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2600 MHz; σ = 2.049 S/m; ε_r = 38.26; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.38, 7.38, 7.38); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Pin=250mW/Area Scan (71x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 22.7 W/kg

Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 83.42 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 32.7 W/kg
SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.12 W/kg
Maximum value of SAR (measured) = 22.9 W/kg



0 dB = 22.7 W/kg = 13.56 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.10.4

System Check_Head_5250MHz

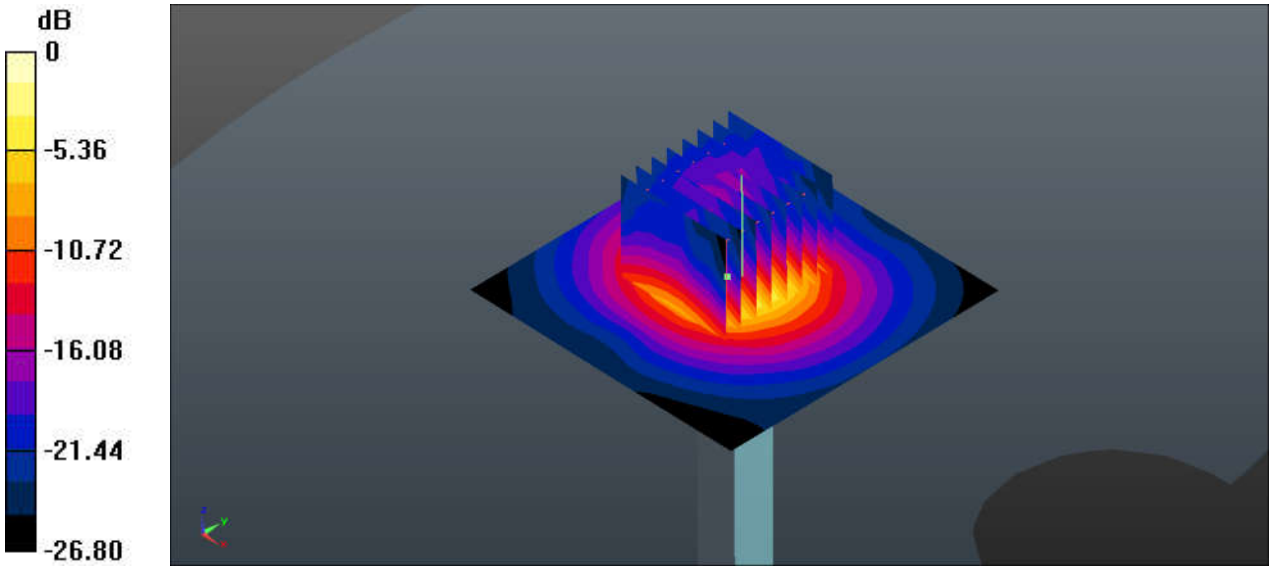
DUT: D5GHzV2-SN:1128

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: HSL_5000 Medium parameters used: f = 5250 MHz; σ = 4.6 S/m; ε_r = 36.384; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.6 ℃

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-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 18.2 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 40.05 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 29.2 W/kg
SAR(1 g) = 7.82 W/kg; SAR(10 g) = 2.33 W/kg
Maximum value of SAR (measured) = 18.0 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.10.6

System Check_Head_5600MHz

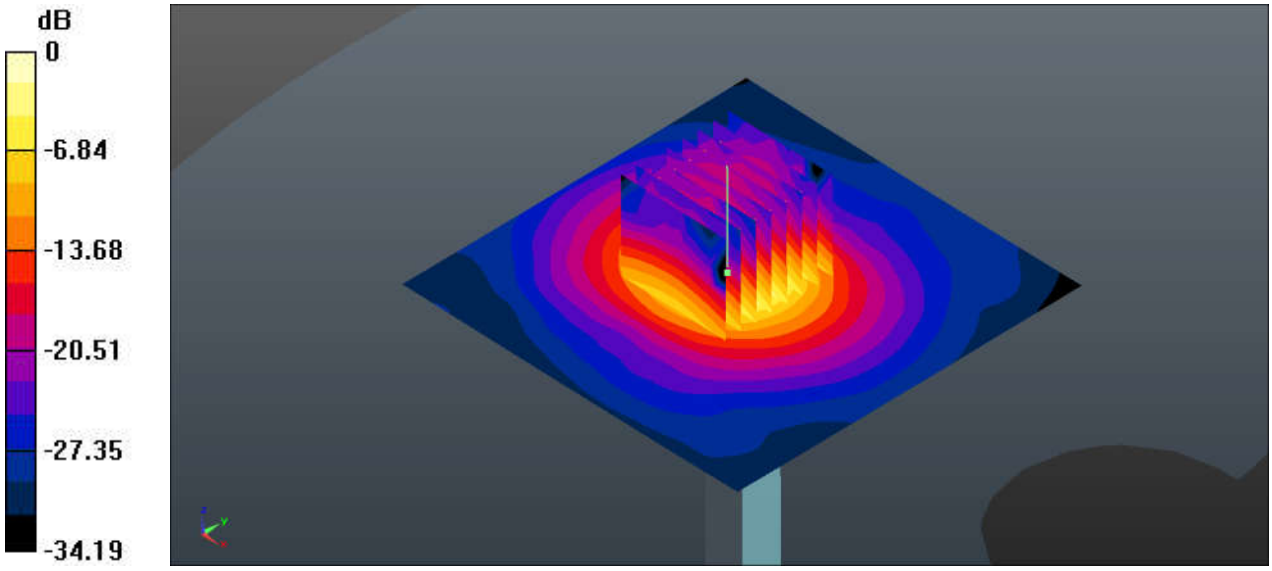
DUT: D5GHzV2-SN:1128

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: HSL_5000 Medium parameters used: f = 5600 MHz; σ = 4.989 S/m; ε_r = 35.806; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃； Liquid Temperature：22.7 ℃

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-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 20.4 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 38.22 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 36.0 W/kg
SAR(1 g) = 8.08 W/kg; SAR(10 g) = 2.27 W/kg
Maximum value of SAR (measured) = 20.4 W/kg



0 dB = 20.4 W/kg = 13.10 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.10.6

System Check_Head_5750MHz

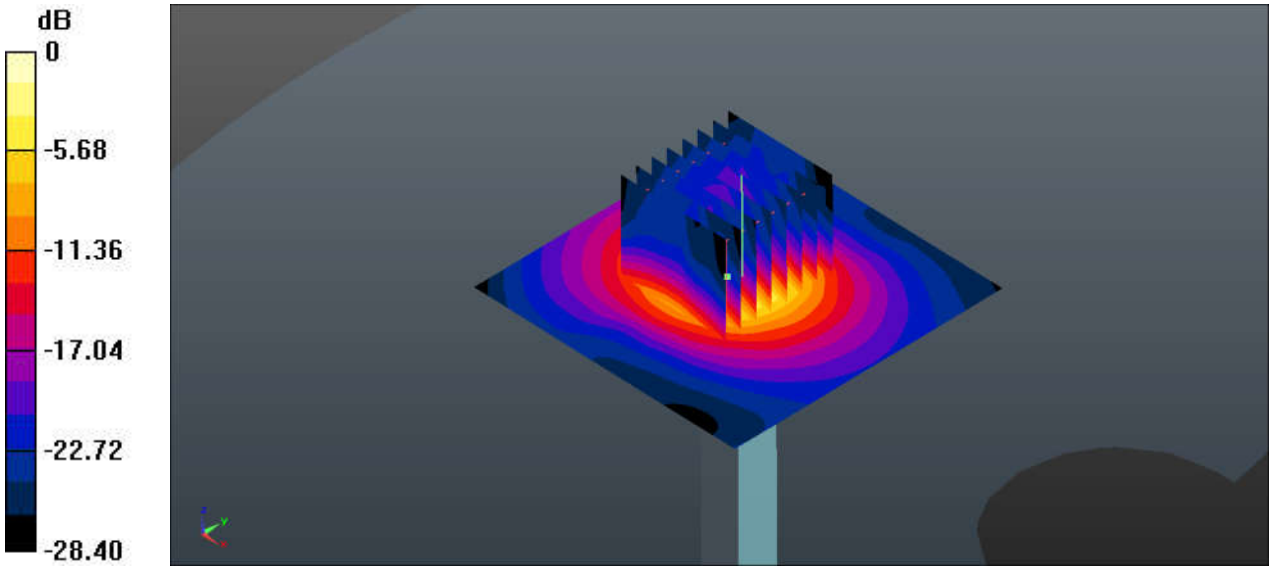
DUT: D5GHzV2-SN:1128

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: HSL_5000 Medium parameters used: f = 5750 MHz; σ = 5.166 S/m; ε_r = 35.55; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

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-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Pin=100mW/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 20.1 W/kg

Pin=100mW/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 37.93 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 33.5 W/kg
SAR(1 g) = 7.89 W/kg; SAR(10 g) = 2.31 W/kg
Maximum value of SAR (measured) = 18.7 W/kg



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

Appendix B. Plots of High SAR Measurement

The plots are shown as follows.

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.18

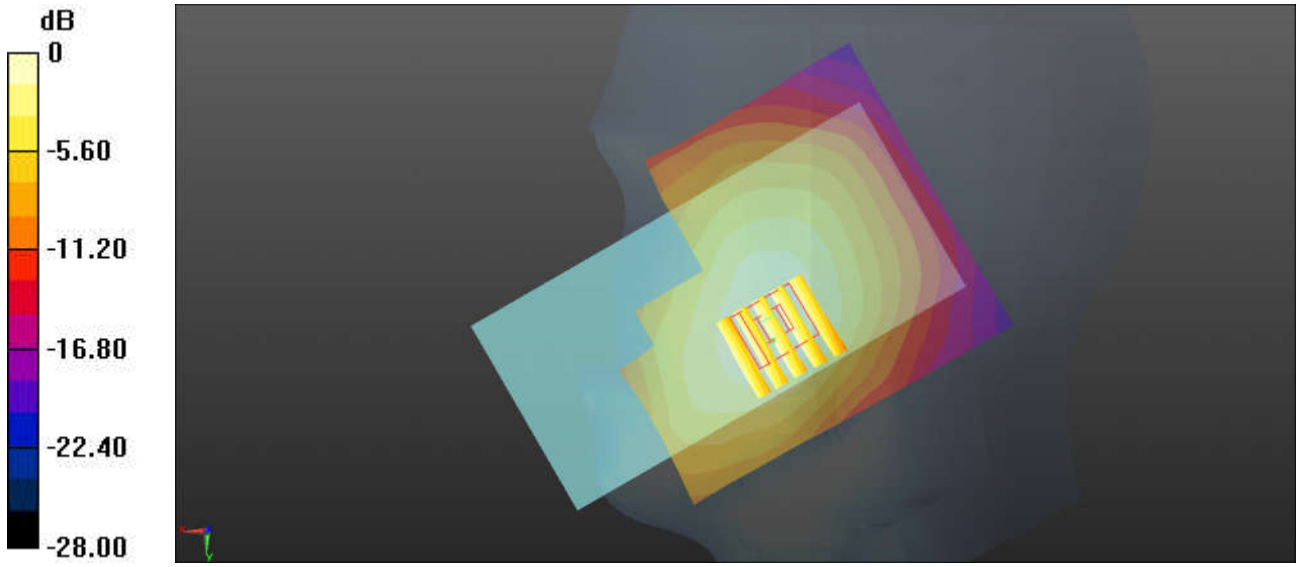
01_GSM850_GPRS 4 Tx slots_Right Cheek_0mm_Ch189

Communication System: UID 0, GSM850-4UP (0); Frequency: 836.4 MHz;Duty Cycle: 1:2.08
Medium: HSL_850 Medium parameters used: f = 836.4 MHz; σ = 0.94 S/m; ε_r = 41.931; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.48, 10.48, 10.48); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch189/Area Scan (81x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.310 W/kg

Ch189/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.245 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.379 W/kg
SAR(1 g) = 0.284 W/kg; SAR(10 g) = 0.209 W/kg
Maximum value of SAR (measured) = 0.316 W/kg



0 dB = 0.310 W/kg = -5.09 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.20

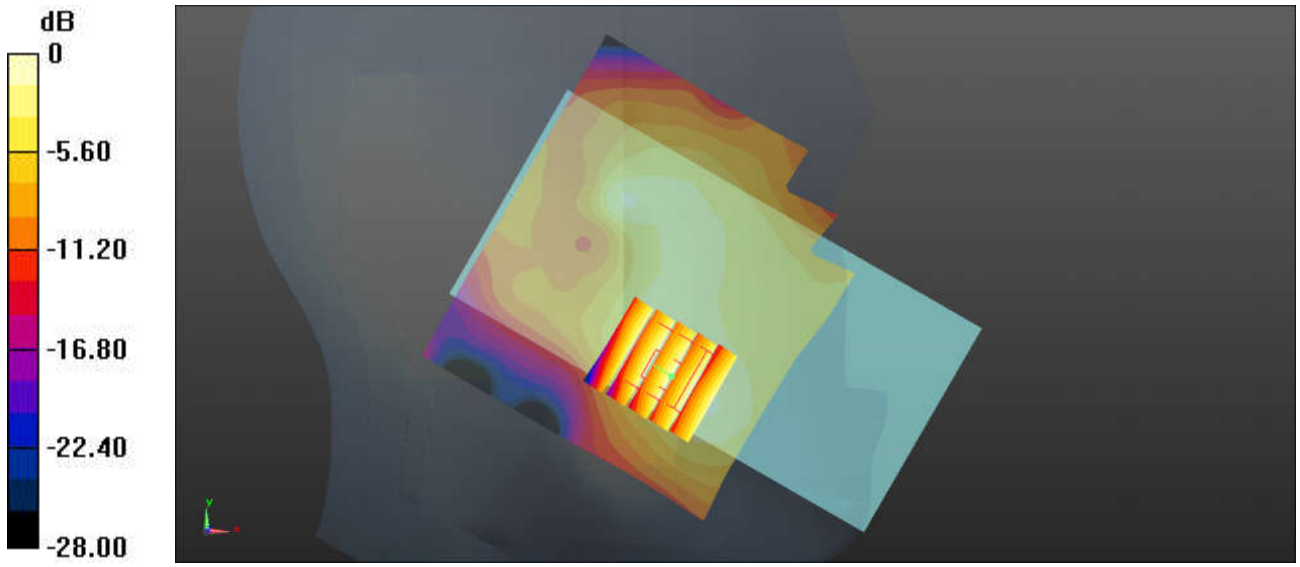
02_GSM1900_GPRS 4 Tx slots_Left Cheek_0mm_Ch661

Communication System: UID 0, PCS-4UP (0); Frequency: 1880 MHz;Duty Cycle: 1:2.08
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.412 S/m; ε_r = 40.469; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.5, 8.5, 8.5); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch661/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.158 W/kg

Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.827 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.173 W/kg
SAR(1 g) = 0.111 W/kg; SAR(10 g) = 0.068 W/kg
Maximum value of SAR (measured) = 0.147 W/kg



0 dB = 0.158 W/kg = -8.01 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.18

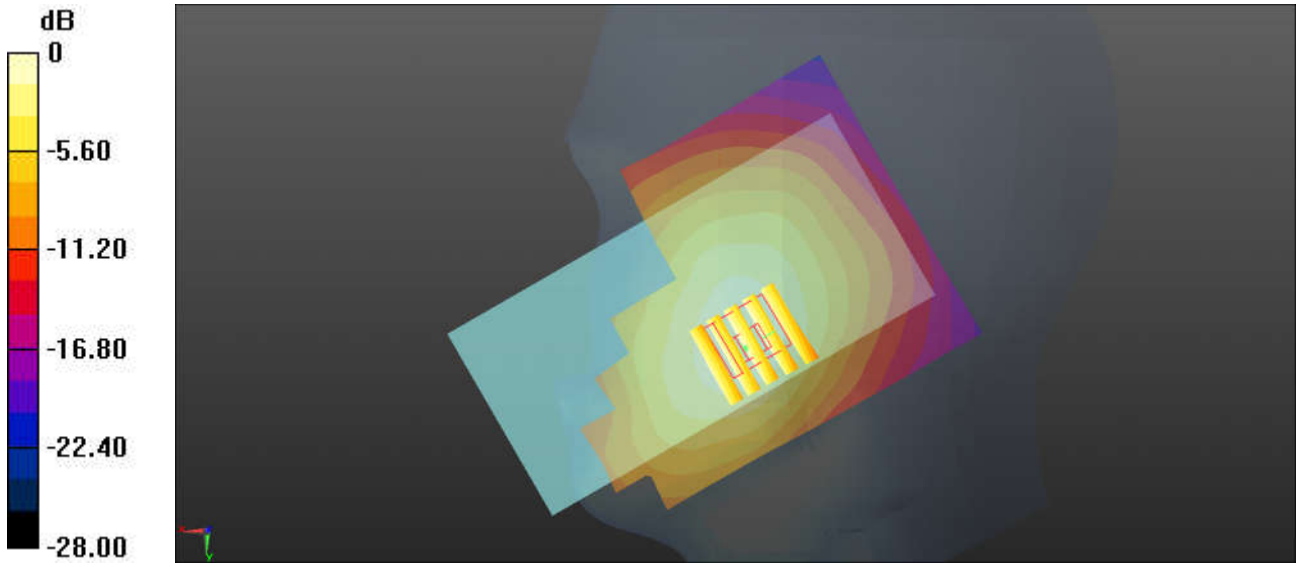
03_WCDMA V_RMC 12.2Kbps_Right Cheek_0mm_Ch4182

Communication System: UID 0, WCDMA (0); Frequency: 836.4 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 836.4 MHz; σ = 0.94 S/m; ε_r = 41.931; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.48, 10.48, 10.48); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch4182/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.322 W/kg

Ch4182/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.325 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.385 W/kg
SAR(1 g) = 0.285 W/kg; SAR(10 g) = 0.206 W/kg
Maximum value of SAR (measured) = 0.313 W/kg



0 dB = 0.322 W/kg = -4.92 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.19

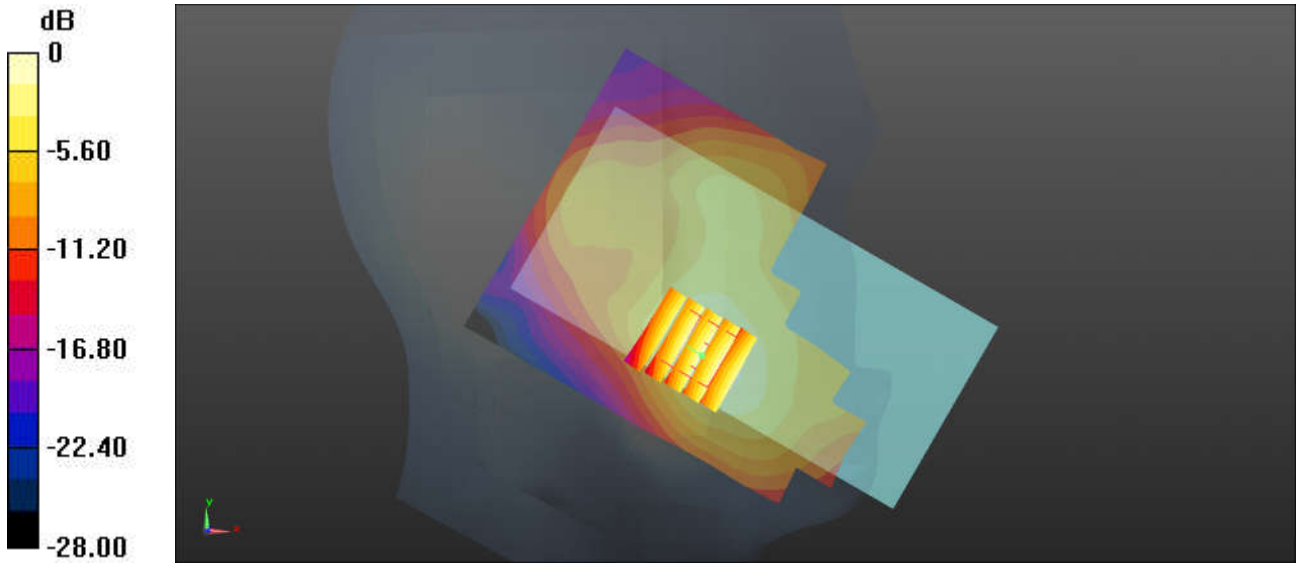
04_WCDMA IV_RMC 12.2Kbps_Left Cheek_0mm_Ch1413

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 = 1.401 S/m; ε_r = 39.179; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.91, 8.91, 8.91); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1413/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.189 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.872 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.213 W/kg
SAR(1 g) = 0.151 W/kg; SAR(10 g) = 0.099 W/kg
Maximum value of SAR (measured) = 0.174 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.20

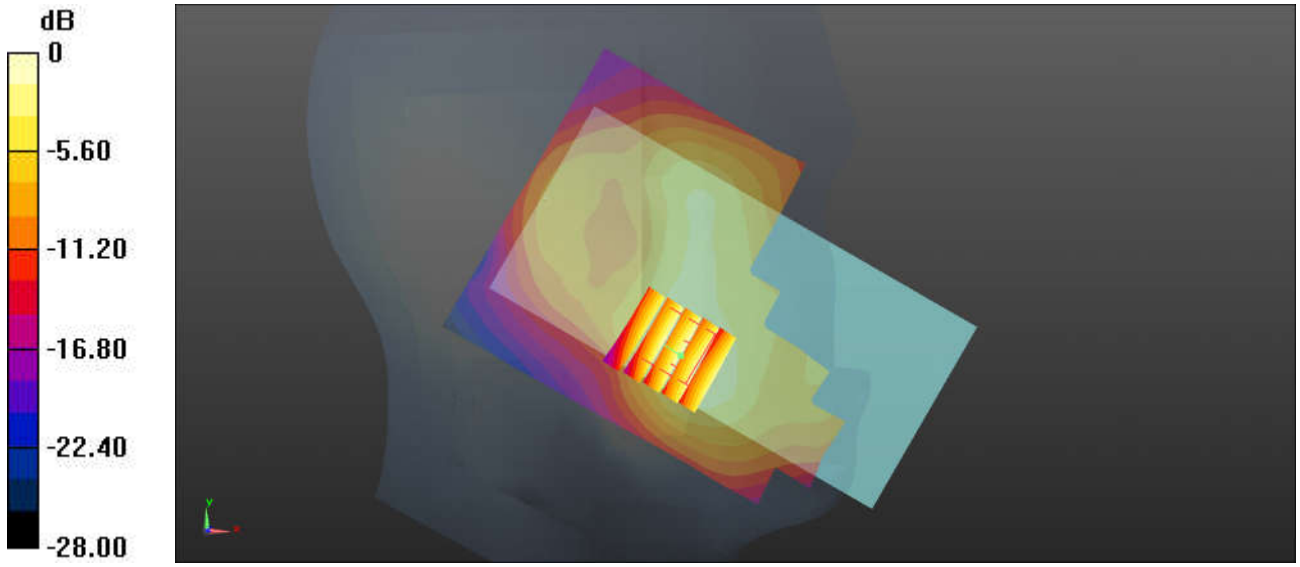
05_WCDMA II_RMC 12.2Kbps_Left Cheek_0mm_Ch9400

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.412 S/m; ε_r = 40.469; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.5, 8.5, 8.5); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch9400/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.308 W/kg

Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.304 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.343 W/kg
SAR(1 g) = 0.233 W/kg; SAR(10 g) = 0.146 W/kg
Maximum value of SAR (measured) = 0.273 W/kg



0 dB = 0.308 W/kg = -5.11 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.20

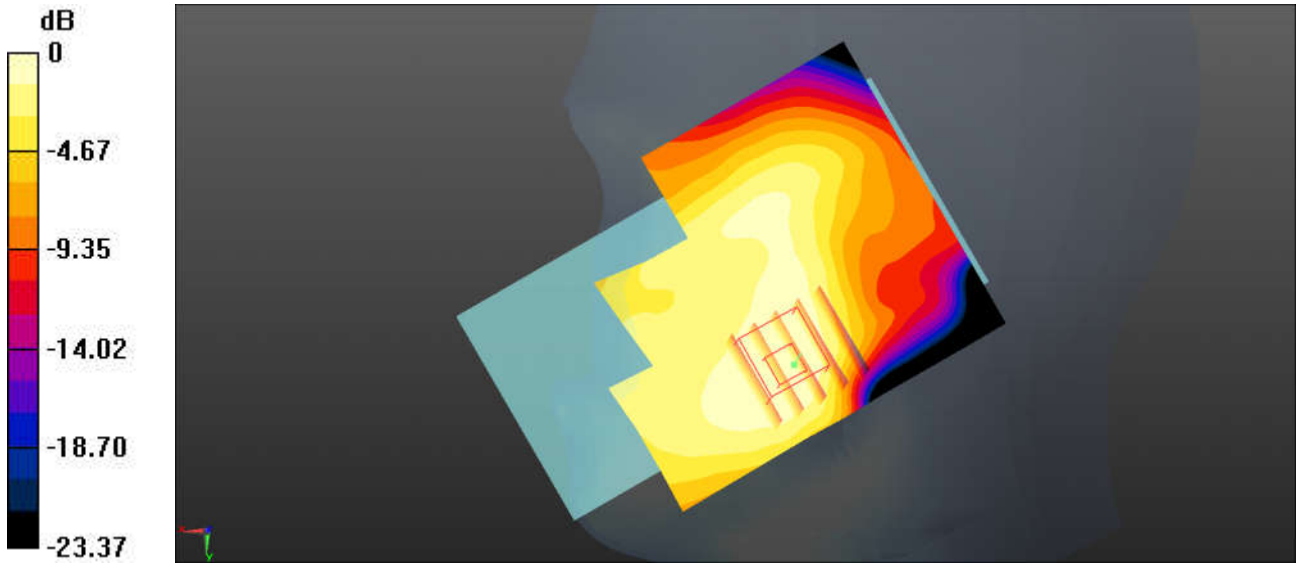
06_LTE Band2_20M_QPSK_1RB_0Offset_Right Cheek_0mm_Ch18900

Communication System: UID 0, LTE-FDD (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.412 S/m; ε_r = 40.469; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.5, 8.5, 8.5); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch18900/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.184 W/kg

Ch18900/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.535 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.203 W/kg
SAR(1 g) = 0.131 W/kg; SAR(10 g) = 0.087 W/kg
Maximum value of SAR (measured) = 0.172 W/kg



0 dB = 0.172 W/kg = -7.64 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.18

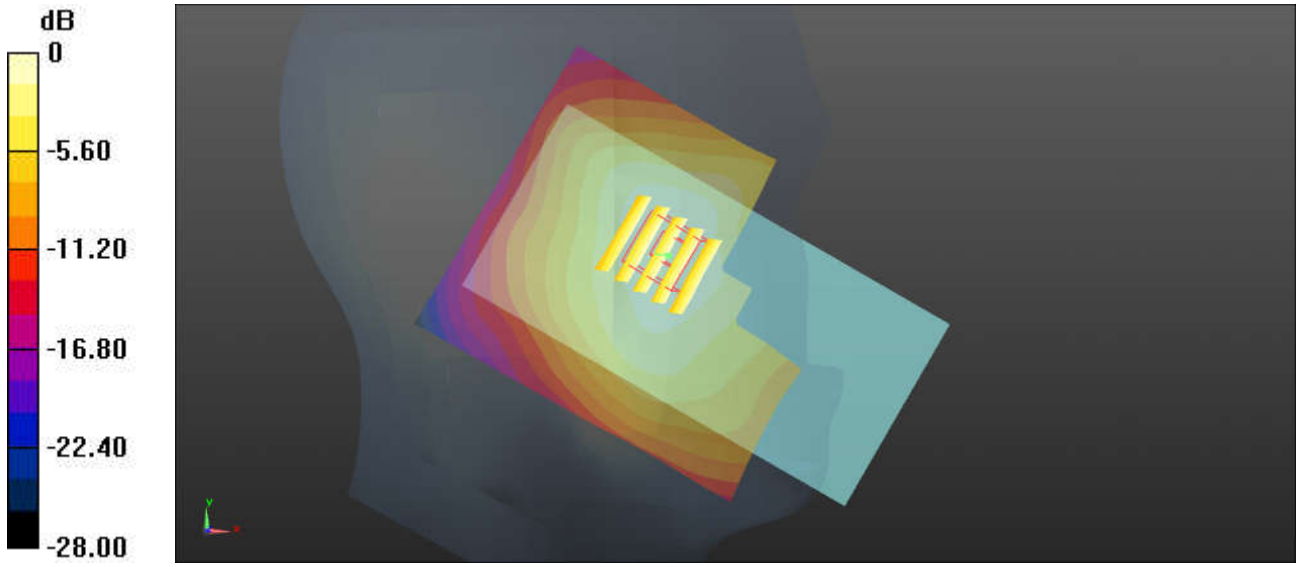
07_LTE Band 5_10M_1RB_0Offset_Left Cheek_0mm_Ch20525

Communication System: UID 0, LTE-FDD (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 836.5 MHz; σ = 0.94 S/m; ε_r = 41.93; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.48, 10.48, 10.48); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch20525/Area Scan (81x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.185 W/kg

Ch20525/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.330 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.203 W/kg
SAR(1 g) = 0.165 W/kg; SAR(10 g) = 0.126 W/kg
Maximum value of SAR (measured) = 0.180 W/kg



0 dB = 0.185 W/kg = -7.33 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.17

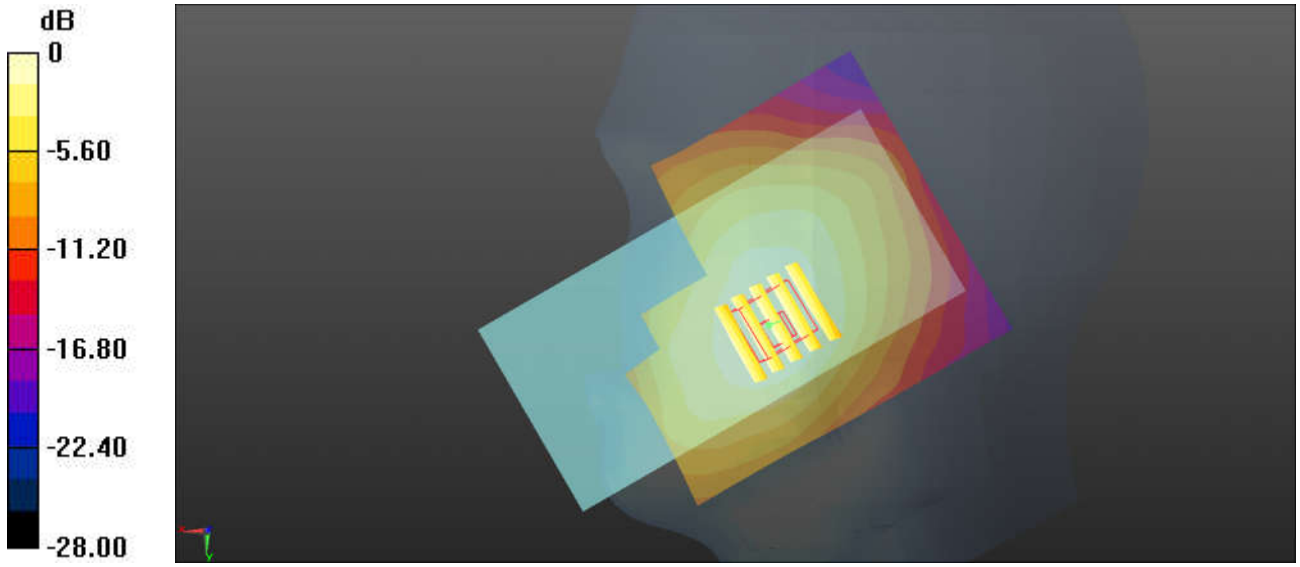
08_LTE Band 12_10M_1RB_0Offset_Right Cheek_0mm_Ch23095

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 = 0.838 S/m; ε_r = 43.73; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.83, 10.83, 10.83); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch23095/Area Scan (81x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.148 W/kg

Ch23095/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.725 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.170 W/kg
SAR(1 g) = 0.134 W/kg; SAR(10 g) = 0.104 W/kg
Maximum value of SAR (measured) = 0.145 W/kg



0 dB = 0.148 W/kg = -8.30 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.19

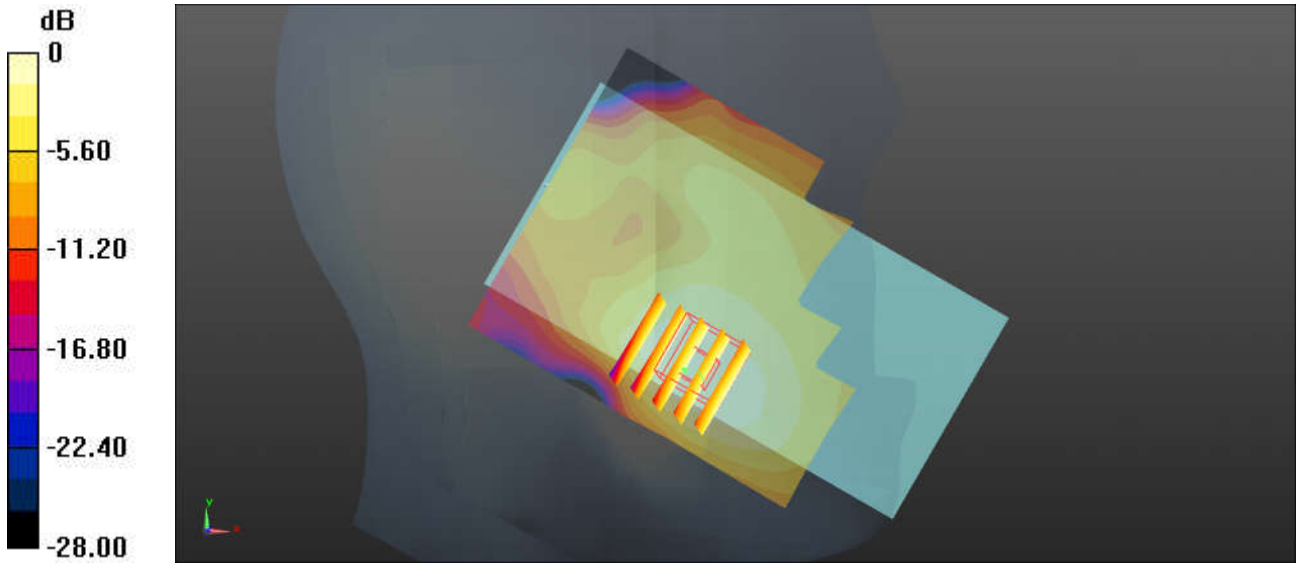
09_LTE Band66_20M_QPSK_1RB_0Offset_Left Cheek_0mm_Ch132322

Communication System: UID 0, LTE-FDD (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1745 MHz; σ = 1.41 S/m; ε_r = 39.159; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.91, 8.91, 8.91); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP:1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch132322/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.115 W/kg

Ch132322/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.615 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.129 W/kg
SAR(1 g) = 0.088 W/kg; SAR(10 g) = 0.058 W/kg
Maximum value of SAR (measured) = 0.111 W/kg



0 dB = 0.115 W/kg = -9.39 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.21

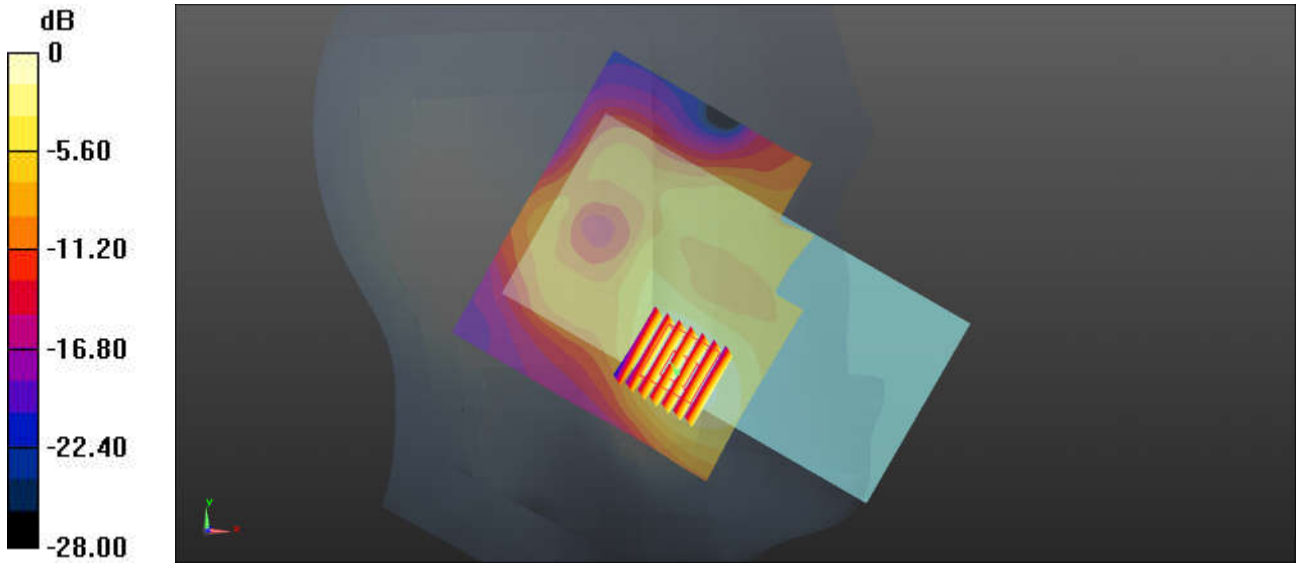
10_LTE Band7_20M_QPSK_1RB_0Offset_Left Cheek_0mm_Ch21100

Communication System: UID 0, LTE-FDD (0); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2535 MHz; σ = 1.969 S/m; ε_r = 38.505; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.38, 7.38, 7.38); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch21100/Area Scan (101x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.350 W/kg

Ch21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.904 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.409 W/kg
SAR(1 g) = 0.225 W/kg; SAR(10 g) = 0.121 W/kg
Maximum value of SAR (measured) = 0.341 W/kg



0 dB = 0.350 W/kg = -4.56 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.22

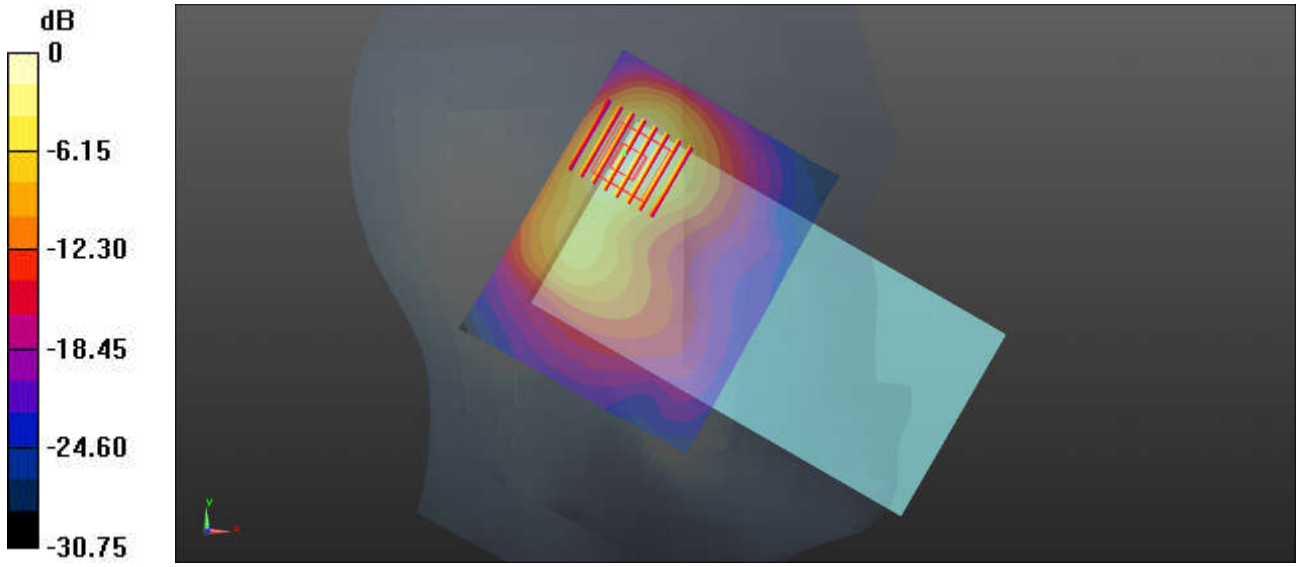
11_WLAN2.4GHz_802.11b 1Mbps_Left Tilted_0mm_Ch6

Communication System: UID 0, 802.11b (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium: HSL_2450 Medium parameters used: f = 2437 MHz; σ = 1.844 S/m; ε_r = 38.707; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.69, 7.69, 7.69); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch6/Area Scan (101x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.16 W/kg

Ch6/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.962 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.78 W/kg
SAR(1 g) = 0.844 W/kg; SAR(10 g) = 0.404 W/kg
Maximum value of SAR (measured) = 1.06 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.22

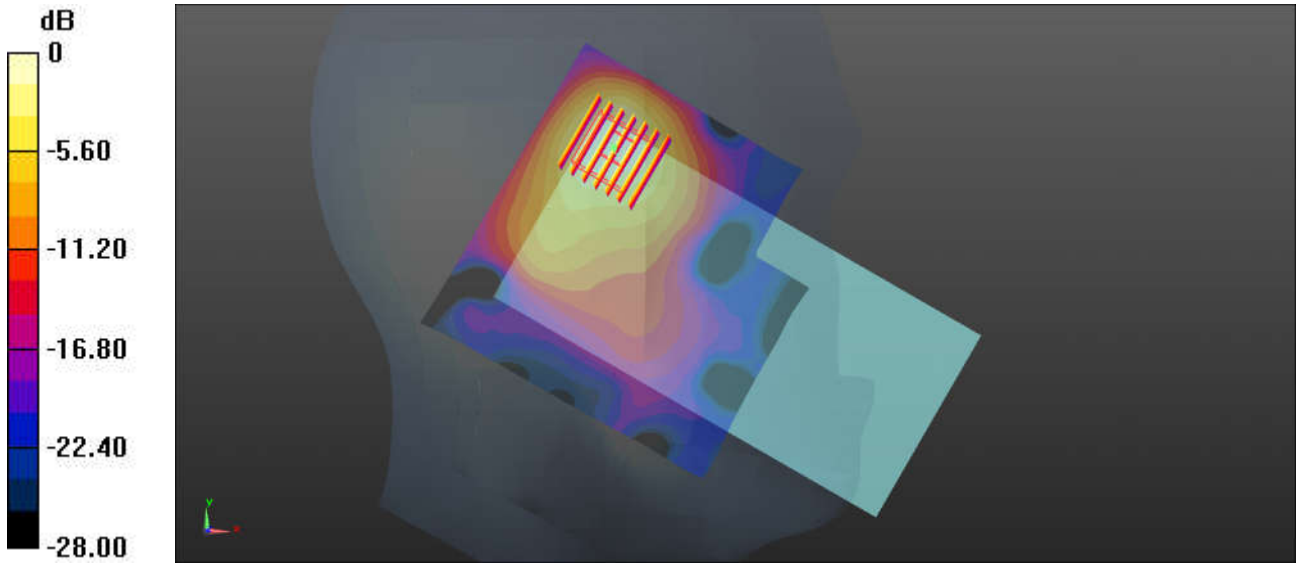
12_Bluetooth_1Mbps_Left Cheek_0mm_Ch39

Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.304
Medium: HSL_2450 Medium parameters used: f = 2441 MHz; σ = 1.848 S/m; ε_r = 38.689; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.69, 7.69, 7.69); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch39/Area Scan (101x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.227 W/kg

Ch39/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.843 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.362 W/kg
SAR(1 g) = 0.175 W/kg; SAR(10 g) = 0.086 W/kg
Maximum value of SAR (measured) = 0.226 W/kg



0 dB = 0.227 W/kg = -6.44 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.10.4

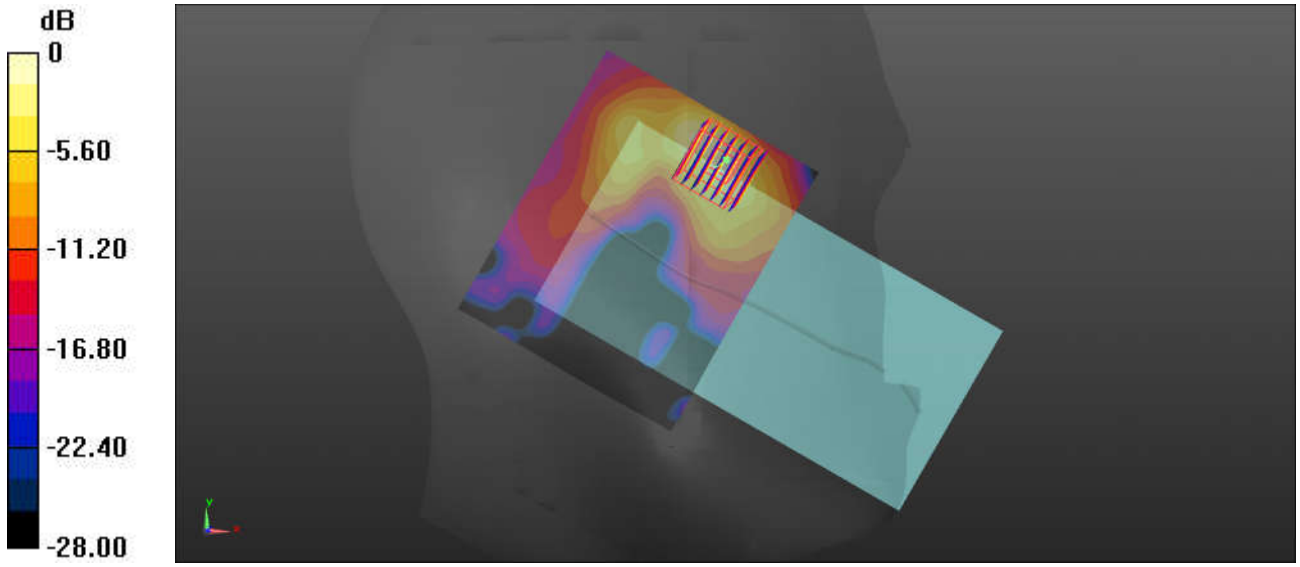
13_WLAN5GHz_802.11a 6Mbps_Left Cheek_0mm_Ch52

Communication System: UID 0, 802.11a (0); Frequency: 5260 MHz;Duty Cycle: 1:1.018
Medium: HSL_5000 Medium parameters used: f = 5260 MHz; σ = 4.617 S/m; ε_r = 36.37; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

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-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch52/Area Scan (111x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.06 W/kg

Ch52/Zoom Scan (7x7x16)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 7.140 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 4.36 W/kg
SAR(1 g) = 0.909 W/kg; SAR(10 g) = 0.289 W/kg
Maximum value of SAR (measured) = 2.51 W/kg



0 dB = 2.06 W/kg = 3.14 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.10.6

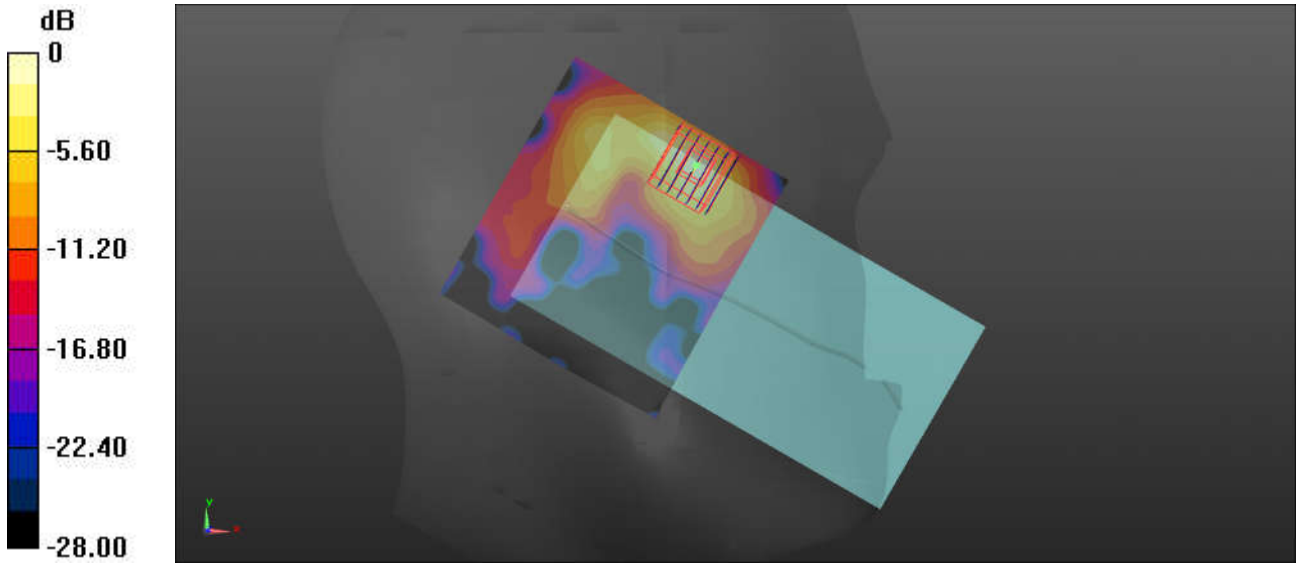
14_WLAN5GHz_802.11a 6Mbps_Left Cheek_0mm_Ch116

Communication System: UID 0, 802.11a (0); Frequency: 5580 MHz;Duty Cycle: 1:1.018
Medium: HSL_5000 Medium parameters used: f = 5580 MHz; σ = 4.97 S/m; ε_r = 35.87; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

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-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch116/Area Scan (101x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.08 W/kg

Ch116/Zoom Scan (7x7x16)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 8.084 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 4.00 W/kg
SAR(1 g) = 0.744 W/kg; SAR(10 g) = 0.222 W/kg
Maximum value of SAR (measured) = 2.12 W/kg



0 dB = 2.08 W/kg = 3.18 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.10.6

15_WLAN5GHz_802.11a 6Mbps_Left Cheek_0mm_Ch165

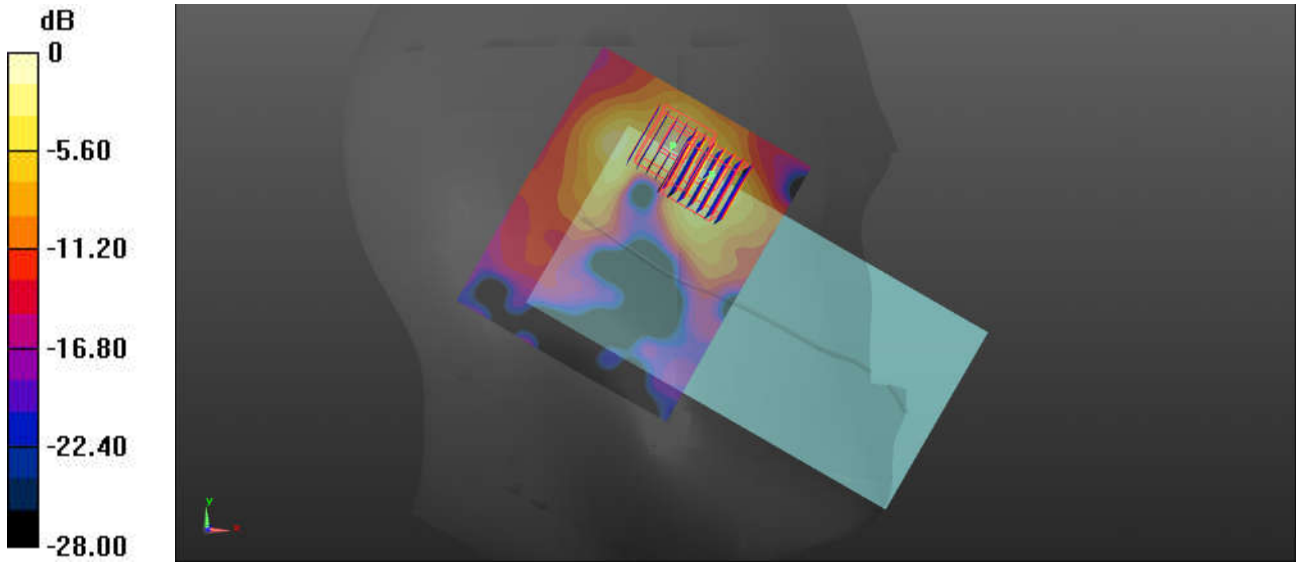
Communication System: UID 0, 802.11a (0); Frequency: 5825 MHz;Duty Cycle: 1:1.018
Medium: HSL_5000 Medium parameters used: f = 5825 MHz; σ = 5.249 S/m; ε_r = 35.438; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

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-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch165/Area Scan (111x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.55 W/kg

Ch165/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 6.945 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.10 W/kg
SAR(1 g) = 0.588 W/kg; SAR(10 g) = 0.184 W/kg
Maximum value of SAR (measured) = 1.50 W/kg

Ch165/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 6.945 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.65 W/kg
SAR(1 g) = 0.550 W/kg; SAR(10 g) = 0.167 W/kg
Maximum value of SAR (measured) = 1.47 W/kg



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.18

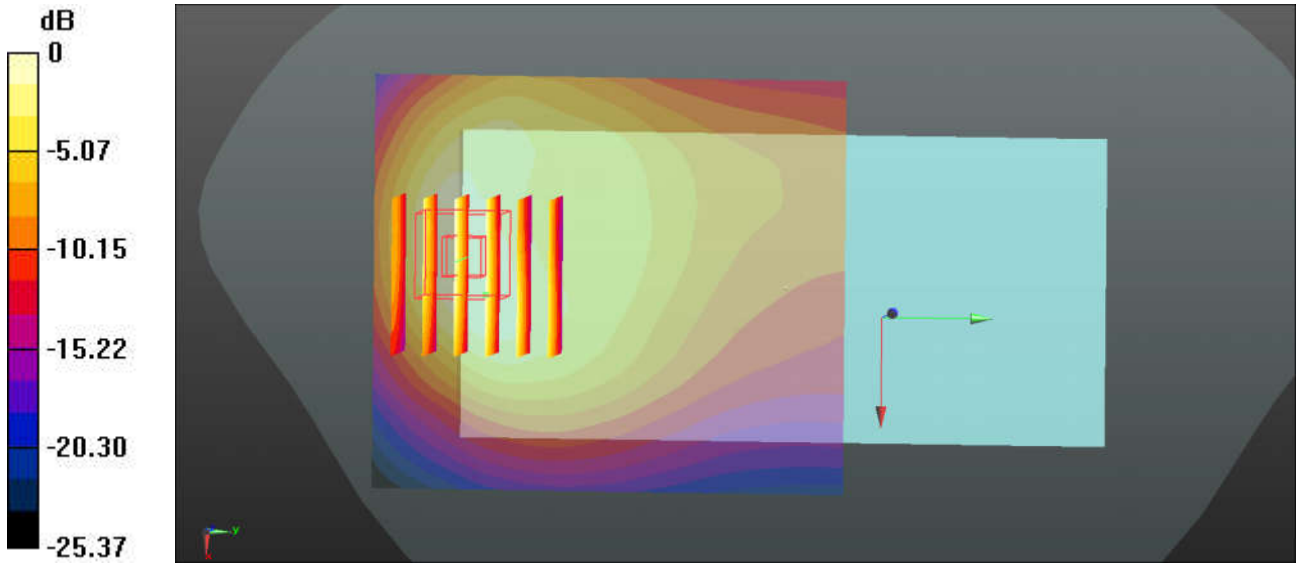
16_GSM850_GPRS 4 Tx slots_Back_5mm_Ch251

Communication System: UID 0, GSM850-4UP (0); Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium: HSL_850 Medium parameters used: f = 849 MHz; σ = 0.952 S/m; ε_r = 41.785; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.48, 10.48, 10.48); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch251/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.03 W/kg

Ch251/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.79 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.521 W/kg
Maximum value of SAR (measured) = 1.24 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.20

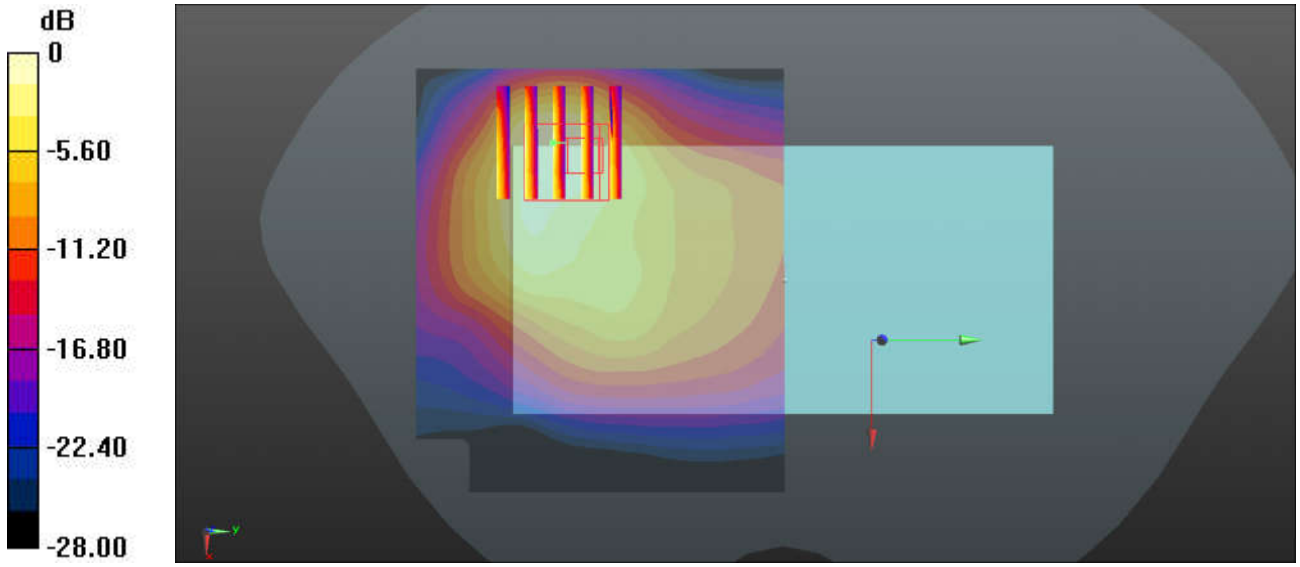
17_GSM1900_GPRS 4 Tx slots_Back_5mm_Ch810

Communication System: UID 0, PCS-4UP (0); Frequency: 1909.8 MHz;Duty Cycle: 1:2.08
Medium: HSL_1900 Medium parameters used: f = 1910 MHz; σ = 1.44 S/m; ε_r = 40.343; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.5, 8.5, 8.5); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch810/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.92 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.871 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 2.39 W/kg
SAR(1 g) = 0.968 W/kg; SAR(10 g) = 0.505 W/kg
Maximum value of SAR (measured) = 1.71 W/kg



0 dB = 1.92 W/kg = 2.83 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.18

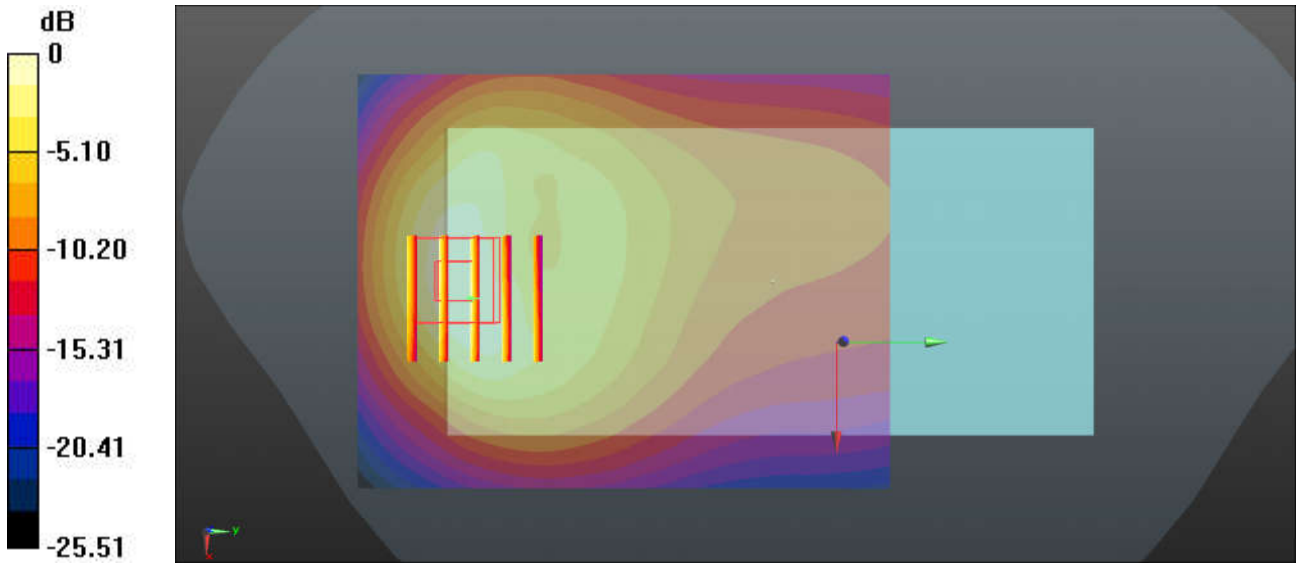
18_WCDMA V_RMC 12.2Kbps_Back_5mm_Ch4233

Communication System: UID 0, WCDMA (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 847 MHz; σ = 0.95 S/m; ε_r = 41.809; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.48, 10.48, 10.48); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch4233/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.31 W/kg

Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.43 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 2.28 W/kg
SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.582 W/kg
Maximum value of SAR (measured) = 1.41 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.19

19_WCDMA IV_RMC 12.2Kbps_Back_5mm_Ch1413

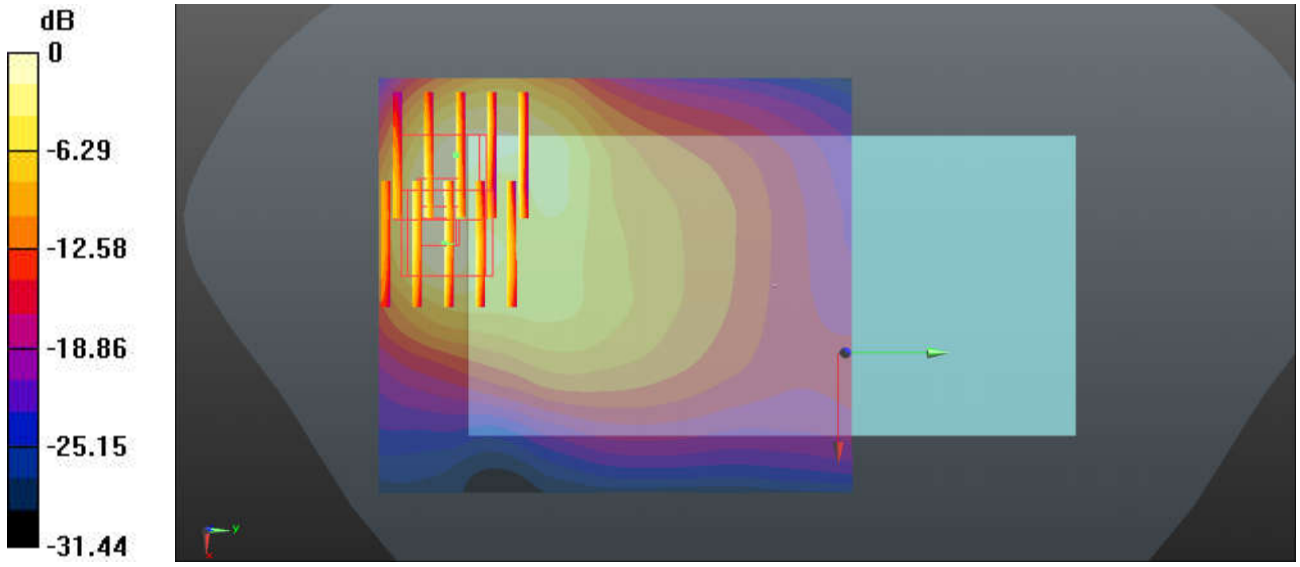
Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1732.6 MHz; σ = 1.401 S/m; ε_r = 39.179; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.91, 8.91, 8.91); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1413/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.82 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.897 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.583 W/kg
Maximum value of SAR (measured) = 1.79 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.897 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.02 W/kg
SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.482 W/kg
Maximum value of SAR (measured) = 1.52 W/kg



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.20

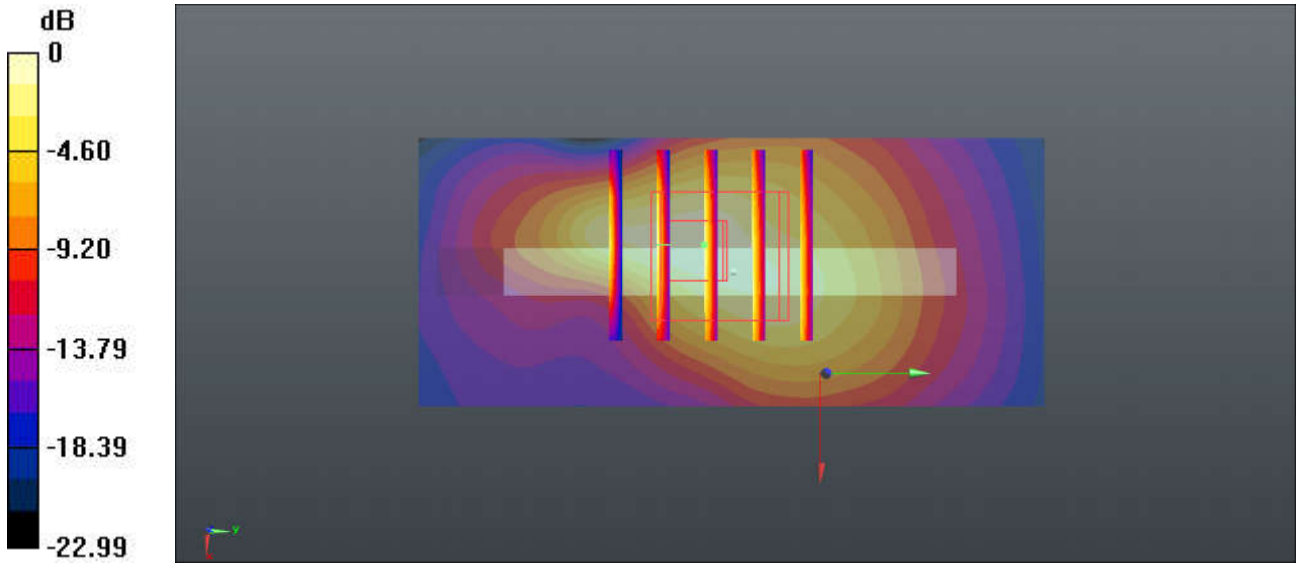
20_WCDMA II_RMC 12.2Kbps_Bottom Side_5mm_Ch9262

Communication System: UID 0, WCDMA (0); Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1852.4 MHz; σ = 1.389 S/m; ε_r = 40.569; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.5, 8.5, 8.5); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch9262/Area Scan (31x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.97 W/kg

Ch9262/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 35.95 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 2.30 W/kg
SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.598 W/kg
Maximum value of SAR (measured) = 1.79 W/kg



0 dB = 1.97 W/kg = 2.94 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.20

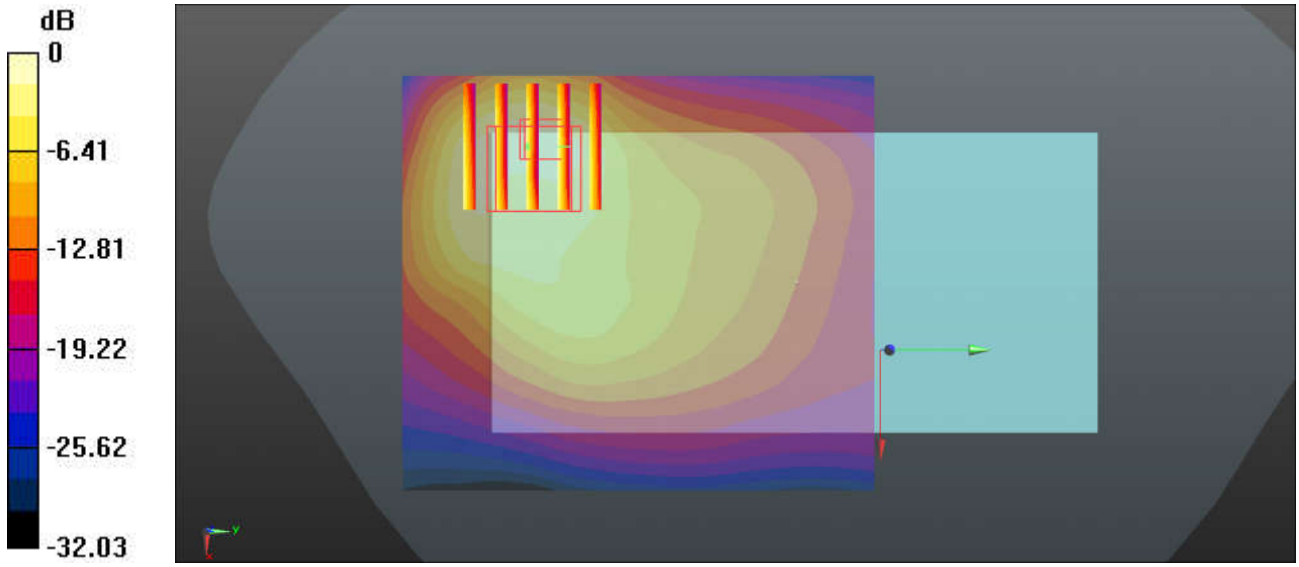
21_LTE Band2_20M_QPSK_50RB_0Offset_Back_5mm_Ch18700

Communication System: UID 0, LTE-FDD (0); Frequency: 1860 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1860 MHz; σ = 1.396 S/m; ε_r = 40.544; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.5, 8.5, 8.5); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch18700/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.22 W/kg

Ch18700/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.94 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 2.09 W/kg
SAR(1 g) = 1.2 W/kg; SAR(10 g) = 0.656 W/kg
Maximum value of SAR (measured) = 1.77 W/kg



0 dB = 2.22 W/kg = 3.46 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.18

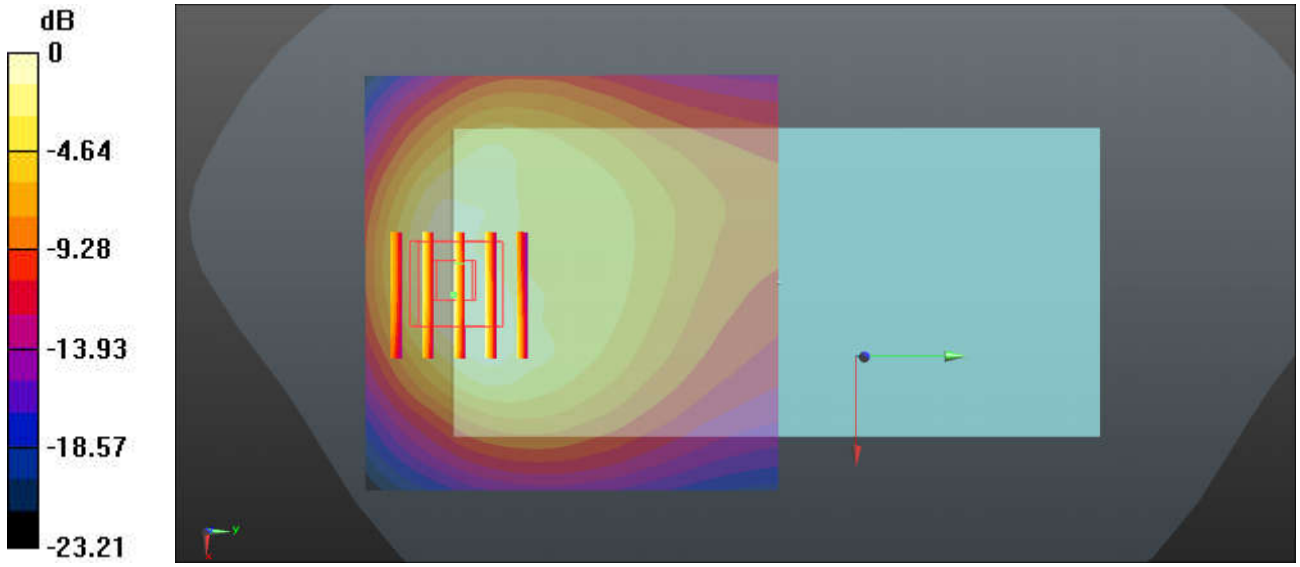
22_LTE Band 5_10M_QPSK_50RB_0Offset_Back_5mm_Ch20525

Communication System: UID 0, LTE-FDD (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 836.5 MHz; σ = 0.94 S/m; ε_r = 41.93; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.48, 10.48, 10.48); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch20525/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.968 W/kg

Ch20525/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.05 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.89 W/kg
SAR(1 g) = 0.961 W/kg; SAR(10 g) = 0.494 W/kg
Maximum value of SAR (measured) = 1.27 W/kg



0 dB = 0.968 W/kg = -0.14 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.17

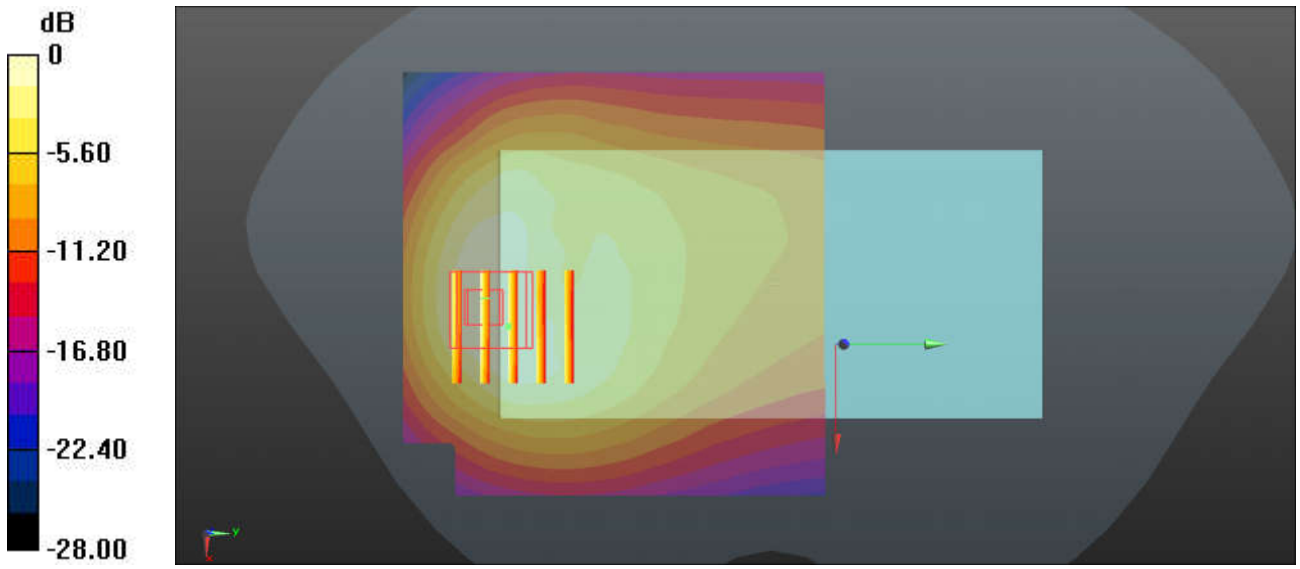
23_LTE Band12_10M_QPSK_1RB_0Offset_Back_5mm_Ch23095

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 = 0.838 S/m; ε_r = 43.73; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.83, 10.83, 10.83); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch23095/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.978 W/kg

Ch23095/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.89 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.64 W/kg
SAR(1 g) = 0.794 W/kg; SAR(10 g) = 0.414 W/kg
Maximum value of SAR (measured) = 1.28 W/kg



0 dB = 0.978 W/kg = -0.10 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.19

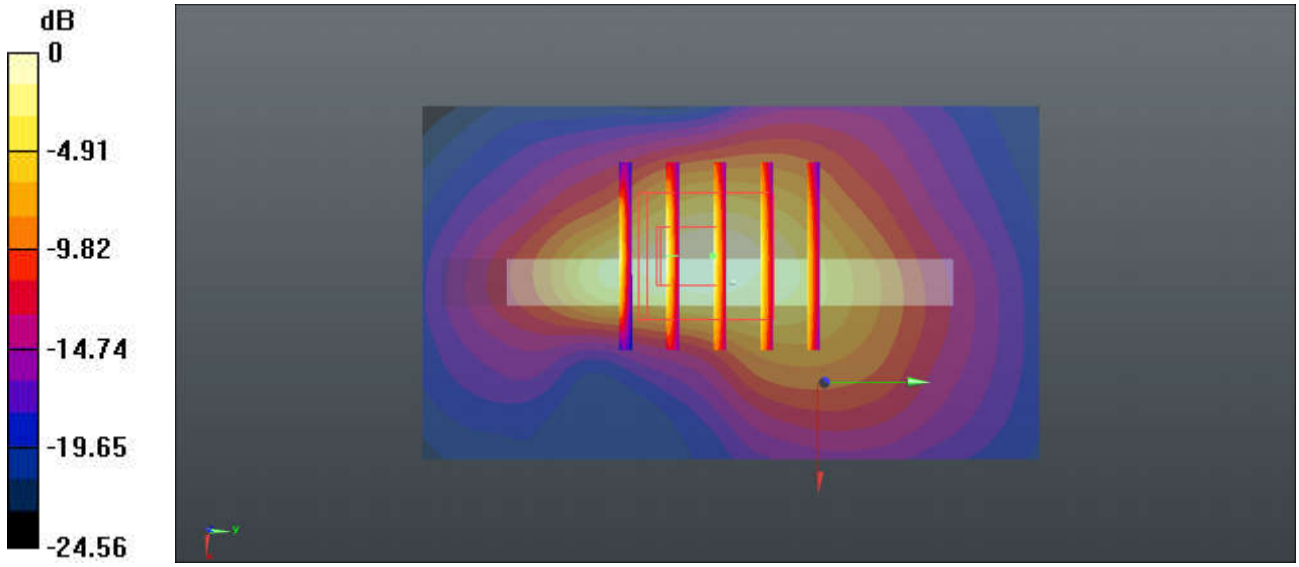
24_LTE Band66_20M_QPSK_50RB_0Offset_Bottom Side_5mm_Ch132072

Communication System: UID 0, LTE-FDD (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1720 MHz; σ = 1.394 S/m; ε_r = 39.208; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.91, 8.91, 8.91); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch132072/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.61 W/kg

Ch132072/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.57 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 2.14 W/kg
SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.498 W/kg
Maximum value of SAR (measured) = 1.72 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.21

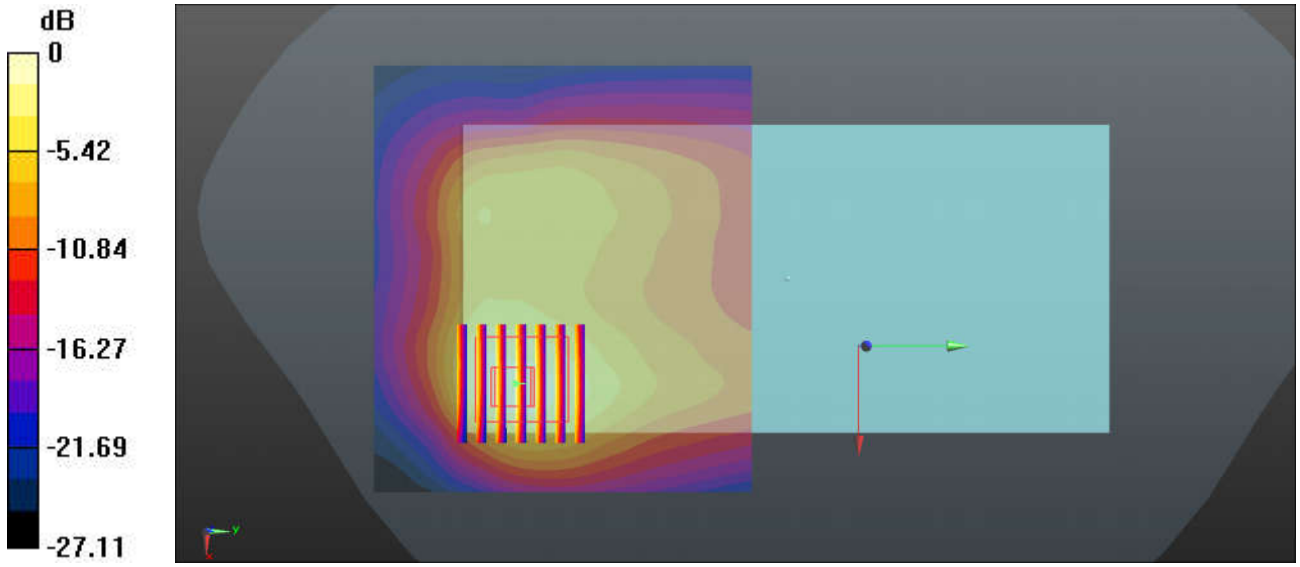
25_LTE Band 7_20M_QPSK_100RB_0Offset_Back_5mm_Ch21100

Communication System: UID 0, LTE-FDD (0); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2535 MHz; σ = 1.969 S/m; ε_r = 38.505; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.38, 7.38, 7.38); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch21100/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.61 W/kg

Ch21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.13 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 2.48 W/kg
SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.510 W/kg
Maximum value of SAR (measured) = 1.45 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.22

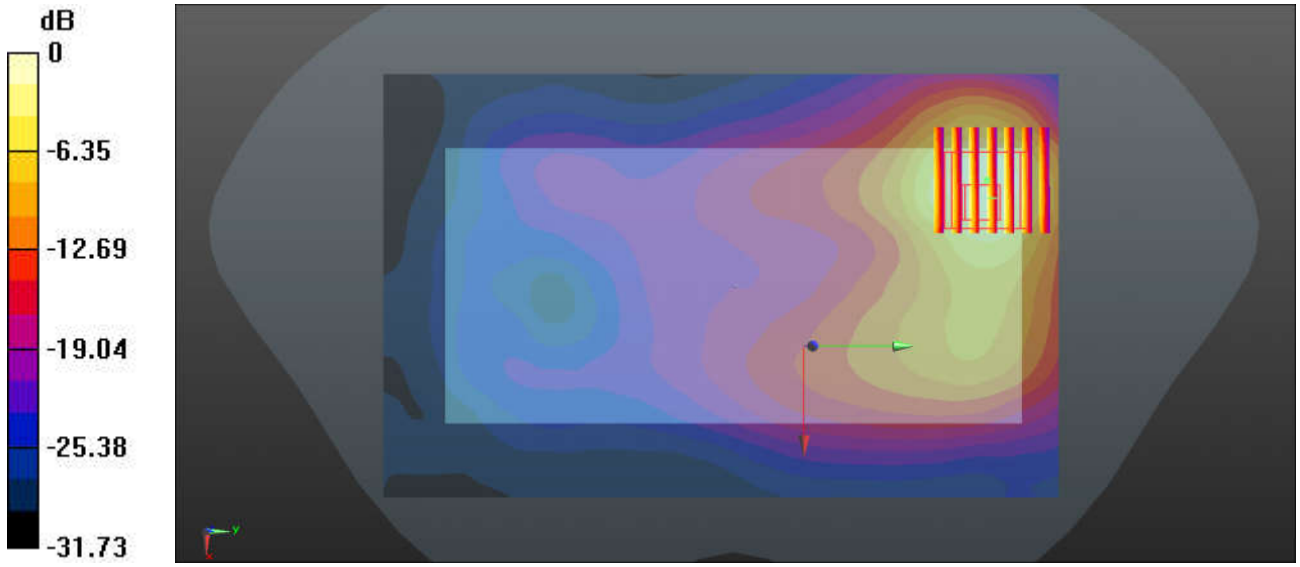
26_WLAN2.4GHz_802.11b 1Mbps_Back_5mm_Ch1

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium: HSL_2450 Medium parameters used: f = 2412 MHz; σ = 1.814 S/m; ε_r = 38.807; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.69, 7.69, 7.69); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1/Area Scan (101x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.47 W/kg

Ch1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.289 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.82 W/kg
SAR(1 g) = 0.929 W/kg; SAR(10 g) = 0.460 W/kg
Maximum value of SAR (measured) = 1.18 W/kg



0 dB = 1.47 W/kg = 1.67 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.22

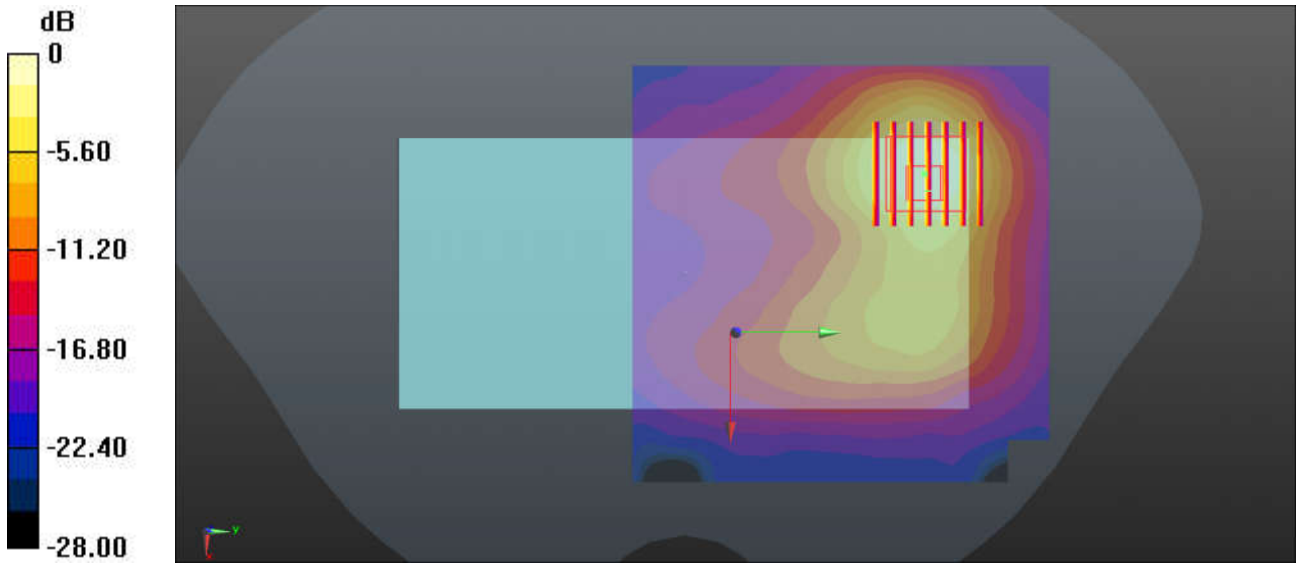
27_Bluetooth_1Mbps_Back_5mm_Ch39

Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.304
Medium: HSL_2450 Medium parameters used: f = 2441 MHz; σ = 1.848 S/m; ε_r = 38.689; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.69, 7.69, 7.69); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch39/Area Scan (101x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.216 W/kg

Ch39/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.498 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.284 W/kg
SAR(1 g) = 0.146 W/kg; SAR(10 g) = 0.074 W/kg
Maximum value of SAR (measured) = 0.188 W/kg



0 dB = 0.216 W/kg = -6.66 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.10.4

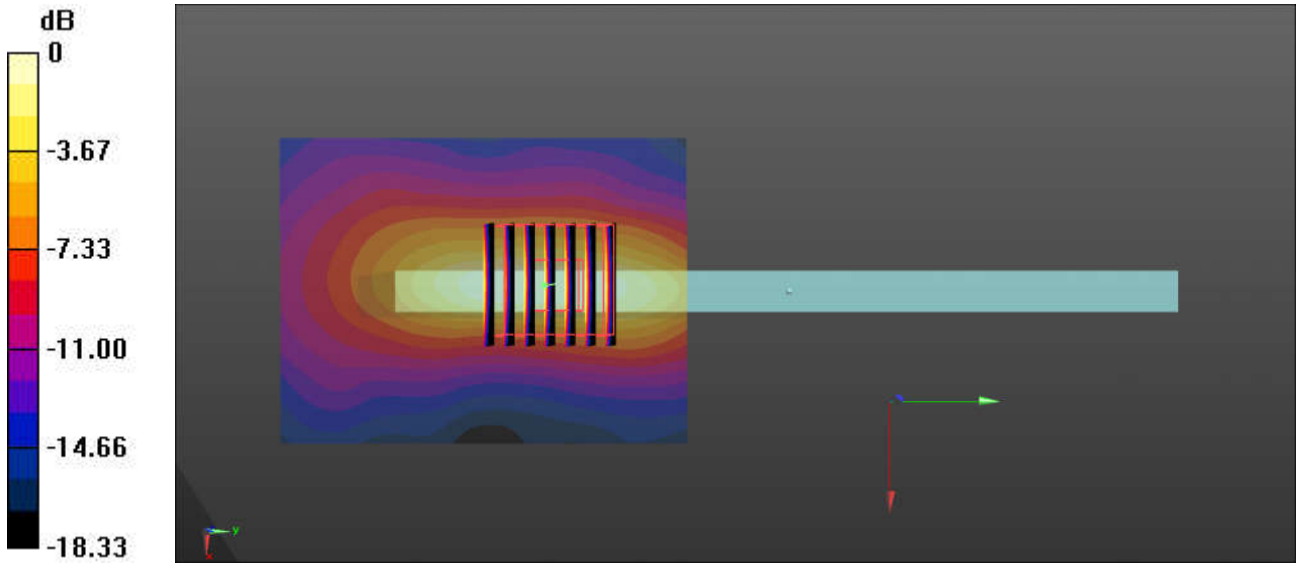
28_WLAN5GHz_802.11a 6Mbps_Right Side_5mm_Ch48

Communication System: UID 0, 802.11a (0); Frequency: 5240 MHz;Duty Cycle: 1:1.018
Medium: HSL_5000 Medium parameters used: f = 5240 MHz; σ = 4.585 S/m; ε_r = 36.403; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

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-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch48/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.39 W/kg

Ch48/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 13.10 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 4.14 W/kg
SAR(1 g) = 1.000 W/kg; SAR(10 g) = 0.353 W/kg
Maximum value of SAR (measured) = 2.42 W/kg



0 dB = 2.39 W/kg = 3.78 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.10.6

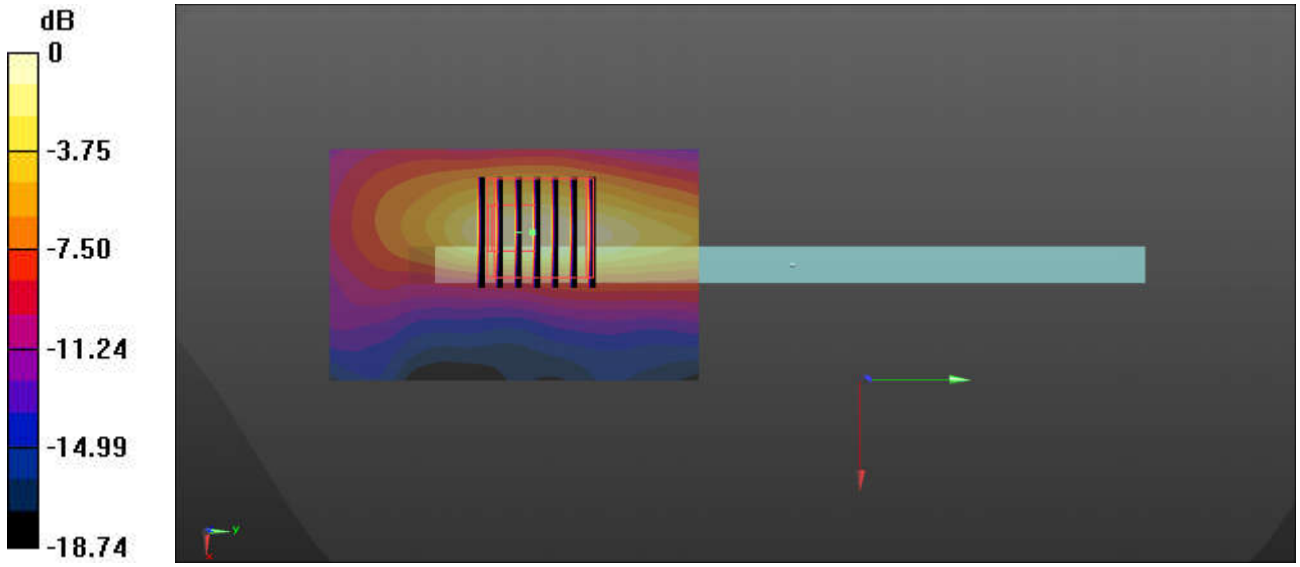
29_WLAN5GHz_802.11a 6Mbps_Right Side_5mm_Ch165

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 = 5.249 S/m; ε_r = 35.438; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

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-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch165/Area Scan (51x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 2.59 W/kg

Ch165/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 10.67 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 4.82 W/kg
SAR(1 g) = 0.998 W/kg; SAR(10 g) = 0.340 W/kg
Maximum value of SAR (measured) = 2.58 W/kg



0 dB = 2.59 W/kg = 4.13 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.18

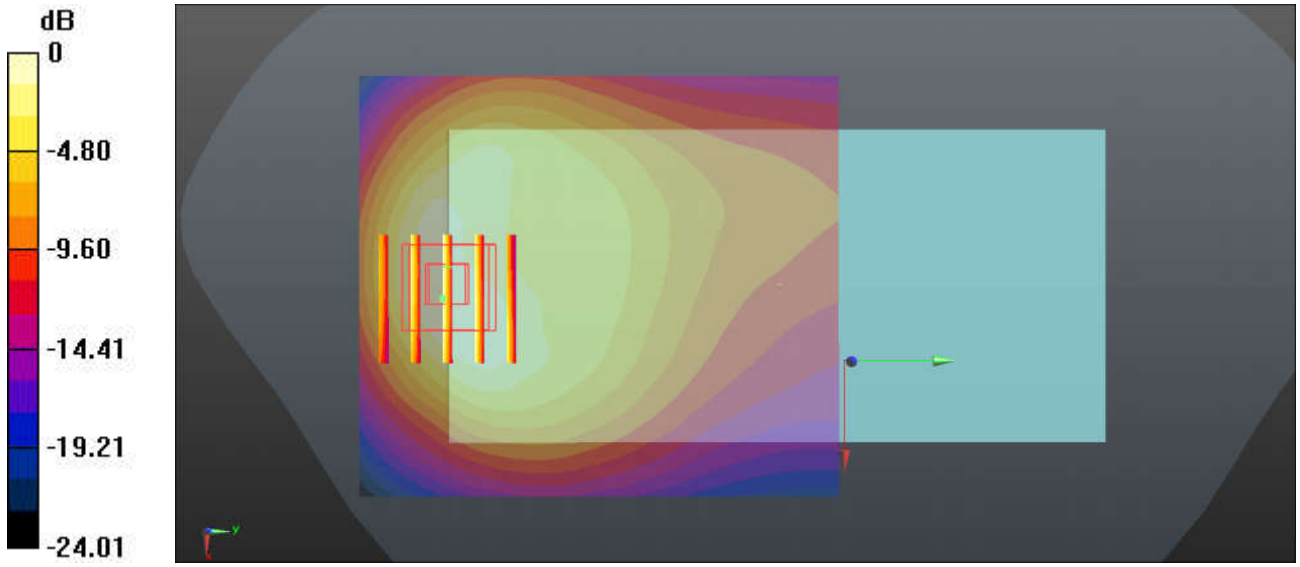
30_GSM850_GPRS 4 Tx slots_Back_5mm_Ch251_Headset

Communication System: UID 0, GSM850-4UP (0); Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium: HSL_850 Medium parameters used: f = 849 MHz; σ = 0.952 S/m; ε_r = 41.785; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.48, 10.48, 10.48); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch251/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.05 W/kg

Ch251/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.00 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.04 W/kg; SAR(10 g) = 0.541 W/kg
Maximum value of SAR (measured) = 1.34 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.20

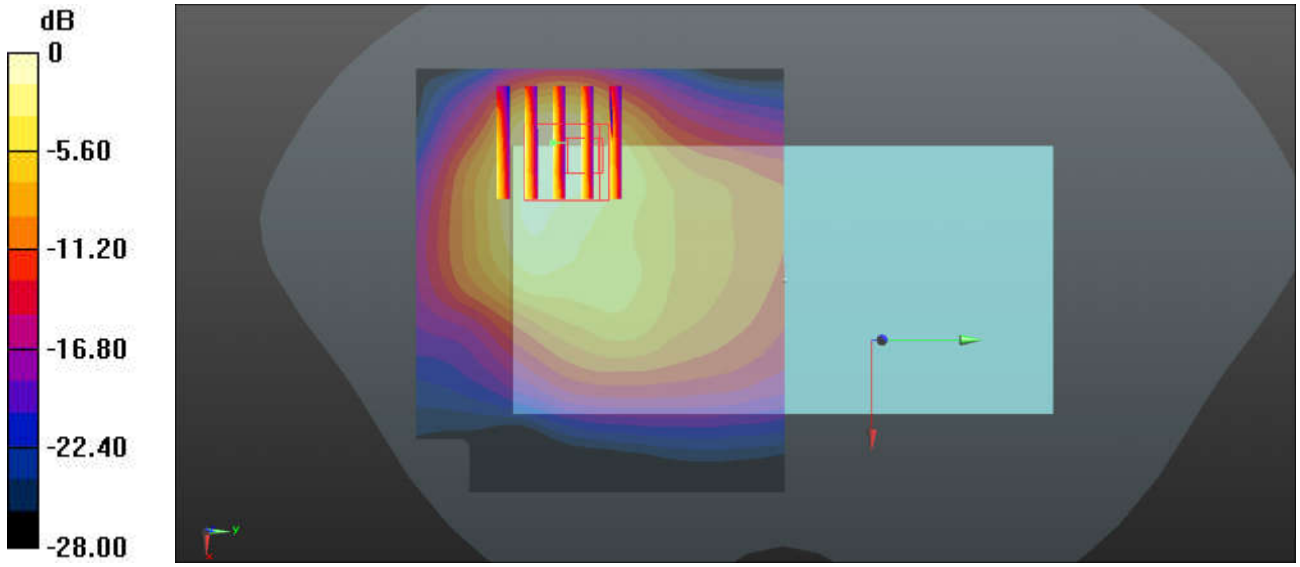
31_GSM1900_GPRS 4 Tx slots_Back_5mm_Ch810

Communication System: UID 0, PCS-4UP (0); Frequency: 1909.8 MHz;Duty Cycle: 1:2.08
Medium: HSL_1900 Medium parameters used: f = 1910 MHz; σ = 1.44 S/m; ε_r = 40.343; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.5, 8.5, 8.5); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch810/Area Scan (81x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.92 W/kg

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.871 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 2.39 W/kg
SAR(1 g) = 0.968 W/kg; SAR(10 g) = 0.505 W/kg
Maximum value of SAR (measured) = 1.71 W/kg



0 dB = 1.92 W/kg = 2.83 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.18

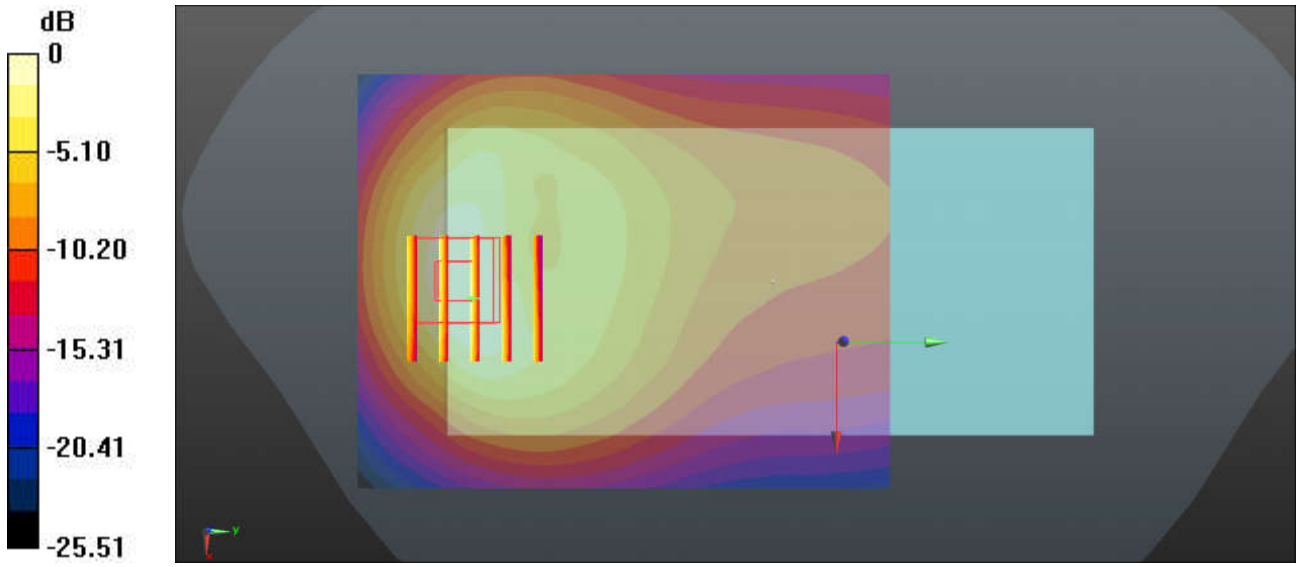
32_WCDMA V_RMC 12.2Kbps_Back_5mm_Ch4233

Communication System: UID 0, WCDMA (0); Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 847 MHz; σ = 0.95 S/m; ε_r = 41.809; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.48, 10.48, 10.48); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch4233/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.31 W/kg

Ch4233/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.43 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 2.28 W/kg
SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.582 W/kg
Maximum value of SAR (measured) = 1.41 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.19

33_WCDMA IV_RMC 12.2Kbps_Back_5mm_Ch1413

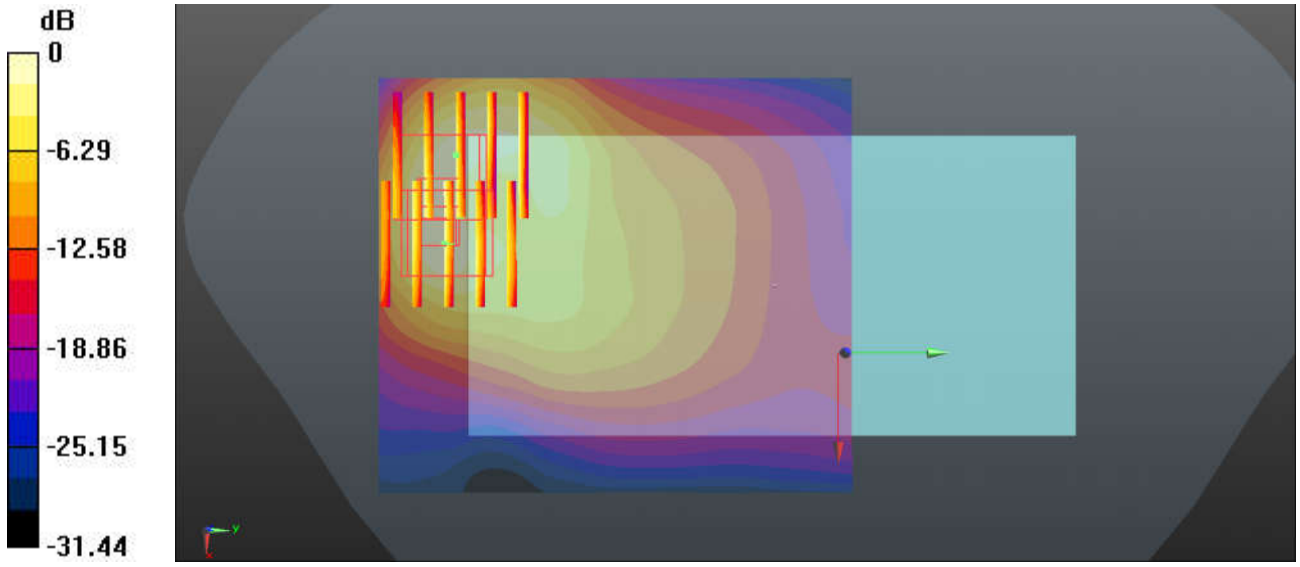
Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1732.6 MHz; σ = 1.401 S/m; ε_r = 39.179; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.91, 8.91, 8.91); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1413/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.82 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.897 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.583 W/kg
Maximum value of SAR (measured) = 1.79 W/kg

Ch1413/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.897 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.02 W/kg
SAR(1 g) = 1.06 W/kg; SAR(10 g) = 0.482 W/kg
Maximum value of SAR (measured) = 1.52 W/kg



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.20

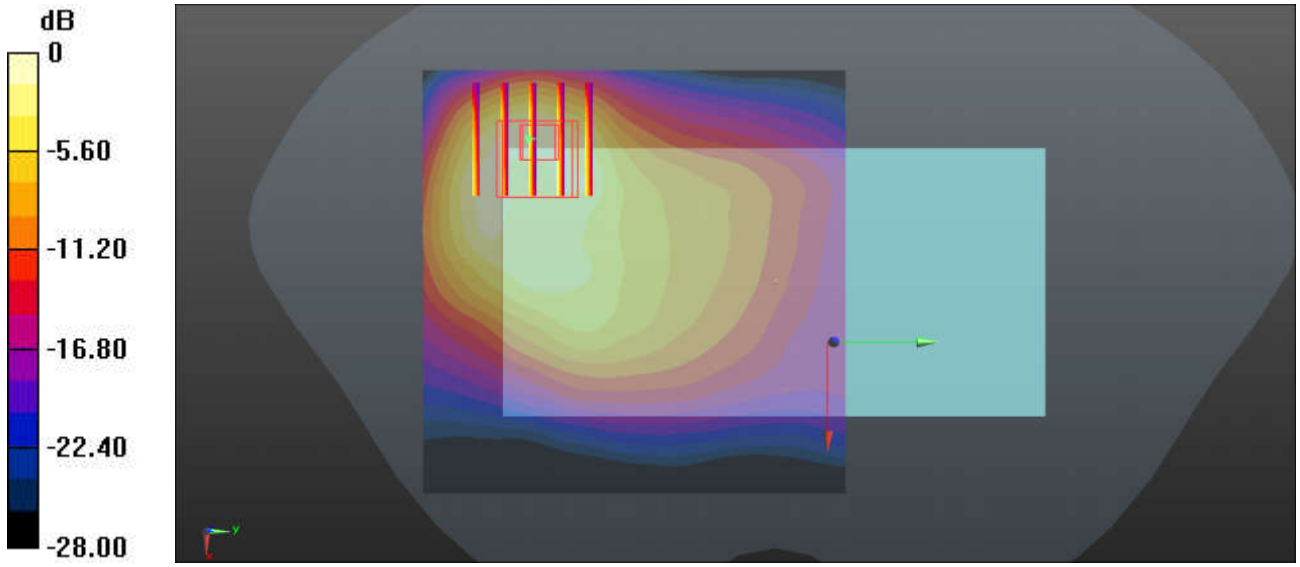
34_WCDMA II_RMC 12.2Kbps_Back_5mm_Ch9400

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.412 S/m; ε_r = 40.469; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.5, 8.5, 8.5); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch9400/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.02 W/kg

Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.615 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 2.64 W/kg
SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.590 W/kg
Maximum value of SAR (measured) = 2.08 W/kg



0 dB = 2.02 W/kg = 3.05 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.20

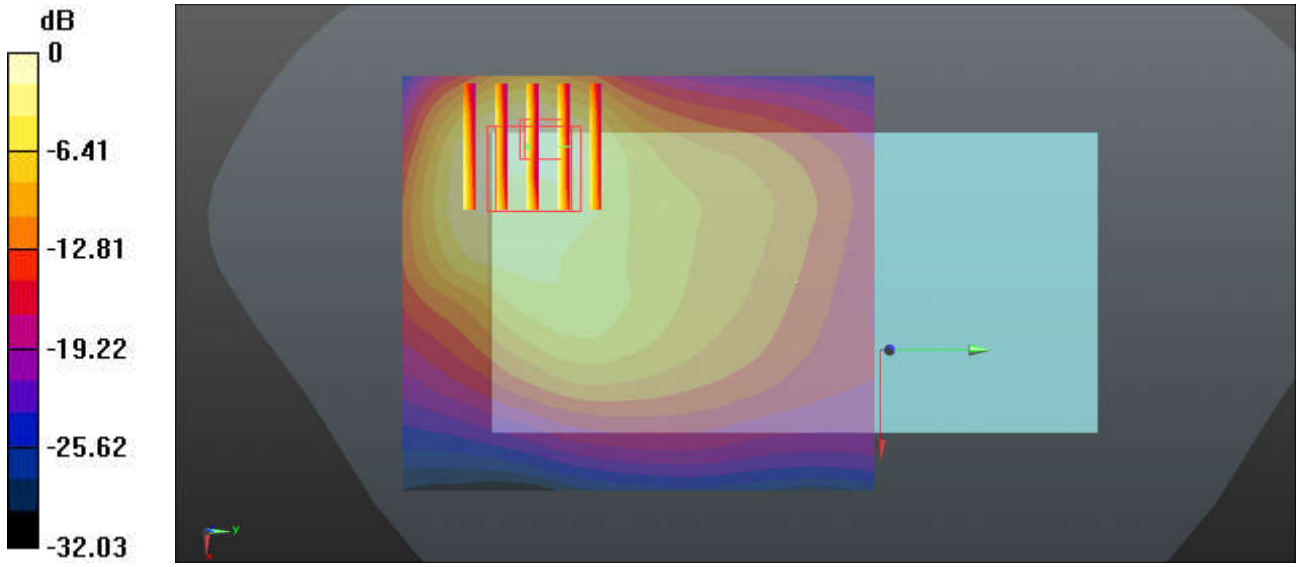
35_LTE Band2_20M_QPSK_50RB_0Offset_Back_5mm_Ch18700

Communication System: UID 0, LTE-FDD (0); Frequency: 1860 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1860 MHz; σ = 1.396 S/m; ε_r = 40.544; ρ = 1000kg/m^3
Ambient Temperature：23.3 ℃； Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.5, 8.5, 8.5); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch18700/Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.22 W/kg

Ch18700/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.94 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 2.09 W/kg
SAR(1 g) = 1.2 W/kg; SAR(10 g) = 0.656 W/kg
Maximum value of SAR (measured) = 1.77 W/kg



0 dB = 2.22 W/kg = 3.46 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.18

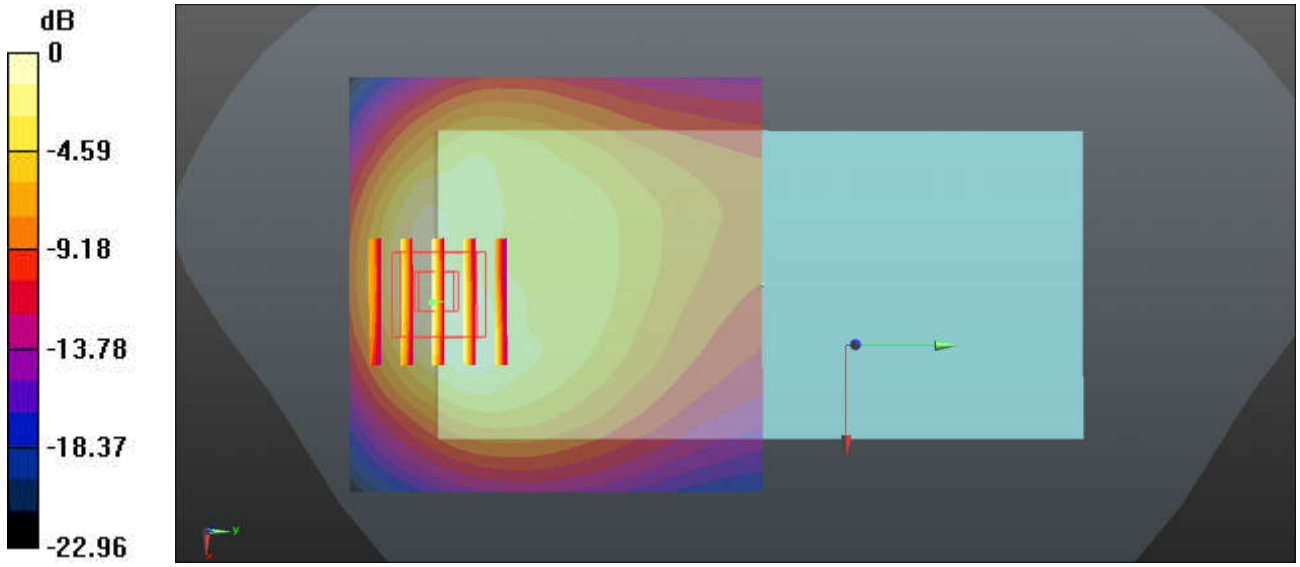
36_LTE Band 5_10M_QPSK_50RB_0Offset_Back_5mm_Ch20525_Headset

Communication System: UID 0, LTE-FDD (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium: HSL_850 Medium parameters used: f = 836.5 MHz; σ = 0.94 S/m; ε_r = 41.93; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.48, 10.48, 10.48); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch20525/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.03 W/kg

Ch20525/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.86 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 2.01 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.533 W/kg
Maximum value of SAR (measured) = 1.31 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.17

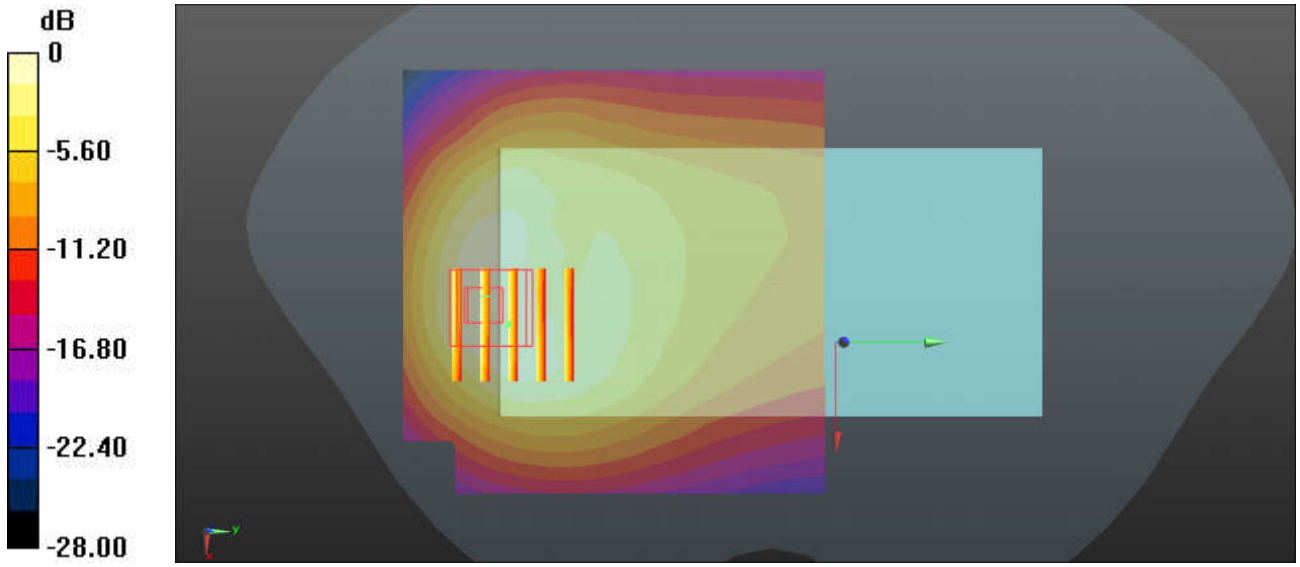
37_LTE Band12_10M_QPSK_1RB_0Offset_Back_5mm_Ch23095

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 = 0.838 S/m; ε_r = 43.73; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.6 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(10.83, 10.83, 10.83); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch23095/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.978 W/kg

Ch23095/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.89 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.64 W/kg
SAR(1 g) = 0.794 W/kg; SAR(10 g) = 0.414 W/kg
Maximum value of SAR (measured) = 1.28 W/kg



0 dB = 0.978 W/kg = -0.10 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.19

38_LTE Band66_20M_QPSK_1RB_0Offset_Back_5mm_Ch132072

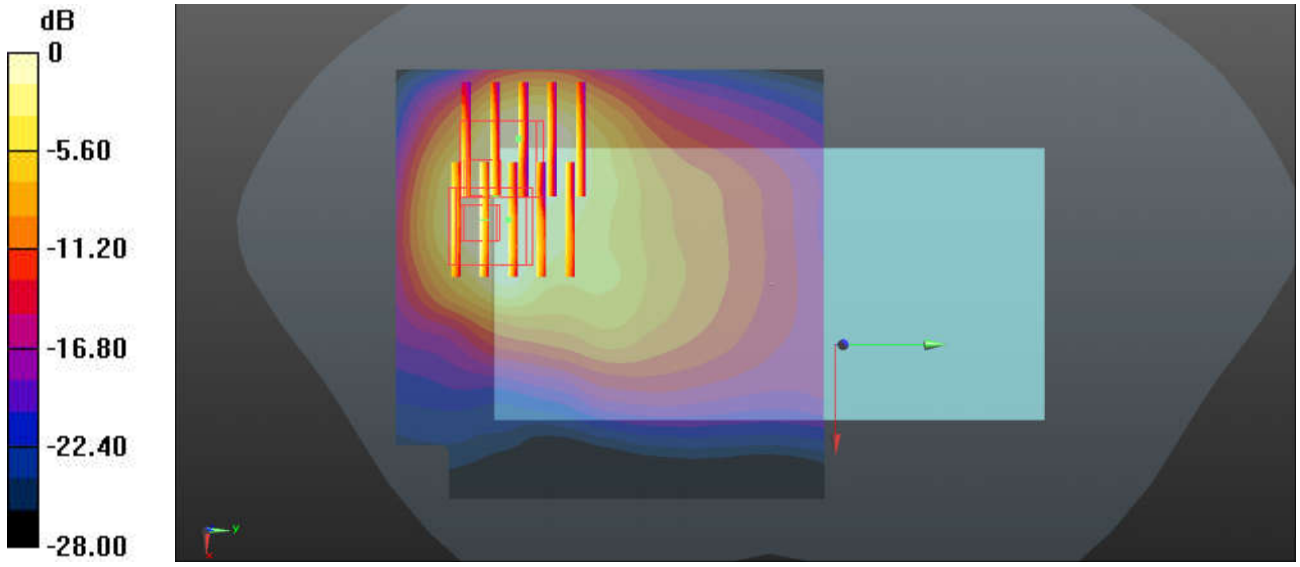
Communication System: UID 0, LTE-FDD (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium: HSL_1750 Medium parameters used: f = 1720 MHz; σ = 1.394 S/m; ε_r = 39.208; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.7 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(8.91, 8.91, 8.91); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM2; Type: SAM; Serial: TP-1754
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch132072/Area Scan (81x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.45 W/kg

Ch132072/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.139 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 2.04 W/kg
SAR(1 g) = 0.951 W/kg; SAR(10 g) = 0.412 W/kg
Maximum value of SAR (measured) = 1.58 W/kg

Ch132072/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.139 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 2.08 W/kg
SAR(1 g) = 1.16 W/kg; SAR(10 g) = 0.584 W/kg
Maximum value of SAR (measured) = 1.83 W/kg



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.21

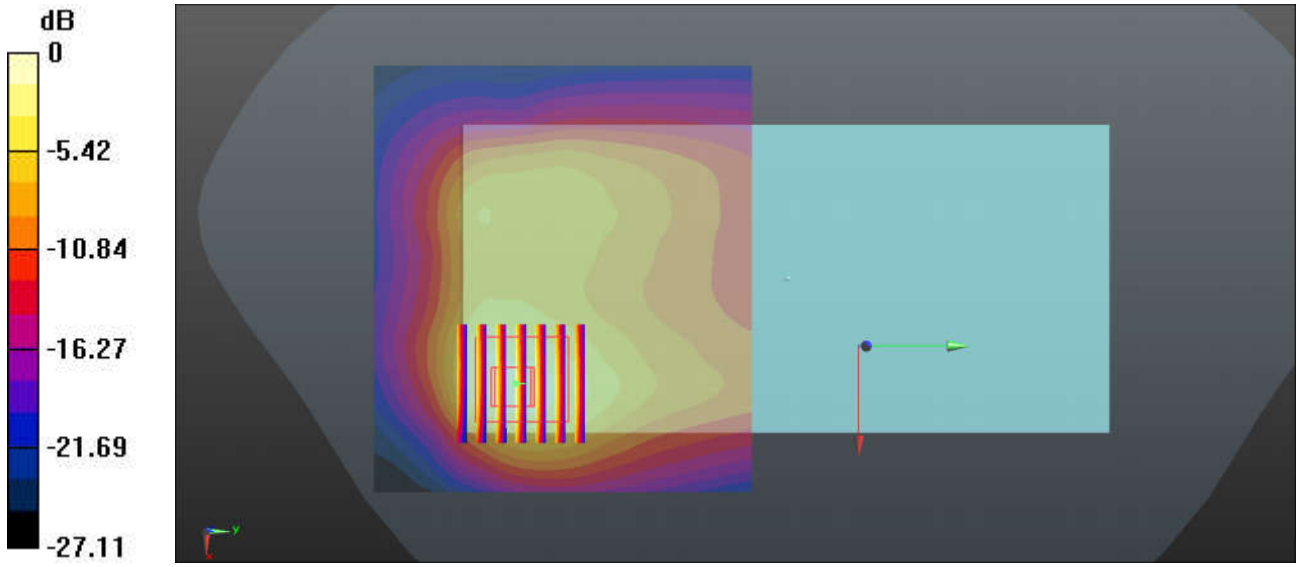
39_LTE Band 7_20M_QPSK_100RB_0Offset_Back_5mm_Ch21100

Communication System: UID 0, LTE-FDD (0); Frequency: 2535 MHz;Duty Cycle: 1:1
Medium: HSL_2600 Medium parameters used: f = 2535 MHz; σ = 1.969 S/m; ε_r = 38.505; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.8 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.38, 7.38, 7.38); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch21100/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.61 W/kg

Ch21100/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.13 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 2.48 W/kg
SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.510 W/kg
Maximum value of SAR (measured) = 1.45 W/kg



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

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.22

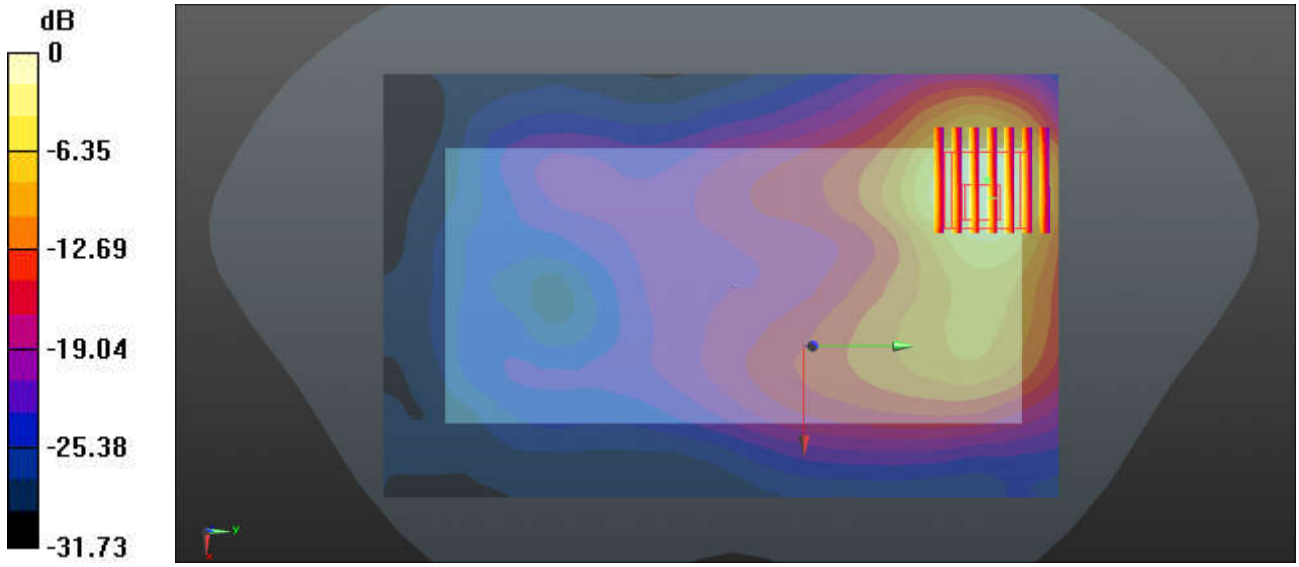
40_WLAN2.4GHz_802.11b 1Mbps_Back_5mm_Ch1

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium: HSL_2450 Medium parameters used: f = 2412 MHz; σ = 1.814 S/m; ε_r = 38.807; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.69, 7.69, 7.69); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch1/Area Scan (101x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.47 W/kg

Ch1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.289 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.82 W/kg
SAR(1 g) = 0.929 W/kg; SAR(10 g) = 0.460 W/kg
Maximum value of SAR (measured) = 1.18 W/kg



0 dB = 1.47 W/kg = 1.67 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.9.22

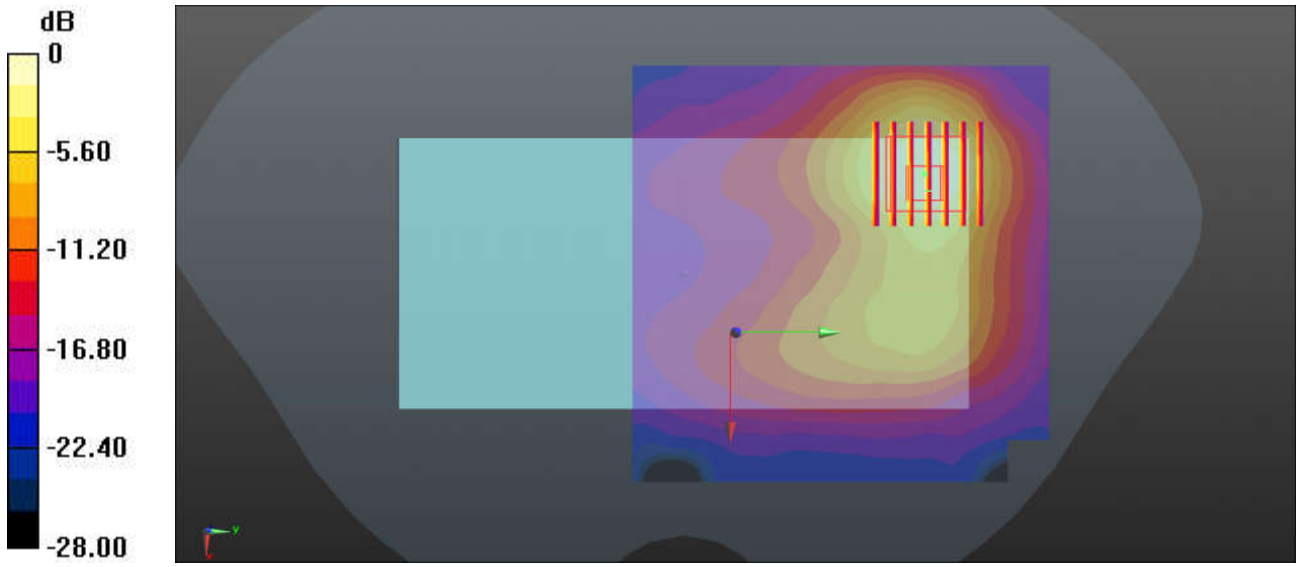
41_Bluetooth_1Mbps_Back_5mm_Ch39

Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.304
Medium: HSL_2450 Medium parameters used: f = 2441 MHz; σ = 1.848 S/m; ε_r = 38.689; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.9 ℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3935; ConvF(7.69, 7.69, 7.69); Calibrated: 2018.11.26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2019.7.23
- Phantom: SAM1; Type: SAM; Serial: TP-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch39/Area Scan (101x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.216 W/kg

Ch39/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.498 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.284 W/kg
SAR(1 g) = 0.146 W/kg; SAR(10 g) = 0.074 W/kg
Maximum value of SAR (measured) = 0.188 W/kg



0 dB = 0.216 W/kg = -6.66 dBW/kg

Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.10.4

42_WLAN5GHz_802.11a 6Mbps_Back_5mm_Ch52

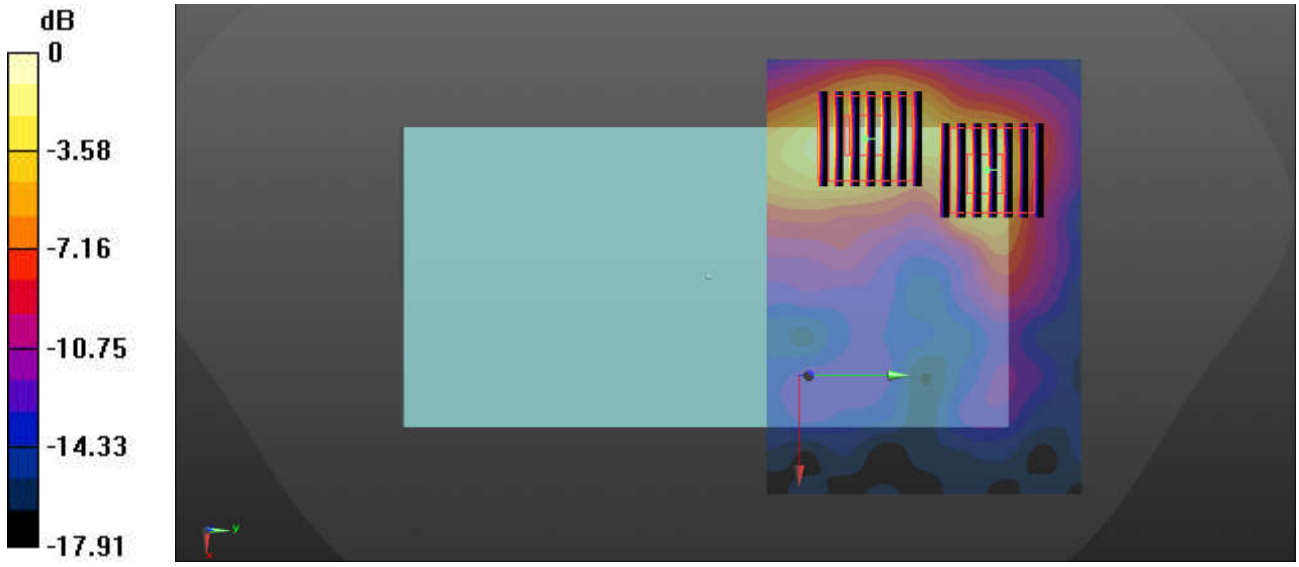
Communication System: UID 0, 802.11a (0); Frequency: 5260 MHz;Duty Cycle: 1:1.018
Medium: HSL_5000 Medium parameters used: f = 5260 MHz; σ = 4.617 S/m; ε_r = 36.37; ρ = 1000 kg/m^3
Ambient Temperature：23.3 ℃; Liquid Temperature：22.6 ℃

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-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch52/Area Scan (111x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.79 W/kg

Ch52/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 5.693 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 2.97 W/kg
SAR(1 g) = 0.783 W/kg; SAR(10 g) = 0.284 W/kg
Maximum value of SAR (measured) = 1.79 W/kg

Ch52/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 5.693 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 2.05 W/kg
SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.213 W/kg
Maximum value of SAR (measured) = 1.28 W/kg



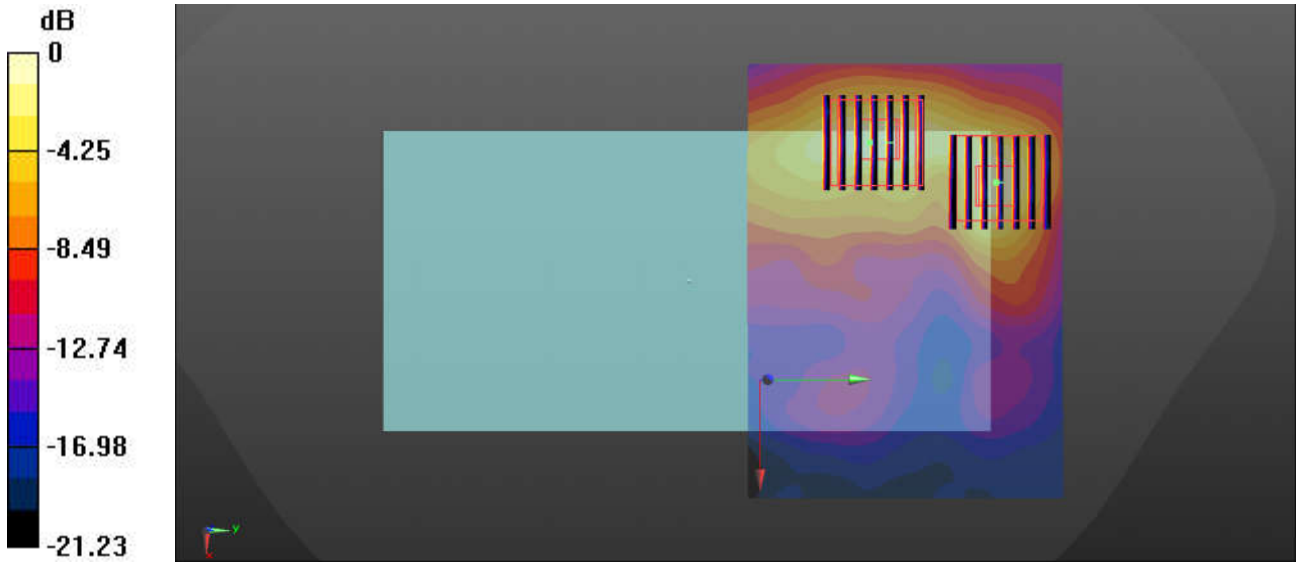
Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2019.10.6

43_WLAN5GHz_802.11a 6Mbps_Back_5mm_Ch116

Communication System: UID 0, 802.11a (0); Frequency: 5580 MHz;Duty Cycle: 1:1.018
Medium: HSL_5000 Medium parameters used: f = 5580 MHz; σ = 4.97 S/m; ε_r = 35.87; ρ = 1000 kg/m^3
Ambient Temperature：23.4 ℃; Liquid Temperature：22.7 ℃

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-1839
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

Ch116/Area Scan (111x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.96 W/kg

Ch116/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 5.823 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 3.49 W/kg
SAR(1 g) = 0.824 W/kg; SAR(10 g) = 0.291 W/kg
Maximum value of SAR (measured) = 1.98 W/kg

Ch116/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 5.823 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 3.16 W/kg
SAR(1 g) = 0.793 W/kg; SAR(10 g) = 0.283 W/kg
Maximum value of SAR (measured) = 1.86 W/kg