

### 16.3 Body-Worn Accessory Exposure Conditions

#### <Top Antenna>

WWAN Band		Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth Ant 1		
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
GSM	GSM850	Front	0.539	0.371	0.517	0.032	0.91	1.09
		Back	0.602	0.371	0.316	0.040	0.97	0.96
	GSM1900	Front	0.153	0.371	0.517	0.032	0.52	0.70
		Back	0.163	0.371	0.316	0.040	0.53	0.52
WCDMA	Band V	Front	0.268	0.371	0.517	0.032	0.64	0.82
		Back	0.388	0.371	0.316	0.040	0.76	0.74
	Band IV	Front	0.426	0.371	0.517	0.032	0.80	0.98
		Back	0.494	0.371	0.316	0.040	0.87	0.85
	Band II	Front	0.416	0.371	0.517	0.032	0.79	0.97
		Back	0.502	0.371	0.316	0.040	0.87	0.86
LTE	Band 5	Front	0.491	0.371	0.517	0.032	0.86	1.04
		Back	0.656	0.371	0.316	0.040	1.03	1.01
	Band 4	Front	0.336	0.371	0.517	0.032	0.71	0.89
		Back	0.394	0.371	0.316	0.040	0.77	0.75
	Band 2	Front	0.315	0.371	0.517	0.032	0.69	0.86
		Back	0.365	0.371	0.316	0.040	0.74	0.72
	Band 7	Front	0.743	0.371	0.517	0.032	1.11	1.29
		Back	0.832	0.371	0.316	0.040	1.20	1.19
	Band 38	Front	0.431	0.371	0.517	0.032	0.80	0.98
		Back	0.488	0.371	0.316	0.040	0.86	0.84

**<Bottom Antenna>**

WWAN Band		Exposure Position	1	2	3	4	1+2 Summed 1g SAR (W/kg)	1+3+4 Summed 1g SAR (W/kg)
			WWAN	2.4GHz WLAN	5GHz WLAN	Bluetooth Ant 1		
			1g SAR (W/kg)	1g SAR (W/kg)	1g SAR (W/kg)	Estimated 1g SAR (W/kg)		
GSM	GSM850	Front	0.219	0.371	0.517	0.032	0.59	0.77
		Back	0.278	0.371	0.316	0.040	0.65	0.63
	GSM1900	Front	0.489	0.371	0.517	0.032	0.86	1.04
		Back	0.668	0.371	0.316	0.040	1.04	1.02
WCDMA	Band V	Front	0.268	0.371	0.517	0.032	0.64	0.82
		Back	0.388	0.371	0.316	0.040	0.76	0.74
	Band IV	Front	0.734	0.371	0.517	0.032	1.11	1.28
		Back	0.952	0.371	0.316	0.040	1.32	1.31
	Band II	Front	0.811	0.371	0.517	0.032	1.18	1.36
		Back	1.085	0.371	0.316	0.040	1.46	1.44
LTE	Band 5	Front	0.277	0.371	0.517	0.032	0.65	0.83
		Back	0.353	0.371	0.316	0.040	0.72	0.71
	Band 4	Front	0.684	0.371	0.517	0.032	1.06	1.23
		Back	0.917	0.371	0.316	0.040	1.29	1.27
	Band 2	Front	0.777	0.371	0.517	0.032	1.15	1.33
		Back	1.084	0.371	0.316	0.040	1.46	1.44
	Band 7	Front	0.522	0.371	0.517	0.032	0.89	1.07
		Back	0.893	0.371	0.316	0.040	1.26	1.25
	Band 38	Front	0.466	0.371	0.517	0.032	0.84	1.02
		Back	0.696	0.371	0.316	0.040	1.07	1.05

**Test Engineer : Nick Hu**



## **17. 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. The expanded SAR measurement uncertainty must be  $\leq 30\%$ , 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. Therefore, the measurement uncertainty table is not required in this report.

## **18. 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 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [11] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [12] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [13] FCC KDB 941225 D06 v02r01, "SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities", Oct 2015.
- [14] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015



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**Appendix A. Plots of System Performance Check**

The plots are shown as follows.

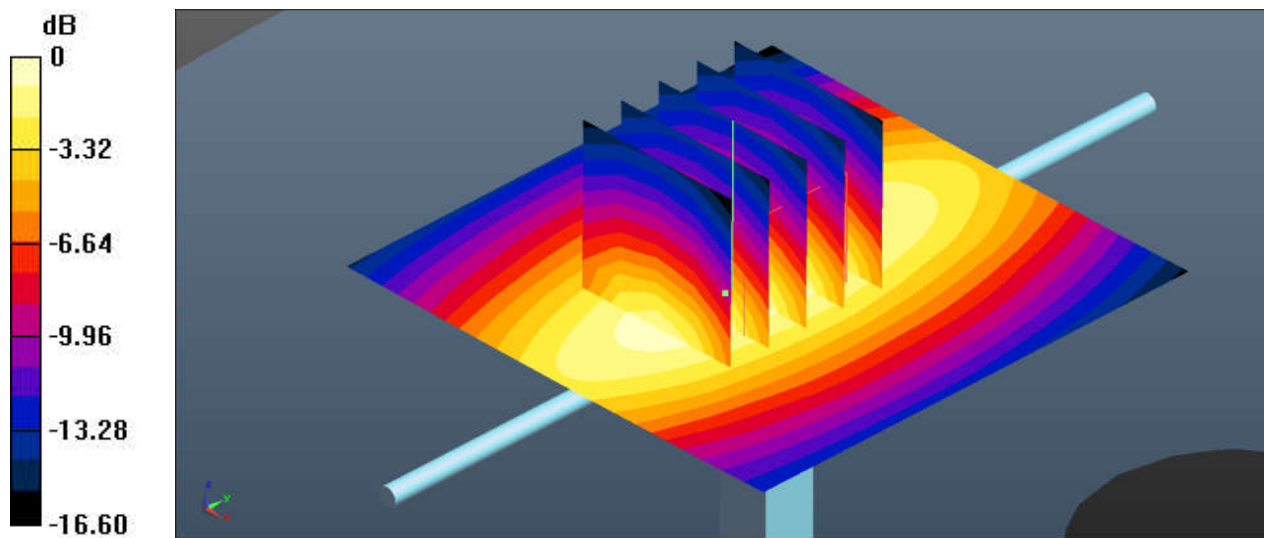
**System Check\_Head\_835MHz****DUT: D835V2 - SN:4d051**

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1

Medium: HSL\_850 Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.915 \text{ S/m}$ ;  $\epsilon_r = 41.269$ ;  $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature :  $23.2 \text{ }^\circ\text{C}$ ; Liquid Temperature :  $22.8 \text{ }^\circ\text{C}$ 

DASY5 Configuration:

- Probe: ES3DV3 - SN3293; ConvF(6.47, 6.47, 6.47); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) =  $2.68 \text{ W/kg}$ **Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$ Reference Value =  $51.87 \text{ V/m}$ ; Power Drift =  $-0.15 \text{ dB}$ Peak SAR (extrapolated) =  $2.78 \text{ W/kg}$ **SAR(1 g) =  $2.23 \text{ W/kg}$ ; SAR(10 g) =  $1.55 \text{ W/kg}$** Maximum value of SAR (measured) =  $2.63 \text{ W/kg}$ 0 dB =  $2.68 \text{ W/kg}$  =  $4.28 \text{ dBW/kg}$

**System Check\_Head\_1750MHz****DUT: D1750V2 - SN:1090**

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: HSL\_1750 Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.346$  S/m;  $\epsilon_r = 40.238$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(5.4, 5.4, 5.4); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- 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) = 13.0 W/kg

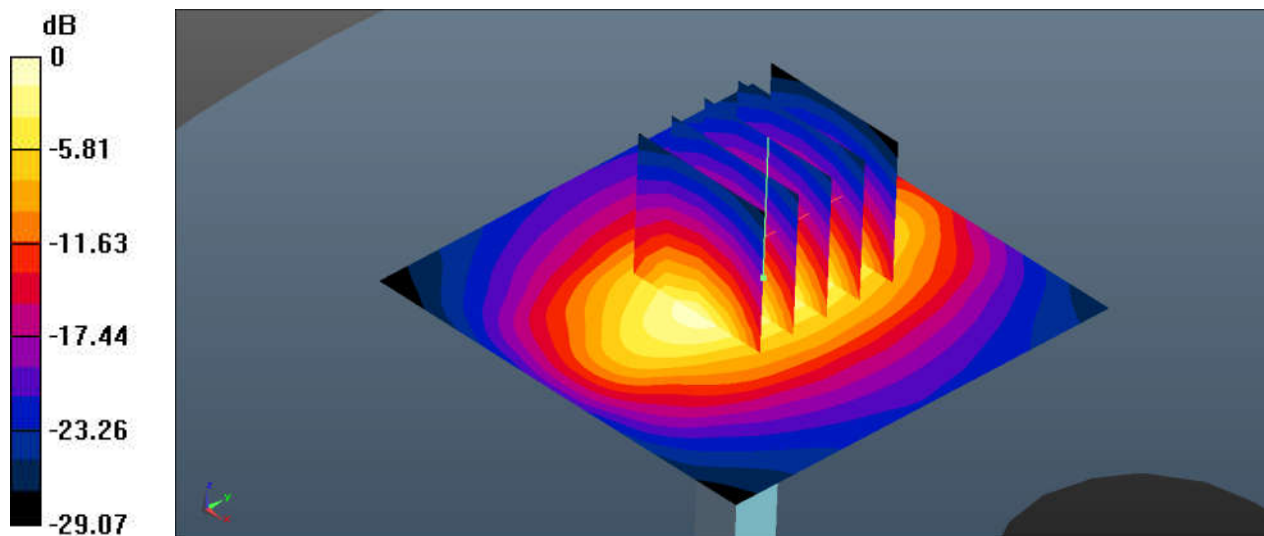
**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 84.23 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 16.7 W/kg

**SAR(1 g) = 8.79 W/kg; SAR(10 g) = 4.6 W/kg**

Maximum value of SAR (measured) = 12.7 W/kg



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

**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;  $\sigma = 1.428$  S/m;  $\epsilon_r = 41.104$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.6 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(5.19, 5.19, 5.19); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- 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) = 12.5 W/kg

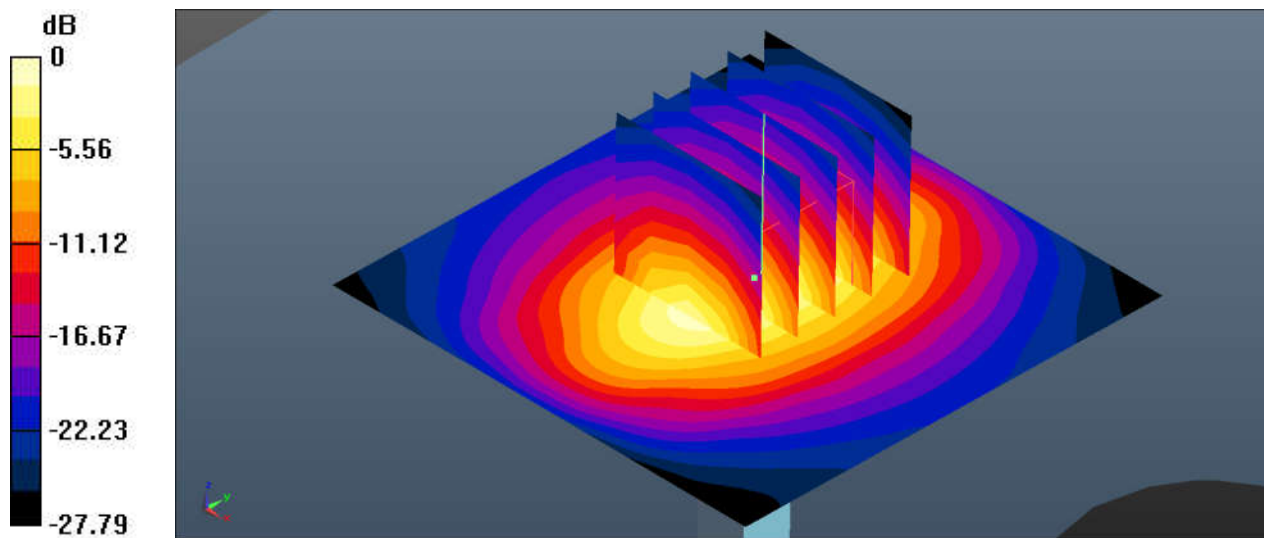
**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 86.62 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 14.2 W/kg

**SAR(1 g) = 9.18 W/kg; SAR(10 g) = 4.79 W/kg**

Maximum value of SAR (measured) = 12.2 W/kg



0 dB = 12.5 W/kg = 10.97 dBW/kg



**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;  $\sigma = 1.824$  S/m;  $\epsilon_r = 38.12$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C ; Liquid Temperature : 22.6 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(7.56, 7.56, 7.56); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7372)

**Pin=250mW/Area Scan (71x71x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 19.4 W/kg

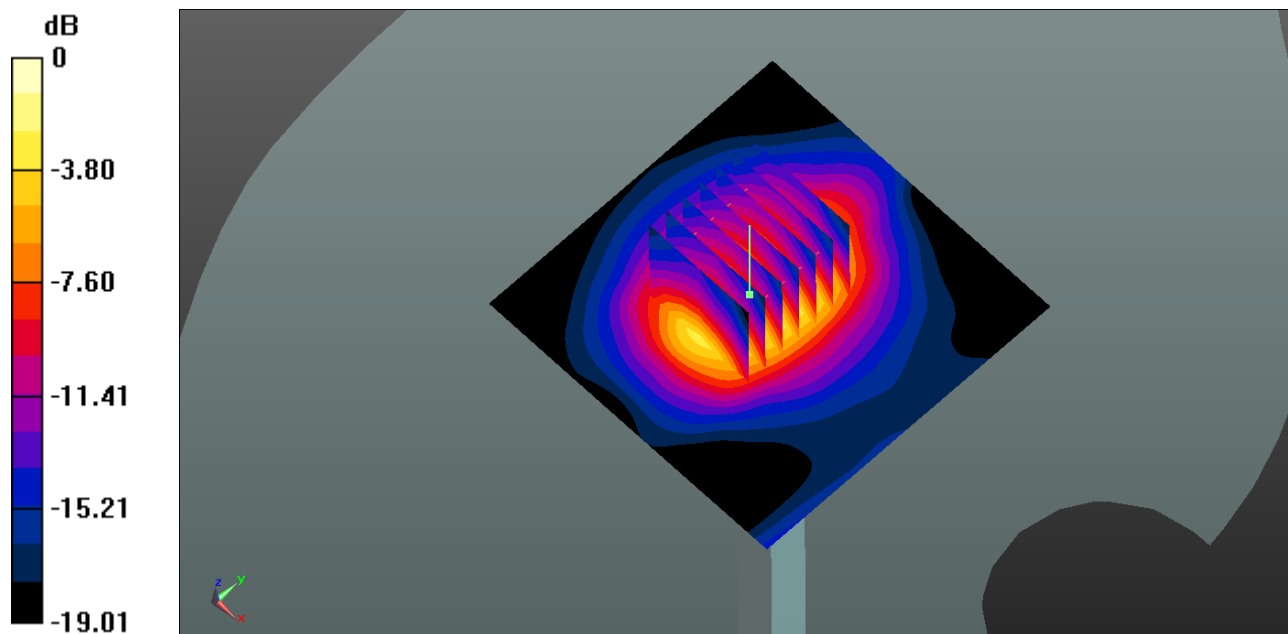
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 81.56 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 22.5 W/kg

**SAR(1 g) = 12.2 W/kg; SAR(10 g) = 6.01 W/kg**

Maximum value of SAR (measured) = 17.7 W/kg



0 dB = 17.7 W/kg = 12.48 dBW/kg

**System Check\_Head\_2600MHz****DUT: D2600V2 - SN:1061**

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: HSL\_2600 Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.012$  S/m;  $\epsilon_r = 37.658$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(4.44, 4.44, 4.44); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- 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) = 19.9 W/kg

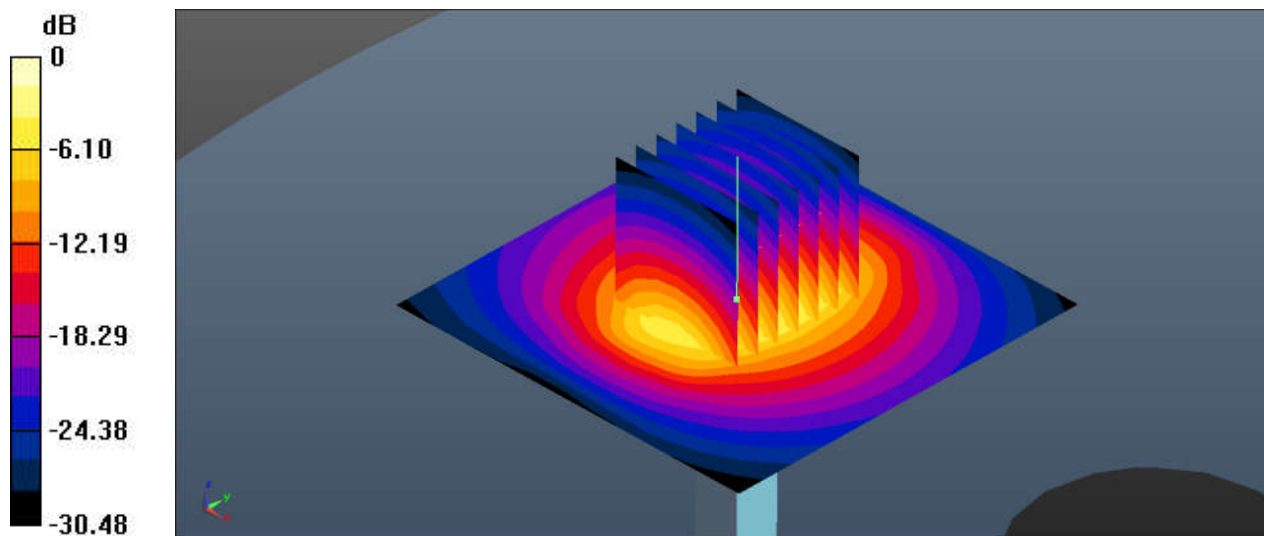
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 90.78 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 32.5 W/kg

**SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.2 W/kg**

Maximum value of SAR (measured) = 19.3 W/kg



0 dB = 19.9 W/kg = 12.99 dBW/kg

**System Check\_Head\_5250MHz****DUT: D5GHzV2-SN:1006**

Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: HSL\_5000 Medium parameters used:  $f = 5250$  MHz;  $\sigma = 4.53$  S/m;  $\epsilon_r = 36.367$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(5.2, 5.2, 5.2); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Pin=100/Area Scan (71x71x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 17.2 W/kg

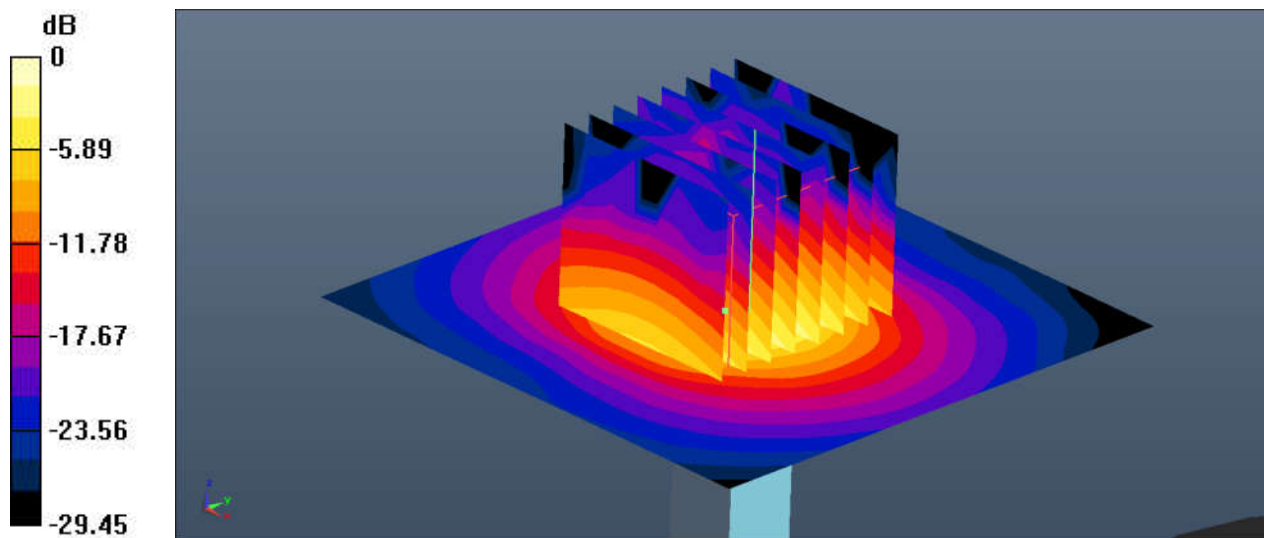
**Pin=100/Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 42.97 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 29.2 W/kg

**SAR(1 g) = 7.51 W/kg; SAR(10 g) = 2.41 W/kg**

Maximum value of SAR (measured) = 17.2 W/kg



0 dB = 17.2 W/kg = 12.36 dBW/kg

**System Check\_Head\_5600MHz****DUT: D5GHzV2-SN:1006**

Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: HSL\_5000 Medium parameters used:  $f = 5600$  MHz;  $\sigma = 4.861$  S/m;  $\epsilon_r = 35.896$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(4.94, 4.94, 4.94); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10(1); SEMCAD X Version 14.6.10 (7372)

**Pin=100/Area Scan (71x71x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 17.3 W/kg

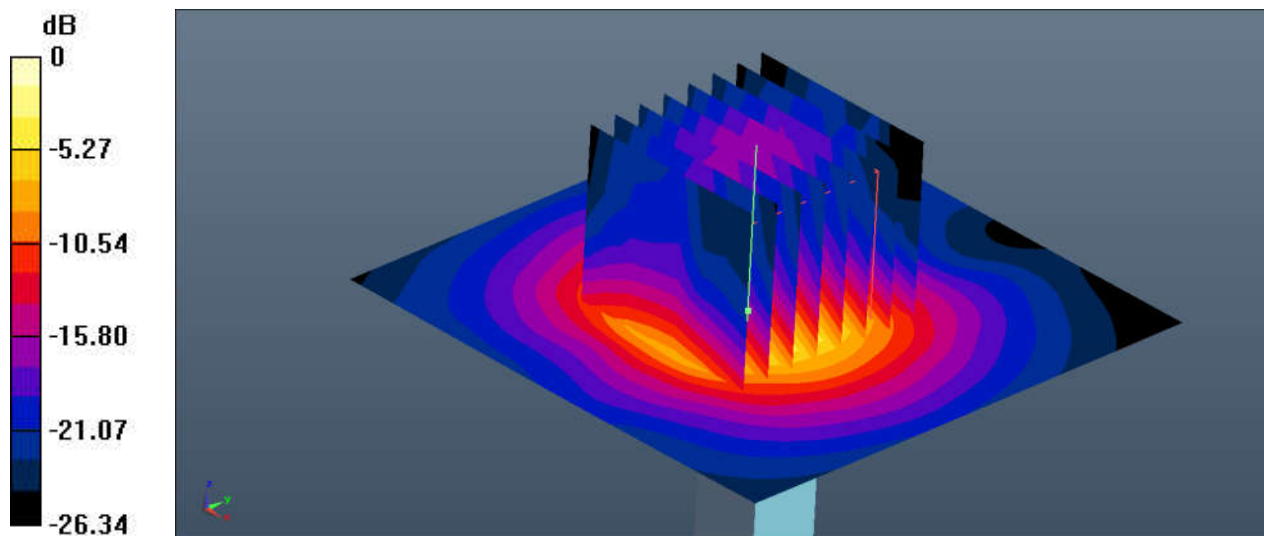
**Pin=100/Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 39.39 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 27.4 W/kg

**SAR(1 g) = 7.67 W/kg; SAR(10 g) = 2.33 W/kg**

Maximum value of SAR (measured) = 17.0 W/kg



0 dB = 17.3 W/kg = 12.38 dBW/kg

**System Check\_Head\_5750MHz****DUT: D5GHzV2-SN:1006**

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: HSL\_5000 Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.007$  S/m;  $\epsilon_r = 35.703$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(5.23, 5.23, 5.23); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Pin=100/Area Scan (71x71x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 16.4 W/kg

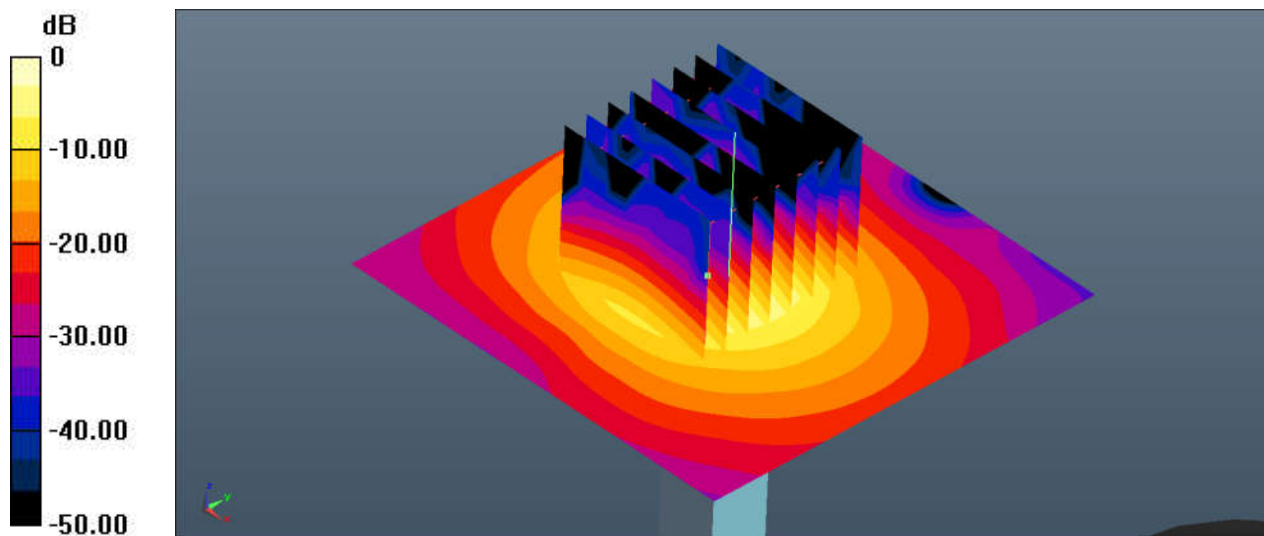
**Pin=100/Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 37.72 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 30.5 W/kg

**SAR(1 g) = 7.65 W/kg; SAR(10 g) = 2.34 W/kg**

Maximum value of SAR (measured) = 16.3 W/kg



0 dB = 16.4 W/kg = 12.15 dBW/kg

**System Check\_Body\_835MHz****DUT: D835V2 - SN:4d151**

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: MSL\_850 Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.987$  S/m;  $\epsilon_r = 54.827$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(6.24, 6.24, 6.24); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- 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) = 3.30 W/kg

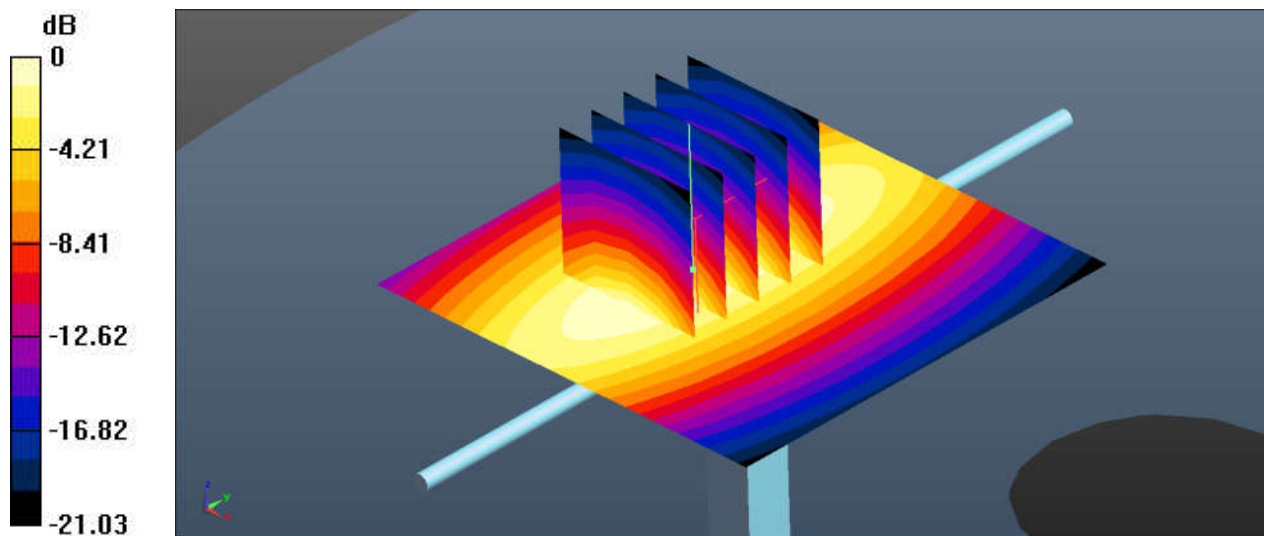
**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 48.20 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 4.02 W/kg

**SAR(1 g) = 2.56 W/kg; SAR(10 g) = 1.67 W/kg**

Maximum value of SAR (measured) = 3.29 W/kg



0 dB = 3.30 W/kg = 5.19 dBW/kg

**System Check\_Body\_1750MHz****DUT: D1750V2 - SN:1090**

Communication System: UID 0, CW (0); Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: MSL\_1750 Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.521$  S/m;  $\epsilon_r = 54.081$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(5.01, 5.01, 5.01); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- 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) = 11.6 W/kg

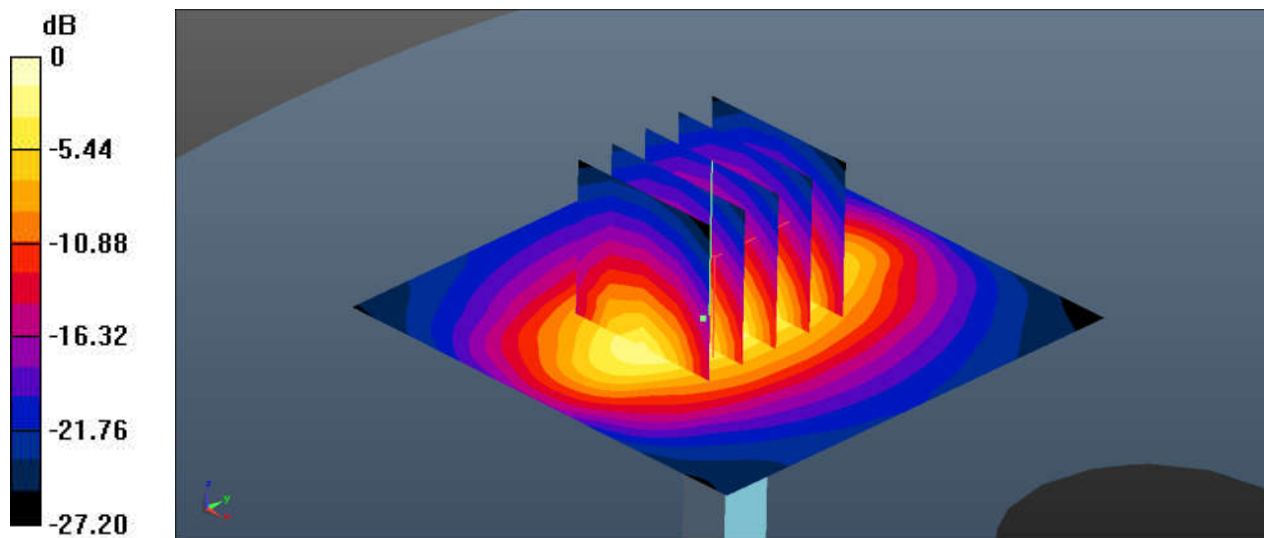
**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 81.95 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 13.0 W/kg

**SAR(1 g) = 8.66 W/kg; SAR(10 g) = 4.73 W/kg**

Maximum value of SAR (measured) = 11.6 W/kg



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



**System Check\_Body\_1900MHz****DUT: D1900V2 - SN:5d170**

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: MSL\_1900 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.534$  S/m;  $\epsilon_r = 53.035$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

DASY5 Configuration:

- Probe: ES3DV3 - SN3293; ConvF(4.74, 4.74, 4.74); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- 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) = 10.6 W/kg

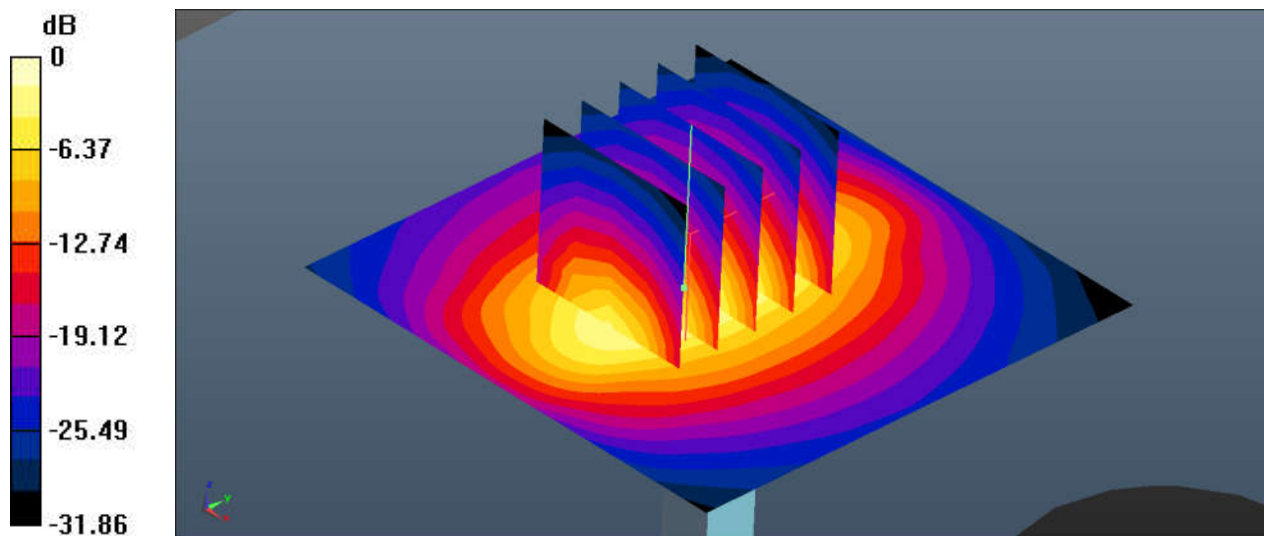
**Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 75.90 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 12.0 W/kg

**SAR(1 g) = 9.51 W/kg; SAR(10 g) = 5.12 W/kg**

Maximum value of SAR (measured) = 10.6 W/kg



0 dB = 10.6 W/kg = 10.25 dBW/kg



**System Check\_Body\_2450MHz****DUT: D2450V2 - SN:908**

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: MSL\_2450 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 2.027$  S/m;  $\epsilon_r = 53.032$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C ; Liquid Temperature : 22.8 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(7.42, 7.42, 7.42); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.04.19
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7372)

**Pin=250mW/Area Scan (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 18.7 W/kg

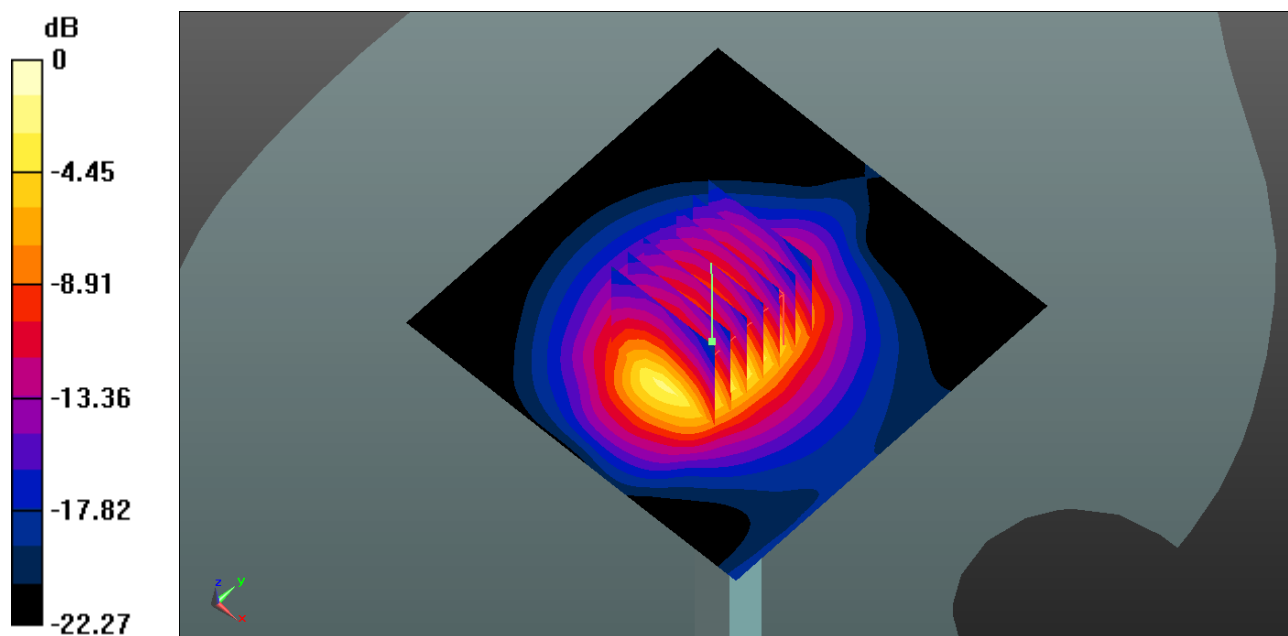
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 81.15 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 23.8 W/kg

**SAR(1 g) = 12.4 W/kg; SAR(10 g) = 6.02 W/kg**

Maximum value of SAR (measured) = 18.4 W/kg



0 dB = 18.4 W/kg = 12.65 dBW/kg

**System Check\_Body\_2600MHz****DUT: D2600V2 - SN:1061**

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: MSL\_2600 Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.217$  S/m;  $\epsilon_r = 52.913$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.8 °C

DASY5 Configuration:

- Probe: ES3DV3 - SN3293; ConvF(4.28, 4.28, 4.28); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Pin=250mW/Area Scan (61x61x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 21.0 W/kg

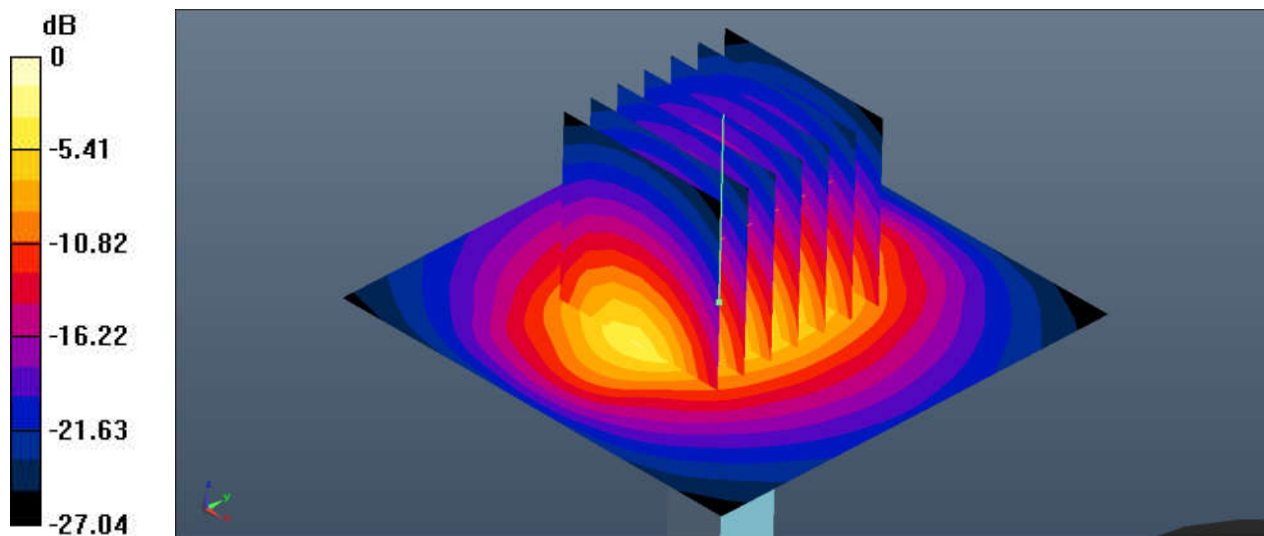
**Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.31 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 23.0 W/kg

**SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.11 W/kg**

Maximum value of SAR (measured) = 20.8 W/kg



0 dB = 21.0 W/kg = 13.22 dBW/kg

**System Check\_Body\_5250MHz****DUT: D5GHzV2-SN:1006**

Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: MSL\_5000 Medium parameters used:  $f = 5250$  MHz;  $\sigma = 5.505$  S/m;  $\epsilon_r = 49.515$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C ; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(4.4, 4.4, 4.4); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.04.19
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7372)

**Pin=100mW/Area Scan (71x71x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 17.3 W/kg

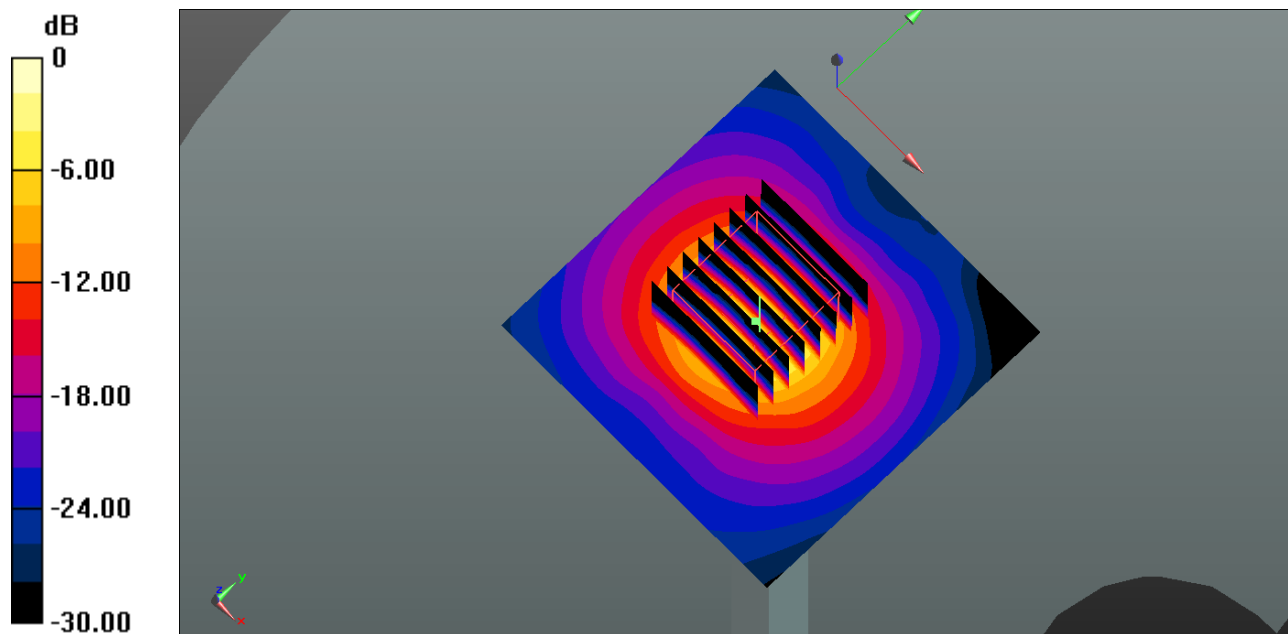
**Pin=100mW/Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 38.01 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 29.1 W/kg

**SAR(1 g) = 7.23 W/kg; SAR(10 g) = 2.02 W/kg**

Maximum value of SAR (measured) = 16.7 W/kg



0 dB = 17.3 W/kg = 12.38 dBW/kg

**System Check\_Body\_5600MHz****DUT: D5GHzV2-SN:1006**

Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: MSL\_5000 Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.974$  S/m;  $\epsilon_r = 48.957$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C ; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(3.98, 3.98, 3.98); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.04.19
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7372)

**CW/Area Scan (71x71x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 18.0 W/kg

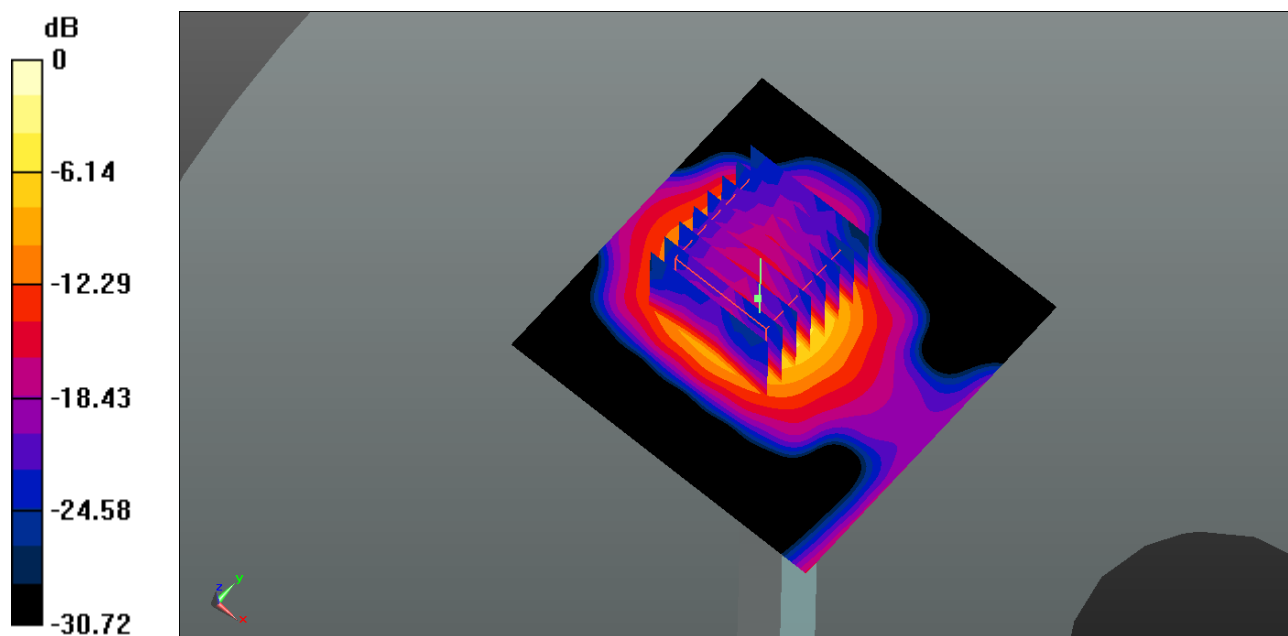
**CW/Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 27.71 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 34.1 W/kg

**SAR(1 g) = 7.4 W/kg; SAR(10 g) = 2.16 W/kg**

Maximum value of SAR (measured) = 17.4 W/kg



0 dB = 17.4 W/kg = 12.41 dBW/kg

**System Check\_Body\_5750MHz****DUT: D5GHzV2-SN:1006**

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: MSL\_5000 Medium parameters used:  $f = 5750$  MHz;  $\sigma = 6.189$  S/m;  $\epsilon_r = 48.732$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C ; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(4.31, 4.31, 4.31); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.04.19
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7372)

**Pin=100mW/Area Scan (71x71x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 17.2 W/kg

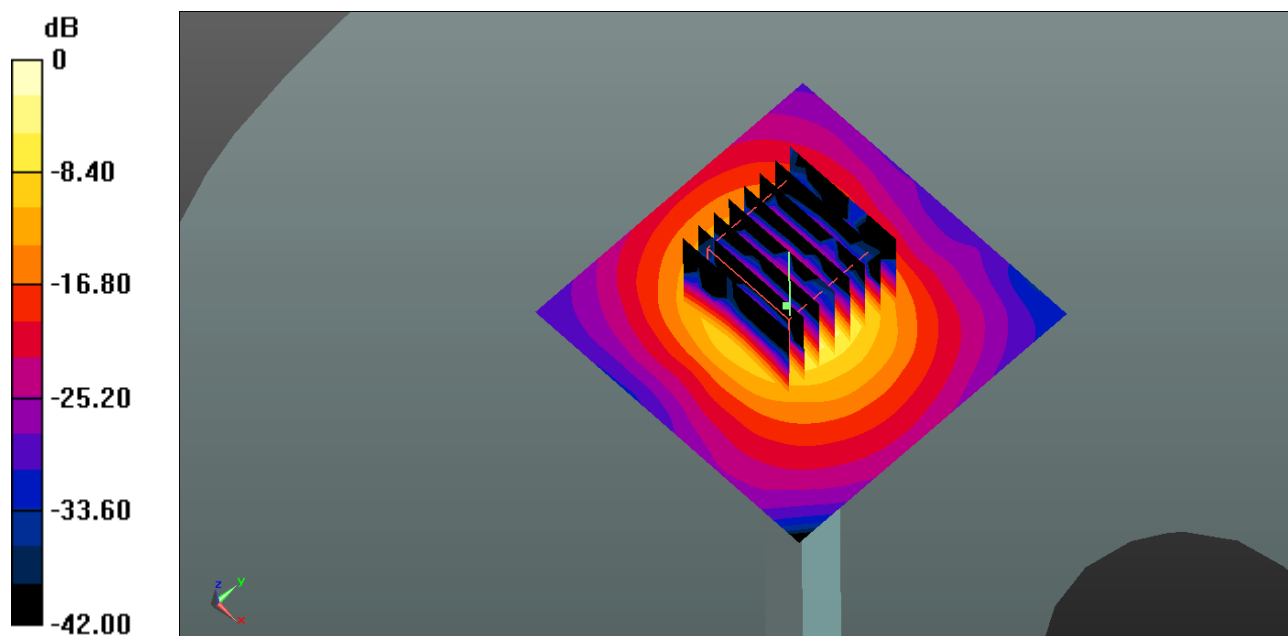
**Pin=100mW/Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 34.71 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 31.6 W/kg

**SAR(1 g) = 7.98 W/kg; SAR(10 g) = 2.11 W/kg**

Maximum value of SAR (measured) = 17.1 W/kg



0 dB = 17.2 W/kg = 12.36 dBW/kg



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## ***Appendix B. Plots of High SAR Measurement***

The plots are shown as follows.

**01\_GSM850 \_GPRS 4 Tx slots\_Right Cheek\_0mm\_Ch189\_UAT**

Communication System: UID 0, GSM850 (0); Frequency: 836.4 MHz; Duty Cycle: 1:2.08

Medium: HSL\_850 Medium parameters used:  $f = 836.4$  MHz;  $\sigma = 0.916$  S/m;  $\epsilon_r = 41.25$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.8 °C

DASY5 Configuration:

- Probe: ES3DV3 - SN3293; ConvF(6.47, 6.47, 6.47); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch189/Area Scan (71x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.603 W/kg

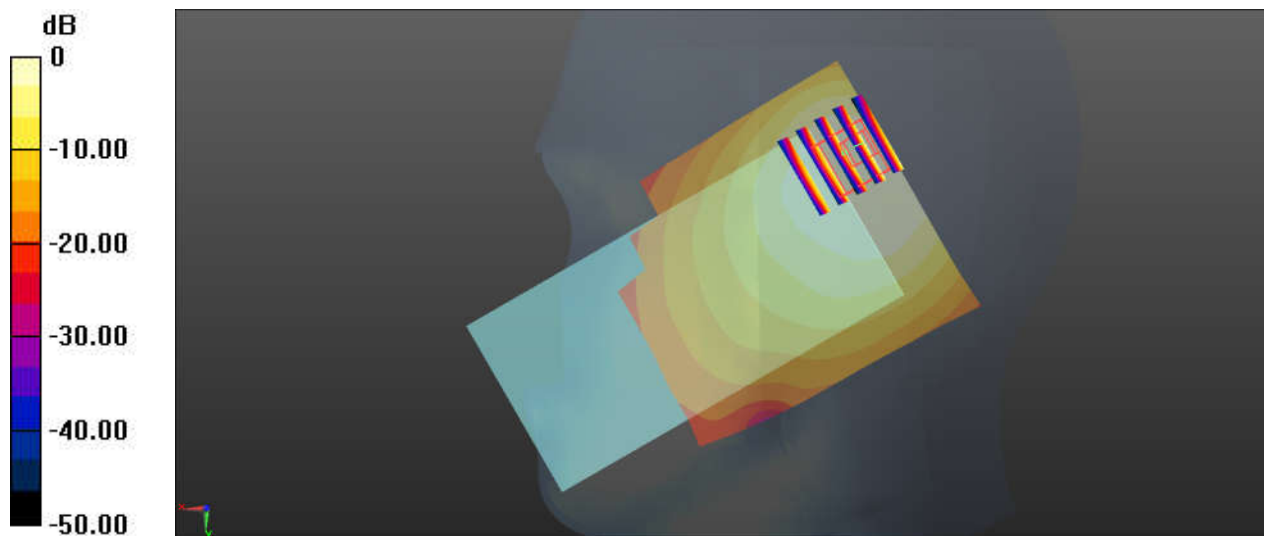
**Ch189/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.48 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.05 W/kg

**SAR(1 g) = 0.512 W/kg; SAR(10 g) = 0.284 W/kg**

Maximum value of SAR (measured) = 0.639 W/kg



0 dB = 0.603 W/kg = -2.20 dBW/kg

**02\_GSM1900\_GPRS 4 Tx slots\_Right Cheek\_0mm\_UAT\_Ch810**

Communication System: UID 0, PCS (0); Frequency: 1909.8 MHz; Duty Cycle: 1:2.08  
Medium: HSL\_1900 Medium parameters used:  $f = 1909.8$  MHz;  $\sigma = 1.439$  S/m;  $\epsilon_r = 41.053$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.6 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(5.19, 5.19, 5.19); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch810/Area Scan (71x71x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 1.51 W/kg

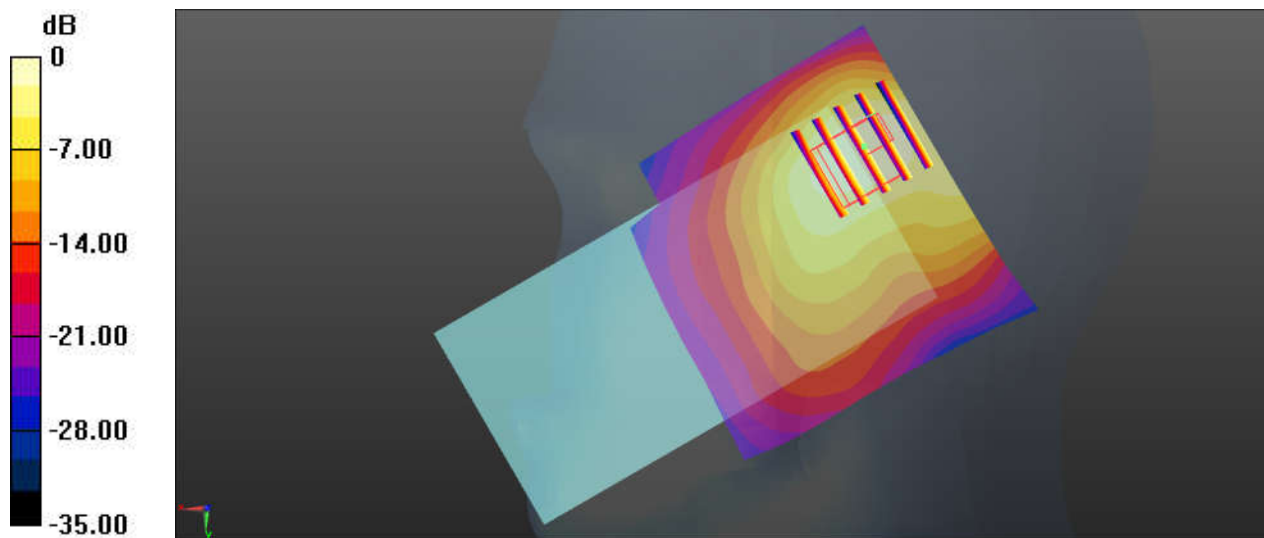
**Ch810/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 22.97 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.85 W/kg

**SAR(1 g) = 0.848 W/kg; SAR(10 g) = 0.513 W/kg**

Maximum value of SAR (measured) = 1.32 W/kg





**03\_WCDMA V\_RMC 12.2Kbps\_Left Cheek\_0mm\_UAT\_Ch4233**

Communication System: UID 0, WCDMA (0); Frequency: 846.6 MHz; Duty Cycle: 1:1  
Medium: HSL\_850 Medium parameters used:  $f = 846.6$  MHz;  $\sigma = 0.926$  S/m;  $\epsilon_r = 41.111$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2 °C ; Liquid Temperature : 22.8 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(6.47, 6.47, 6.47); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch4233/Area Scan (71x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.699 W/kg

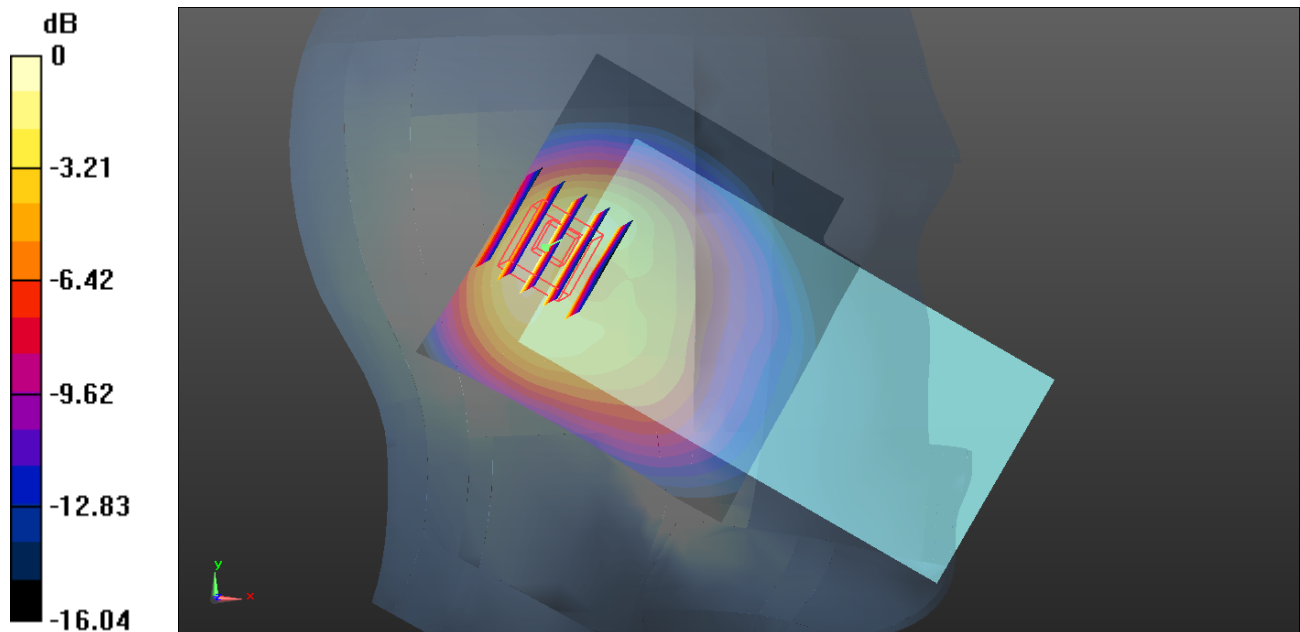
**Ch4233/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.13 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.21 W/kg

**SAR(1 g) = 0.556 W/kg; SAR(10 g) = 0.291 W/kg**

Maximum value of SAR (measured) = 0.717 W/kg



0 dB = 0.717 W/kg = -1.44 dBW/kg

**04\_WCDMA IV\_RMC 12.2Kbps\_Right Tilted\_0mm\_UAT\_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;  $\sigma = 1.331$  S/m;  $\epsilon_r = 40.296$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(5.4, 5.4, 5.4); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch1413/Area Scan (71x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.998 W/kg

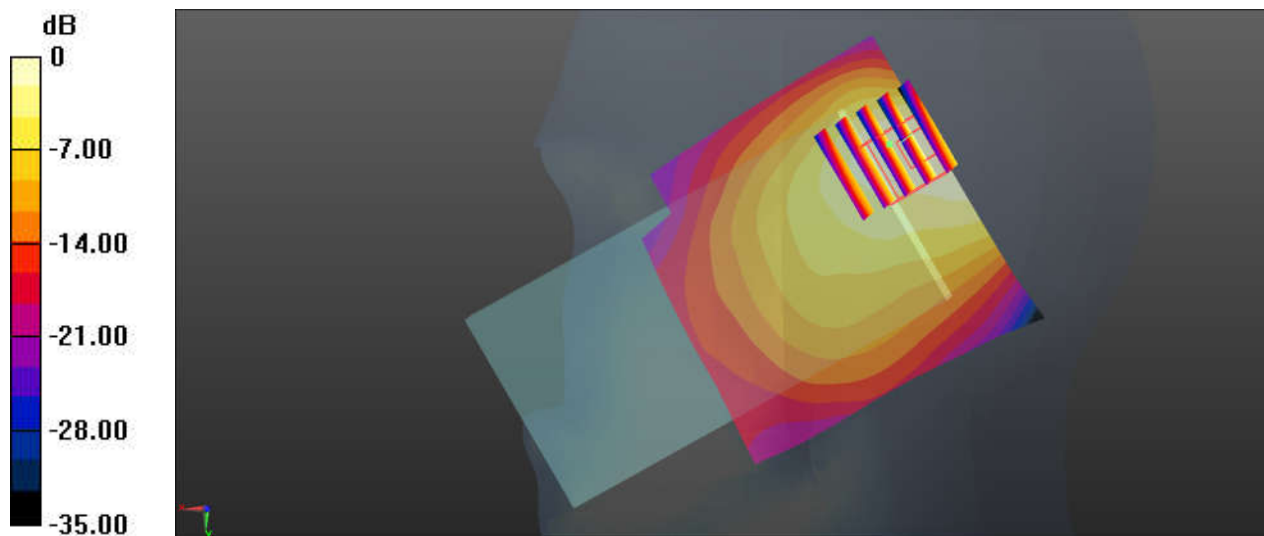
**Ch1413/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.00 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 2.13 W/kg

**SAR(1 g) = 0.802 W/kg; SAR(10 g) = 0.405 W/kg**

Maximum value of SAR (measured) = 1.61 W/kg



**05\_WCDMA II\_RMC 12.2Kbps\_Right Cheek\_0mm\_UAT\_Ch9400**

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1  
Medium: HSL\_1900 Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.407$  S/m;  $\epsilon_r = 41.21$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.6 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(5.19, 5.19, 5.19); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch9400/Area Scan (71x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.62 W/kg

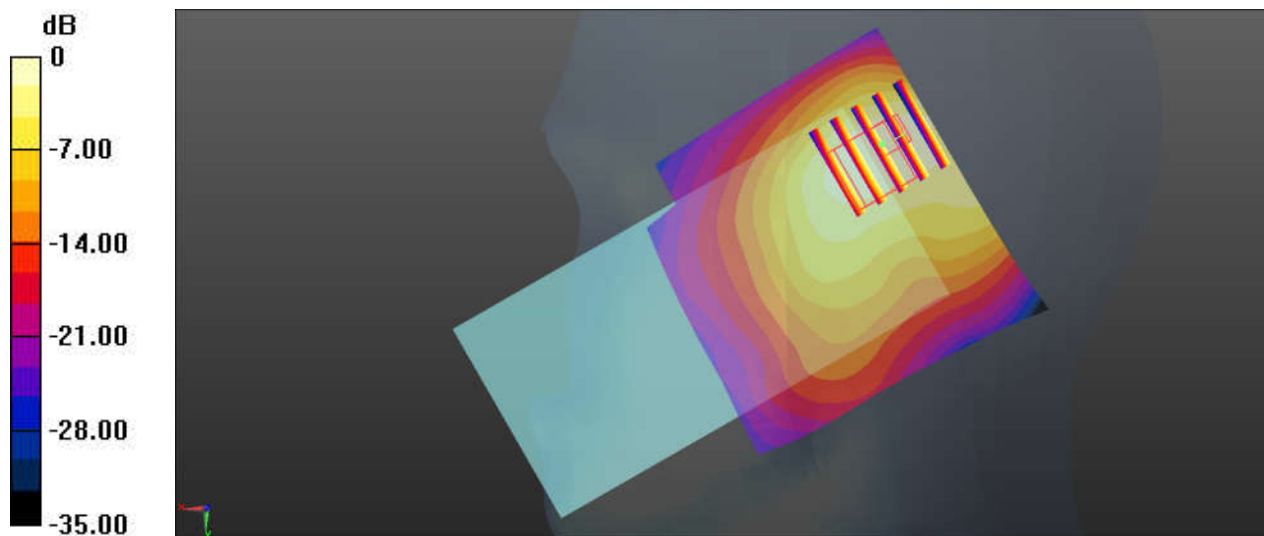
**Ch9400/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.55 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 2.05 W/kg

**SAR(1 g) = 0.939 W/kg; SAR(10 g) = 0.576 W/kg**

Maximum value of SAR (measured) = 1.44 W/kg



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

**06\_LTE Band 5\_10M\_QPSK\_25RB\_0offset\_Right Tilted\_0mm\_UAT\_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;  $\sigma = 0.916$  S/m;  $\epsilon_r = 41.249$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.8 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(6.47, 6.47, 6.47); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- 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) = 1.05 W/kg

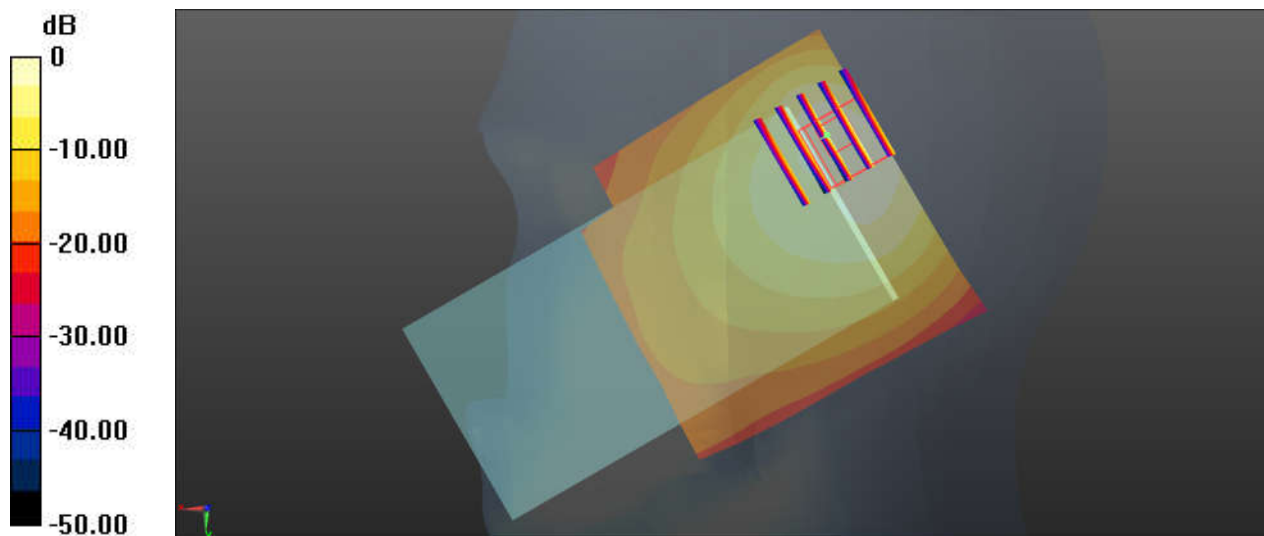
**Ch20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.502 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.06 W/kg

**SAR(1 g) = 0.775 W/kg; SAR(10 g) = 0.367 W/kg**

Maximum value of SAR (measured) = 1.02 W/kg



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

**07\_LTE Band 4\_20M\_QPSK\_100RB\_0Offset\_Right Tilted\_0mm\_UAT\_Ch20175**

Communication System: UID 0, LTE-FDD (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium: HSL\_1750 Medium parameters used:  $f = 1732.5$  MHz;  $\sigma = 1.331$  S/m;  $\epsilon_r = 40.296$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(5.4, 5.4, 5.4); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch20175/Area Scan (71x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.11 W/kg

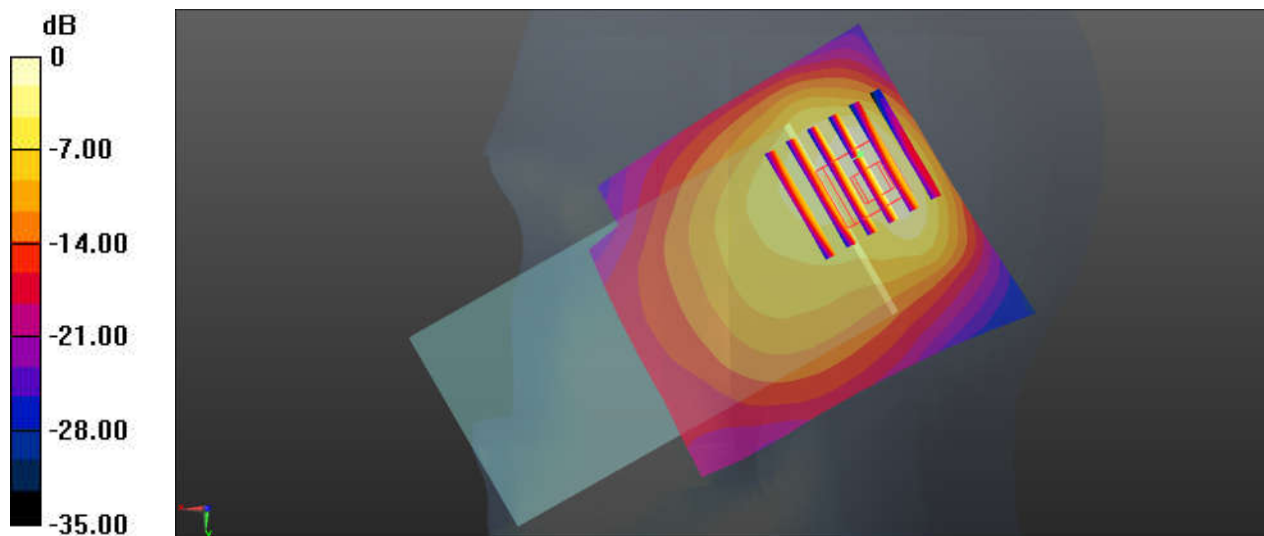
**Ch20175/Zoom Scan (6x6x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.42 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 2.23 W/kg

**SAR(1 g) = 0.911 W/kg; SAR(10 g) = 0.469 W/kg**

Maximum value of SAR (measured) = 1.70 W/kg



0 dB = 1.11 W/kg = 0.45 dBW/kg

**08\_LTE Band 2\_20M\_QPSK\_50RB\_0Offset\_Right Cheek\_0mm\_UAT\_Ch19100**

Communication System: UID 0, LTE-FDD (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: HSL\_1900 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.428$  S/m;  $\epsilon_r = 41.104$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: ES3DV3 - SN3293; ConvF(5.19, 5.19, 5.19); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch19100/Area Scan (71x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.34 W/kg

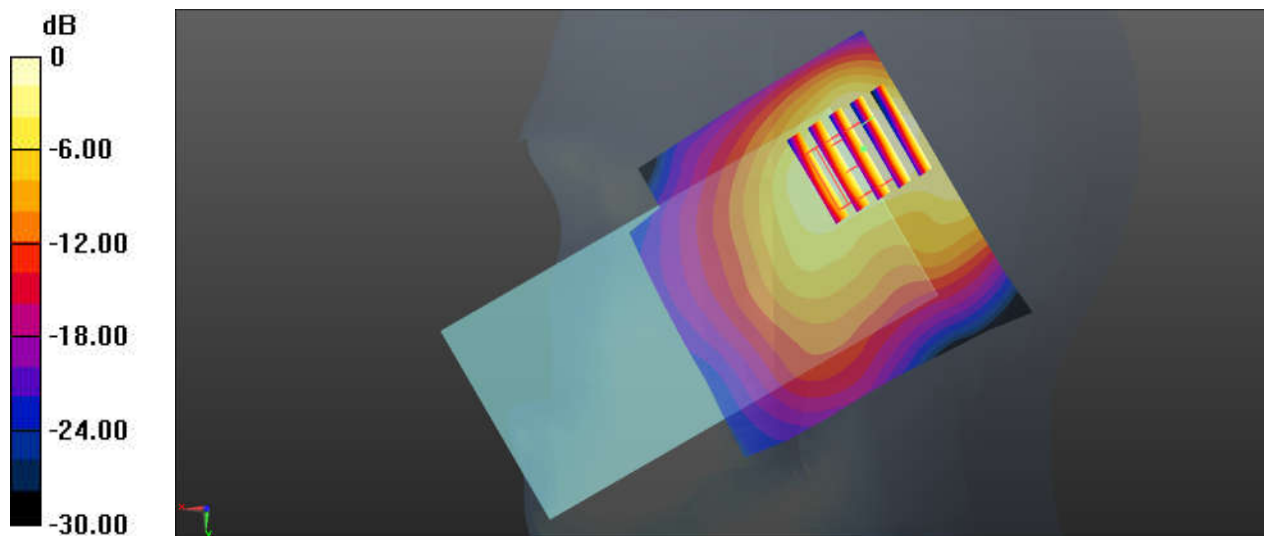
**Ch19100/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.433 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.68 W/kg

**SAR(1 g) = 0.811 W/kg; SAR(10 g) = 0.515 W/kg**

Maximum value of SAR (measured) = 1.28 W/kg



**09\_LTE Band 7\_20M\_QPSK\_50RB\_0Offset\_Right Tilted\_0mm\_UAT\_Ch20850**

Communication System: UID 0, LTE-FDD (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium: HSL\_2600 Medium parameters used:  $f = 2510$  MHz;  $\sigma = 1.907$  S/m;  $\epsilon_r = 38.012$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: ES3DV3 - SN3293; ConvF(4.44, 4.44, 4.44); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch20850/Area Scan (81x81x1):** Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm

Maximum value of SAR (interpolated) = 1.33 W/kg

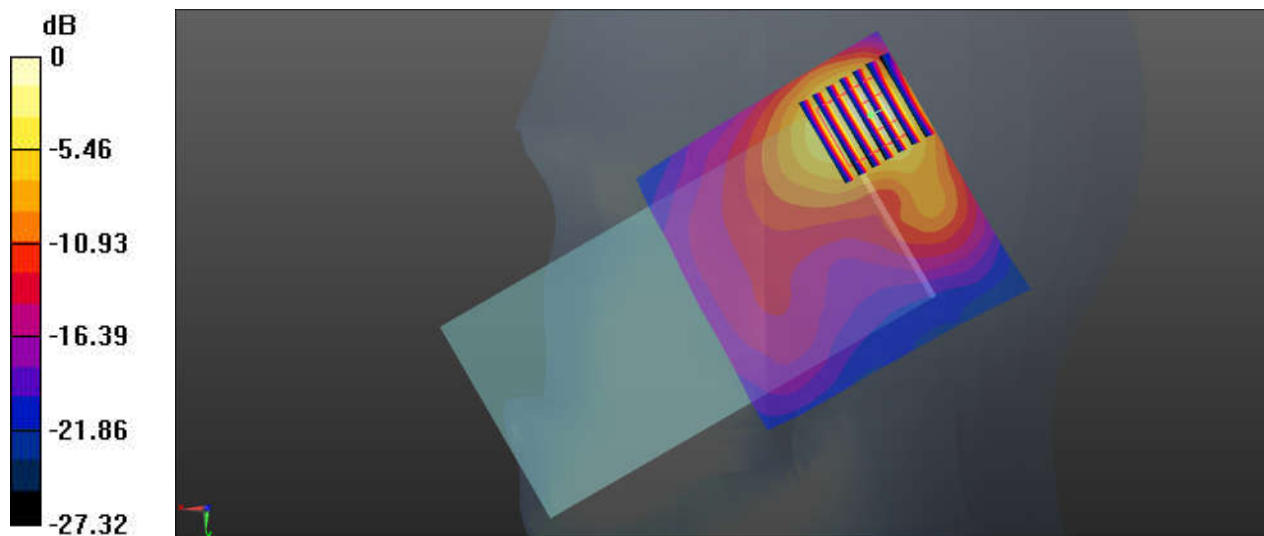
**Ch20850/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 7.722 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 2.27 W/kg

**SAR(1 g) = 0.803 W/kg; SAR(10 g) = 0.346 W/kg**

Maximum value of SAR (measured) = 1.11 W/kg



**10\_LTE Band 38\_20M\_QPSK\_100RB\_0Offset\_Right Cheek\_0mm\_UAT\_Ch38000**

Communication System: UID 0, LTE-TDD (0); Frequency: 2595 MHz; Duty Cycle: 1:1.59

Medium: HSL\_2600 Medium parameters used:  $f = 2595$  MHz;  $\sigma = 2.006$  S/m;  $\epsilon_r = 37.677$ ;  $\rho = 1000$

kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C ; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: ES3DV3 - SN3293; ConvF(4.44, 4.44, 4.44); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch38000/Area Scan (81x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.08 W/kg

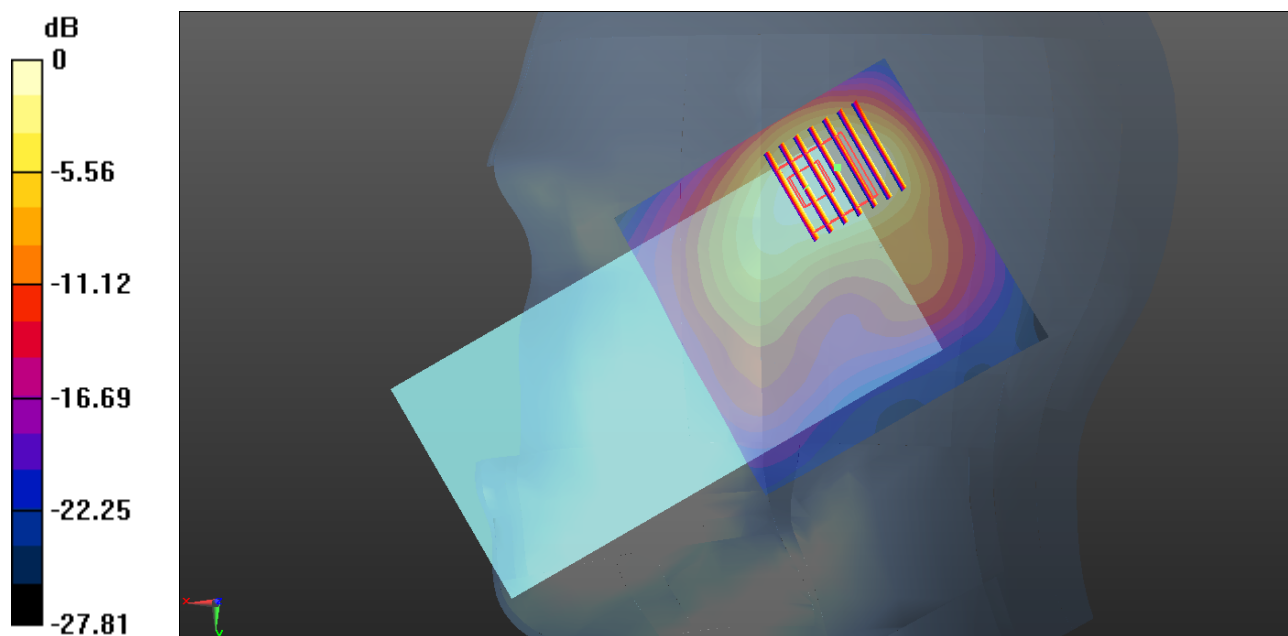
**Ch38000/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.438 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.96 W/kg

**SAR(1 g) = 0.748 W/kg; SAR(10 g) = 0.364 W/kg**

Maximum value of SAR (measured) = 0.979 W/kg



0 dB = 0.979 W/kg = -0.09 dBW/kg



**11\_WLAN2.4GHz\_802.11b 1Mbps\_Left Cheek\_0mm\_Ch1**

Communication System: UID 0, WIFI (0); Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: HSL\_2450 Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.785$  S/m;  $\epsilon_r = 38.274$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C ; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3857; ConvF(7.56, 7.56, 7.56); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.10 (7372)

**Ch1/Area Scan (91x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 2.09 W/kg

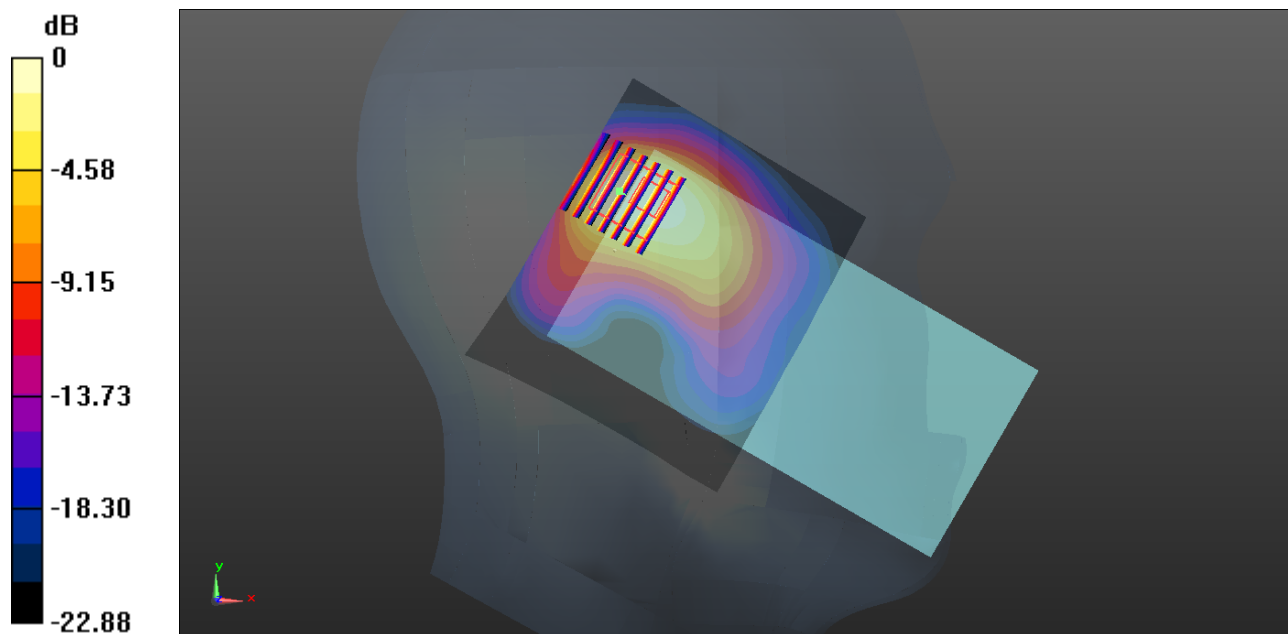
**Ch1/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.30 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 2.29 W/kg

**SAR(1 g) = 0.930 W/kg; SAR(10 g) = 0.443 W/kg**

Maximum value of SAR (measured) = 1.62 W/kg



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

**12\_WLAN5GHz\_802.11a 6Mbps\_Left Cheek\_0mm\_Ch64**

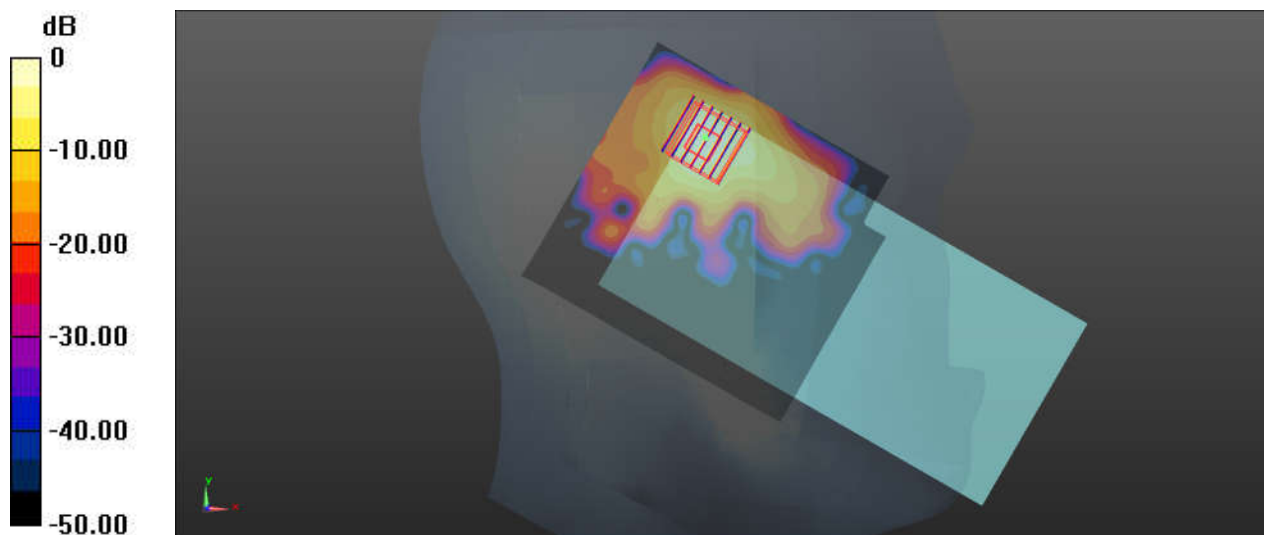
Communication System: UID 0, 802.11a (0); Frequency: 5320 MHz; Duty Cycle: 1:1.018  
Medium: HSL\_5000 Medium parameters used:  $f = 5320$  MHz;  $\sigma = 4.725$  S/m;  $\epsilon_r = 36.232$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(5.2, 5.2, 5.2); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch64/Area Scan (101x111x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm  
Maximum value of SAR (interpolated) = 2.75 W/kg

**Ch64/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm  
Reference Value = 0.2320 V/m; Power Drift = -0.05 dB  
Peak SAR (extrapolated) = 5.30 W/kg  
**SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.307 W/kg**  
Maximum value of SAR (measured) = 2.91 W/kg



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

**13\_WLAN5GHz\_802.11a 6Mbps\_Left Cheek\_0mm\_Ch100**

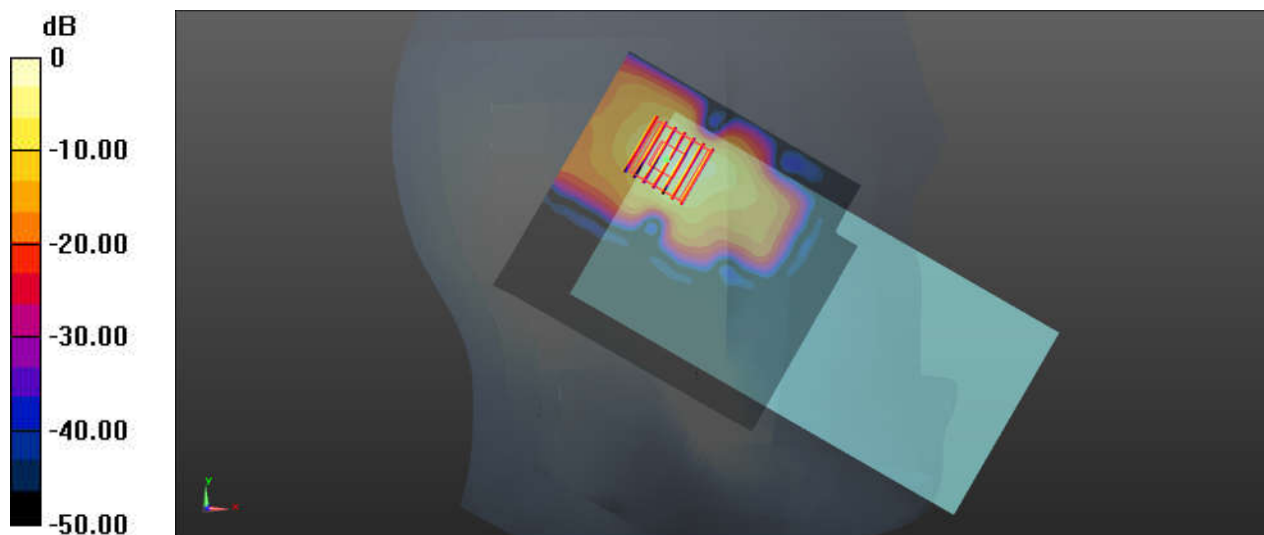
Communication System: UID 0, 802.11a (0); Frequency: 5500 MHz; Duty Cycle: 1:1.018  
Medium: HSL\_5000 Medium parameters used:  $f = 5500$  MHz;  $\sigma = 4.905$  S/m;  $\epsilon_r = 35.99$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(4.94, 4.94, 4.94); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch100/Area Scan (101x111x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 2.51 W/kg

**Ch100/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 0 V/m; Power Drift = 0.01 dB  
Peak SAR (extrapolated) = 4.20 W/kg  
**SAR(1 g) = 0.871 W/kg; SAR(10 g) = 0.229 W/kg**  
Maximum value of SAR (measured) = 2.39 W/kg



0 dB = 2.51 W/kg = 4.00 dBW/kg

**14\_WLAN5GHz\_802.11a 6Mbps\_Left Cheek\_0mm\_Ch161**

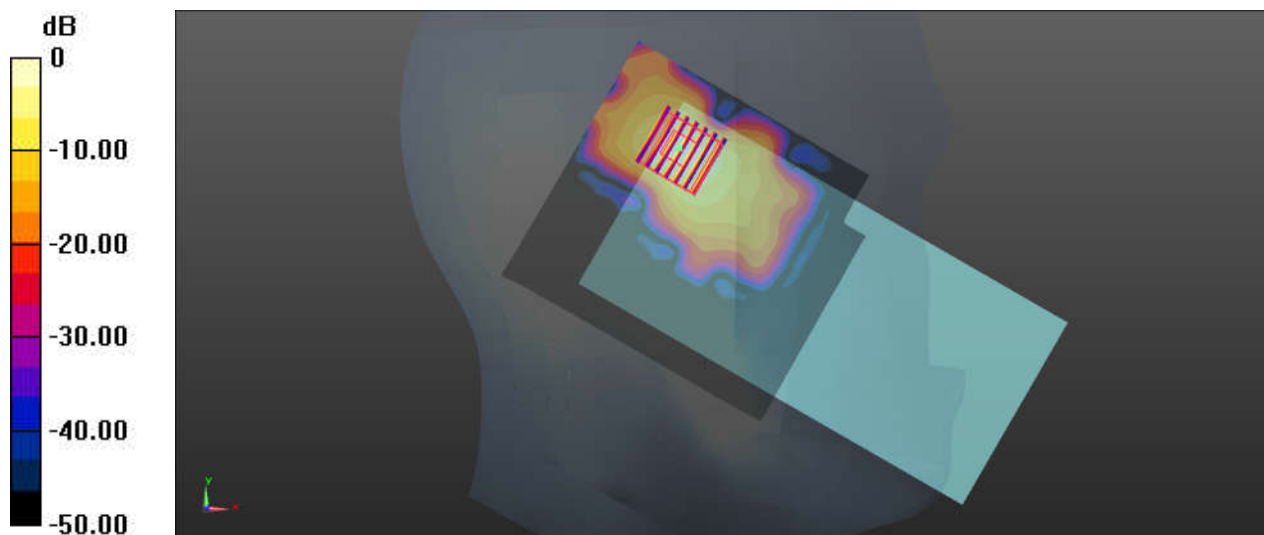
Communication System: UID 0, 802.11a (0); Frequency: 5805 MHz; Duty Cycle: 1:1.018  
Medium: HSL\_5000 Medium parameters used:  $f = 5805$  MHz;  $\sigma = 5.228$  S/m;  $\epsilon_r = 35.566$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.3 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(5.23, 5.23, 5.23); Calibrated: 2018.5.31
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM1; Type: SAM; Serial: TP-1842
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch161/Area Scan (101x111x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 2.56 W/kg

**Ch161/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 3.143 V/m; Power Drift = -0.07 dB  
Peak SAR (extrapolated) = 4.25 W/kg  
**SAR(1 g) = 0.874 W/kg; SAR(10 g) = 0.234 W/kg**  
Maximum value of SAR (measured) = 2.35 W/kg



0 dB = 2.56 W/kg = 4.08 dBW/kg

**15\_Bluetooth\_1Mbps\_Left Tilted\_0mm\_Ch0**

Communication System: UID 0, Bluetooth (0); Frequency: 2402 MHz; Duty Cycle: 1:1.302

Medium: HSL\_2450 Medium parameters used:  $f = 2402$  MHz;  $\sigma = 1.774$  S/m;  $\epsilon_r = 38.314$ ;  $\rho = 1000$

kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C ; Liquid Temperature : 22.6 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3857; ConvF(7.56, 7.56, 7.56); Calibrated: 2018.5.31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1358; Calibrated: 2018.4.19
- Phantom: SAM2; Type: SAM; Serial: TP-1503
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.10 (7372)

**Ch0/Area Scan (101x101x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.556 W/kg

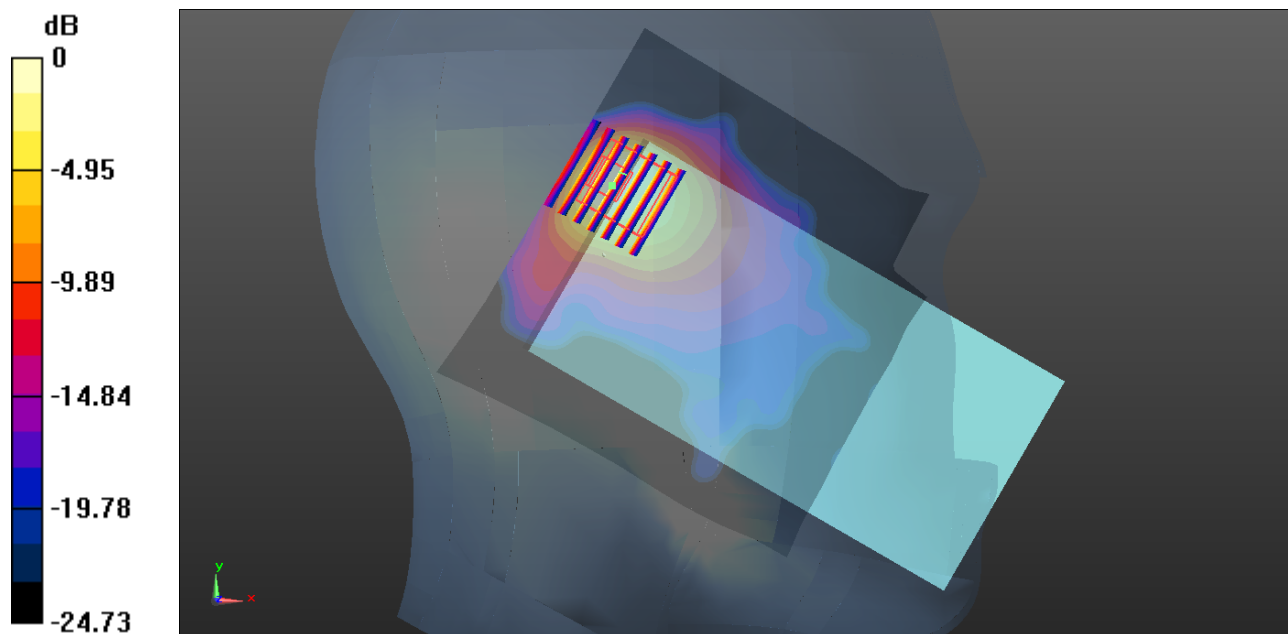
**Ch0/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.90 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.653 W/kg

**SAR(1 g) = 0.218 W/kg; SAR(10 g) = 0.090 W/kg**

Maximum value of SAR (measured) = 0.454 W/kg



0 dB = 0.454 W/kg = -3.43 dBW/kg

**16\_GSM850 \_GPRS 4 Tx slots\_Back\_10mm\_UAT\_Ch189**

Communication System: UID 0, GSM850 (0); Frequency: 836.4 MHz; Duty Cycle: 1:2.08

Medium: MSL\_850 Medium parameters used:  $f = 836.4$  MHz;  $\sigma = 0.989$  S/m;  $\epsilon_r = 54.827$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C ; Liquid Temperature : 22.7 °C

DASY5 Configuration:

- Probe: ES3DV3 - SN3293; ConvF(6.24, 6.24, 6.24); Calibrated: 2018.10.25;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.10 (7372)

**Ch189/Area Scan (71x121x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.507 W/kg

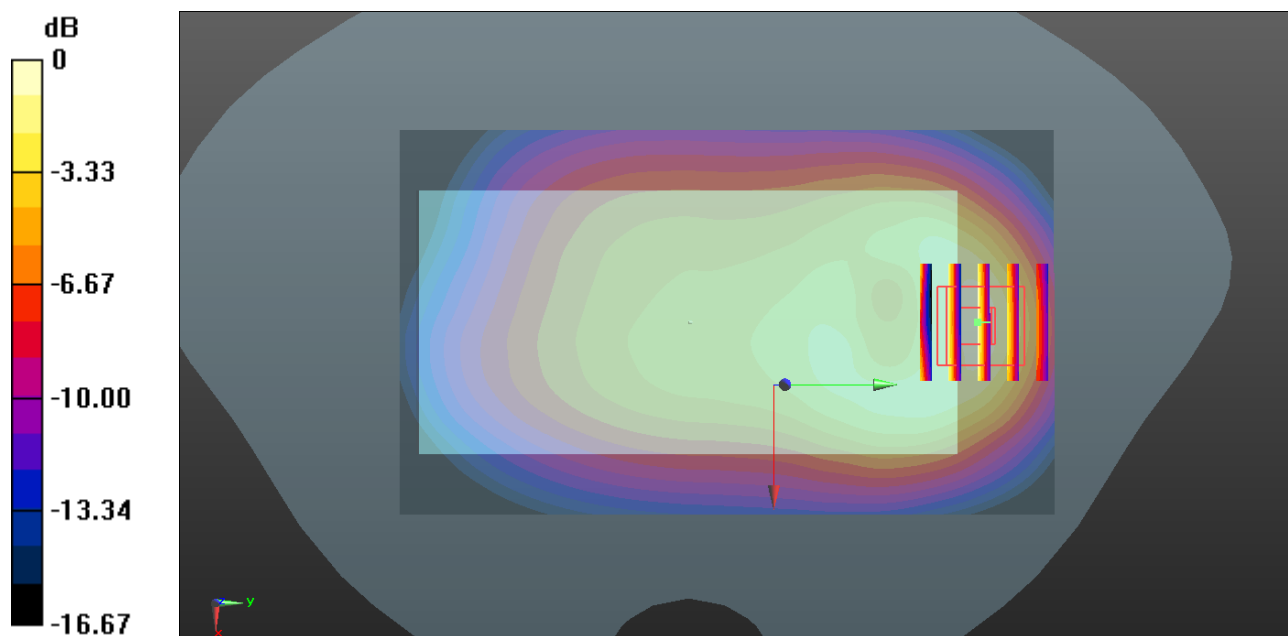
**Ch189/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.72 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 0.812 W/kg

**SAR(1 g) = 0.461 W/kg; SAR(10 g) = 0.258 W/kg**

Maximum value of SAR (measured) = 0.560 W/kg



0 dB = 0.560 W/kg = -2.52 dBW/kg

**17\_GSM1900\_GPRS 4 Tx slots\_Bottom Side\_10mm\_LAT\_Hotspot on\_Ch512**

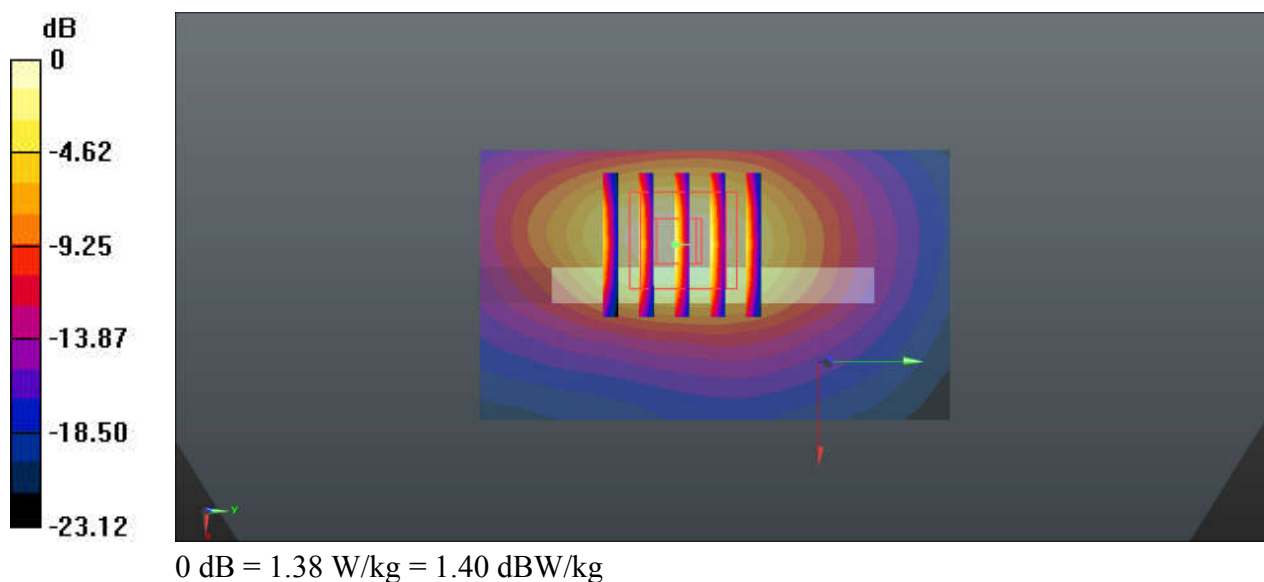
Communication System: UID 0, PCS (0); Frequency: 1850.2 MHz; Duty Cycle: 1:2.08  
Medium: MSL\_1900 Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.478$  S/m;  $\epsilon_r = 53.189$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(4.74, 4.74, 4.74); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch512/Area Scan (41x71x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm  
Maximum value of SAR (interpolated) = 1.38 W/kg

**Ch512/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 3.517 V/m; Power Drift = 0.06 dB  
Peak SAR (extrapolated) = 1.68 W/kg  
**SAR(1 g) = 0.938 W/kg; SAR(10 g) = 0.485 W/kg**  
Maximum value of SAR (measured) = 1.43 W/kg



**18\_WCDMA V\_RMC 12.2Kbps\_Back\_10mm\_UAT\_Ch4182**

Communication System: UID 0, WCDMA (0); Frequency: 836.4 MHz; Duty Cycle: 1:1  
Medium: MSL\_850 Medium parameters used:  $f = 836.4$  MHz;  $\sigma = 0.989$  S/m;  $\epsilon_r = 54.827$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(6.24, 6.24, 6.24); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch4182/Area Scan (71x121x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 0.706 W/kg

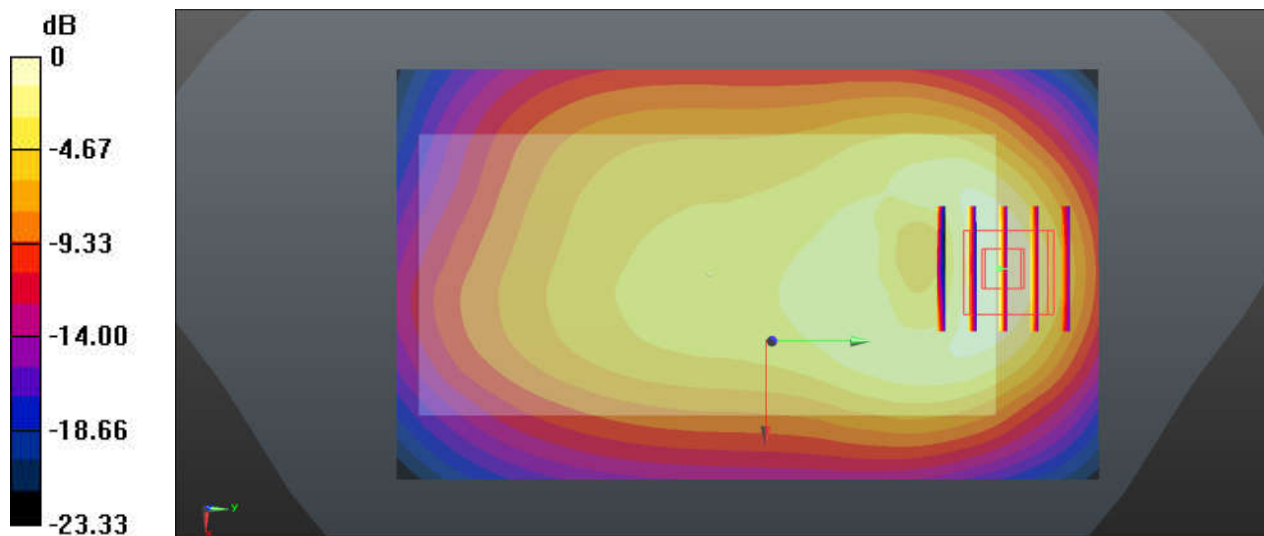
**Ch4182/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 25.26 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.04 W/kg

**SAR(1 g) = 0.607 W/kg; SAR(10 g) = 0.334 W/kg**

Maximum value of SAR (measured) = 0.747 W/kg



0 dB = 0.706 W/kg = -1.51 dBW/kg



**19\_WCDMA IV\_RMC 12.2Kbps\_Bottom Side\_10mm\_LAT\_Hotspot on\_Ch1312**

Communication System: UID 0, WCDMA (0); Frequency: 1712.4 MHz; Duty Cycle: 1:1  
Medium: MSL\_1750 Medium parameters used:  $f = 1712.4$  MHz;  $\sigma = 1.482$  S/m;  $\epsilon_r = 54.208$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(5.01, 5.01, 5.01); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch1312/Area Scan (41x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.24 W/kg

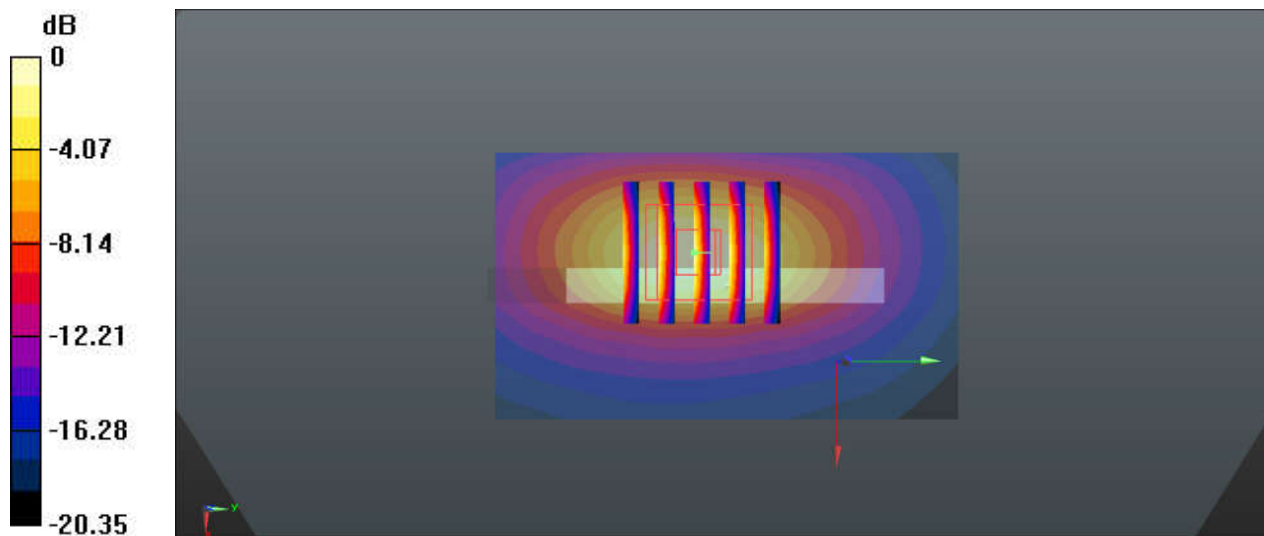
**Ch1312/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.58 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.39 W/kg

**SAR(1 g) = 0.809 W/kg; SAR(10 g) = 0.432 W/kg**

Maximum value of SAR (measured) = 1.20 W/kg



0 dB = 1.24 W/kg = 0.93 dBW/kg

**20\_WCDMA II\_RMC 12.2Kbps\_Bottom Side\_10mm\_LAT\_Hotspot on\_Ch9538**

Communication System: UID 0, WCDMA (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1  
Medium: MSL\_1900 Medium parameters used:  $f = 1907.6$  MHz;  $\sigma = 1.543$  S/m;  $\epsilon_r = 53.011$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(4.74, 4.74, 4.74); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch9538/Area Scan (41x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.36 W/kg

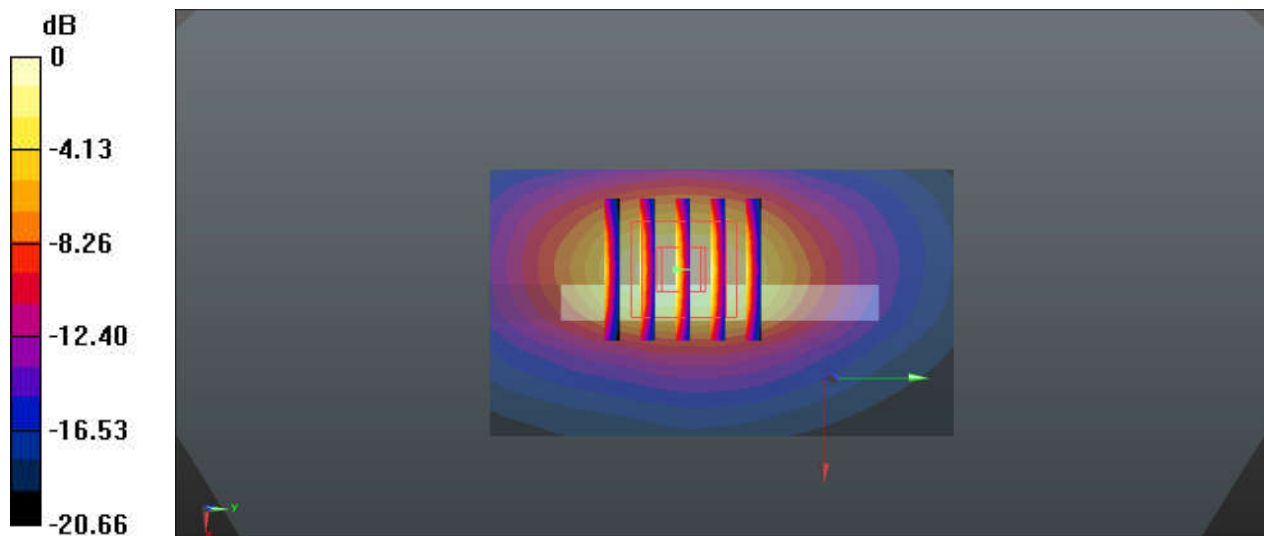
**Ch9538/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.34 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.56 W/kg

**SAR(1 g) = 0.849 W/kg; SAR(10 g) = 0.433 W/kg**

Maximum value of SAR (measured) = 1.31 W/kg



0 dB = 1.36 W/kg = 1.34 dBW/kg

**21\_LTE Band 5\_10M\_QPSK\_1RB\_0offset\_Back\_10mm\_UAT\_Ch20525**

Communication System: UID 0, LTE-FDD (0); Frequency: 836.5 MHz; Duty Cycle: 1:1  
Medium: MSL\_850 Medium parameters used:  $f = 836.5$  MHz;  $\sigma = 0.989$  S/m;  $\epsilon_r = 54.827$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(6.24, 6.24, 6.24); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch20525/Area Scan (71x121x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.531 W/kg

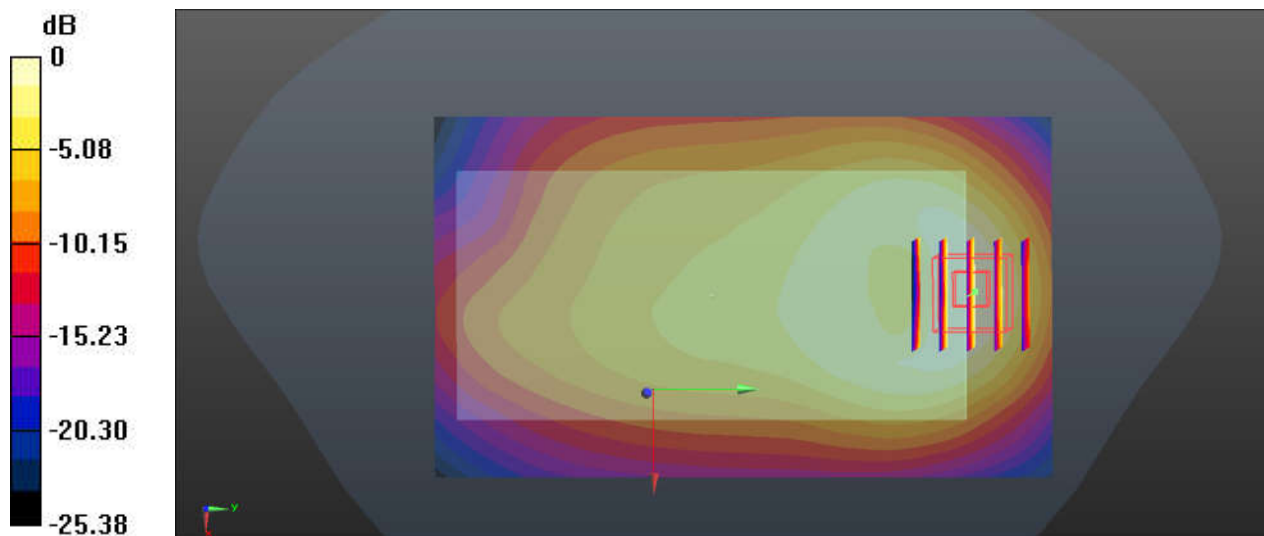
**Ch20525/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.57 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.826 W/kg

**SAR(1 g) = 0.474 W/kg; SAR(10 g) = 0.265 W/kg**

Maximum value of SAR (measured) = 0.575 W/kg



**22\_LTE Band 4\_20M\_QPSK\_50RB\_0Offset\_Bottom Side\_10mm\_LAT\_Hotspot on\_Ch20175**

Communication System: UID 0, LTE-FDD (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium: MSL\_1750 Medium parameters used:  $f = 1732.5$  MHz;  $\sigma = 1.504$  S/m;  $\epsilon_r = 54.131$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: ES3DV3 - SN3293; ConvF(5.01, 5.01, 5.01); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch20175/Area Scan (41x71x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.17 W/kg

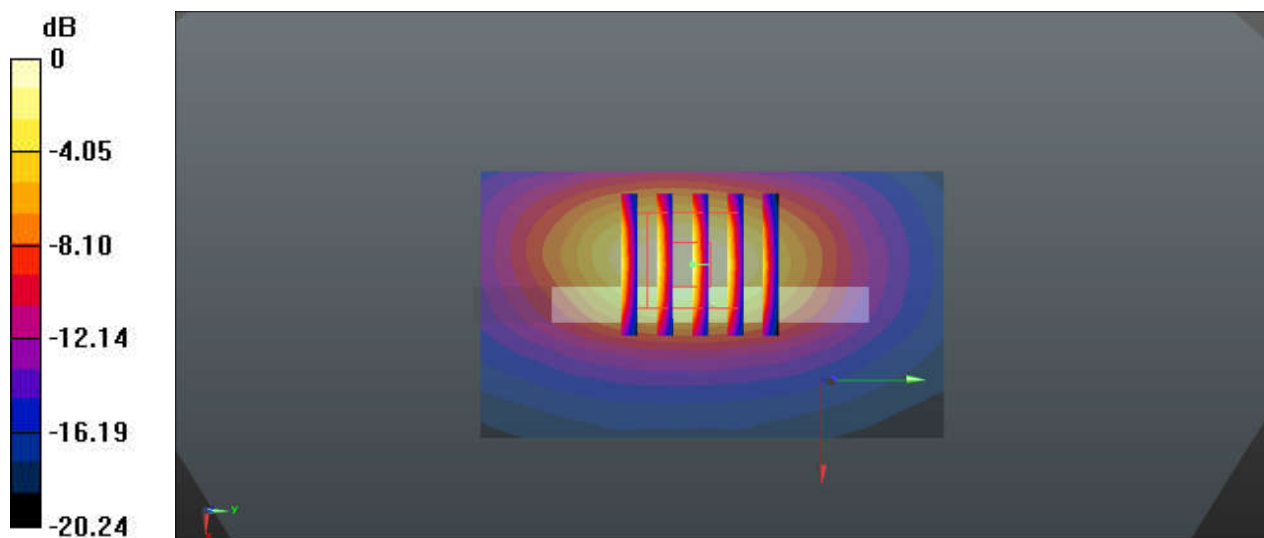
**Ch20175/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.604 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.36 W/kg

**SAR(1 g) = 0.784 W/kg; SAR(10 g) = 0.420 W/kg**

Maximum value of SAR (measured) = 1.16 W/kg



0 dB = 1.17 W/kg = 0.68 dBW/kg

**23\_LTE Band 2\_20M\_QPSK\_50RB\_0Offset\_Bottom Side\_10mm\_LAT\_Hotspot on\_Ch19100**

Communication System: UID 0, LTE-FDD (0); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: MSL\_1900 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.534$  S/m;  $\epsilon_r = 53.035$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.7 °C

DASY5 Configuration:

- Probe: ES3DV3 - SN3293; ConvF(4.74, 4.74, 4.74); Calibrated: 2018.10.25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn915; Calibrated: 2018.6.20
- Phantom: SAM2; Type: SAM; Serial: TP-1542
- Measurement SW: DASY52, Version 52.10 (1); SEMCAD X Version 14.6.11 (7439)

**Ch19100/Area Scan (41x71x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 1.22 W/kg

**Ch19100/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 3.092 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.46 W/kg

**SAR(1 g) = 0.813 W/kg; SAR(10 g) = 0.420 W/kg**

Maximum value of SAR (measured) = 1.24 W/kg

