

**System Check\_Head\_5750MHz****DUT: D5GHzV2 - SN:1113**

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

Medium: HSL\_5000 Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.137$  S/m;  $\epsilon_r = 35.513$ ;  $\rho = 1000$  kg/m<sup>3</sup>

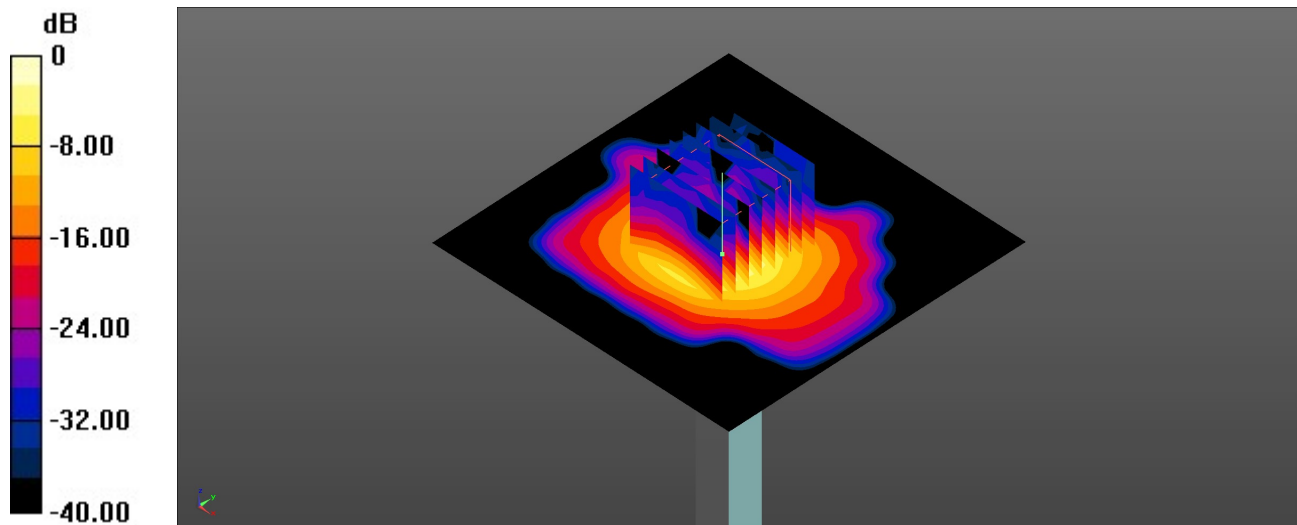
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.9 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(4.92, 4.92, 4.92); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 7.87 W/kg

**Pin=50mW/Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 40.81 V/m; Power Drift = -0.02 dB  
Peak SAR (extrapolated) = 15.3 W/kg  
**SAR(1 g) = 3.74 W/kg; SAR(10 g) = 1.09 W/kg**  
Maximum value of SAR (measured) = 8.68 W/kg



0 dB = 8.68 W/kg = 9.39 dBW/kg



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

The plots are shown as follows.

**01\_GSM850\_GPRS (4 Tx slots)\_Bottom Face\_0mm\_Ch251**

Communication System: UID 0, GSM850 (0); Frequency: 848.8 MHz; Duty Cycle: 1:2.08

Medium: HSL\_835 Medium parameters used:  $f = 849$  MHz;  $\sigma = 0.927$  S/m;  $\epsilon_r = 40.837$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(9.18, 9.18, 9.18); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (71x201x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 2.51 W/kg

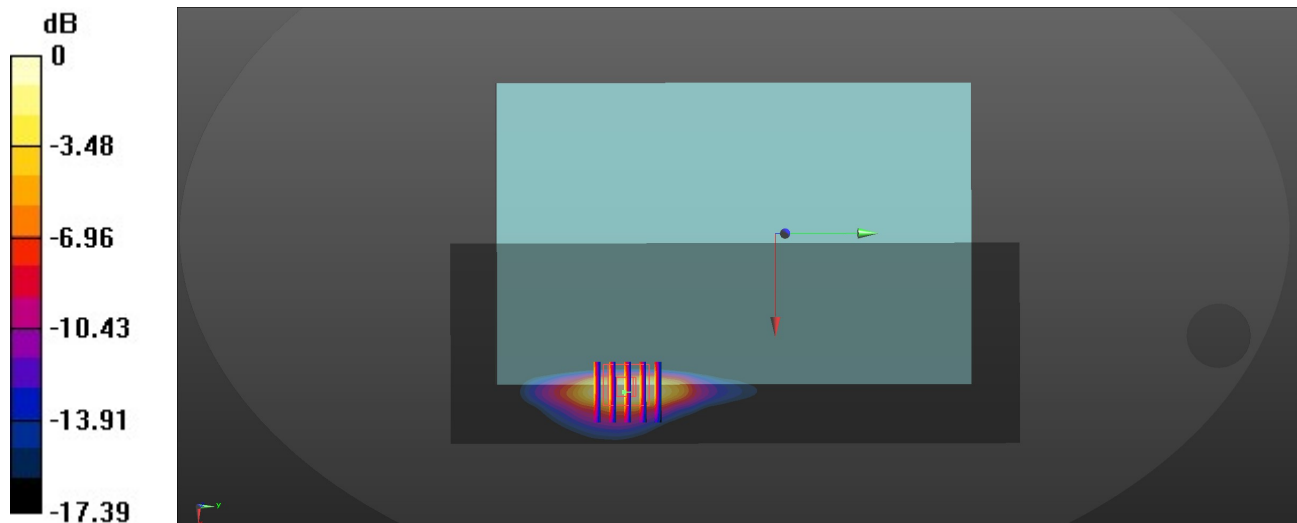
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 2.076 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.28 W/kg

**SAR(1 g) = 0.907 W/kg; SAR(10 g) = 0.408 W/kg**

Maximum value of SAR (measured) = 1.68 W/kg



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

**02\_WCDMA V\_RMC 12.2Kbps\_Bottom Face\_0mm\_Ch4233**

Communication System: UID 0, WCDMA (0); Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: HSL\_835 Medium parameters used:  $f = 847$  MHz;  $\sigma = 0.926$  S/m;  $\epsilon_r = 40.846$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(9.18, 9.18, 9.18); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (71x201x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 1.74 W/kg

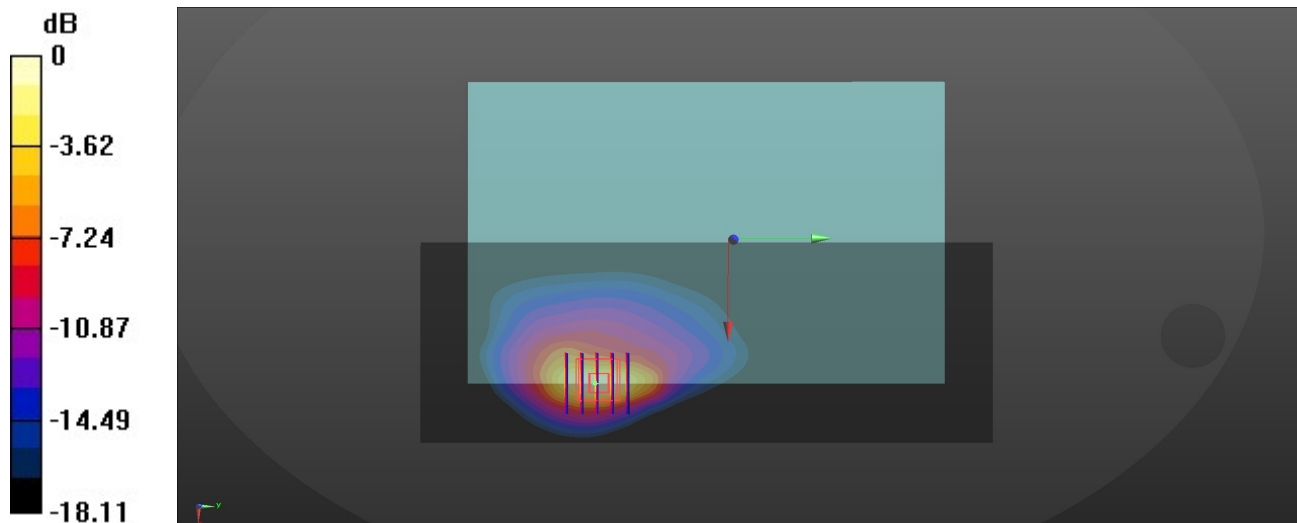
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 47.14 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.19 W/kg

**SAR(1 g) = 0.811 W/kg; SAR(10 g) = 0.380 W/kg**

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



0 dB = 1.70 W/kg = 2.30 dBW/kg

**03\_LTE Band 26\_15M\_QPSK\_1RB\_0Offset\_Bottom Face\_0mm\_Ch26865**

Communication System: UID 0, LTE-FDD (0); Frequency: 831.5 MHz; Duty Cycle: 1:1

Medium: HSL\_835 Medium parameters used:  $f = 831.5$  MHz;  $\sigma = 0.92$  S/m;  $\epsilon_r = 40.886$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(9.18, 9.18, 9.18); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (71x201x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

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

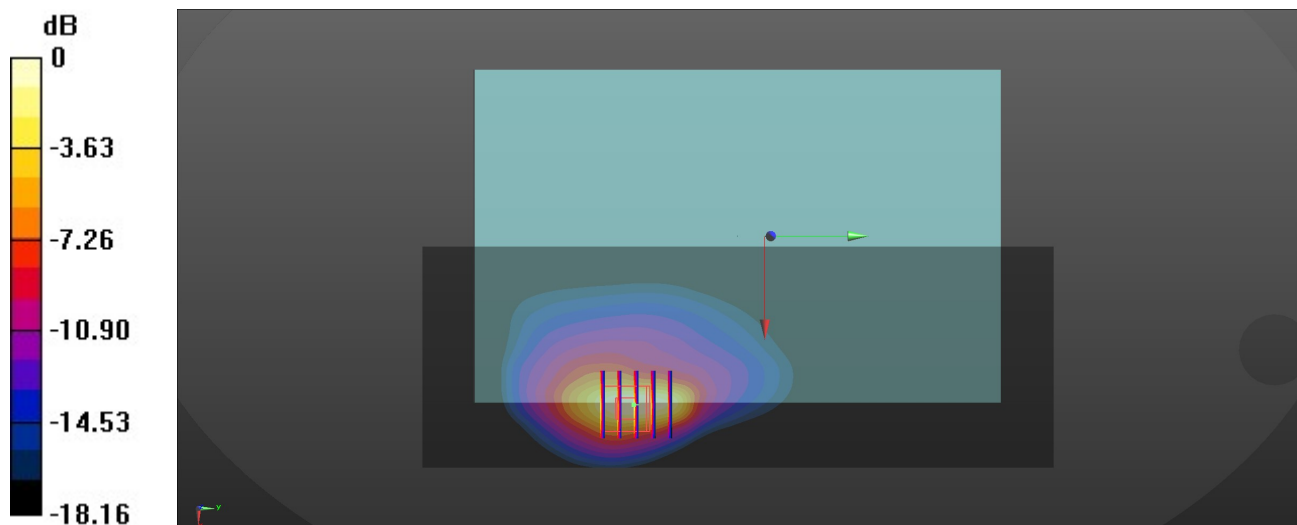
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 38.41 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 2.22 W/kg

**SAR(1 g) = 0.835 W/kg; SAR(10 g) = 0.390 W/kg**

Maximum value of SAR (measured) = 1.66 W/kg



0 dB = 1.66 W/kg = 2.20 dBW/kg

**04\_LTE Band 4\_20M\_QPSK\_1RB\_0Offset\_Edge 1\_0mm\_Ch20175**

Communication System: UID 0, LTE-FDD (0); Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium: HSL\_1750 Medium parameters used:  $f = 1733$  MHz;  $\sigma = 1.332$  S/m;  $\epsilon_r = 39.584$ ;  $\rho = 1000$  kg/m<sup>3</sup>

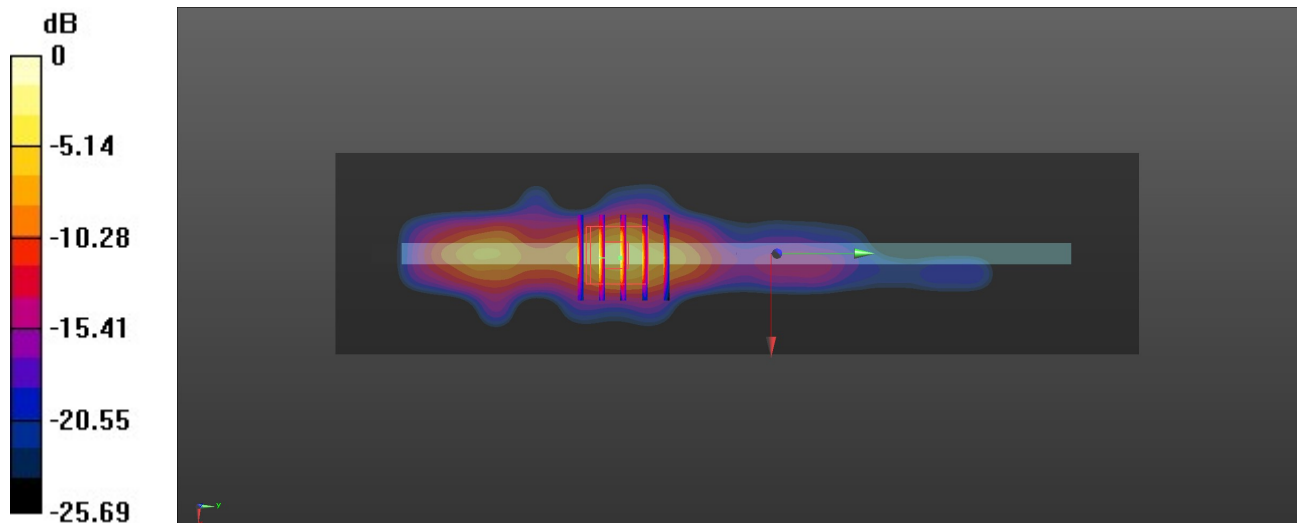
Ambient Temperature : 23.1 °C; Liquid Temperature : 22.7 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(8.13, 8.13, 8.13); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (51x201x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm  
Maximum value of SAR (interpolated) = 0.635 W/kg

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 34.94 V/m; Power Drift = -0.06 dB  
Peak SAR (extrapolated) = 1.84 W/kg  
**SAR(1 g) = 0.731 W/kg; SAR(10 g) = 0.271 W/kg**  
Maximum value of SAR (measured) = 1.50 W/kg



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

**05\_GSM1900\_GPRS (4 Tx slots)\_Bottom Face\_0mm\_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;  $\sigma = 1.411$  S/m;  $\epsilon_r = 39.345$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.1 °C; Liquid Temperature : 22.9 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(7.86, 7.86, 7.86); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (71x201x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 1.27 W/kg

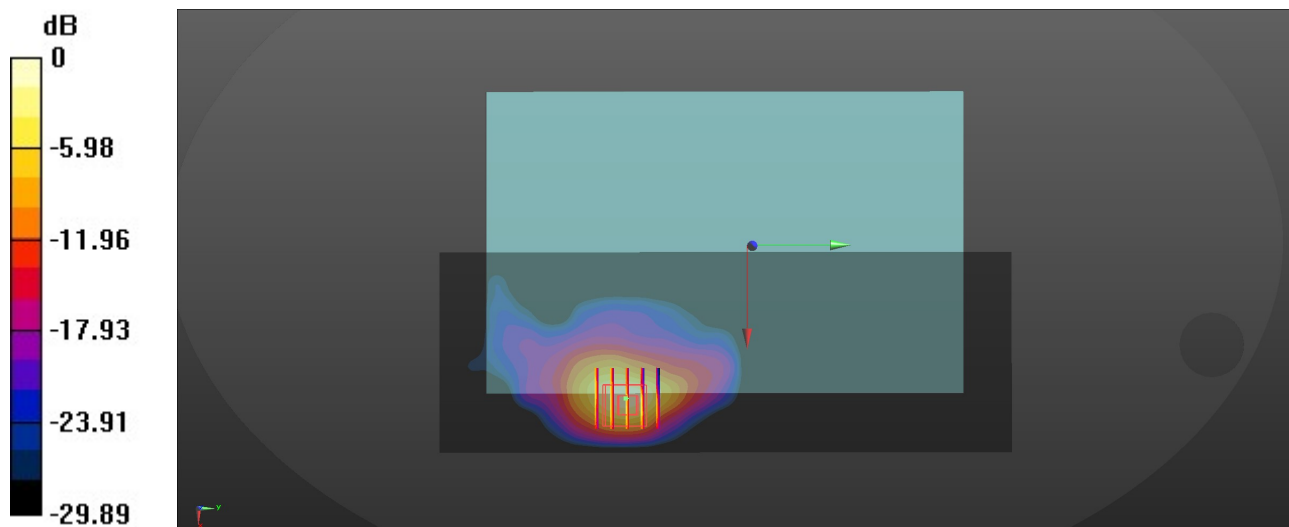
**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 0.5000 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 2.00 W/kg

**SAR(1 g) = 0.781 W/kg; SAR(10 g) = 0.316 W/kg**

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



0 dB = 1.44 W/kg = 1.58 dBW/kg

**06\_WCDMA II\_RMC 12.2Kbps\_Bottom Face\_0mm\_Ch9400**

Communication System: UID 0, WCDMA (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1  
Medium: HSL\_1900 Medium parameters used:  $f = 1852.4$  MHz;  $\sigma = 1.396$  S/m;  $\epsilon_r = 39.38$ ;  $\rho = 1000$  kg/m<sup>3</sup>

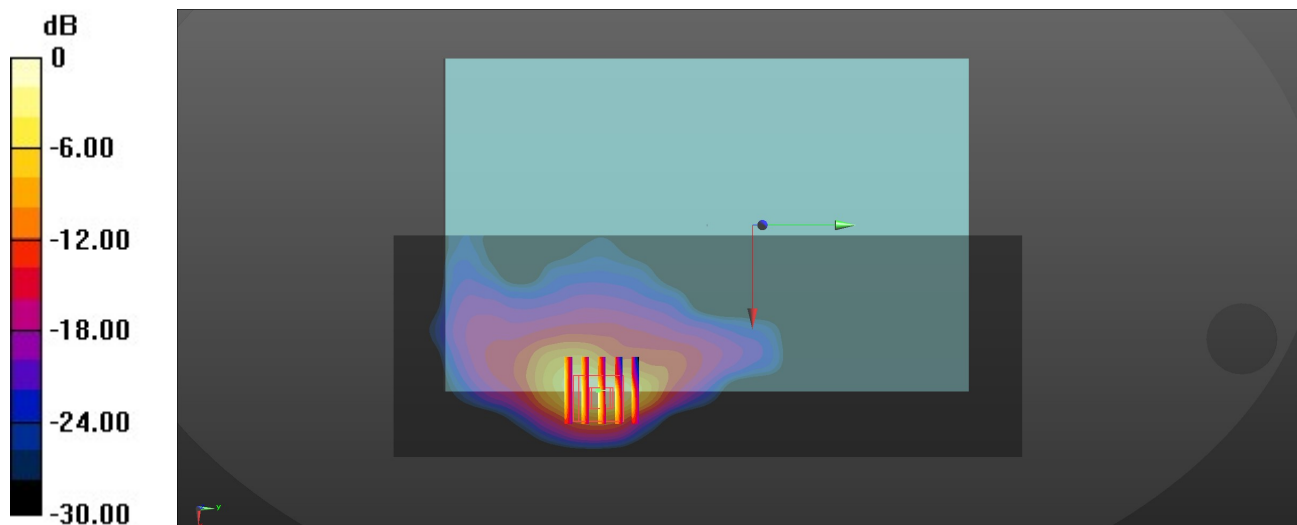
Ambient Temperature : 23.1 °C; Liquid Temperature : 22.9 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(7.86, 7.86, 7.86); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (71x201x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm  
Maximum value of SAR (interpolated) = 1.48 W/kg

**Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 29.75 V/m; Power Drift = 0.11 dB  
Peak SAR (extrapolated) = 1.83 W/kg  
**SAR(1 g) = 0.735 W/kg; SAR(10 g) = 0.293 W/kg**  
Maximum value of SAR (measured) = 1.33 W/kg



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

**07\_LTE Band 2\_20M\_QPSK\_1RB\_0Offset\_Bottom Face\_0mm\_Ch18700**

Communication System: UID 0, LTE-FDD (0); Frequency: 1860 MHz; Duty Cycle: 1:1

Medium: HSL\_1900 Medium parameters used:  $f = 1860$  MHz;  $\sigma = 1.4$  S/m;  $\epsilon_r = 39.377$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.1 °C; Liquid Temperature : 22.9 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(7.86, 7.86, 7.86); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (71x201x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 1.41 W/kg

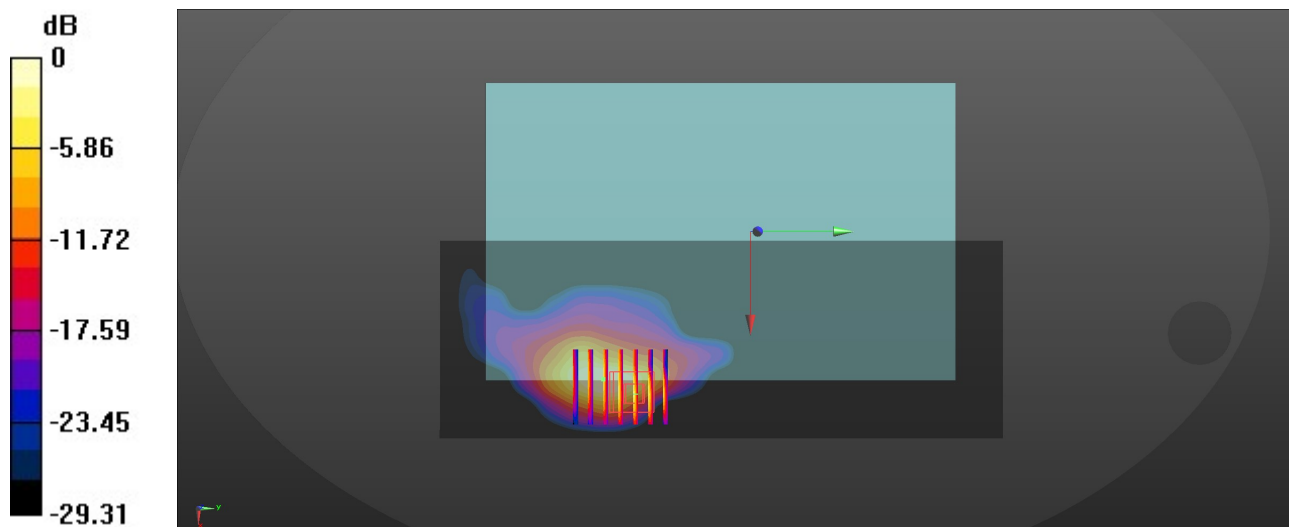
**Zoom Scan (6x7x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 21.08 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.44 W/kg

**SAR(1 g) = 0.626 W/kg; SAR(10 g) = 0.262 W/kg**

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



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

**08\_LTE Band 7\_20M\_QPSK\_1RB\_0Offset\_Bottom Face\_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;  $\sigma = 1.866$  S/m;  $\epsilon_r = 38.484$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(7.28, 7.28, 7.28); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (91x251x1):** Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm

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

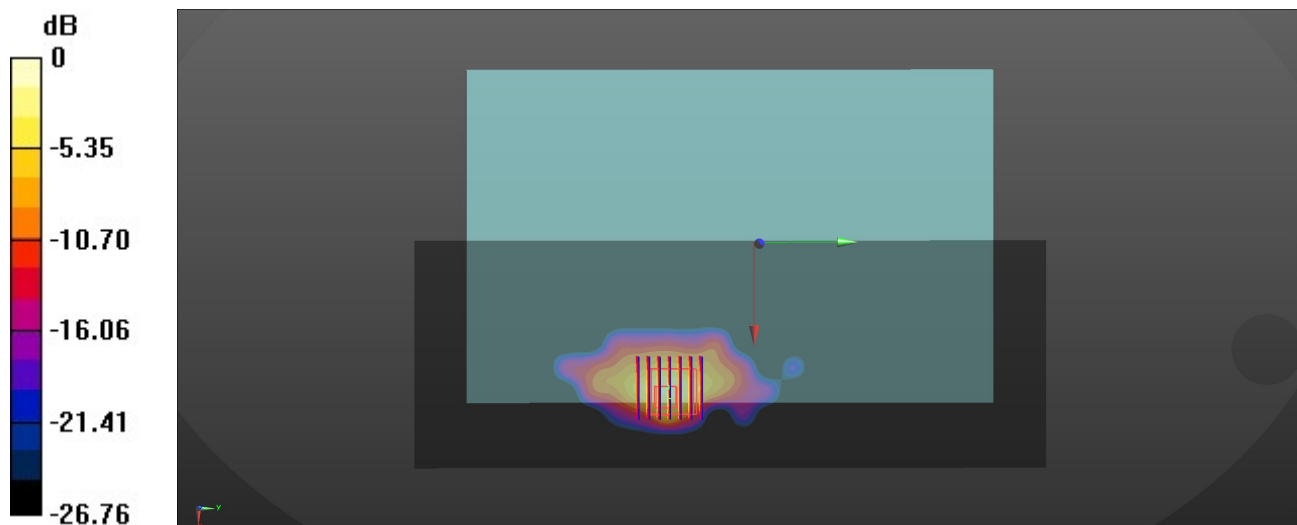
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 27.54 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 2.48 W/kg

**SAR(1 g) = 0.774 W/kg; SAR(10 g) = 0.302 W/kg**

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



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

**09\_LTE Band 41\_20M\_QPSK\_1RB\_0Offset\_Bottom Face\_0mm\_Ch40620**

Communication System: UID 0, LTE-TDD (0); Frequency: 2593 MHz; Duty Cycle: 1:1.59  
Medium: HSL\_2600 Medium parameters used:  $f = 2593$  MHz;  $\sigma = 1.915$  S/m;  $\epsilon_r = 38.253$ ;  $\rho = 1000$  kg/m<sup>3</sup>

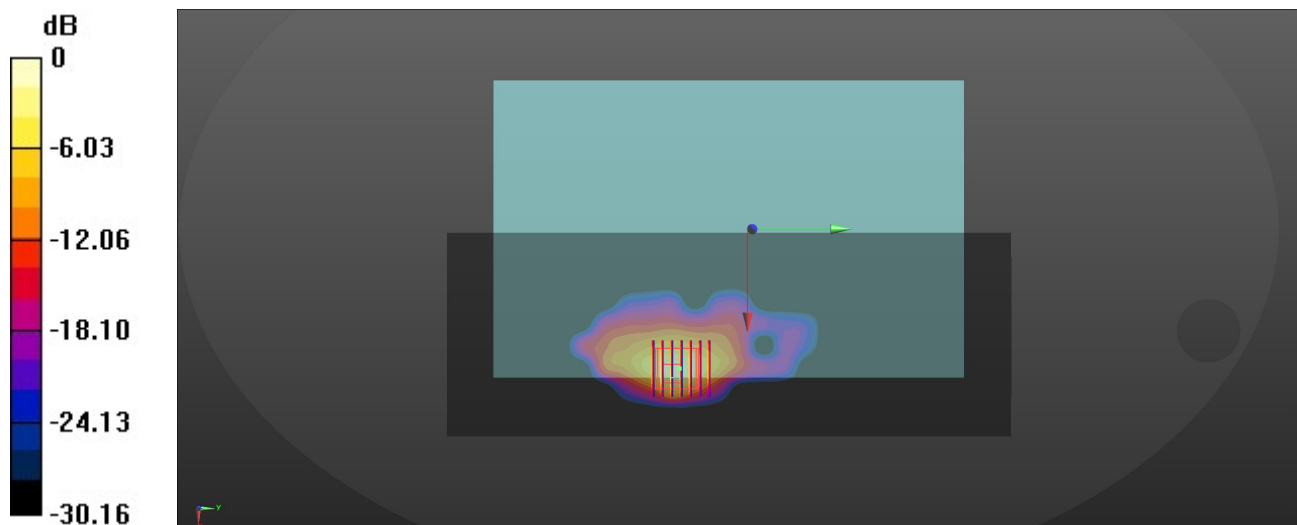
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.6 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(7.28, 7.28, 7.28); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (91x251x1):** Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm  
Maximum value of SAR (interpolated) = 1.36 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 28.98 V/m; Power Drift = -0.12 dB  
Peak SAR (extrapolated) = 2.71 W/kg  
**SAR(1 g) = 0.767 W/kg; SAR(10 g) = 0.300 W/kg**  
Maximum value of SAR (measured) = 1.81 W/kg



0 dB = 1.81 W/kg = 2.58 dBW/kg

**10\_WLAN2.4G\_802.11b 1Mbps\_Bottom Face\_0mm\_Ch1**

Communication System: UID 0, WLAN2.4GHz (0); Frequency: 2412 MHz; Duty Cycle: 1:1.017  
Medium: HSL\_2450 Medium parameters used:  $f = 2412$  MHz;  $\sigma = 1.786$  S/m;  $\epsilon_r = 38.623$ ;  $\rho = 1000$  kg/m<sup>3</sup>

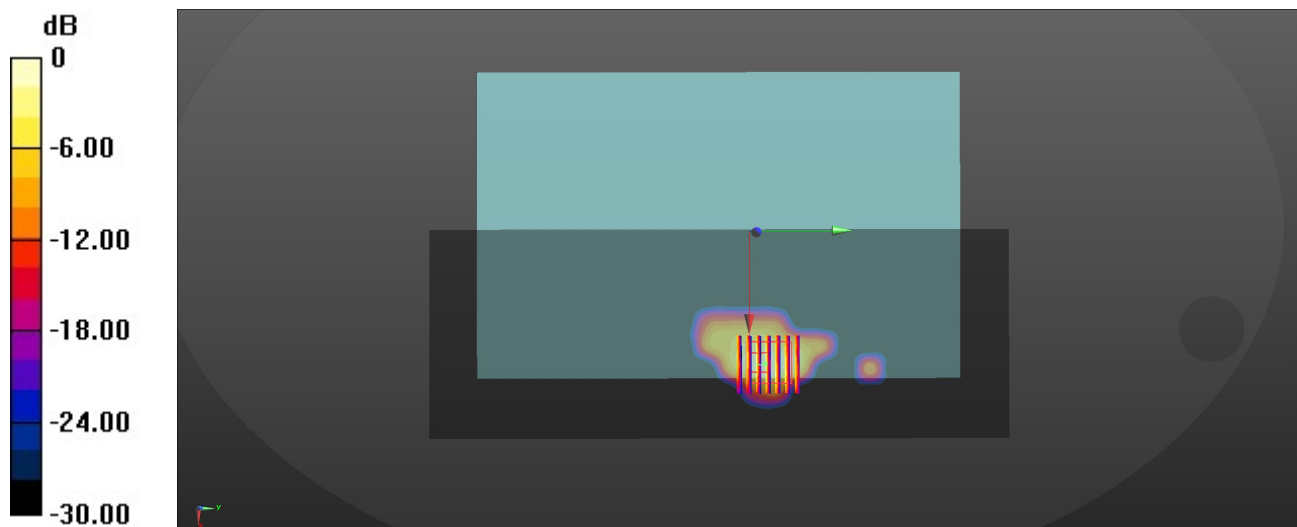
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.6 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(7.53, 7.53, 7.53); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (91x251x1):** Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm  
Maximum value of SAR (interpolated) = 0.786 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 0.7030 V/m; Power Drift = -0.07 dB  
Peak SAR (extrapolated) = 0.914 W/kg  
**SAR(1 g) = 0.308 W/kg; SAR(10 g) = 0.125 W/kg**  
Maximum value of SAR (measured) = 0.627 W/kg



0 dB = 0.627 W/kg = -2.03 dBW/kg

**11\_Bluetooth\_802.11b 1Mbps\_Bottom Face\_0mm\_Ch78**

Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz; Duty Cycle: 1:1.302  
Medium: HSL\_2450 Medium parameters used:  $f = 2480$  MHz;  $\sigma = 1.832$  S/m;  $\epsilon_r = 38.443$ ;  $\rho = 1000$  kg/m<sup>3</sup>

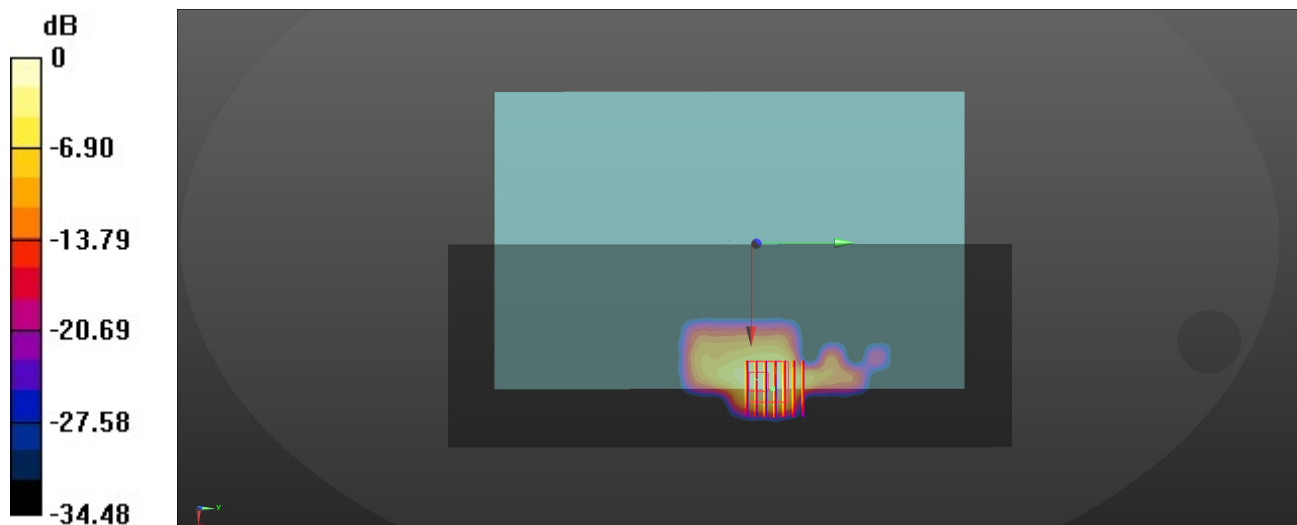
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.6 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(7.53, 7.53, 7.53); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (91x251x1):** Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm  
Maximum value of SAR (interpolated) = 0.428 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 10.72 V/m; Power Drift = -0.05 dB  
Peak SAR (extrapolated) = 0.526 W/kg  
**SAR(1 g) = 0.117 W/kg; SAR(10 g) = 0.043 W/kg**  
Maximum value of SAR (measured) = 0.367 W/kg



0 dB = 0.367 W/kg = -4.35 dBW/kg

**12\_WLAN5G\_802.11ac-VHT80 MCS0\_Bottom Face\_0mm\_Ch42**

Communication System: UID 0, WLAN5GHz (0); Frequency: 5210 MHz; Duty Cycle: 1:1.078  
Medium: HSL\_5000 Medium parameters used:  $f = 5210$  MHz;  $\sigma = 4.537$  S/m;  $\epsilon_r = 36.358$ ;  $\rho = 1000$  kg/m<sup>3</sup>

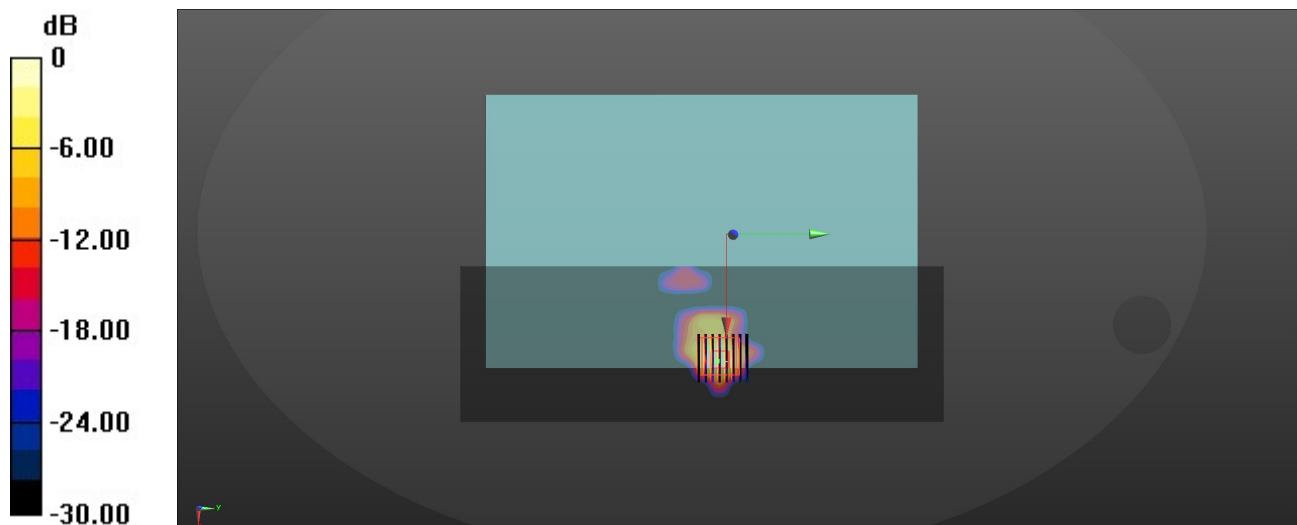
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.9 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(5.05, 5.05, 5.05); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (91x281x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm  
Maximum value of SAR (interpolated) = 0.674 W/kg

**Zoom Scan (8x8x7)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm  
Reference Value = 10.97 V/m; Power Drift = 0.07 dB  
Peak SAR (extrapolated) = 0.911 W/kg  
**SAR(1 g) = 0.204 W/kg; SAR(10 g) = 0.058 W/kg**  
Maximum value of SAR (measured) = 0.554 W/kg



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

**13\_WLAN5G\_802.11ac-VHT80 MCS0\_Bottom Face\_0mm\_Ch58**

Communication System: UID 0, WLAN5GHz (0); Frequency: 5290 MHz; Duty Cycle: 1:1.078  
Medium: HSL\_5000 Medium parameters used:  $f = 5290$  MHz;  $\sigma = 4.628$  S/m;  $\epsilon_r = 36.241$ ;  $\rho = 1000$  kg/m<sup>3</sup>

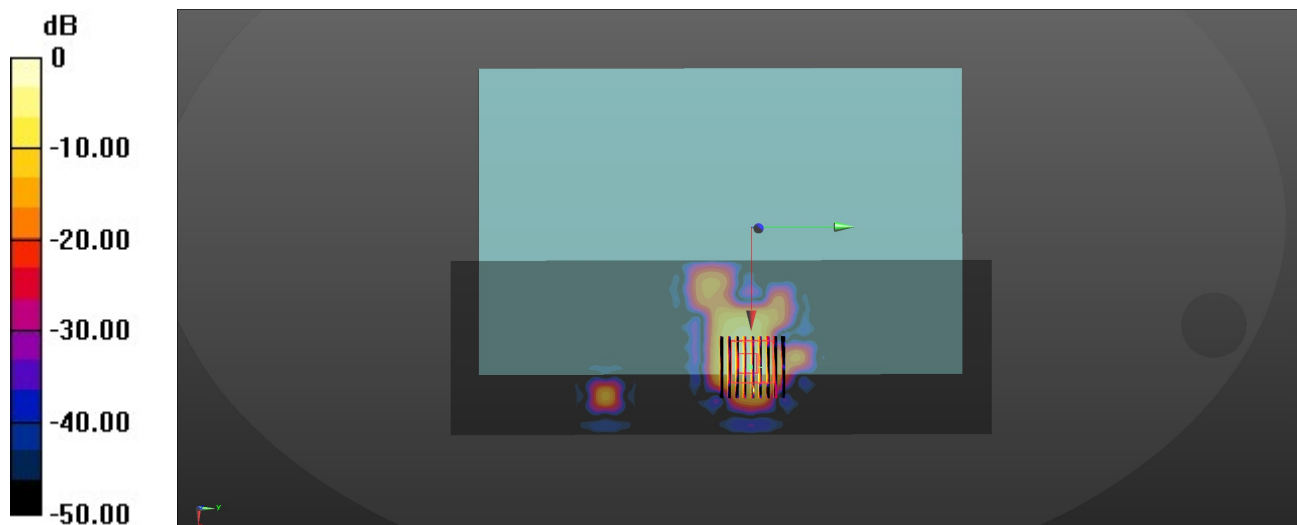
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.9 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(5.05, 5.05, 5.05); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (91x281x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm  
Maximum value of SAR (interpolated) = 0.898 W/kg

**Zoom Scan (9x9x7)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm  
Reference Value = 11.42 V/m; Power Drift = 0.16 dB  
Peak SAR (extrapolated) = 1.64 W/kg  
**SAR(1 g) = 0.222 W/kg; SAR(10 g) = 0.057 W/kg**  
Maximum value of SAR (measured) = 0.624 W/kg



0 dB = 0.624 W/kg = -2.05 dBW/kg

**14\_WLAN5G\_802.11ac-VHT80 MCS0\_Edge 1\_0mm\_Ch106**

Communication System: UID 0, WLAN5GHz (0); Frequency: 5530 MHz; Duty Cycle: 1:1.078  
Medium: HSL\_5000 Medium parameters used:  $f = 5530$  MHz;  $\sigma = 4.869$  S/m;  $\epsilon_r = 35.806$ ;  $\rho = 1000$  kg/m<sup>3</sup>

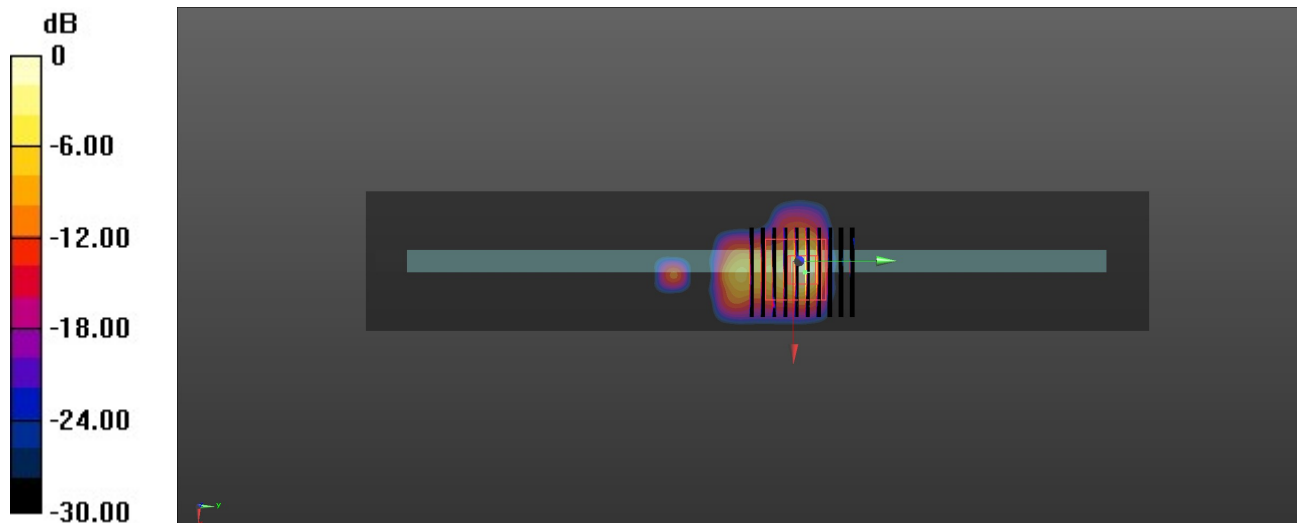
Ambient Temperature : 23.2 °C; Liquid Temperature : 22.9 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(4.69, 4.69, 4.69); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (51x281x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm  
Maximum value of SAR (interpolated) = 0.890 W/kg

**Zoom Scan (9x10x7)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm  
Reference Value = 6.420 V/m; Power Drift = -0.09 dB  
Peak SAR (extrapolated) = 1.39 W/kg  
**SAR(1 g) = 0.247 W/kg; SAR(10 g) = 0.047 W/kg**  
Maximum value of SAR (measured) = 0.806 W/kg



0 dB = 0.806 W/kg = -0.94 dBW/kg

**15\_WLAN5G\_802.11ac-VHT80 MCS0\_Edge 1\_0mm\_Ch155**

Communication System: UID 0, WLAN5GHz (0); Frequency: 5775 MHz; Duty Cycle: 1:1.078

Medium: HSL\_5000 Medium parameters used:  $f = 5775$  MHz;  $\sigma = 5.147$  S/m;  $\epsilon_r = 35.474$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.2 °C; Liquid Temperature : 22.9 °C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3857; ConvF(4.92, 4.92, 4.92); Calibrated: 2021/11/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2021/9/21
- Phantom: ELI Phantom; Type: ELI V8.0; Serial: TP-2134
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (51x281x1):** Interpolated grid:  $dx=1.000$  mm,  $dy=1.000$  mm

Maximum value of SAR (interpolated) = 0.675 W/kg

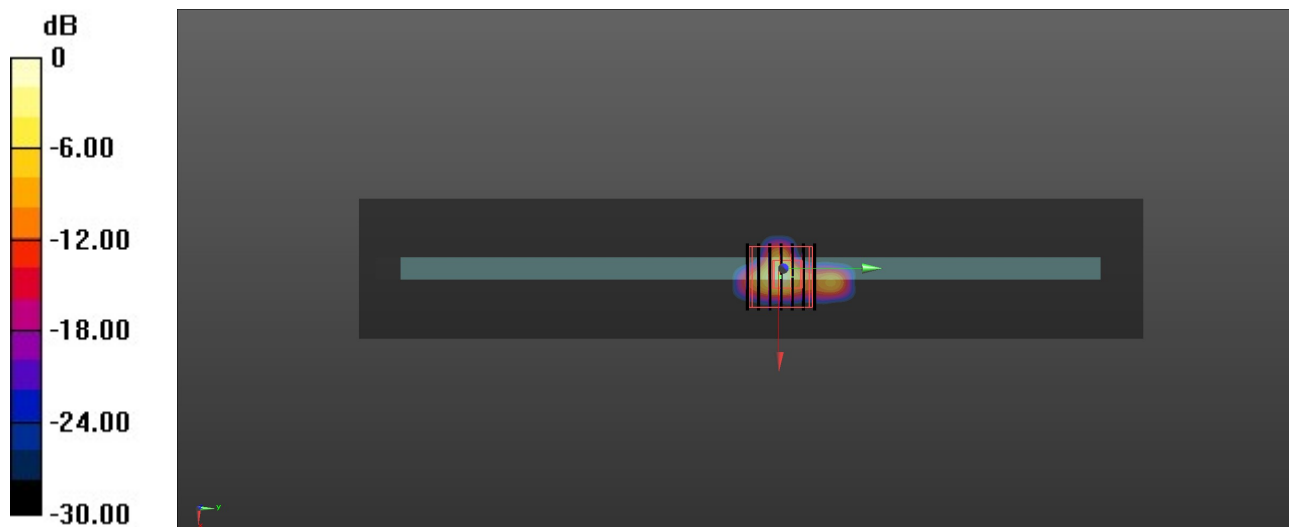
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 12.87 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.37 W/kg

**SAR(1 g) = 0.222 W/kg; SAR(10 g) = 0.034 W/kg**

Maximum value of SAR (measured) = 0.800 W/kg



0 dB = 0.800 W/kg = -0.97 dBW/kg



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**Appendix C.     *DASY Calibration Certificate***

The DASY calibration certificates are shown as follows.



Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **Sporton**

Certificate No: **D835V2-4d258\_May20**

## CALIBRATION CERTIFICATE

Object **D835V2 - SN:4d258**

Calibration procedure(s) **QA CAL-05.v11  
Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**

Calibration date: **May 07, 2020**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).  
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature ( $22 \pm 3$ )°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards               | ID #               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|---------------------------------|--------------------|-----------------------------------|------------------------|
| Power meter NRP                 | SN: 104778         | 01-Apr-20 (No. 217-03100/03101)   | Apr-21                 |
| Power sensor NRP-Z91            | SN: 103244         | 01-Apr-20 (No. 217-03100)         | Apr-21                 |
| Power sensor NRP-Z91            | SN: 103245         | 01-Apr-20 (No. 217-03101)         | Apr-21                 |
| Reference 20 dB Attenuator      | SN: BH9394 (20k)   | 31-Mar-20 (No. 217-03106)         | Apr-21                 |
| Type-N mismatch combination     | SN: 310982 / 06327 | 31-Mar-20 (No. 217-03104)         | Apr-21                 |
| Reference Probe EX3DV4          | SN: 7349           | 31-Dec-19 (No. EX3-7349_Dec19)    | Dec-20                 |
| DAE4                            | SN: 601            | 27-Dec-19 (No. DAE4-601_Dec19)    | Dec-20                 |
| Secondary Standards             | ID #               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B              | SN: GB39512475     | 30-Oct-14 (in house check Feb-19) | In house check: Oct-20 |
| Power sensor HP 8481A           | SN: US37292783     | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| Power sensor HP 8481A           | SN: MY41092317     | 07-Oct-15 (in house check Oct-18) | In house check: Oct-20 |
| RF generator R&S SMT-06         | SN: 100972         | 15-Jun-15 (in house check Oct-18) | In house check: Oct-20 |
| Network Analyzer Agilent E8358A | SN: US41080477     | 31-Mar-14 (in house check Oct-19) | In house check: Oct-20 |

Calibrated by: **Jeffrey Katzman**      Name: Jeffrey Katzman      Function: Laboratory Technician

Approved by: **Katja Pokovic**      Name: Katja Pokovic      Function: Technical Manager

Signature

Issued: May 7, 2020

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

The Swiss Accreditation Service is one of the signatories to the EA  
Multilateral Agreement for the recognition of calibration certificates

### Glossary:

|       |                                 |
|-------|---------------------------------|
| TSL   | tissue simulating liquid        |
| ConvF | sensitivity in TSL / NORM x,y,z |
| N/A   | not applicable or not measured  |

### Calibration is Performed According to the Following Standards:

- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

### Additional Documentation:

- DASY4/5 System Handbook

### Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss:** These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay:** One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k=2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%.

## Measurement Conditions

DASY system configuration, as far as not given on page 1.

|                              |                        |             |
|------------------------------|------------------------|-------------|
| DASY Version                 | DASY5                  | V52.10.4    |
| Extrapolation                | Advanced Extrapolation |             |
| Phantom                      | Modular Flat Phantom   |             |
| Distance Dipole Center - TSL | 15 mm                  | with Spacer |
| Zoom Scan Resolution         | dx, dy, dz = 5 mm      |             |
| Frequency                    | 835 MHz $\pm$ 1 MHz    |             |

## Head TSL parameters

The following parameters and calculations were applied.

|                                         | Temperature         | Permittivity   | Conductivity         |
|-----------------------------------------|---------------------|----------------|----------------------|
| Nominal Head TSL parameters             | 22.0 °C             | 41.5           | 0.90 mho/m           |
| Measured Head TSL parameters            | (22.0 $\pm$ 0.2) °C | 42.2 $\pm$ 6 % | 0.92 mho/m $\pm$ 6 % |
| Head TSL temperature change during test | < 0.5 °C            | ----           | ----                 |

## SAR result with Head TSL

|                                                       |                    |                                                |
|-------------------------------------------------------|--------------------|------------------------------------------------|
| SAR averaged over 1 cm <sup>3</sup> (1 g) of Head TSL | Condition          |                                                |
| SAR measured                                          | 250 mW input power | 2.39 W/kg                                      |
| SAR for nominal Head TSL parameters                   | normalized to 1W   | <b>9.44 W/kg <math>\pm</math> 17.0 % (k=2)</b> |

|                                                         |                    |                                                |
|---------------------------------------------------------|--------------------|------------------------------------------------|
| SAR averaged over 10 cm <sup>3</sup> (10 g) of Head TSL | condition          |                                                |
| SAR measured                                            | 250 mW input power | 1.55 W/kg                                      |
| SAR for nominal Head TSL parameters                     | normalized to 1W   | <b>6.13 W/kg <math>\pm</math> 16.5 % (k=2)</b> |