

### P06 LTE 2\_QPSK20M\_Left Cheek\_Ch18700\_1RB\_OS0

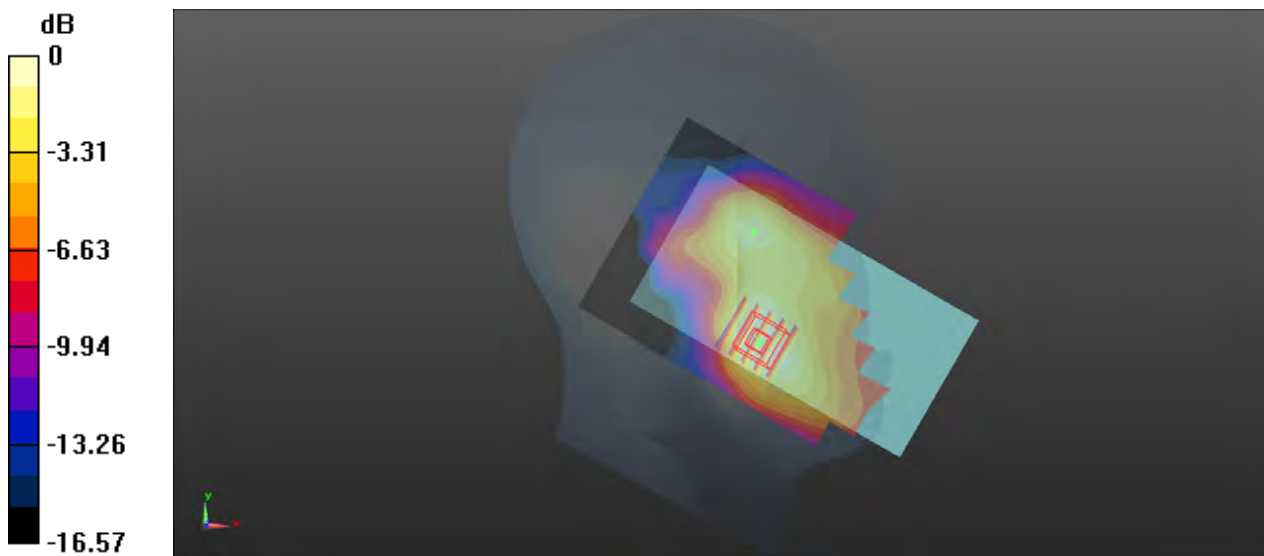
Communication System: LTE; Frequency: 1860 MHz; Duty Cycle: 1:1  
Medium: HSL1900\_0414 Medium parameters used:  $f = 1860$  MHz;  $\sigma = 1.393$  S/m;  $\epsilon_r = 39.959$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2°C; Liquid Temperature : 22.8°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8, 8, 8); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x121x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.307 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 4.596 V/m; Power Drift = -0.03 dB  
Peak SAR (extrapolated) = 0.311 W/kg  
**SAR(1 g) = 0.210 W/kg; SAR(10 g) = 0.139 W/kg**  
Maximum value of SAR (measured) = 0.274 W/kg



0 dB = 0.274 W/kg

### P07 LTE 5\_QPSK10M\_Left Cheek\_Ch20600\_1RB\_OS49

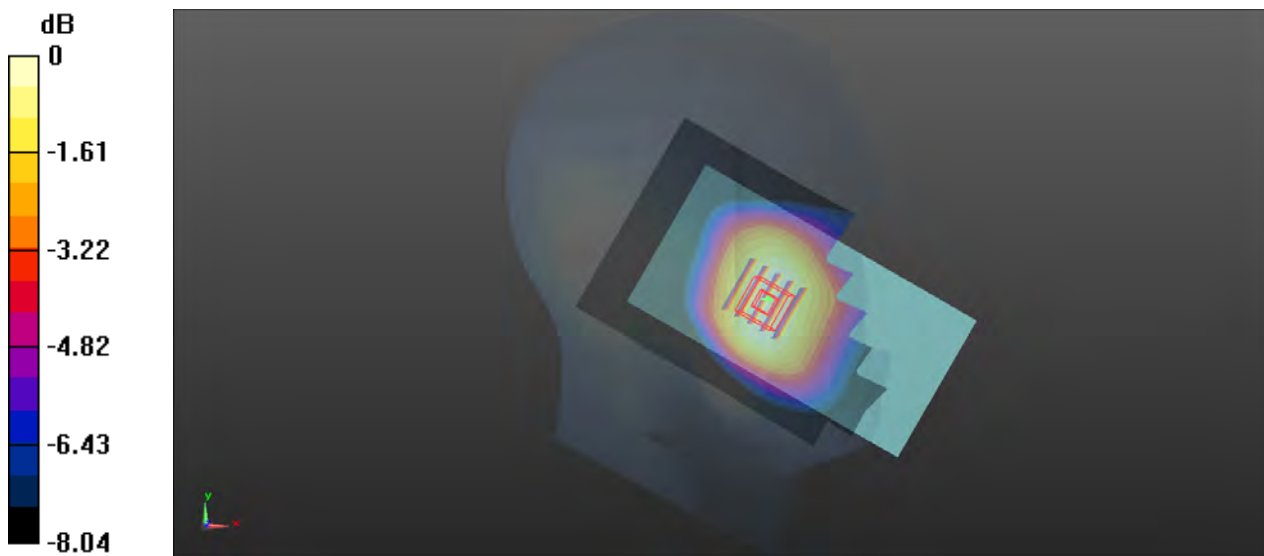
Communication System: LTE; Frequency: 844 MHz; Duty Cycle: 1:1  
Medium: HSL835\_0413 Medium parameters used:  $f = 844 \text{ MHz}$ ;  $\sigma = 0.908 \text{ S/m}$ ;  $\epsilon_r = 41.65$ ;  $\rho = 1000 \text{ kg/m}^3$   
Ambient Temperature :  $23.3^\circ\text{C}$ ; Liquid Temperature :  $22.2^\circ\text{C}$

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.36, 9.36, 9.36); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x121x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
Maximum value of SAR (interpolated) =  $0.395 \text{ W/kg}$

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value =  $4.262 \text{ V/m}$ ; Power Drift =  $0.08 \text{ dB}$   
Peak SAR (extrapolated) =  $0.420 \text{ W/kg}$   
**SAR(1 g) =  $0.334 \text{ W/kg}$ ; SAR(10 g) =  $0.257 \text{ W/kg}$**   
Maximum value of SAR (measured) =  $0.393 \text{ W/kg}$



0 dB =  $0.393 \text{ W/kg}$

### P08 LTE 7\_QPSK20M\_Left Cheek\_Ch21100\_1RB\_OS99

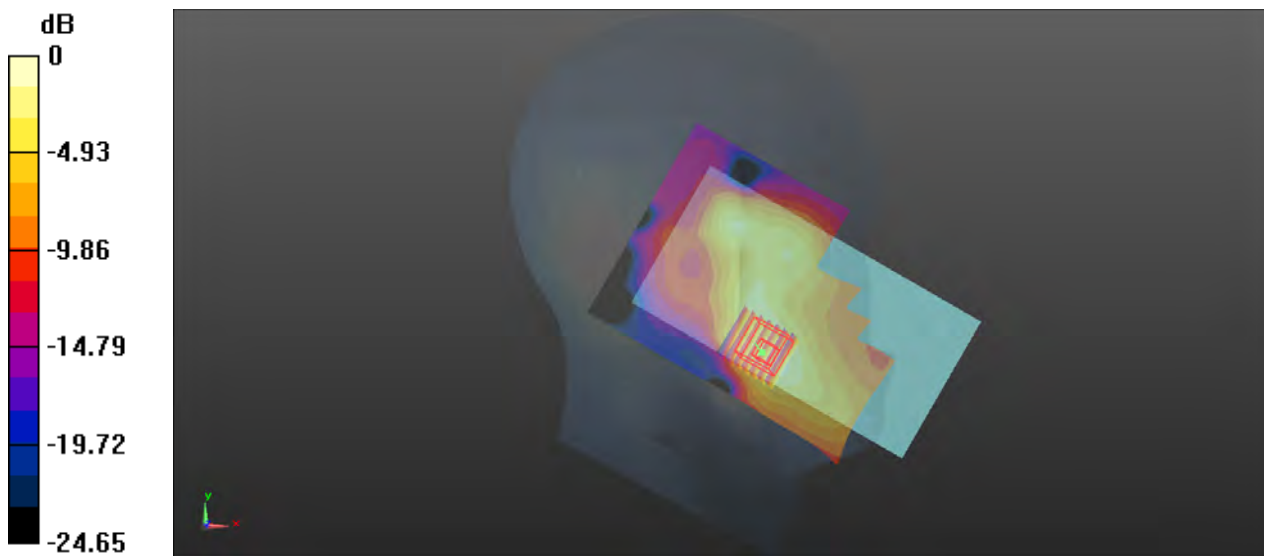
Communication System: LTE; Frequency: 2535 MHz; Duty Cycle: 1:1  
Medium: HSL2600\_0415 Medium parameters used:  $f = 2535$  MHz;  $\sigma = 1.981$  S/m;  $\epsilon_r = 37.865$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.6°C; Liquid Temperature : 22.6°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.66, 7.66, 7.66); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (101x161x1)**: Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 0.423 W/kg

- **Zoom Scan (7x7x7)/Cube 0**: Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 3.526 V/m; Power Drift = 0.02 dB  
Peak SAR (extrapolated) = 0.475 W/kg  
**SAR(1 g) = 0.254 W/kg; SAR(10 g) = 0.141 W/kg**  
Maximum value of SAR (measured) = 0.388 W/kg



0 dB = 0.388 W/kg

### P09 LTE 12\_QPSK10M\_Right Cheek\_Ch23095\_1RB\_OS49

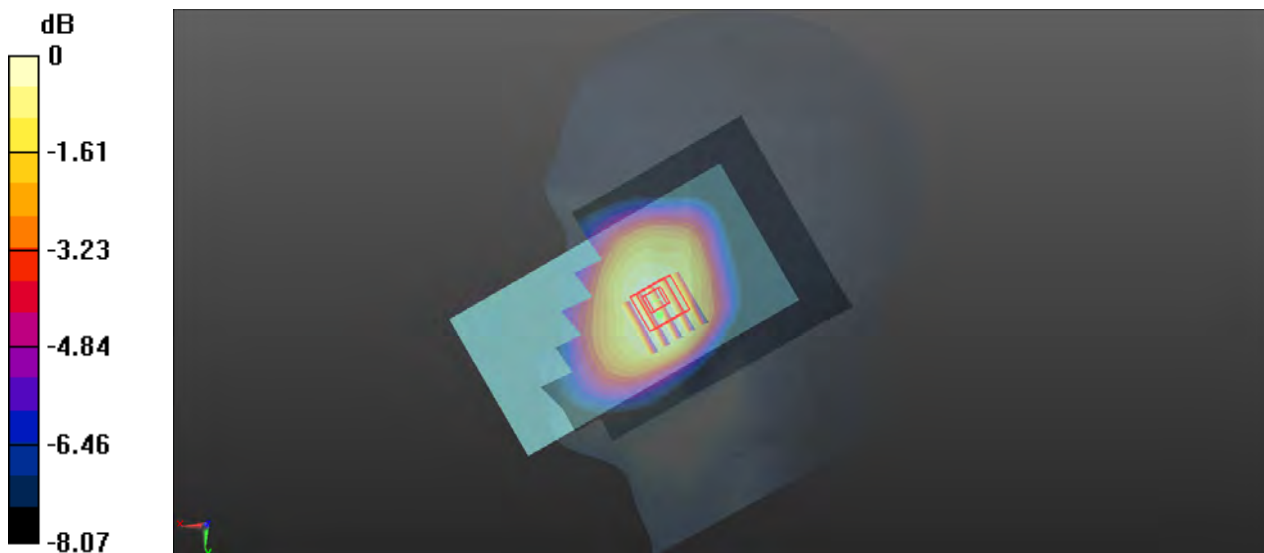
Communication System: LTE; Frequency: 707.5 MHz; Duty Cycle: 1:1  
Medium: HSL750\_0412 Medium parameters used:  $f = 707.5$  MHz;  $\sigma = 0.853$  S/m;  $\epsilon_r = 41.528$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.4°C; Liquid Temperature : 22.6°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.57, 9.57, 9.57); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x121x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.212 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 3.913 V/m; Power Drift = 0.05 dB  
Peak SAR (extrapolated) = 0.221 W/kg  
**SAR(1 g) = 0.186 W/kg; SAR(10 g) = 0.150 W/kg**  
Maximum value of SAR (measured) = 0.210 W/kg



0 dB = 0.210 W/kg

## P10 LTE 13\_QPSK10M\_Left Cheek\_Ch23230\_1RB\_OS0

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: HSL750\_0412 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.905 \text{ S/m}$ ;  $\epsilon_r = 41.078$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4^\circ\text{C}$ ; Liquid Temperature :  $22.6^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.57, 9.57, 9.57); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x121x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) =  $0.328 \text{ W/kg}$

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

Reference Value =  $5.012 \text{ V/m}$ ; Power Drift =  $0.17 \text{ dB}$

Peak SAR (extrapolated) =  $0.347 \text{ W/kg}$

**SAR(1 g) =  $0.279 \text{ W/kg}$ ; SAR(10 g) =  $0.218 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.327 \text{ W/kg}$



0 dB =  $0.327 \text{ W/kg}$

## P11 LTE 66\_QPSK20M\_Right Cheek\_Ch132572 \_1RB\_OS0

Communication System: LTE; Frequency: 1770 MHz; Duty Cycle: 1:1

Medium: HSL1750\_0413 Medium parameters used:  $f = 1770$  MHz;  $\sigma = 1.401$  S/m;  $\epsilon_r = 41.093$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.5°C; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8.19, 8.19, 8.19); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x121x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.269 W/kg

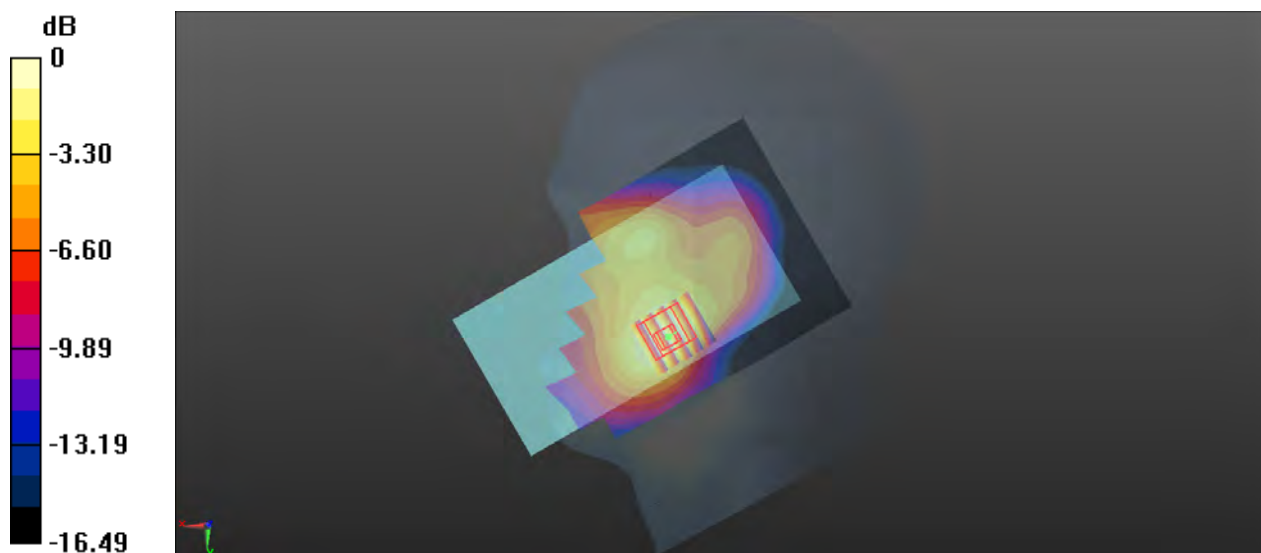
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.105 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.305 W/kg

**SAR(1 g) = 0.203 W/kg; SAR(10 g) = 0.132 W/kg**

Maximum value of SAR (measured) = 0.271 W/kg



0 dB = 0.271 W/kg

## P12 WLAN2.4G\_802.11b\_Left Cheek\_Ch11

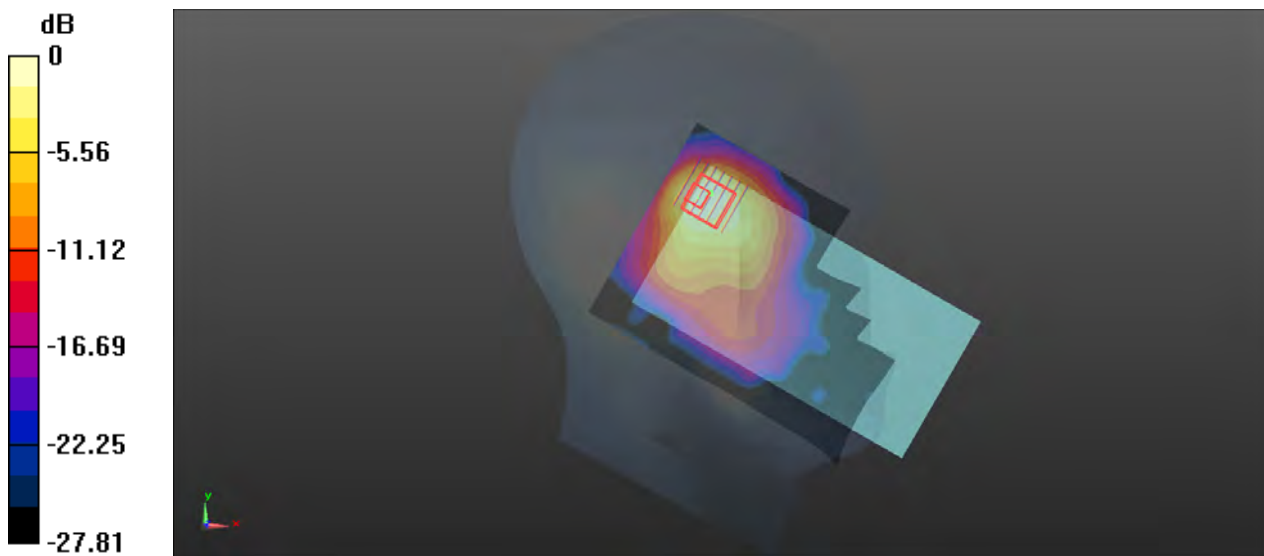
Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1  
Medium: HSL2450\_0414 Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.857$  S/m;  $\epsilon_r = 39.358$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.7°C; Liquid Temperature : 22.3°C

### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (101x161x1)**: Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 0.781 W/kg

- **Zoom Scan (7x7x7)/Cube 0**: Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 8.442 V/m; Power Drift = -0.10 dB  
Peak SAR (extrapolated) = 1.19 W/kg  
**SAR(1 g) = 0.476 W/kg; SAR(10 g) = 0.234 W/kg**  
Maximum value of SAR (measured) = 0.858 W/kg



0 dB = 0.858 W/kg

### P13 BT\_GFSK\_Left Cheek\_Ch78

Communication System: BT; Frequency: 2480 MHz; Duty Cycle: 1:1.29

Medium: HSL2450\_0414 Medium parameters used:  $f = 2480$  MHz;  $\sigma = 1.876$  S/m;  $\epsilon_r = 39.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.7°C; Liquid Temperature : 22.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (101x161x1)**: Interpolated grid: dx=1.200 mm, dy=1.200 mm  
 Maximum value of SAR (interpolated) = 0.129 W/kg

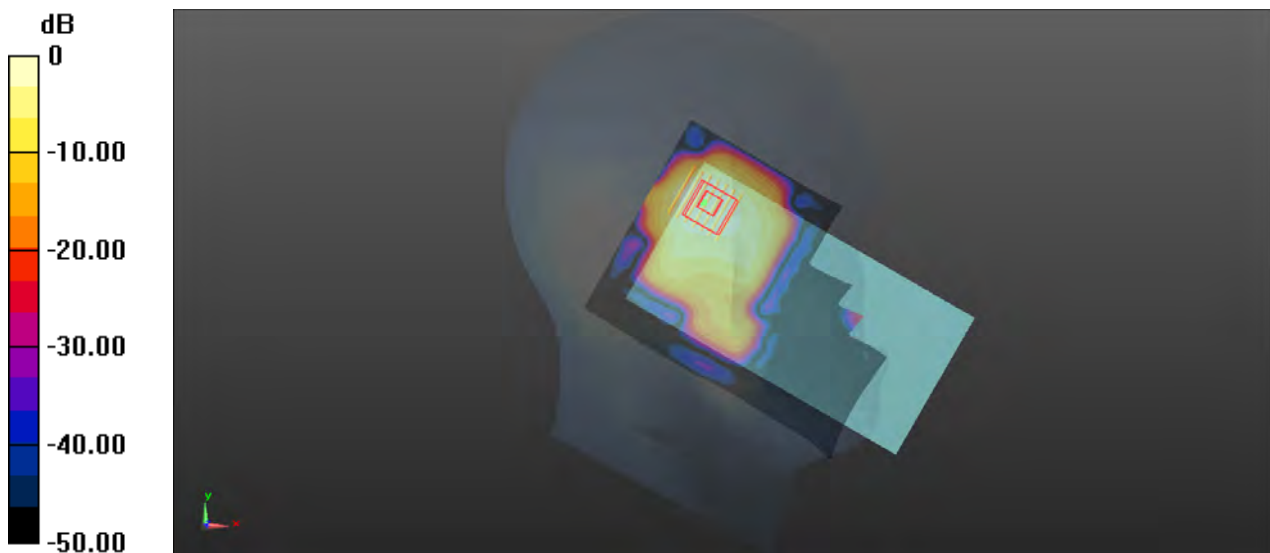
- **Zoom Scan (7x7x7)/Cube 0**: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.888 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.150 W/kg

**SAR(1 g) = 0.070 W/kg; SAR(10 g) = 0.036 W/kg**

Maximum value of SAR (measured) = 0.113 W/kg



0 dB = 0.113 W/kg



### P14 GSM850\_GPRS10\_Rear Face\_1cm\_Ch251

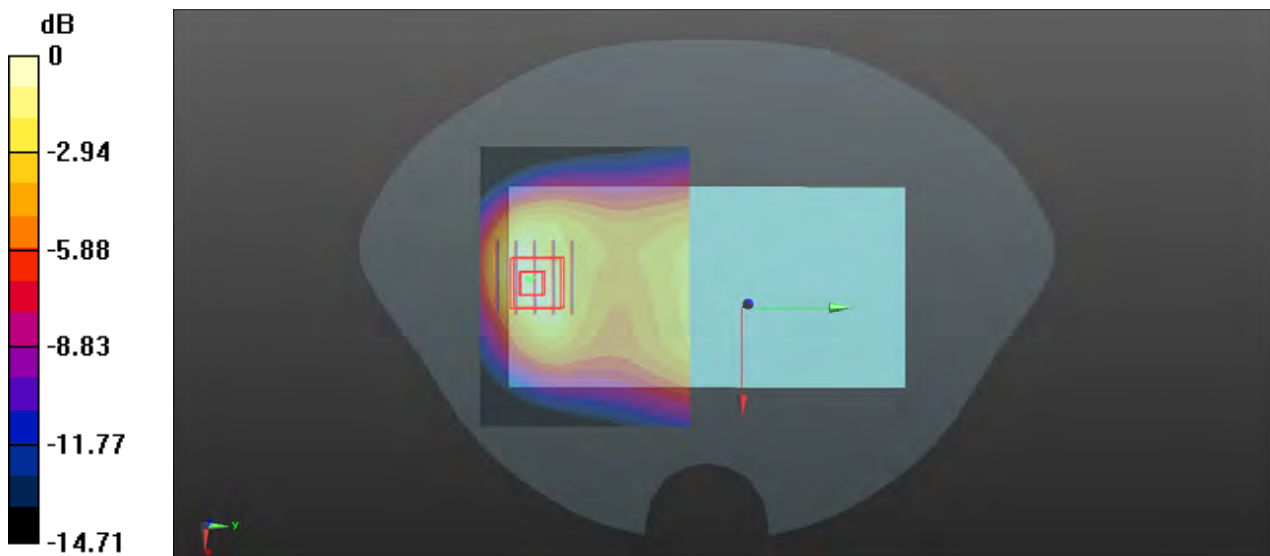
Communication System: GPRS10; Frequency: 848.8 MHz; Duty Cycle: 1:4.15  
 Medium: HSL835\_0413 Medium parameters used:  $f = 849 \text{ MHz}$ ;  $\sigma = 0.91 \text{ S/m}$ ;  $\epsilon_r = 41.609$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Ambient Temperature :  $23.3^\circ\text{C}$ ; Liquid Temperature :  $22.2^\circ\text{C}$

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3873; ConvF(9.36, 9.36, 9.36); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x61x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.607 \text{ W/kg}$

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $19.519 \text{ V/m}$ ; Power Drift =  $-0.07 \text{ dB}$   
 Peak SAR (extrapolated) =  $0.740 \text{ W/kg}$   
**SAR(1 g) =  $0.415 \text{ W/kg}$ ; SAR(10 g) =  $0.242 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.620 \text{ W/kg}$



0 dB =  $0.620 \text{ W/kg}$

## P15 GSM1900\_GPRS10\_Rear Face\_1cm\_Ch512

Communication System: GPRS10; Frequency: 1850.2 MHz; Duty Cycle: 1:4.15

Medium: HSL1900\_0414 Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.384$  S/m;  $\epsilon_r = 40.011$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8, 8, 8); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.548 W/kg

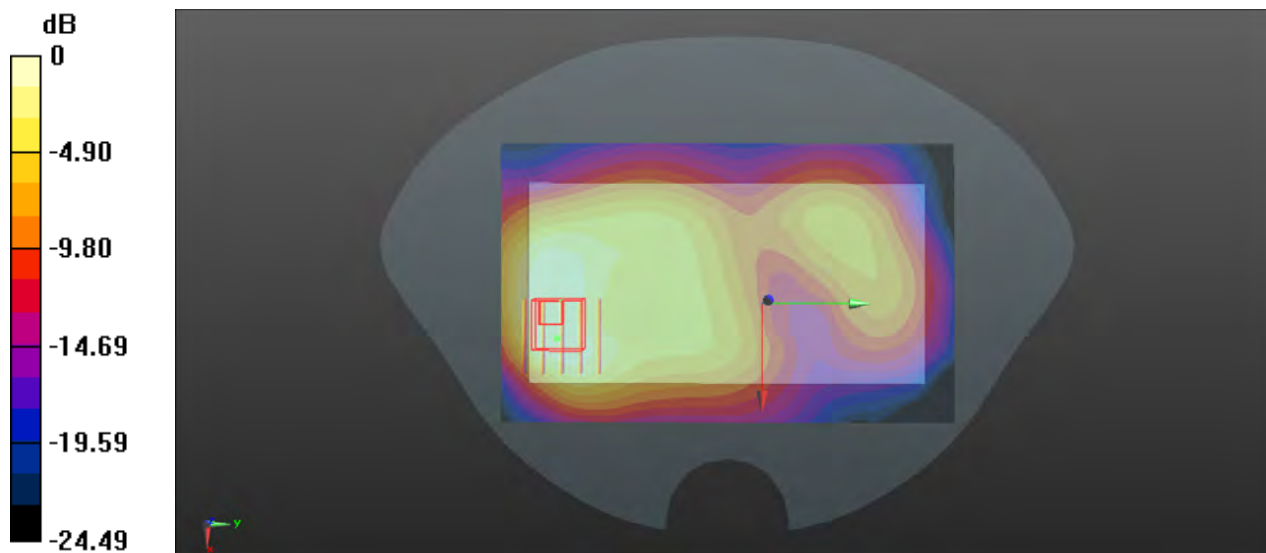
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.999 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.631 W/kg

**SAR(1 g) = 0.366 W/kg; SAR(10 g) = 0.210 W/kg**

Maximum value of SAR (measured) = 0.526 W/kg



0 dB = 0.526 W/kg

### P16 WCDMA II\_RMC12.2K\_Rear Face\_1cm\_Ch9538

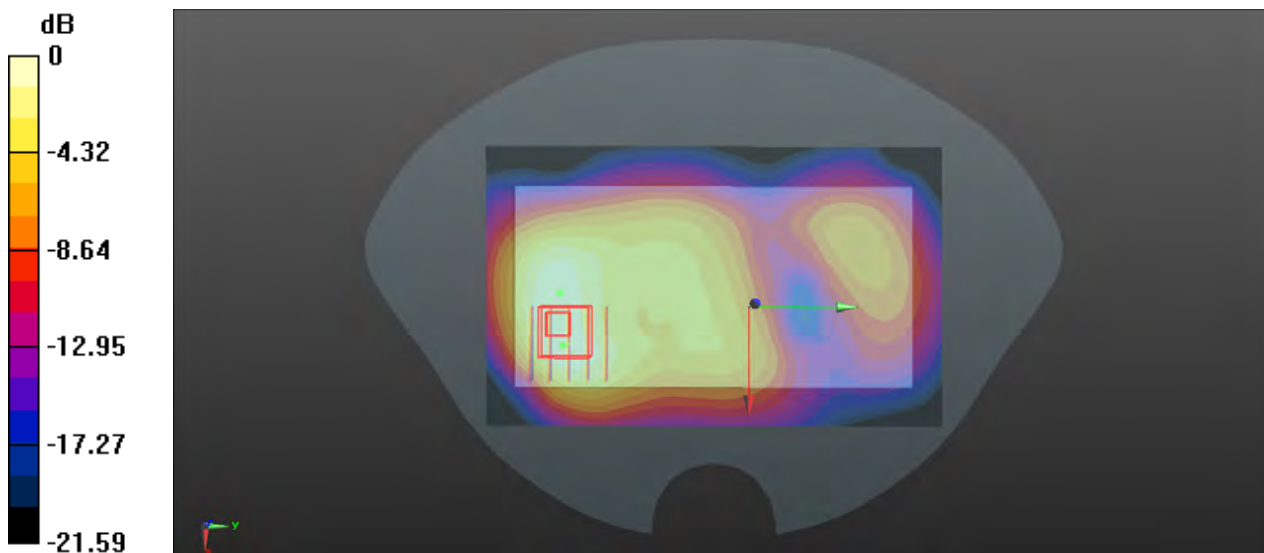
Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1  
Medium: HSL1900\_0414 Medium parameters used:  $f = 1908$  MHz;  $\sigma = 1.441$  S/m;  $\epsilon_r = 39.767$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2°C; Liquid Temperature : 22.8°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8, 8, 8); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.631 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 10.252 V/m; Power Drift = 0.04 dB  
Peak SAR (extrapolated) = 0.685 W/kg  
**SAR(1 g) = 0.391 W/kg; SAR(10 g) = 0.229 W/kg**  
Maximum value of SAR (measured) = 0.561 W/kg



0 dB = 0.561 W/kg

### P17 WCDMA IV\_RMC12.2K\_Front Face\_1.3cm\_Ch1312

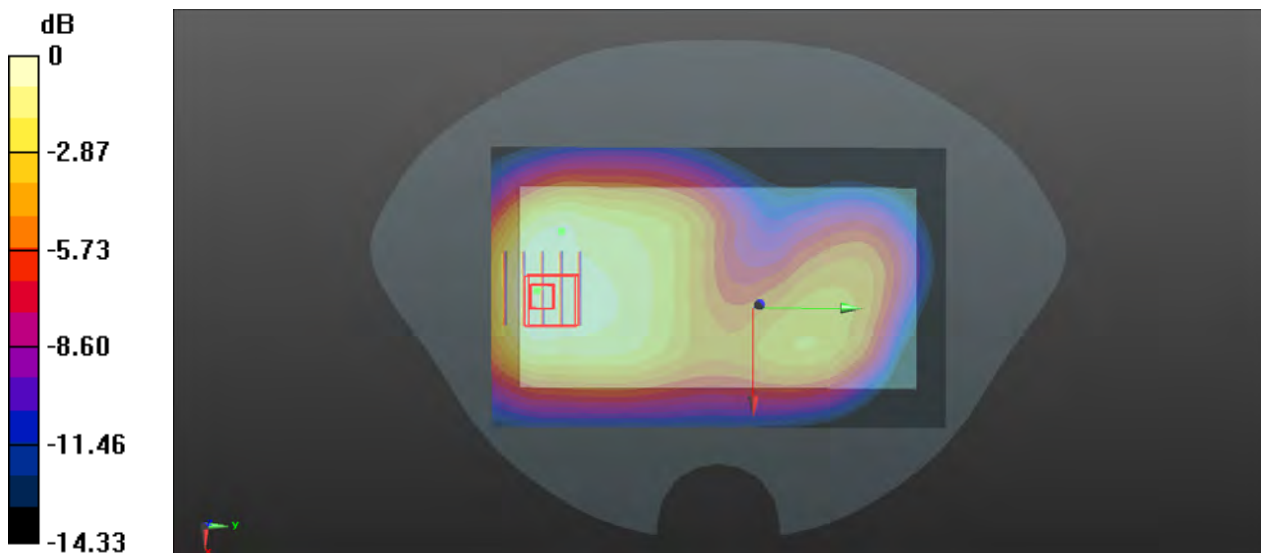
Communication System: WCDMA; Frequency: 1712.4 MHz; Duty Cycle: 1:1  
Medium: HSL1750\_0413 Medium parameters used:  $f = 1712.4$  MHz;  $\sigma = 1.34$  S/m;  $\epsilon_r = 41.324$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.5°C; Liquid Temperature : 22.4°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8.19, 8.19, 8.19); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.541 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 8.956 V/m; Power Drift = -0.05 dB  
Peak SAR (extrapolated) = 0.605 W/kg  
**SAR(1 g) = 0.380 W/kg; SAR(10 g) = 0.248 W/kg**  
Maximum value of SAR (measured) = 0.521 W/kg



0 dB = 0.521 W/kg

### P18 WCDMA V\_RMC12.2K\_Rear Face\_1cm\_Ch4233

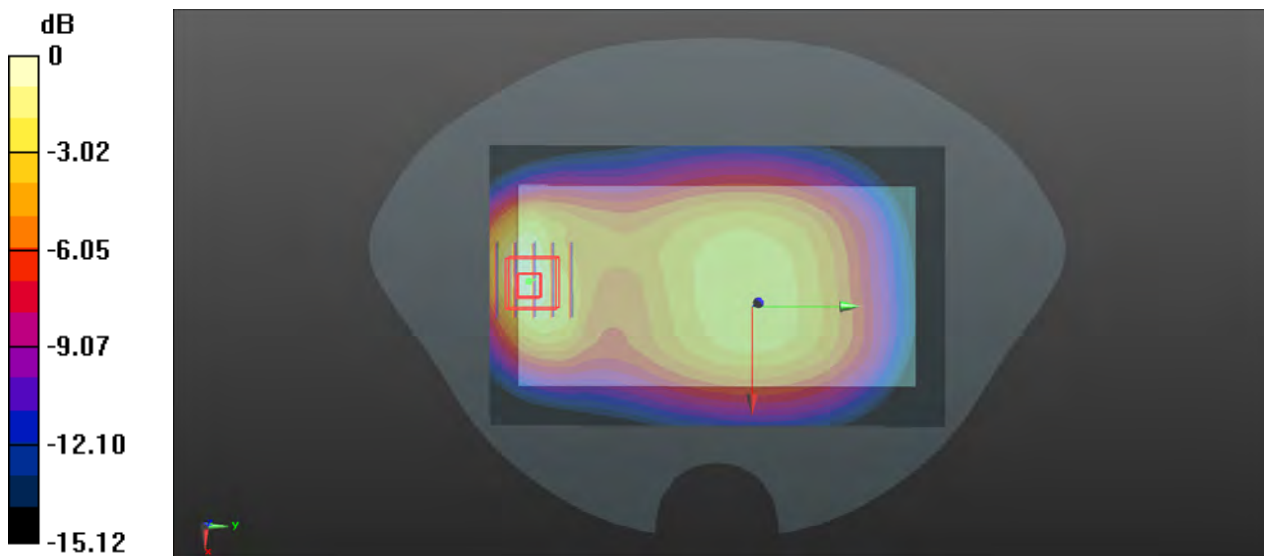
Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1  
Medium: HSL835\_0413 Medium parameters used:  $f = 847$  MHz;  $\sigma = 0.91$  S/m;  $\epsilon_r = 41.627$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.3°C; Liquid Temperature : 22.2°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.36, 9.36, 9.36); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.651 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 18.195 V/m; Power Drift = -0.00 dB  
Peak SAR (extrapolated) = 0.752 W/kg  
**SAR(1 g) = 0.410 W/kg; SAR(10 g) = 0.231 W/kg**  
Maximum value of SAR (measured) = 0.620 W/kg



0 dB = 0.620 W/kg

### P19 LTE 2\_QPSK20M\_Rear Face\_1cm\_Ch18700\_1RB\_OS0

Communication System: LTE; Frequency: 1860 MHz; Duty Cycle: 1:1

Medium: HSL1900\_0414 Medium parameters used:  $f = 1860$  MHz;  $\sigma = 1.393$  S/m;  $\epsilon_r = 39.959$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8, 8, 8); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.615 W/kg

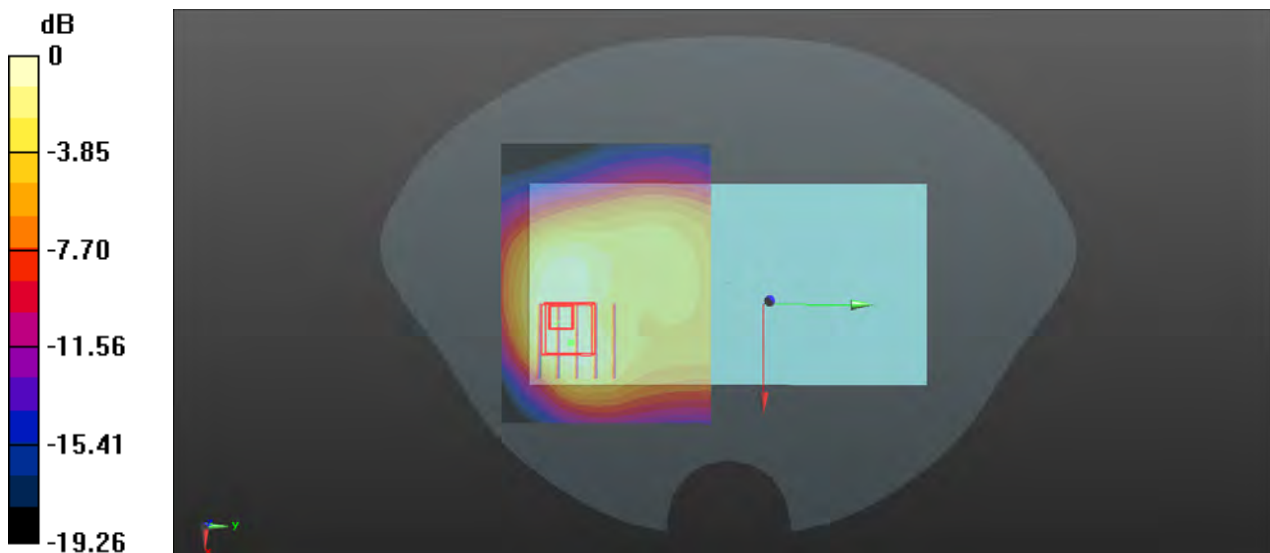
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.701 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.688 W/kg

**SAR(1 g) = 0.406 W/kg; SAR(10 g) = 0.236 W/kg**

Maximum value of SAR (measured) = 0.567 W/kg



0 dB = 0.567 W/kg

## P20 LTE 5\_QPSK10M\_Rear Face\_1cm\_Ch20600\_1RB\_OS49

Communication System: LTE; Frequency: 844 MHz; Duty Cycle: 1:1

Medium: HSL835\_0413 Medium parameters used:  $f = 844 \text{ MHz}$ ;  $\sigma = 0.908 \text{ S/m}$ ;  $\epsilon_r = 41.65$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.3^\circ\text{C}$ ; Liquid Temperature :  $22.2^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.36, 9.36, 9.36); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x131x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) =  $0.491 \text{ W/kg}$

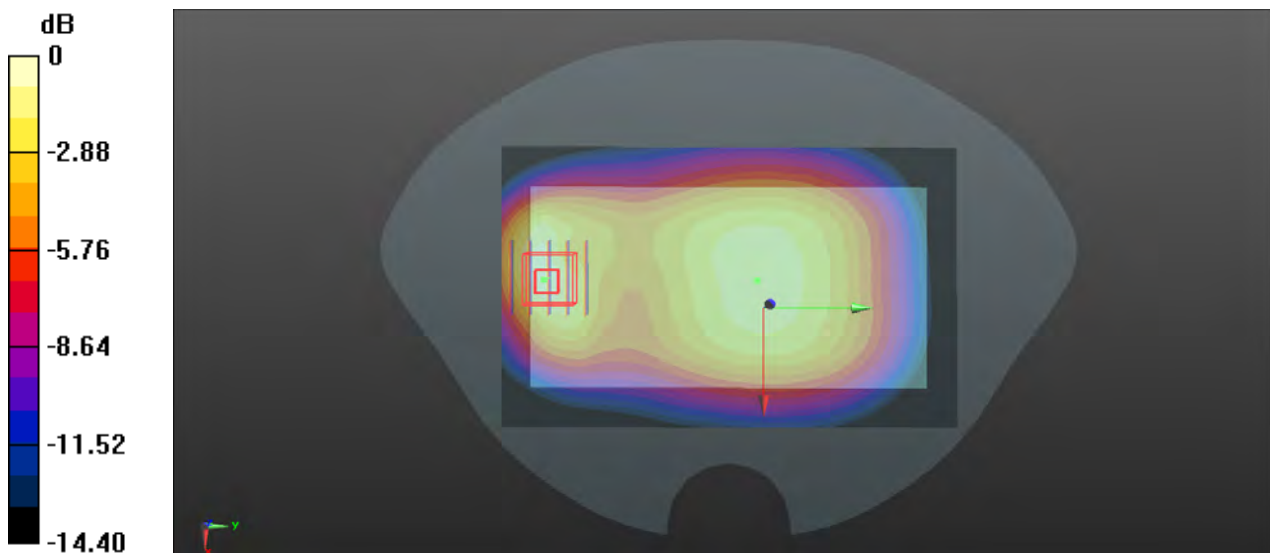
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $18.391 \text{ V/m}$ ; Power Drift =  $0.07 \text{ dB}$

Peak SAR (extrapolated) =  $0.598 \text{ W/kg}$

**SAR(1 g) =  $0.337 \text{ W/kg}$ ; SAR(10 g) =  $0.197 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.503 \text{ W/kg}$



0 dB =  $0.503 \text{ W/kg}$

## P21 LTE 7\_QPSK20M\_Rear Face\_1.8cm\_Ch21100\_1RB\_OS99

Communication System: LTE; Frequency: 2535 MHz; Duty Cycle: 1:1

Medium: HSL2600\_0415 Medium parameters used:  $f = 2535$  MHz;  $\sigma = 1.981$  S/m;  $\epsilon_r = 37.865$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.6°C; Liquid Temperature : 22.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.66, 7.66, 7.66); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (101x81x1)**: Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 0.580 W/kg

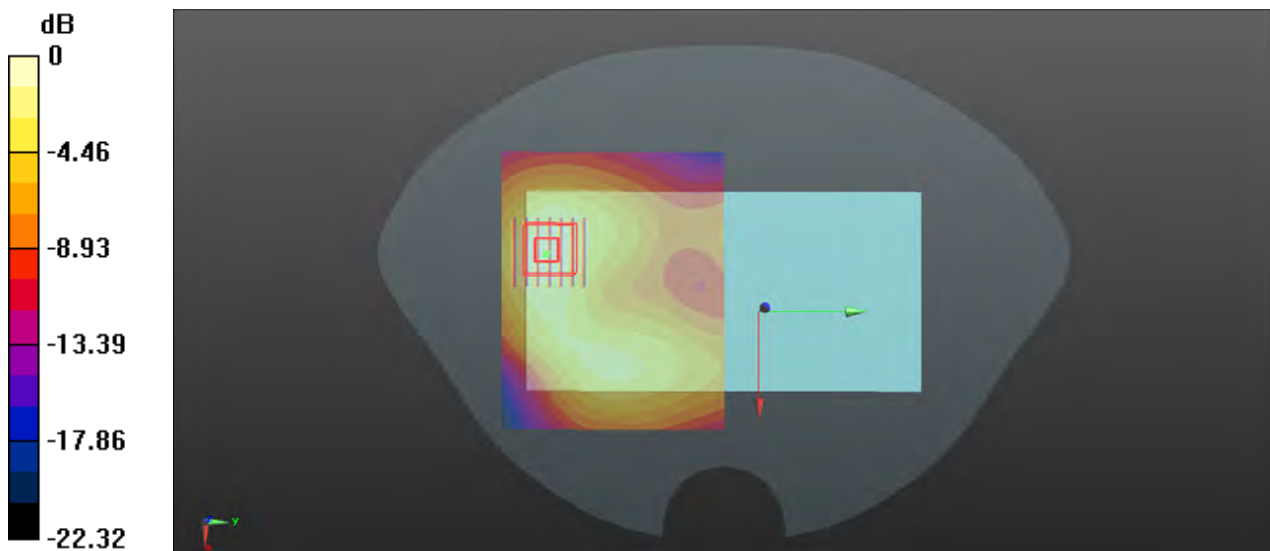
- **Zoom Scan (7x7x7)/Cube 0**: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.832 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.767 W/kg

**SAR(1 g) = 0.405 W/kg; SAR(10 g) = 0.220 W/kg**

Maximum value of SAR (measured) = 0.618 W/kg



0 dB = 0.618 W/kg



### P22 LTE 12\_QPSK10M\_Rear Face\_1cm\_Ch23095\_1RB\_OS49

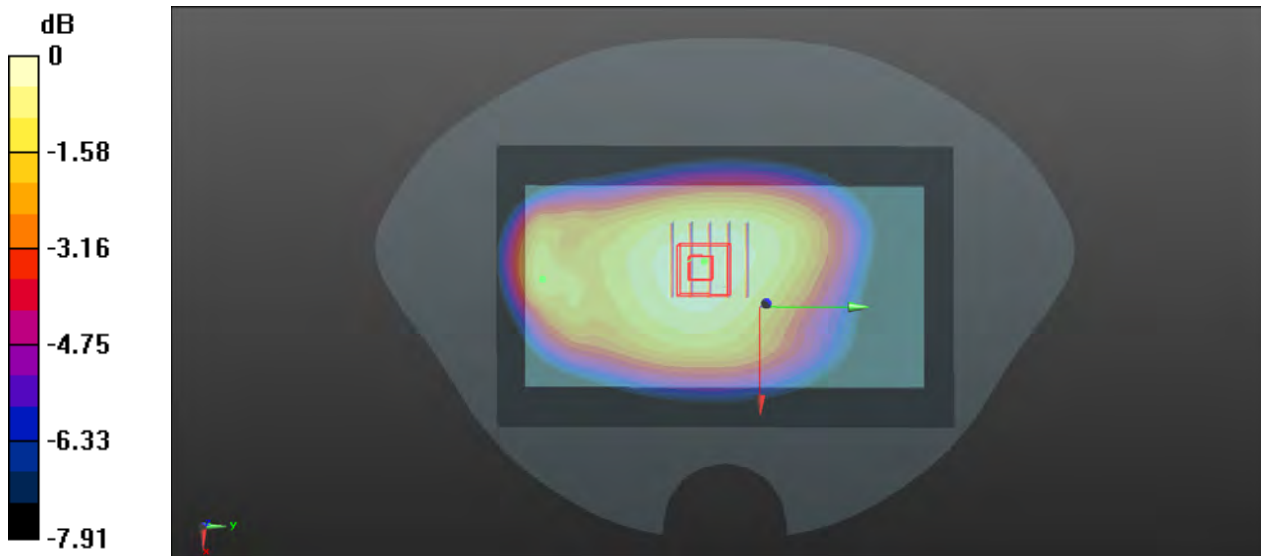
Communication System: LTE; Frequency: 707.5 MHz; Duty Cycle: 1:1  
Medium: HSL750\_0412 Medium parameters used:  $f = 707.5$  MHz;  $\sigma = 0.853$  S/m;  $\epsilon_r = 41.528$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.4°C; Liquid Temperature : 22.6°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.57, 9.57, 9.57); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.446 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 21.715 V/m; Power Drift = -0.08 dB  
Peak SAR (extrapolated) = 0.471 W/kg  
**SAR(1 g) = 0.378 W/kg; SAR(10 g) = 0.297 W/kg**  
Maximum value of SAR (measured) = 0.439 W/kg



0 dB = 0.439 W/kg

### P23 LTE 13\_QPSK10M\_Rear Face\_1cm\_Ch23230\_1RB\_OS0

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: HSL750\_0412 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.905 \text{ S/m}$ ;  $\epsilon_r = 41.078$ ;  $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature :  $23.4^\circ\text{C}$ ; Liquid Temperature :  $22.6^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.57, 9.57, 9.57); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x131x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.417 \text{ W/kg}$

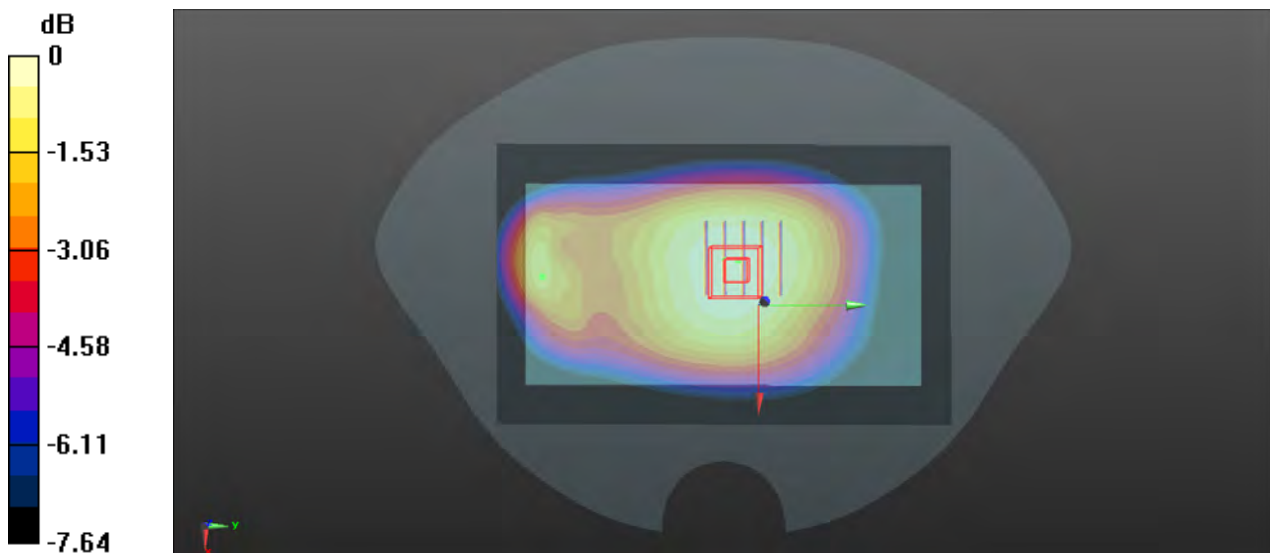
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value =  $19.718 \text{ V/m}$ ; Power Drift =  $0.05 \text{ dB}$

Peak SAR (extrapolated) =  $0.455 \text{ W/kg}$

**SAR(1 g) =  $0.363 \text{ W/kg}$ ; SAR(10 g) =  $0.285 \text{ W/kg}$**

Maximum value of SAR (measured) =  $0.425 \text{ W/kg}$



0 dB =  $0.425 \text{ W/kg}$

### P24 LTE 66\_QPSK20M\_Front Face\_1.3cm\_Ch132572\_1RB\_OS0

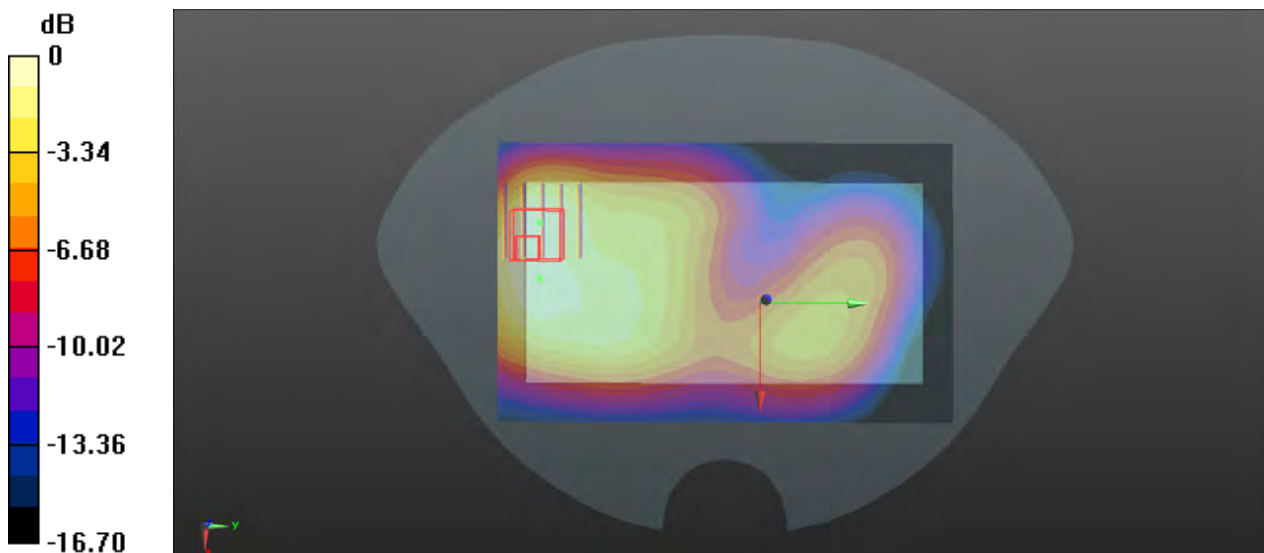
Communication System: LTE; Frequency: 1770 MHz; Duty Cycle: 1:1  
Medium: HSL1750\_0413 Medium parameters used:  $f = 1770$  MHz;  $\sigma = 1.401$  S/m;  $\epsilon_r = 41.093$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.5°C; Liquid Temperature : 22.4°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8.19, 8.19, 8.19); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x131x1):** 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=8mm, dy=8mm, dz=5mm  
Reference Value = 7.896 V/m; Power Drift = -0.03 dB  
Peak SAR (extrapolated) = 0.738 W/kg  
**SAR(1 g) = 0.439 W/kg; SAR(10 g) = 0.266 W/kg**  
Maximum value of SAR (measured) = 0.627 W/kg



0 dB = 0.627 W/kg

## P25 WLAN2.4G\_802.11b\_Rear Face\_1cm\_Ch11

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: HSL2450\_0414 Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.857$  S/m;  $\epsilon_r = 39.358$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.7°C; Liquid Temperature : 22.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (101x161x1)**: Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.240 W/kg

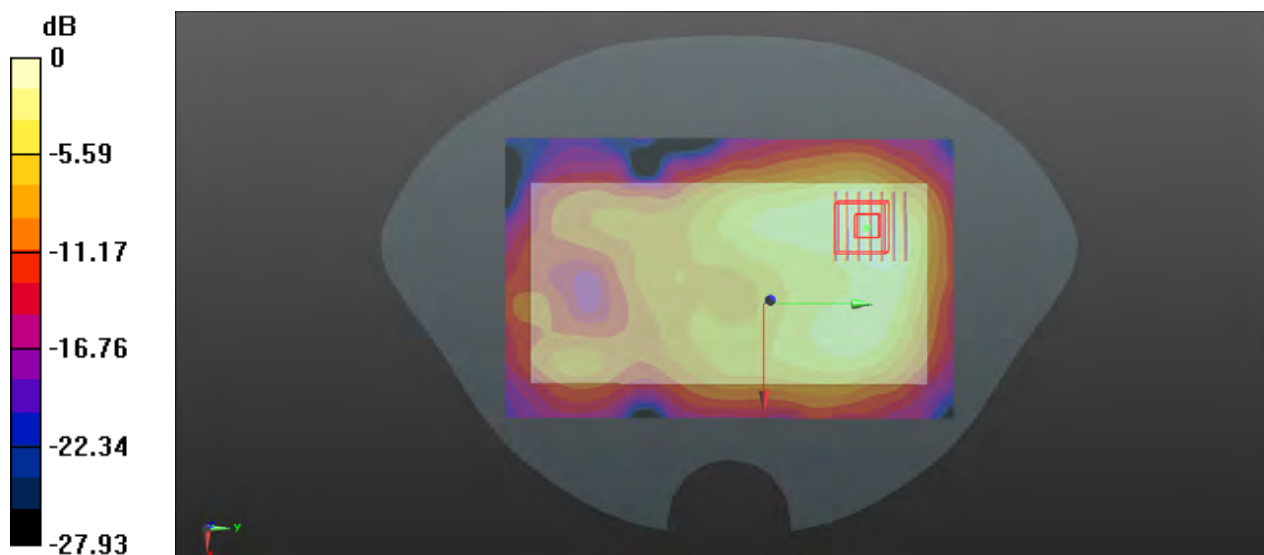
- **Zoom Scan (7x7x7)/Cube 0**: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.776 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.295 W/kg

**SAR(1 g) = 0.138 W/kg; SAR(10 g) = 0.070 W/kg**

Maximum value of SAR (measured) = 0.224 W/kg



0 dB = 0.224 W/kg

### P26 BT\_GFSK\_Rear Face\_1cm\_Ch78

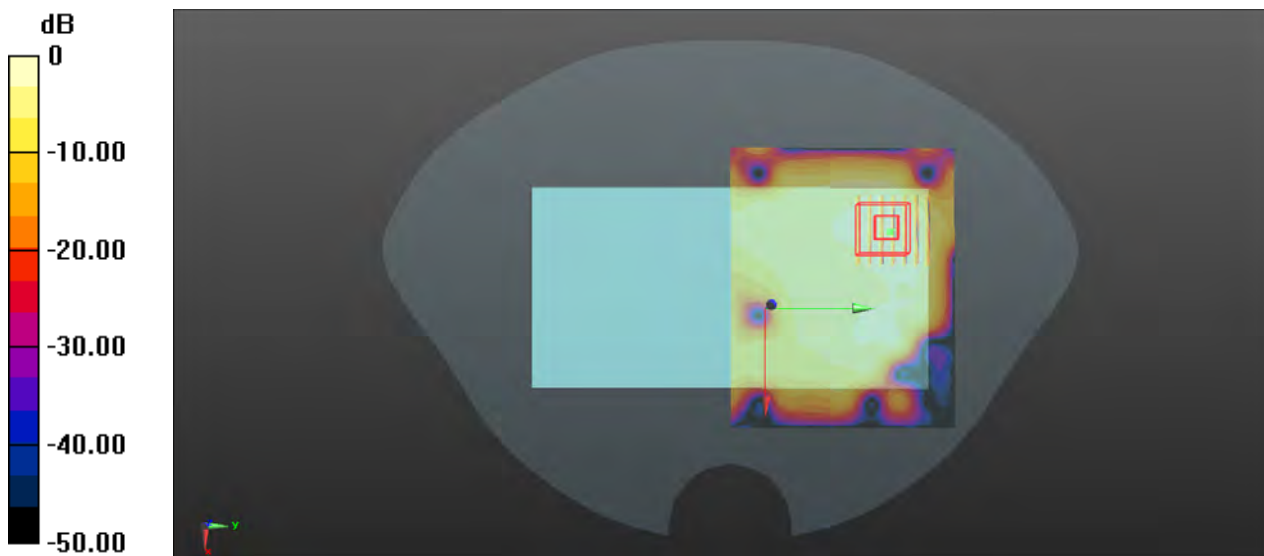
Communication System: BT; Frequency: 2480 MHz; Duty Cycle: 1:1.29  
Medium: HSL2450\_0414 Medium parameters used:  $f = 2480$  MHz;  $\sigma = 1.876$  S/m;  $\epsilon_r = 39.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.7°C; Liquid Temperature : 22.3°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (101x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 0.0359 W/kg

- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 1.400 V/m; Power Drift = -0.06 dB  
Peak SAR (extrapolated) = 0.0500 W/kg  
**SAR(1 g) = 0.019 W/kg; SAR(10 g) = 0.00897 W/kg**  
Maximum value of SAR (measured) = 0.0348 W/kg



0 dB = 0.0348 W/kg

### P27 GSM850\_GPRS10\_Rear Face\_1cm\_Ch251

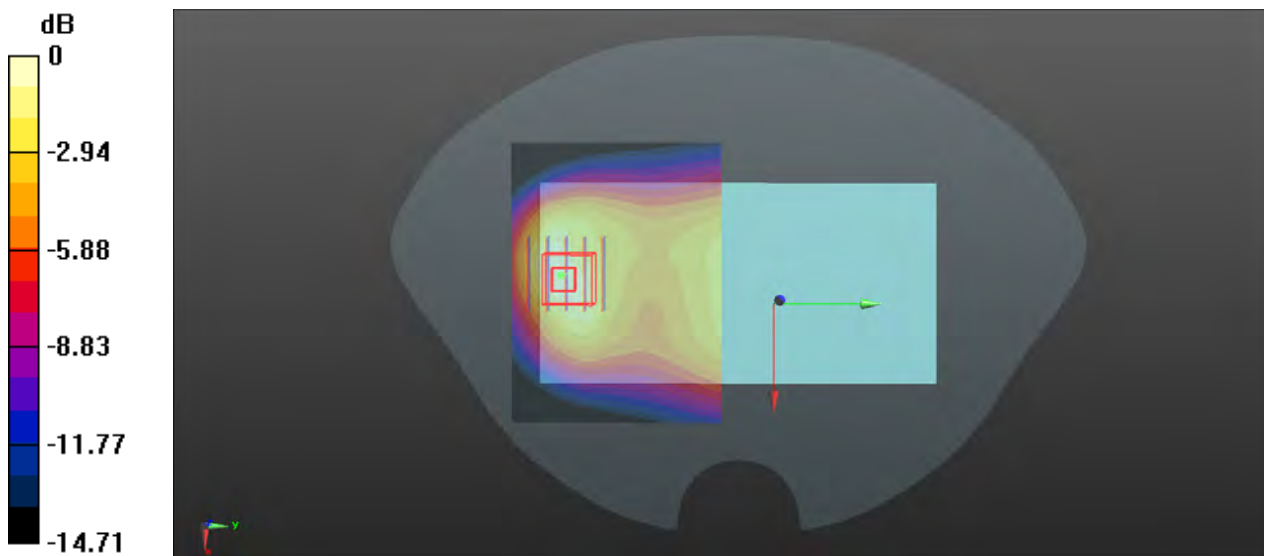
Communication System: GPRS10; Frequency: 848.8 MHz; Duty Cycle: 1:4.15  
Medium: HSL835\_0413 Medium parameters used:  $f = 849$  MHz;  $\sigma = 0.91$  S/m;  $\epsilon_r = 41.609$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.3°C; Liquid Temperature : 22.2°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.36, 9.36, 9.36); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.607 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 19.519 V/m; Power Drift = -0.07 dB  
Peak SAR (extrapolated) = 0.740 W/kg  
**SAR(1 g) = 0.415 W/kg; SAR(10 g) = 0.242 W/kg**  
Maximum value of SAR (measured) = 0.620 W/kg



0 dB = 0.620 W/kg

## P28 GSM1900\_GPRS10\_Bottom Side\_1cm\_Ch512

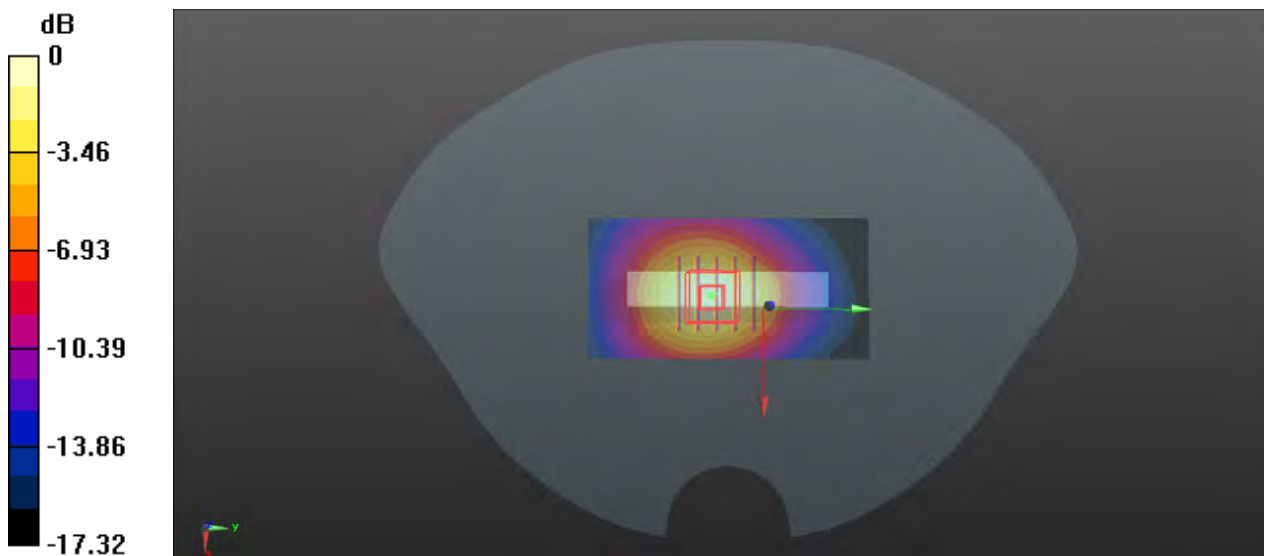
Communication System: GPRS10; Frequency: 1850.2 MHz; Duty Cycle: 1:4.15  
Medium: HSL1900\_0414 Medium parameters used:  $f = 1850.2$  MHz;  $\sigma = 1.384$  S/m;  $\epsilon_r = 40.011$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2°C; Liquid Temperature : 22.8°C

### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8, 8, 8); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (41x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.759 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 18.997 V/m; Power Drift = -0.14 dB  
Peak SAR (extrapolated) = 0.870 W/kg  
**SAR(1 g) = 0.509 W/kg; SAR(10 g) = 0.289 W/kg**  
Maximum value of SAR (measured) = 0.741 W/kg



0 dB = 0.741 W/kg

## P29 WCDMA II\_RMC12.2K\_Bottom Side\_1cm\_Ch9538

Communication System: WCDMA; Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium: HSL1900\_0414 Medium parameters used:  $f = 1908$  MHz;  $\sigma = 1.441$  S/m;  $\epsilon_r = 39.767$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8, 8, 8); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (41x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Maximum value of SAR (interpolated) = 0.722 W/kg

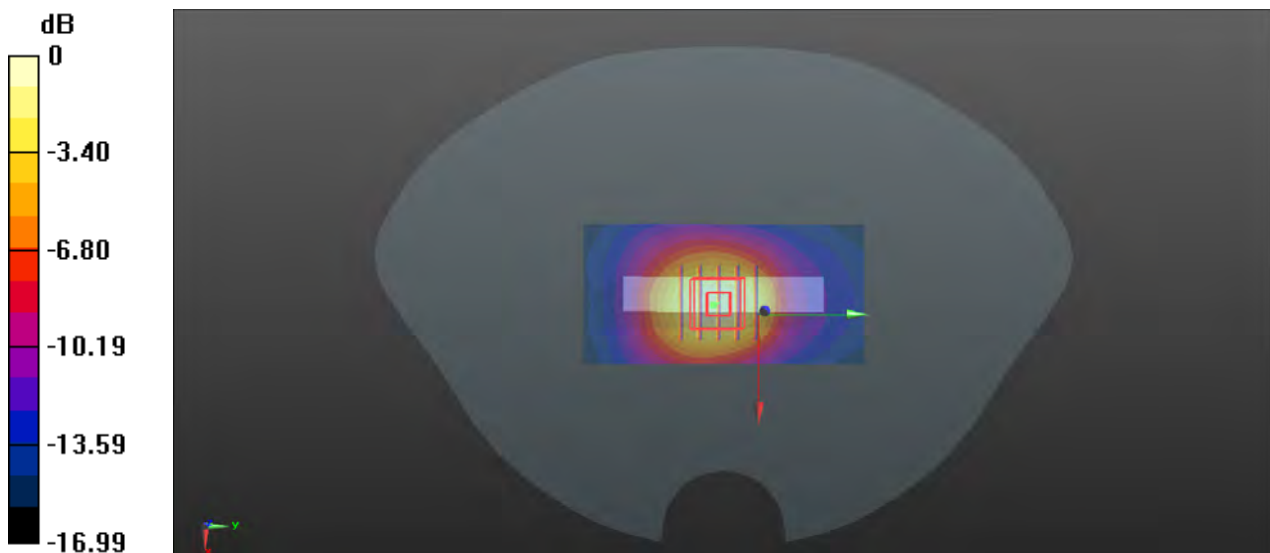
- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.266 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.807 W/kg

**SAR(1 g) = 0.476 W/kg; SAR(10 g) = 0.267 W/kg**

Maximum value of SAR (measured) = 0.690 W/kg



0 dB = 0.690 W/kg



### P30 WCDMA IV\_RMC12.2K\_Bottom Side\_1cm\_Ch1312

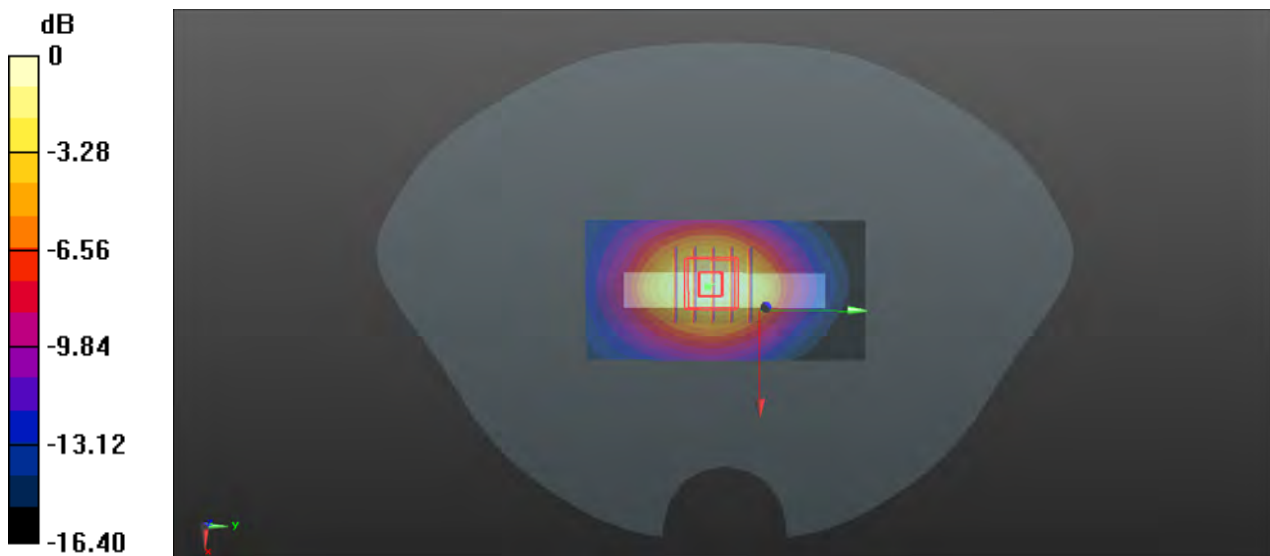
Communication System: WCDMA; Frequency: 1712.4 MHz; Duty Cycle: 1:1  
 Medium: HSL1750\_0413 Medium parameters used:  $f = 1712.4$  MHz;  $\sigma = 1.34$  S/m;  $\epsilon_r = 41.324$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Ambient Temperature : 23.5°C; Liquid Temperature : 22.4°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3873; ConvF(8.19, 8.19, 8.19); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (41x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Maximum value of SAR (interpolated) = 0.671 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 18.560 V/m; Power Drift = 0.07 dB  
 Peak SAR (extrapolated) = 0.767 W/kg  
**SAR(1 g) = 0.456 W/kg; SAR(10 g) = 0.265 W/kg**  
 Maximum value of SAR (measured) = 0.656 W/kg



0 dB = 0.656 W/kg

### P31 WCDMA V\_RMC12.2K\_Rear Face\_1cm\_Ch4233

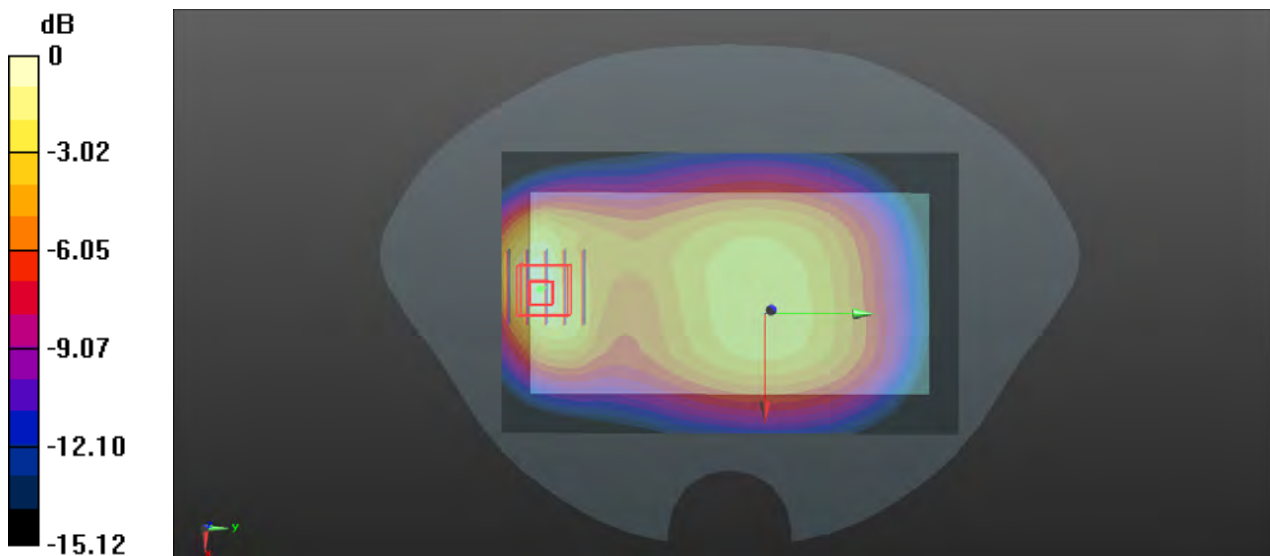
Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1  
 Medium: HSL835\_0413 Medium parameters used:  $f = 847$  MHz;  $\sigma = 0.91$  S/m;  $\epsilon_r = 41.627$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Ambient Temperature : 23.3°C; Liquid Temperature : 22.2°C

**DASY5 Configuration:**

- Probe: EX3DV4 - SN3873; ConvF(9.36, 9.36, 9.36); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Maximum value of SAR (interpolated) = 0.651 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 18.195 V/m; Power Drift = -0.00 dB  
 Peak SAR (extrapolated) = 0.752 W/kg  
**SAR(1 g) = 0.410 W/kg; SAR(10 g) = 0.231 W/kg**  
 Maximum value of SAR (measured) = 0.620 W/kg



0 dB = 0.620 W/kg

### P32 LTE 2\_QPSK20M\_Bottom Side\_1cm\_Ch18700\_1RB\_OS0

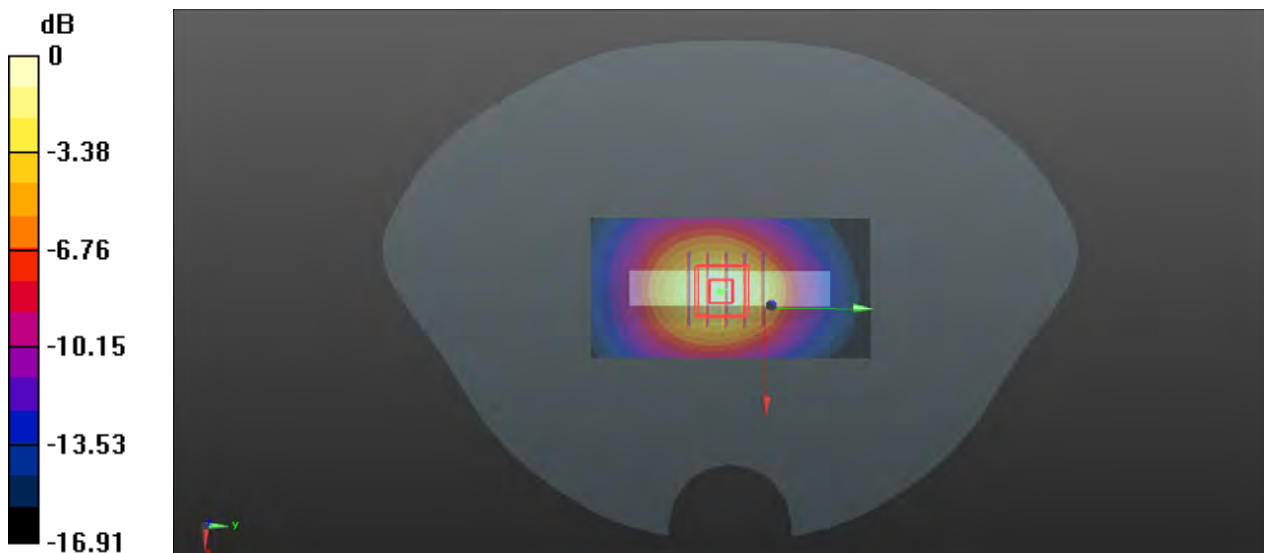
Communication System: LTE; Frequency: 1860 MHz; Duty Cycle: 1:1  
Medium: HSL1900\_0414 Medium parameters used:  $f = 1860$  MHz;  $\sigma = 1.393$  S/m;  $\epsilon_r = 39.959$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.2°C; Liquid Temperature : 22.8°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8, 8, 8); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (41x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.840 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 20.984 V/m; Power Drift = -0.06 dB  
Peak SAR (extrapolated) = 0.979 W/kg  
**SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.330 W/kg**  
Maximum value of SAR (measured) = 0.842 W/kg



0 dB = 0.842 W/kg

### P33 LTE 5\_QPSK10M\_Rear Face\_1cm\_Ch20600\_1RB\_OS49

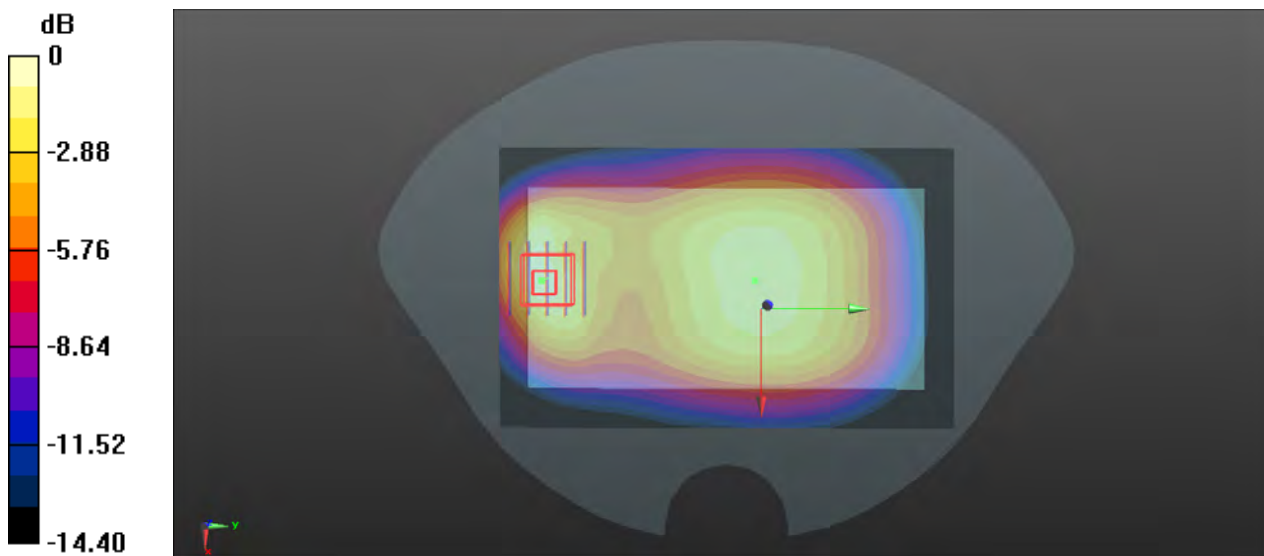
Communication System: LTE; Frequency: 844 MHz; Duty Cycle: 1:1  
Medium: HSL835\_0413 Medium parameters used:  $f = 844 \text{ MHz}$ ;  $\sigma = 0.908 \text{ S/m}$ ;  $\epsilon_r = 41.65$ ;  $\rho = 1000 \text{ kg/m}^3$   
Ambient Temperature :  $23.3^\circ\text{C}$ ; Liquid Temperature :  $22.2^\circ\text{C}$

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.36, 9.36, 9.36); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x131x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
Maximum value of SAR (interpolated) =  $0.491 \text{ W/kg}$

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
Reference Value =  $18.391 \text{ V/m}$ ; Power Drift =  $0.07 \text{ dB}$   
Peak SAR (extrapolated) =  $0.598 \text{ W/kg}$   
**SAR(1 g) =  $0.337 \text{ W/kg}$ ; SAR(10 g) =  $0.197 \text{ W/kg}$**   
Maximum value of SAR (measured) =  $0.503 \text{ W/kg}$



0 dB =  $0.503 \text{ W/kg}$

### P34 LTE 7\_QPSK20M\_Bottom Side\_1cm\_Ch21100\_1RB\_OS99

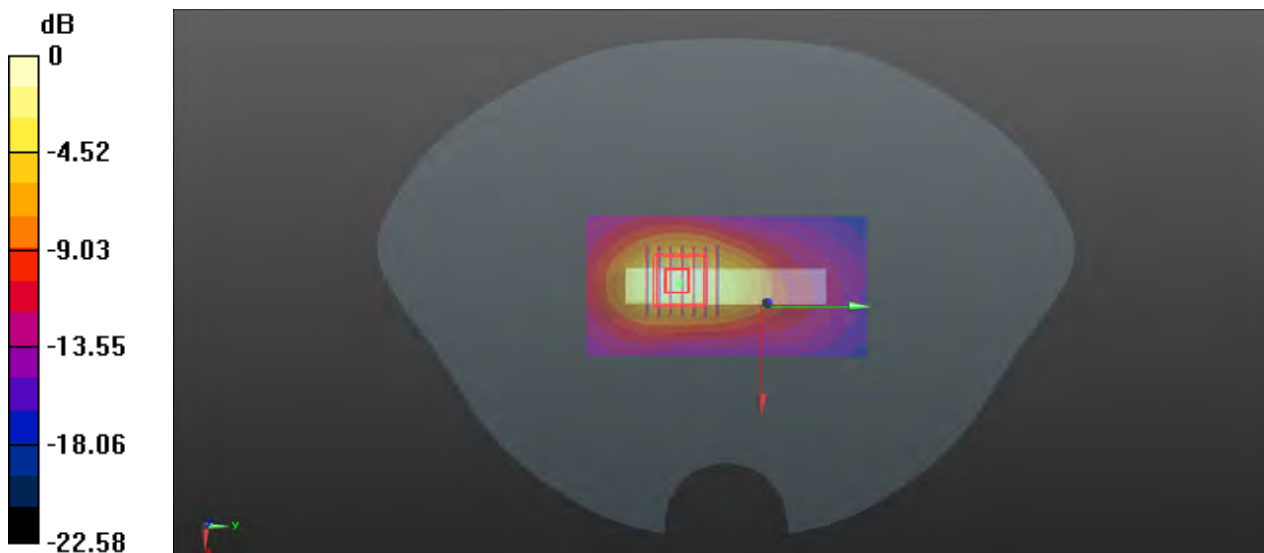
Communication System: LTE; Frequency: 2535 MHz; Duty Cycle: 1:1  
Medium: HSL2600\_0415 Medium parameters used:  $f = 2535$  MHz;  $\sigma = 1.981$  S/m;  $\epsilon_r = 37.865$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.6°C; Liquid Temperature : 22.6°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.66, 7.66, 7.66); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (51x101x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 1.50 W/kg

- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 15.189 V/m; Power Drift = 0.01 dB  
Peak SAR (extrapolated) = 1.87 W/kg  
**SAR(1 g) = 0.896 W/kg; SAR(10 g) = 0.423 W/kg**  
Maximum value of SAR (measured) = 1.48 W/kg



0 dB = 1.48 W/kg

### P35 LTE 12\_QPSK10M\_Right Side\_1cm\_Ch23095\_1RB\_OS49

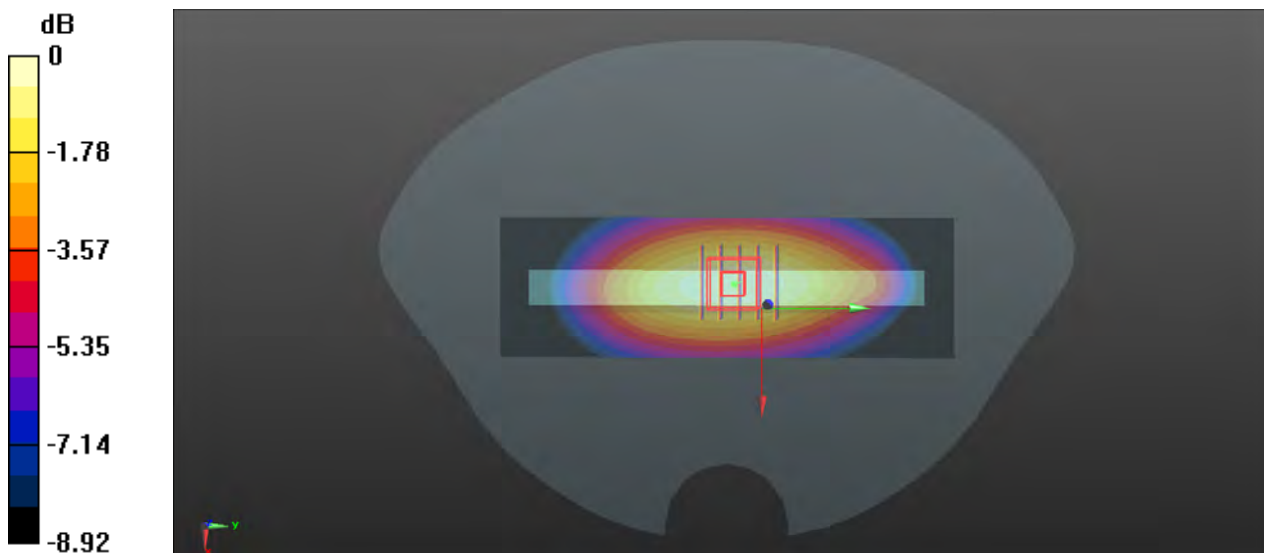
Communication System: LTE; Frequency: 707.5 MHz; Duty Cycle: 1:1  
Medium: HSL750\_0412 Medium parameters used:  $f = 707.5$  MHz;  $\sigma = 0.853$  S/m;  $\epsilon_r = 41.528$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.4°C; Liquid Temperature : 22.6°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.57, 9.57, 9.57); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (41x131x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 0.418 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 20.101 V/m; Power Drift = 0.06 dB  
Peak SAR (extrapolated) = 0.467 W/kg  
**SAR(1 g) = 0.329 W/kg; SAR(10 g) = 0.232 W/kg**  
Maximum value of SAR (measured) = 0.422 W/kg



0 dB = 0.422 W/kg

**P36 LTE 13\_QPSK10M\_Rear Face\_1cm\_Ch23230\_1RB\_OS0**

Communication System: LTE; Frequency: 782 MHz; Duty Cycle: 1:1

Medium: HSL750\_0412 Medium parameters used:  $f = 782$  MHz;  $\sigma = 0.905$  S/m;  $\epsilon_r = 41.078$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4°C; Liquid Temperature : 22.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(9.57, 9.57, 9.57); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (81x131x1)**: Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.417 W/kg

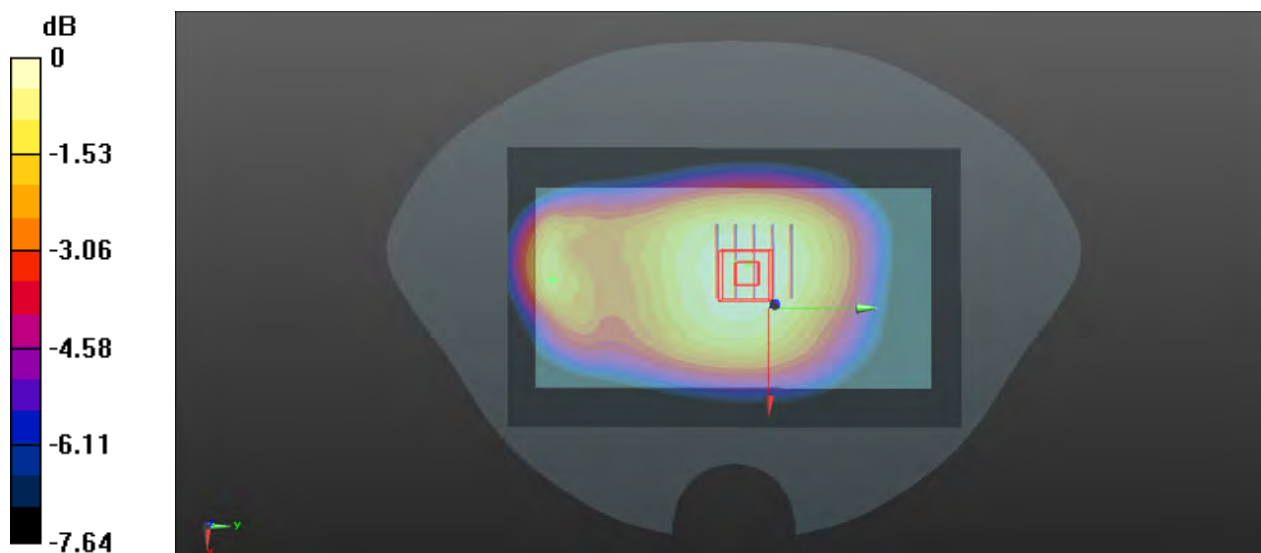
- **Zoom Scan (5x5x7)/Cube 0**: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.718 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.455 W/kg

**SAR(1 g) = 0.363 W/kg; SAR(10 g) = 0.285 W/kg**

Maximum value of SAR (measured) = 0.425 W/kg



### P37 LTE 66\_QPSK20M\_Bottom Side\_1cm\_Ch132572\_1RB\_OS0

Communication System: LTE; Frequency: 1770 MHz; Duty Cycle: 1:1

Medium: HSL1750\_0413 Medium parameters used:  $f = 1770$  MHz;  $\sigma = 1.401$  S/m;  $\epsilon_r = 41.093$ ;  $\rho = 1000$  kg/m<sup>3</sup>

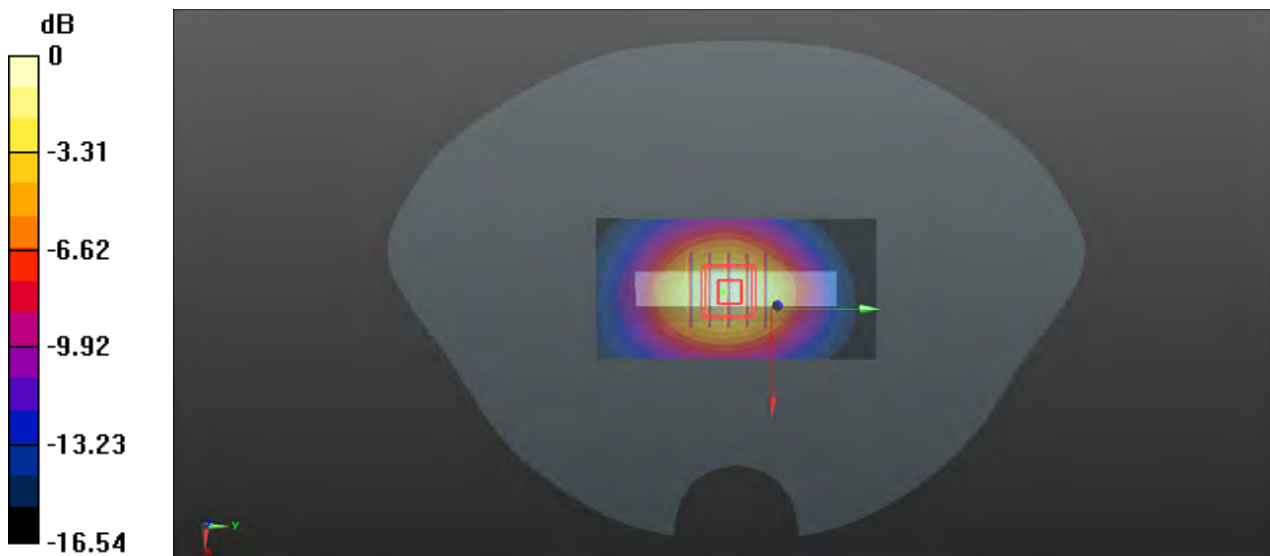
Ambient Temperature : 23.5°C; Liquid Temperature : 22.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8.19, 8.19, 8.19); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (41x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Maximum value of SAR (interpolated) = 0.826 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
 Reference Value = 20.567 V/m; Power Drift = -0.07 dB  
 Peak SAR (extrapolated) = 0.954 W/kg  
**SAR(1 g) = 0.562 W/kg; SAR(10 g) = 0.322 W/kg**  
 Maximum value of SAR (measured) = 0.810 W/kg



0 dB = 0.810 W/kg



### P38 WLAN2.4G\_802.11b\_Rear Face\_1cm\_Ch11

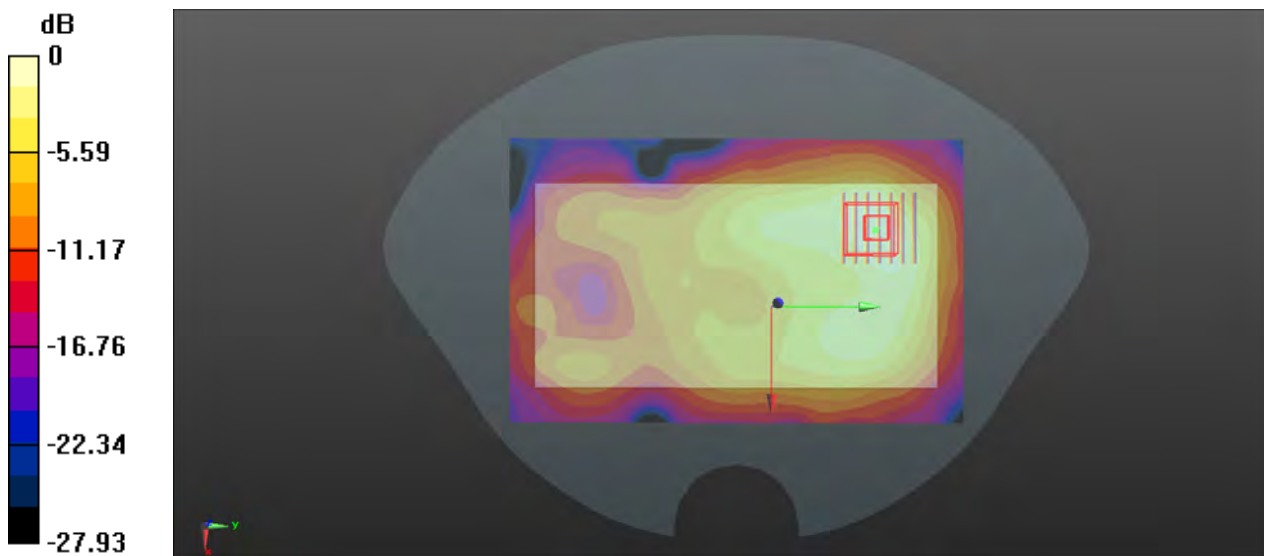
Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1  
Medium: HSL2450\_0414 Medium parameters used:  $f = 2462$  MHz;  $\sigma = 1.857$  S/m;  $\epsilon_r = 39.358$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.7°C; Liquid Temperature : 22.3°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (101x161x1)**: Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 0.240 W/kg

- **Zoom Scan (7x7x7)/Cube 0**: Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 3.776 V/m; Power Drift = -0.02 dB  
Peak SAR (extrapolated) = 0.295 W/kg  
**SAR(1 g) = 0.138 W/kg; SAR(10 g) = 0.070 W/kg**  
Maximum value of SAR (measured) = 0.224 W/kg



0 dB = 0.224 W/kg

### P39 BT\_GFSK\_Rear Face\_1cm\_Ch78

Communication System: BT; Frequency: 2480 MHz; Duty Cycle: 1:1.29

Medium: HSL2450\_0414 Medium parameters used:  $f = 2480$  MHz;  $\sigma = 1.876$  S/m;  $\epsilon_r = 39.28$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.7°C; Liquid Temperature : 22.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (101x81x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0359 W/kg

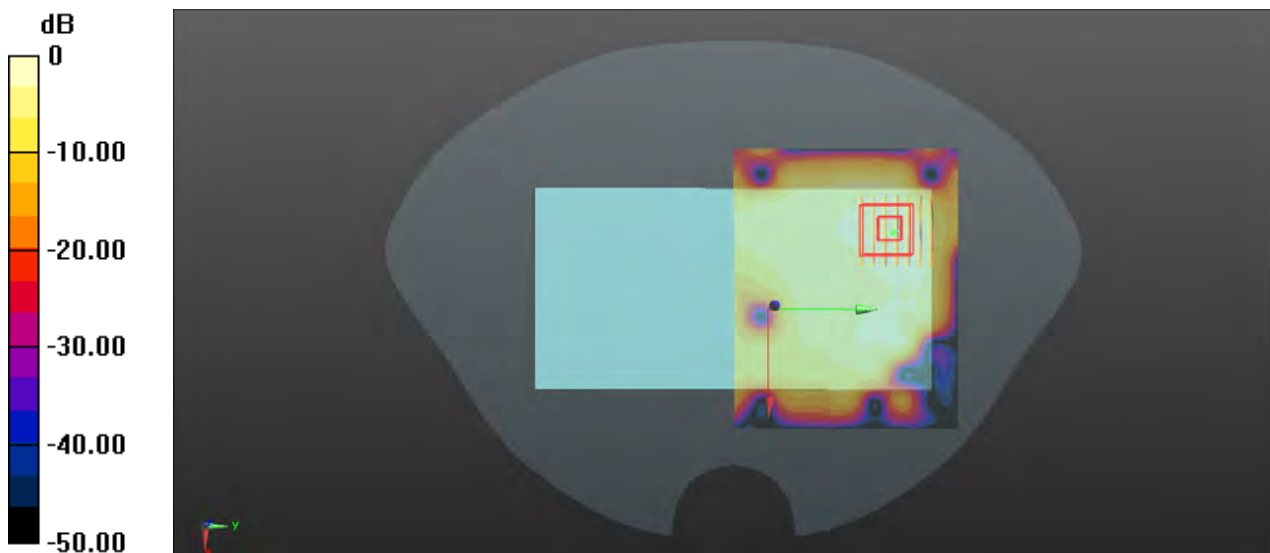
- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.400 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.0500 W/kg

**SAR(1 g) = 0.019 W/kg; SAR(10 g) = 0.00897 W/kg**

Maximum value of SAR (measured) = 0.0348 W/kg



0 dB = 0.0348 W/kg

### P40 WCDMA IV\_RMC12.2K\_Bottom Side\_0cm\_Ch1312

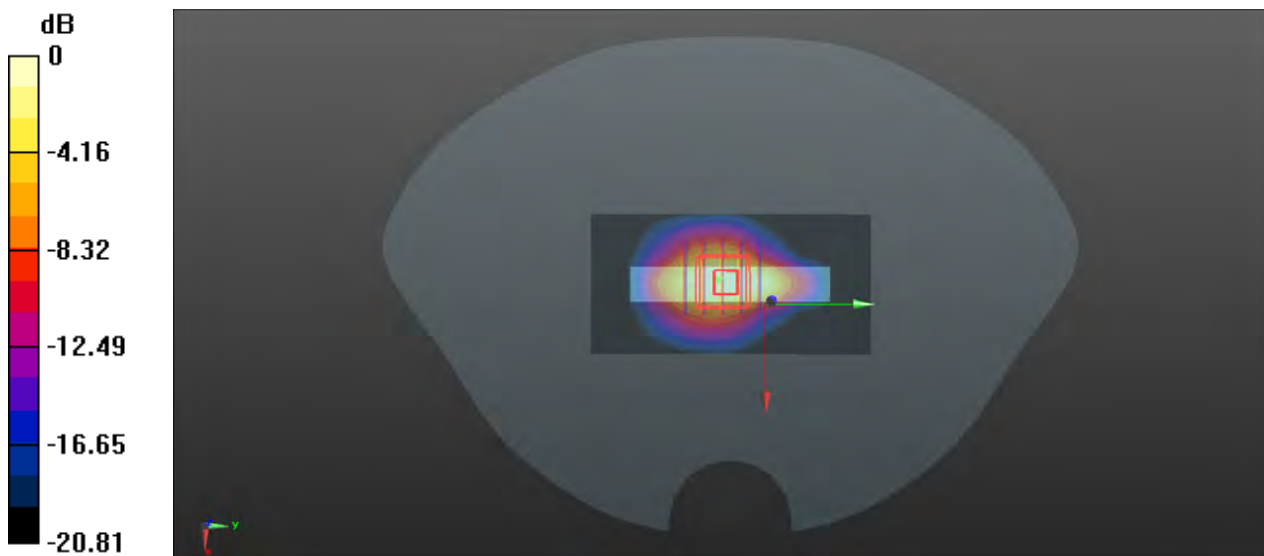
Communication System: WCDMA; Frequency: 1712.4 MHz; Duty Cycle: 1:1  
Medium: HSL1750\_0413 Medium parameters used:  $f = 1712.4$  MHz;  $\sigma = 1.34$  S/m;  $\epsilon_r = 41.324$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.5°C; Liquid Temperature : 22.4°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8.19, 8.19, 8.19); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (41x81x1)**: Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 5.92 W/kg

- **Zoom Scan (5x5x7)/Cube 0**: Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 51.789 V/m; Power Drift = -0.17 dB  
Peak SAR (extrapolated) = 6.26 W/kg  
**SAR(1 g) = 3.17 W/kg; SAR(10 g) = 1.54 W/kg**  
Maximum value of SAR (measured) = 5.15 W/kg



0 dB = 5.15 W/kg

### P41 LTE 7\_QPSK20M\_Bottom Side\_0cm\_Ch21100\_1RB\_OS99

Communication System: LTE; Frequency: 2535 MHz; Duty Cycle: 1:1

Medium: HSL2600\_0415 Medium parameters used:  $f = 2535$  MHz;  $\sigma = 1.981$  S/m;  $\epsilon_r = 37.865$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.6°C; Liquid Temperature : 22.6°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(7.66, 7.66, 7.66); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (51x101x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 11.3 W/kg

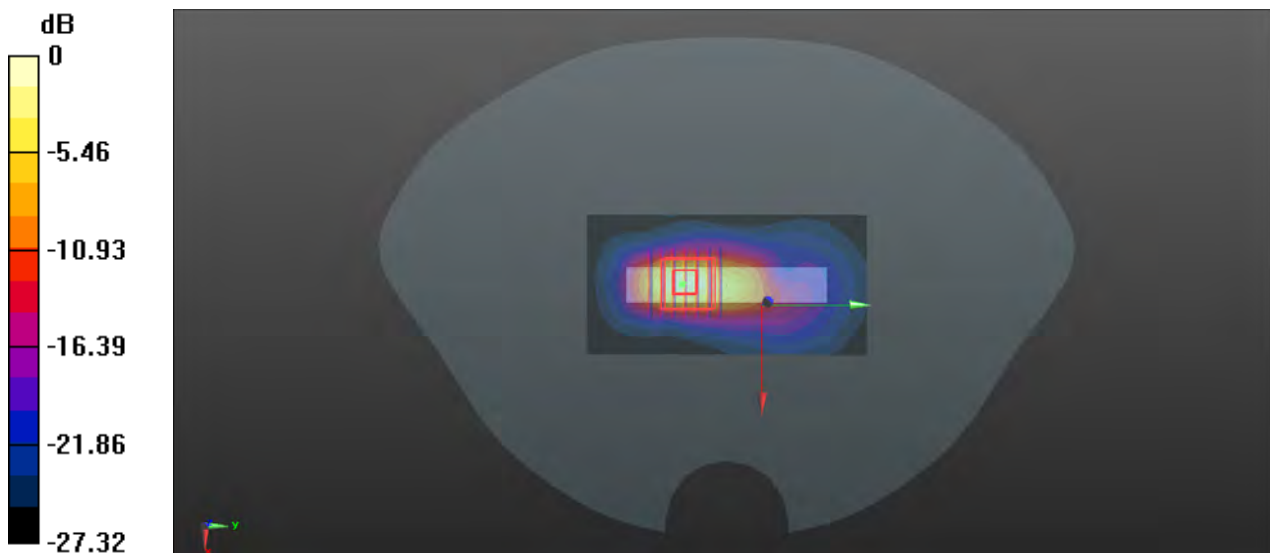
- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 38.362 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 13.9 W/kg

**SAR(1 g) = 5.06 W/kg; SAR(10 g) = 1.87 W/kg**

Maximum value of SAR (measured) = 10.5 W/kg



0 dB = 10.5 W/kg

### P42 LTE 66\_QPSK20M\_Bottom Side\_0cm\_Ch132322\_1RB\_OS0

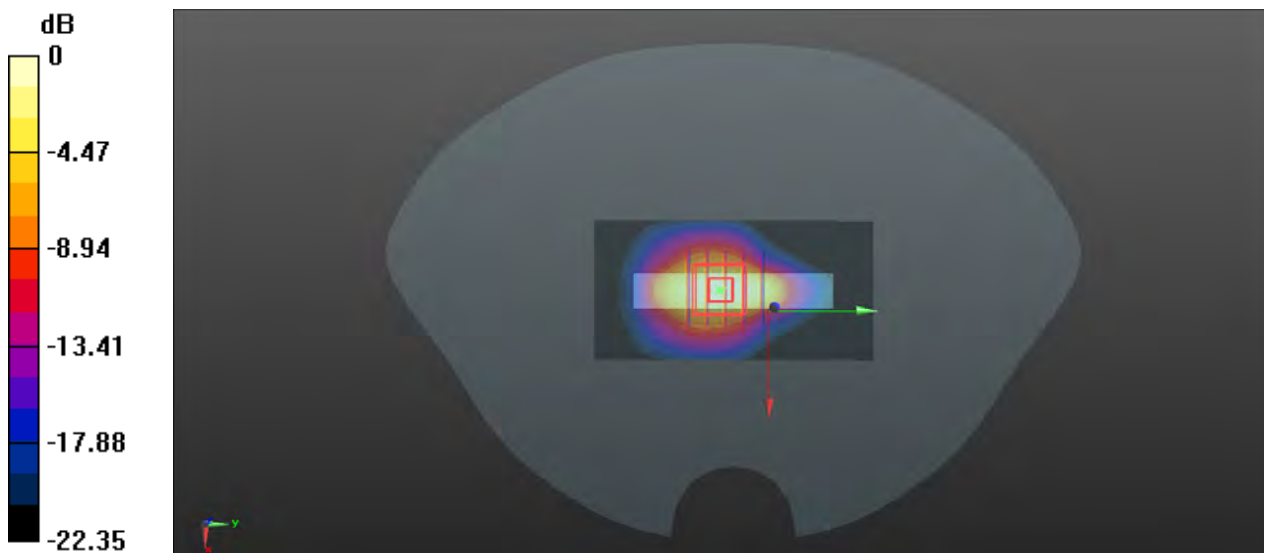
Communication System: LTE; Frequency: 1745 MHz; Duty Cycle: 1:1  
Medium: HSL1750\_0413 Medium parameters used:  $f = 1745$  MHz;  $\sigma = 1.375$  S/m;  $\epsilon_r = 41.203$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.5°C; Liquid Temperature : 22.4°C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3873; ConvF(8.19, 8.19, 8.19); Calibrated: 2021/8/25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2021/10/26
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.8 (7); SEMCAD X Version 14.6.10 (7164)

- **Area Scan (41x81x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 6.29 W/kg

- **Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 50.890 V/m; Power Drift = -0.03 dB  
Peak SAR (extrapolated) = 6.73 W/kg  
**SAR(1 g) = 3.36 W/kg; SAR(10 g) = 1.62 W/kg**  
Maximum value of SAR (measured) = 5.52 W/kg



0 dB = 5.52 W/kg



## **Appendix C. Calibration Certificate for Probe and Dipole**

The SPEAG calibration certificates are shown as follows.



In Collaboration with  
**s p e a g**  
CALIBRATION LABORATORY



中国认可  
国际互认  
校准  
CALIBRATION  
CNAS L0570

Add: No.52 HuanYuanBei Road, Haidian District, Beijing, 100191, C  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

Client

B.V.ADT

Certificate No: Z21-60332

## CALIBRATION CERTIFICATE

Object D750V3 - SN: 1067

Calibration Procedure(s) FF-Z11-003-01  
Calibration Procedures for dipole validation kits

Calibration date: September 16, 2021

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±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106277	23-Sep-20 (CTTL, No.J20X08336)	Sep-21
Power sensor NRP8S	104291	23-Sep-20 (CTTL, No.J20X08336)	Sep-21
Reference Probe EX3DV4	SN 7517	03-Feb-21(CTTL-SPEAG,No.Z21-60001)	Feb-22
DAE4	SN 1556	15-Jan-21(SPEAG,No.DAE4-1556_Jan21)	Jan-22
Secondary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	01-Feb-21 (CTTL, No.J21X00593)	Jan-22
NetworkAnalyzer E5071C	MY46110673	14-Jan-21 (CTTL, No.J21X00232)	Jan-22

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: September 21, 2021

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



Add: No.52 HuanYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

### Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM <sub>x,y,z</sub>
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 assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices- Part 1: Device used next to the ear (Frequency range of 300MHz to 6GHz)", July 2016
- IEC 62209-2, "Procedure to measure the Specific Absorption Rate (SAR) For wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 6GHz)", March 2010
- KDB865664, 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%.





Add: No.52 Huan YuanBei Road, Haidian District, Beijing, 100191, China  
 Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
 E-mail: cttl@chinattl.com http://www.chinattl.cn

### Measurement Conditions

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

<b>DASY Version</b>	DASY52	V52.10.4
<b>Extrapolation</b>	Advanced Extrapolation	
<b>Phantom</b>	Triple Flat Phantom 5.1C	
<b>Distance Dipole Center - TSL</b>	15 mm	with Spacer
<b>Zoom Scan Resolution</b>	dx, dy, dz = 5 mm	
<b>Frequency</b>	750 MHz ± 1 MHz	

### Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
<b>Nominal Head TSL parameters</b>	22.0 °C	42.0	0.90 mho/m
<b>Measured Head TSL parameters</b>	(22.0 ± 0.2) °C	42.1 ± 6 %	0.87 mho/m ± 6 %
<b>Head TSL temperature change during test</b>	<1.0 °C	----	----

### SAR result with Head TSL

<b>SAR averaged over 1 cm<sup>3</sup> (1 g) of Head TSL</b>	Condition	
SAR measured	250 mW input power	2.05 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>8.34 W/kg ± 18.8 % (k=2)</b>
<b>SAR averaged over 10 cm<sup>3</sup> (10 g) of Head TSL</b>	Condition	
SAR measured	250 mW input power	1.34 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>5.43 W/kg ± 18.7 % (k=2)</b>



Add: No.52 HuanYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

## Appendix (Additional assessments outside the scope of CNAS L0570)

### Antenna Parameters with Head TSL

Impedance, transformed to feed point	55.7 $\Omega$ - 1.83j $\Omega$
Return Loss	- 25.0dB

### General Antenna Parameters and Design

Electrical Delay (one direction)	0.939 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

Manufactured by	SPEAG
-----------------	-------



Add: No.52 HuanYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

### DASY5 Validation Report for Head TSL

Date: 09.16.2021

Test Laboratory: CCTL, Beijing, China

**DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1067**

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.872$  S/m;  $\epsilon_r = 42.14$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(9.81, 9.81, 9.81) @ 750 MHz; Calibrated: 2021-02-03
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2021-01-15
- Phantom: MFP\_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Reference Value = 55.23 V/m; Power Drift = -0.01 dB

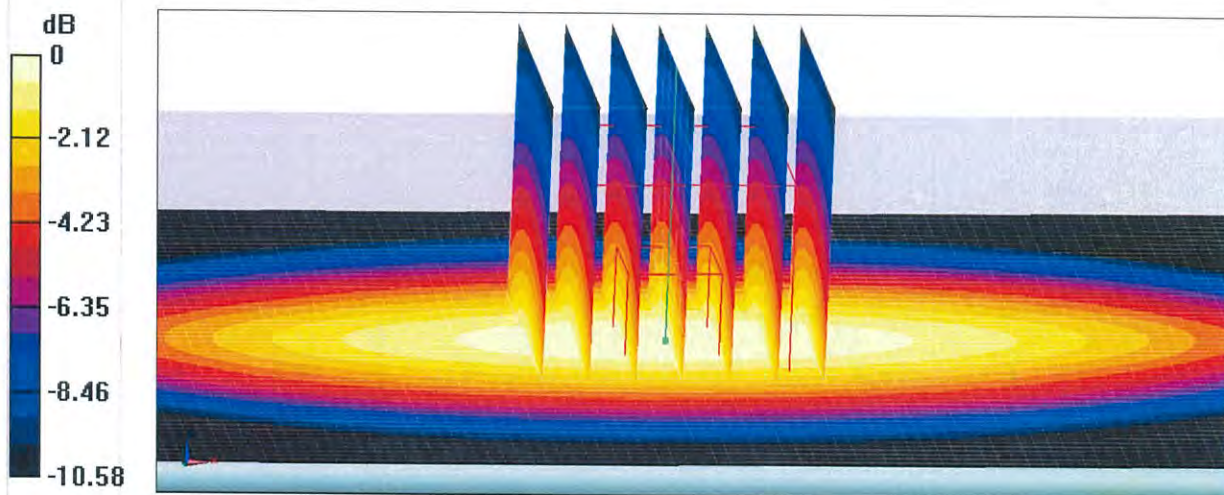
Peak SAR (extrapolated) = 3.22 W/kg

**SAR(1 g) = 2.05 W/kg; SAR(10 g) = 1.34 W/kg**

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 63.9%

Maximum value of SAR (measured) = 2.79 W/kg

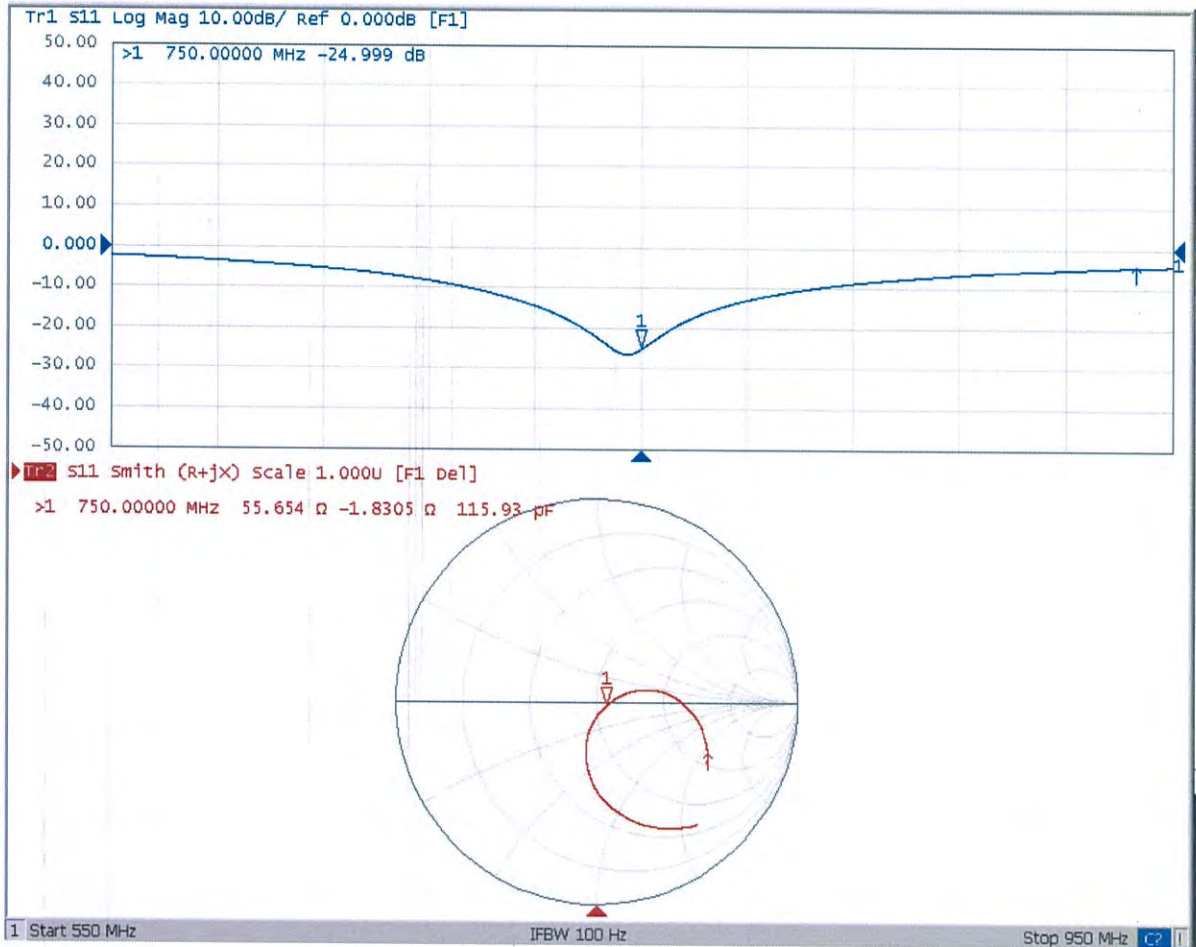


0 dB = 2.79 W/kg = 4.46 dBW/kg



Add: No.52 HuanYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

### Impedance Measurement Plot for Head TSL





In Collaboration with  
**s p e a g**  
CALIBRATION LABORATORY



中国认可  
国际互认  
校准  
CALIBRATION  
CNAS L0570

Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, Chi  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

Client **B.V.ADT**

Certificate No: **Z21-60333**

## CALIBRATION CERTIFICATE

Object **D835V2 - SN: 4d139**

Calibration Procedure(s) **FF-Z11-003-01**  
Calibration Procedures for dipole validation kits

Calibration date: **September 17, 2021**

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±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106277	23-Sep-20 (CTTL, No.J20X08336)	Sep-21
Power sensor NRP8S	104291	23-Sep-20 (CTTL, No.J20X08336)	Sep-21
Reference Probe EX3DV4	SN 7517	03-Feb-21(CTTL-SPEAG,No.Z21-60001)	Feb-22
DAE4	SN 1556	15-Jan-21(SPEAG,No.DAE4-1556_Jan21)	Jan-22
Secondary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	01-Feb-21 (CTTL, No.J21X00593)	Jan-22
NetworkAnalyzer E5071C	MY46110673	14-Jan-21 (CTTL, No.J21X00232)	Jan-22

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: September 22, 2021

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



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

### Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM <sub>x,y,z</sub>
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 assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices- Part 1: Device used next to the ear (Frequency range of 300MHz to 6GHz)", July 2016
- IEC 62209-2, "Procedure to measure the Specific Absorption Rate (SAR) For wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 6GHz)", March 2010
- KDB865664, 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%.



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

### Measurement Conditions

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

<b>DASY Version</b>	DASY52	V52.10.4
<b>Extrapolation</b>	Advanced Extrapolation	
<b>Phantom</b>	Triple Flat Phantom 5.1C	
<b>Distance Dipole Center - TSL</b>	15 mm	with Spacer
<b>Zoom Scan Resolution</b>	dx, dy, dz = 5 mm	
<b>Frequency</b>	835 MHz $\pm$ 1 MHz	

### Head TSL parameters

The following parameters and calculations were applied.

	<b>Temperature</b>	<b>Permittivity</b>	<b>Conductivity</b>
<b>Nominal Head TSL parameters</b>	22.0 °C	41.5	0.90 mho/m
<b>Measured Head TSL parameters</b>	(22.0 $\pm$ 0.2) °C	41.2 $\pm$ 6 %	0.91 mho/m $\pm$ 6 %
<b>Head TSL temperature change during test</b>	<1.0 °C	----	----

### SAR result with Head TSL

<b>SAR averaged over 1 cm<sup>3</sup> (1 g) of Head TSL</b>	Condition	
SAR measured	250 mW input power	2.39 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>9.47 W/kg <math>\pm</math> 18.8 % (k=2)</b>
<b>SAR averaged over 10 cm<sup>3</sup> (10 g) of Head TSL</b>	Condition	
SAR measured	250 mW input power	1.55 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>6.15 W/kg <math>\pm</math> 18.7 % (k=2)</b>



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

## Appendix (Additional assessments outside the scope of CNAS L0570)

### Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.4Ω- 2.93jΩ
Return Loss	- 29.9dB

### General Antenna Parameters and Design

Electrical Delay (one direction)	1.302 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

Manufactured by	SPEAG
-----------------	-------





Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

**DASY5 Validation Report for Head TSL**

Date: 09.17.2021

Test Laboratory: CTTL, Beijing, China

**DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d139**

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

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.91$  S/m;  $\epsilon_r = 41.23$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(9.81, 9.81, 9.81) @ 835 MHz; Calibrated: 2021-02-03
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2021-01-15
- Phantom: MFP\_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Reference Value = 58.58 V/m; Power Drift = 0.00 dB

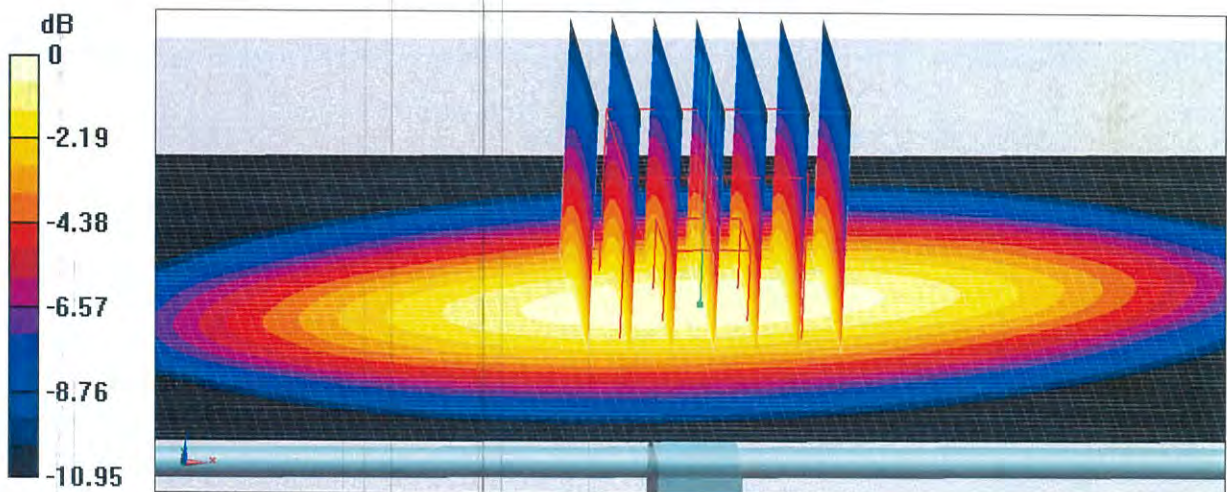
Peak SAR (extrapolated) = 3.75 W/kg

**SAR(1 g) = 2.39 W/kg; SAR(10 g) = 1.55 W/kg**

Smallest distance from peaks to all points 3 dB below = 17.5 mm

Ratio of SAR at M2 to SAR at M1 = 63.9%

Maximum value of SAR (measured) = 3.27 W/kg

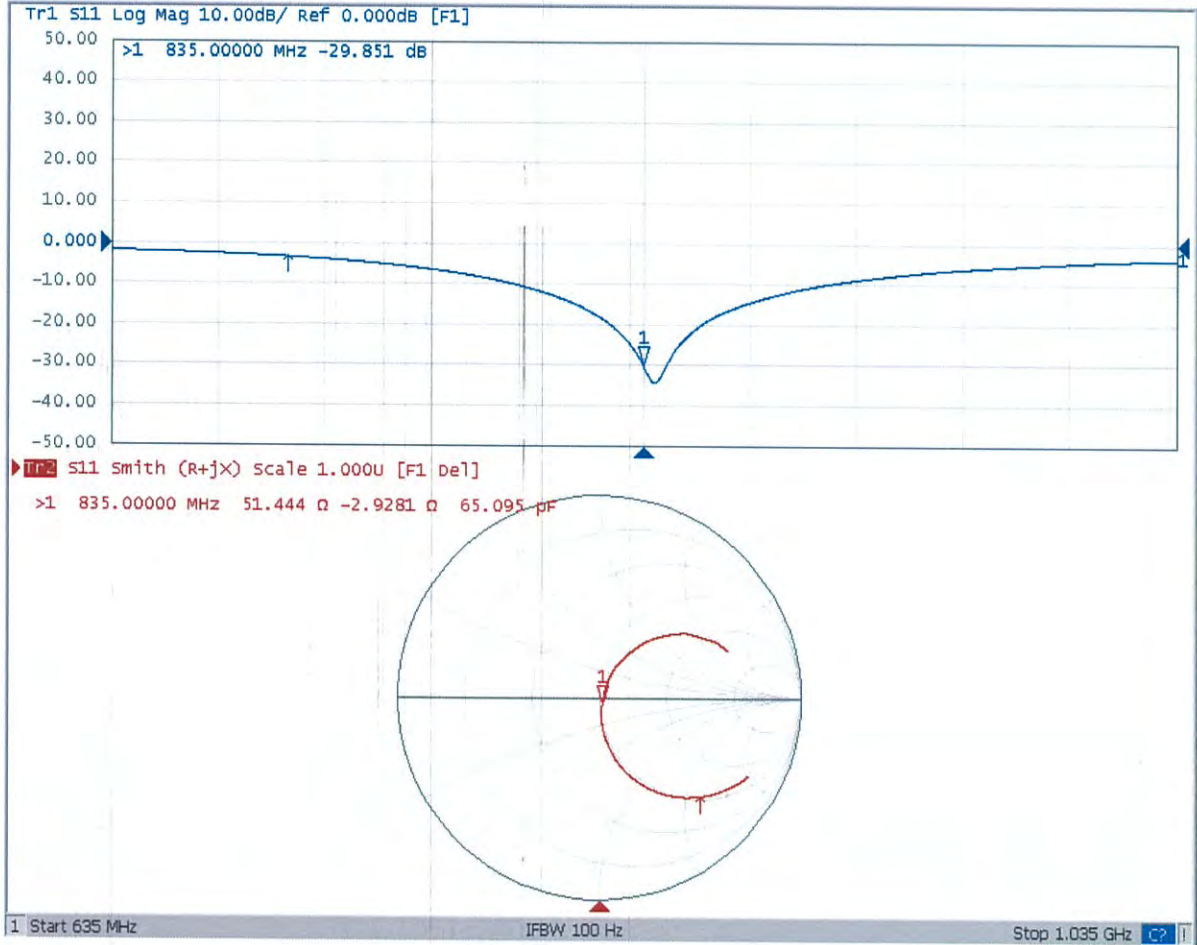


0 dB = 3.27 W/kg = 5.15 dBW/kg



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

### Impedance Measurement Plot for Head TSL





In Collaboration with  
**s p e a g**  
CALIBRATION LABORATORY



中国认可  
国际互认  
校准  
CALIBRATION  
CNAS L0570

Add: No.52 Hua YuanBei Road, Haidian District, Beijing, 100191, Ch  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

Client **B.V.ADT**

Certificate No: **Z21-60335**

## CALIBRATION CERTIFICATE

Object **D1750V2 - SN: 1071**

Calibration Procedure(s) **FF-Z11-003-01**  
Calibration Procedures for dipole validation kits

Calibration date: **September 18, 2021**

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±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106277	23-Sep-20 (CTTL, No.J20X08336)	Sep-21
Power sensor NRP8S	104291	23-Sep-20 (CTTL, No.J20X08336)	Sep-21
Reference Probe EX3DV4	SN 7517	03-Feb-21(CTTL-SPEAG,No.Z21-60001)	Feb-22
DAE4	SN 1556	15-Jan-21(SPEAG,No.DAE4-1556_Jan21)	Jan-22
Secondary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	01-Feb-21 (CTTL, No.J21X00593)	Jan-22
NetworkAnalyzer E5071C	MY46110673	14-Jan-21 (CTTL, No.J21X00232)	Jan-22

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: September 26, 2021

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



### Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM <sub>x,y,z</sub>
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 assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices- Part 1: Device used next to the ear (Frequency range of 300MHz to 6GHz)", July 2016
- IEC 62209-2, "Procedure to measure the Specific Absorption Rate (SAR) For wireless communication devices used in close proximity to the human body (frequency range of 30MHz to 6GHz)", March 2010
- KDB865664, 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%.



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

### Measurement Conditions

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

<b>DASY Version</b>	DASY52	V52.10.4
<b>Extrapolation</b>	Advanced Extrapolation	
<b>Phantom</b>	Triple Flat Phantom 5.1C	
<b>Distance Dipole Center - TSL</b>	10 mm	with Spacer
<b>Zoom Scan Resolution</b>	dx, dy, dz = 5 mm	
<b>Frequency</b>	1750 MHz ± 1 MHz	

### Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
<b>Nominal Head TSL parameters</b>	22.0 °C	40.1	1.37 mho/m
<b>Measured Head TSL parameters</b>	(22.0 ± 0.2) °C	40.3 ± 6 %	1.36 mho/m ± 6 %
<b>Head TSL temperature change during test</b>	<1.0 °C	----	----

### SAR result with Head TSL

<b>SAR averaged over 1 cm<sup>3</sup> (1 g) of Head TSL</b>	Condition	
SAR measured	250 mW input power	9.09 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>36.6 W/kg ± 18.8 % (k=2)</b>
<b>SAR averaged over 10 cm<sup>3</sup> (10 g) of Head TSL</b>	Condition	
SAR measured	250 mW input power	4.75 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	<b>19.1 W/kg ± 18.7 % (k=2)</b>



Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China  
Tel: +86-10-62304633-2079 Fax: +86-10-62304633-2504  
E-mail: cttl@chinattl.com http://www.chinattl.cn

## Appendix (Additional assessments outside the scope of CNAS L0570)

### Antenna Parameters with Head TSL

Impedance, transformed to feed point	49.0Ω- 1.69jΩ
Return Loss	- 34.2 dB

### General Antenna Parameters and Design

Electrical Delay (one direction)	1.122 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard. No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

### Additional EUT Data

Manufactured by	SPEAG
-----------------	-------