

System Check_B5600_180211**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019**

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: B34T60N1_0211 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.824$ S/m; $\epsilon_r = 46.355$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(4.1, 4.1, 4.1); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

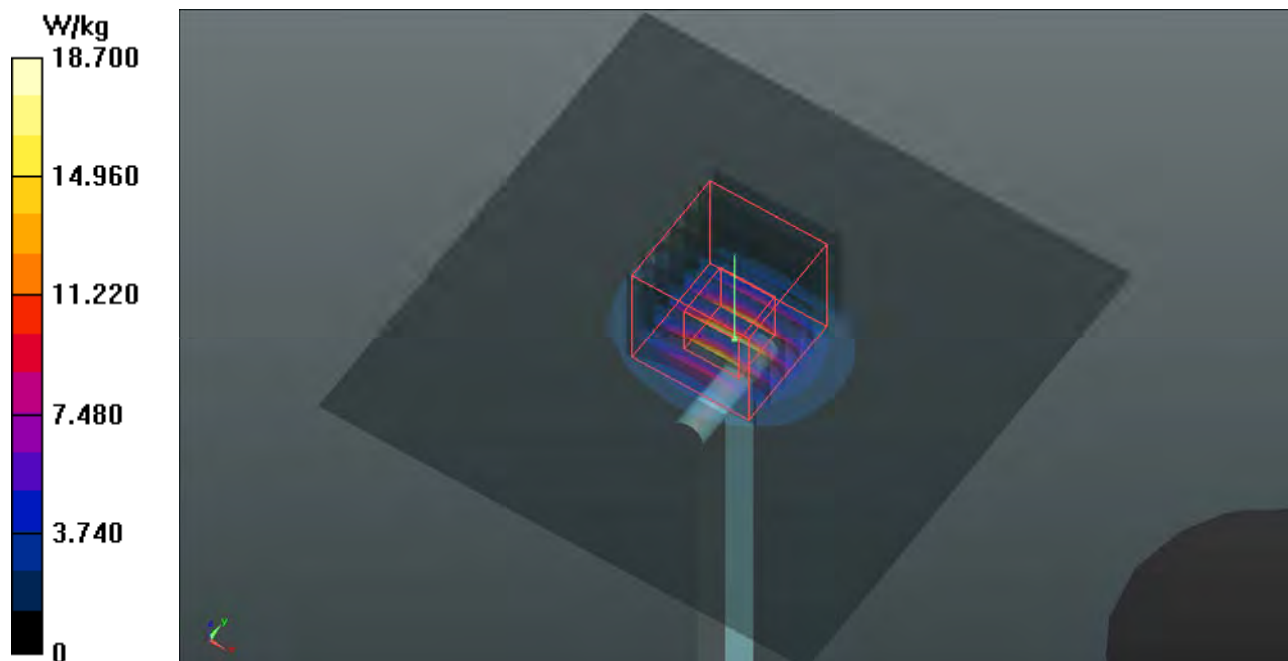
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 66.47 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 34.7 W/kg

SAR(1 g) = 7.98 W/kg; SAR(10 g) = 2.24 W/kg

Maximum value of SAR (measured) = 20.1 W/kg



System Check_B5800_180211**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019**

Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: B34T60N1_0211 Medium parameters used: $f = 5800$ MHz; $\sigma = 6.086$ S/m; $\epsilon_r = 45.973$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(4.41, 4.41, 4.41); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

Pin=100mW/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 15.1 W/kg

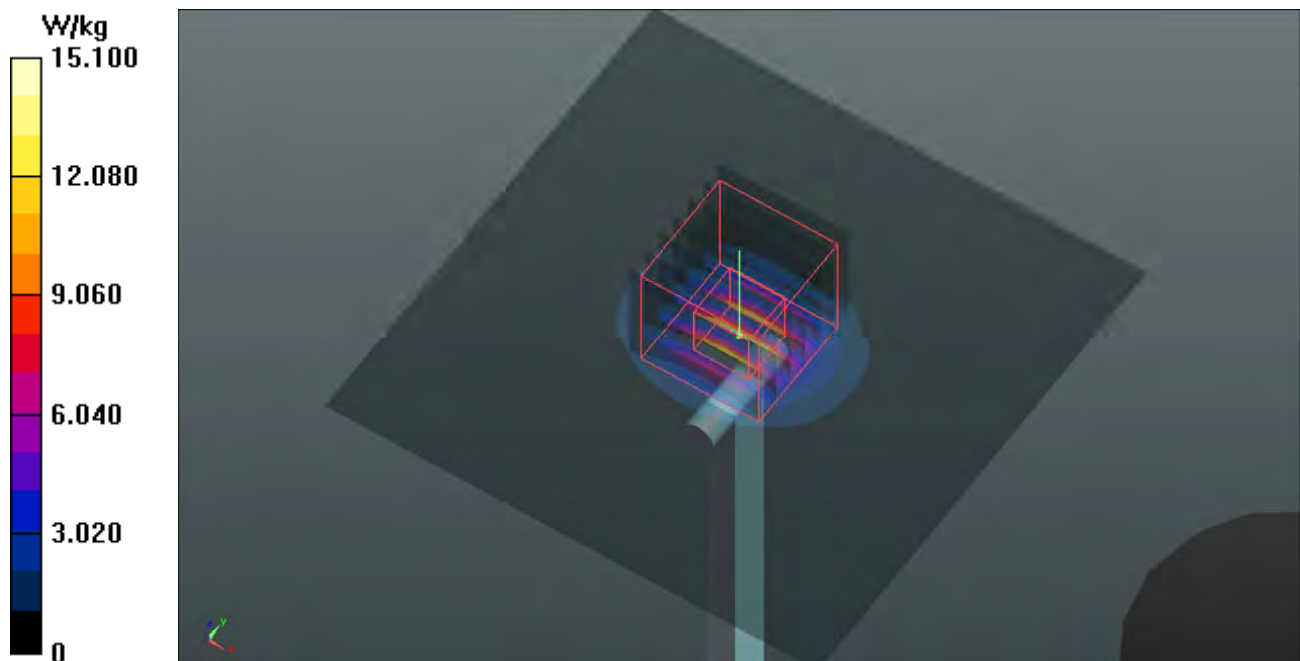
Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 56.66 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 34.0 W/kg

SAR(1 g) = 7.77 W/kg; SAR(10 g) = 2.19 W/kg

Maximum value of SAR (measured) = 16.6 W/kg



Appendix B. SAR Plots of SAR Measurement

The SAR plots for highest measured SAR in each exposure configuration, wireless mode and frequency band combination, and measured SAR > 1.5 W/kg are shown as follows.

P01 GSM850_GPRS12_Left Cheek_Ch251_Sample1**DUT: 171130C29**

Communication System: GPRS12; Frequency: 848.8 MHz; Duty Cycle: 1:2

Medium: H07T10N1_0207 Medium parameters used: $f = 849$ MHz; $\sigma = 0.936$ S/m; $\epsilon_r = 41.999$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.67, 10.67, 10.67); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

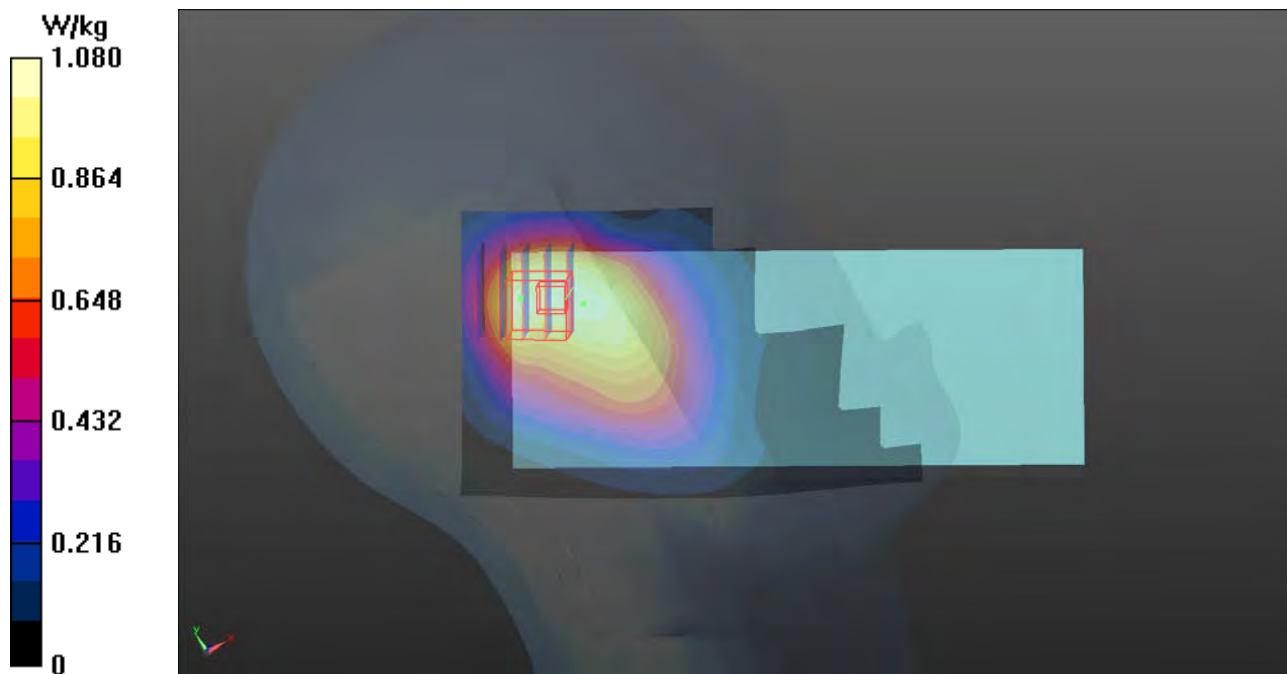
- Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 35.16 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.818 W/kg; SAR(10 g) = 0.549 W/kg

Maximum value of SAR (measured) = 1.05 W/kg



P02 GSM1900_GPRS12_Left Cheek_Ch512_Sample1**DUT: 171130C29**

Communication System: GPRS12 ; Frequency: 1850.2 MHz; Duty Cycle: 1:2

Medium: H16T20N1_0207 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.415$ S/m; $\epsilon_r = 38.692$; ρ $= 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.59, 8.59, 8.59); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.326 W/kg

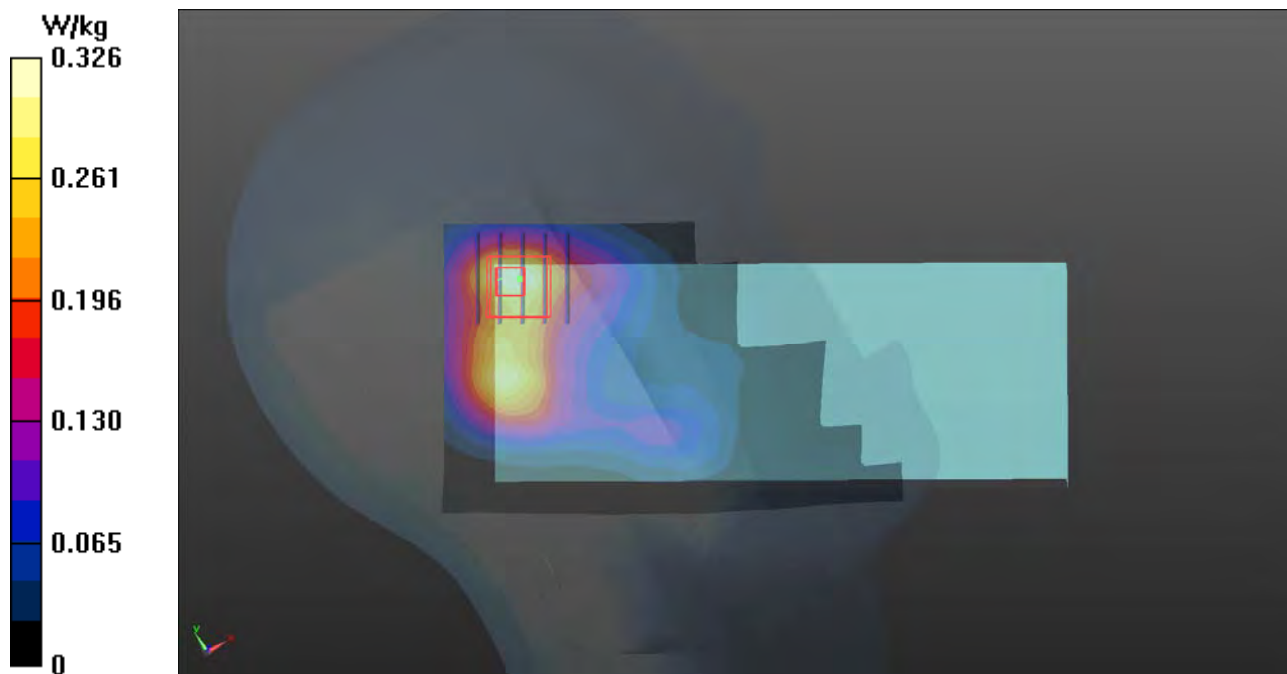
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.71 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.449 W/kg

SAR(1 g) = 0.236 W/kg; SAR(10 g) = 0.129 W/kg

Maximum value of SAR (measured) = 0.369 W/kg



P03 WCDMA II_RMC12.2K_Left Cheek_Ch9262_Sample1**DUT: 171130C29**

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: H16T20N1_0207 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.417$ S/m; $\epsilon_r = 38.684$; ρ $= 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.59, 8.59, 8.59); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

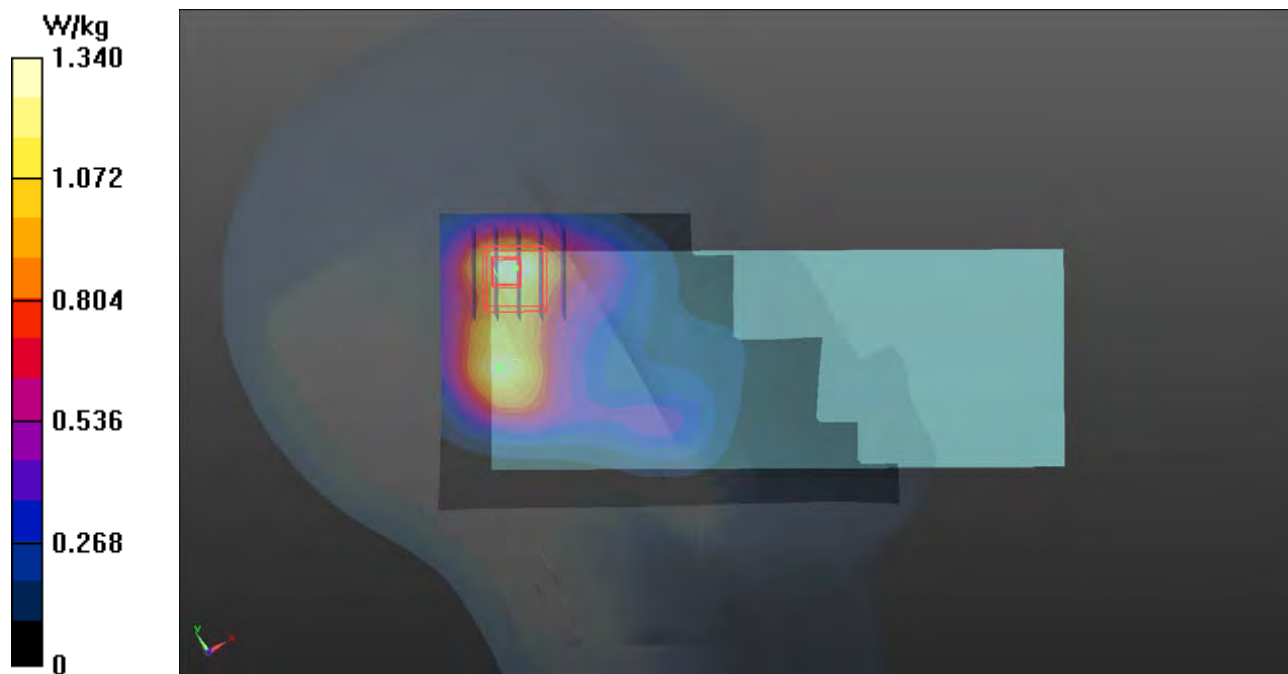
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.78 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.83 W/kg

SAR(1 g) = 0.966 W/kg; SAR(10 g) = 0.529 W/kg

Maximum value of SAR (measured) = 1.50 W/kg



P04 WCDMA IV_RMC12.2K_Left Cheek_Ch1513_Sample1**DUT: 171130C29**

Communication System: WCDMA; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: H16T20N1_0207 Medium parameters used: $f = 1753$ MHz; $\sigma = 1.325$ S/m; $\epsilon_r = 39.014$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.92, 8.92, 8.92); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

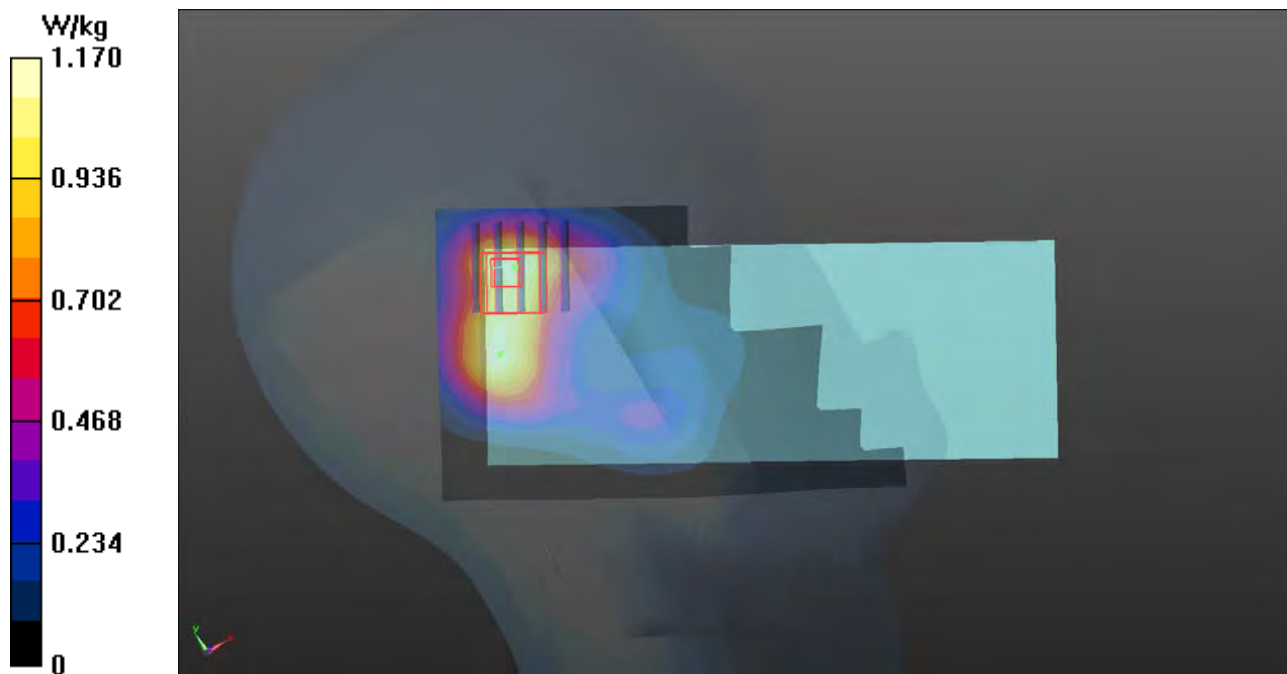
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.30 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.62 W/kg

SAR(1 g) = 0.870 W/kg; SAR(10 g) = 0.493 W/kg

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



P05 WCDMA V_RMC12.2K_Left Cheek_Ch4233_Sample1**DUT: 171130C29**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: H07T10N1_0207 Medium parameters used: $f = 847$ MHz; $\sigma = 0.934$ S/m; $\epsilon_r = 42.02$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.67, 10.67, 10.67); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.15 W/kg

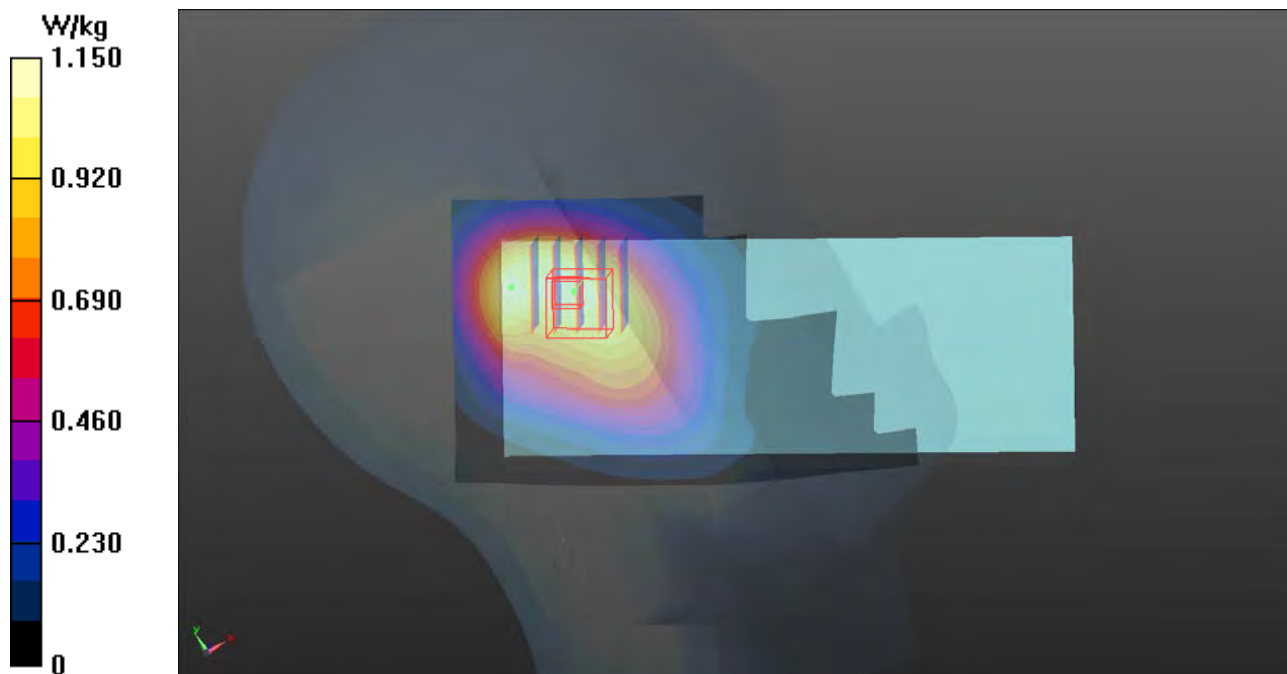
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 36.23 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.910 W/kg; SAR(10 g) = 0.656 W/kg

Maximum value of SAR (measured) = 1.13 W/kg



P06 CDMA BC0_RC3+SO55_Left Cheek_Ch777_Sample1**DUT: 171130C29**

Communication System: CDMA2000 ; Frequency: 848.31 MHz; Duty Cycle: 1:1

Medium: H07T10N1_0207 Medium parameters used: $f = 848.31$ MHz; $\sigma = 0.936$ S/m; $\epsilon_r = 42.006$; ρ $= 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.67, 10.67, 10.67); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.18 W/kg

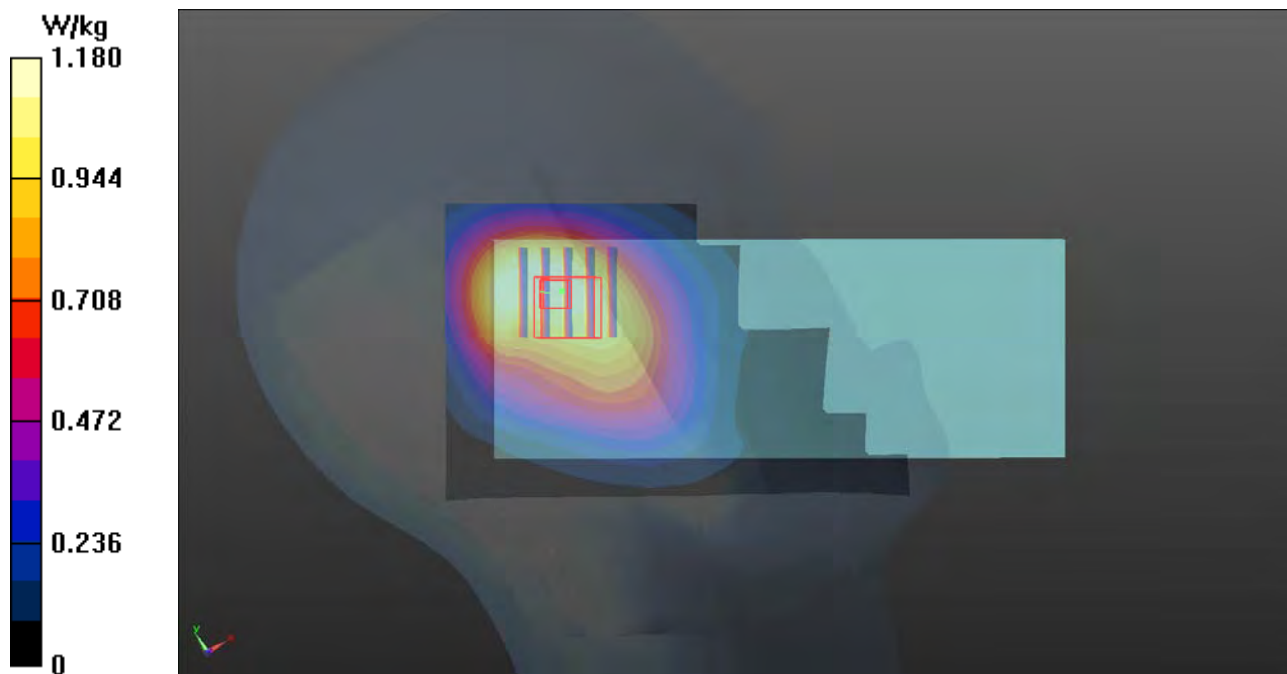
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 36.89 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.968 W/kg; SAR(10 g) = 0.693 W/kg

Maximum value of SAR (measured) = 1.19 W/kg



P07 CDMA BC1_RC3+SO55_Left Cheek_Ch1175_Sample1**DUT: 171130C29**

Communication System: CDMA2000 ; Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium: H16T20N1_0207 Medium parameters used: $f = 1909$ MHz; $\sigma = 1.467$ S/m; $\epsilon_r = 38.502$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.59, 8.59, 8.59); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.25 W/kg

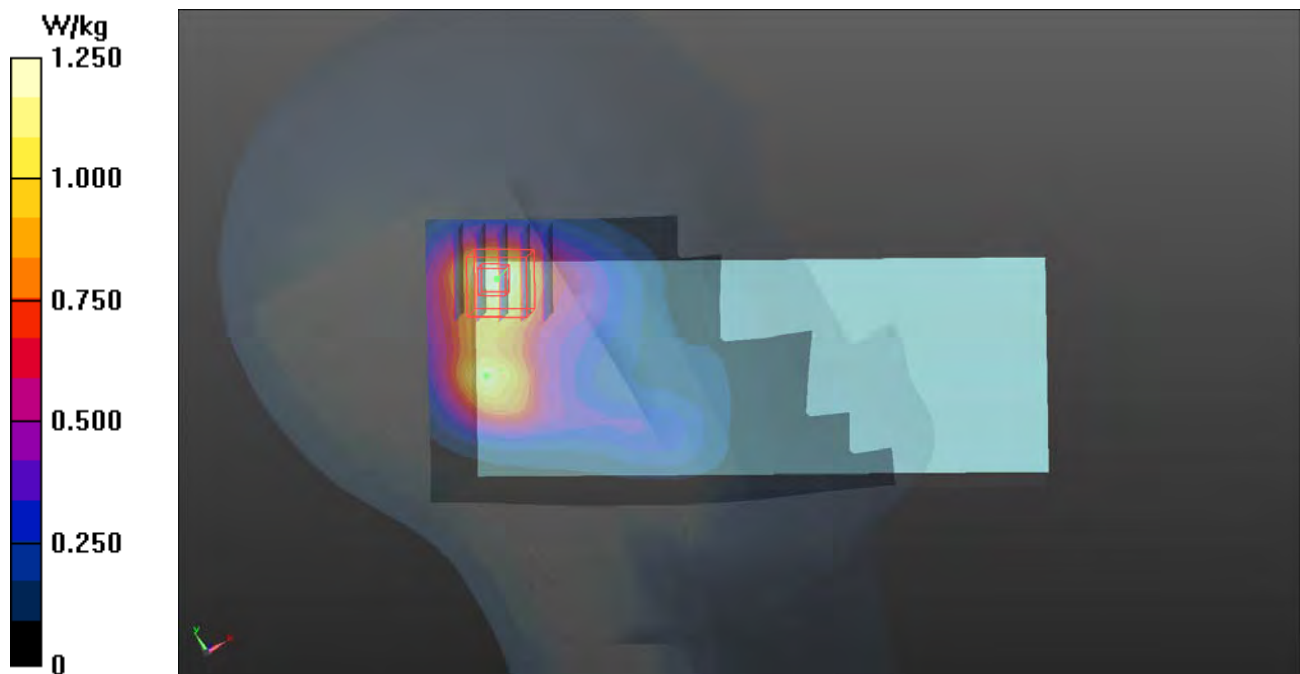
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.39 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.78 W/kg

SAR(1 g) = 0.963 W/kg; SAR(10 g) = 0.522 W/kg

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



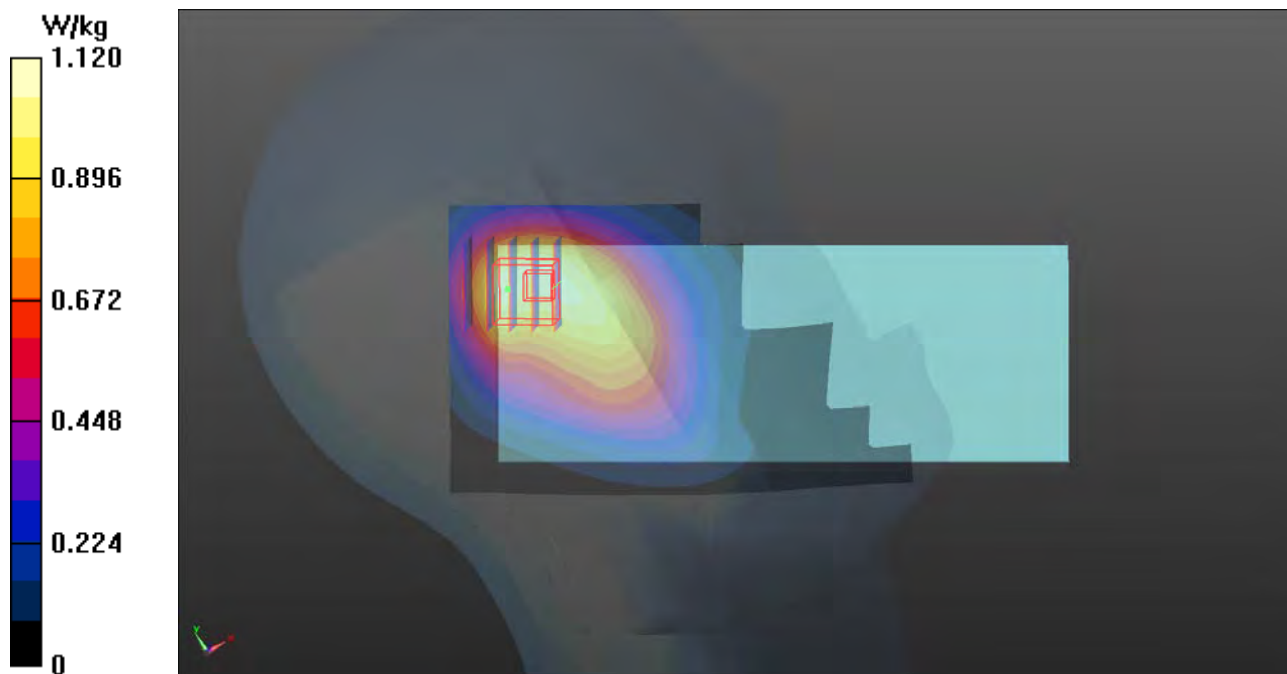
P08 CDMA BC10_RC3+SO55_Left Cheek_Ch684_Sample1**DUT: 171130C29**

Communication System: CDMA2000; Frequency: 823.1 MHz; Duty Cycle: 1:1

Medium: H07T10N1_0207 Medium parameters used: $f = 823.1 \text{ MHz}$; $\sigma = 0.912 \text{ S/m}$; $\epsilon_r = 42.3$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.5 \text{ }^\circ\text{C}$; Liquid Temperature : $23.2 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.67, 10.67, 10.67); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 1.12 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 35.79 V/m ; Power Drift = 0.04 dB Peak SAR (extrapolated) = 1.20 W/kg **SAR(1 g) = 0.827 W/kg ; SAR(10 g) = 0.577 W/kg** Maximum value of SAR (measured) = 1.08 W/kg 

P09 LTE 2_QPSK20M_Left Cheek_Ch19100_Sample1_1RB_OS0**DUT: 171130C29**

Communication System: LTE; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: H16T20N1_0207 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.458$ S/m; $\epsilon_r = 38.53$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.59, 8.59, 8.59); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.987 W/kg

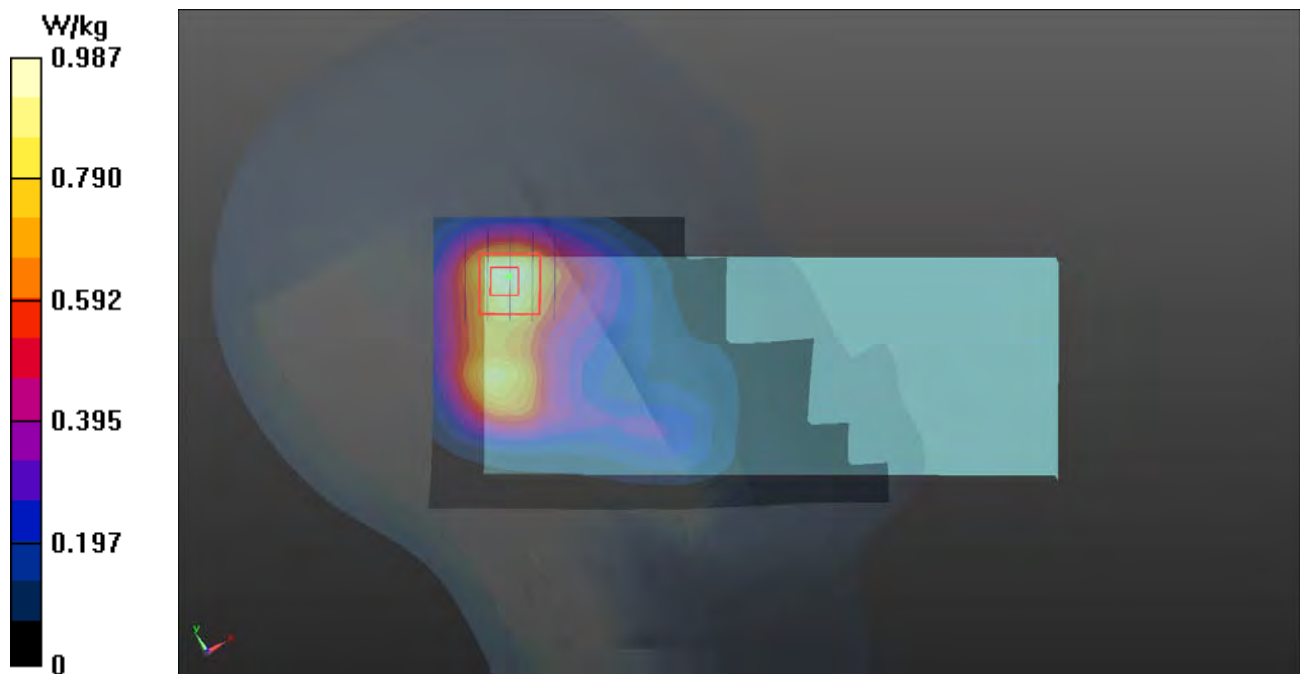
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.78 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.736 W/kg; SAR(10 g) = 0.403 W/kg

Maximum value of SAR (measured) = 1.09 W/kg



P10 LTE 4_QPSK20M_Left Cheek_Ch20300_Sample1_1RB_OS0**DUT: 171130C29**

Communication System: LTE; Frequency: 1745 MHz; Duty Cycle: 1:1

Medium: H16T20N1_0207 Medium parameters used: $f = 1745$ MHz; $\sigma = 1.319$ S/m; $\epsilon_r = 39.038$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.92, 8.92, 8.92); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

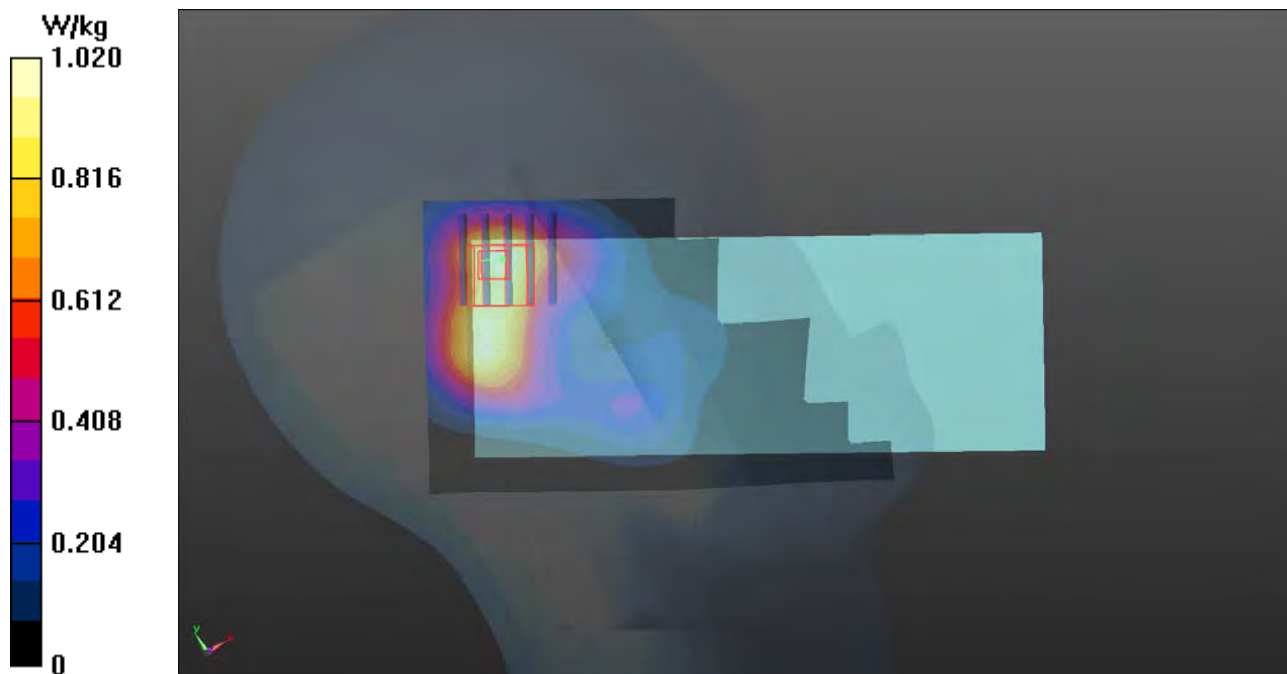
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.49 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.763 W/kg; SAR(10 g) = 0.429 W/kg

Maximum value of SAR (measured) = 1.14 W/kg



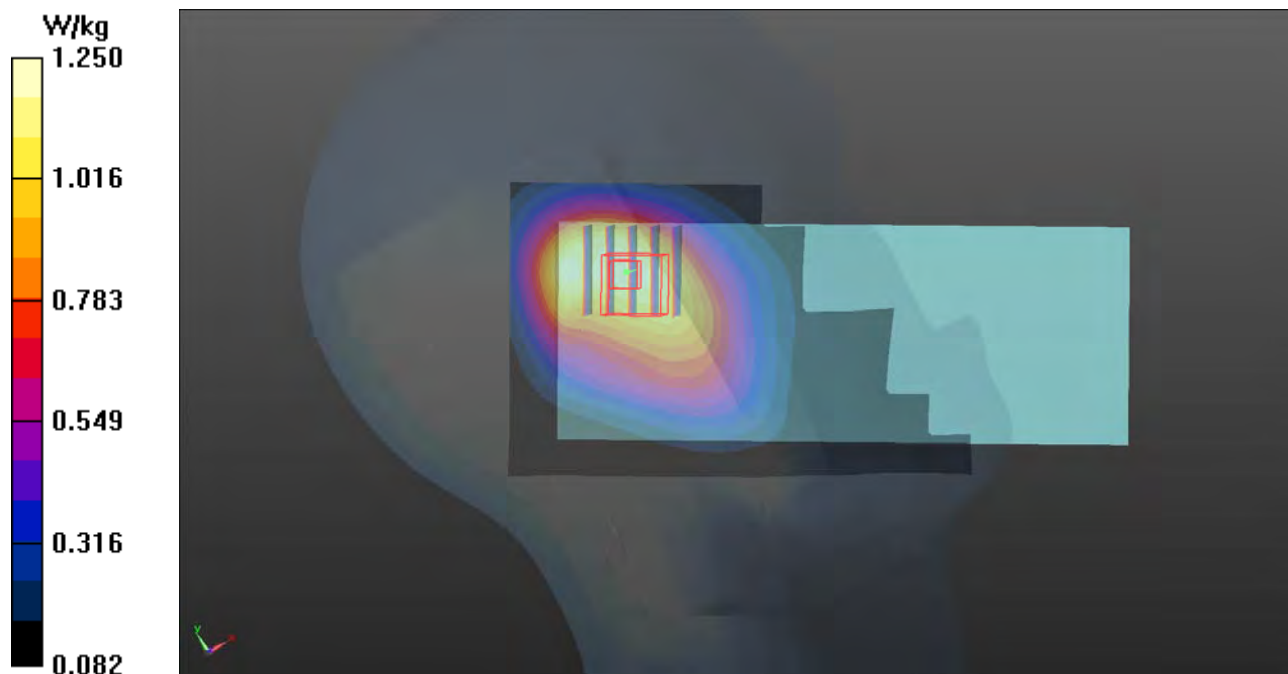
P11 LTE 5_QPSK10M_Left Cheek_Ch20600_Sample2_1RB_OS49**DUT: 171130C29**

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

Medium: H07T10N1_0208 Medium parameters used: $f = 844 \text{ MHz}$; $\sigma = 0.921 \text{ S/m}$; $\epsilon_r = 42.278$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.5 \text{ }^\circ\text{C}$; Liquid Temperature : $23.2 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.67, 10.67, 10.67); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 1.25 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 38.02 V/m ; Power Drift = 0.08 dB Peak SAR (extrapolated) = 1.38 W/kg **SAR(1 g) = 0.987 W/kg ; SAR(10 g) = 0.698 W/kg** Maximum value of SAR (measured) = 1.25 W/kg 

P12 LTE 7_QPSK20M_Left Cheek_Ch20850_Sample1_1RB_OS99**DUT: 171130C29**

Communication System: LTE; Frequency: 2510 MHz; Duty Cycle: 1:1

Medium: H19T27N3_0209 Medium parameters used: $f = 2510$ MHz; $\sigma = 1.942$ S/m; $\epsilon_r = 38.181$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(7.59, 7.59, 7.59); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (91x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.601 W/kg

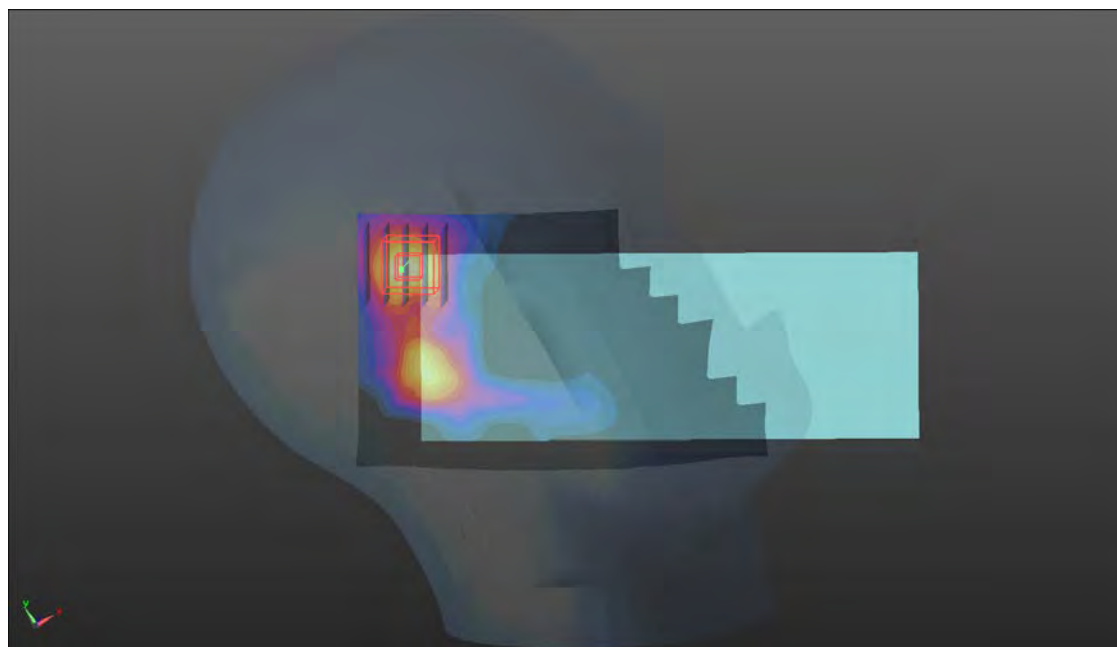
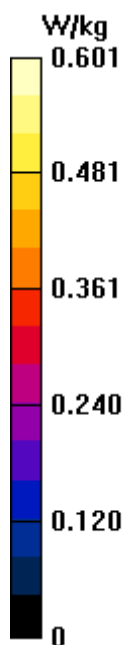
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.80 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.722 W/kg

SAR(1 g) = 0.384 W/kg; SAR(10 g) = 0.207 W/kg

Maximum value of SAR (measured) = 0.589 W/kg



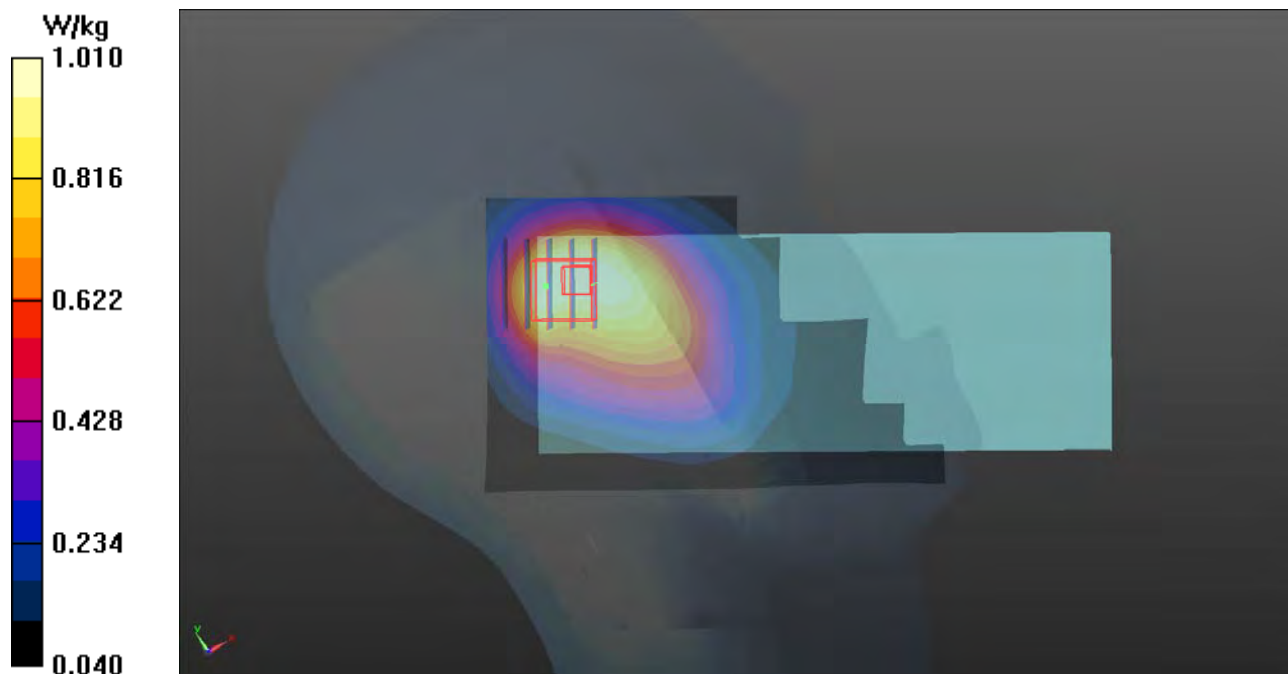
P13 LTE 12_QPSK10M_Left Cheek_Ch23130_Sample2_1RB_OS24**DUT: 171130C29**

Communication System: LTE; Frequency: 711 MHz; Duty Cycle: 1:1

Medium: H06T09N1_0208 Medium parameters used: $f = 711 \text{ MHz}$; $\sigma = 0.857 \text{ S/m}$; $\epsilon_r = 43.925$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.5 \text{ }^\circ\text{C}$; Liquid Temperature : $23.2 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.91, 10.91, 10.91); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 1.05 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 35.83 V/m ; Power Drift = 0.08 dB Peak SAR (extrapolated) = 1.12 W/kg **SAR(1 g) = 0.795 W/kg ; SAR(10 g) = 0.537 W/kg** Maximum value of SAR (measured) = 1.01 W/kg 

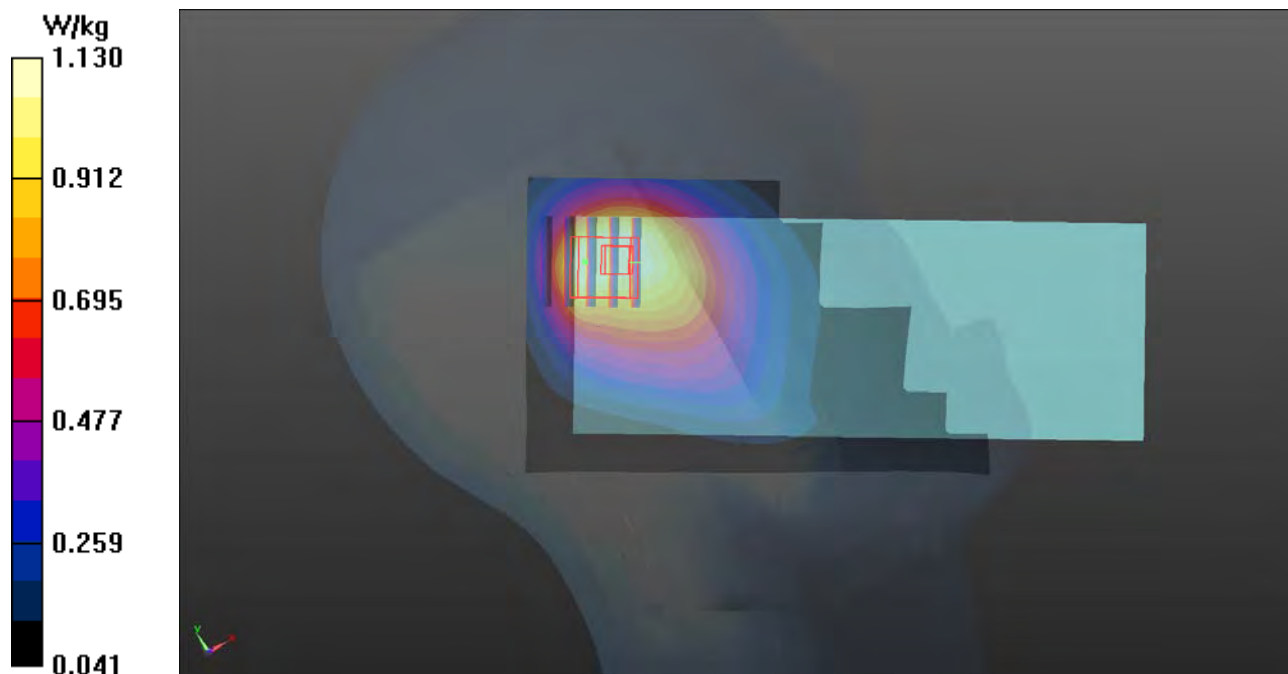
P14 LTE 13_QPSK10M_Left Cheek_Ch23230_Sample1_1RB_OS0**DUT: 171130C29**

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

Medium: H06T09N1_0207 Medium parameters used: $f = 782 \text{ MHz}$; $\sigma = 0.922 \text{ S/m}$; $\epsilon_r = 42.385$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.5 \text{ }^\circ\text{C}$; Liquid Temperature : $23.1 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.91, 10.91, 10.91); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 1.20 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 36.50 V/m ; Power Drift = 0.01 dB Peak SAR (extrapolated) = 1.25 W/kg **SAR(1 g) = 0.895 W/kg ; SAR(10 g) = 0.595 W/kg** Maximum value of SAR (measured) = 1.13 W/kg 

P15 LTE 25_QPSK20M_Left Cheek_Ch26365_Sample1_1RB_OS0**DUT: 171130C29**

Communication System: LTE; Frequency: 1882.5 MHz; Duty Cycle: 1:1

Medium: H16T20N1_0207 Medium parameters used: $f = 1882.5$ MHz; $\sigma = 1.443$ S/m; $\epsilon_r = 38.585$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.59, 8.59, 8.59); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.21 W/kg

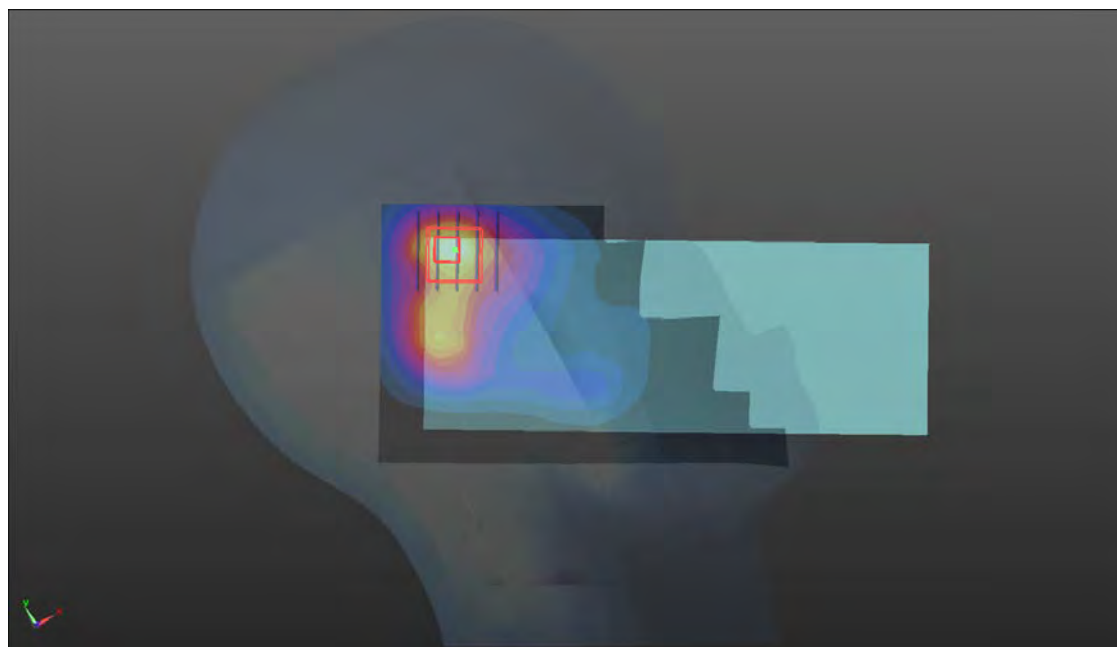
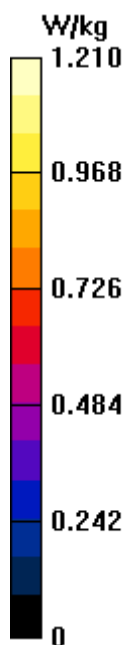
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.65 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1 g) = 0.817 W/kg; SAR(10 g) = 0.447 W/kg

Maximum value of SAR (measured) = 1.25 W/kg



P16 LTE 26_QPSK15M_Left Cheek_Ch26865_Sample1_1RB_OS74**DUT: 171130C29**

Communication System: LTE; Frequency: 831.5 MHz; Duty Cycle: 1:1

Medium: H07T10N1_0207 Medium parameters used: $f = 831.5$ MHz; $\sigma = 0.92$ S/m; $\epsilon_r = 42.204$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.67, 10.67, 10.67); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.23 W/kg

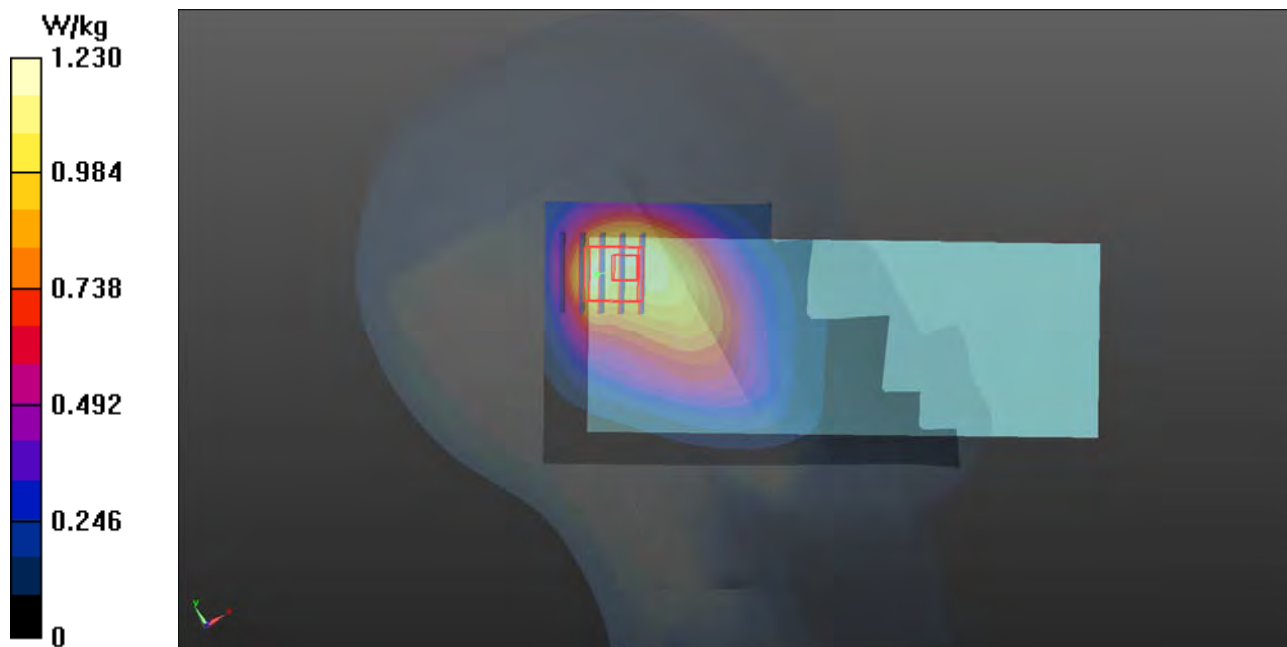
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 36.35 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.895 W/kg; SAR(10 g) = 0.599 W/kg

Maximum value of SAR (measured) = 1.14 W/kg



P17 LTE 38_QPSK20M_Left Cheek_Ch38000_Sample1_1RB_OS50**DUT: 171130C29**

Communication System: LTE TDD CF0; Frequency: 2595 MHz; Duty Cycle: 1:1.58

Medium: H19T27N3_0207 Medium parameters used: $f = 2595$ MHz; $\sigma = 2.006$ S/m; $\epsilon_r = 37.391$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(7.34, 7.34, 7.34); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1654; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (91x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.550 W/kg

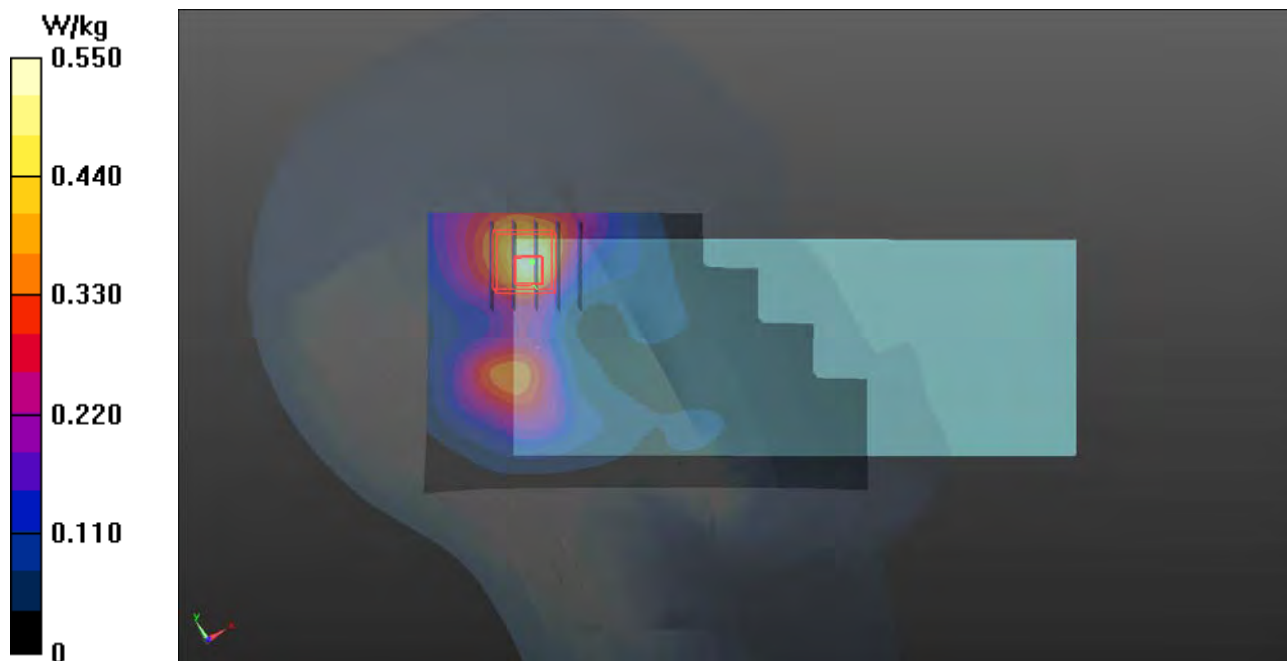
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.83 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.682 W/kg

SAR(1 g) = 0.359 W/kg; SAR(10 g) = 0.187 W/kg

Maximum value of SAR (measured) = 0.553 W/kg



P18 LTE 41_QPSK20M_Left Cheek_Ch39790_Sample1_1RB_OS50**DUT: 171130C29**

Communication System: LTE TDD CF0; Frequency: 2510 MHz; Duty Cycle: 1:1.58

Medium: H19T27N3_0207 Medium parameters used: $f = 2510$ MHz; $\sigma = 1.922$ S/m; $\epsilon_r = 37.681$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(7.34, 7.34, 7.34); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1654; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (91x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.549 W/kg

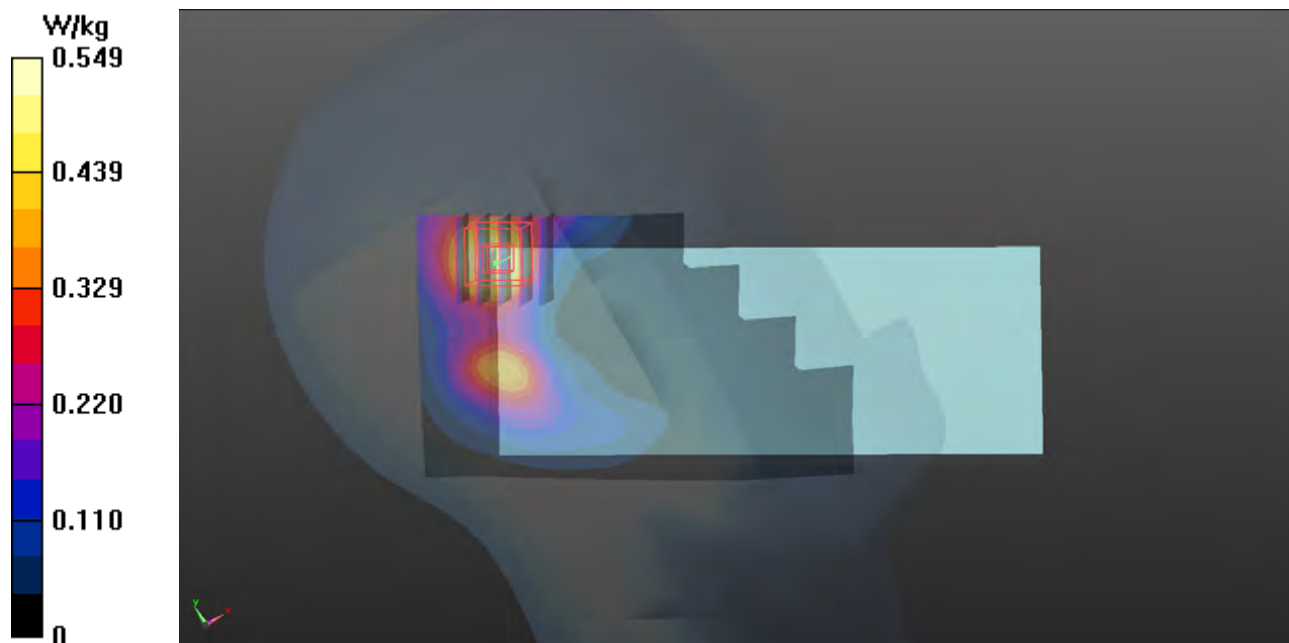
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.54 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.692 W/kg

SAR(1 g) = 0.384 W/kg; SAR(10 g) = 0.208 W/kg

Maximum value of SAR (measured) = 0.577 W/kg



P19 WLAN2.4G_802.11b_Right Cheek_Ch11_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0214 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.895$ S/m; $\epsilon_r = 38.478$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(7.65, 7.65, 7.65); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn917; Calibrated: 2017/12/14
- Phantom: Twin SAM Phantom_1653; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (101x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.974 W/kg

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

Reference Value = 23.52 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.859 W/kg

SAR(1 g) = 0.387 W/kg; SAR(10 g) = 0.208 W/kg

Maximum value of SAR (measured) = 0.656 W/kg

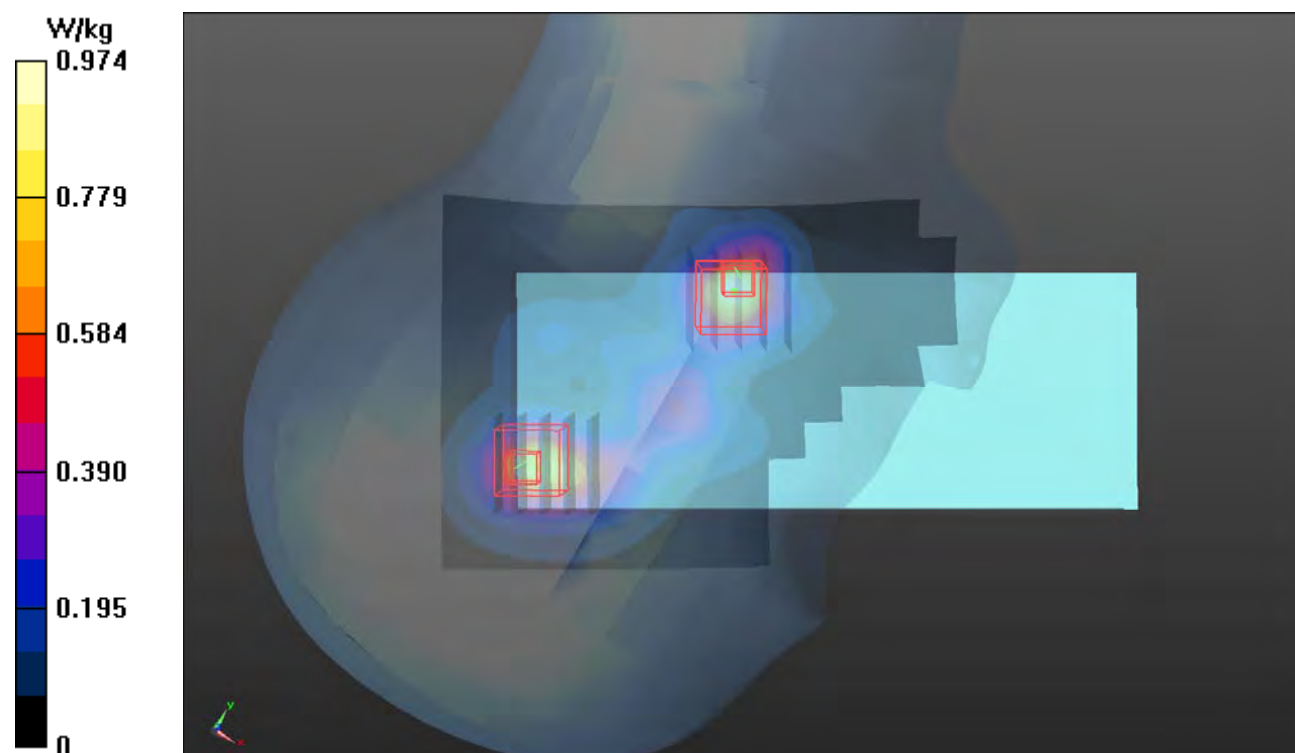
- Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.52 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.592 W/kg

SAR(1 g) = 0.286 W/kg; SAR(10 g) = 0.148 W/kg

Maximum value of SAR (measured) = 0.471 W/kg



P20 WLAN5G_802.11ac VHT80_Right Cheek_Ch58_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_5G; Frequency: 5290 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0214 Medium parameters used: $f = 5290$ MHz; $\sigma = 4.707$ S/m; $\epsilon_r = 37.594$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(5.15, 5.15, 5.15); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn917; Calibrated: 2017/12/14
- Phantom: Twin SAM Phantom_1653; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (121x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.713 W/kg

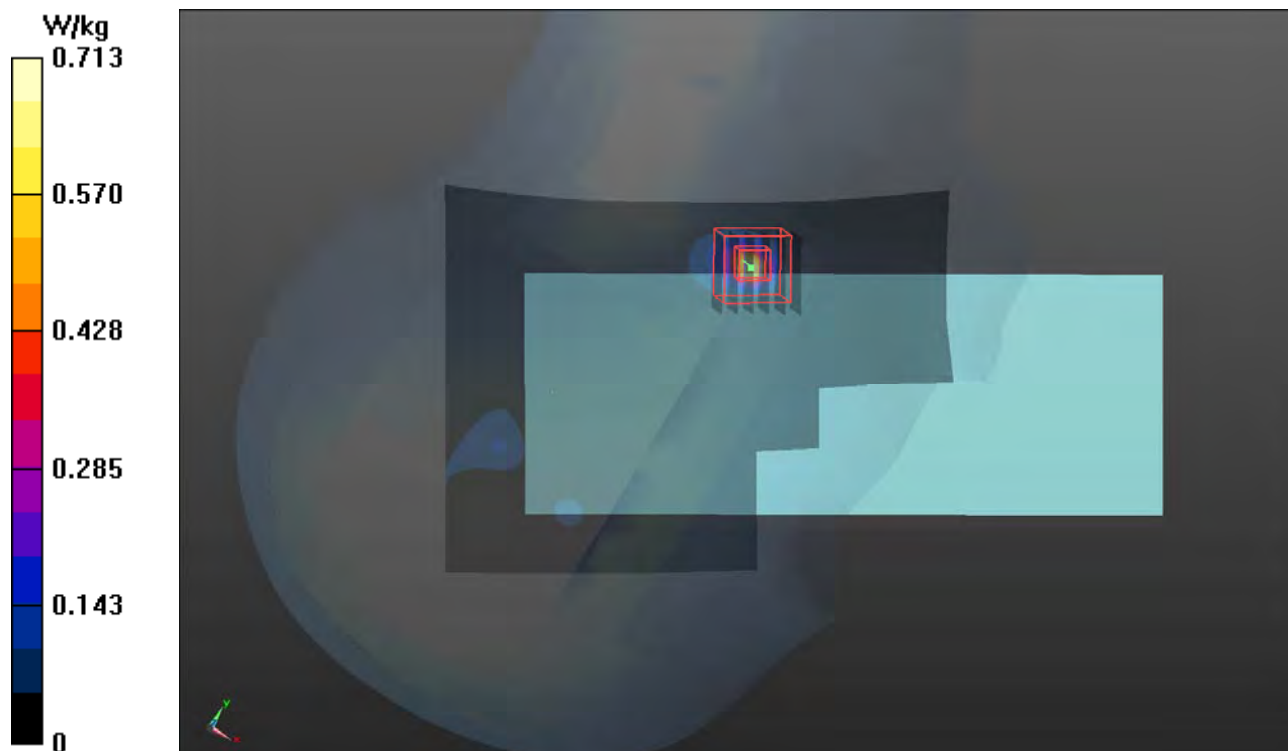
- Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 11.97 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.71 W/kg

SAR(1 g) = 0.277 W/kg; SAR(10 g) = 0.063 W/kg

Maximum value of SAR (measured) = 0.626 W/kg



P21 WLAN5G_802.11ac VHT80_Right Cheek_Ch106_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_5G; Frequency: 5530 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0210 Medium parameters used: $f = 5530$ MHz; $\sigma = 5.138$ S/m; $\epsilon_r = 35.812$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(4.94, 4.94, 4.94); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1654; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (121x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.941 W/kg

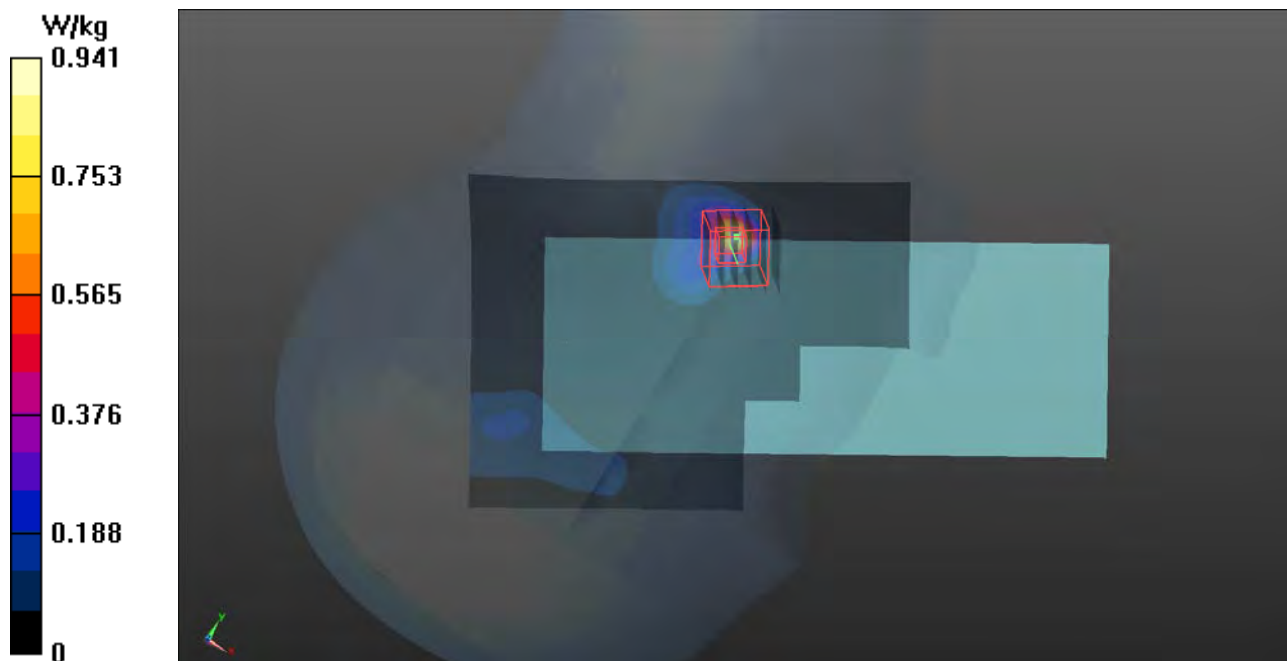
- Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 13.15 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 2.34 W/kg

SAR(1 g) = 0.418 W/kg; SAR(10 g) = 0.115 W/kg

Maximum value of SAR (measured) = 1.30 W/kg



P22 WLAN5G_802.11ac VHT80_Right Cheek_Ch155_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_5G; Frequency: 5775 MHz; Duty Cycle: 1:1

Medium: H34T60N1_0210 Medium parameters used: $f = 5775$ MHz; $\sigma = 5.423$ S/m; $\epsilon_r = 35.383$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(4.8, 4.8, 4.8); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1654; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (121x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.932 W/kg

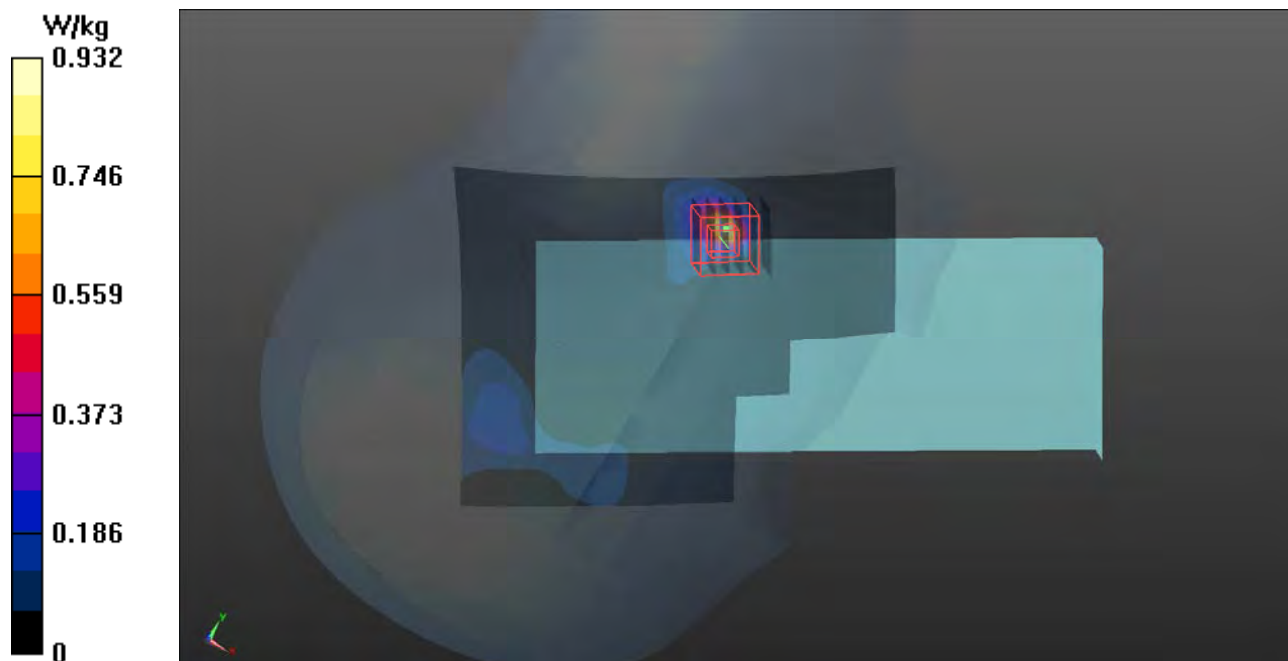
- Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 12.41 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.97 W/kg

SAR(1 g) = 0.398 W/kg; SAR(10 g) = 0.097 W/kg

Maximum value of SAR (measured) = 0.964 W/kg



P23 BT_EDR_Right Cheek_Ch0_Sample1**DUT: 171130C29**

Communication System: BT; Frequency: 2402 MHz; Duty Cycle: 1:1

Medium: H19T27N1_0210 Medium parameters used: $f = 2402$ MHz; $\sigma = 1.843$ S/m; $\epsilon_r = 39.792$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(7.65, 7.65, 7.65); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1654; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (101x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0698 W/kg

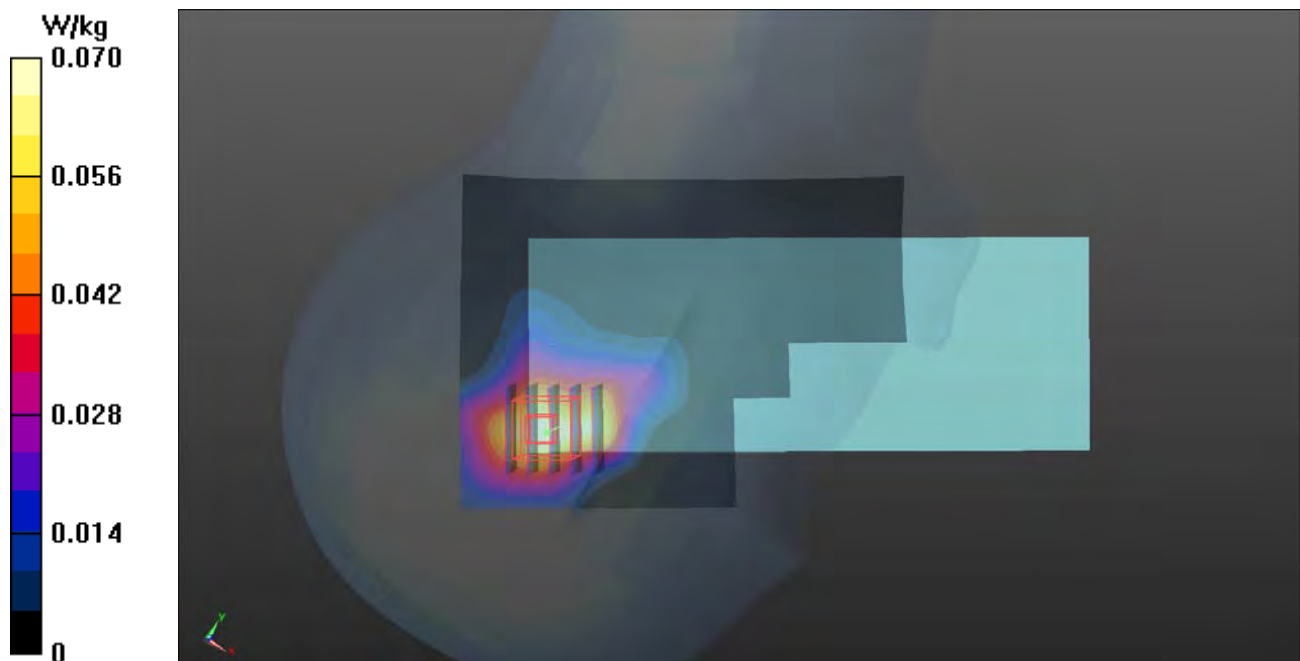
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.601 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.109 W/kg

SAR(1 g) = 0.053 W/kg; SAR(10 g) = 0.026 W/kg

Maximum value of SAR (measured) = 0.0856 W/kg



P24 GSM850_GPRS12_Front Face_15mm_Ch251_Sample1**DUT: 171130C29**

Communication System: GPRS12; Frequency: 848.8 MHz; Duty Cycle: 1:2

Medium: B07T10N3_0205 Medium parameters used: $f = 849$ MHz; $\sigma = 0.983$ S/m; $\epsilon_r = 55.257$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.7 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.393 W/kg

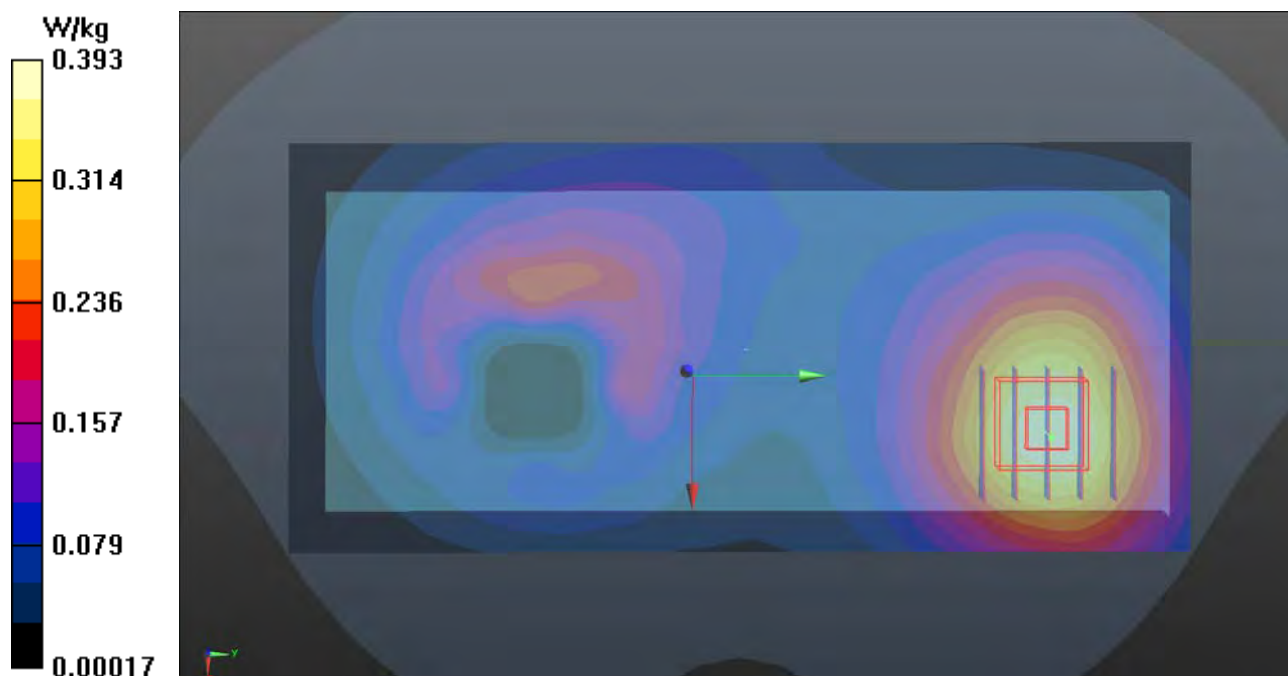
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.57 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.441 W/kg

SAR(1 g) = 0.311 W/kg; SAR(10 g) = 0.219 W/kg

Maximum value of SAR (measured) = 0.397 W/kg



P25 GSM1900_GPRS12_Front Face_15mm_Ch512_Sample1**DUT: 171130C29**

Communication System: GPRS12; Frequency: 1850.2 MHz; Duty Cycle: 1:2

Medium: B16T20N2_0205 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.537$ S/m; $\epsilon_r = 55.084$; ρ $= 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.26, 8.26, 8.26); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.162 W/kg

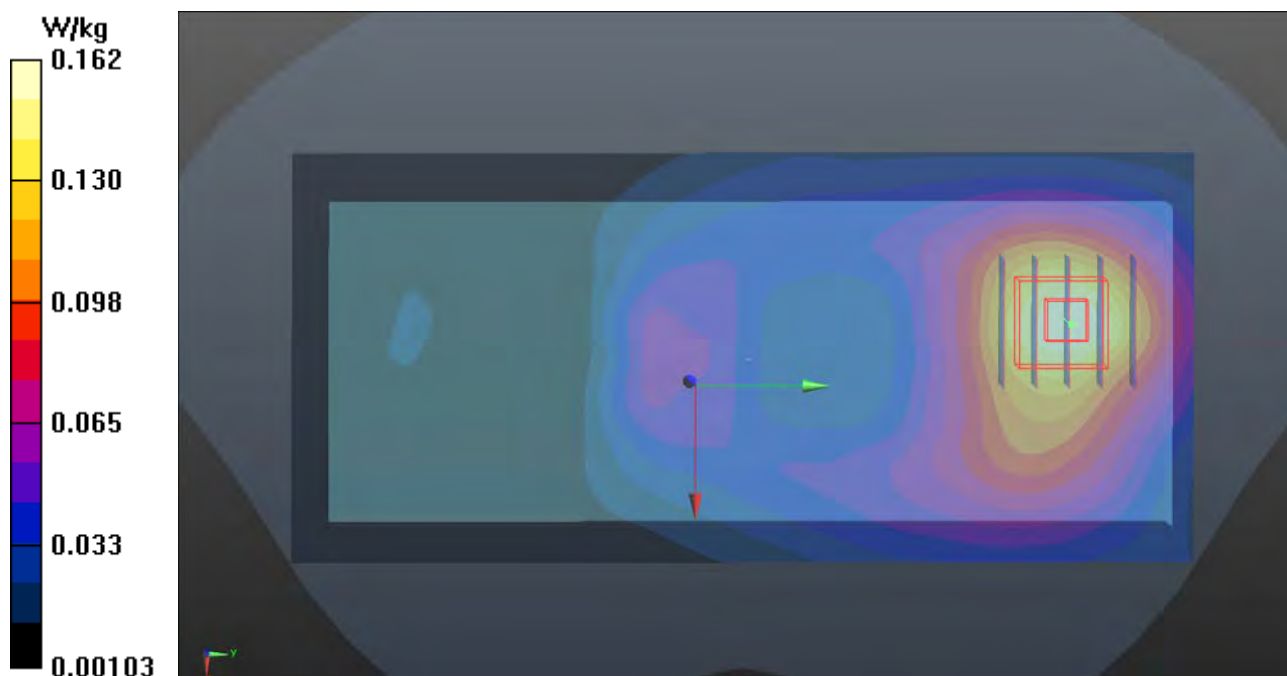
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.10 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.188 W/kg

SAR(1 g) = 0.119 W/kg; SAR(10 g) = 0.075 W/kg

Maximum value of SAR (measured) = 0.163 W/kg



P26 WCDMA II_RMC12.2K_Front Face_15mm_Ch9262_Sample1**DUT: 171130C29**

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: B16T20N2_0205 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.539$ S/m; $\epsilon_r = 55.078$; ρ

$= 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.26, 8.26, 8.26); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.431 W/kg

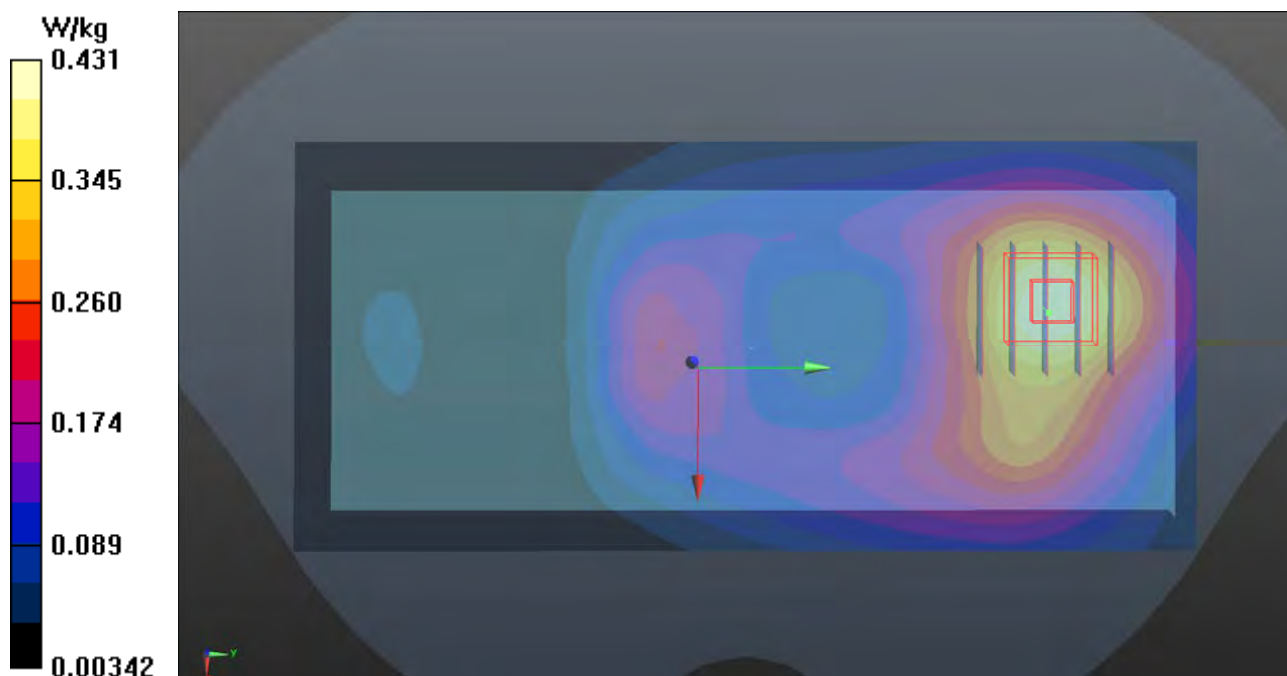
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.96 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.498 W/kg

SAR(1 g) = 0.314 W/kg; SAR(10 g) = 0.198 W/kg

Maximum value of SAR (measured) = 0.430 W/kg



P27 WCDMA IV_RMC12.2K_Rear Face_15mm_Ch1513_Sample1**DUT: 171130C29**

Communication System: WCDMA; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: B16T20N1_0206 Medium parameters used: $f = 1753$ MHz; $\sigma = 1.432$ S/m; $\epsilon_r = 51.422$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.51, 8.51, 8.51); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.287 W/kg

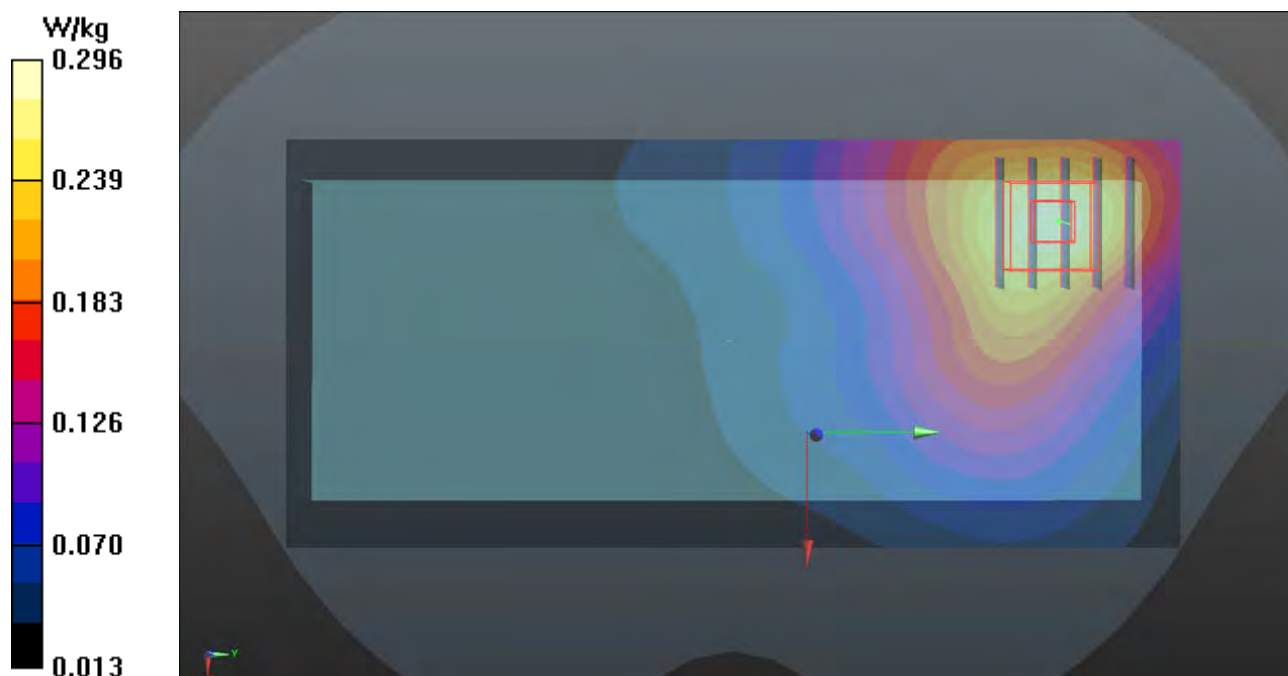
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.49 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.342 W/kg

SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.137 W/kg

Maximum value of SAR (measured) = 0.296 W/kg



P28 WCDMA V_RMC12.2K_Front Face_15mm_Ch4132_Sample1**DUT: 171130C29**

Communication System: WCDMA; Frequency: 826.4 MHz; Duty Cycle: 1:1

Medium: B07T10N3_0205 Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.962$ S/m; $\epsilon_r = 55.457$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.7 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.245 W/kg

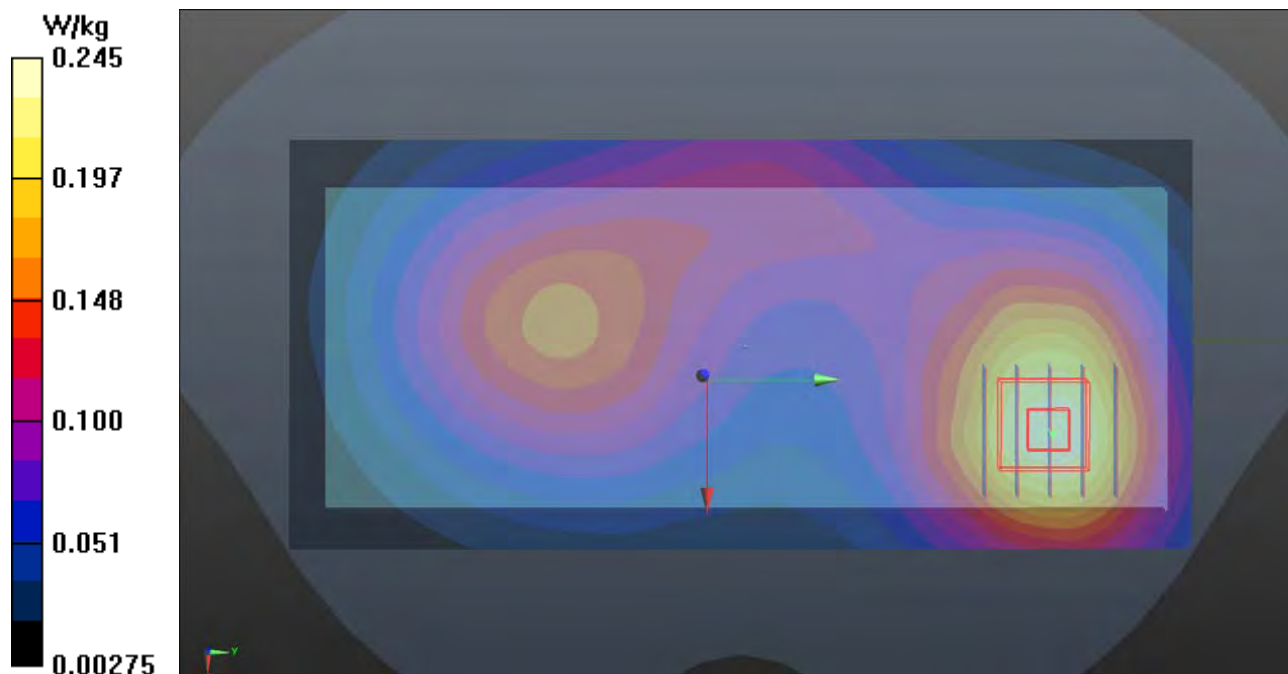
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.74 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.268 W/kg

SAR(1 g) = 0.189 W/kg; SAR(10 g) = 0.133 W/kg

Maximum value of SAR (measured) = 0.241 W/kg



P29 CDMA BC0_RC3+SO32 (FCH)_Front Face_15mm_Ch777_Holster w/o_Sample1**DUT: 171130C29**

Communication System: CDMA2000; Frequency: 848.31 MHz; Duty Cycle: 1:1

Medium: B07T10N3_0205 Medium parameters used: $f = 848.31$ MHz; $\sigma = 0.982$ S/m; $\epsilon_r = 55.265$; ρ $= 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.569 W/kg

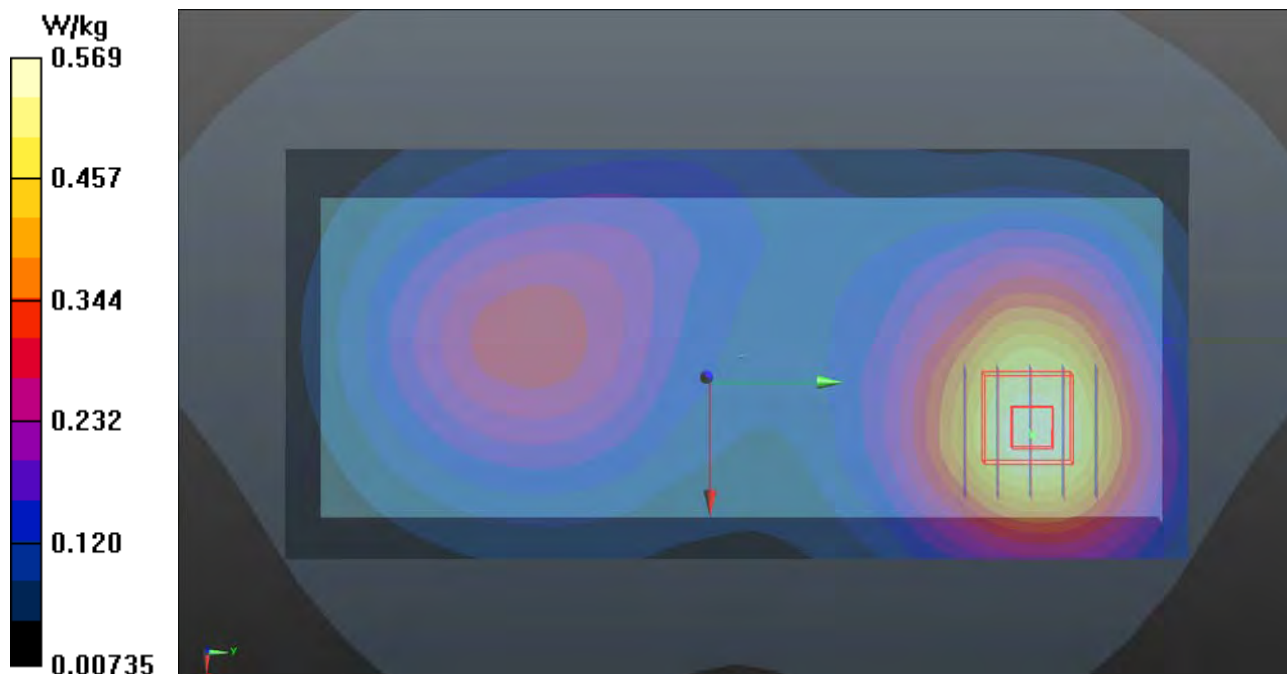
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.20 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.623 W/kg

SAR(1 g) = 0.439 W/kg; SAR(10 g) = 0.309 W/kg

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



P30 CDMA BC1_RC3+SO32 (FCH)_Front Face_15mm_Ch25_Holster w/o_Sample1**DUT: 171130C29**

Communication System: CDMA2000 ; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: B16T20N1_0206 Medium parameters used: $f = 1851.25$ MHz; $\sigma = 1.519$ S/m; $\epsilon_r = 51.073$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.26, 8.26, 8.26); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.545 W/kg

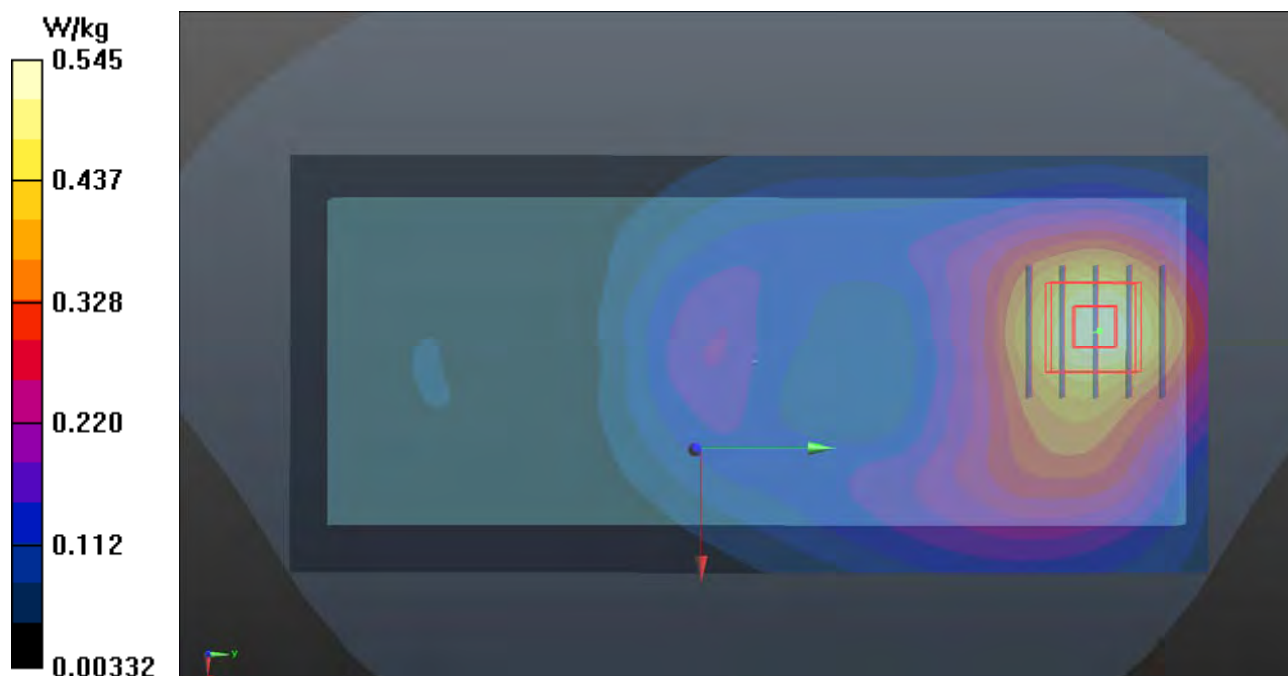
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.92 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.619 W/kg

SAR(1 g) = 0.389 W/kg; SAR(10 g) = 0.244 W/kg

Maximum value of SAR (measured) = 0.536 W/kg



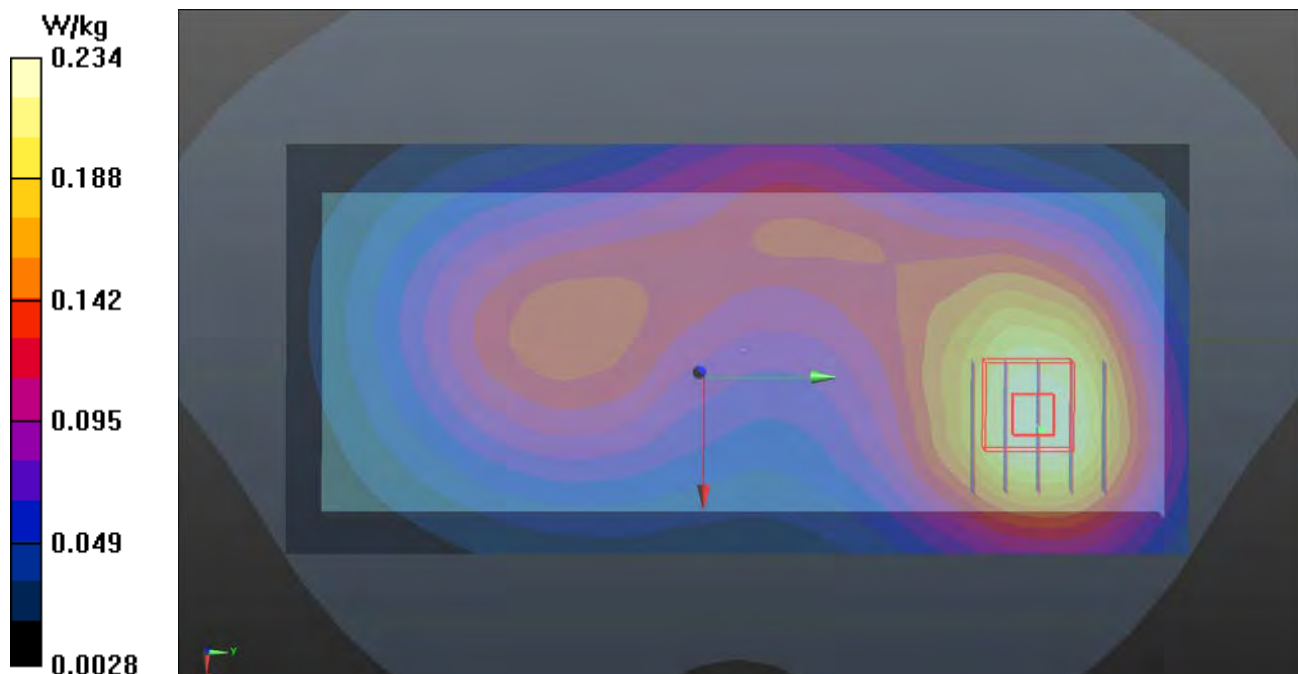
P31 CDMA BC10_RC3+SO32 (FCH)_Front Face_15mm_Ch476_Holster w/o_Sample1**DUT: 171130C29**

Communication System: CDMA2000; Frequency: 817.9 MHz; Duty Cycle: 1:1

Medium: B07T10N3_0205 Medium parameters used: $f = 818 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 55.518$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.6 \text{ }^\circ\text{C}$; Liquid Temperature : $23.3 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 0.234 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 15.98 V/m ; Power Drift = -0.03 dB Peak SAR (extrapolated) = 0.260 W/kg **SAR(1 g) = 0.184 W/kg ; SAR(10 g) = 0.131 W/kg** Maximum value of SAR (measured) = 0.233 W/kg 

P32 LTE 2_QPSK20M_Front Face_15mm_Ch18700_Holster w/o_Sample1_1RB_OS0**DUT: 171130C29**

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

Medium: B16T20N1_0206 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 51.056$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.26, 8.26, 8.26); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.461 W/kg

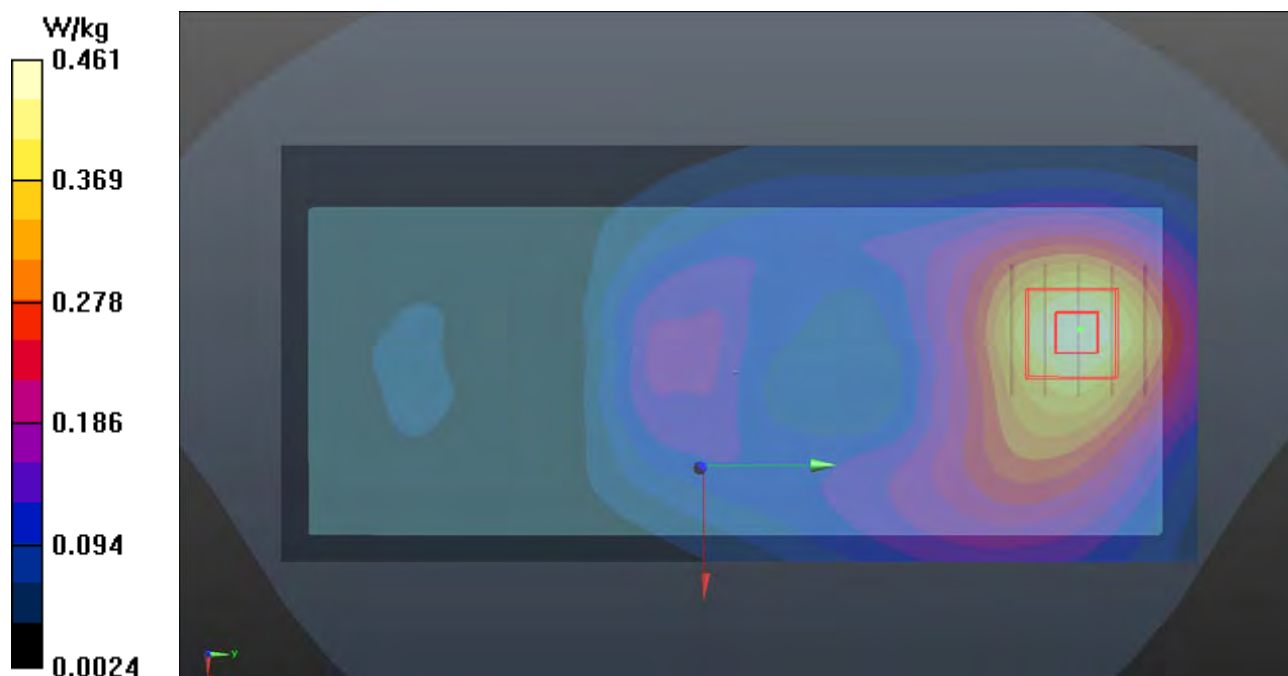
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.85 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.540 W/kg

SAR(1 g) = 0.339 W/kg; SAR(10 g) = 0.212 W/kg

Maximum value of SAR (measured) = 0.468 W/kg



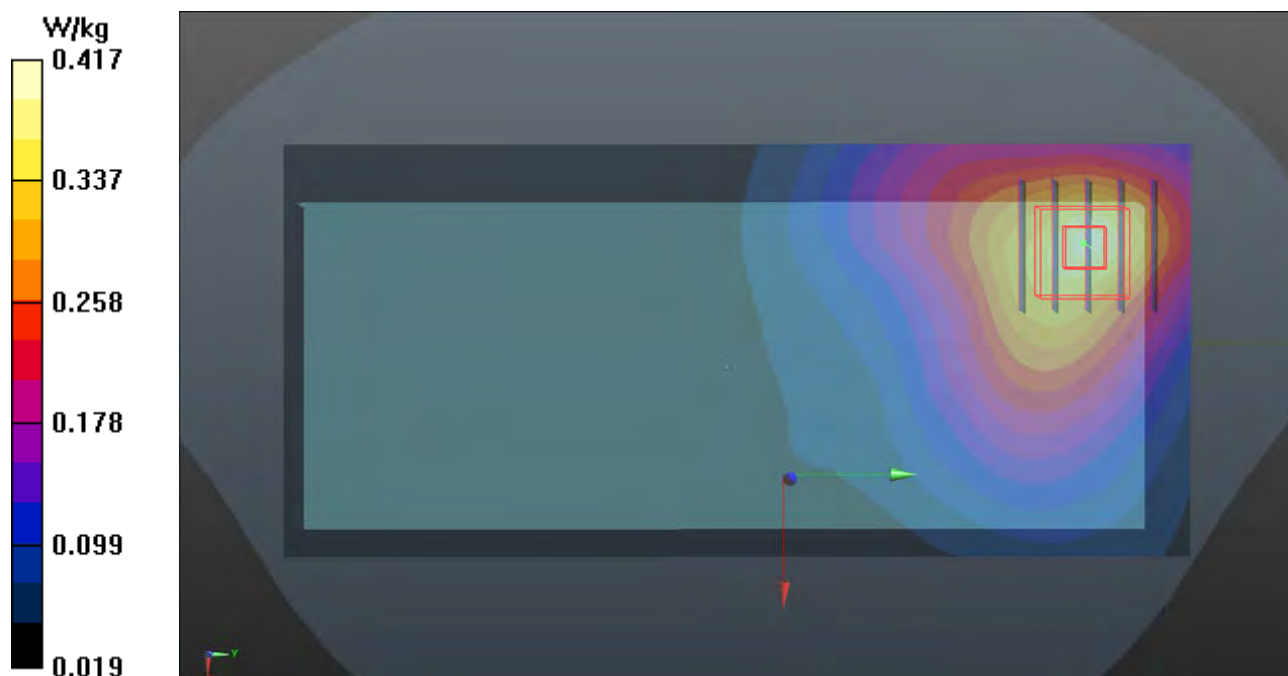
P33 LTE 4_QPSK20M_Rear Face_15mm_Ch20300_Holster w/o_Sample1_1RB_OS0**DUT: 171130C29**

Communication System: LTE; Frequency: 1745 MHz; Duty Cycle: 1:1

Medium: B16T20N1_0206 Medium parameters used: $f = 1745$ MHz; $\sigma = 1.426$ S/m; $\epsilon_r = 51.453$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 23.5°C ; Liquid Temperature : 23.1°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.51, 8.51, 8.51); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mmMaximum value of SAR (interpolated) = 0.399 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 16.78 V/m ; Power Drift = 0.04 dB Peak SAR (extrapolated) = 0.482 W/kg **SAR(1 g) = 0.300 W/kg ; SAR(10 g) = 0.189 W/kg** Maximum value of SAR (measured) = 0.417 W/kg 

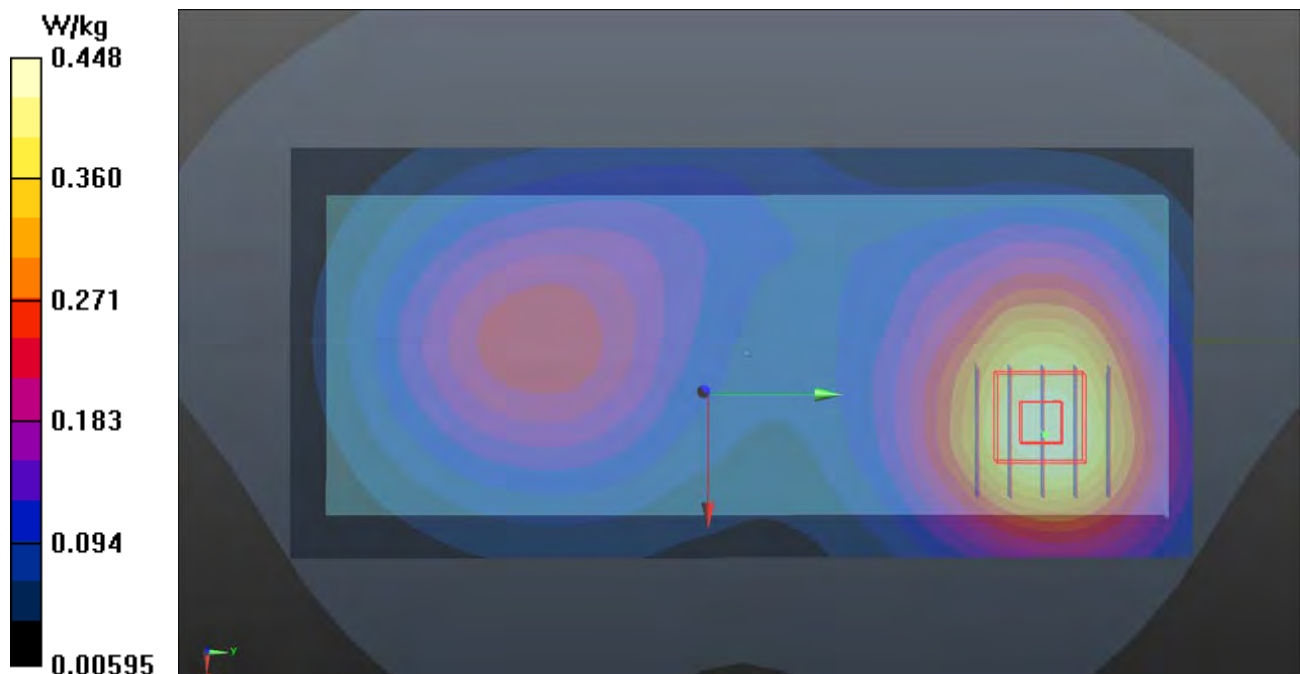
P34 LTE 5_QPSK10M_Front Face_15mm_Ch20600_Holster w/o_Sample1_1RB_OS49**DUT: 171130C29**

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

Medium: B07T10N3_0205 Medium parameters used: $f = 844 \text{ MHz}$; $\sigma = 0.978 \text{ S/m}$; $\epsilon_r = 55.303$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.6 \text{ }^\circ\text{C}$; Liquid Temperature : $23.3 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 0.448 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 21.45 V/m ; Power Drift = -0.02 dB Peak SAR (extrapolated) = 0.492 W/kg **SAR(1 g) = 0.347 W/kg ; SAR(10 g) = 0.245 W/kg** Maximum value of SAR (measured) = 0.441 W/kg 

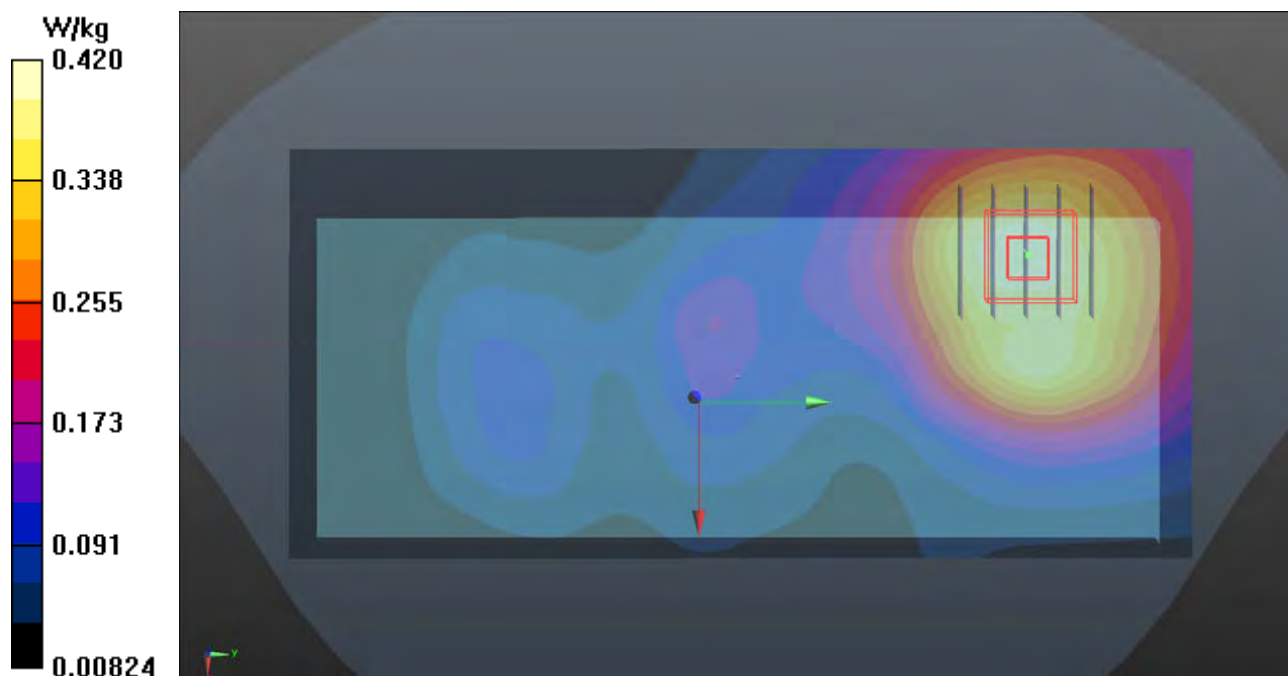
P35 LTE 7_QPSK20M_Rear Face_15mm_Ch21350_Holster w/o_Sample1_1RB_OS99**DUT: 171130C29**

Communication System: LTE; Frequency: 2560 MHz; Duty Cycle: 1:1

Medium: B19T27N2_0206 Medium parameters used: $f = 2560$ MHz; $\sigma = 2.119$ S/m; $\epsilon_r = 50.235$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 23.6°C ; Liquid Temperature : 23.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(7.32, 7.32, 7.32); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (91x191x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mmMaximum value of SAR (interpolated) = 0.420 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 14.05 V/m ; Power Drift = -0.14 dB Peak SAR (extrapolated) = 0.518 W/kg **SAR(1 g) = 0.276 W/kg ; SAR(10 g) = 0.162 W/kg** Maximum value of SAR (measured) = 0.418 W/kg 

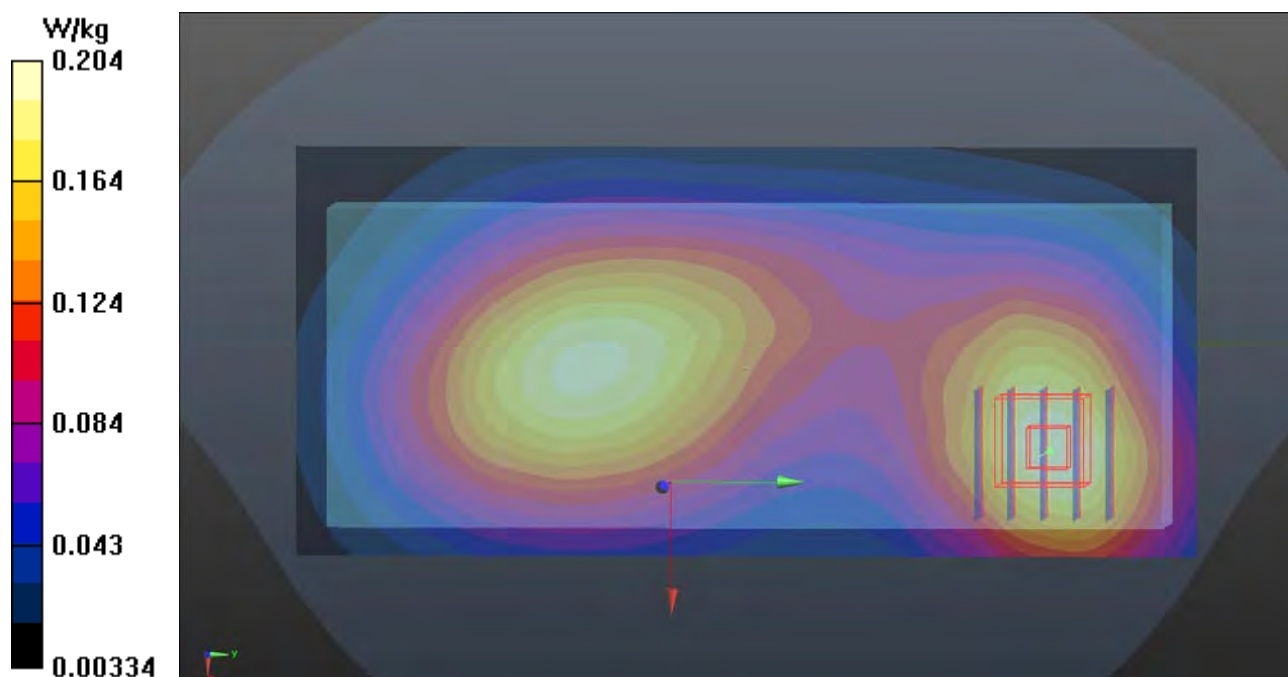
P36 LTE 12_QPSK10M_Front Face_15mm_Ch23130_Holster w/o_Sample1_1RB_OS24**DUT: 171130C29**

Communication System: LTE; Frequency: 711 MHz; Duty Cycle: 1:1

Medium: B06T09N1_0206 Medium parameters used: $f = 711 \text{ MHz}$; $\sigma = 0.924 \text{ S/m}$; $\epsilon_r = 55.849$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.5 \text{ }^\circ\text{C}$; Liquid Temperature : $23.1 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.61, 10.61, 10.61); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 0.204 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 14.83 V/m ; Power Drift = -0.03 dB Peak SAR (extrapolated) = 0.224 W/kg **SAR(1 g) = 0.161 W/kg ; SAR(10 g) = 0.115 W/kg** Maximum value of SAR (measured) = 0.203 W/kg 

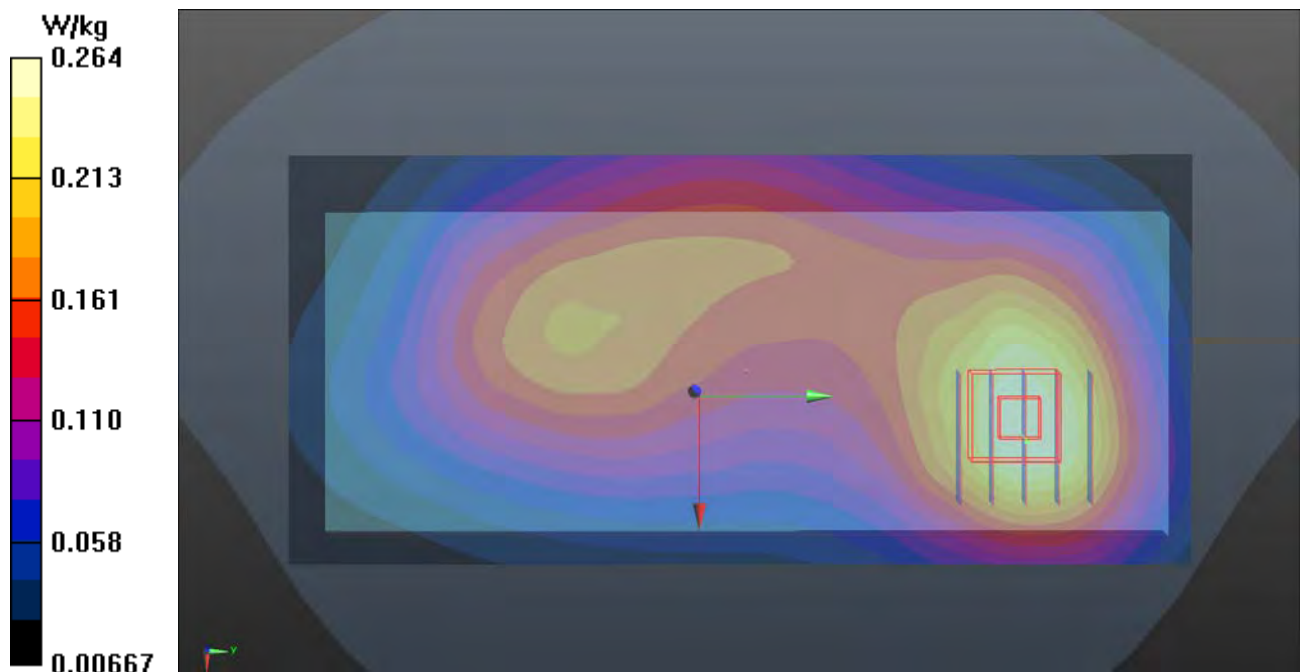
P37 LTE 13_QPSK10M_Front Face_15mm_Ch23230_Holster w/o_Sample1_1RB_OS0**DUT: 171130C29**

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

Medium: B06T09N1_0206 Medium parameters used: $f = 782 \text{ MHz}$; $\sigma = 0.987 \text{ S/m}$; $\epsilon_r = 55.203$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.6 \text{ }^\circ\text{C}$; Liquid Temperature : $23.3 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.61, 10.61, 10.61); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 0.264 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 16.59 V/m ; Power Drift = -0.10 dB Peak SAR (extrapolated) = 0.275 W/kg **SAR(1 g) = 0.196 W/kg ; SAR(10 g) = 0.139 W/kg** Maximum value of SAR (measured) = 0.246 W/kg 

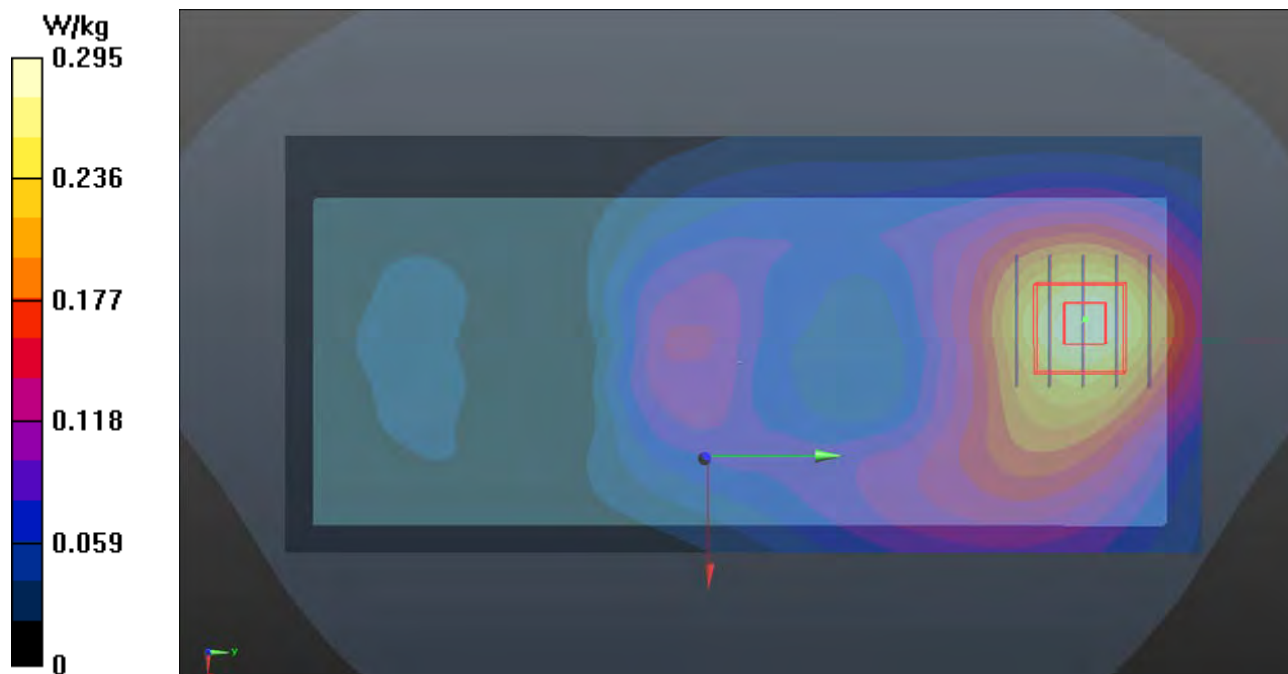
P38 LTE 25_QPSK20M_Front Face_15mm_Ch26140_Holster w/o_Sample1_1RB_OS0**DUT: 171130C29**

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

Medium: B16T20N1_0206 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 51.056$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 23.5°C ; Liquid Temperature : 23.1°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.26, 8.26, 8.26); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mmMaximum value of SAR (interpolated) = 0.295 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 13.44 V/m ; Power Drift = -0.08 dB Peak SAR (extrapolated) = 0.343 W/kg **SAR(1 g) = 0.214 W/kg ; SAR(10 g) = 0.134 W/kg** Maximum value of SAR (measured) = 0.297 W/kg 

P39 LTE 26_QPSK15M_Front Face_15mm_Ch26965_Holster w/o_Sample1_1RB_OS74**DUT: 171130C29**

Communication System: LTE; Frequency: 841.5 MHz; Duty Cycle: 1:1

Medium: B07T10N3_0205 Medium parameters used: $f = 841.5$ MHz; $\sigma = 0.976$ S/m; $\epsilon_r = 55.327$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.430 W/kg

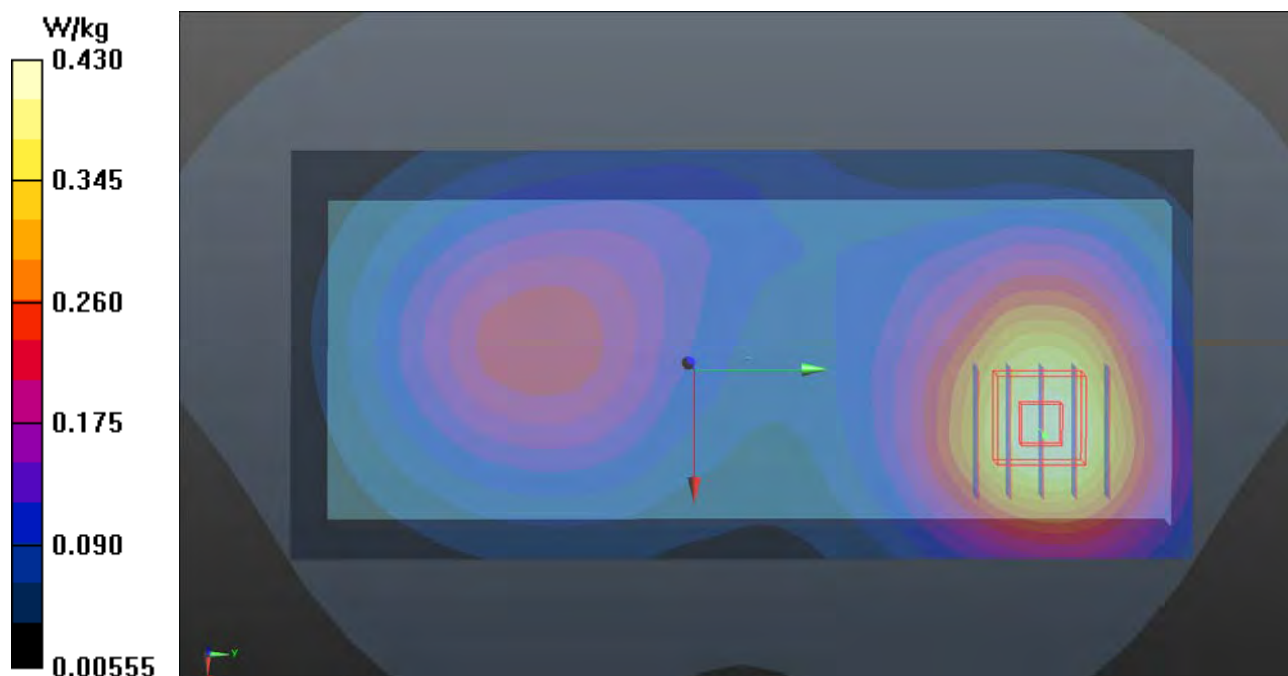
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.07 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.474 W/kg

SAR(1 g) = 0.333 W/kg; SAR(10 g) = 0.234 W/kg

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



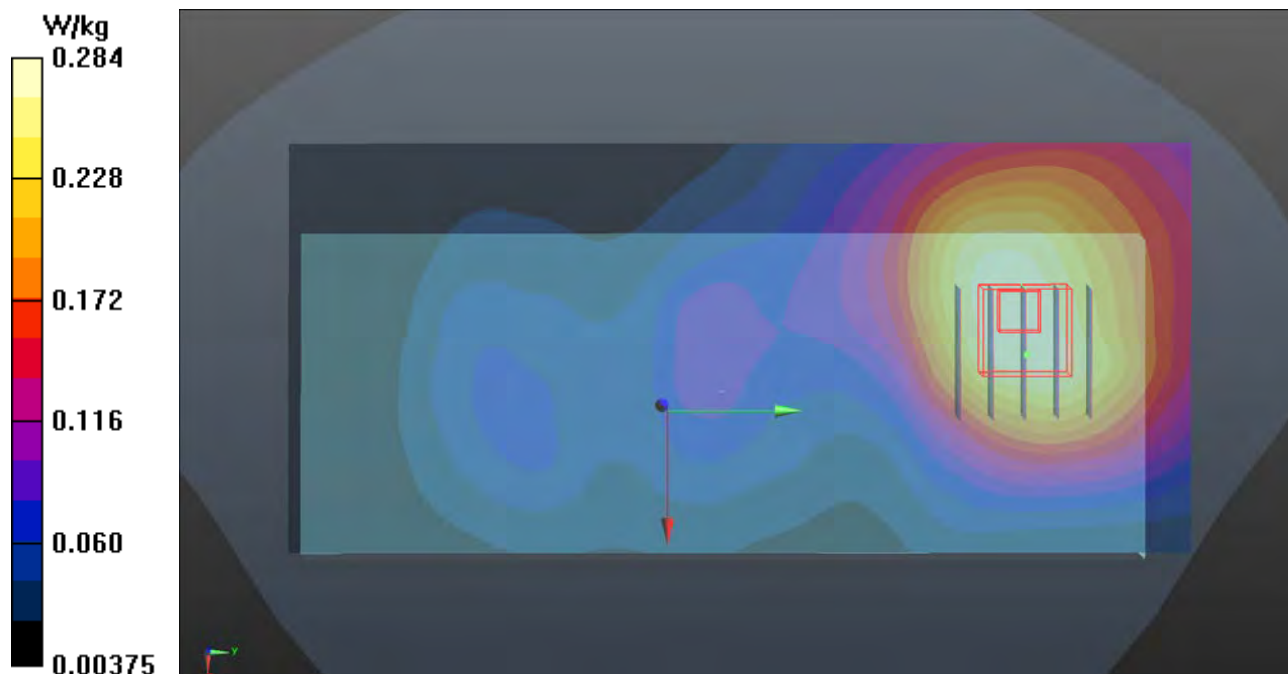
P40 LTE 38_QPSK20M_Rear Face_15mm_Ch38150_Holster w/o_Sample1_1RB_OS50**DUT: 171130C29**

Communication System: LTE TDD CF0; Frequency: 2610 MHz; Duty Cycle: 1:1.58

Medium: B19T27N2_0206 Medium parameters used: $f = 2610$ MHz; $\sigma = 2.179$ S/m; $\epsilon_r = 50.107$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 23.5°C ; Liquid Temperature : 23.1°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(7.32, 7.32, 7.32); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (91x191x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mmMaximum value of SAR (interpolated) = 0.284 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 11.55 V/m ; Power Drift = 0.00 dB Peak SAR (extrapolated) = 0.358 W/kg **SAR(1 g) = 0.180 W/kg ; SAR(10 g) = 0.104 W/kg** Maximum value of SAR (measured) = 0.286 W/kg 

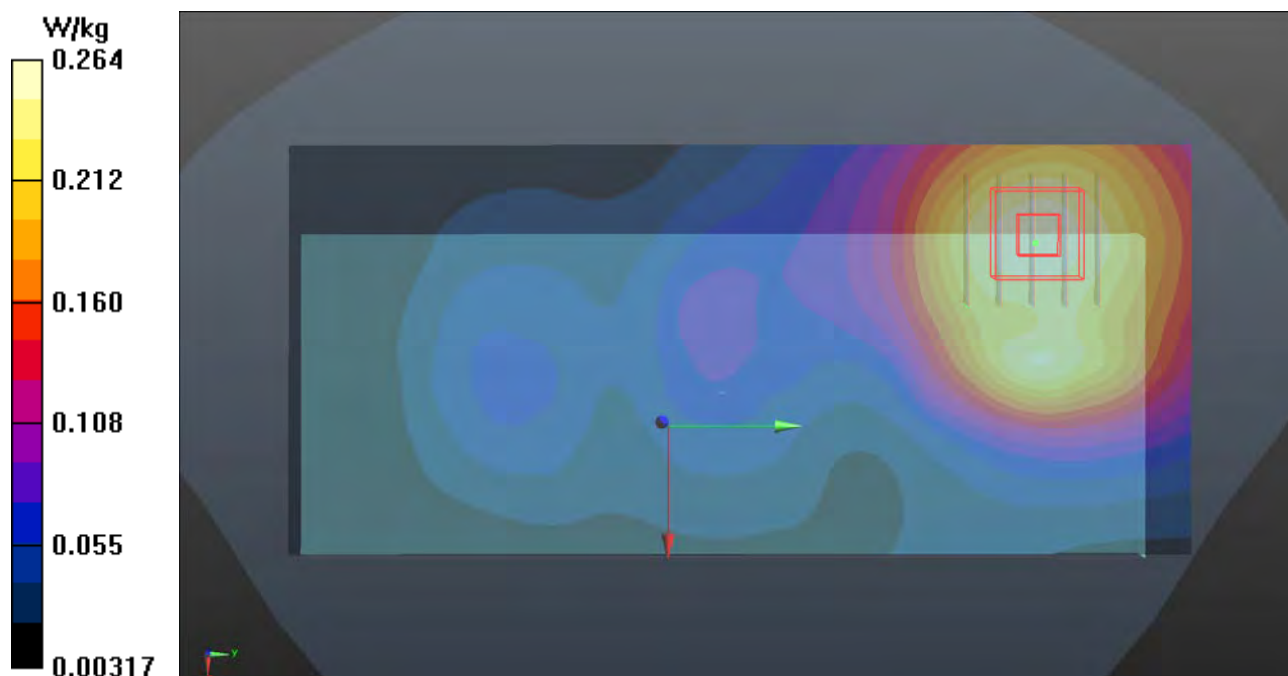
P41 LTE 41_QPSK20M_Rear Face_15mm_Ch40185_Holster w/o_Sample1_1RB_OS99**DUT: 171130C29**

Communication System: LTE TDD CF0; Frequency: 2549.5 MHz; Duty Cycle: 1:1.58

Medium: B19T27N2_0206 Medium parameters used: $f = 2550$ MHz; $\sigma = 2.107$ S/m; $\epsilon_r = 50.265$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 23.5°C ; Liquid Temperature : 23.1°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(7.32, 7.32, 7.32); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (91x191x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mmMaximum value of SAR (interpolated) = 0.264 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 11.52 V/m ; Power Drift = -0.06 dB Peak SAR (extrapolated) = 0.332 W/kg **SAR(1 g) = 0.177 W/kg ; SAR(10 g) = 0.105 W/kg** Maximum value of SAR (measured) = 0.269 W/kg 

P42 WLAN2.4G_802.11b_Front Face_15mm_Ch1_Holster w/o_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_2.4G; Frequency: 2412 MHz; Duty Cycle: 1:1

Medium: B19T27N2_0212 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.998$ S/m; $\epsilon_r = 51.893$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.68, 7.68, 7.68); Calibrated: 2017/07/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2017/03/20
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (91x191x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.246 W/kg

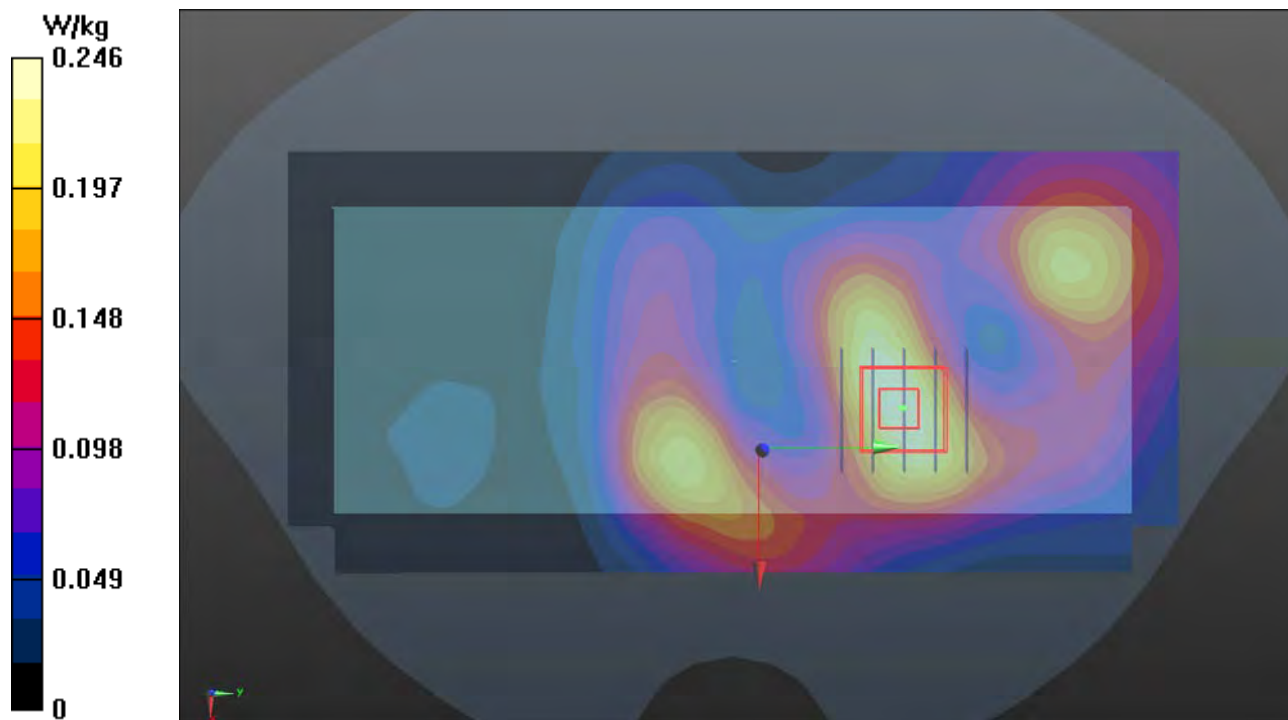
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.19 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.289 W/kg

SAR(1 g) = 0.163 W/kg; SAR(10 g) = 0.097 W/kg

Maximum value of SAR (measured) = 0.239 W/kg



P43 WLAN5G_802.11n HT40_Rear Face_15mm_Ch54_Holster w/o_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_5G; Frequency: 5270 MHz; Duty Cycle: 1:1

Medium: B34T60N1_0211 Medium parameters used: $f = 5270$ MHz; $\sigma = 5.416$ S/m; $\epsilon_r = 46.898$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(4.64, 4.64, 4.64); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (121x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.461 W/kg

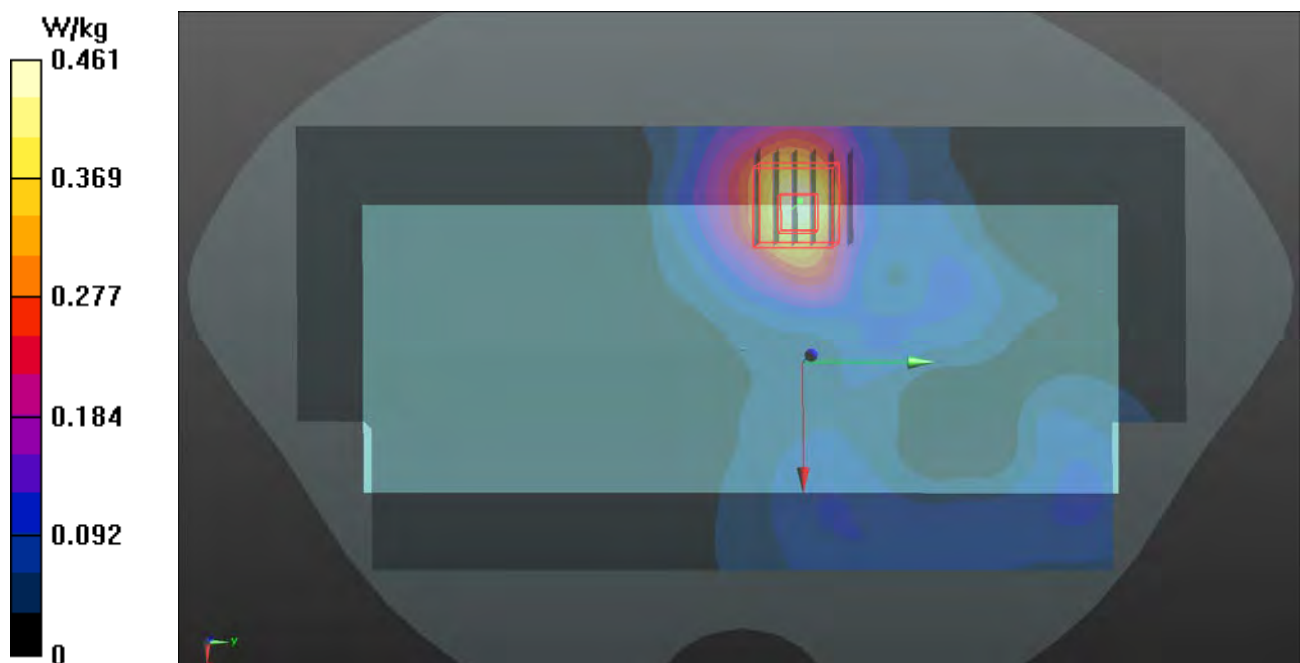
- Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 9.995 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.768 W/kg

SAR(1 g) = 0.222 W/kg; SAR(10 g) = 0.092 W/kg

Maximum value of SAR (measured) = 0.472 W/kg



P44 WLAN5G_802.11ac VHT80_Front Face_15mm_Ch138_Holster w/o_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_5G; Frequency: 5690 MHz; Duty Cycle: 1:1

Medium: B34T60N1_0211 Medium parameters used: $f = 5690$ MHz; $\sigma = 5.941$ S/m; $\epsilon_r = 46.156$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(4.1, 4.1, 4.1); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (121x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.456 W/kg

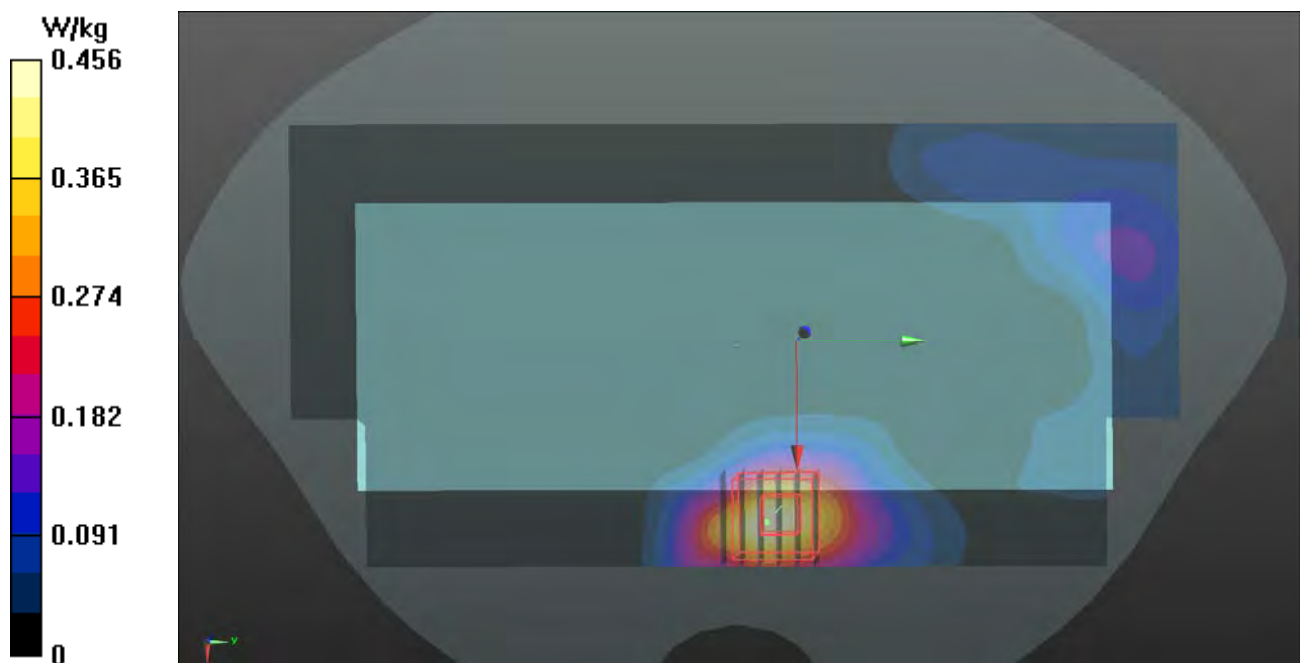
- Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 8.165 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.701 W/kg

SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.070 W/kg

Maximum value of SAR (measured) = 0.407 W/kg



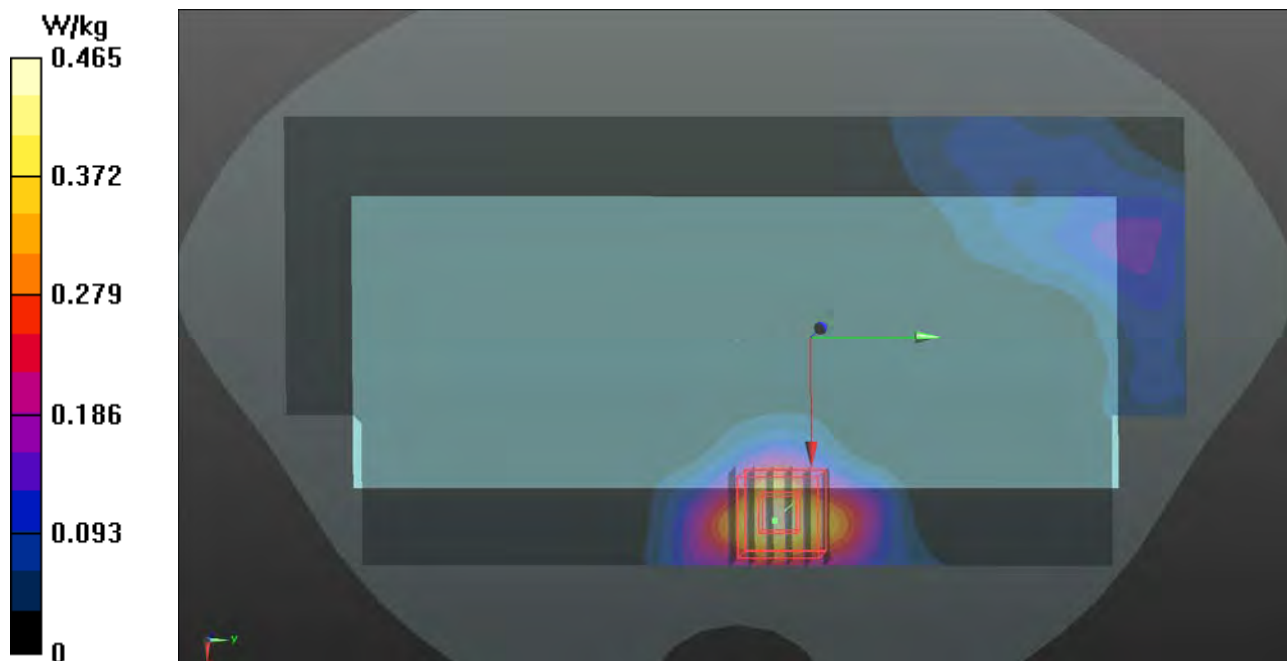
P45 WLAN5G_802.11ac VHT80_Front Face_15mm_Ch155_Holster w/o_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_5G; Frequency: 5775 MHz; Duty Cycle: 1:1

Medium: B34T60N1_0211 Medium parameters used: $f = 5775$ MHz; $\sigma = 6.028$ S/m; $\epsilon_r = 46.017$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 23.5°C ; Liquid Temperature : 23.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(4.41, 4.41, 4.41); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (121x241x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mmMaximum value of SAR (interpolated) = 0.465 W/kg **- Zoom Scan (6x6x12)/Cube 0:** Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=2\text{mm}$ Reference Value = 7.406 V/m ; Power Drift = 0.13 dB Peak SAR (extrapolated) = 0.695 W/kg **SAR(1 g) = 0.154 W/kg ; SAR(10 g) = 0.059 W/kg** Maximum value of SAR (measured) = 0.358 W/kg 

P46 BT_Front Face_15mm_Ch39_Holster w/o_Sample1_Ant0**DUT: 171130C29**

Communication System: BT; Frequency: 2441 MHz; Duty Cycle: 1:1

Medium: B19T27N2_0212 Medium parameters used: $f = 2441$ MHz; $\sigma = 2.031$ S/m; $\epsilon_r = 51.797$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.68, 7.68, 7.68); Calibrated: 2017/07/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2017/03/20
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (91x191x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.00803 W/kg

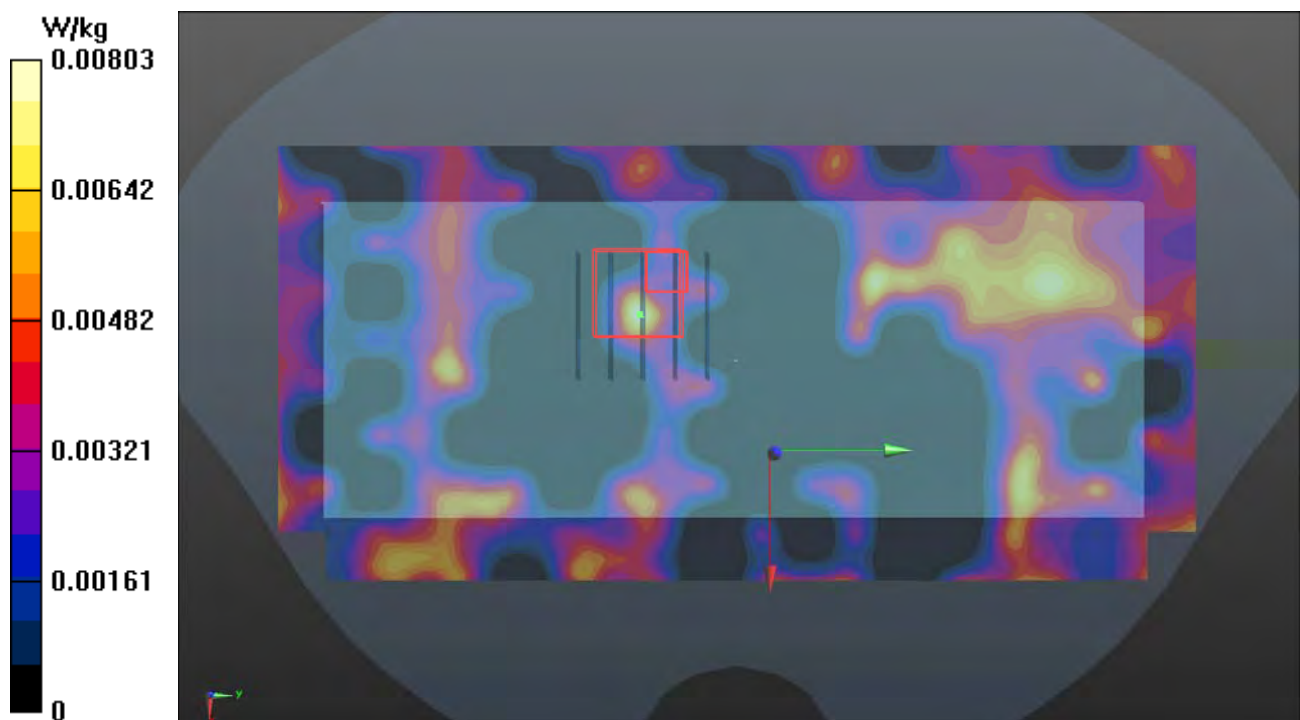
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.483 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.00370 W/kg

SAR(1 g) = 0.000362 W/kg; SAR(10 g) = 9.3e-005 W/kg

Maximum value of SAR (measured) = 0.00204 W/kg



P47 GSM850_GPRS12_Front Face_10mm_Ch251_Sample1**DUT: 171130C29**

Communication System: GPRS12; Frequency: 848.8 MHz; Duty Cycle: 1:2

Medium: B07T10N3_0205 Medium parameters used: $f = 849$ MHz; $\sigma = 0.983$ S/m; $\epsilon_r = 55.257$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.636 W/kg

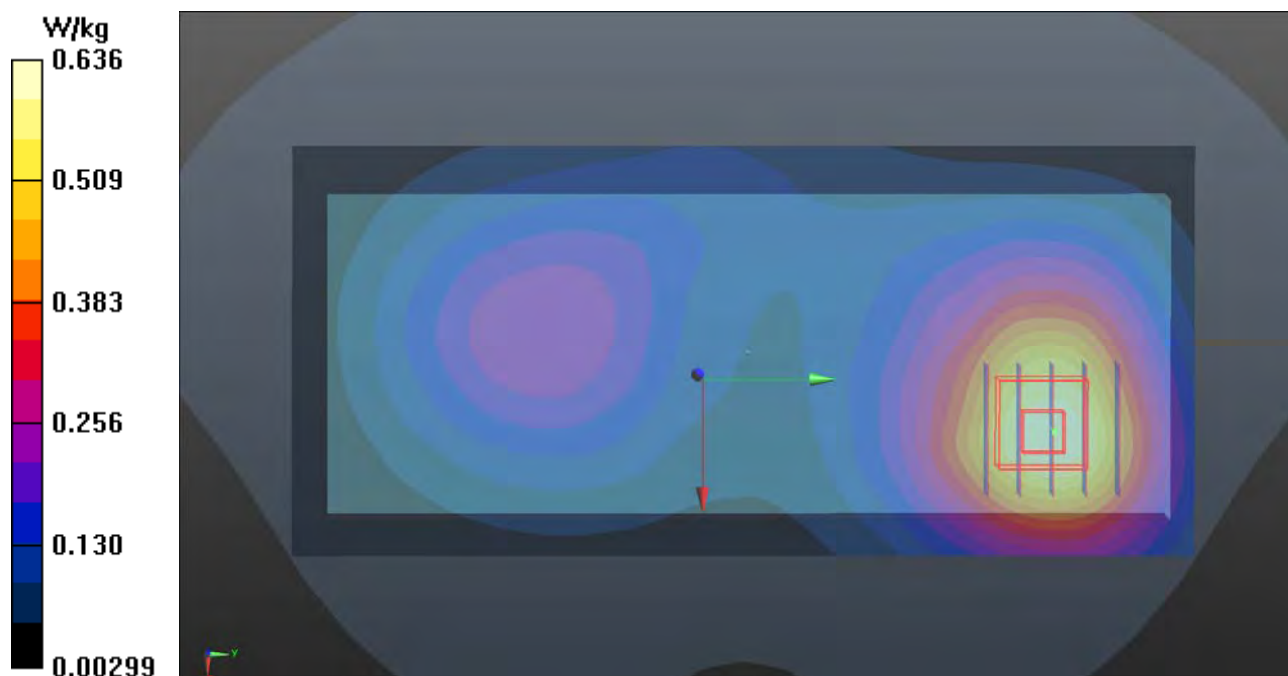
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.89 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.678 W/kg

SAR(1 g) = 0.481 W/kg; SAR(10 g) = 0.337 W/kg

Maximum value of SAR (measured) = 0.610 W/kg



P48 GSM1900_GPRS12_Front Face_10mm_Ch512_Sample1**DUT: 171130C29**

Communication System: GPRS12; Frequency: 1850.2 MHz; Duty Cycle: 1:2

Medium: B16T20N2_0205 Medium parameters used: $f = 1850.2$ MHz; $\sigma = 1.537$ S/m; $\epsilon_r = 55.084$; ρ $= 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.26, 8.26, 8.26); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.253 W/kg

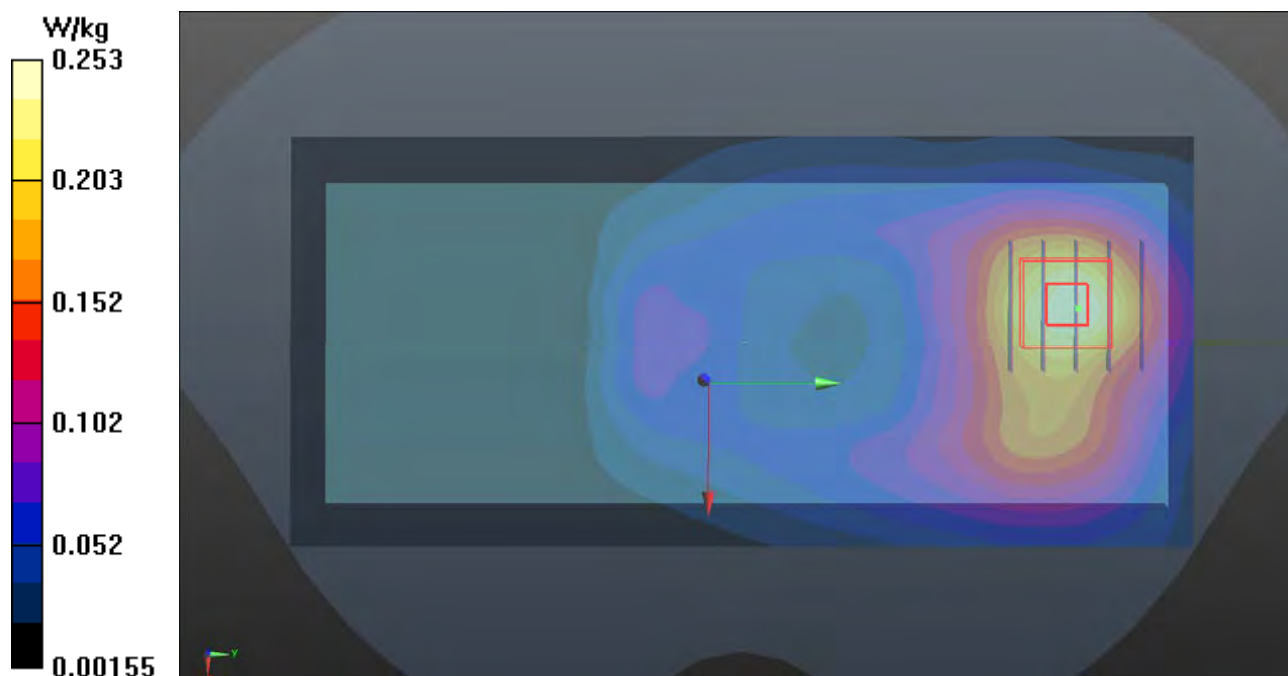
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.32 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.309 W/kg

SAR(1 g) = 0.195 W/kg; SAR(10 g) = 0.119 W/kg

Maximum value of SAR (measured) = 0.266 W/kg



P49 WCDMA II_RMC12.2K_Right Side_10mm_Ch9262_Sample1**DUT: 171130C29**

Communication System: WCDMA; Frequency: 1852.4 MHz; Duty Cycle: 1:1

Medium: B16T20N2_0205 Medium parameters used: $f = 1852.4$ MHz; $\sigma = 1.539$ S/m; $\epsilon_r = 55.078$; ρ $= 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.26, 8.26, 8.26); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (61x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.849 W/kg

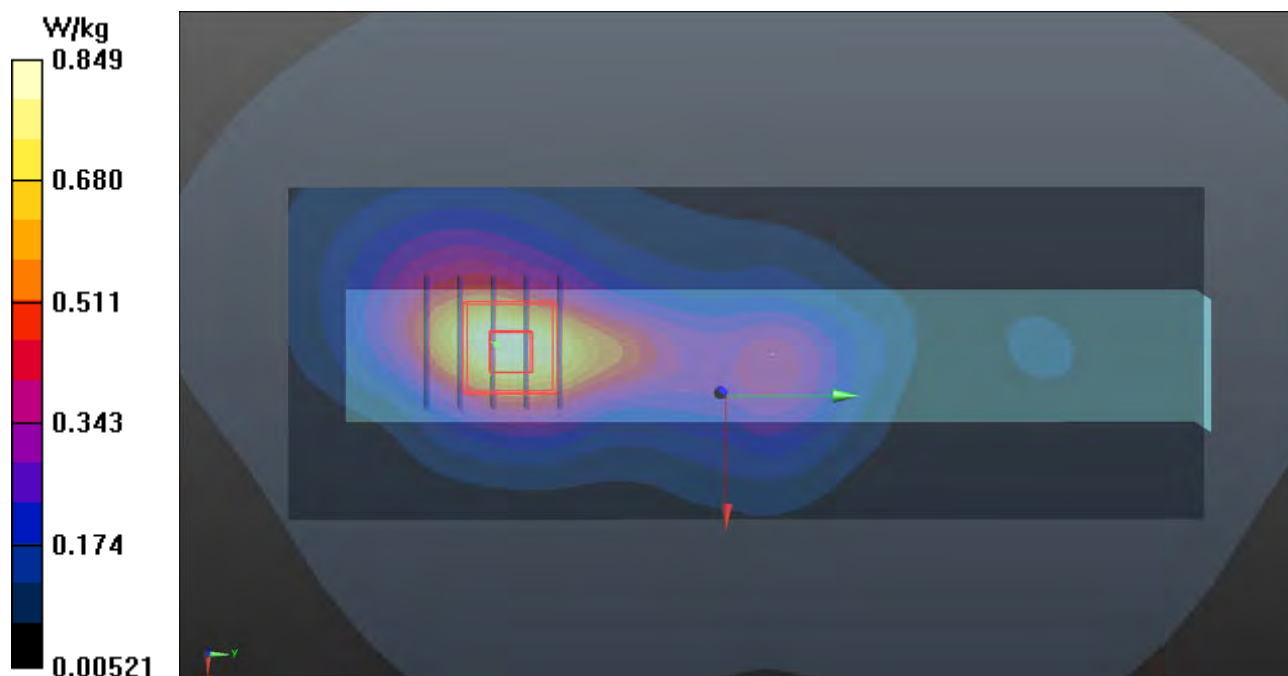
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.37 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.966 W/kg

SAR(1 g) = 0.580 W/kg; SAR(10 g) = 0.344 W/kg

Maximum value of SAR (measured) = 0.814 W/kg



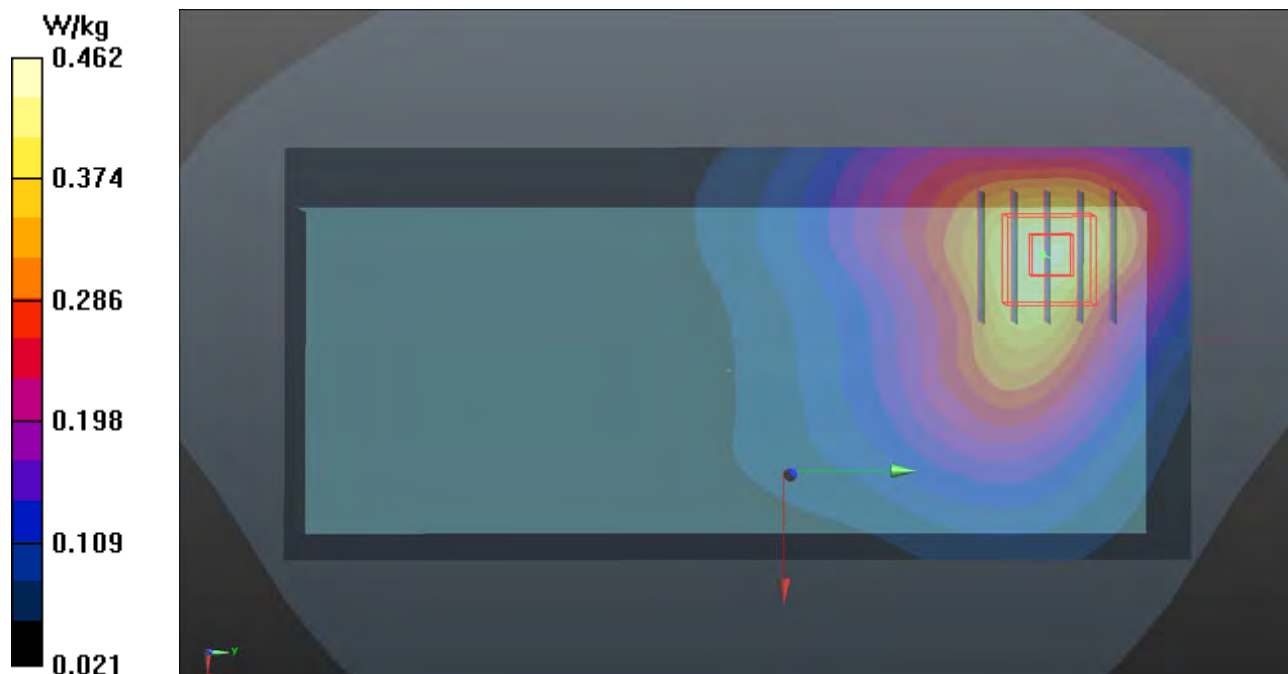
P50 WCDMA IV_RMC12.2K_Rear Face_10mm_Ch1513_Sample1**DUT: 171130C29**

Communication System: WCDMA; Frequency: 1752.6 MHz; Duty Cycle: 1:1

Medium: B16T20N1_0206 Medium parameters used: $f = 1753$ MHz; $\sigma = 1.432$ S/m; $\epsilon_r = 51.422$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 23.5°C ; Liquid Temperature : 23.1°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.51, 8.51, 8.51); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mmMaximum value of SAR (interpolated) = 0.440 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 17.59 V/m ; Power Drift = -0.12 dB Peak SAR (extrapolated) = 0.535 W/kg **SAR(1 g) = 0.330 W/kg ; SAR(10 g) = 0.206 W/kg** Maximum value of SAR (measured) = 0.462 W/kg 

P51 WCDMA V_RMC12.2K_Front Face_10mm_Ch4233_Sample1**DUT: 171130C29**

Communication System: WCDMA; Frequency: 846.6 MHz; Duty Cycle: 1:1

Medium: B07T10N3_0205 Medium parameters used: $f = 847$ MHz; $\sigma = 0.981$ S/m; $\epsilon_r = 55.277$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.7 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.786 W/kg

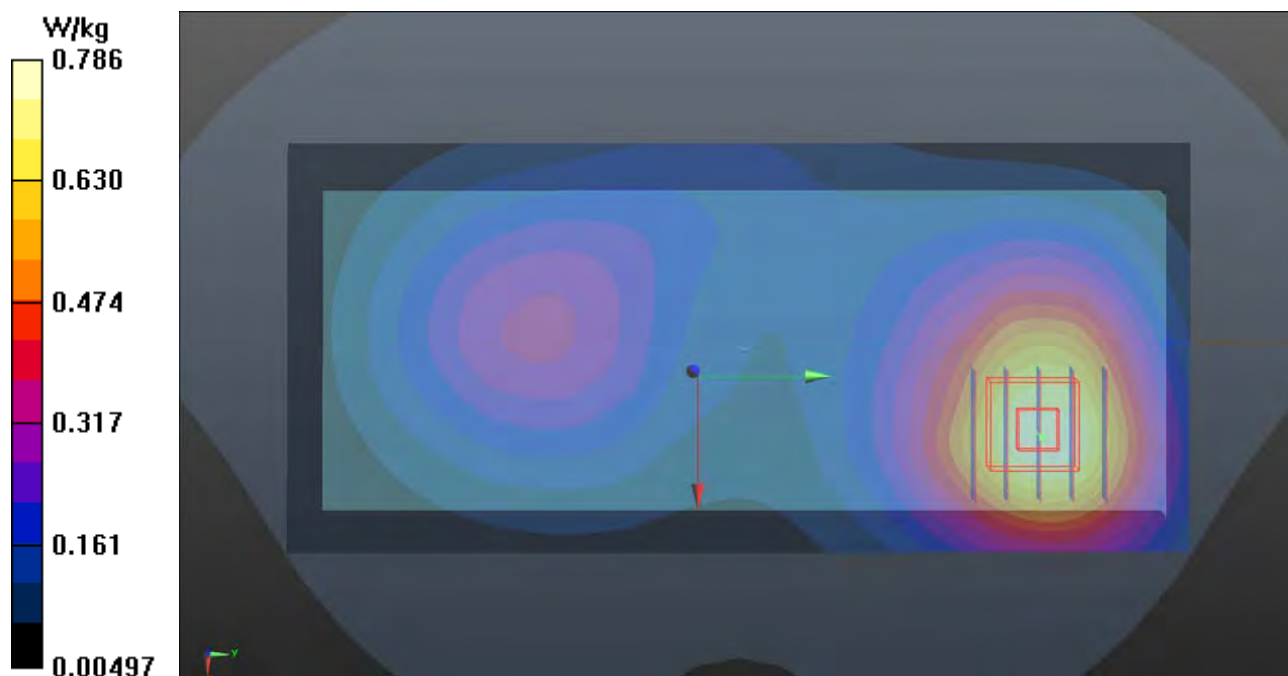
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.77 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.856 W/kg

SAR(1 g) = 0.599 W/kg; SAR(10 g) = 0.418 W/kg

Maximum value of SAR (measured) = 0.768 W/kg



P52 CDMA BC0_RTAP153.6_Front Face_10mm_Ch777_Sample1**DUT: 171130C29**

Communication System: CDMA2000; Frequency: 848.31 MHz; Duty Cycle: 1:1

Medium: B07T10N3_0205 Medium parameters used: $f = 848.31$ MHz; $\sigma = 0.982$ S/m; $\epsilon_r = 55.265$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.892 W/kg

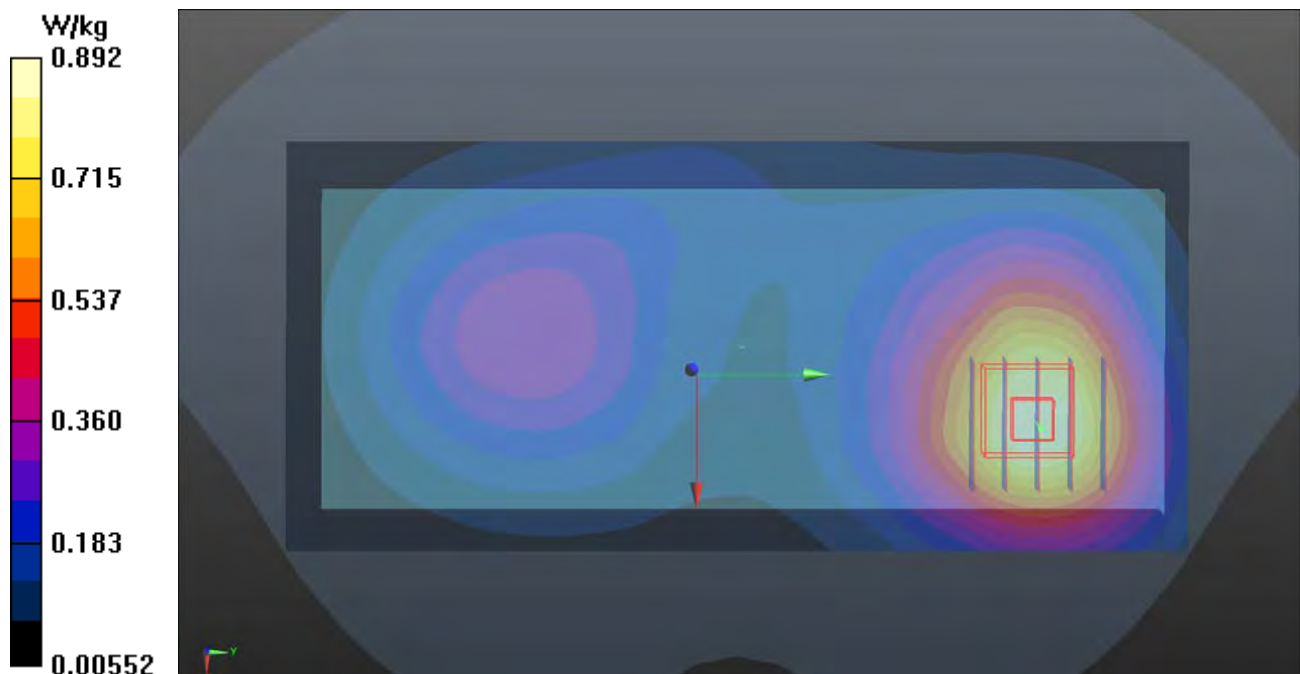
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.98 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.971 W/kg

SAR(1 g) = 0.635 W/kg; SAR(10 g) = 0.474 W/kg

Maximum value of SAR (measured) = 0.870 W/kg



P53 CDMA BC1_RTAP153.6_Right Side_10mm_Ch25_Sample1**DUT: 171130C29**

Communication System: CDMA2000; Frequency: 1851.25 MHz; Duty Cycle: 1:1

Medium: B16T20N1_0206 Medium parameters used: $f = 1851.25$ MHz; $\sigma = 1.519$ S/m; $\epsilon_r = 51.073$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.26, 8.26, 8.26); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (41x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.875 W/kg

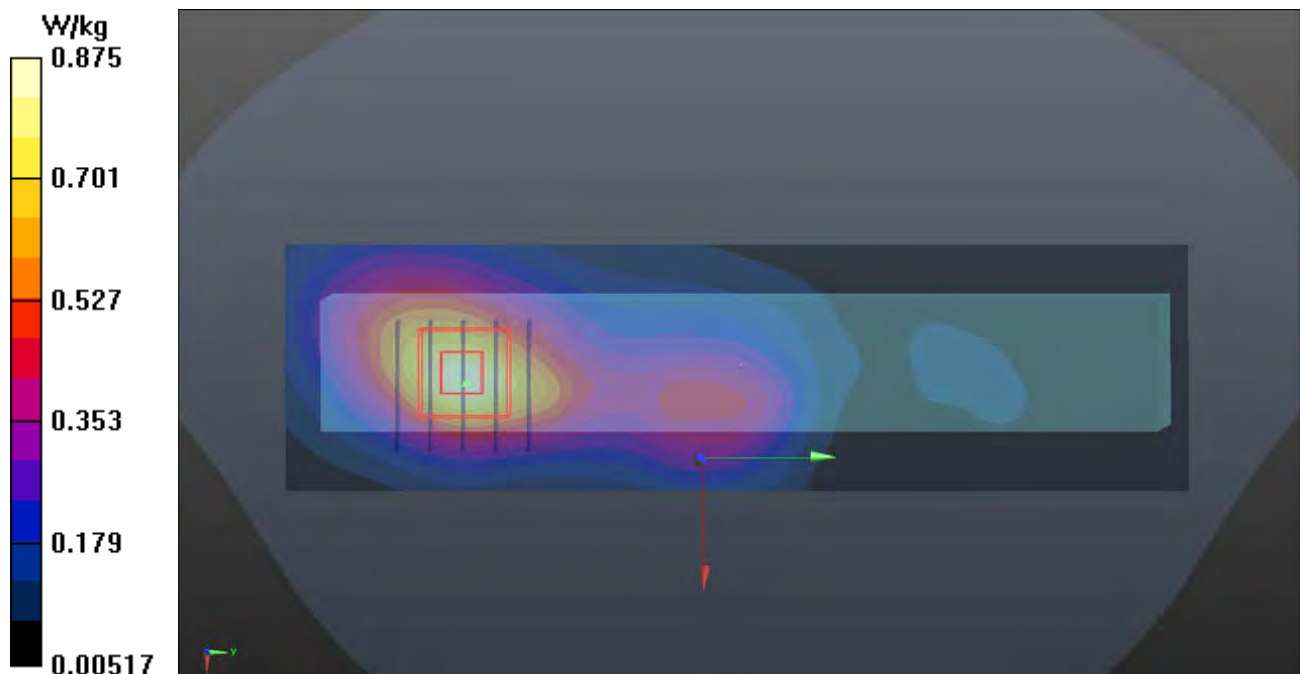
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.06 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.618 W/kg; SAR(10 g) = 0.367 W/kg

Maximum value of SAR (measured) = 0.870 W/kg



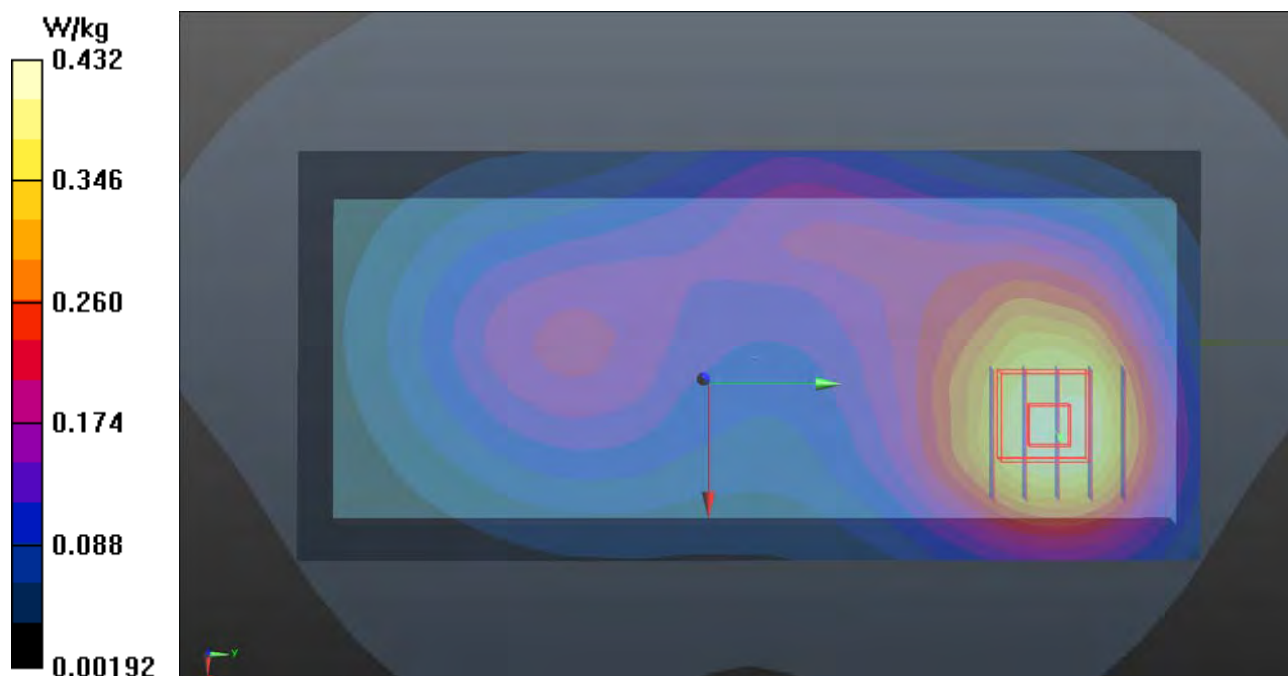
P54 CDMA BC10_RTAP153.6_Front Face_10mm_Ch476_Sample1**DUT: 171130C29**

Communication System: CDMA2000; Frequency: 817.9 MHz; Duty Cycle: 1:1

Medium: B07T10N3_0205 Medium parameters used: $f = 818 \text{ MHz}$; $\sigma = 0.954 \text{ S/m}$; $\epsilon_r = 55.518$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.6 \text{ }^\circ\text{C}$; Liquid Temperature : $23.3 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 0.432 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 21.31 V/m ; Power Drift = -0.04 dB Peak SAR (extrapolated) = 0.471 W/kg **SAR(1 g) = 0.331 W/kg ; SAR(10 g) = 0.234 W/kg** Maximum value of SAR (measured) = 0.420 W/kg 

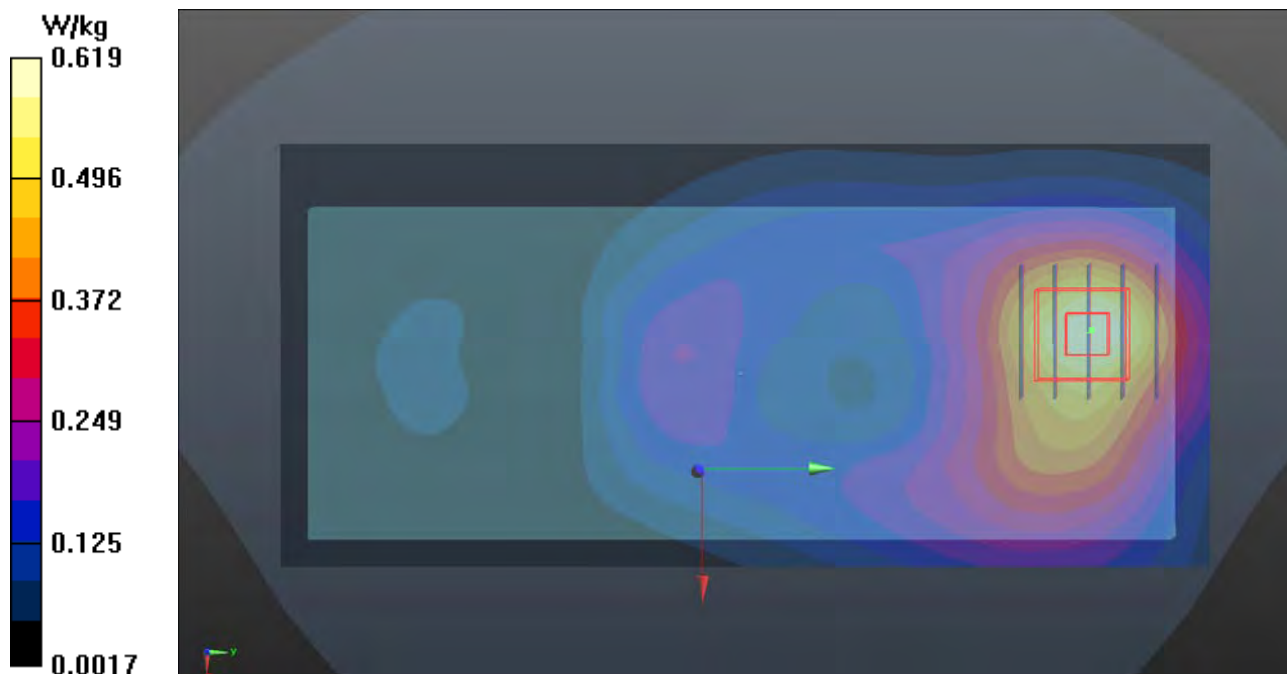
P55 LTE 2_QPSK20M_Front Face_10mm_Ch18700_Sample1_1RB_OS0**DUT: 171130C29**

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

Medium: B16T20N1_0206 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 51.056$; $\rho =$ 1000 kg/m^3 Ambient Temperature : 23.5°C ; Liquid Temperature : 23.1°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.26, 8.26, 8.26); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mmMaximum value of SAR (interpolated) = 0.619 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 19.41 V/m ; Power Drift = -0.15 dB Peak SAR (extrapolated) = 0.727 W/kg **SAR(1 g) = 0.453 W/kg ; SAR(10 g) = 0.281 W/kg** Maximum value of SAR (measured) = 0.629 W/kg 

P56 LTE 4_QPSK20M_Top Side_10mm_Ch20300_Sample1_1RB_OS0**DUT: 171130C29**

Communication System: LTE; Frequency: 1745 MHz; Duty Cycle: 1:1

Medium: B16T20N1_0206 Medium parameters used: $f = 1745$ MHz; $\sigma = 1.426$ S/m; $\epsilon_r = 51.453$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.51, 8.51, 8.51); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (41x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.715 W/kg

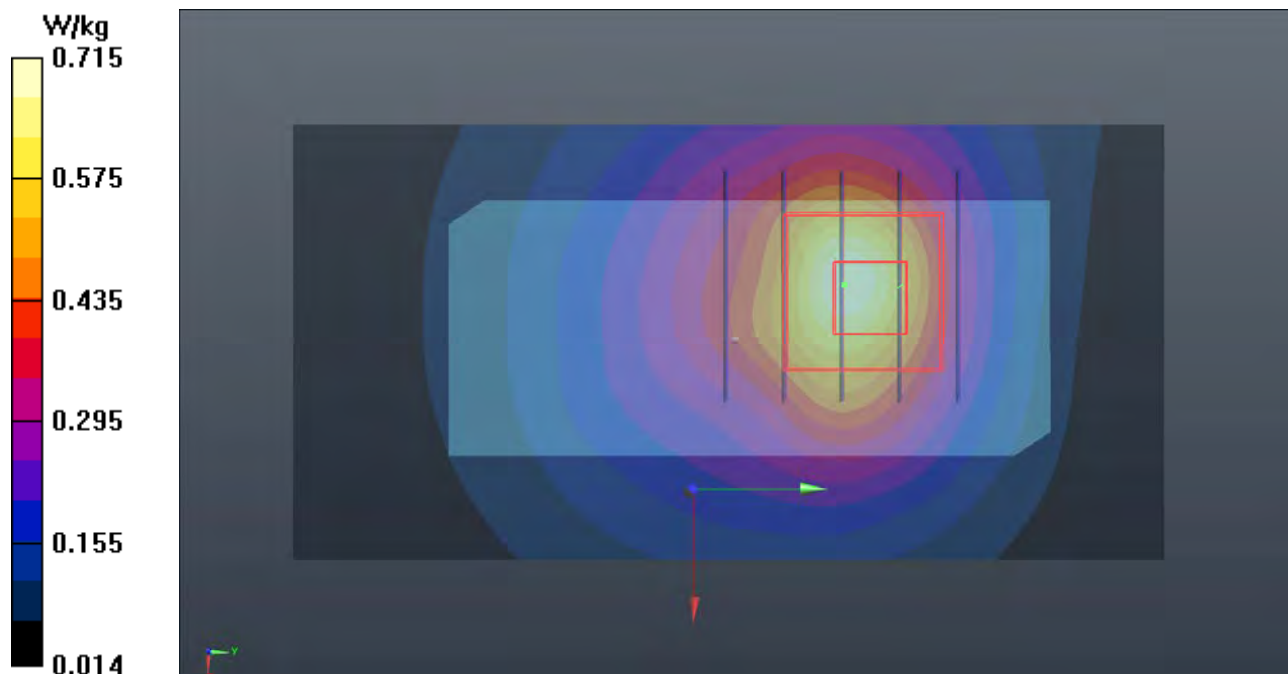
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.54 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.824 W/kg

SAR(1 g) = 0.479 W/kg; SAR(10 g) = 0.277 W/kg

Maximum value of SAR (measured) = 0.660 W/kg



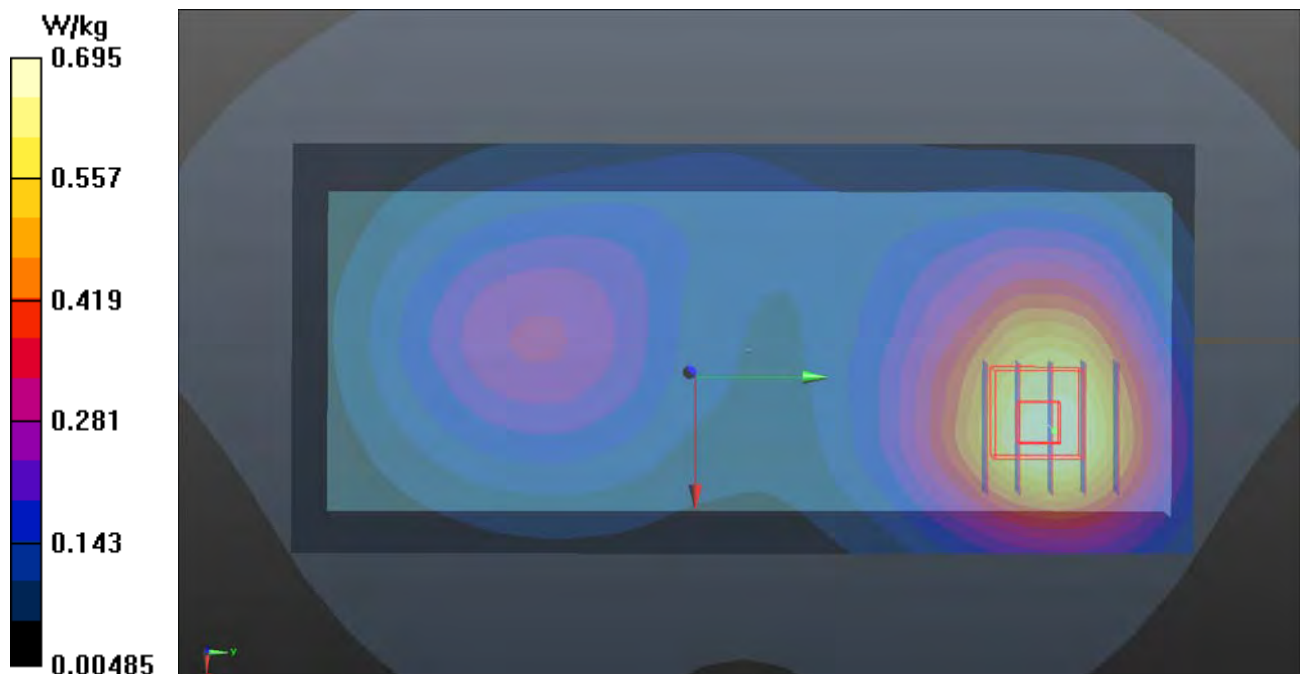
P57 LTE 5_QPSK10M_Front Face_10mm_Ch20600_Sample1_1RB_OS49**DUT: 171130C29**

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

Medium: B07T10N3_0205 Medium parameters used: $f = 844 \text{ MHz}$; $\sigma = 0.978 \text{ S/m}$; $\epsilon_r = 55.303$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.6 \text{ }^\circ\text{C}$; Liquid Temperature : $23.3 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 0.695 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 26.63 V/m ; Power Drift = -0.13 dB Peak SAR (extrapolated) = 0.751 W/kg **SAR(1 g) = 0.528 W/kg ; SAR(10 g) = 0.369 W/kg** Maximum value of SAR (measured) = 0.669 W/kg 

P58 LTE 7_QPSK20M_Right Side_10mm_Ch21100_Sample1_1RB_OS99**DUT: 171130C29**

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

Medium: B19T27N1_0213 Medium parameters used: $f = 2535$ MHz; $\sigma = 2.134$ S/m; $\epsilon_r = 53.175$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.7 °C ; Liquid Temperature : 23.4 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.37, 7.37, 7.37); Calibrated: 2017/07/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2017/03/20
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (61x181x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.944 W/kg

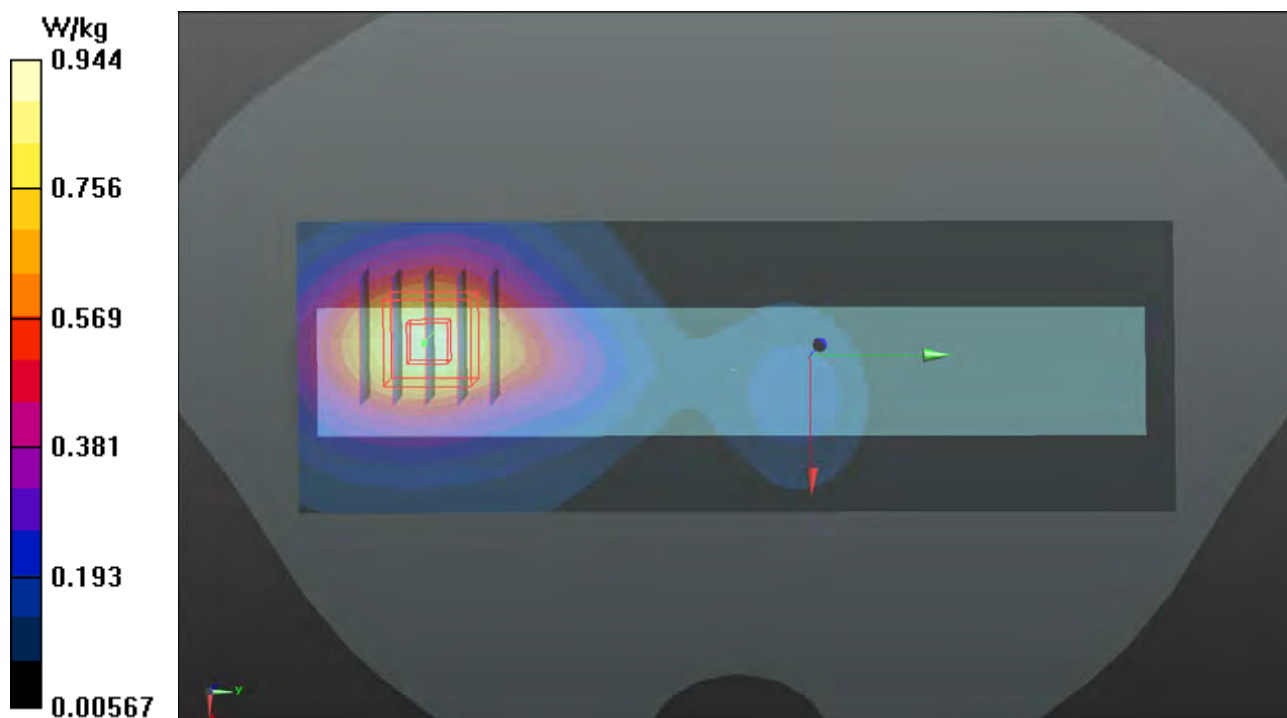
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.55 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.527 W/kg; SAR(10 g) = 0.320 W/kg

Maximum value of SAR (measured) = 0.930 W/kg



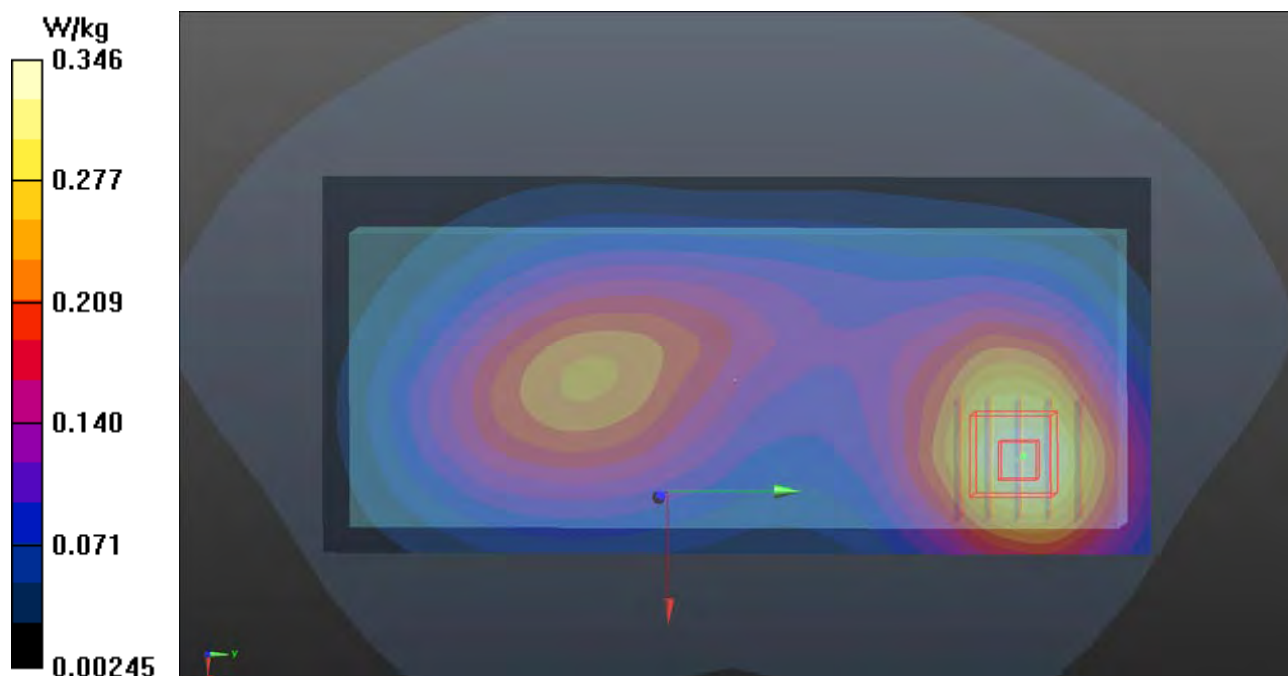
P59 LTE 12_QPSK10M_Front Face_10mm_Ch23130_Sample1_1RB_OS24**DUT: 171130C29**

Communication System: LTE; Frequency: 711 MHz; Duty Cycle: 1:1

Medium: B06T09N1_0206 Medium parameters used: $f = 711 \text{ MHz}$; $\sigma = 0.924 \text{ S/m}$; $\epsilon_r = 55.849$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.5 \text{ }^\circ\text{C}$; Liquid Temperature : $23.1 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.61, 10.61, 10.61); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 0.346 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 19.43 V/m ; Power Drift = 0.00 dB Peak SAR (extrapolated) = 0.372 W/kg **SAR(1 g) = 0.265 W/kg ; SAR(10 g) = 0.187 W/kg** Maximum value of SAR (measured) = 0.335 W/kg 

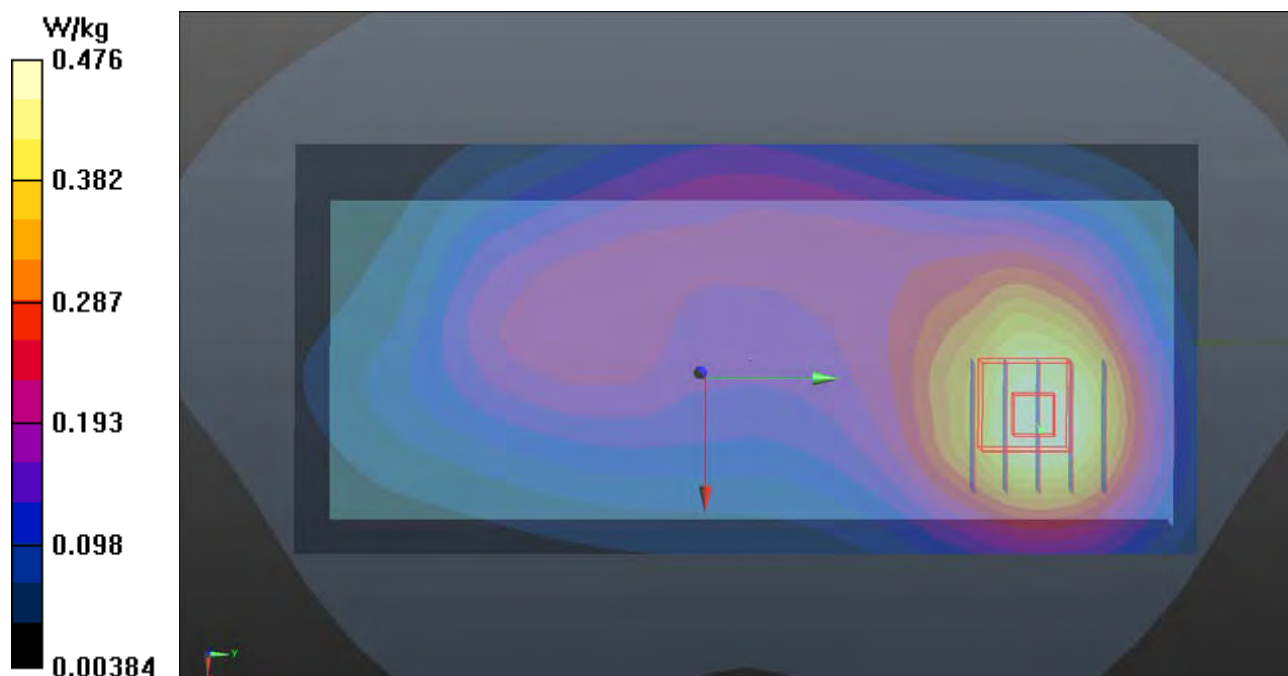
P60 LTE 13_QPSK10M_Front Face_10mm_Ch23230_Sample1_1RB_OS0**DUT: 171130C29**

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

Medium: B06T09N1_0206 Medium parameters used: $f = 782 \text{ MHz}$; $\sigma = 0.987 \text{ S/m}$; $\epsilon_r = 55.203$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature : $23.6 \text{ }^\circ\text{C}$; Liquid Temperature : $23.3 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.61, 10.61, 10.61); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$ Maximum value of SAR (interpolated) = 0.476 W/kg **- Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 22.06 V/m ; Power Drift = -0.08 dB Peak SAR (extrapolated) = 0.500 W/kg **SAR(1 g) = 0.353 W/kg ; SAR(10 g) = 0.248 W/kg** Maximum value of SAR (measured) = 0.448 W/kg 

P61 LTE 25_QPSK20M_Right Side_10mm_Ch26140_Sample1_1RB_OS0**DUT: 171130C29**

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

Medium: B16T20N1_0206 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 51.056$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(8.26, 8.26, 8.26); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (41x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.509 W/kg

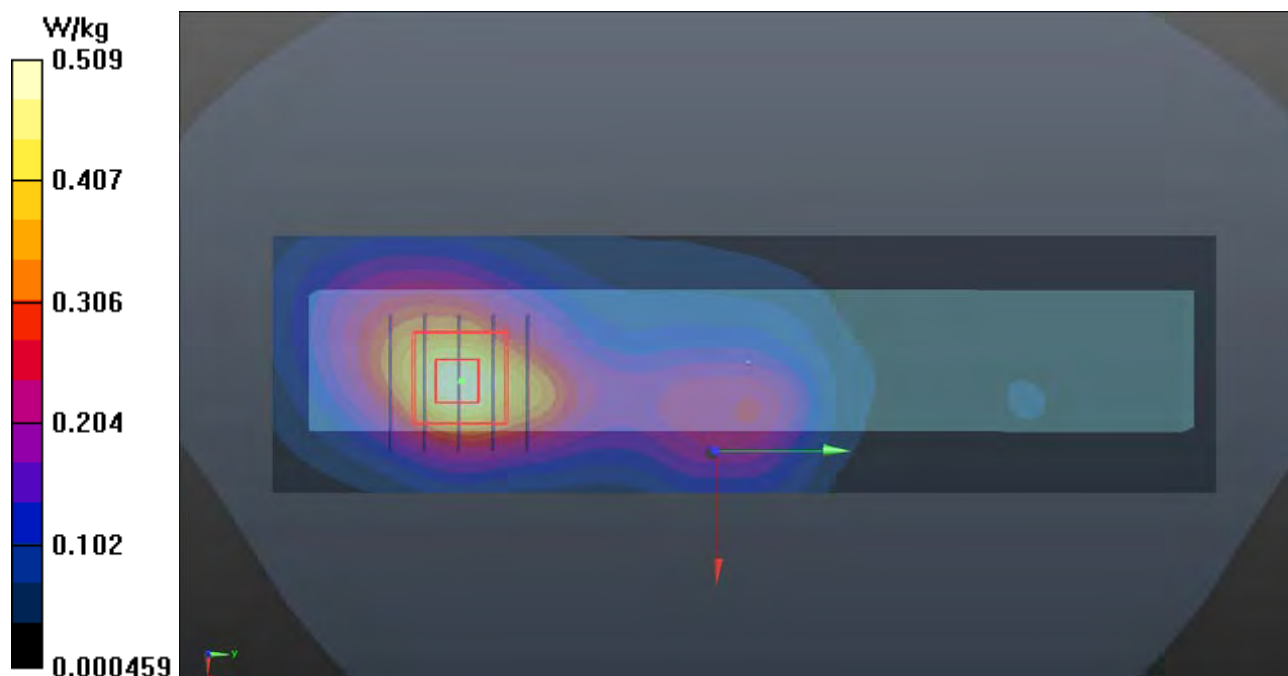
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.49 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.603 W/kg

SAR(1 g) = 0.359 W/kg; SAR(10 g) = 0.211 W/kg

Maximum value of SAR (measured) = 0.515 W/kg



P62 LTE 26_QPSK15M_Front Face_10mm_Ch26965_Sample1_1RB_OS74**DUT: 171130C29**

Communication System: LTE; Frequency: 841.5 MHz; Duty Cycle: 1:1

Medium: B07T10N3_0205 Medium parameters used: $f = 841.5$ MHz; $\sigma = 0.976$ S/m; $\epsilon_r = 55.327$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(10.52, 10.52, 10.52); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.662 W/kg

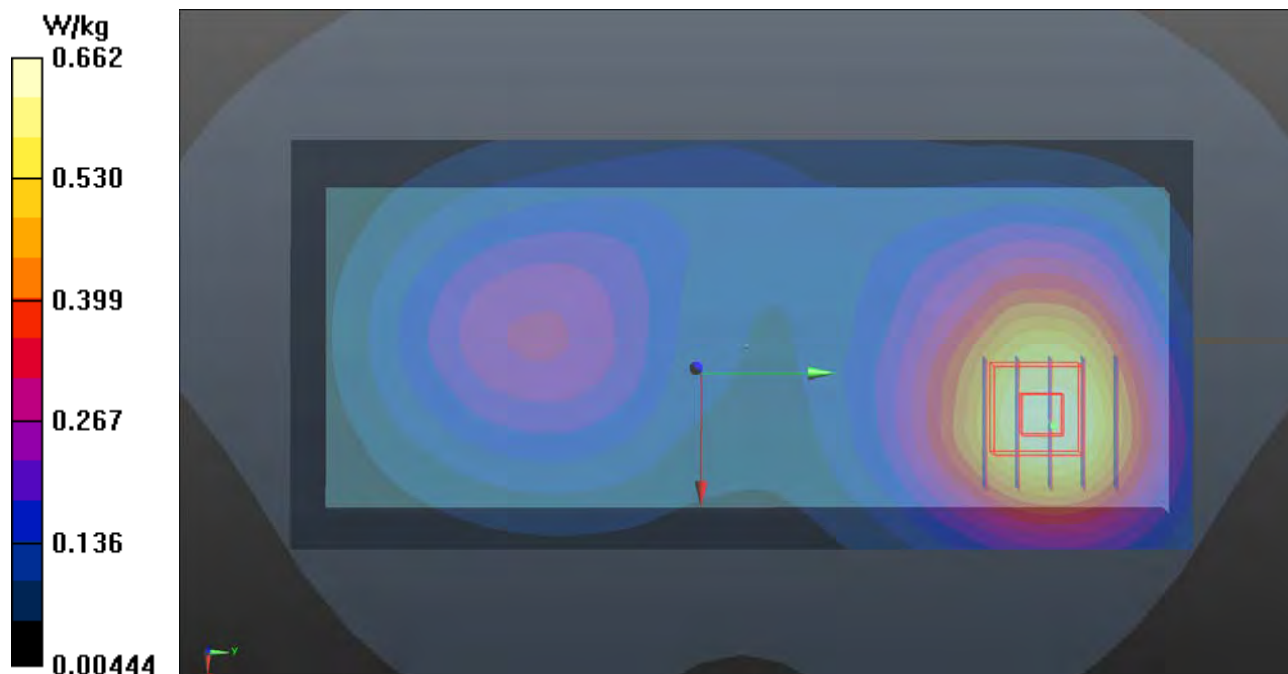
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.03 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.731 W/kg

SAR(1 g) = 0.511 W/kg; SAR(10 g) = 0.356 W/kg

Maximum value of SAR (measured) = 0.653 W/kg



P63 LTE 38_QPSK20M_Right Side_10mm_Ch37850_Sample1_1RB_OS50**DUT: 171130C29**

Communication System: LTE TDD CF0; Frequency: 2580 MHz; Duty Cycle: 1:1.58

Medium: B19T27N2_0206 Medium parameters used: $f = 2580$ MHz; $\sigma = 2.143$ S/m; $\epsilon_r = 50.176$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(7.32, 7.32, 7.32); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (51x191x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.868 W/kg

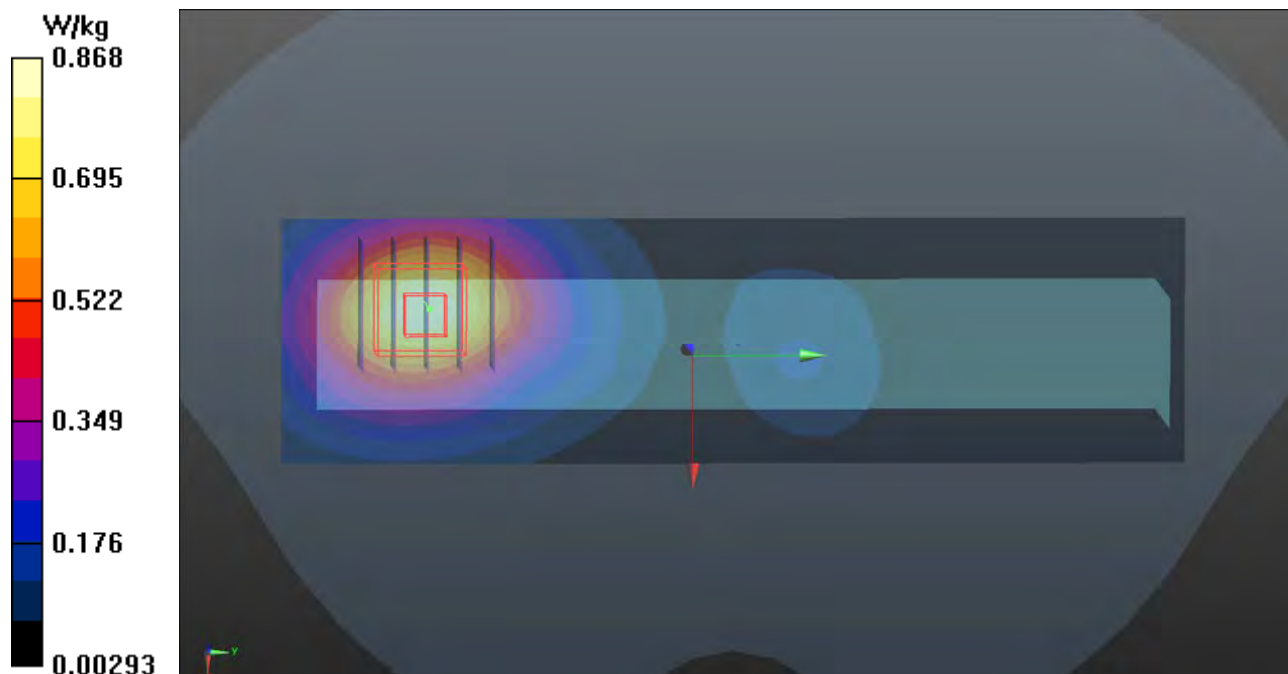
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.29 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.321 W/kg

Maximum value of SAR (measured) = 0.883 W/kg



P64 LTE 41_QPSK20M_Right Side_10mm_Ch.39790_Sample1_1RB_OS50**DUT: 171130C29**

Communication System: LTE TDD CF0; Frequency: 2510 MHz; Duty Cycle: 1:1.58

Medium: B19T27N2_0206 Medium parameters used: $f = 2510$ MHz; $\sigma = 2.065$ S/m; $\epsilon_r = 50.39$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3971; ConvF(7.32, 7.32, 7.32); Calibrated: 2017/03/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2017/05/22
- Phantom: Twin SAM Phantom_1496; Type: QD000P40CA;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (51x191x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.969 W/kg

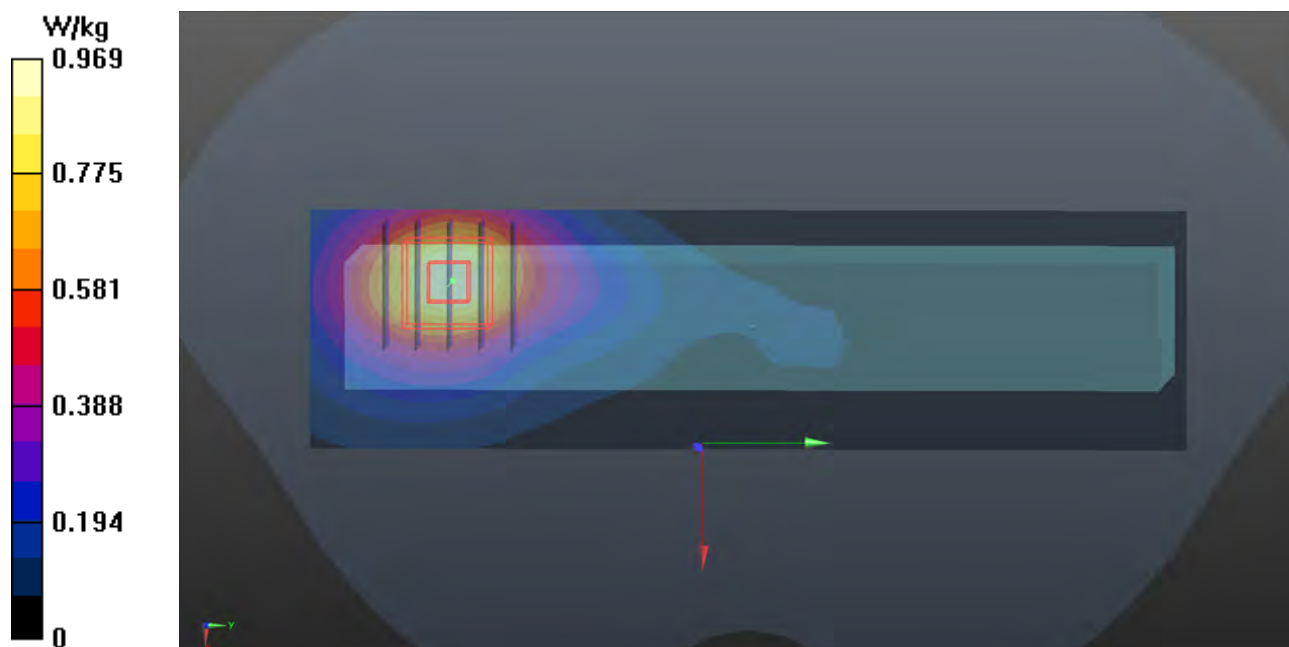
- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.82 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.640 W/kg; SAR(10 g) = 0.357 W/kg

Maximum value of SAR (measured) = 0.967 W/kg



P65 WLAN2.4G_802.11b_Right Side_10mm_Ch11_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_2.4G; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: B19T27N2_0214 Medium parameters used: $f = 2462$ MHz; $\sigma = 2.036$ S/m; $\epsilon_r = 51.644$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.6 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(7.83, 7.83, 7.83); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn917; Calibrated: 2017/12/14
- Phantom: Twin SAM Phantom_1652; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (51x201x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.571 W/kg

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

Reference Value = 17.30 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.708 W/kg

SAR(1 g) = 0.368 W/kg; SAR(10 g) = 0.190 W/kg

Maximum value of SAR (measured) = 0.578 W/kg

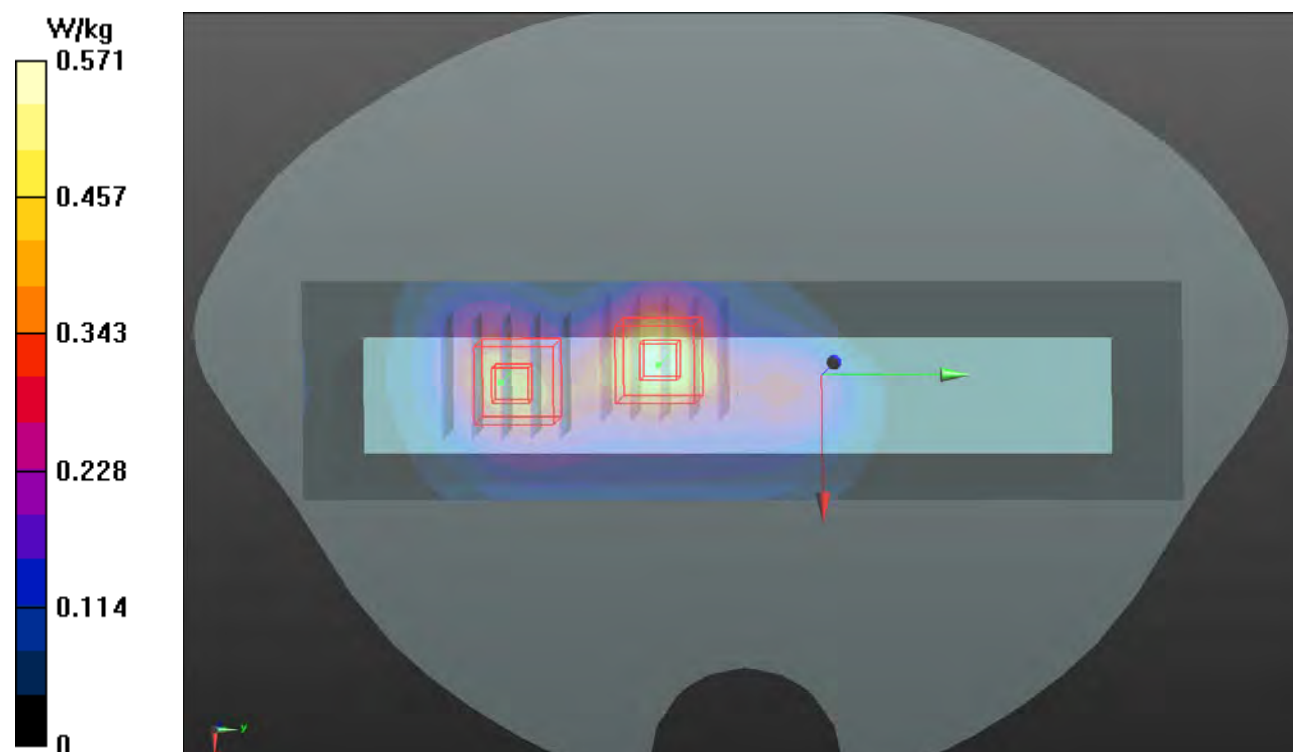
- Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.30 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.490 W/kg

SAR(1 g) = 0.269 W/kg; SAR(10 g) = 0.150 W/kg

Maximum value of SAR (measured) = 0.403 W/kg



P66 WLAN5G_802.11ac VHT80_Right Side_10mm_Ch42_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_5G; Frequency: 5210 MHz; Duty Cycle: 1:1

Medium: B34T60N1_0211 Medium parameters used: $f = 5210$ MHz; $\sigma = 5.321$ S/m; $\epsilon_r = 47.037$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(4.84, 4.84, 4.84); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (121x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.700 W/kg

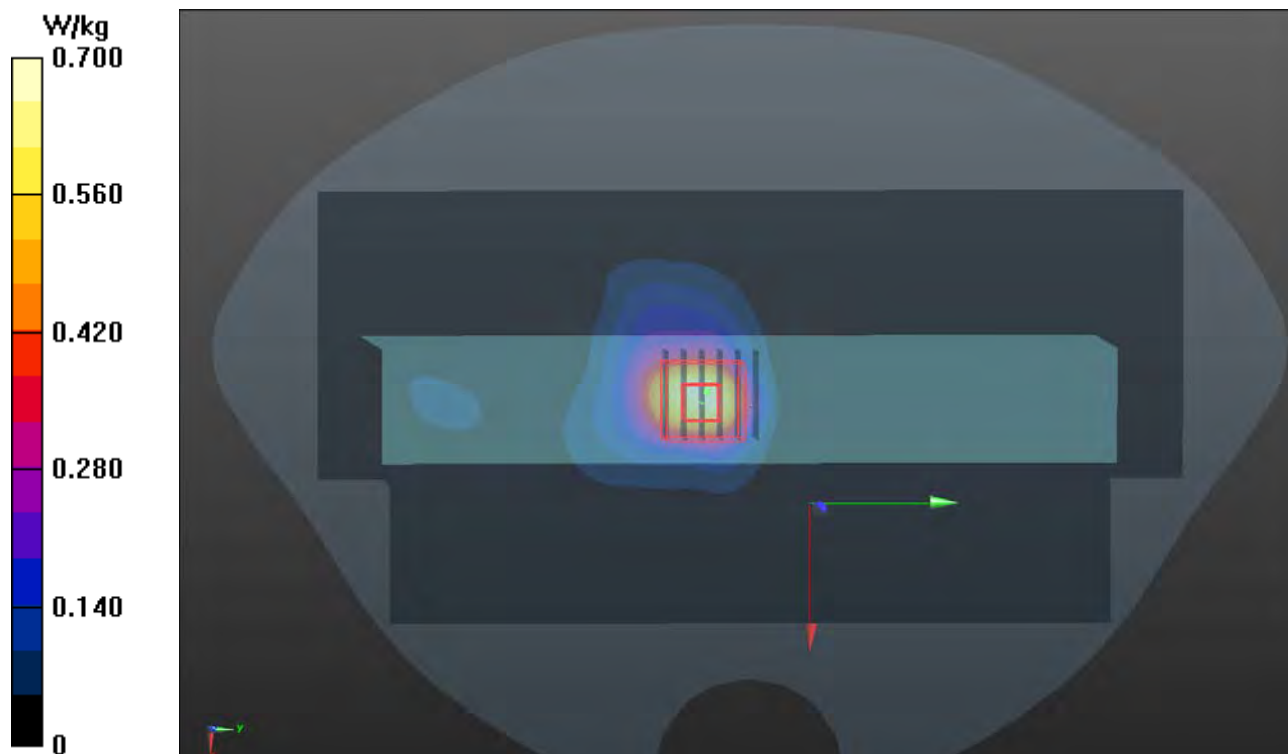
- Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 12.04 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.339 W/kg; SAR(10 g) = 0.120 W/kg

Maximum value of SAR (measured) = 0.762 W/kg



P67 WLAN5G_802.11ac VHT80_Right Side_10mm_Ch155_Sample1_Ant0+1**DUT: 171130C29**

Communication System: WLAN_5G; Frequency: 5775 MHz; Duty Cycle: 1:1

Medium: B34T60N1_0211 Medium parameters used: $f = 5775$ MHz; $\sigma = 6.028$ S/m; $\epsilon_r = 46.017$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7375; ConvF(4.41, 4.41, 4.41); Calibrated: 2017/12/18;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn579; Calibrated: 2017/08/17
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- Area Scan (121x241x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.366 W/kg

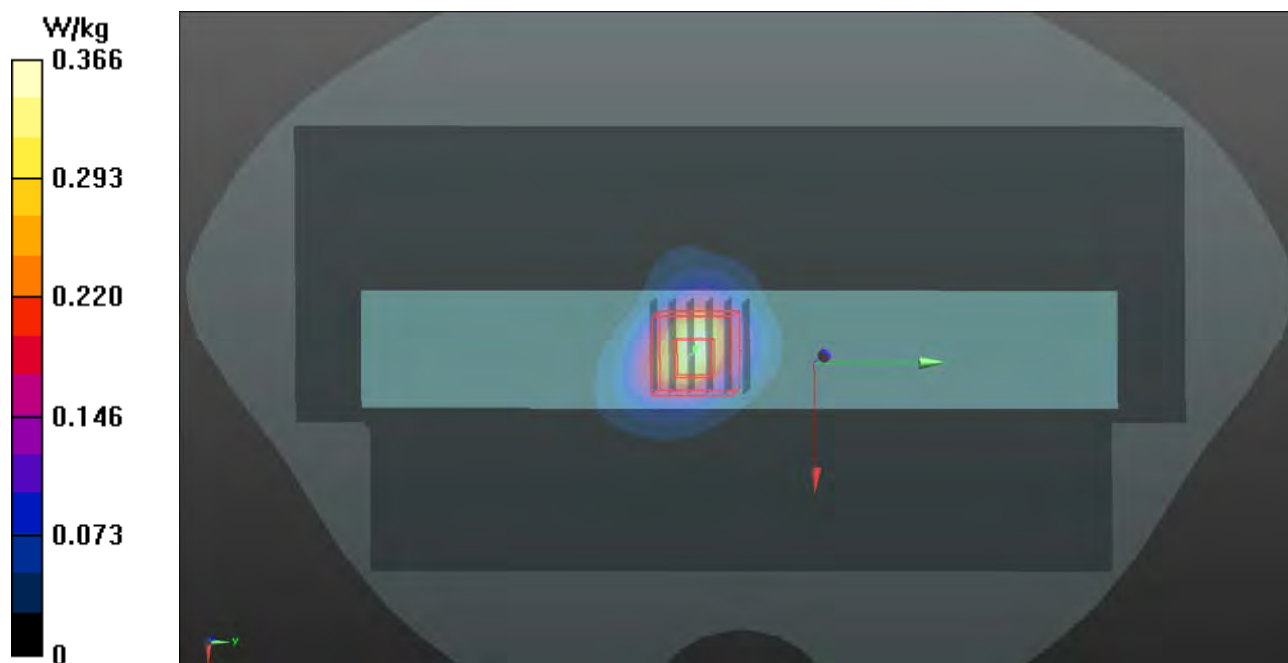
- Zoom Scan (6x6x12)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 7.261 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.706 W/kg

SAR(1 g) = 0.155 W/kg; SAR(10 g) = 0.050 W/kg

Maximum value of SAR (measured) = 0.370 W/kg



P68 BT_Front Face_10mm_Ch39_Sample1_Ant0**DUT: 171130C29**

Communication System: BT; Frequency: 2441 MHz; Duty Cycle: 1:1

Medium: B19T27N2_0212 Medium parameters used: $f = 2441$ MHz; $\sigma = 2.031$ S/m; $\epsilon_r = 51.797$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5 °C ; Liquid Temperature : 23.3 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.68, 7.68, 7.68); Calibrated: 2017/07/24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1431; Calibrated: 2017/03/20
- Phantom: Twin SAM Phantom_1822; Type: QD000P40;
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7373)

- **Area Scan (101x201x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.00829 W/kg

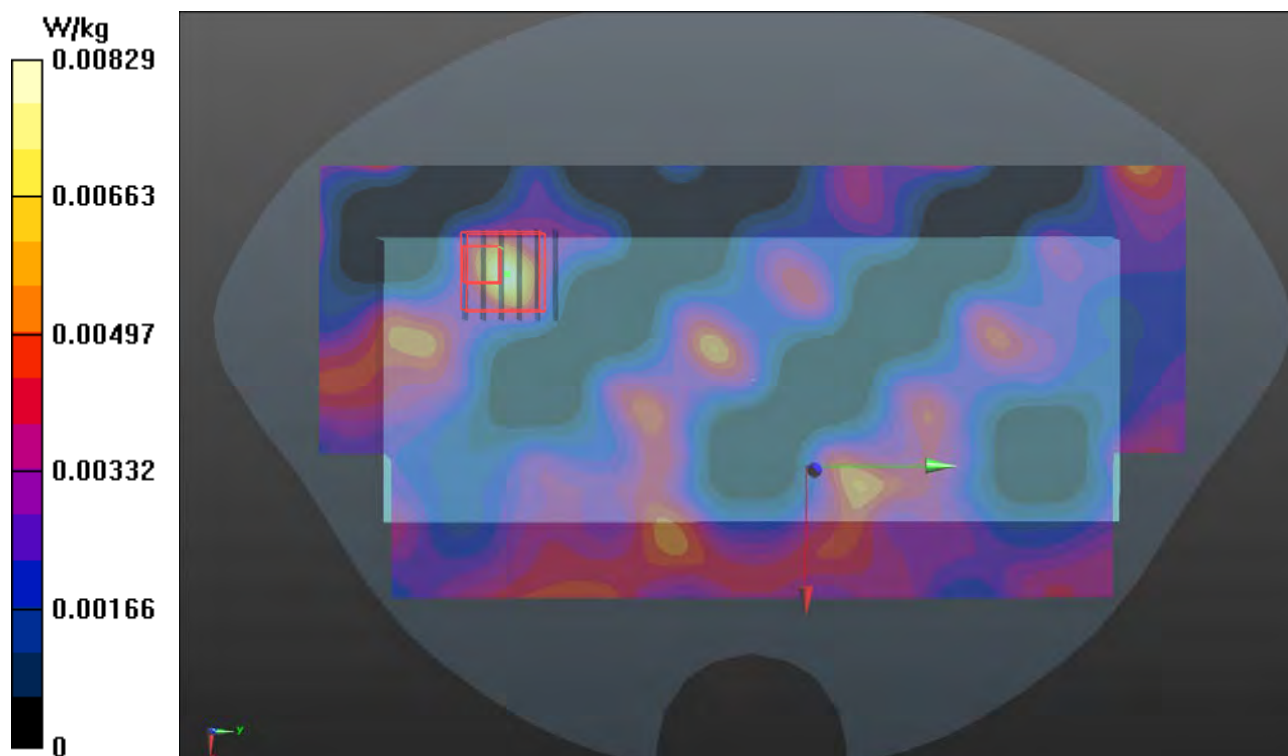
- **Zoom Scan (6x6x12)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 0.7230 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.0150 W/kg

SAR(1 g) = 0.000911 W/kg; SAR(10 g) = 0.000221 W/kg

Maximum value of SAR (measured) = 0.00429 W/kg



Appendix C. Calibration Certificate for Probe and Dipole

The SPEAG 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 **B.V. ADT (Auden)**

Certificate No: **D750V3-1013_Aug17**

CALIBRATION CERTIFICATE

Object **D750V3 - SN:1013**

Calibration procedure(s) **QA CAL-05.v9
Calibration procedure for dipole validation kits above 700 MHz**

Calibration date: **August 21, 2017**

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 (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Reference Probe EX3DV4	SN: 7349	31-May-17 (No. EX3-7349_May17)	May-18
DAE4	SN: 601	28-Mar-17 (No. DAE4-601_Mar17)	Mar-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-16)	In house check: Oct-17

Calibrated by: **Claudio Leubler** **Laboratory Technician**

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

Signature

Issued: August 21, 2017

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



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**

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	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	41.1 $\pm$ 6 %	0.90 mho/m $\pm$ 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.09 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.25 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.35 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.35 W/kg $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	55.5 $\pm$ 6 %	0.96 mho/m $\pm$ 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.18 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	8.72 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.43 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	5.72 W/kg $\pm$ 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	$54.6 \Omega + 0.5 j\Omega$
Return Loss	- 27.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	$48.8 \Omega - 3.1 j\Omega$
Return Loss	- 29.4 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.034 ns
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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
Manufactured on	March 22, 2010

DASY5 Validation Report for Head TSL

Date: 18.08.2017

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1013

Communication System: UID 0 - CW; Frequency: 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.9 \text{ S/m}$; $\epsilon_r = 41.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.49, 10.49, 10.49); Calibrated: 31.05.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 28.03.2017
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

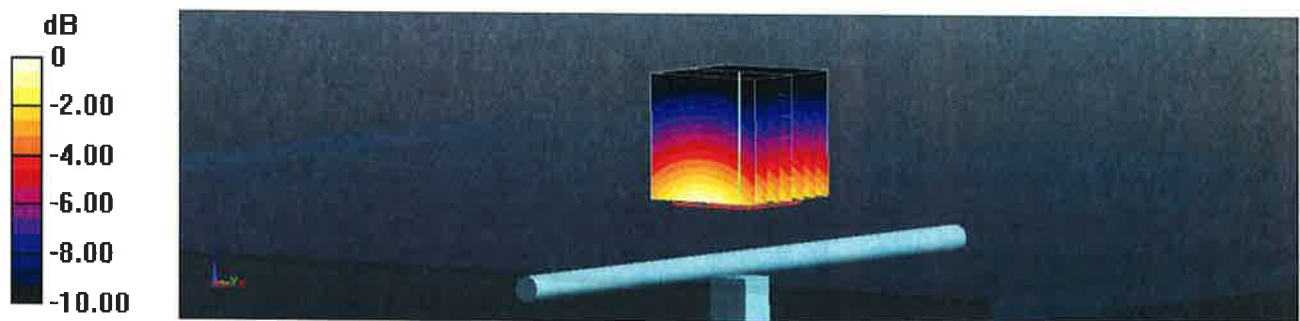
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

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

Peak SAR (extrapolated) = 3.21 W/kg

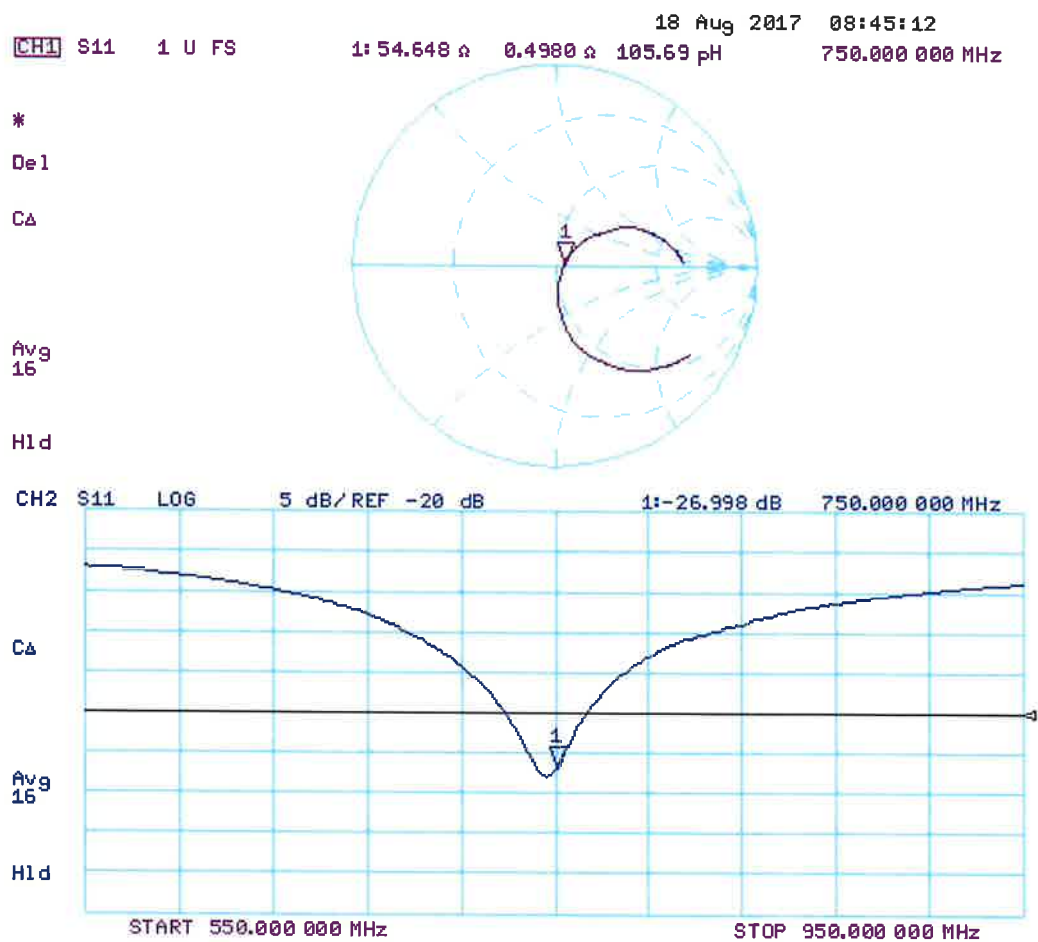
SAR(1 g) = 2.09 W/kg; SAR(10 g) = 1.35 W/kg

Maximum value of SAR (measured) = 2.83 W/kg



0 dB = 2.83 W/kg = 4.52 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 21.08.2017

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1013

Communication System: UID 0 - CW; Frequency: 750 MHz

Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.96 \text{ S/m}$; $\epsilon_r = 55.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.35, 10.35, 10.35); Calibrated: 31.05.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 28.03.2017
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

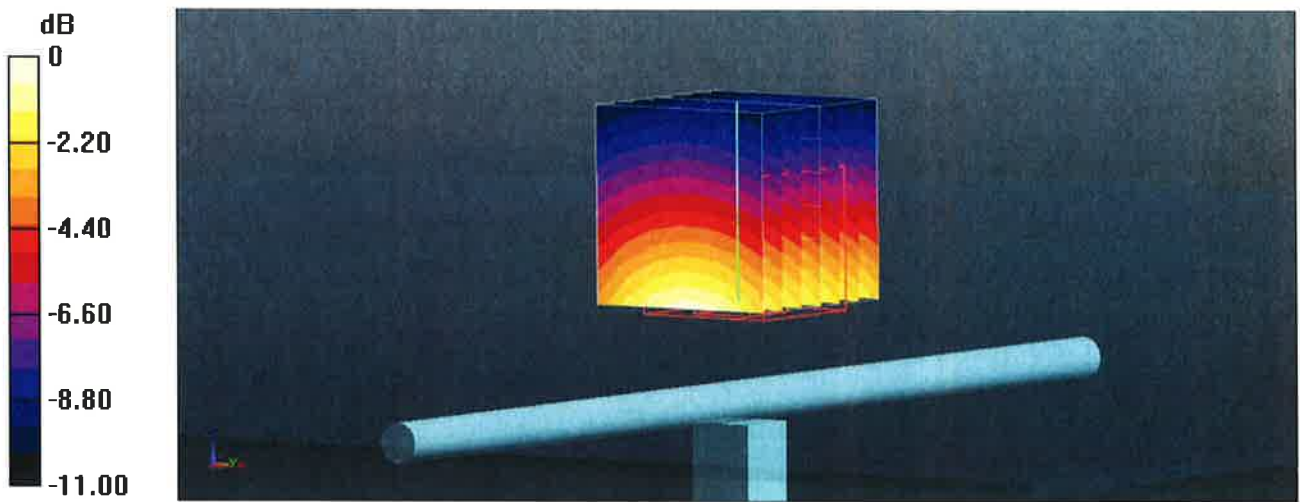
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 57.81 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.29 W/kg

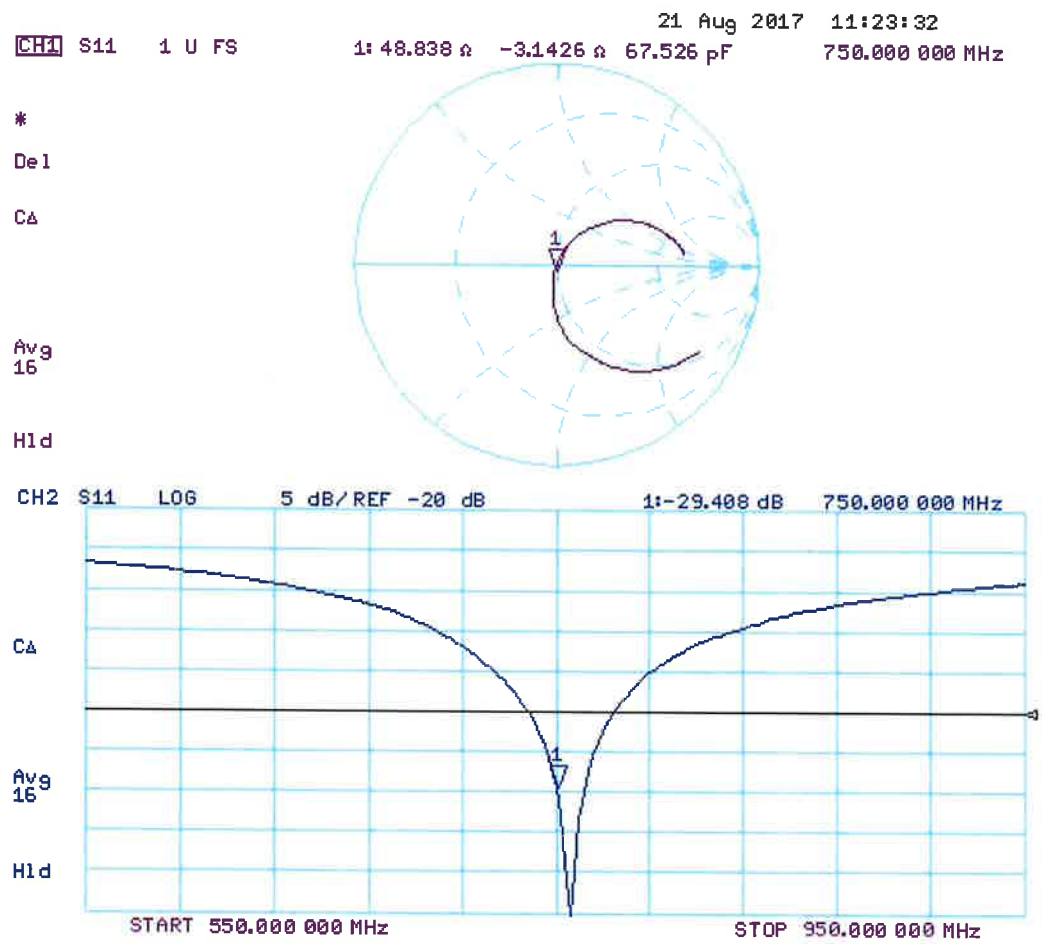
SAR(1 g) = 2.18 W/kg; SAR(10 g) = 1.43 W/kg

Maximum value of SAR (measured) = 2.89 W/kg



0 dB = 2.89 W/kg = 4.61 dBW/kg

Impedance Measurement Plot for Body TSL





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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 **B.V. ADT (Auden)**

Certificate No: **D835V2-4d121_Aug17**

CALIBRATION CERTIFICATE

Object **D835V2 - SN:4d121**

Calibration procedure(s) **QA CAL-05.v9**
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: **August 21, 2017**

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 $(22 \pm 3)^{\circ}\text{C}$ 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	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Reference Probe EX3DV4	SN: 7349	31-May-17 (No. EX3-7349_May17)	May-18
DAE4	SN: 601	28-Mar-17 (No. DAE4-601_Mar17)	Mar-18

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-16)	In house check: Oct-17

Calibrated by: **Claudio Leubler** **Laboratory Technician**

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

Signature

Signature

Issued: August 21, 2017

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



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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

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	V52.10.0
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	40.9 $\pm$ 6 %	0.93 mho/m $\pm$ 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.42 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.41 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.56 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.11 W/kg $\pm$ 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 $\pm$ 0.2) °C	55.3 $\pm$ 6 %	0.98 mho/m $\pm$ 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.42 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	9.61 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.58 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	6.28 W/kg $\pm$ 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.4 Ω - 2.8 j Ω
Return Loss	- 30.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.1 Ω - 5.8 j Ω
Return Loss	- 23.5 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.395 ns
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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
Manufactured on	June 29, 2010

DASY5 Validation Report for Head TSL

Date: 18.08.2017

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d121

Communication System: UID 0 - CW; Frequency: 835 MHz

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.93 \text{ S/m}$; $\epsilon_r = 40.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.07, 10.07, 10.07); Calibrated: 31.05.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 28.03.2017
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

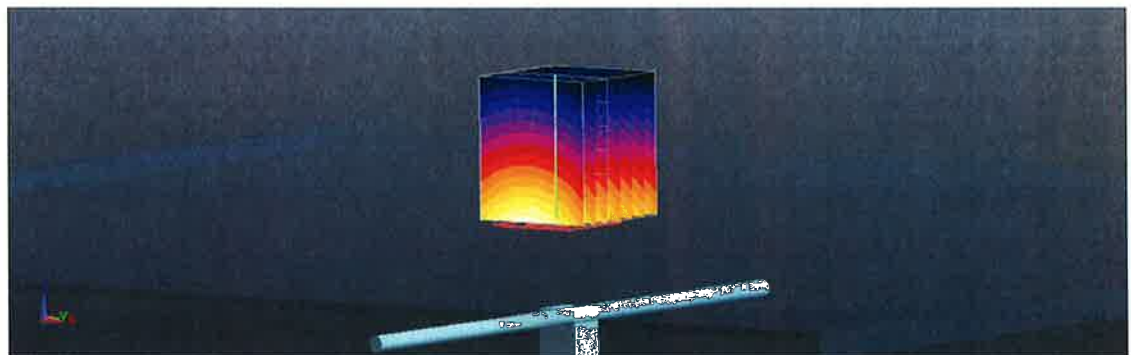
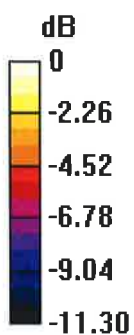
Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 61.91 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 3.75 W/kg

SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.56 W/kg

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



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