

Plot 84 GSM 850 GPRS (2Txslots) Back Side Middle (Distance 10mm)

Date: 3/31/2016

Communication System: UID 0, GPRS 2TX (0); Frequency: 836.6 MHz; Duty Cycle: 1:4.14954

Medium parameters used: $f = 837$ MHz; $\sigma = 0.967$ S/m; $\epsilon_r = 54.144$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.42, 9.42, 9.42); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side Middle /Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.406 W/kg

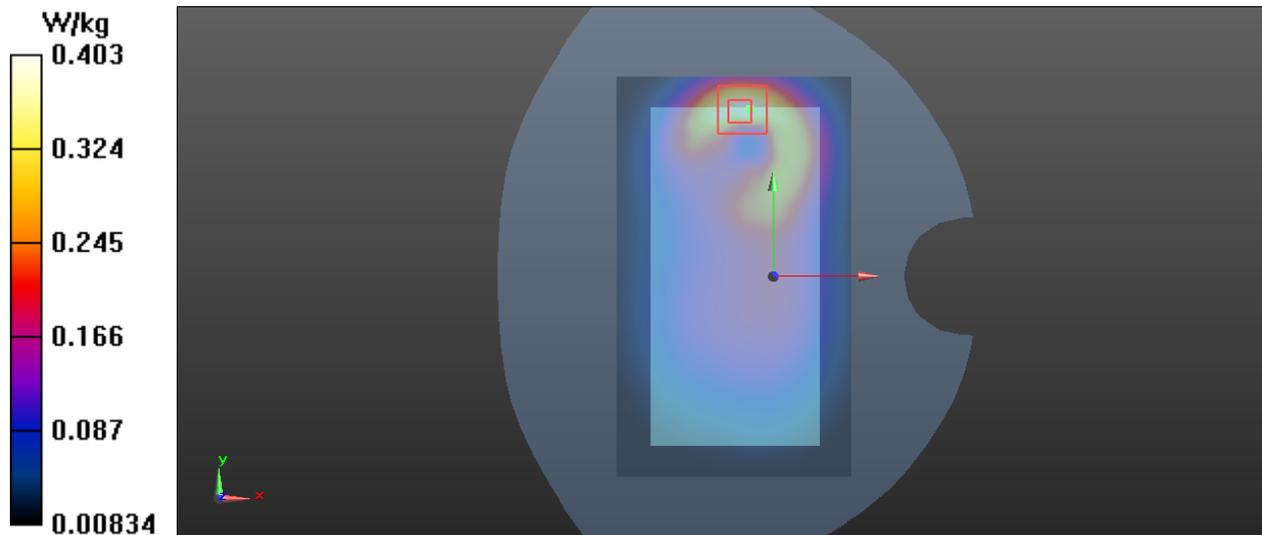
Back Side Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.04 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.678 W/kg

SAR(1 g) = 0.380 W/kg; SAR(10 g) = 0.213 W/kg

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



Plot 85 GSM 1900 Right Cheek Middle (Battery 3)

Date: 3/24/2016

Communication System: UID 0, GSM (0); Frequency: 1880 MHz; Duty Cycle: 1:8.30042

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.394$ S/m; $\epsilon_r = 40.185$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.96, 7.96, 7.96); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Cheek Middle/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.57 W/kg

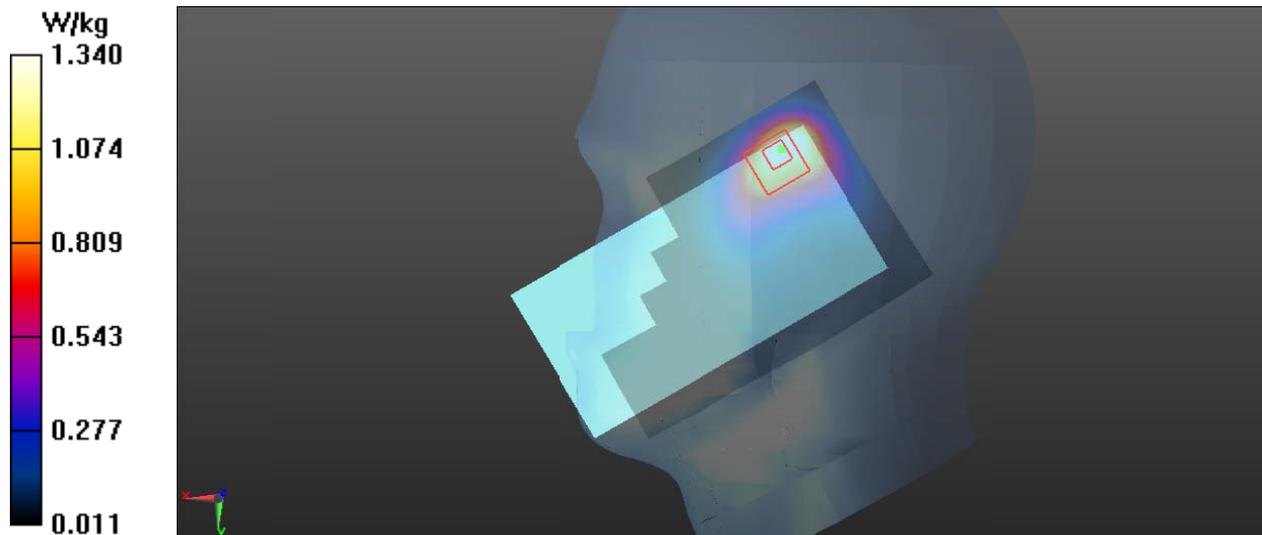
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.60 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.29 W/kg

SAR(1 g) = 1.21 W/kg; SAR(10 g) = 0.651 W/kg

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



Plot 86 GSM 1900 Back Side Middle (Distance 15mm)

Date: 3/22/2016

Communication System: UID 0, PCS 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.494$ S/m; $\epsilon_r = 52.613$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.42, 7.42, 7.42); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Back Side Middle /Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0923 W/kg

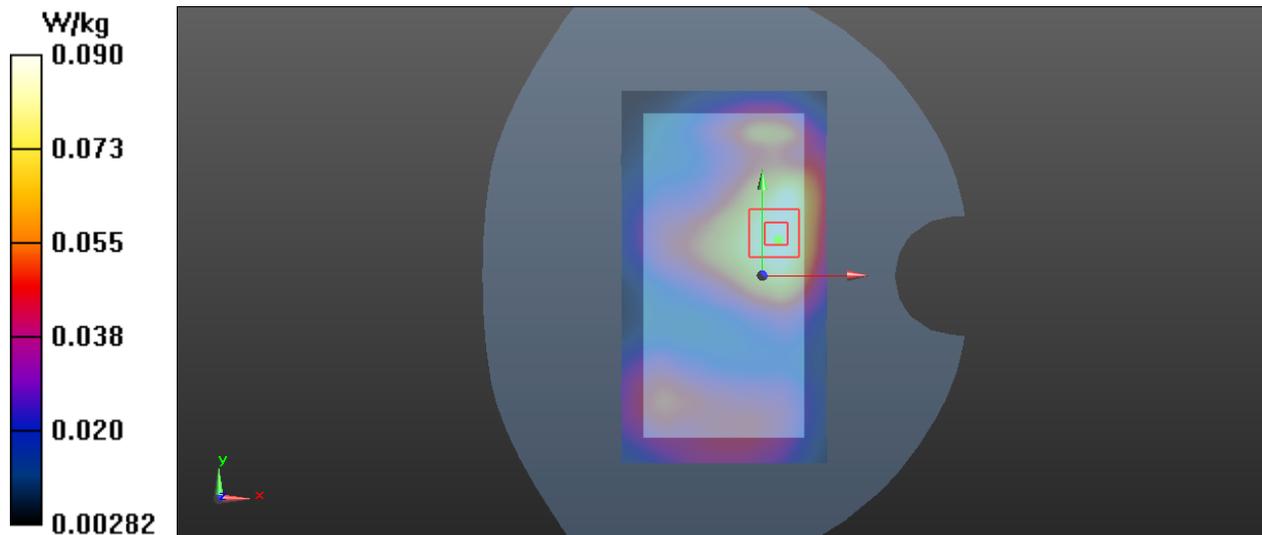
Back Side Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.078 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.129 W/kg

SAR(1 g) = 0.085 W/kg; SAR(10 g) = 0.055 W/kg

Maximum value of SAR (measured) = 0.0901 W/kg



Plot 87 GSM 1900 GPRS (2Txslots) Left Edge Middle (Distance 10mm)

Date: 3/22/2016

Communication System: UID 0, PCS 1900+GPRS(2Up); Frequency: 1880 MHz; Duty Cycle: 1:4.15

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.494$ S/m; $\epsilon_r = 52.613$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.42, 7.42, 7.42); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Left Edge Middle/Area Scan (51x171x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.293 W/kg

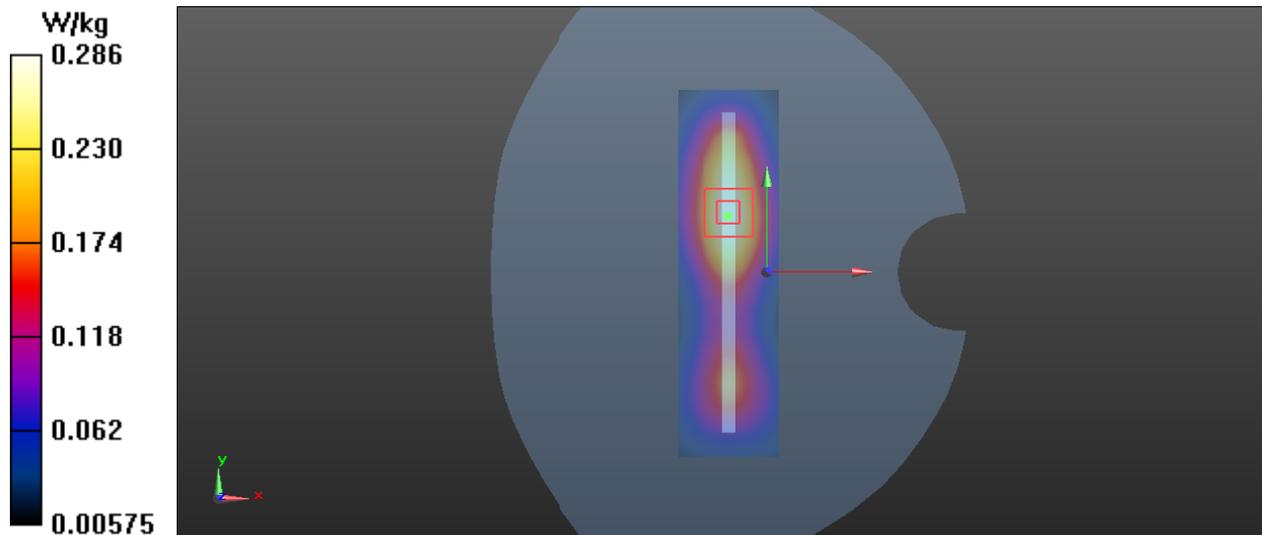
Left Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.78 V/m; Power Drift = 0.074 dB

Peak SAR (extrapolated) = 0.422 W/kg

SAR(1 g) = 0.264 W/kg; SAR(10 g) = 0.159 W/kg

Maximum value of SAR (measured) = 0.286 W/kg



Plot 88 UMTS Band II Right Cheek Middle

Date: 3/24/2016

Communication System: UID 0, WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.386$ S/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.96, 7.96, 7.96); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Cheek Middle/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.756 W/kg

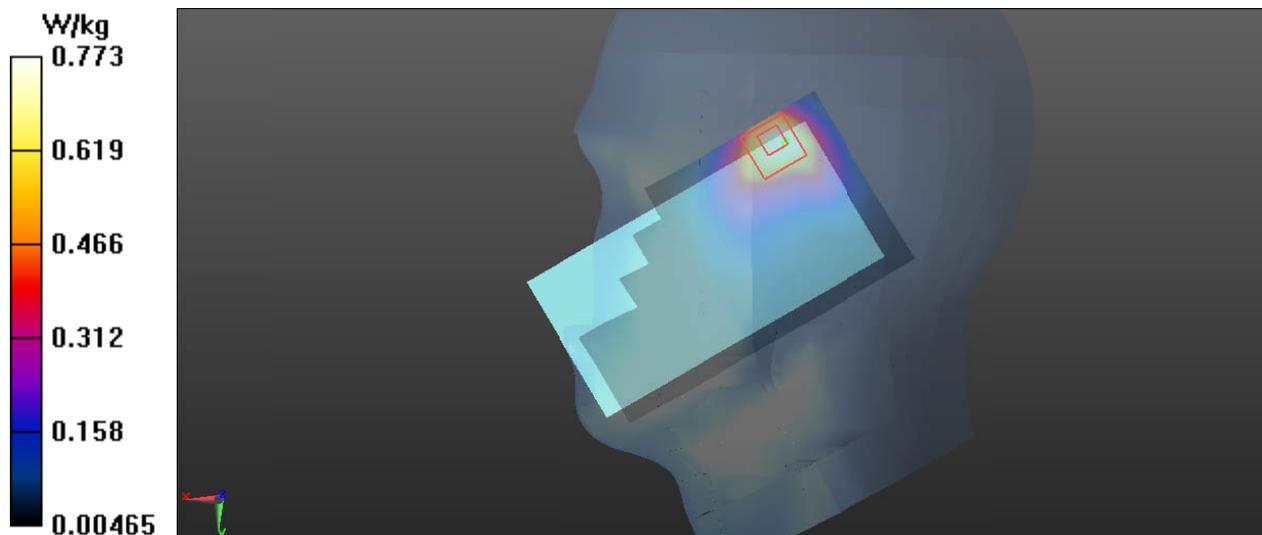
Right Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.22 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 1.63 W/kg

SAR(1 g) = 0.725 W/kg; SAR(10 g) = 0.363 W/kg

Maximum value of SAR (measured) = 0.773 W/kg



Plot 89 UMTS Band II Back Side Middle (Distance 15mm)

Date: 3/22/2016

Communication System: UID 0, WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.494$ S/m; $\epsilon_r = 52.613$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.42, 7.42, 7.42); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Back Side Middle/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0860 W/kg

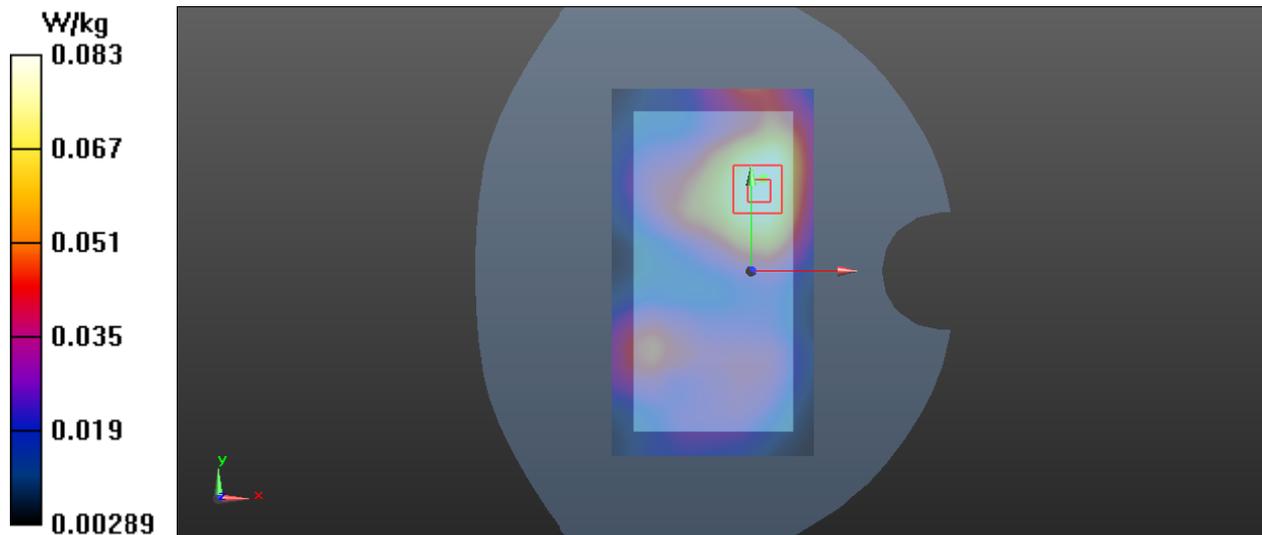
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.880 V/m; Power Drift = 0.068 dB

Peak SAR (extrapolated) = 0.117 W/kg

SAR(1 g) = 0.078 W/kg; SAR(10 g) = 0.051 W/kg

Maximum value of SAR (measured) = 0.0833 W/kg



Plot 90 UMTS Band II Back Side Middle (Battery 3, Distance 10mm)

Date: 3/22/2016

Communication System: UID 0, WCDMA Band II; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.494$ S/m; $\epsilon_r = 52.613$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.42, 7.42, 7.42); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Back Side Middle/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.621 W/kg

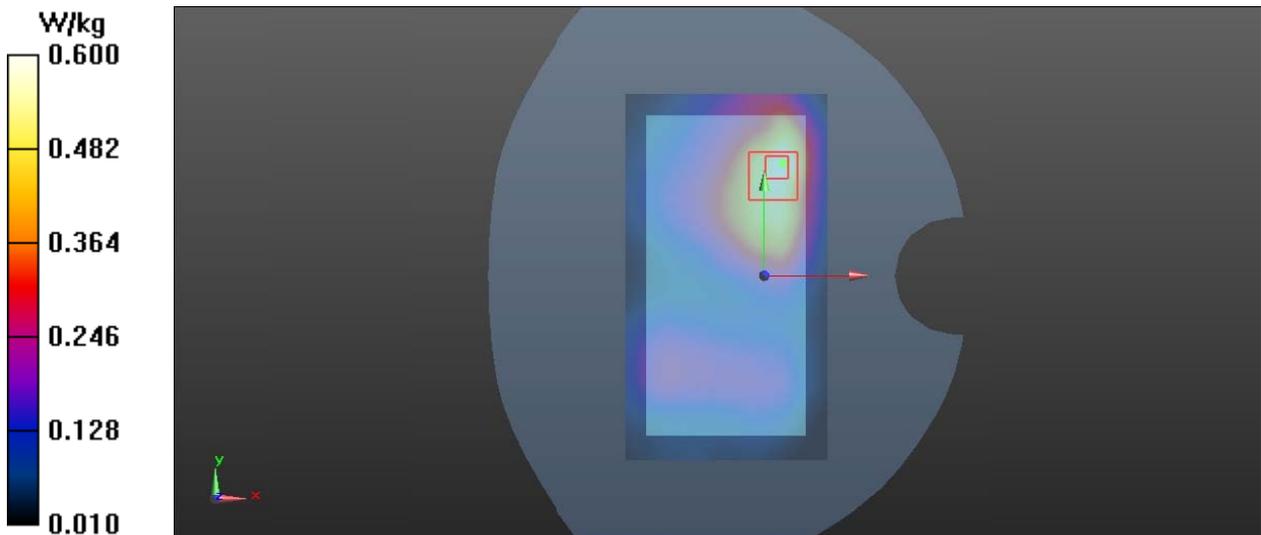
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.595 V/m; Power Drift = 0.078 dB

Peak SAR (extrapolated) = 0.889 W/kg

SAR(1 g) = 0.546 W/kg; SAR(10 g) = 0.337 W/kg

Maximum value of SAR (measured) = 0.600 W/kg



Plot 91 UMTS Band IV Right Cheek Low

Date: 4/4/2016

Communication System: UID 0, WCDMA (0); Frequency: 1712.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.303$ S/m; $\epsilon_r = 40.338$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.98, 7.98, 7.98); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Cheek Low/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

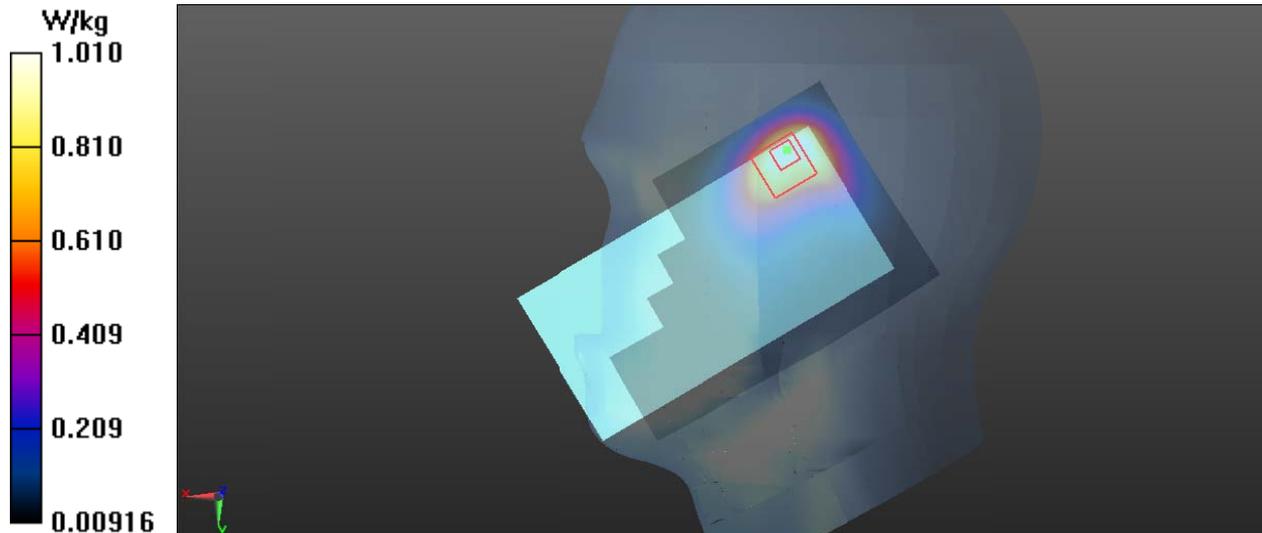
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.66 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 1.82 W/kg

SAR(1 g) = 0.920 W/kg; SAR(10 g) = 0.520 W/kg

Maximum value of SAR (measured) = 1.01 W/kg



Plot 92 UMTS Band IV Back Side Middle (Distance 15mm)

Date: 4/10/2016

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1733$ MHz; $\sigma = 1.443$ S/m; $\epsilon_r = 51.909$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.65, 7.65, 7.65); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side Middle /Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0855 W/kg

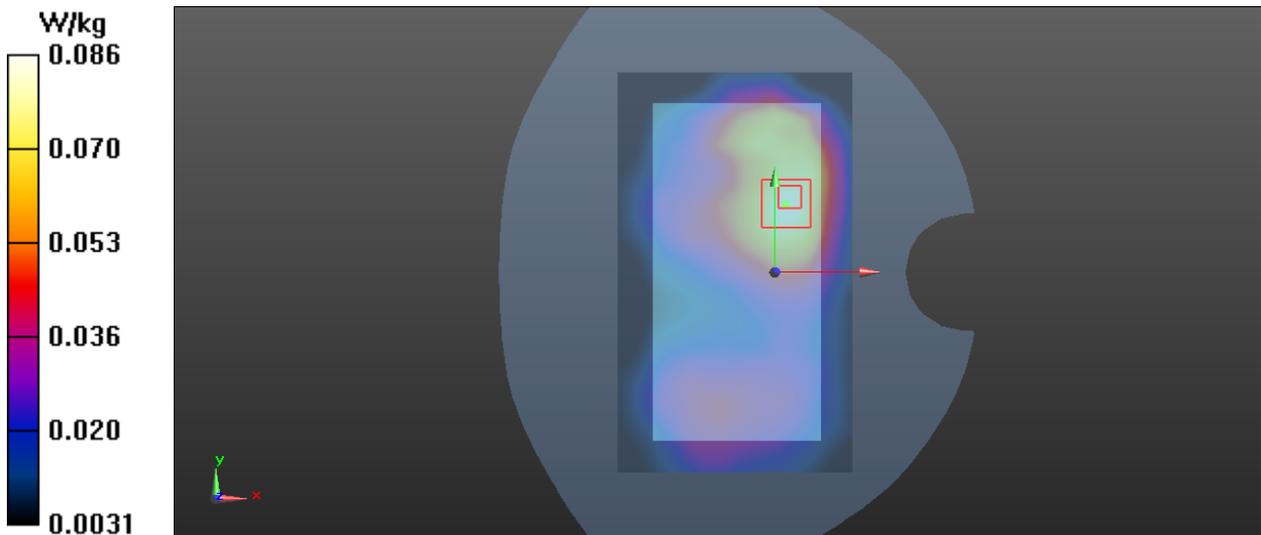
Back Side Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.671 V/m; Power Drift = 0.056 dB

Peak SAR (extrapolated) = 0.120 W/kg

SAR(1 g) = 0.081 W/kg; SAR(10 g) = 0.052 W/kg

Maximum value of SAR (measured) = 0.0862 W/kg



Plot 93 UMTS Band IV Left Edge Middle (Distance 10mm)

Date: 4/10/2016

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1733$ MHz; $\sigma = 1.443$ S/m; $\epsilon_r = 51.909$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.65, 7.65, 7.65); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Left Edge Middle/Area Scan (51x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.752 W/kg

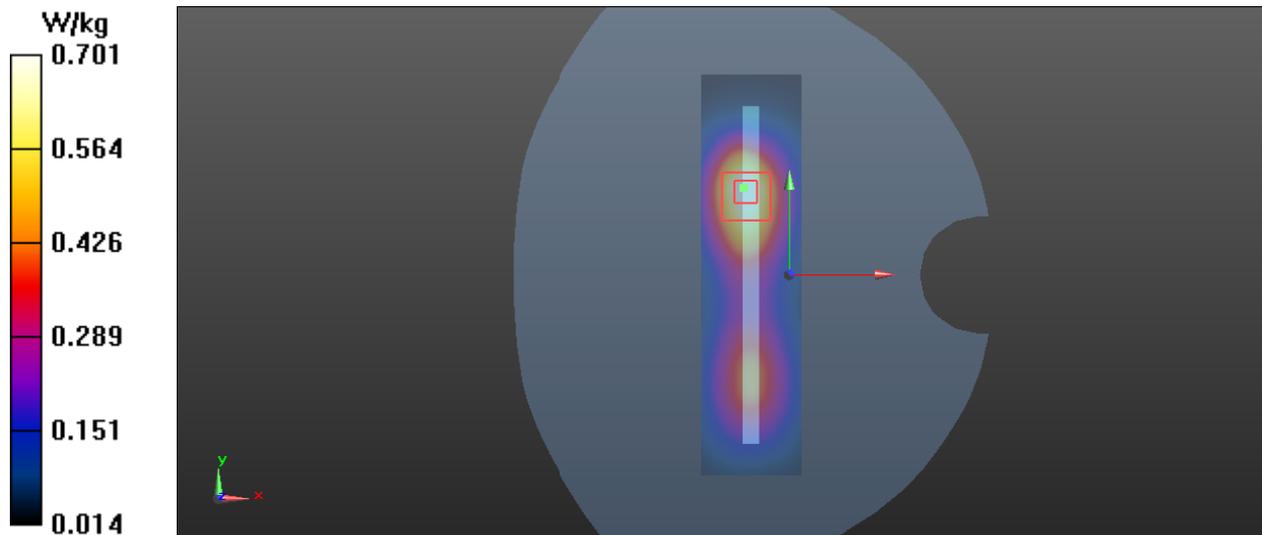
Left Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.16 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.655 W/kg; SAR(10 g) = 0.390 W/kg

Maximum value of SAR (measured) = 0.701 W/kg



Plot 94 UMTS Band V Right Tilt Middle

Date: 3/30/2016

Communication System: UID 0, WCDMA Band V; Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.939$ S/m; $\epsilon_r = 41.857$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.35, 9.35, 9.35); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Right Tilt Middle /Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.785 W/kg

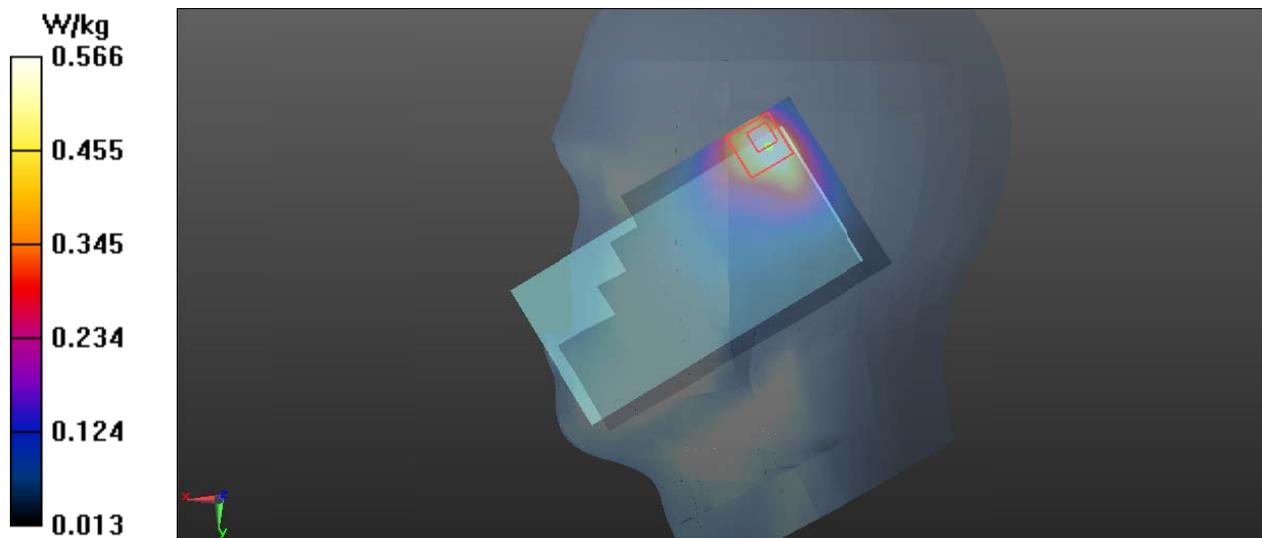
Right Tilt Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.63 V/m; Power Drift = -0.149 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.492 W/kg; SAR(10 g) = 0.254 W/kg

Maximum value of SAR (measured) = 0.566 W/kg



Plot 95 UMTS Band V Back Side Middle (Distance 15mm)

Date: 3/31/2016

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.967$ S/m; $\epsilon_r = 54.144$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.42, 9.42, 9.42); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side Middle /Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.140 W/kg

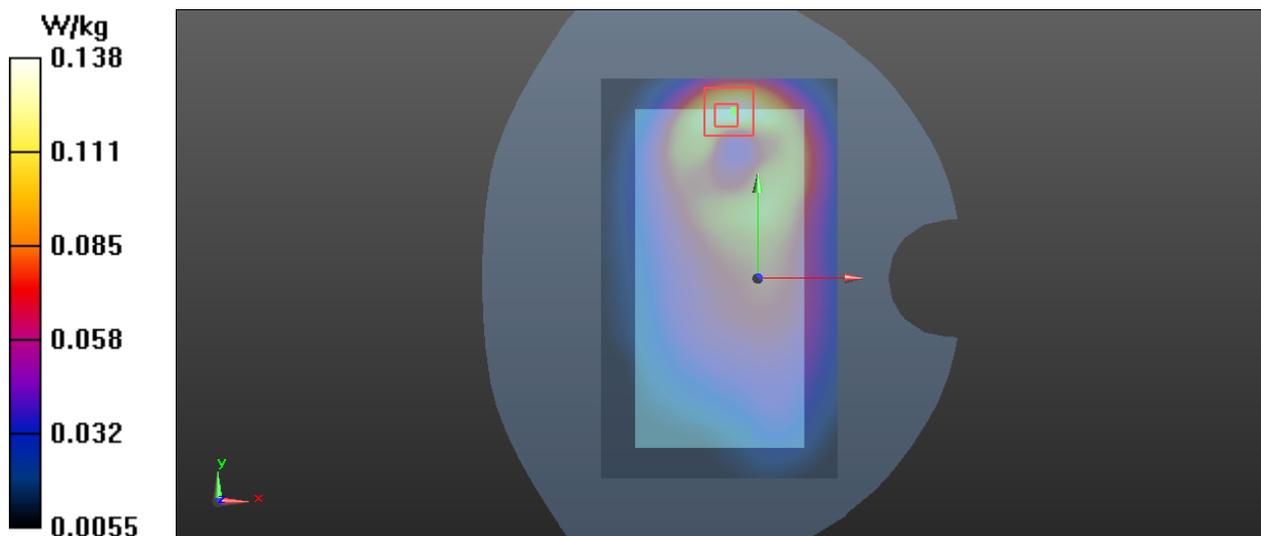
Back Side Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.584 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.208 W/kg

SAR(1 g) = 0.129 W/kg; SAR(10 g) = 0.077 W/kg

Maximum value of SAR (measured) = 0.138 W/kg



Plot 96 UMTS Band V Back Side Middle (Distance 10mm)

Date: 3/31/2016

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 837$ MHz; $\sigma = 0.967$ S/m; $\epsilon_r = 54.144$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.42, 9.42, 9.42); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side Middle /Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.310 W/kg

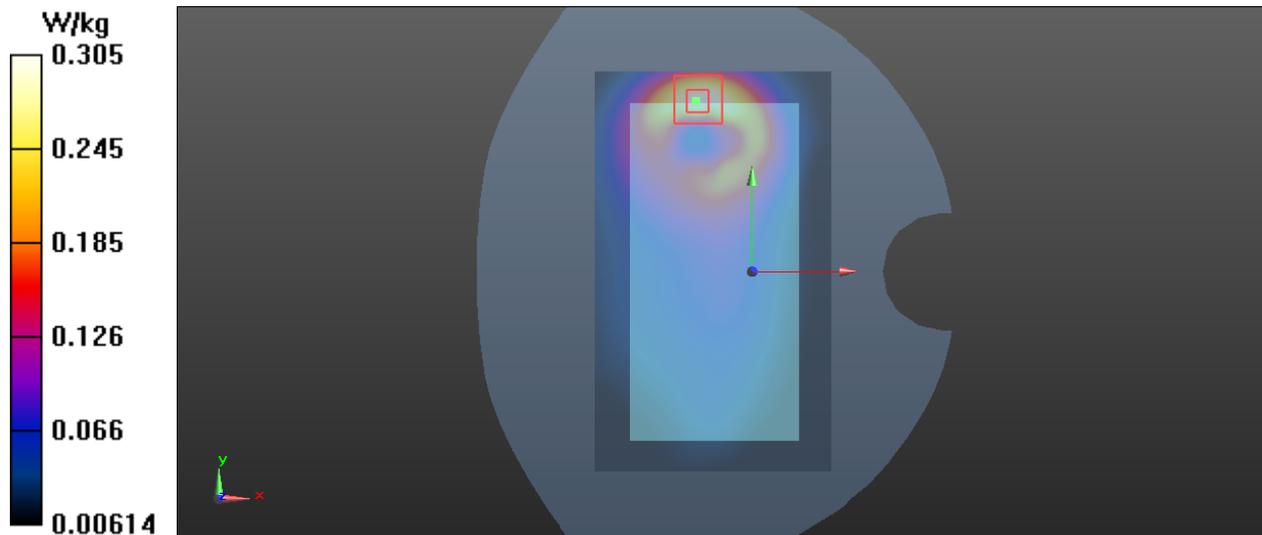
Back Side Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.411 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.506 W/kg

SAR(1 g) = 0.282 W/kg; SAR(10 g) = 0.158 W/kg

Maximum value of SAR (measured) = 0.305 W/kg



Plot 97 LTE Band 2 1RB Right Cheek Middle (Battery 2)

Date: 3/24/2016

Communication System: UID 0, LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.394$ S/m; $\epsilon_r = 40.185$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.96, 7.96, 7.96); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Cheek Middle/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.72 W/kg

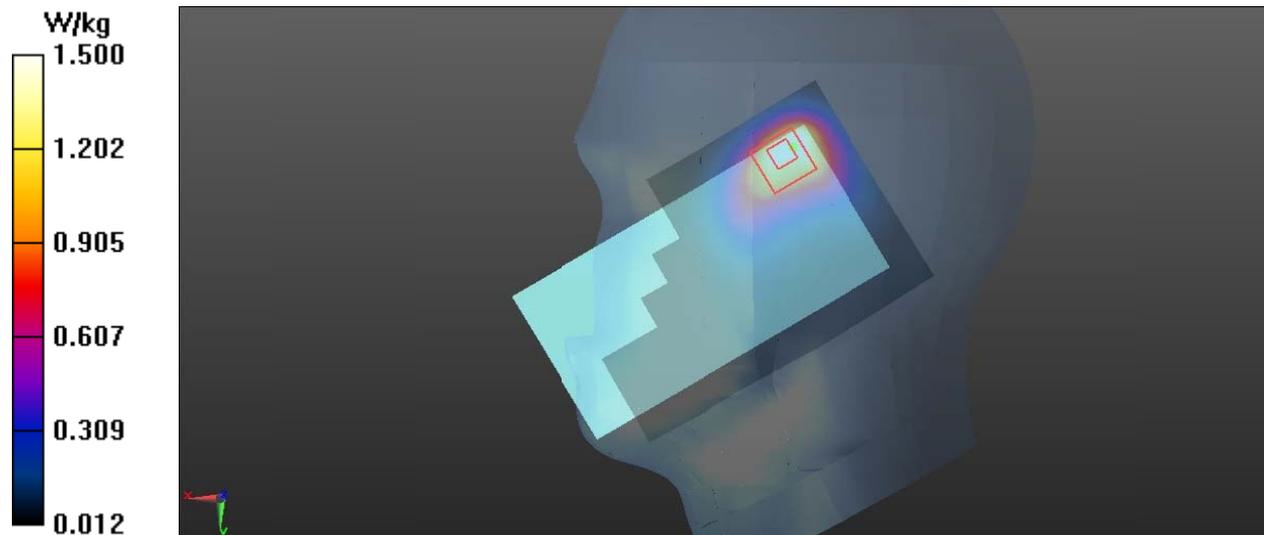
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.66 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 2.74 W/kg

SAR(1 g) = 1.35 W/kg; SAR(10 g) = 0.732 W/kg

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



Plot 98 LTE Band 2 1RB Back Side Middle (Distance 15mm)

Date: 3/22/2016

Communication System: UID 0, LTE Band 2; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.494$ S/m; $\epsilon_r = 52.613$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.42, 7.42, 7.42); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Back Side Middle/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0957 W/kg

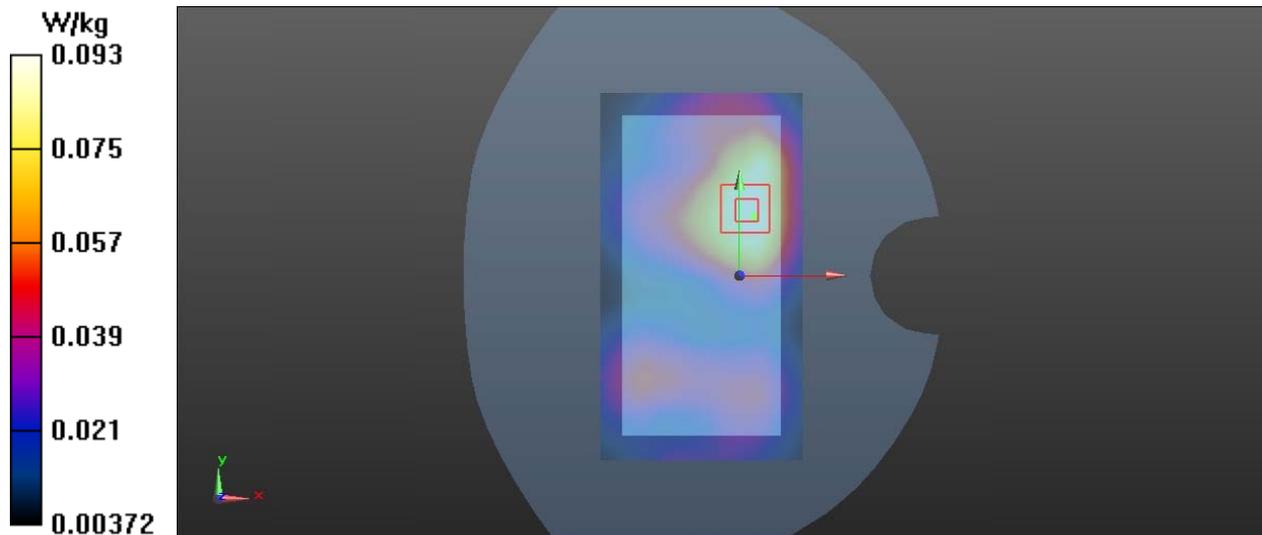
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.592 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 0.131 W/kg

SAR(1 g) = 0.088 W/kg; SAR(10 g) = 0.057 W/kg

Maximum value of SAR (measured) = 0.0926 W/kg



Plot 99 LTE Band 2 1RB Back Side Middle (Battery 2, Distance 10mm)

Date: 3/22/2016

Communication System: UID 0, LTE Band 2; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.494$ S/m; $\epsilon_r = 52.613$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.42, 7.42, 7.42); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Back Side Middle/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

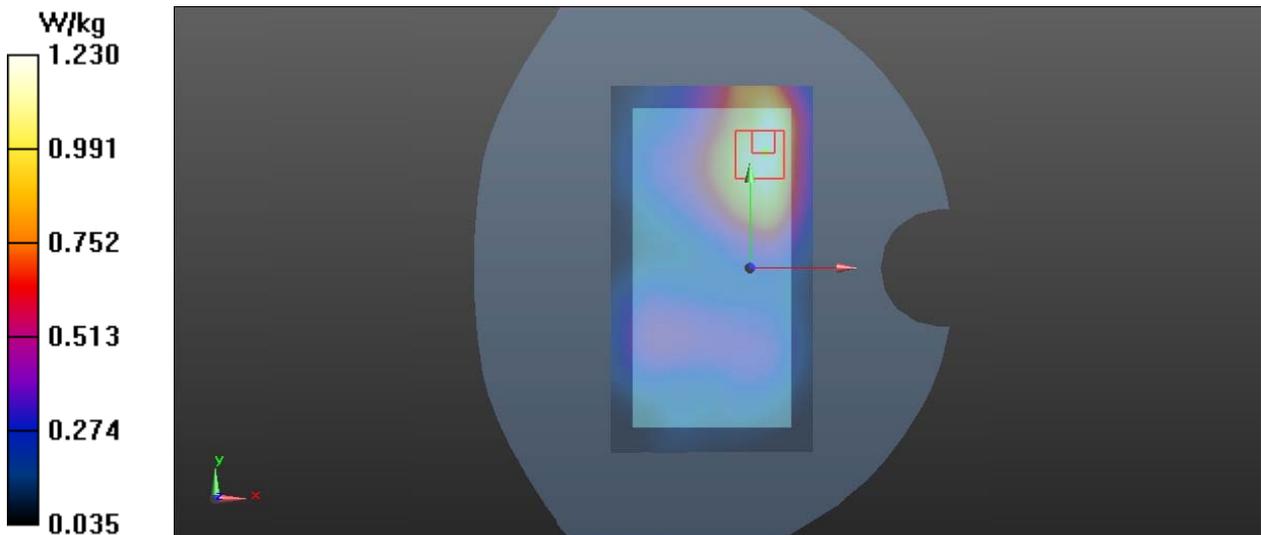
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.12 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 1.79 W/kg

SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.716 W/kg

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



Plot 100 LTE Band 4 1RB Right Cheek High (Battery 2)

Date: 4/4/2016

Communication System: UID 0, LTE Band 4; Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.333$ S/m; $\epsilon_r = 40.236$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.98, 7.98, 7.98); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Right Cheek High/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

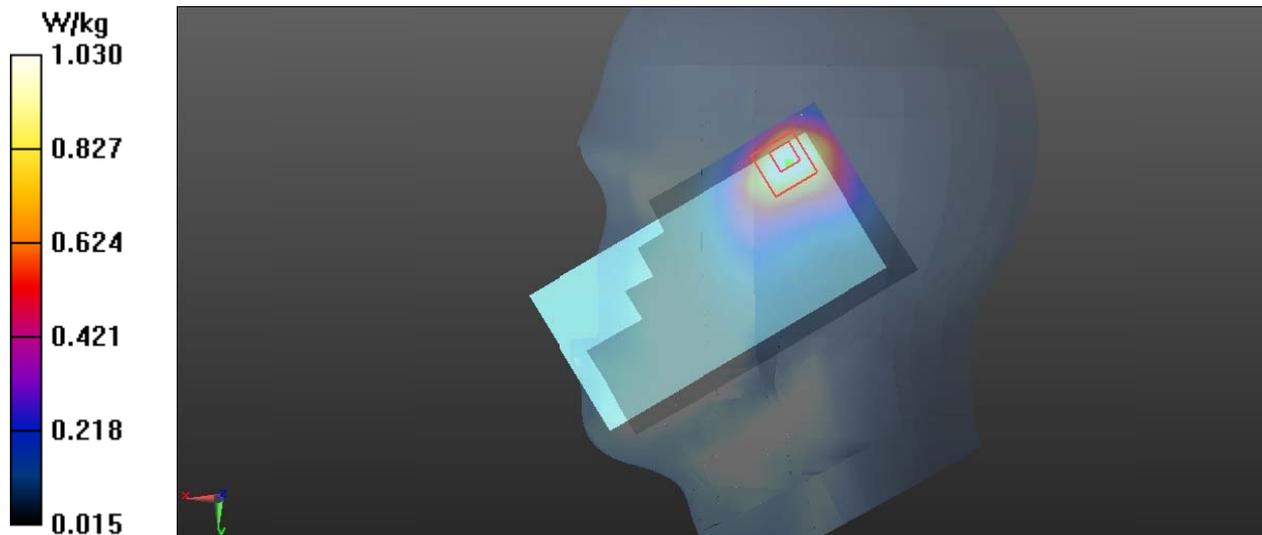
Right Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.89 V/m; Power Drift = 0.056 dB

Peak SAR (extrapolated) = 1.87 W/kg

SAR(1 g) = 0.980 W/kg; SAR(10 g) = 0.541 W/kg

Maximum value of SAR (measured) = 1.03 W/kg



Plot 101 LTE Band 4 1RB Back Side High (Distance 15mm)

Date: 4/10/2016

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.454$ S/m; $\epsilon_r = 51.891$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.65, 7.65, 7.65); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side High/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.111 W/kg

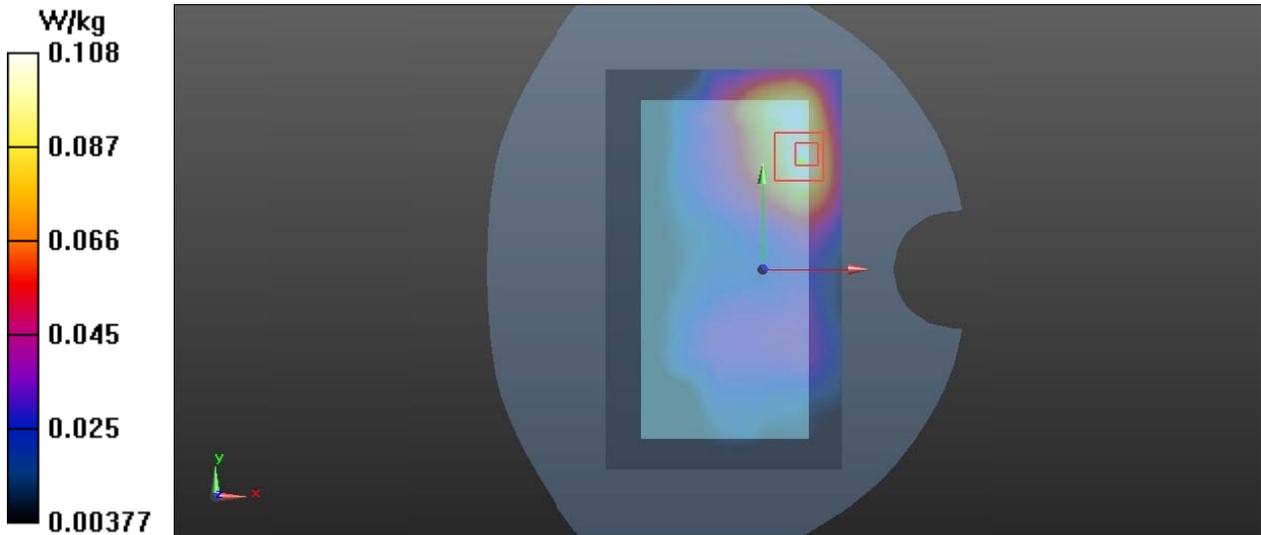
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.797 V/m; Power Drift = 0.101 dB

Peak SAR (extrapolated) = 0.158 W/kg

SAR(1 g) = 0.104 W/kg; SAR(10 g) = 0.065 W/kg

Maximum value of SAR (measured) = 0.108 W/kg



Plot 102 LTE Band 4 1RB Back Side High (Distance 10mm)

Date: 4/10/2016

Communication System: UID 0, LTE (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.454$ S/m; $\epsilon_r = 51.891$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.65, 7.65, 7.65); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side High/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.787 W/kg

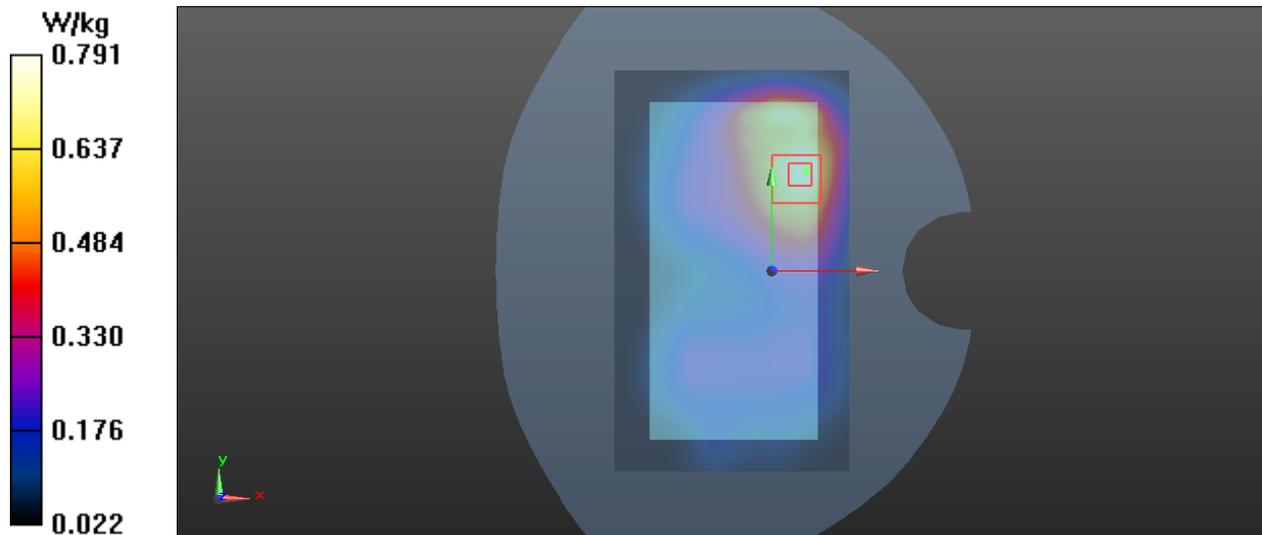
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.37 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.722 W/kg; SAR(10 g) = 0.443 W/kg

Maximum value of SAR (measured) = 0.791 W/kg



Plot 103 LTE Band 5 1RB Right Cheek Middle

Date: 3/30/2016

Communication System: UID 0, LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.885$ S/m; $\epsilon_r = 41.403$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.35, 9.35, 9.35); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Cheek Middle /Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

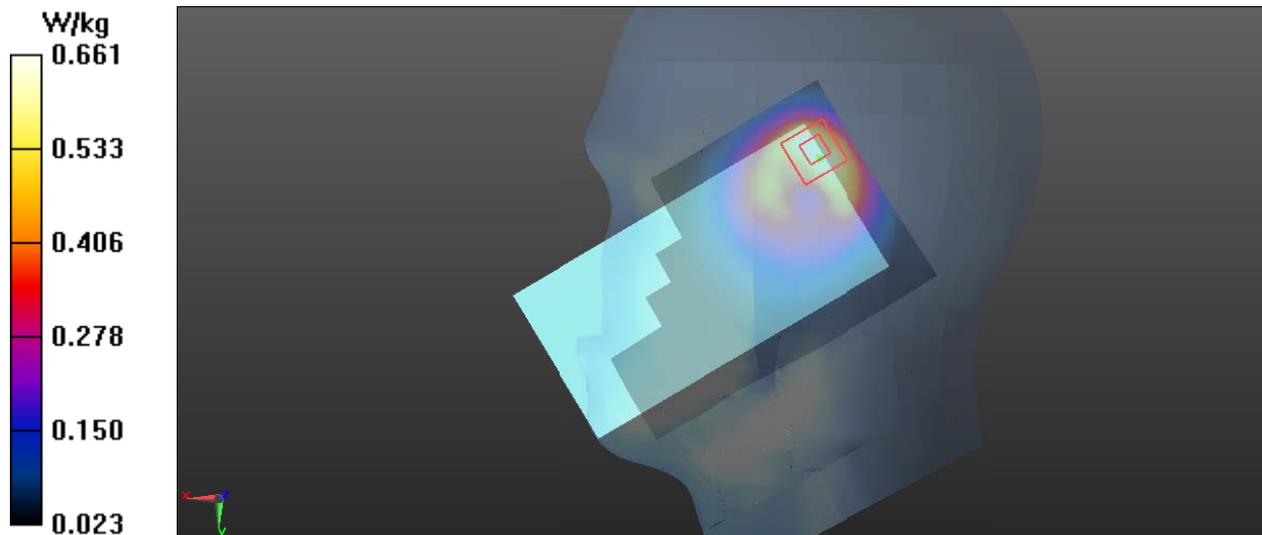
Right Cheek Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.18 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.589 W/kg; SAR(10 g) = 0.322 W/kg

Maximum value of SAR (measured) = 0.661 W/kg



Plot 104 LTE Band 5 1RB Front Side Middle (Distance 15mm)

Date: 3/31/2016

Communication System: UID 0, LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.966$ S/m; $\epsilon_r = 54.152$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.42, 9.42, 9.42); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Front Side Middle/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.139 W/kg

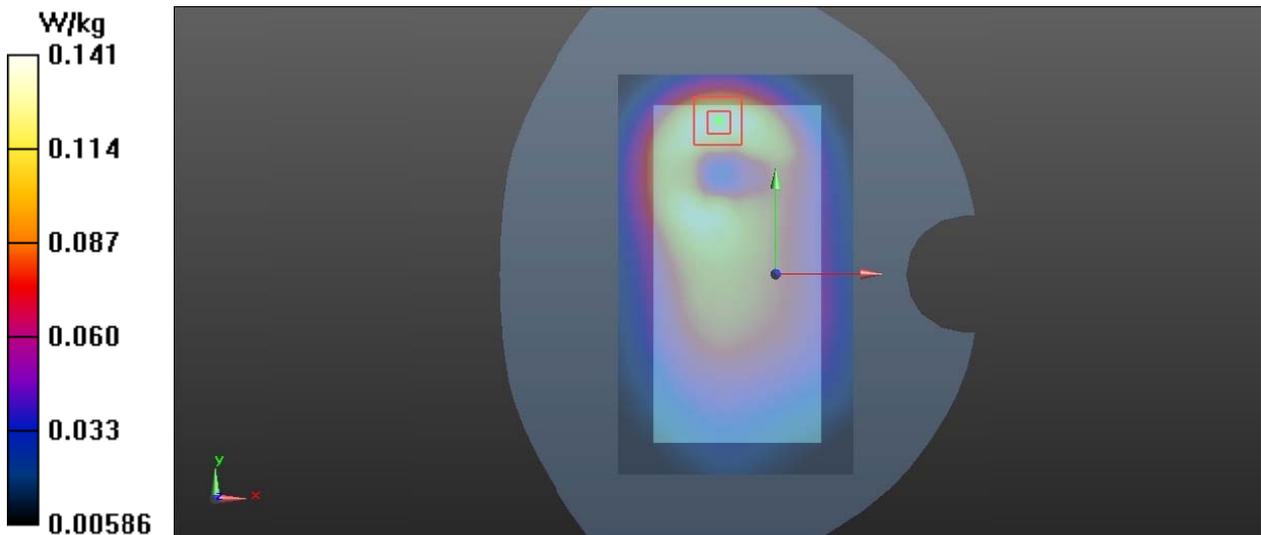
Front Side Middle/Zoom Scan (4x4x7)/Cube 0: Measurement grid: dx=10mm, dy=10mm, dz=5mm

Reference Value = 10.00 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.210 W/kg

SAR(1 g) = 0.136 W/kg; SAR(10 g) = 0.082 W/kg

Maximum value of SAR (measured) = 0.141 W/kg



Plot 105 LTE Band 5 1RB Back Side Middle (Distance 10mm)

Date: 3/31/2016

Communication System: UID 0, LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.966$ S/m; $\epsilon_r = 54.152$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.42, 9.42, 9.42); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side Middle /Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.532 W/kg

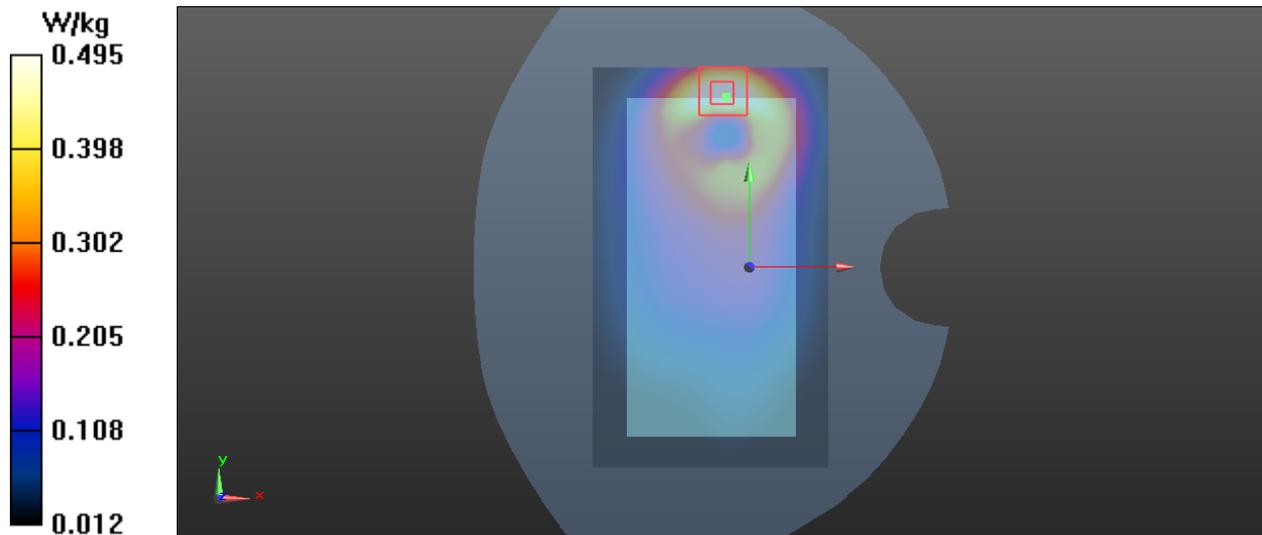
Back Side Middle /Zoom Scan (4x4x7)/Cube 0: Measurement grid: dx=10mm, dy=10mm, dz=5mm

Reference Value = 13.59 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.850 W/kg

SAR(1 g) = 0.485 W/kg; SAR(10 g) = 0.274 W/kg

Maximum value of SAR (measured) = 0.495 W/kg



Plot 106 LTE Band 7 1RB Right Tilt Middle

Date: 3/23/2016

Communication System: UID 0, LTE Band 7; Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 1.917 \text{ S/m}$; $\epsilon_r = 38.06$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.18, 7.18, 7.18); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Tilt Middle /Area Scan (81x141x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$

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

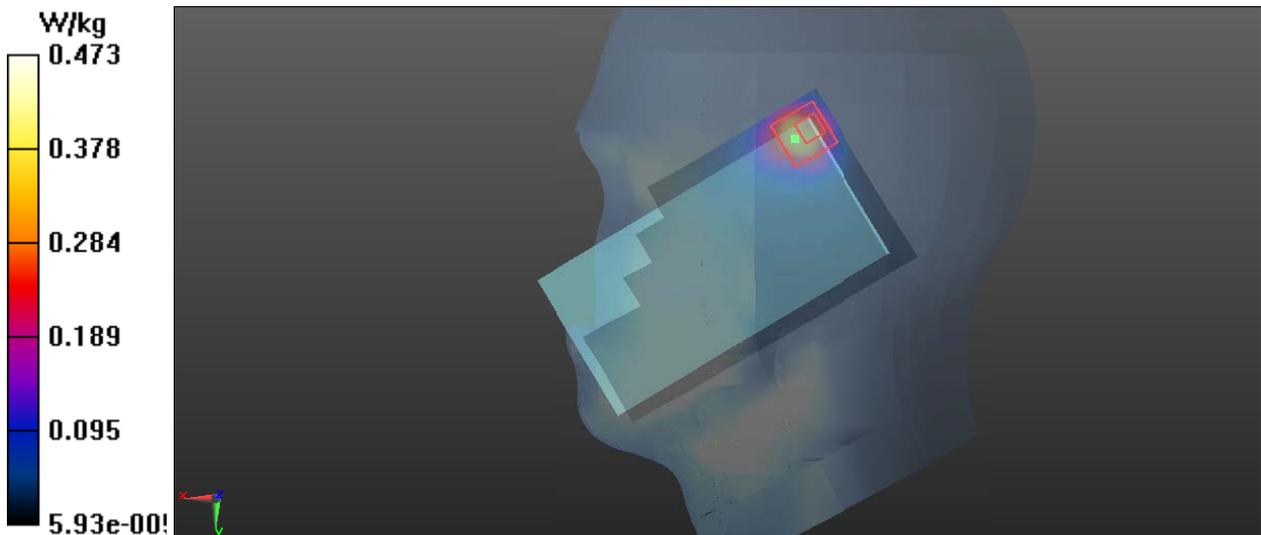
Right Tilt Middle /Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 4.225 V/m ; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.407 W/kg ; SAR(10 g) = 0.165 W/kg

Maximum value of SAR (measured) = 0.473 W/kg



Plot 107 LTE Band 7 1RB Back Side Middle (Distance 15mm)

Date: 3/21/2016

Communication System: UID 0, LTE Band 7; Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 2.162$ S/m; $\epsilon_r = 51.701$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(6.95, 6.95, 6.95); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Back Side Middle /Area Scan (81x141x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0269 W/kg

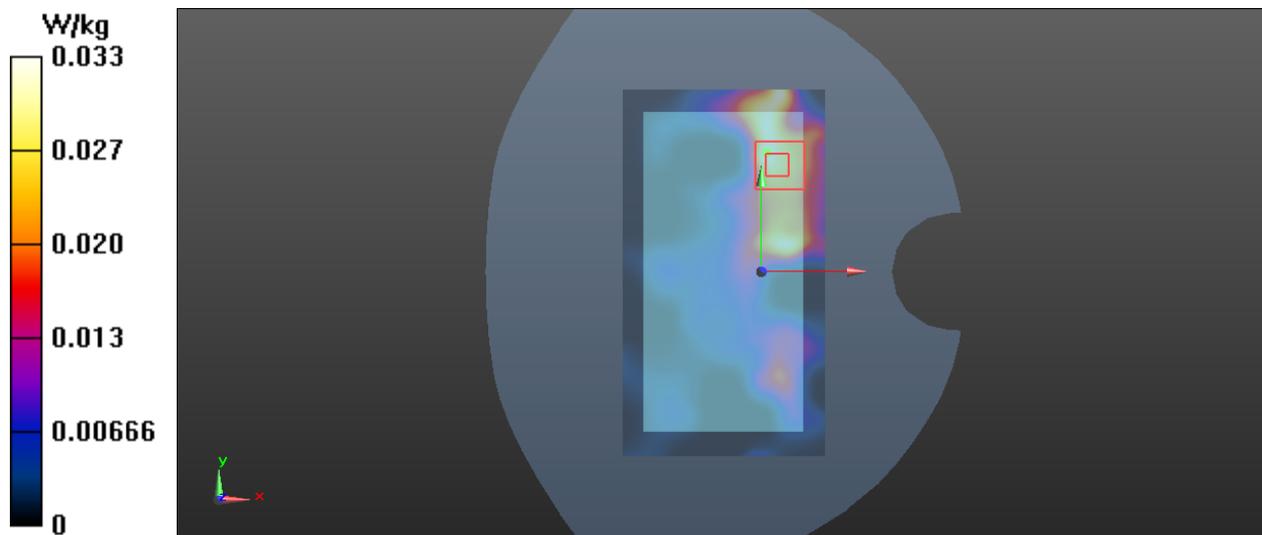
Back Side Middle /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.859 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.0960 W/kg

SAR(1 g) = 0.027 W/kg; SAR(10 g) = 0.012 W/kg

Maximum value of SAR (measured) = 0.0333 W/kg



Plot 108 LTE Band 7 1RB Back Side Middle (Distance 10mm)

Date: 3/21/2016

Communication System: UID 0, LTE (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 2.162$ S/m; $\epsilon_r = 51.701$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(6.95, 6.95, 6.95); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side Middle/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.807 W/kg

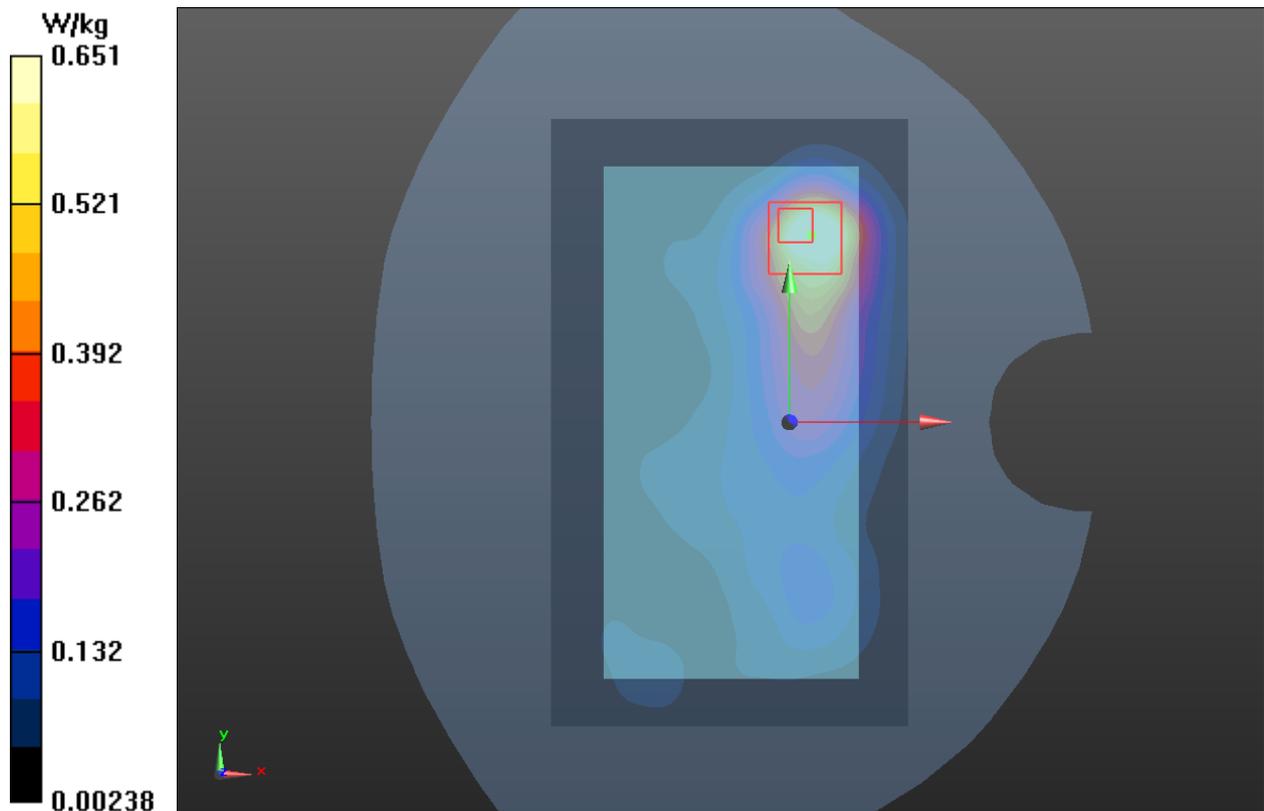
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.727 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.591 W/kg; SAR(10 g) = 0.278 W/kg

Maximum value of SAR (measured) = 0.651 W/kg



Plot 109 LTE Band 12 1RB Right Cheek Low (Battery2)

Date: 4/8/2016

Communication System: UID 0, LTE Band 12; Frequency: 704 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 704$ MHz; $\sigma = 0.853$ S/m; $\epsilon_r = 42.891$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.69, 9.69, 9.69); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Right Cheek Low/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

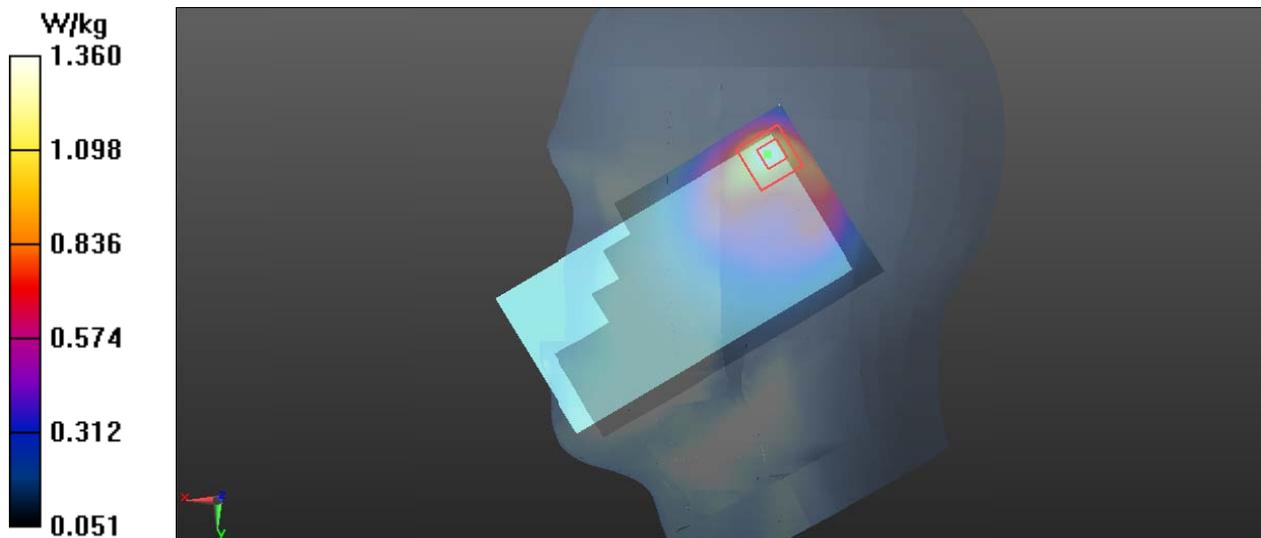
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.84 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 2.59 W/kg

SAR(1 g) = 1.23 W/kg; SAR(10 g) = 0.668 W/kg

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



Plot 110 LTE Band 12 1RB Right Cheek Low (Battery2, For Simultaneous Transmission)

Date: 4/8/2016

Communication System: UID 0, LTE (0); Frequency: 704 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 704$ MHz; $\sigma = 0.853$ S/m; $\epsilon_r = 42.891$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.69, 9.69, 9.69); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Cheek Low/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.743 W/kg

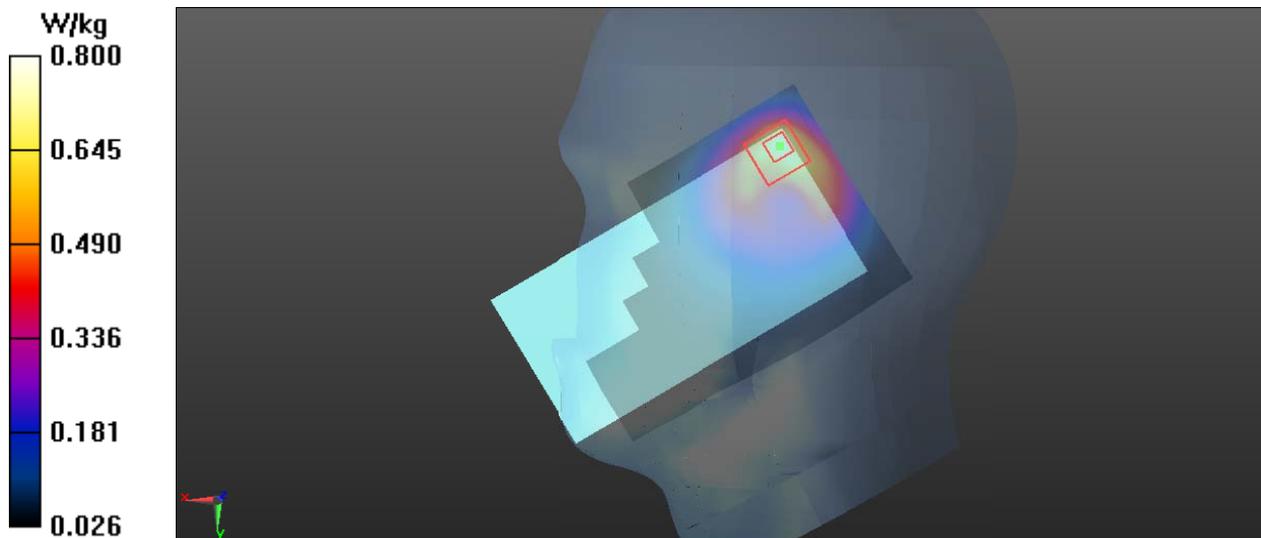
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.19 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 1.54 W/kg

SAR(1 g) = 0.706 W/kg; SAR(10 g) = 0.376 W/kg

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



Plot 111 LTE Band 12 1RB Back Side Low (Distance 15mm)

Date: 4/9/2016

Communication System: UID 0, LTE Band 12; Frequency: 704 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 704$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 57.29$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.71, 9.71, 9.71); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Back Side Low/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.217 W/kg

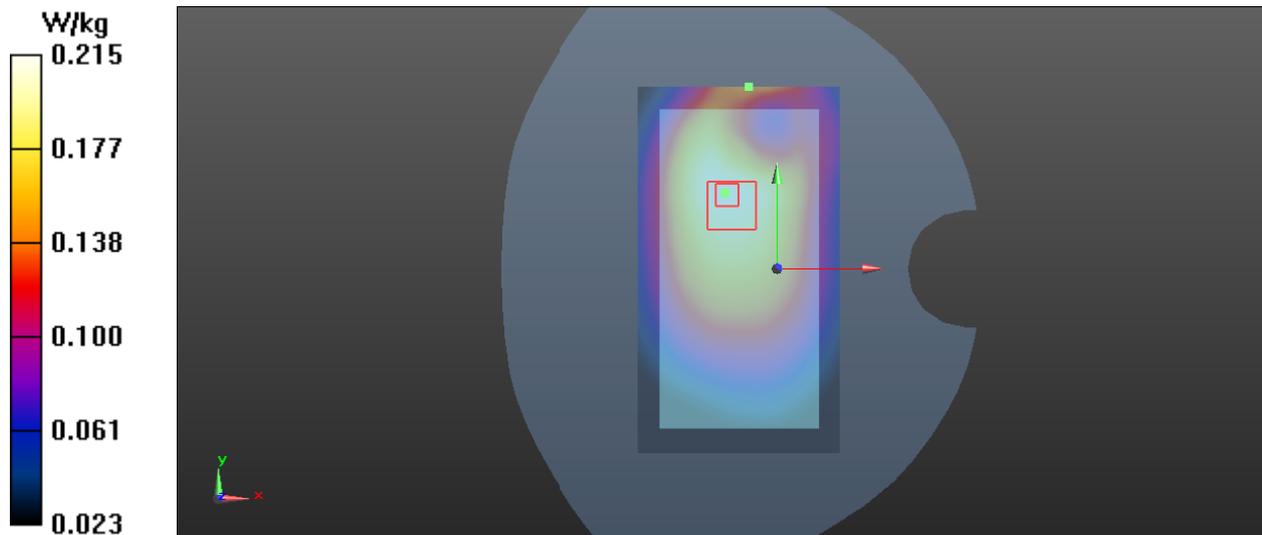
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.96 V/m; Power Drift = 0.051 dB

Peak SAR (extrapolated) = 0.258 W/kg

SAR(1 g) = 0.204 W/kg; SAR(10 g) = 0.157 W/kg

Maximum value of SAR (measured) = 0.215 W/kg



Plot 112 LTE Band 12 1RB Back Side Low (Distance 10mm)

Date: 4/9/2016

Communication System: UID 0, LTE Band 12; Frequency: 704 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 704$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 57.29$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.71, 9.71, 9.71); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Back Side Low/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.532 W/kg

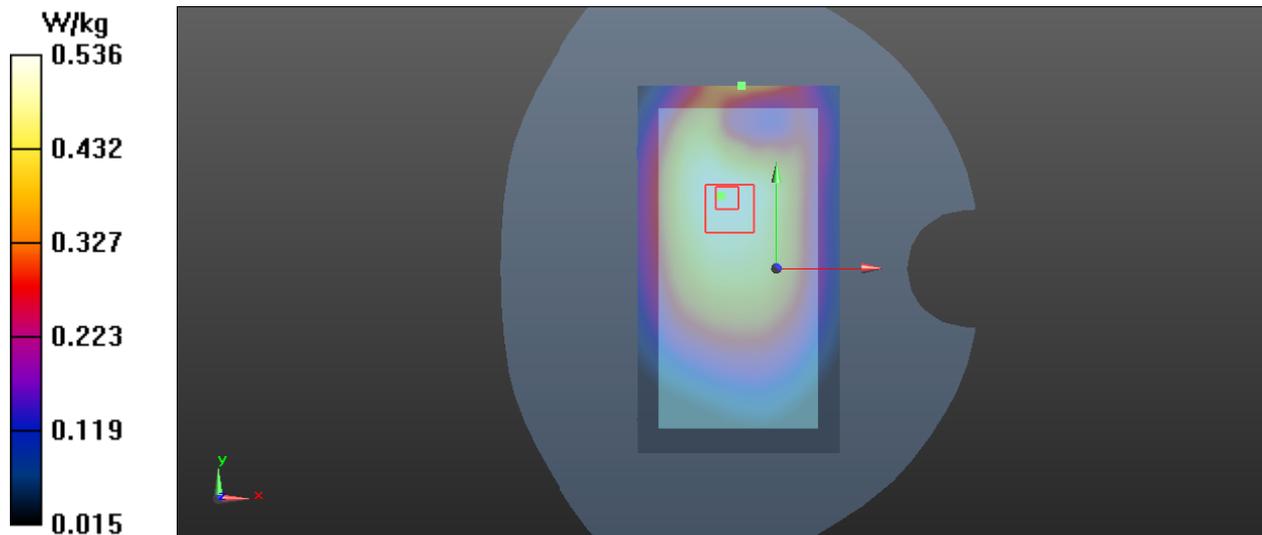
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.96 V/m; Power Drift = 0.039 dB

Peak SAR (extrapolated) = 0.859 W/kg

SAR(1 g) = 0.486 W/kg; SAR(10 g) = 0.278 W/kg

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



Plot 113 LTE Band 17 1RB Right Cheek Middle

Date: 3/28/2016

Communication System: UID 0, LTE Band 17; Frequency: 710 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 710$ MHz; $\sigma = 0.858$ S/m; $\epsilon_r = 42.825$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.69, 9.69, 9.69); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Cheek Middle/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

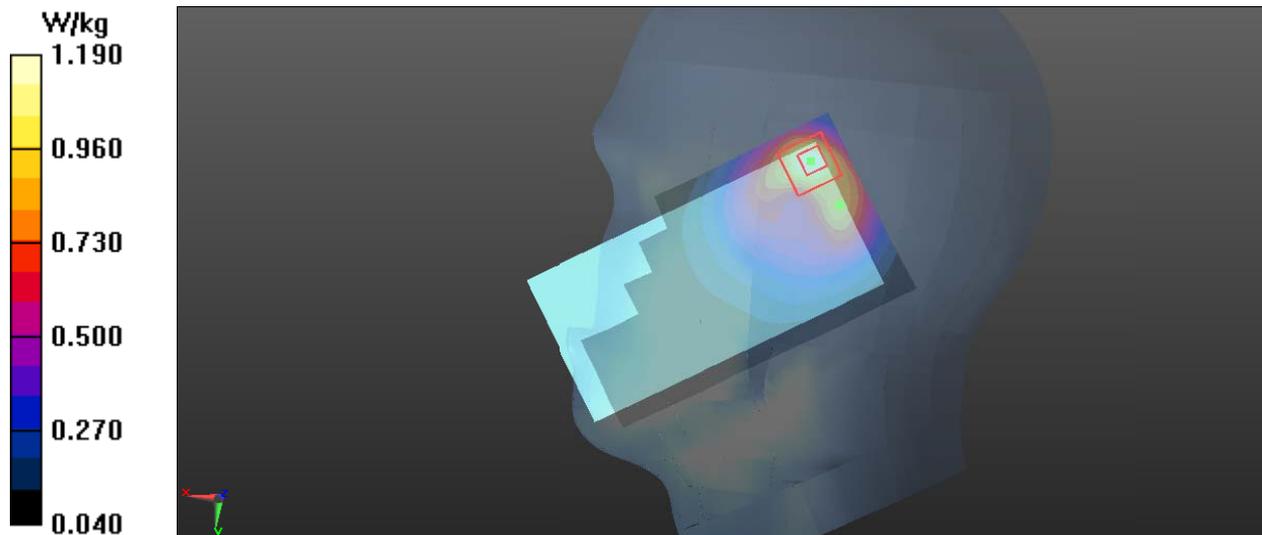
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.98 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 2.22 W/kg

SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.565 W/kg

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



Plot 114 LTE Band 17 1RB Back Side Low (Distance 15mm)

Date: 4/9/2016

Communication System: UID 0, LTE Band 17; Frequency: 709 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 709 \text{ MHz}$; $\sigma = 0.924 \text{ S/m}$; $\epsilon_r = 57.25$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.71, 9.71, 9.71); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Back Side Low/Area Scan (61x111x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.144 W/kg

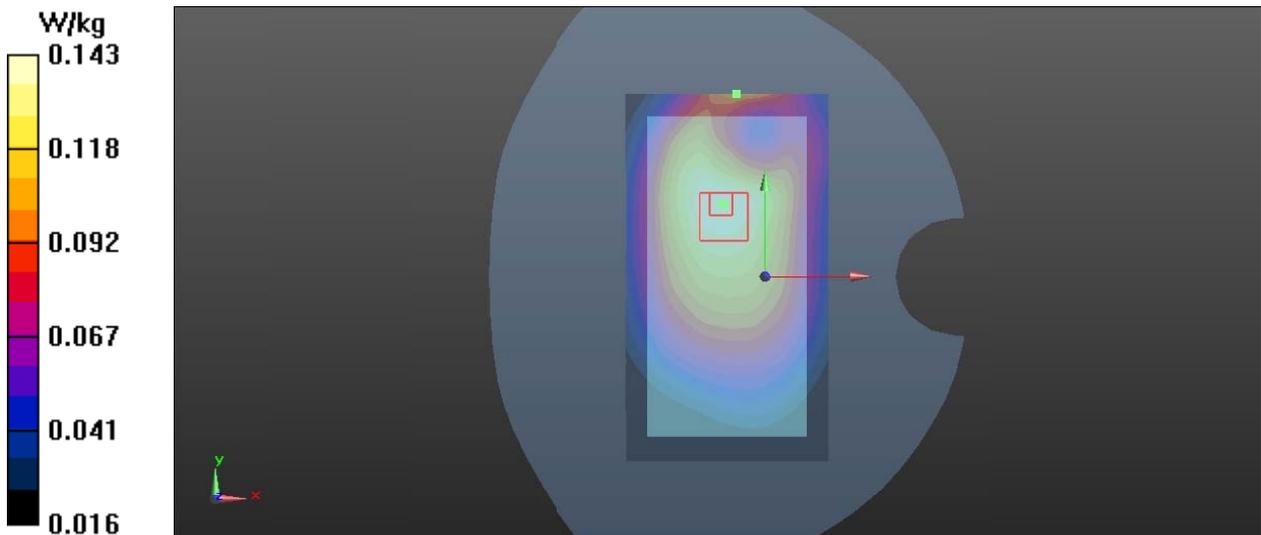
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.61 V/m ; Power Drift = 0.006 dB

Peak SAR (extrapolated) = 0.169 W/kg

SAR(1 g) = 0.136 W/kg ; SAR(10 g) = 0.105 W/kg

Maximum value of SAR (measured) = 0.143 W/kg



Plot 115 LTE Band 17 1RB Back Side Low (Distance 10mm)

Date: 4/9/2016

Communication System: UID 0, LTE Band 17; Frequency: 709 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 709$ MHz; $\sigma = 0.914$ S/m; $\epsilon_r = 57.25$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.71, 9.71, 9.71); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY4, Version 4.7 (80); SEMCAD X Version 14.6.10 (7331)

Back Side Low/Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.349 W/kg

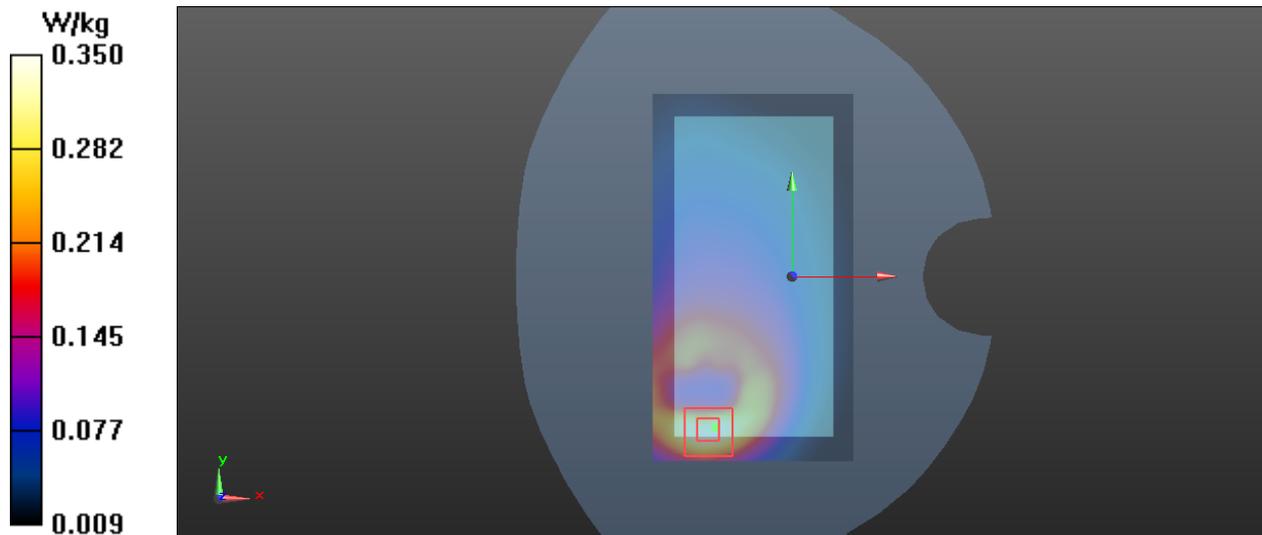
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.08 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 0.562 W/kg

SAR(1 g) = 0.318 W/kg; SAR(10 g) = 0.182 W/kg

Maximum value of SAR (measured) = 0.350 W/kg



Plot 116 LTE Band 26 1RB Right Tilt Low

Date: 4/13/2016

Communication System: UID 0, LTE (0); Frequency: 822.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 822.5$ MHz; $\sigma = 0.87$ S/m; $\epsilon_r = 41.547$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.35, 9.35, 9.35); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Tilt Low/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.03 W/kg

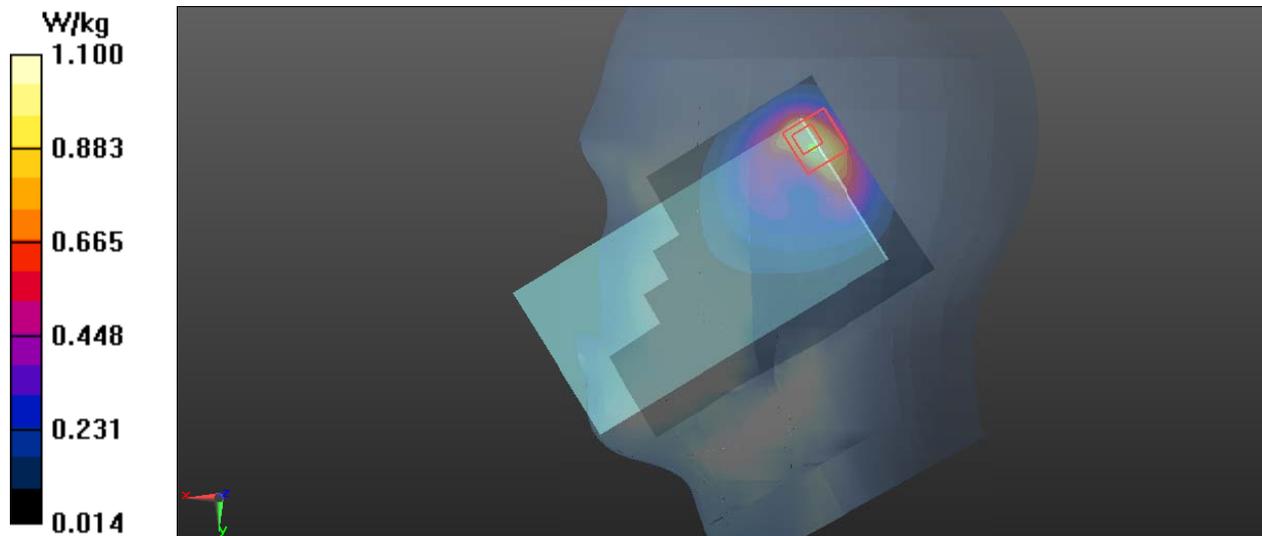
Right Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.19 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.34 W/kg

SAR(1 g) = 0.967 W/kg; SAR(10 g) = 0.464 W/kg

Maximum value of SAR (measured) = 1.10 W/kg



Plot 117 LTE Band 26 1RB Right Tilt Low (For Simultaneous Transmission)

Date: 4/13/2016

Communication System: UID 0, LTE (0); Frequency: 822.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 822.5 \text{ MHz}$; $\sigma = 0.87 \text{ S/m}$; $\epsilon_r = 41.547$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature:22.3 °C Liquid Temperature: 21.5°C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.35, 9.35, 9.35); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Tilt Low/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.708 W/kg

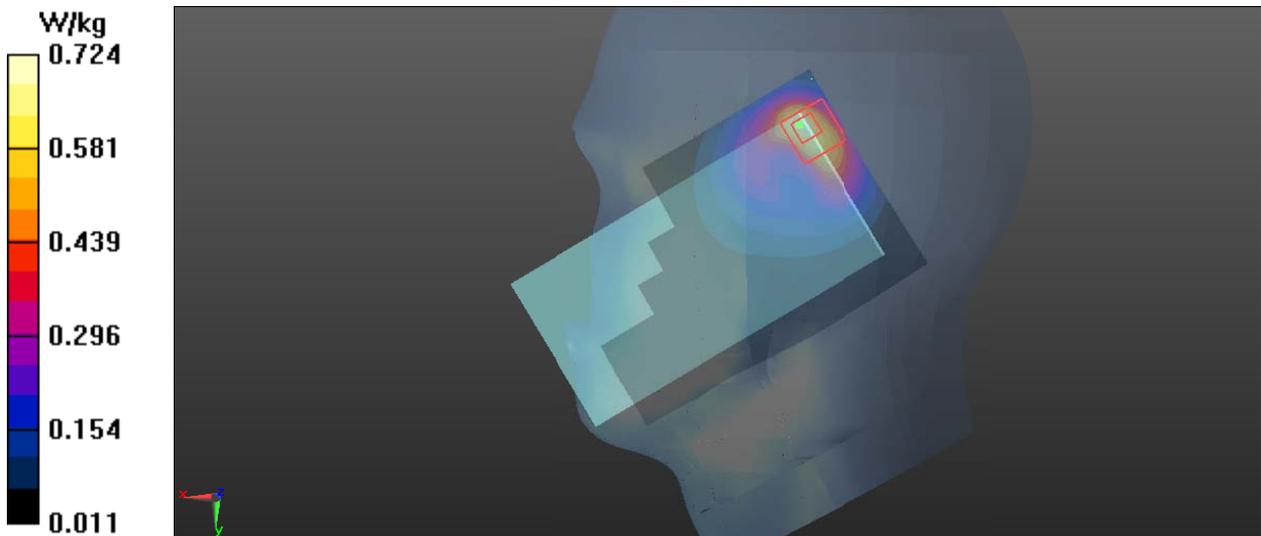
Right Tilt Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.24 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 1.53 W/kg

SAR(1 g) = 0.634 W/kg; SAR(10 g) = 0.306 W/kg

Maximum value of SAR (measured) = 0.724 W/kg



Plot 118 LTE Band 26 1RB Back Side High (Distance 15mm)

Date: 4/13/2016

Communication System: UID 0, LTE (0); Frequency: 841.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 841.5$ MHz; $\sigma = 0.971$ S/m; $\epsilon_r = 54.102$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.42, 9.42, 9.42); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side High/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.187 W/kg

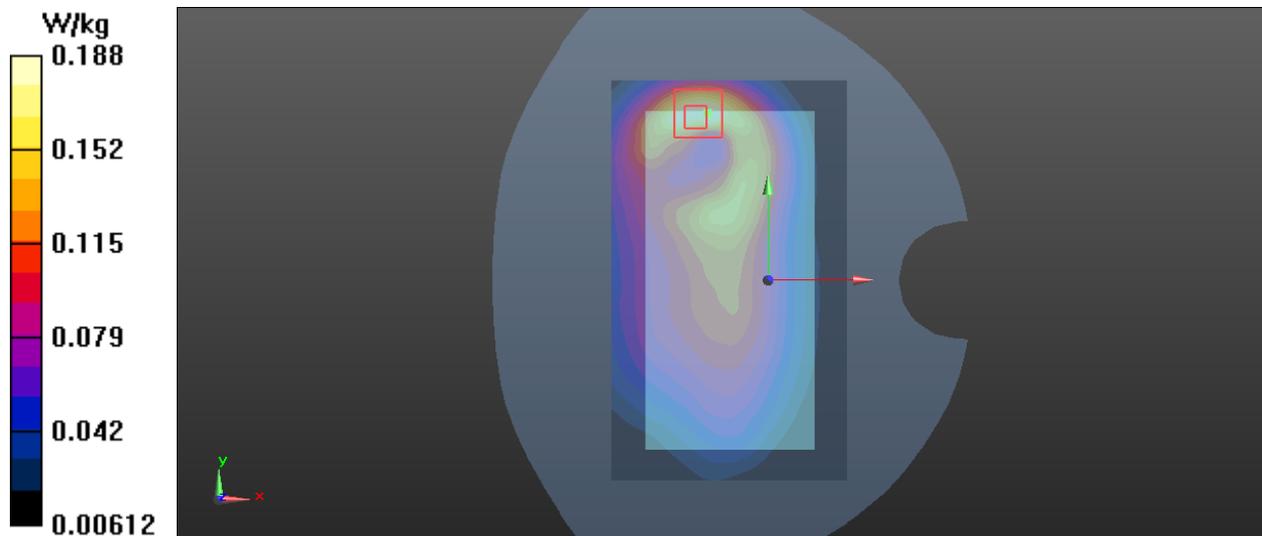
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.15 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.293 W/kg

SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.106 W/kg

Maximum value of SAR (measured) = 0.188 W/kg



Plot 119 LTE Band 26 1RB Back Side High (Distance 10mm)

Date: 4/13/2016

Communication System: UID 0, LTE (0); Frequency: 841.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 841.5$ MHz; $\sigma = 0.971$ S/m; $\epsilon_r = 54.102$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.42, 9.42, 9.42); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side High/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.534 W/kg

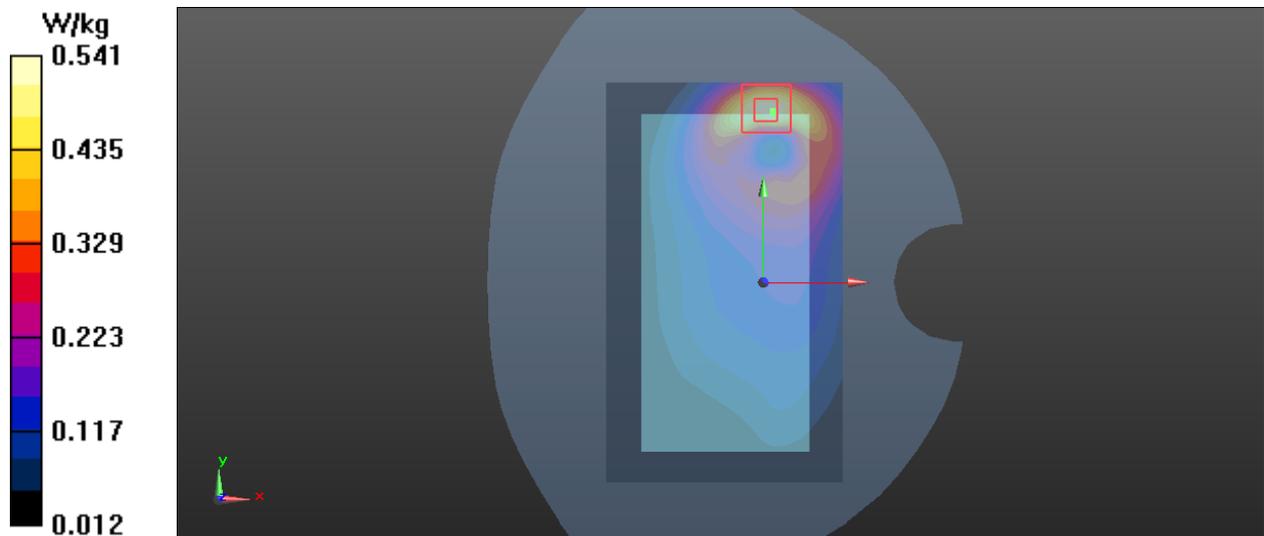
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.60 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.874 W/kg

SAR(1 g) = 0.490 W/kg; SAR(10 g) = 0.275 W/kg

Maximum value of SAR (measured) = 0.541 W/kg



Plot 120 LTE Band 38 1RB Right Tilt High

Date: 3/23/2016

Communication System: UID 0, LTE (0); Frequency: 2610 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2610$ MHz; $\sigma = 2.023$ S/m; $\epsilon_r = 38.118$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.18, 7.18, 7.18); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Tilt High /Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.773 W/kg

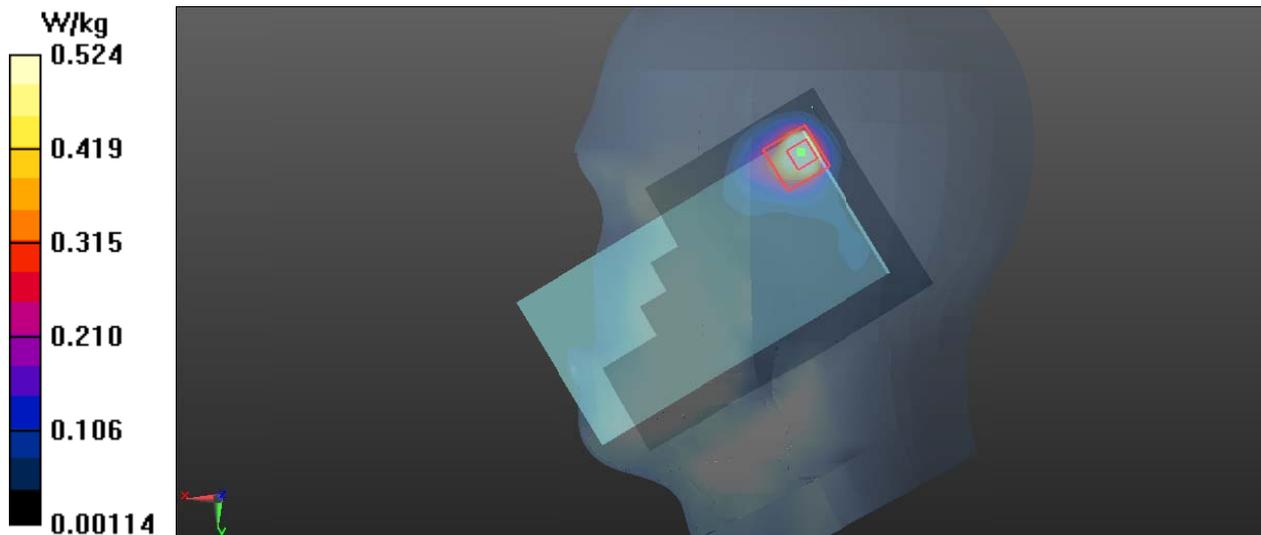
Right Tilt High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.694 V/m; Power Drift = 0.118 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.485 W/kg; SAR(10 g) = 0.198 W/kg

Maximum value of SAR (measured) = 0.524 W/kg



Plot 121 LTE Band 38 1RB Front Side High (Distance 15mm)

Date: 3/21/2016

Communication System: UID 0, LTE (0); Frequency: 2610 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2610$ MHz; $\sigma = 2.239$ S/m; $\epsilon_r = 51.451$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(6.95, 6.95, 6.95); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Front Side High /Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0430 W/kg

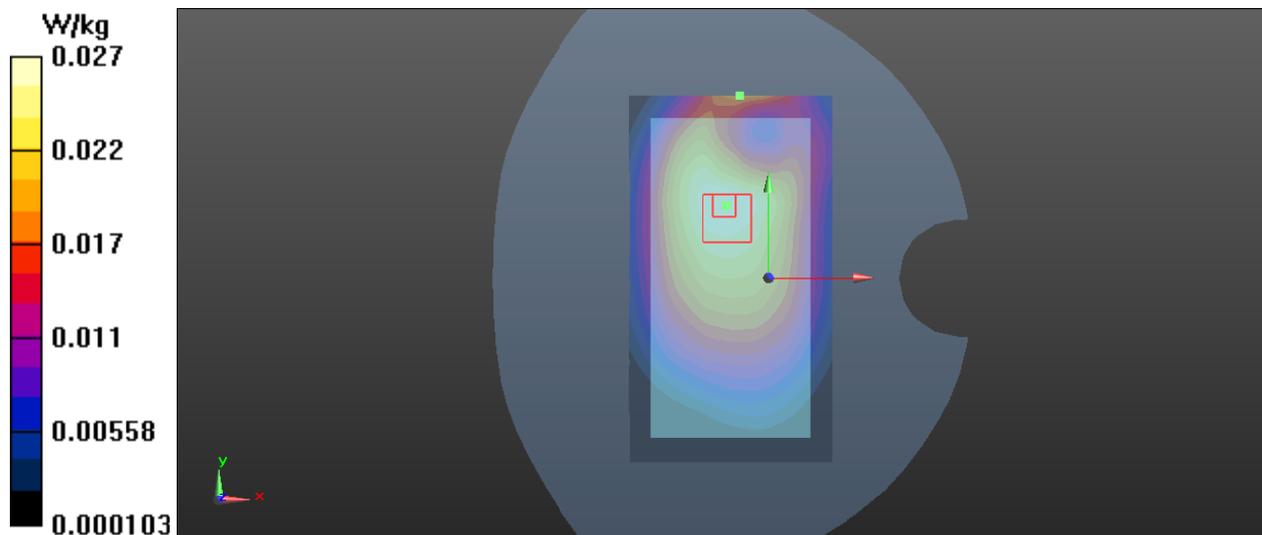
Front Side High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.517 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 0.0440 W/kg

SAR(1 g) = 0.024 W/kg; SAR(10 g) = 0.013 W/kg

Maximum value of SAR (measured) = 0.0275 W/kg



Plot 122 LTE Band 38 1RB Left Edge High (Battery2, Distance 10mm)

Date: 3/21/2016

Communication System: UID 0, LTE (0); Frequency: 2610 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2610$ MHz; $\sigma = 2.239$ S/m; $\epsilon_r = 51.451$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(6.95, 6.95, 6.95); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Left Edge High/Area Scan (51x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.238 W/kg

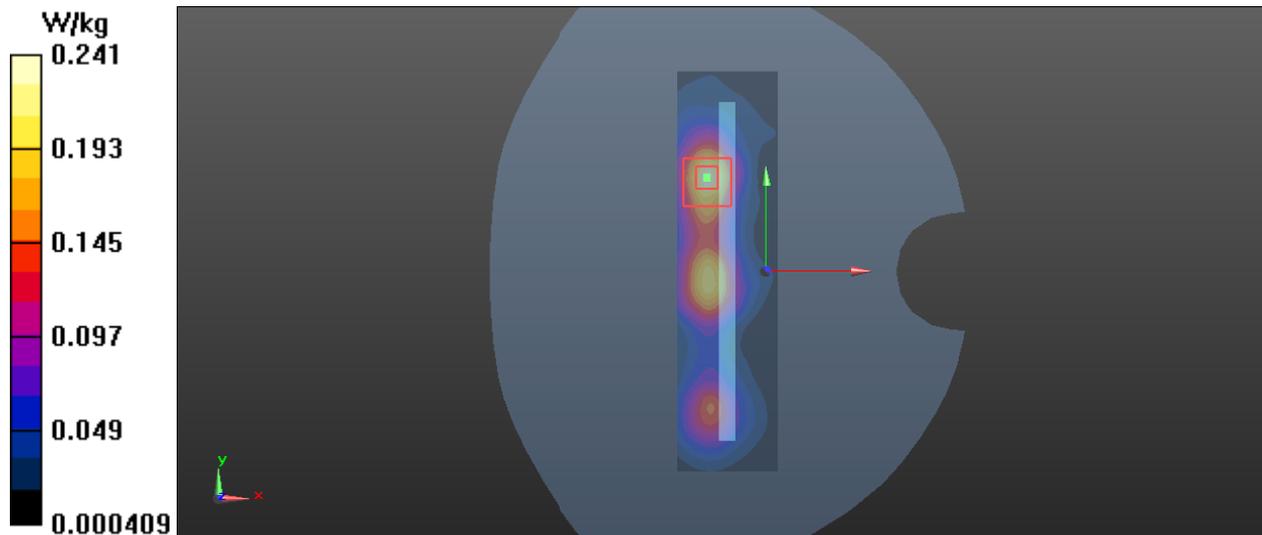
Left Edge High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.943 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 0.409 W/kg

SAR(1 g) = 0.208 W/kg; SAR(10 g) = 0.099 W/kg

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



Plot 123 LTE Band 41 1RB Right Cheek Middle

Date: 3/23/2016

Communication System: UID 0, LTE (0); Frequency: 2605 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2605$ MHz; $\sigma = 2.017$ S/m; $\epsilon_r = 38.126$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.18, 7.18, 7.18); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Cheek Middle /Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.529 W/kg

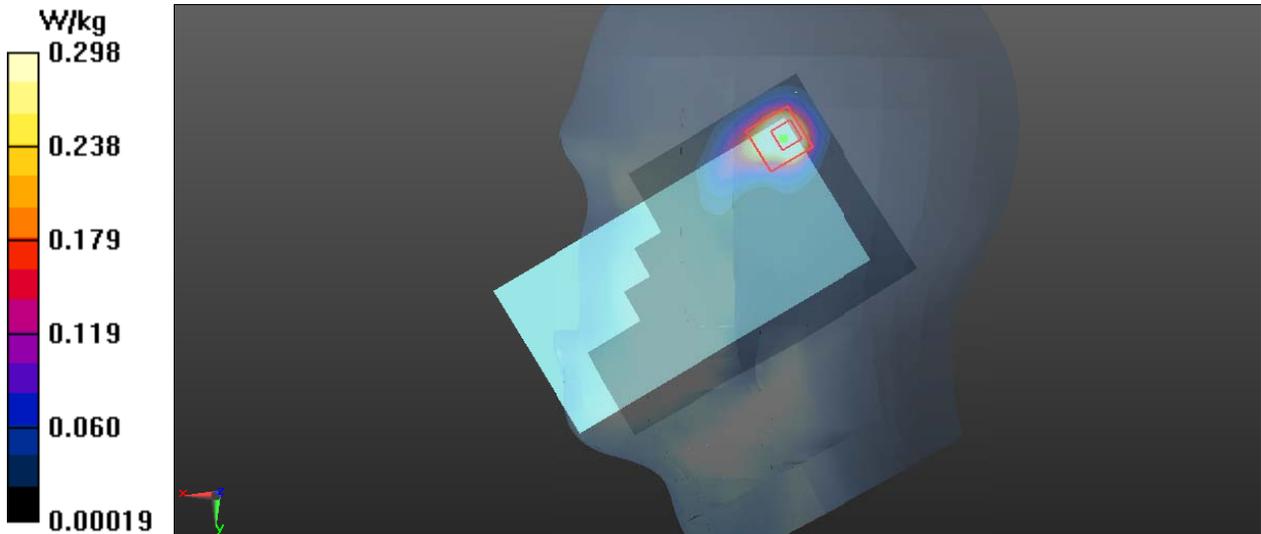
Right Cheek Middle /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.280 V/m; Power Drift = -0.026 dB

Peak SAR (extrapolated) = 0.900 W/kg

SAR(1 g) = 0.306 W/kg; SAR(10 g) = 0.132 W/kg

Maximum value of SAR (measured) = 0.298 W/kg



Plot 124 LTE Band 41 1RB Back Side Middle (Distance 15mm)

Date: 4/7/2016

Communication System: UID 0, LTE (0); Frequency: 2605 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2605$ MHz; $\sigma = 2.234$ S/m; $\epsilon_r = 51.461$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(6.95, 6.95, 6.95); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side Middle /Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0244 W/kg

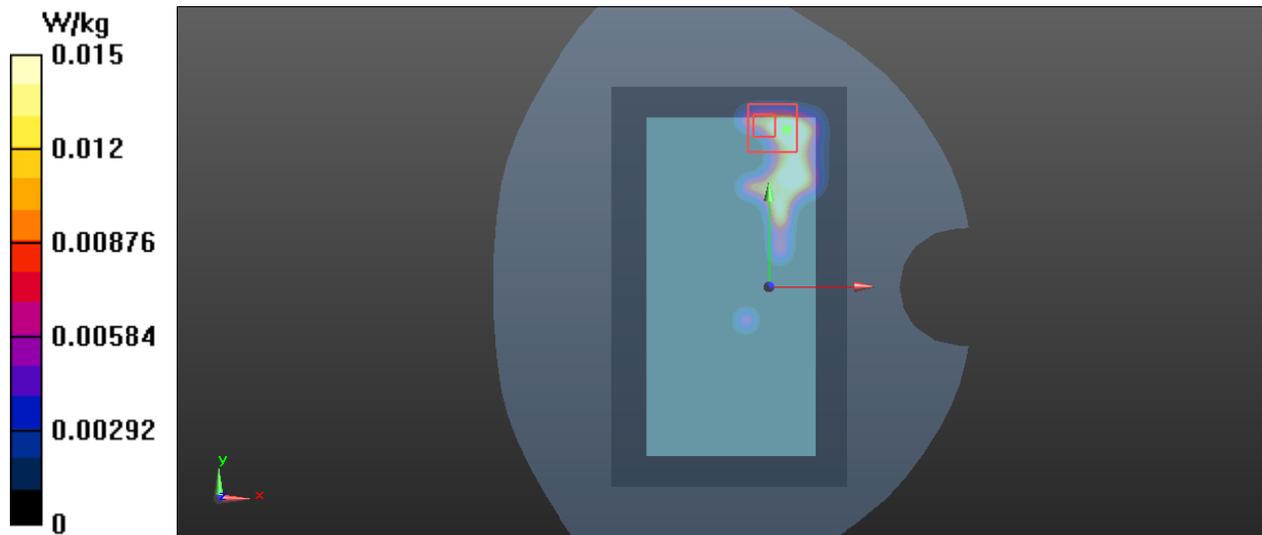
Back Side Middle /Zoom Scan(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.294 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 0.0360 W/kg

SAR(1 g) = 0.013 W/kg; SAR(10 g) = 0.00486 W/kg

Maximum value of SAR (measured) = 0.0146 W/kg



Plot 125 LTE Band 41 1RB Back Side Middle (Distance 10mm)

Date: 4/7/2016

Communication System: UID 0, LTE (0); Frequency: 2605 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2605$ MHz; $\sigma = 2.234$ S/m; $\epsilon_r = 51.461$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(6.95, 6.95, 6.95); Calibrated: 12/10/2015

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side Middle /Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.293 W/kg

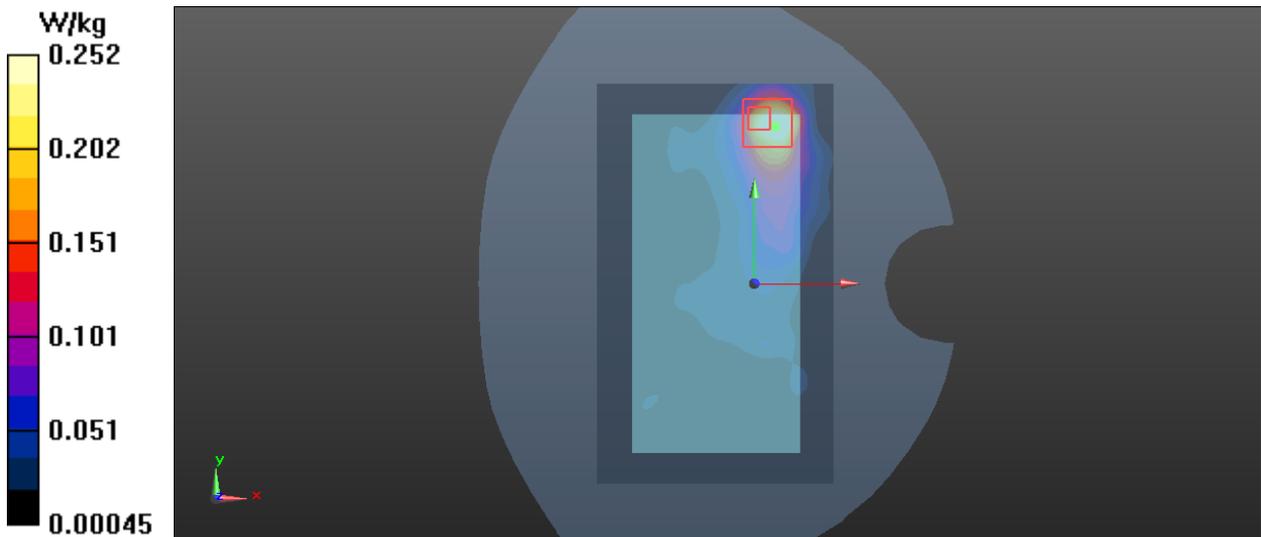
Back Side Middle /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.244 V/m; Power Drift = 0.142 dB

Peak SAR (extrapolated) = 0.492 W/kg

SAR(1 g) = 0.208 W/kg; SAR(10 g) = 0.094 W/kg

Maximum value of SAR (measured) = 0.252 W/kg



Wi-Fi-Antenna

Plot 126 802.11b Left Cheek Middle

Date: 4/11/2016

Communication System: UID 0, 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.811$ S/m; $\epsilon_r = 38.352$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.39, 7.39, 7.39); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Left Cheek Middle/Area Scan (81x141x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

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

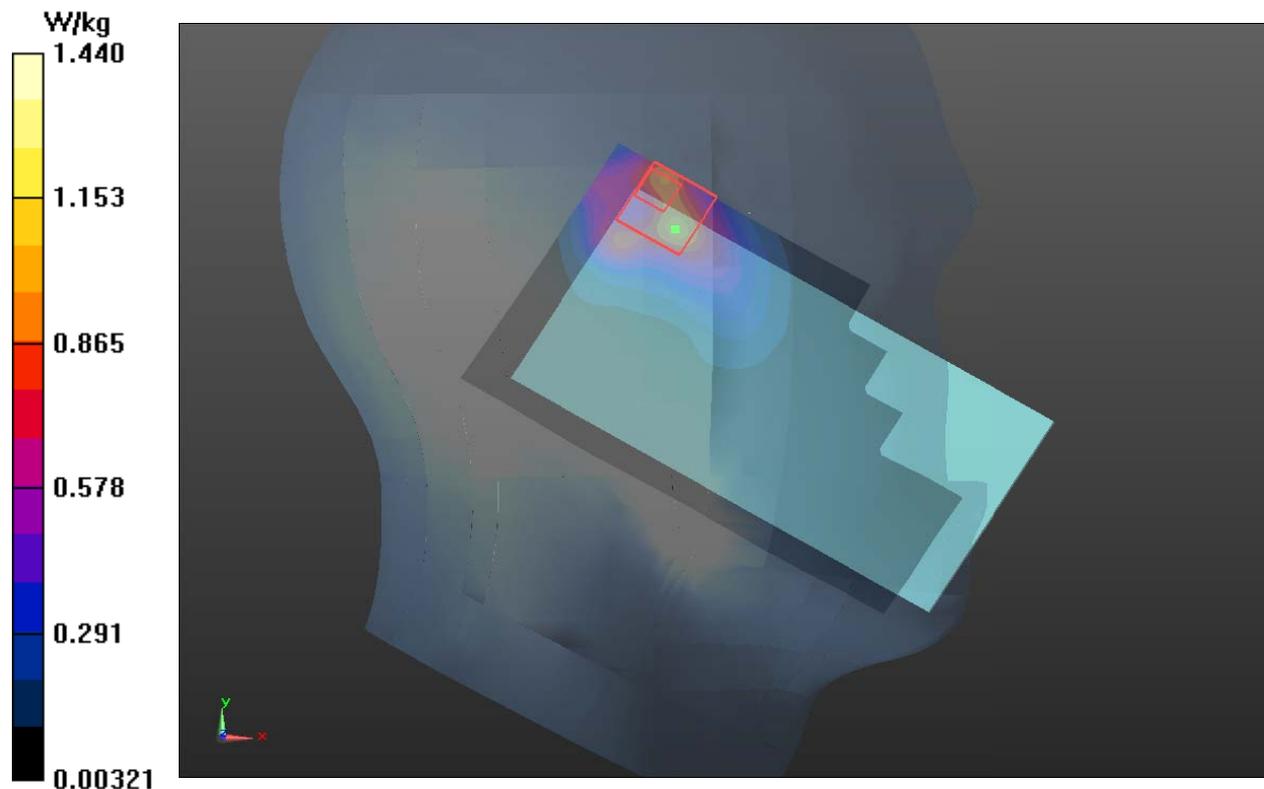
Left Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.822 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 3.94 W/kg

SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.523 W/kg

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



Plot 127 802.11b Left Cheek Middle (For Simultaneous Transmission)

Date: 4/11/2016

Communication System: UID 0, 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.811$ S/m; $\epsilon_r = 38.352$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.39, 7.39, 7.39); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Left Cheek Middle/Area Scan (81x141x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.779 W/kg

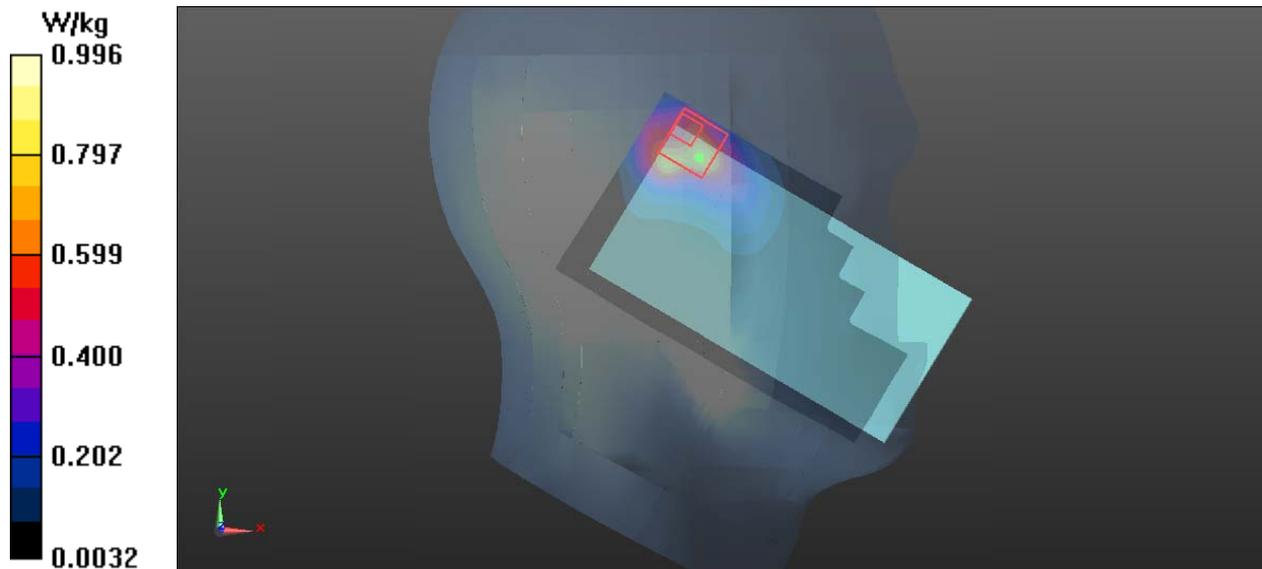
Left Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.557 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.49 W/kg

SAR(1 g) = 0.811 W/kg; SAR(10 g) = 0.368 W/kg

Maximum value of SAR (measured) = 0.996 W/kg



Plot 128 802.11b Back Side High (Distance 15mm)

Date: 4/11/2016

Communication System: UID 0, 802.11b (0); Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.993$ S/m; $\epsilon_r = 52.463$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.22, 7.22, 7.22); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side High/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0221 W/kg

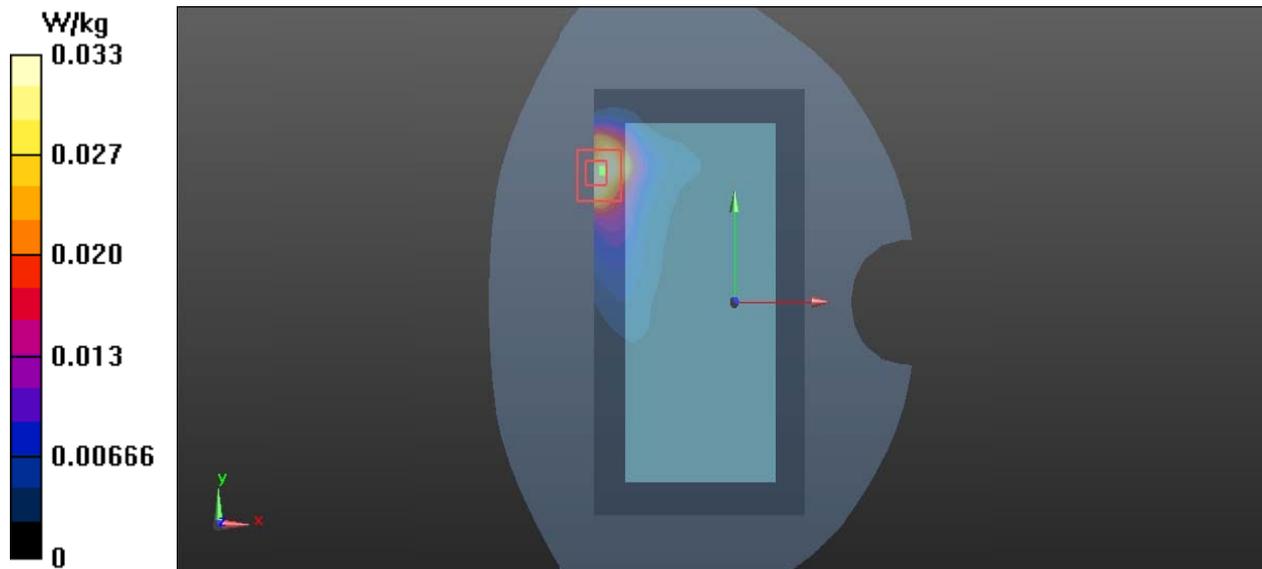
Back Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0.6190 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.0510 W/kg

SAR(1 g) = 0.025 W/kg; SAR(10 g) = 0.010 W/kg

Maximum value of SAR (measured) = 0.0333 W/kg



Plot 129 802.11b Right Edge High (Distance 10mm)

Date: 4/11/2016

Communication System: UID 0, 802.11b (0); Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.993$ S/m; $\epsilon_r = 52.463$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.22, 7.22, 7.22); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Edge High/Area Scan (81x271x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0291 W/kg

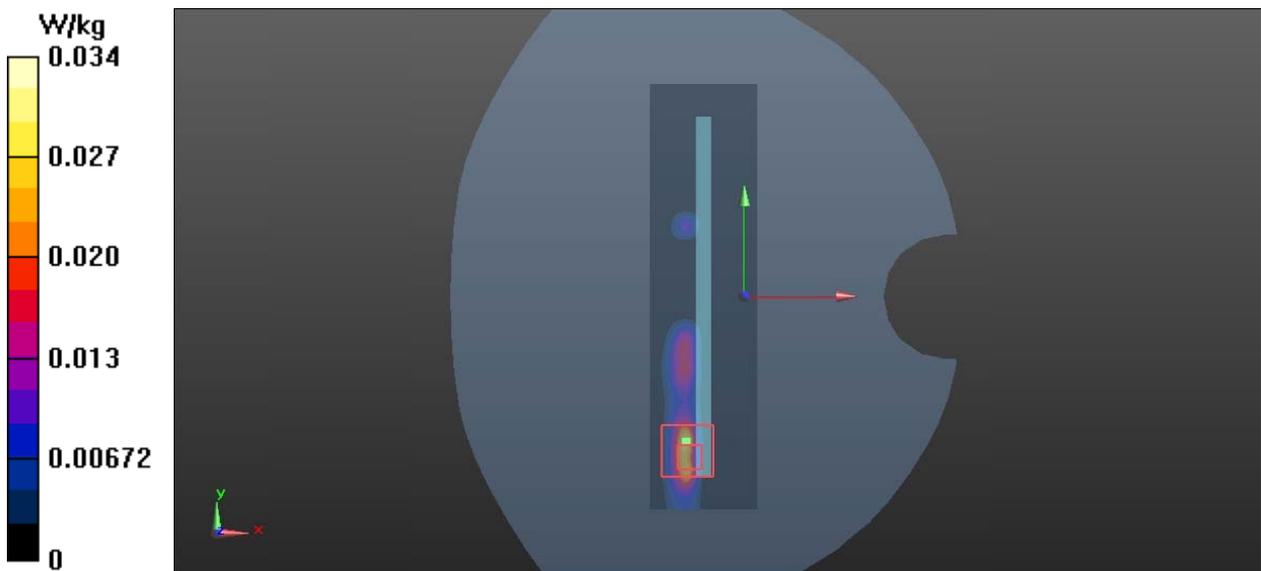
Right Edge High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.671 V/m; Power Drift = 0.0261 dB

Peak SAR (extrapolated) = 0.0540 W/kg

SAR(1 g) = 0.029 W/kg; SAR(10 g) = 0.012 W/kg

Maximum value of SAR (measured) = 0.0336 W/kg



Plot 130 802.11a U-NII-1 Left Cheek Low

Date: 4/11/2016

Communication System: UID 0, 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5180$ MHz; $\sigma = 4.821$ S/m; $\epsilon_r = 35.466$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.58, 5.58, 5.58); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM 2; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Left Cheek Low/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.754 W/kg

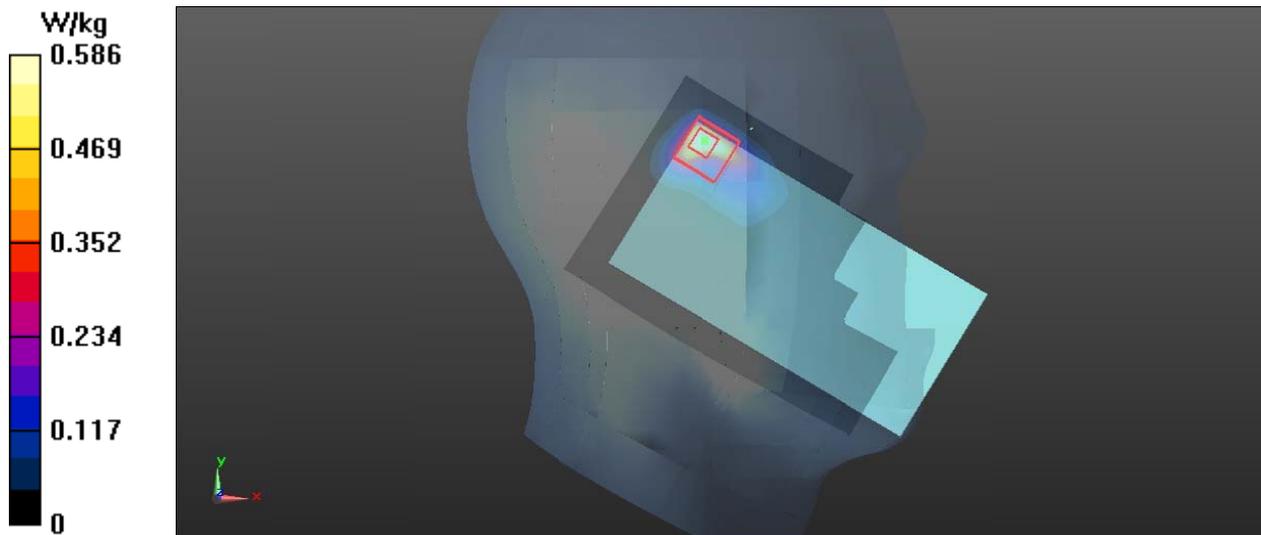
Left Cheek Low/Zoom Scan(7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.823 V/m; Power Drift = 0.0312 dB

Peak SAR (extrapolated) = 2.75 W/kg

SAR(1 g) = 0.587 W/kg; SAR(10 g) = 0.196 W/kg

Maximum value of SAR (measured) = 0.586 W/kg



Plot 131 802.11a U-NII-1 Front Side Low (Distance 15mm)

Date: 4/12/2016

Communication System: UID 0, 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5180$ MHz; $\sigma = 5.29$ S/m; $\epsilon_r = 47.113$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.93, 4.93, 4.93); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Front Side Low/Area Scan(111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0408 W/kg

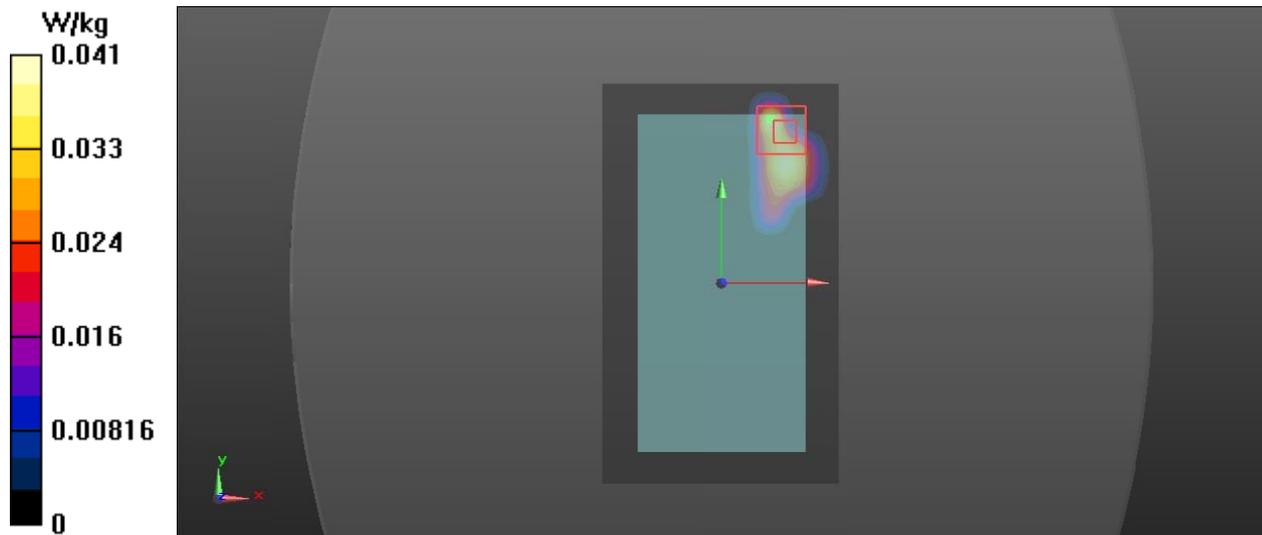
Front Side Low/Zoom Scan(7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.498 V/m; Power Drift = 0.117 dB

Peak SAR (extrapolated) = 0.296 W/kg

SAR(1 g) = 0.063 W/kg; SAR(10 g) = 0.022 W/kg

Maximum value of SAR (measured) = 0.0539 W/kg



Plot 132 802.11a U-NII-1 Right Edge Low (Distance 10mm)

Date: 4/12/2016

Communication System: UID 0, 802.11a (0); Frequency: 5180 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5180 \text{ MHz}$; $\sigma = 5.29 \text{ S/m}$; $\epsilon_r = 47.113$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.93, 4.93, 4.93); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Edge Low/Area Scan (51x181x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

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

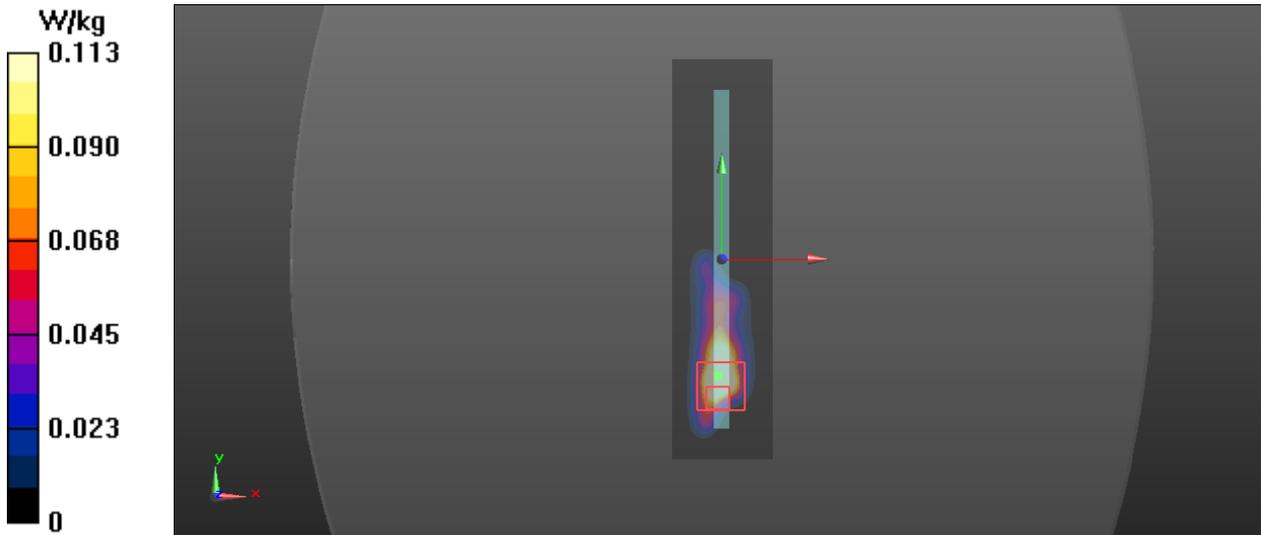
Right Edge Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 2.277 V/m ; Power Drift = 0.0215 dB

Peak SAR (extrapolated) = 0.349 W/kg

SAR(1 g) = 0.104 W/kg ; SAR(10 g) = 0.039 W/kg

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



Plot 133 802.11a U-NII-2A Left Cheek Middle

Date: 4/12/2016

Communication System: UID 0, 802.11a (0); Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.872$ S/m; $\epsilon_r = 35.353$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5°C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.34, 5.34, 5.34); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM1; Type: SAM; Serial: TP-1534

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Left Cheek Middle/Area Scan(111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.473 W/kg

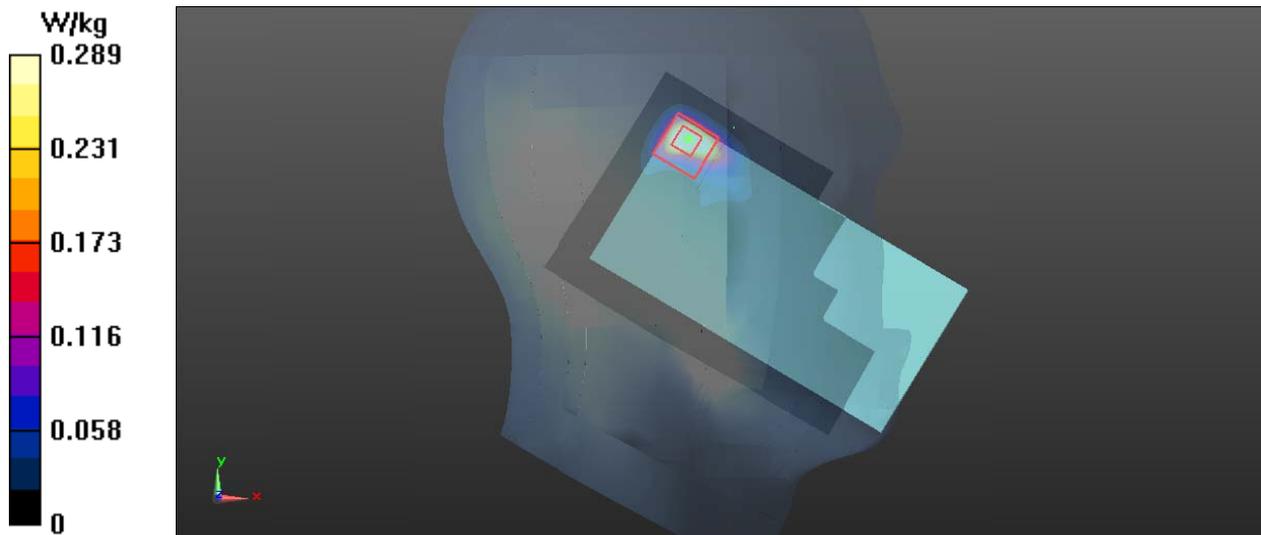
Left Cheek Middle/Zoom Scan(7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.076 V/m; Power Drift = 0.0278 dB

Peak SAR (extrapolated) = 0.704 W/kg

SAR(1 g) = 0.236 W/kg; SAR(10 g) = 0.082 W/kg

Maximum value of SAR (measured) = 0.289 W/kg



Plot 134 802.11a U-NII-2A Front Side High (Distance 15mm)

Date: 4/12/2016

Communication System: UID 0, 802.11a (0); Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5320$ MHz; $\sigma = 5.518$ S/m; $\epsilon_r = 46.737$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.69, 4.69, 4.69); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Front Side High/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.125 W/kg

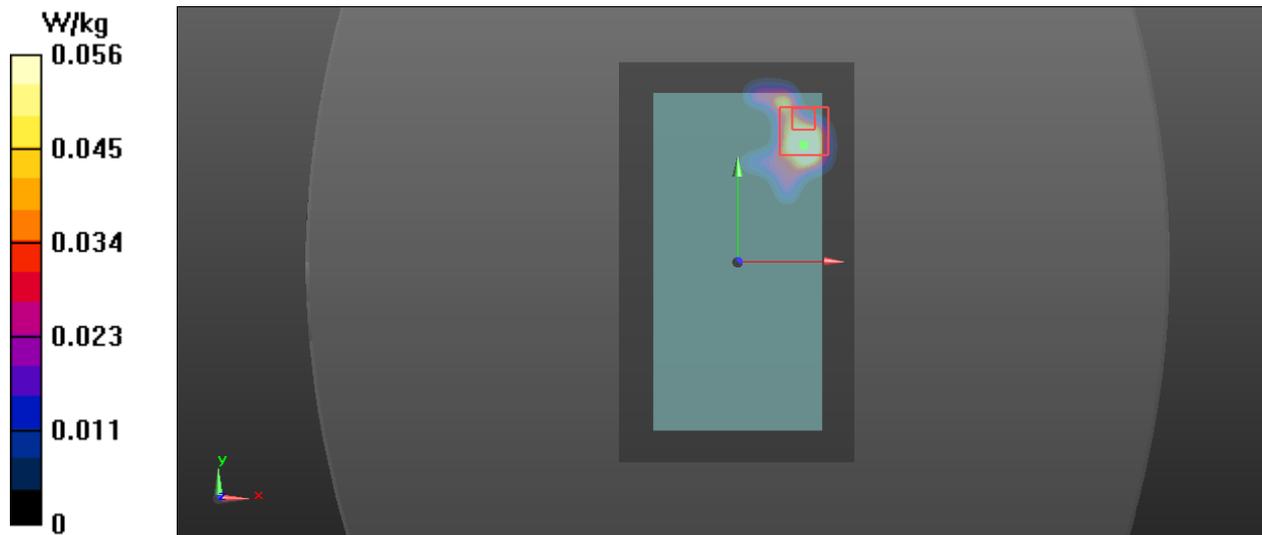
Front Side High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.6370 V/m; Power Drift = 0.0650 dB

Peak SAR (extrapolated) = 0.320 W/kg

SAR(1 g) = 0.063 W/kg; SAR(10 g) = 0.024 W/kg

Maximum value of SAR (measured) = 0.0564 W/kg



Plot 135 802.11a U-NII-2A Back Edge High (Battery3, Distance 0mm)

Date: 4/12/2016

Communication System: UID 0, 802.11a (0); Frequency: 5320 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5320$ MHz; $\sigma = 5.518$ S/m; $\epsilon_r = 46.537$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.69, 4.69, 4.69); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side High/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

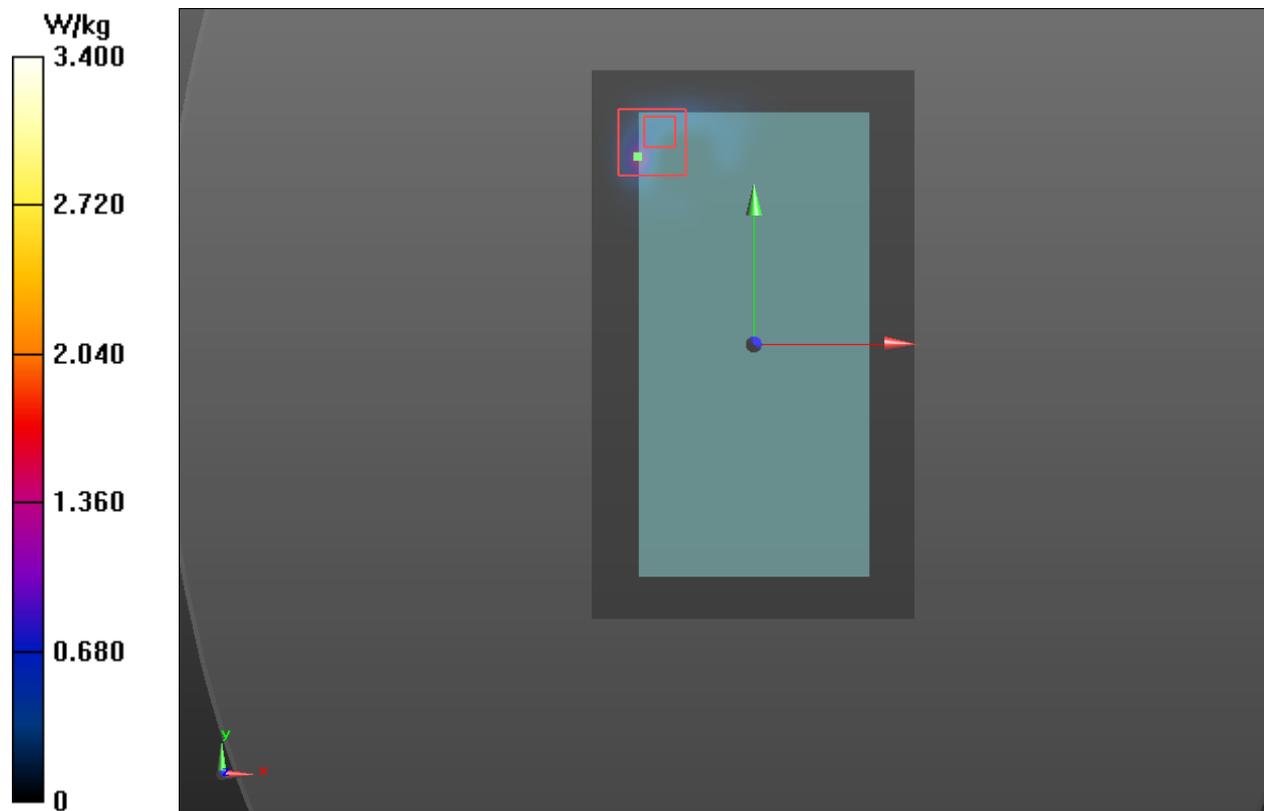
Back Side High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift = 0.099 dB

Peak SAR (extrapolated) = 6.05 W/kg

SAR(1 g) = 1.91 W/kg; SAR(10 g) = 0.489 W/kg

Maximum value of SAR (measured) = 3.40 W/kg



Plot 136 802.11a U-NII-2A Right Edge Middle (Battery3, Distance 0mm)

Date: 4/12/2016

Communication System: UID 0, 802.11a (0); Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.493$ S/m; $\epsilon_r = 46.763$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.69, 4.69, 4.69); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Edge Middle/Area Scan (51x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.97 W/kg

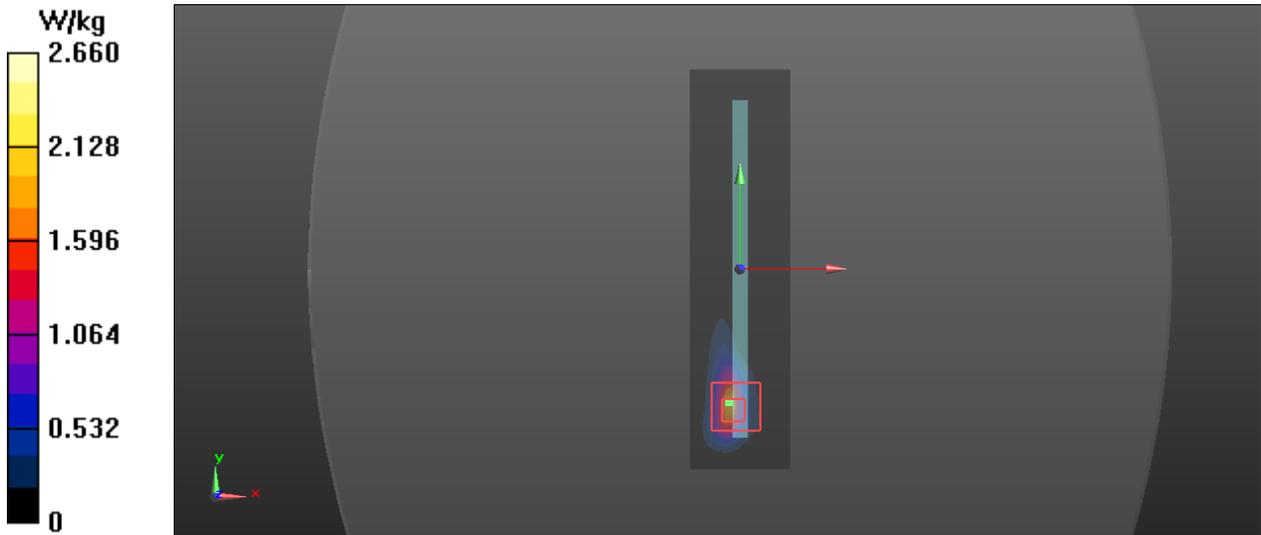
Right Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.426 V/m; Power Drift = 0.090 dB

Peak SAR (extrapolated) = 6.52 W/kg

SAR(1 g) = 2.26 W/kg; SAR(10 g) = 0.672 W/kg

Maximum value of SAR (measured) = 2.66 W/kg



Plot 137 802.11a U-NII-2C Left Cheek Middle (Battery3)

Date: 4/5/2016

Communication System: UID 0, 802.11a (0); Frequency: 5500 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.068$ S/m; $\epsilon_r = 34.456$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.85, 4.85, 4.85); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM 2; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Left Cheek Low/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

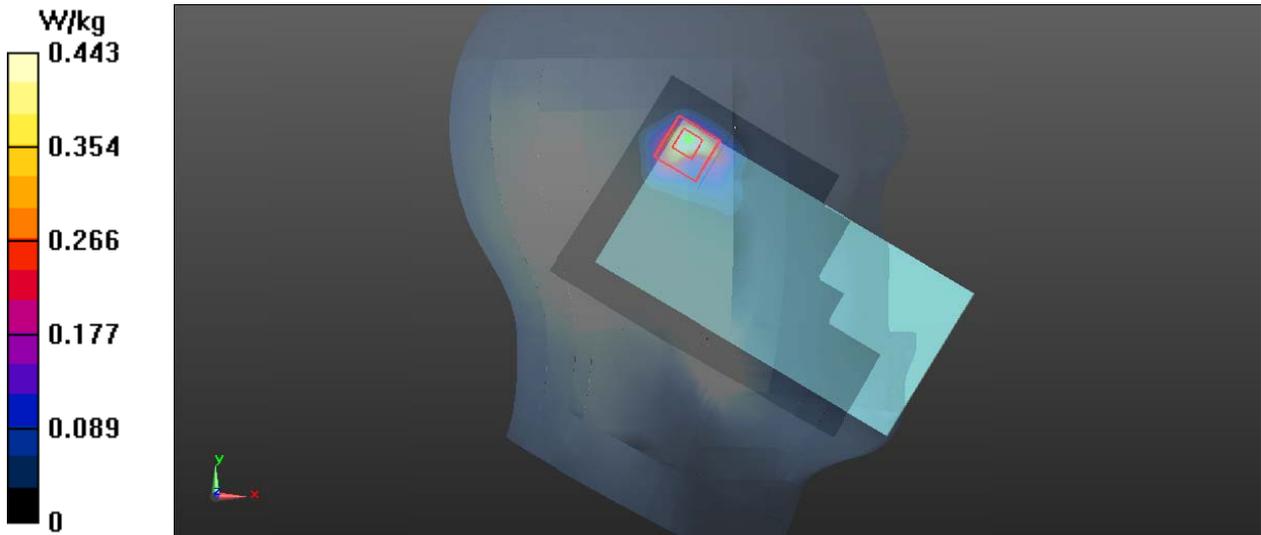
Left Cheek Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.086 V/m; Power Drift = 0.0246 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.344 W/kg; SAR(10 g) = 0.115 W/kg

Maximum value of SAR (measured) = 0.443 W/kg



Plot 138 802.11a U-NII-2C Front Side Low (Distance 15mm)

Date: 4/6/2016

Communication System: UID 0, 802.11a (0); Frequency: 5500 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.668$ S/m; $\epsilon_r = 48.596$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.18, 4.18, 4.18); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Front Side Low/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.125 W/kg

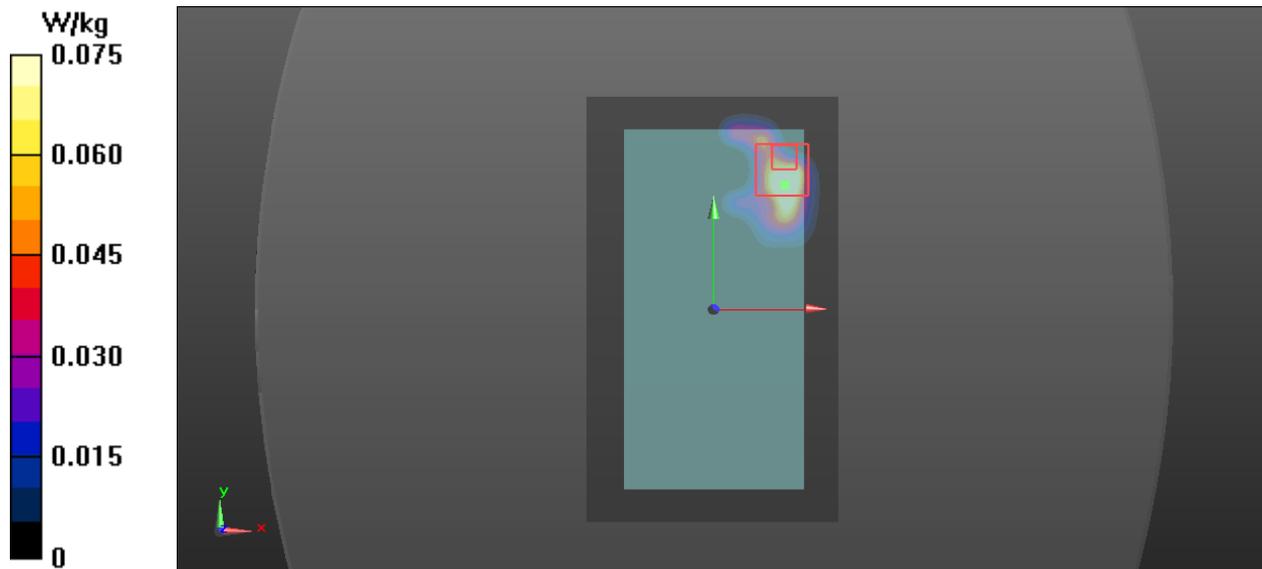
Front Side Low/Zoom Scan(7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.107 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 0.393 W/kg

SAR(1 g) = 0.086 W/kg; SAR(10 g) = 0.031 W/kg

Maximum value of SAR (measured) = 0.0754 W/kg



Plot 139 802.11a U-NII-2C Back Edge Low (Distance 0mm)

Date: 4/6/2016

Communication System: UID 0, 802.11a (0); Frequency: 5500 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5500$ MHz; $\sigma = 5.068$ S/m; $\epsilon_r = 34.456$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.18, 4.18, 4.18); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Edge Low/Area Scan (51x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 3.77 W/kg

Back Edge Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

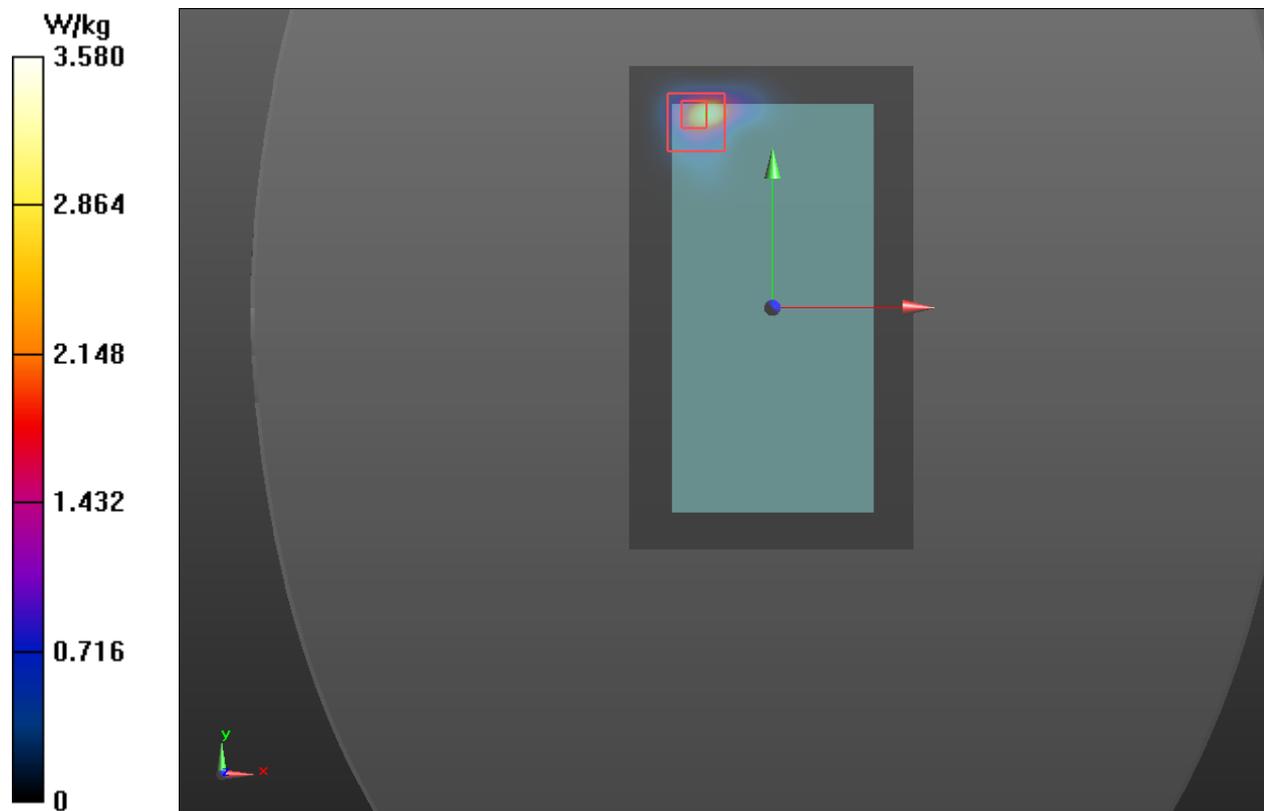
dy=8mm, dz=5mm

Reference Value = 0 V/m; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 7.85 W/kg

SAR(1 g) = 2.49 W/kg; SAR(10 g) = 0.663 W/kg

Maximum value of SAR (measured) = 3.58 W/kg



Plot 140 802.11a U-NII-2C Right Edge Low (Distance 0mm)

Date: 4/6/2016

Communication System: UID 0, 802.11a (0); Frequency: 5500 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5500 \text{ MHz}$; $\sigma = 5.668 \text{ S/m}$; $\epsilon_r = 48.596$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.18, 4.18, 4.18); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Right Edge Low/Area Scan (51x181x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 2.80 W/kg

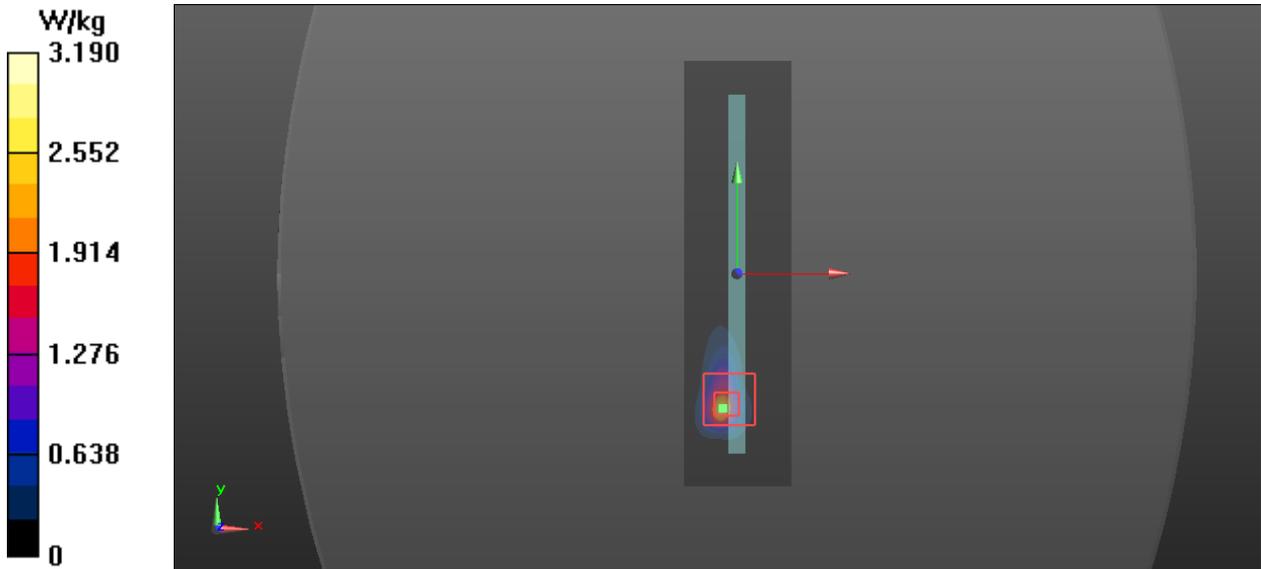
Right Edge Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 5.395 V/m ; Power Drift = -0.0278 dB

Peak SAR (extrapolated) = 7.35 W/kg

SAR(1 g) = 2.46 W/kg ; SAR(10 g) = 0.690 W/kg

Maximum value of SAR (measured) = 3.19 W/kg



Plot 141 802.11a U-NII-3 Left Cheek Middle (Battery3)

Date: 4/5/2016

Communication System: UID 0, 802.11a (0); Frequency: 5785 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 5.263 \text{ S/m}$; $\epsilon_r = 34.007$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.81, 4.81, 4.81); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: SAM 2; Type: SAM;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Left Cheek Middle/Area Scan (111x181x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.337 W/kg

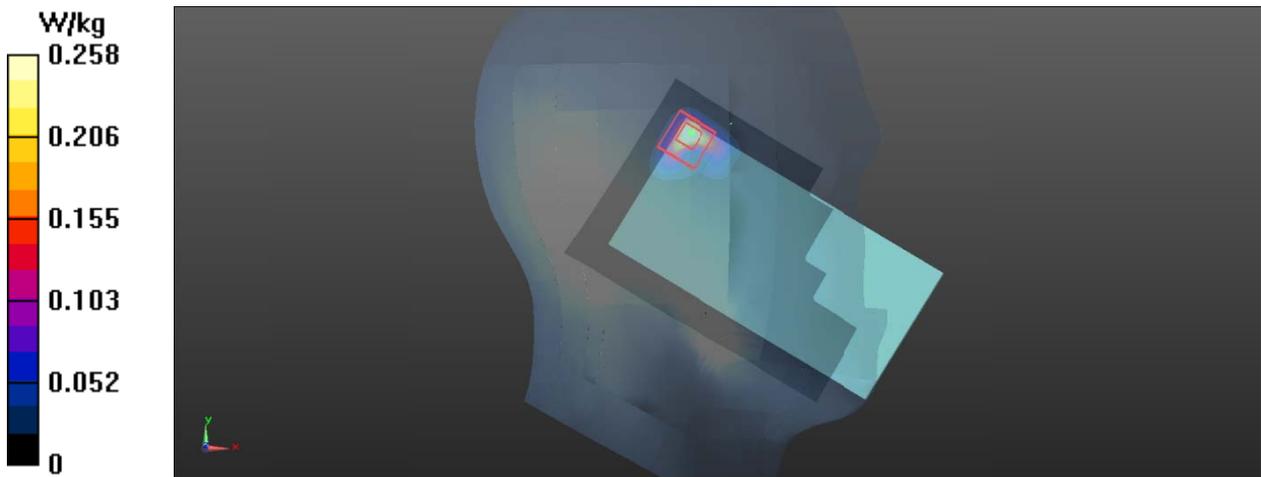
Left Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 1.936 V/m ; Power Drift = 0.0354 dB

Peak SAR (extrapolated) = 0.645 W/kg

SAR(1 g) = 0.192 W/kg ; SAR(10 g) = 0.061 W/kg

Maximum value of SAR (measured) = 0.258 W/kg



Plot 142 802.11a U-NII-3 Front Side Low (Distance 15mm)

Date: 4/6/2016

Communication System: UID 0, 802.11a (0); Frequency: 5745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 6.06$ S/m; $\epsilon_r = 47.742$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5°C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.23, 4.23, 4.23); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Front Side Low/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0855 W/kg

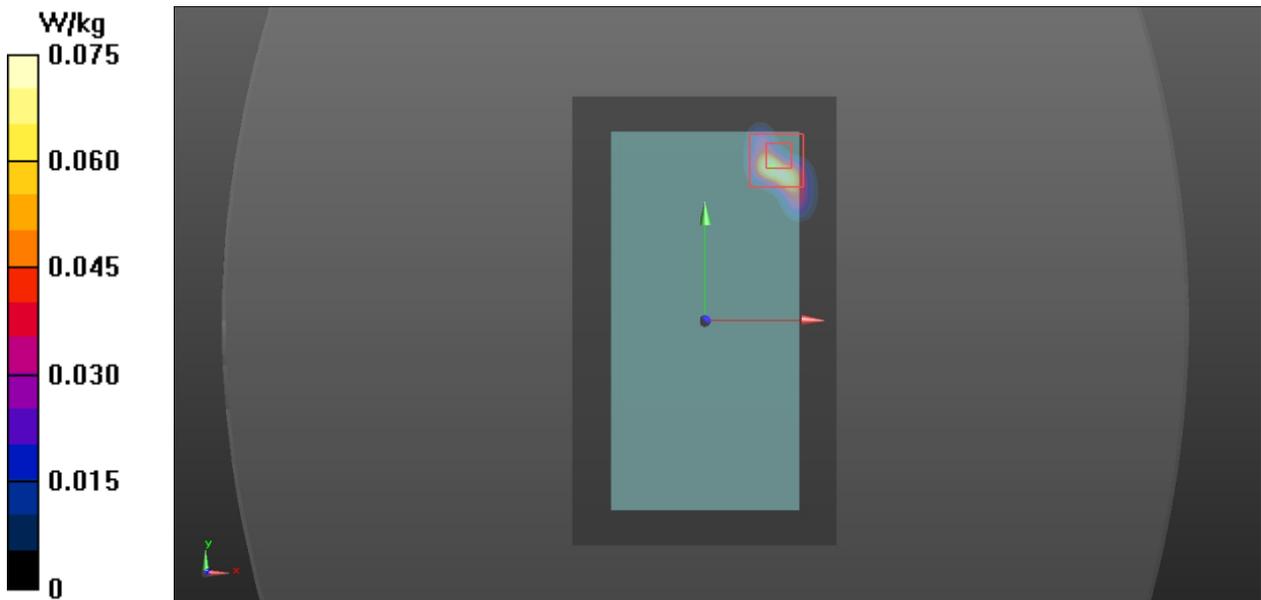
Front Side Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift = 0.023dB

Peak SAR (extrapolated) = 0.441 W/kg

SAR(1 g) = 0.094 W/kg; SAR(10 g) = 0.033 W/kg

Maximum value of SAR (measured) = 0.0753 W/kg



Plot 143 802.11a U-NII-3 Back Side Low (Distance 10mm)

Date: 4/6/2016

Communication System: UID 0, 802.11a (0); Frequency: 5745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 6.06$ S/m; $\epsilon_r = 47.742$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.23, 4.23, 4.23); Calibrated: 12/10/2015;

Electronics: DAE4 Sn871; Calibrated: 11/17/2015

Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA;

Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Back Side Low/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0306 W/kg

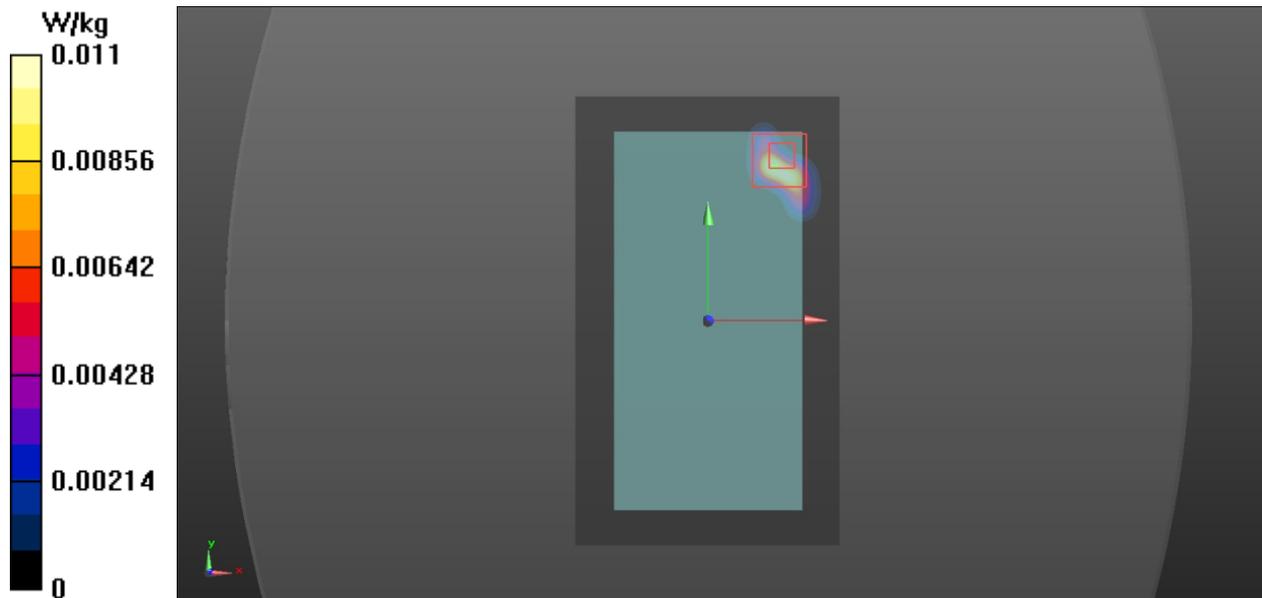
Back Side Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 0.0110 W/kg

SAR(1 g) = 0.053 W/kg; SAR(10 g) = 0.032 W/kg

Maximum value of SAR (measured) = 0.0107 W/kg





ANNEX D: Probe Calibration Certificate



In Collaboration with
s p e a g
CALIBRATION LABORATORY

Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2218 Fax: +86-10-62304633-2209
E-mail: cttl@chinattl.com [Http:// www.chinattl.cn](http://www.chinattl.cn)



CALIBRATION
No. L0570

Client **TA(Shanghai)**

Certificate No: **Z15-97193**

CALIBRATION CERTIFICATE			
Object	EX3DV4 - SN:3677		
Calibration Procedure(s)	FD-Z11-2-004-01 Calibration Procedures for Dosimetric E-field Probes		
Calibration date:	December 10, 2015		
<p>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.</p> <p>All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)°C and humidity<70%.</p> <p>Calibration Equipment used (M&TE critical for calibration)</p>			
Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	01-Jul-15 (CTTL, No.J15X04256)	Jun-16
Power sensor NRP-Z91	101547	01-Jul-15 (CTTL, No.J15X04256)	Jun-16
Power sensor NRP-Z91	101548	01-Jul-15 (CTTL, No.J15X04256)	Jun-16
Reference10dBAttenuator	18N50W-10dB	13-Mar-14(TMC,No.JZ14-1103)	Mar-16
Reference20dBAttenuator	18N50W-20dB	13-Mar-14(TMC,No.JZ14-1104)	Mar-16
Reference Probe EX3DV4	SN 7307	27-Feb-15(SPEAG,No.EX3-7307_Feb15)	Feb-16
DAE4	SN 771	27-Jan-15(SPEAG, No.DAE4-771_Jan15)	Jan -16
Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGeneratorMG3700A	6201052605	01-Jul-15 (CTTL, No.J15X04255)	Jun-16
Network Analyzer E5071C	MY46110673	03-Feb-15 (CTTL, No.J15X00728)	Feb-16
	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Qi Dianyuan	SAR Project Leader	
Approved by:	Lu Bingsong	Deputy Director of the laboratory	
Issued: December 11, 2015			
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			



Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2218 Fax: +86-10-62304633-2209
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Glossary:

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,y,z}
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A,B,C,D	modulation dependent linearization parameters
Polarization Φ	Φ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), $\theta=0$ is normal to probe axis

Connector Angle information used in DASY system to align probe sensor X to the robot coordinate system

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, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300MHz to 3GHz)", February 2005

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}**: Assessed for E-field polarization $\theta=0$ ($f \leq 900\text{MHz}$ in TEM-cell; $f > 1800\text{MHz}$: waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not effect the E^2 -field uncertainty inside TSL (see below ConvF).
- NORM(*f*)_{x,y,z}** = NORM_{x,y,z} * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCP_{x,y,z}**: DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; VR_{x,y,z}**: A,B,C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters**: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800\text{MHz}$) and inside waveguide using analytical field distributions based on power measurements for $f > 800\text{MHz}$. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORM_{x,y,z} * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from $\pm 50\text{MHz}$ to $\pm 100\text{MHz}$.
- Spherical isotropy (3D deviation from isotropy)**: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).



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Probe EX3DV4

SN: 3677

Calibrated: December 10, 2015

Calibrated for DASY/EASY Systems

(Note: non-compatible with DASY2 system!)



In Collaboration with
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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3677

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.40	0.46	0.40	±10.8%
DCP(mV) ^B	100.6	103.2	101.6	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB/μV	C	D dB	VR mV	Unc ^E (k=2)
0	CW	X	0.0	0.0	1.0	0.00	172.8	±2.1%
		Y	0.0	0.0	1.0		187.6	
		Z	0.0	0.0	1.0		171.1	

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%.

^A The uncertainties of Norm X, Y, Z do not affect the E²-field uncertainty inside TSL (see Page 5 and Page 6).
^B Numerical linearization parameter: uncertainty not required.
^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.



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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3677

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz] ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unct. (k=2)
750	41.9	0.89	9.69	9.69	9.69	0.13	1.00	± 12%
850	41.5	0.92	9.35	9.35	9.35	0.14	1.23	± 12%
1750	40.1	1.37	7.98	7.98	7.98	0.17	1.21	± 12%
1900	40.0	1.40	7.96	7.96	7.96	0.13	1.52	± 12%
2300	39.5	1.67	7.60	7.60	7.60	0.44	0.74	± 12%
2450	39.2	1.80	7.39	7.39	7.39	0.51	0.72	± 12%
2600	39.0	1.96	7.18	7.18	7.18	0.27	1.20	± 12%
5200	36.0	4.66	5.58	5.58	5.58	0.38	1.25	± 13%
5300	35.9	4.76	5.34	5.34	5.34	0.37	1.23	± 13%
5600	35.5	5.07	4.85	4.85	4.85	0.40	1.10	± 13%
5800	35.3	5.27	4.81	4.81	4.81	0.40	1.32	± 13%

^C Frequency validity of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequency below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.