

Plot 88 LTE Band 12 1RB Left Cheek Low (ANT0)

Date: 12/4/2020

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

Medium parameters used: $f = 704$ MHz; $\sigma = 0.846$ S/m; $\epsilon_r = 42.775$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.78, 9.78, 9.78); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.421 W/kg

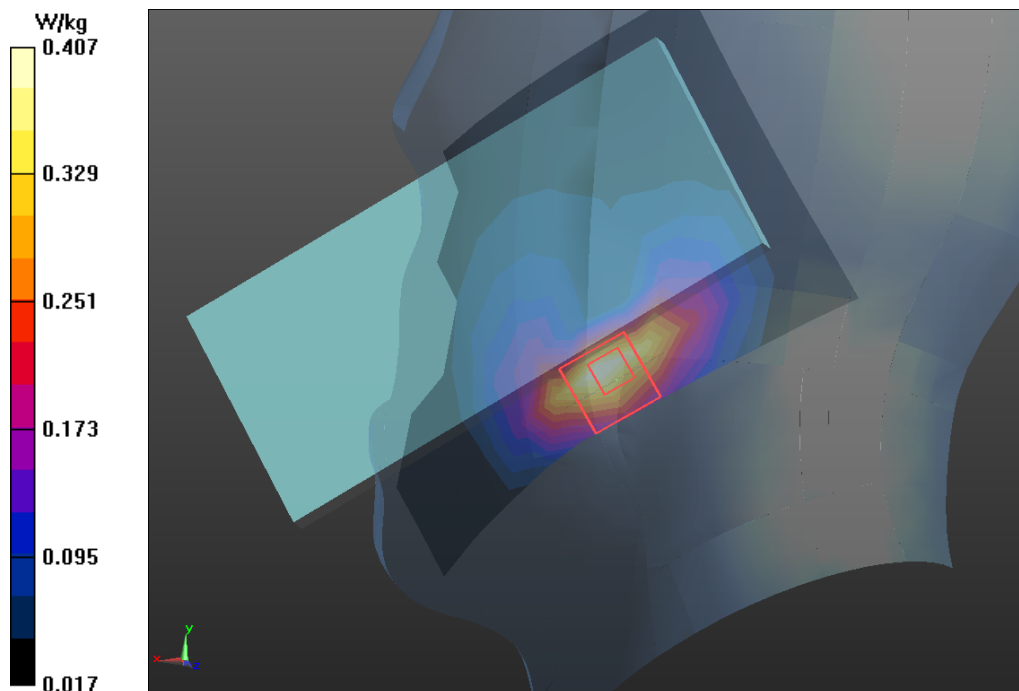
Left Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.893 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.779 W/kg

SAR(1 g) = 0.392 W/kg; SAR(10 g) = 0.215 W/kg

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



Plot 89 LTE Band 12 1RB Back Side Low (Distance 15mm, ANT0)

Date: 12/4/2020

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

Medium parameters used: $f = 704$ MHz; $\sigma = 0.846$ S/m; $\epsilon_r = 42.775$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.78, 9.78, 9.78); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.159 W/kg

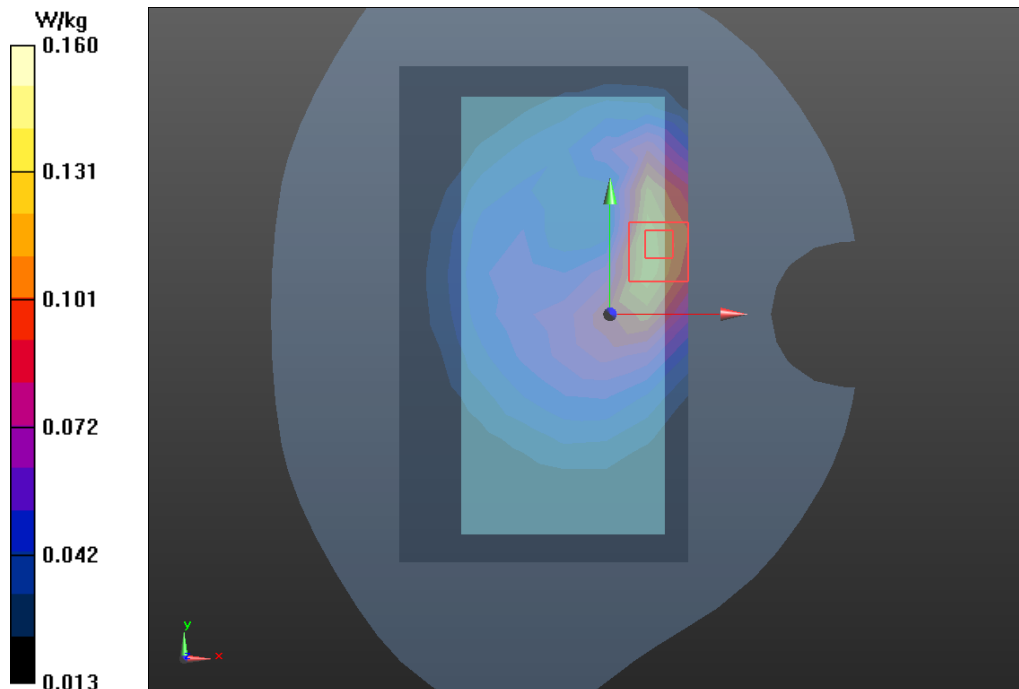
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.033 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.223 W/kg

SAR(1 g) = 0.151 W/kg; SAR(10 g) = 0.099 W/kg

Maximum value of SAR (measured) = 0.160 W/kg



Plot 90 LTE Band 12 1RB Left Edge Low (Distance 10mm, ANT0)

Date: 12/4/2020

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

Medium parameters used: $f = 704$ MHz; $\sigma = 0.846$ S/m; $\epsilon_r = 42.775$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.78, 9.78, 9.78); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Edge Low/Area Scan (4x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.341 W/kg

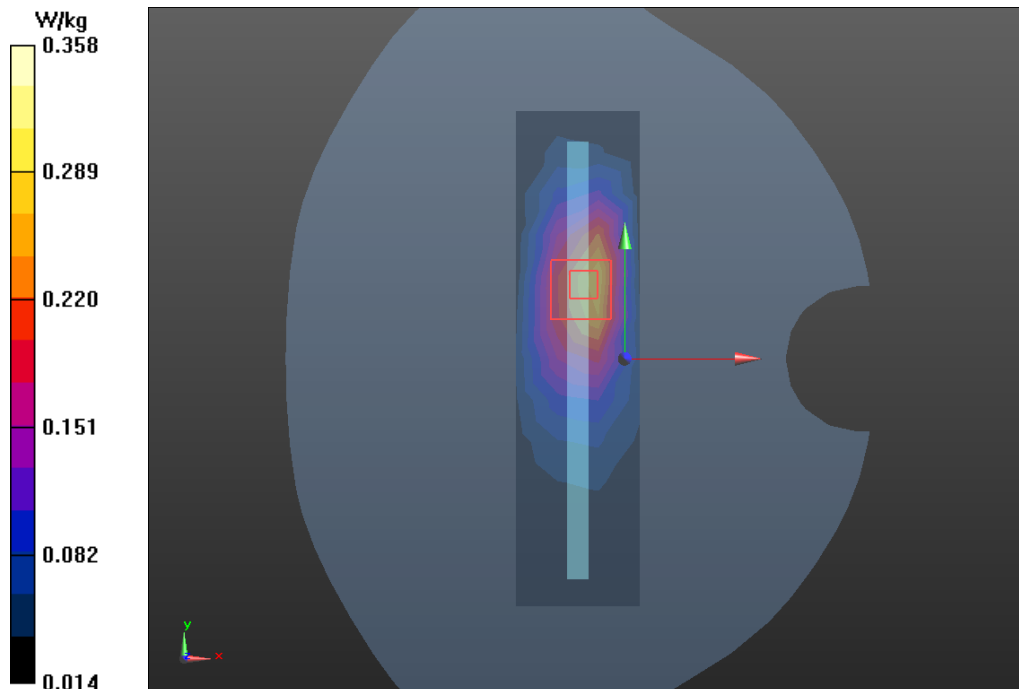
Left Edge Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.97 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.572 W/kg

SAR(1 g) = 0.322 W/kg; SAR(10 g) = 0.179 W/kg

Maximum value of SAR (measured) = 0.358 W/kg



Plot 91 LTE Band 26 1RB Right Cheek Low (ANT0)

Date: 12/8/2020

Communication System: UID 0, LTE (0); Frequency: 821.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 821.5$ MHz; $\sigma = 0.912$ S/m; $\epsilon_r = 42.152$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.38, 9.38, 9.38); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Low/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.424 W/kg

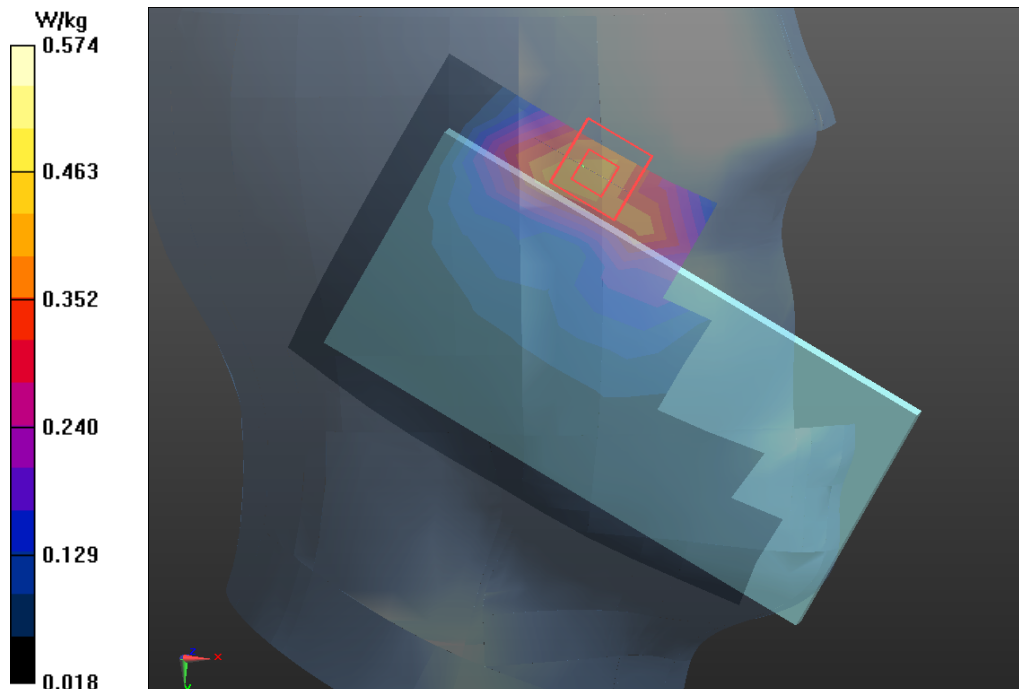
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.507 V/m; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.510 W/kg; SAR(10 g) = 0.275 W/kg

Maximum value of SAR (measured) = 0.574 W/kg



Plot 92 LTE Band 26 1RB Back Side Low (Distance 15mm, ANT0)

Date: 12/8/2020

Communication System: UID 0, LTE (0); Frequency: 821.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 821.5$ MHz; $\sigma = 0.912$ S/m; $\epsilon_r = 42.152$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.38, 9.38, 9.38); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

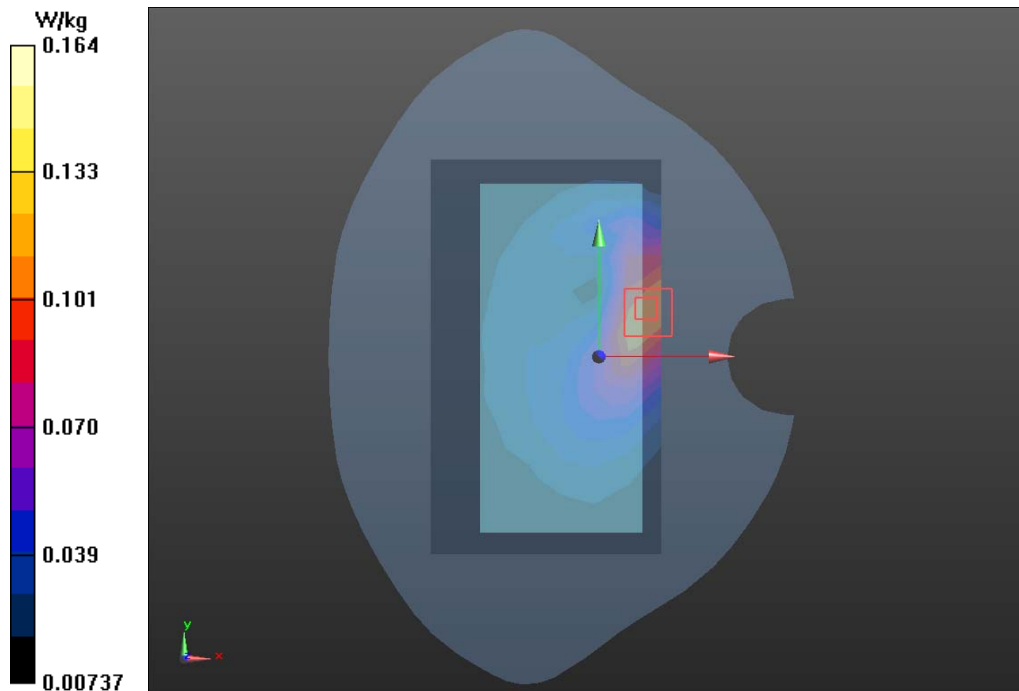
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.106 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 0.181 W/kg

SAR(1 g) = 0.156 W/kg; SAR(10 g) = 0.094 W/kg

Maximum value of SAR (measured) = 0.164 W/kg



Plot 93 LTE Band 26 1RB Left Edge Low (Distance 10mm, ANT0)

Date: 12/8/2020

Communication System: UID 0, LTE (0); Frequency: 821.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 821.5$ MHz; $\sigma = 0.912$ S/m; $\epsilon_r = 42.152$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.38, 9.38, 9.38); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Edge Low/Area Scan (4x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.385 W/kg

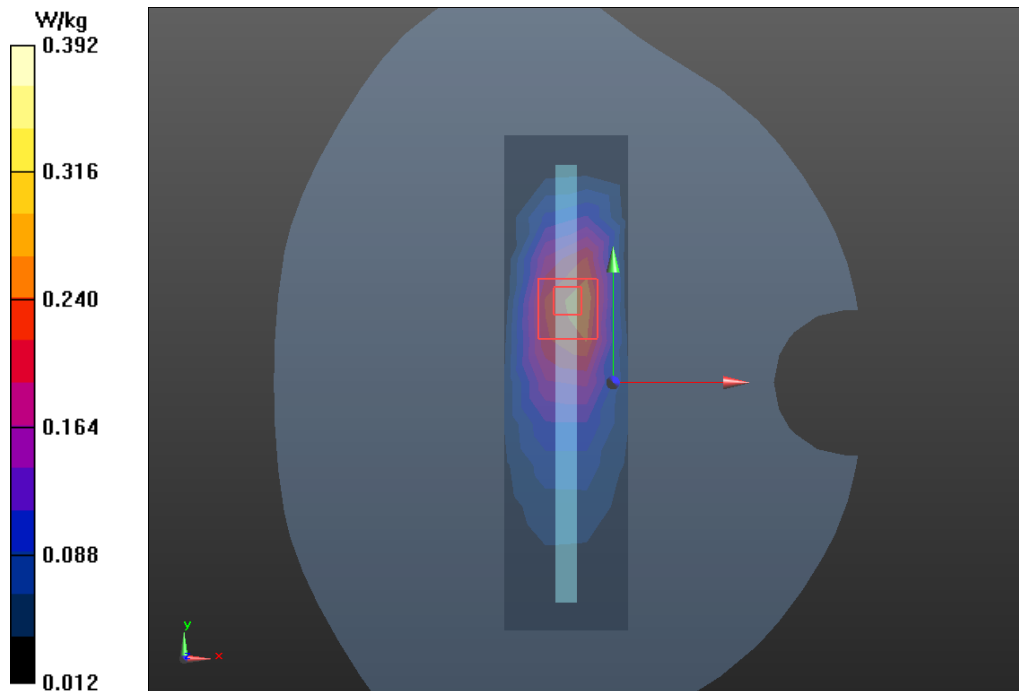
Left Edge Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.38 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.569 W/kg

SAR(1 g) = 0.384 W/kg; SAR(10 g) = 0.204 W/kg

Maximum value of SAR (measured) = 0.392 W/kg



Plot 94 LTE Band 38 50%RB Right Tilt Middle (ANT3)

Date: 12/13/2020

Communication System: UID 0, LTE (0); Frequency: 2595 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2595$ MHz; $\sigma = 1.973$ S/m; $\epsilon_r = 38.008$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.806 W/kg

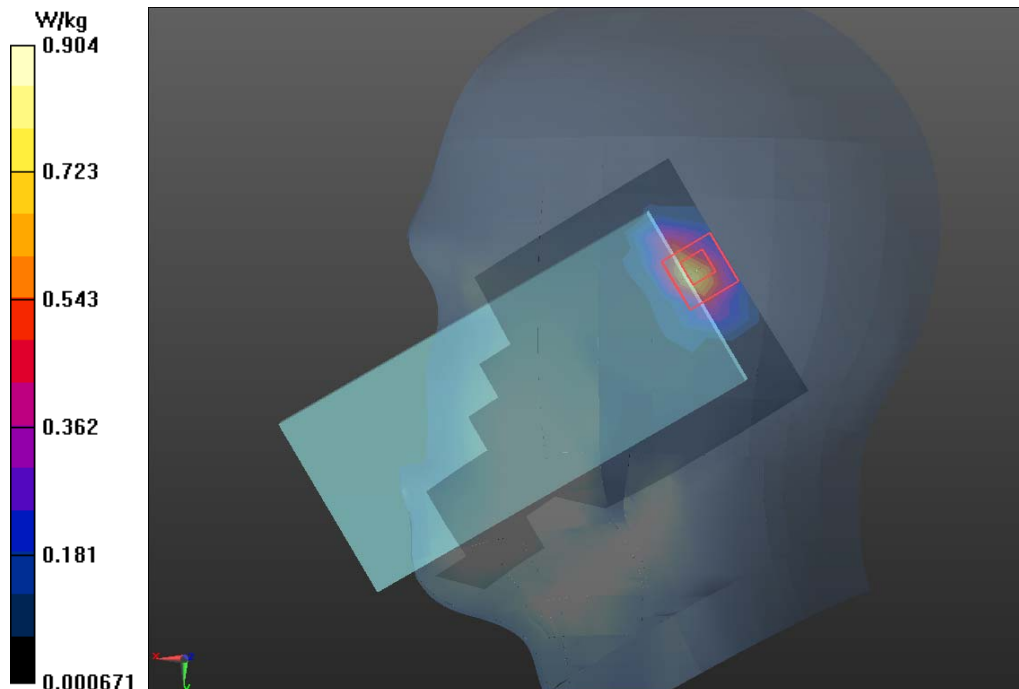
Right Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.96 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 1.94 W/kg

SAR(1 g) = 0.772 W/kg; SAR(10 g) = 0.310 W/kg

Maximum value of SAR (measured) = 0.904 W/kg



Plot 95 LTE Band 38 50%RB Front Side Middle (Distance 15mm, ANT3)

Date: 12/13/2020

Communication System: UID 0, LTE (0); Frequency: 2595 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2595$ MHz; $\sigma = 1.973$ S/m; $\epsilon_r = 38.008$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Middle/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.175 W/kg

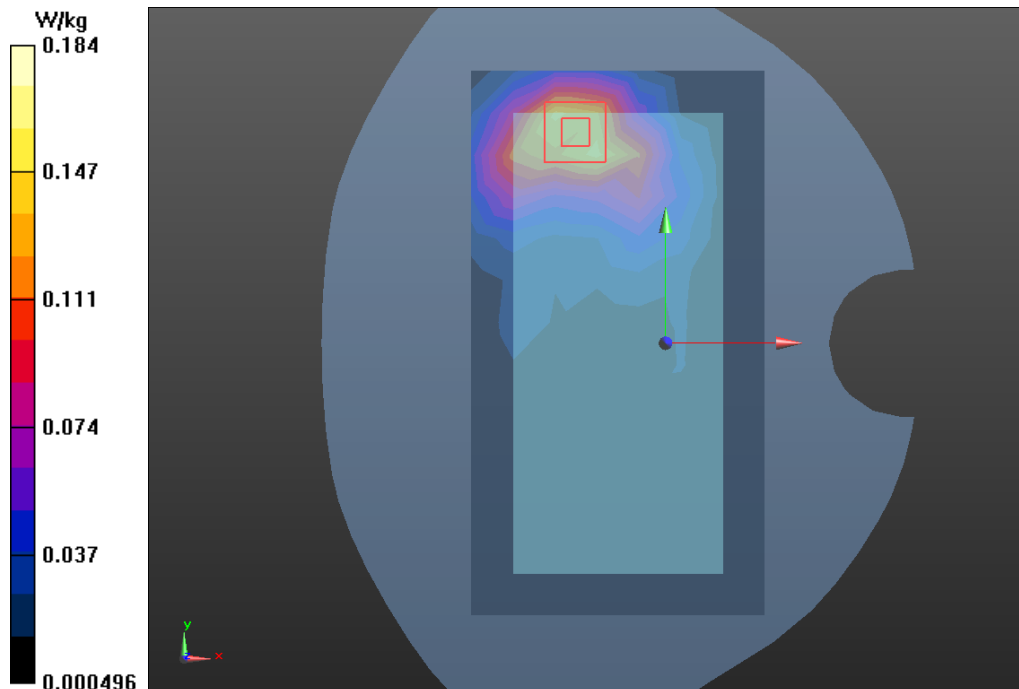
Front Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.541 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 0.346 W/kg

SAR(1 g) = 0.169 W/kg; SAR(10 g) = 0.086 W/kg

Maximum value of SAR (measured) = 0.184 W/kg



Plot 96 LTE Band 38 50%RB Top Edge Middle (Distance 10mm, ANT3)

Date: 12/13/2020

Communication System: UID 0, LTE (0); Frequency: 2595 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2595$ MHz; $\sigma = 1.987$ S/m; $\epsilon_r = 37.993$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Middle/Area Scan (5x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.909 W/kg

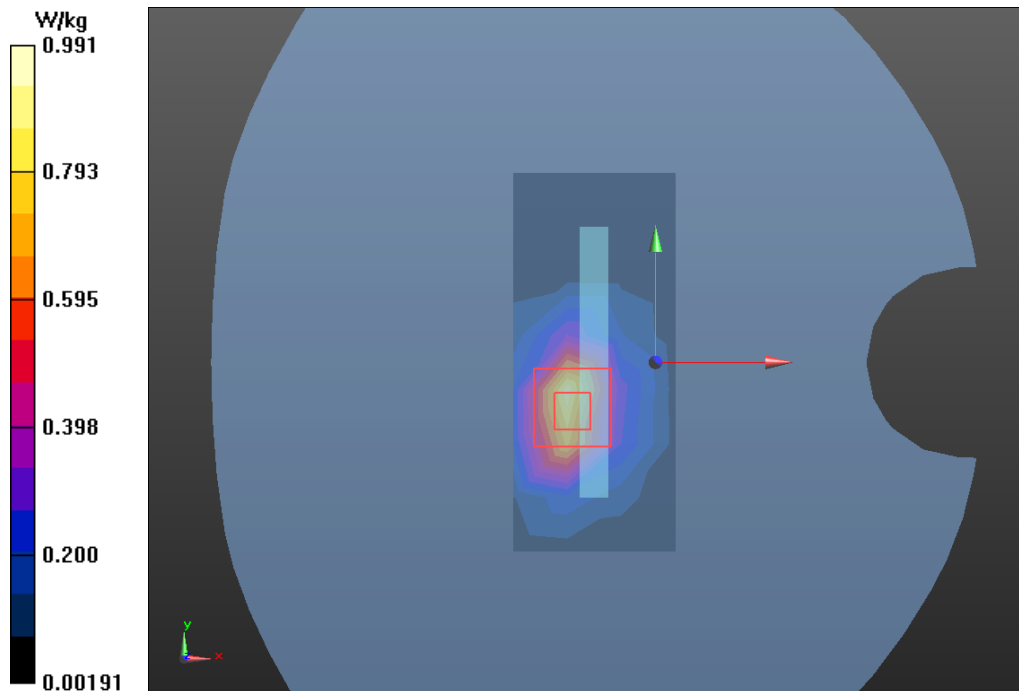
Top Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.07 V/m; Power Drift = -0.027 dB

Peak SAR (extrapolated) = 1.87 W/kg

SAR(1 g) = 0.782 W/kg; SAR(10 g) = 0.334 W/kg

Maximum value of SAR (measured) = 0.991 W/kg



Plot 97 LTE Band 41 1RB Right Tilt Low(ANT3)

Date: 12/26/2020

Communication System: UID 0, LTE (0); Frequency: 2506 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2506$ MHz; $\sigma = 1.871$ S/m; $\epsilon_r = 38.365$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt Low/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

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

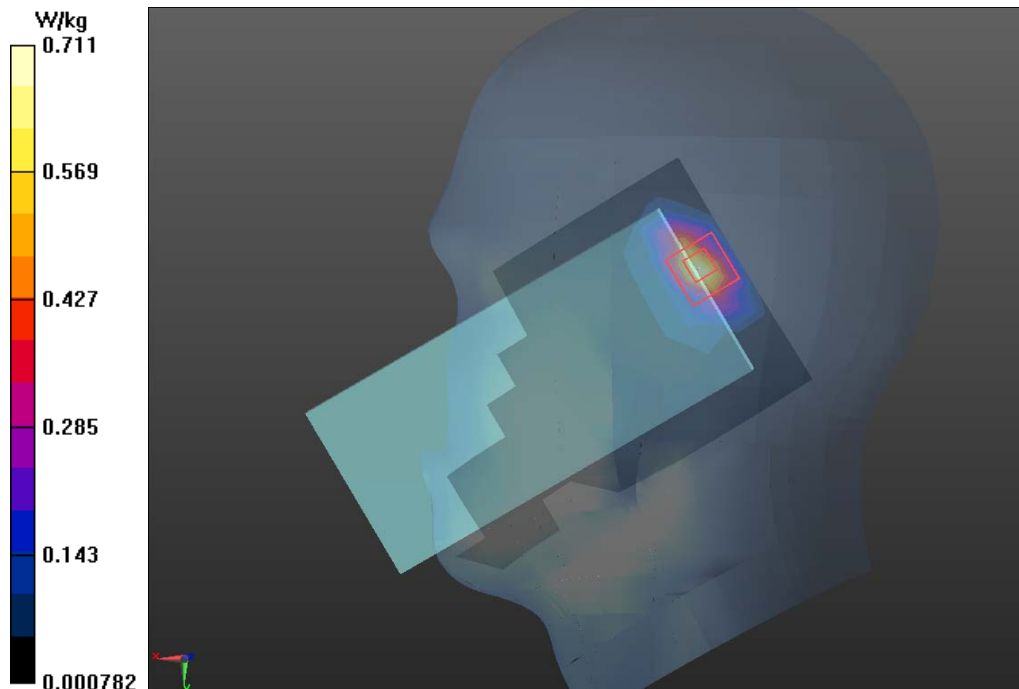
Right Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.32 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 1.57 W/kg

SAR(1 g) = 0.610 W/kg; SAR(10 g) = 0.245 W/kg

Maximum value of SAR (measured) = 0.711 W/kg



Plot 98 LTE Band 41 1RB Front Side High (Distance 15mm, ANT3)

Date: 12/26/2020

Communication System: UID 0, LTE (0); Frequency: 2636.5 MHz; Duty Cycle: 1:1.58

Medium parameters used (interpolated): $f = 2636.5$ MHz; $\sigma = 2.018$ S/m; $\epsilon_r = 37.899$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.195 W/kg

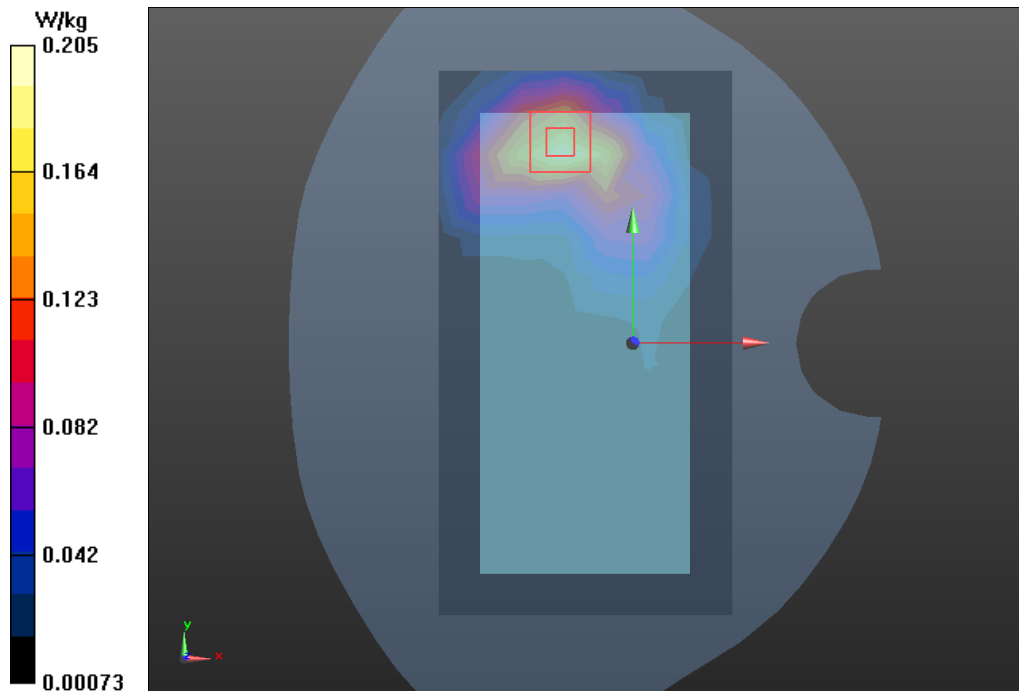
Front Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.208 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.385 W/kg

SAR(1 g) = 0.186 W/kg; SAR(10 g) = 0.094 W/kg

Maximum value of SAR (measured) = 0.205 W/kg



Plot 99 LTE Band 41 1RB Top Edge High (Distance 10mm, ANT3)

Date: 12/26/2020

Communication System: UID 0, LTE (0); Frequency: 2680 MHz; Duty Cycle: 1:1.58

Medium parameters used: $f = 2680$ MHz; $\sigma = 2.068$ S/m; $\epsilon_r = 37.767$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge High/Area Scan (5x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.861 W/kg

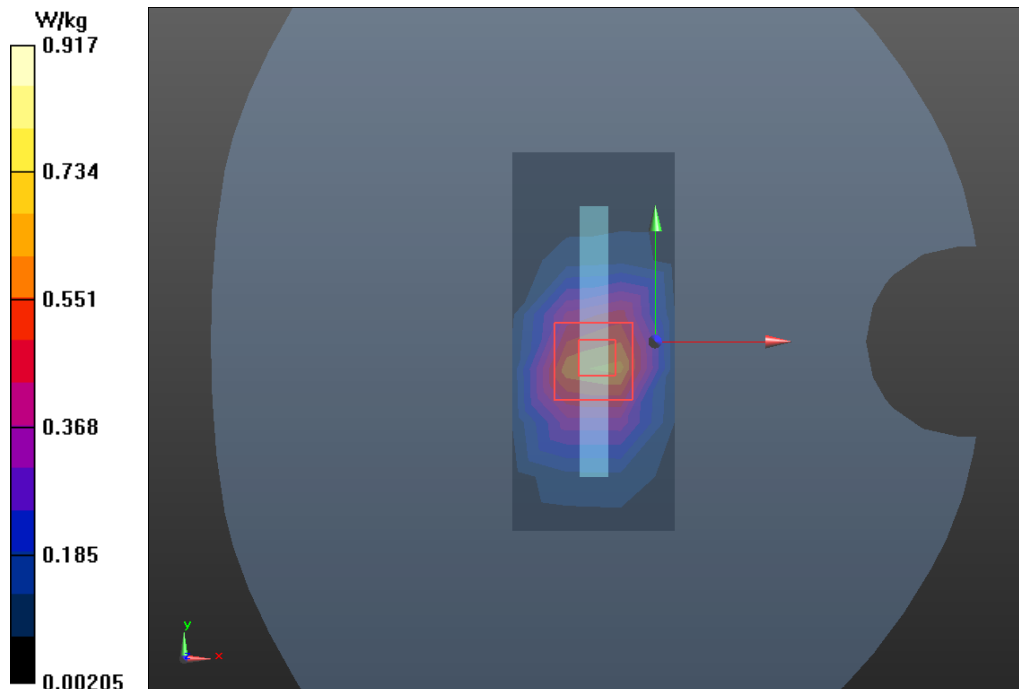
Top Edge High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 20.49 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 1.82 W/kg

SAR(1 g) = 0.814 W/kg; SAR(10 g) = 0.362 W/kg

Maximum value of SAR (measured) = 0.917 W/kg



Plot 100 LTE Band 66 50%RB Right Tilt Middle (ANT3)

Date: 12/22/2020

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

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.301$ S/m; $\epsilon_r = 38.753$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.90, 7.90, 7.90); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt Middle/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.830 W/kg

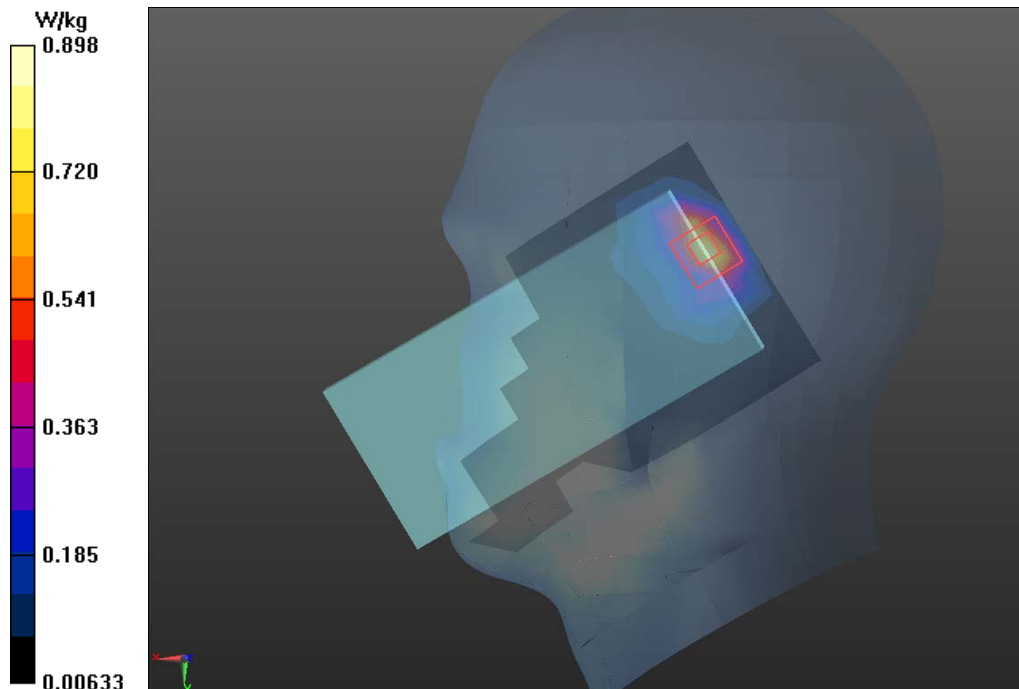
Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.15 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 0.751 W/kg; SAR(10 g) = 0.345 W/kg

Maximum value of SAR (measured) = 0.898 W/kg



Plot 101 LTE Band 66 50%RB Front Side Middle (Distance 15mm, ANT3)

Date: 12/22/2020

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

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.323$ S/m; $\epsilon_r = 39.378$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.90, 7.90, 7.90); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Middle/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.321 W/kg

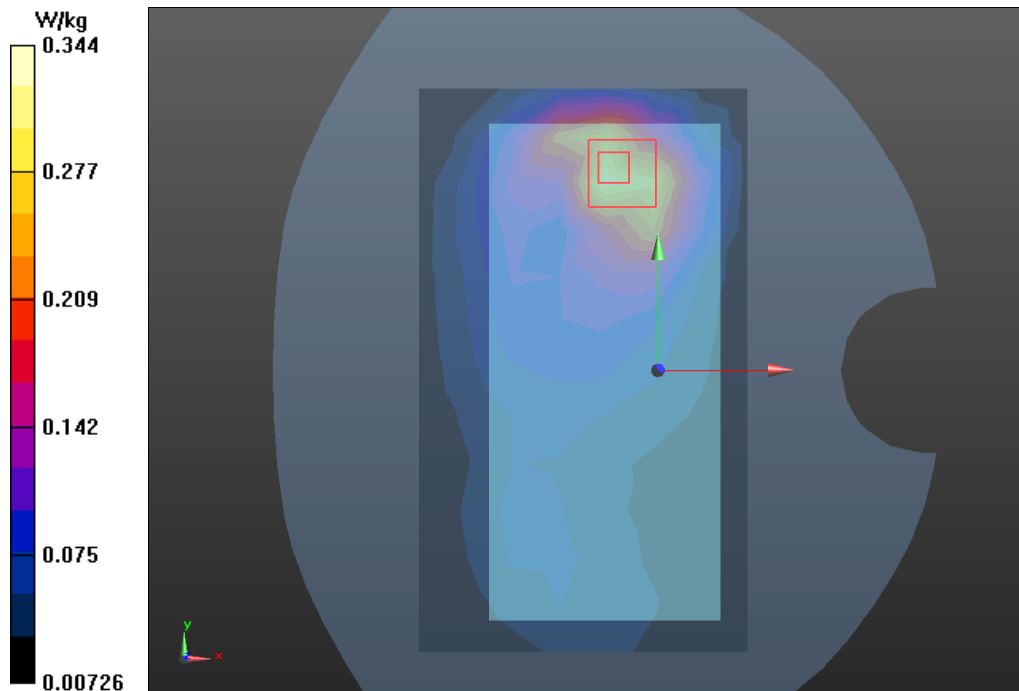
Front Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.687 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.515 W/kg

SAR(1 g) = 0.318 W/kg; SAR(10 g) = 0.189 W/kg

Maximum value of SAR (measured) = 0.344 W/kg



Plot 102 LTE Band 66 50%RB Top Edge Middle (Distance 15mm, ANT3)

Date: 12/22/2020

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

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.323$ S/m; $\epsilon_r = 39.378$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.90, 7.90, 7.90); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Middle/Area Scan (4x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.635 W/kg

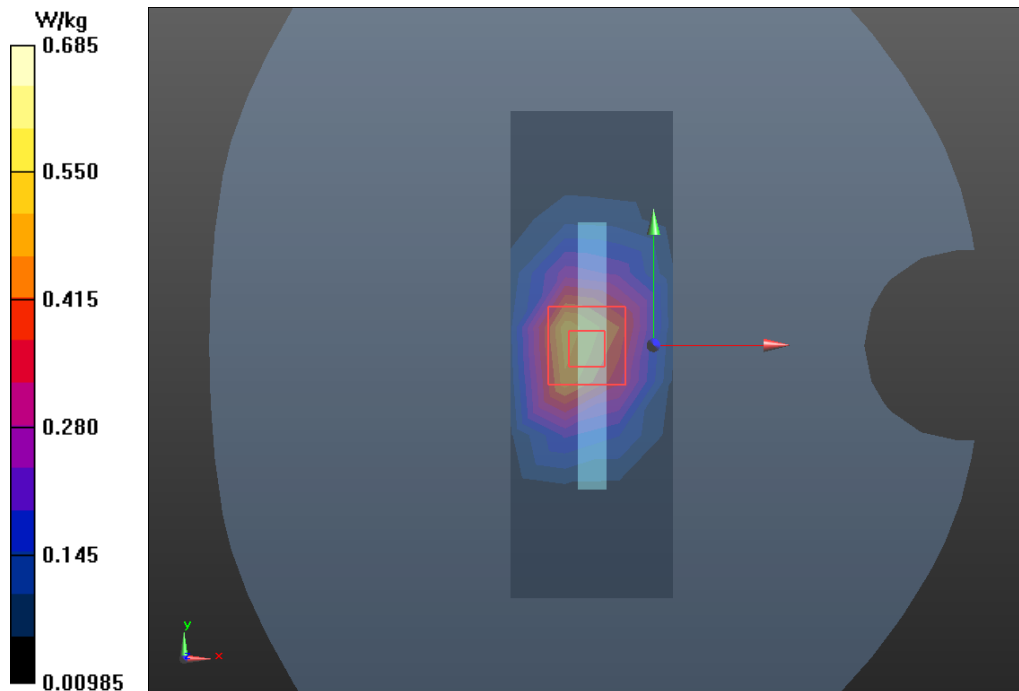
Top Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.65 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.610 W/kg; SAR(10 g) = 0.327 W/kg

Maximum value of SAR (measured) = 0.685 W/kg



Plot 103 NR n5 (EN-DC) 50%RB Left Cheek High (ANT1)

Date: 12/9/2020

Communication System: UID 0, 5G NR (0); Frequency: 839 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 839$ MHz; $\sigma = 0.925$ S/m; $\epsilon_r = 42.206$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.38, 9.38, 9.38); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek High/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.00507 W/kg

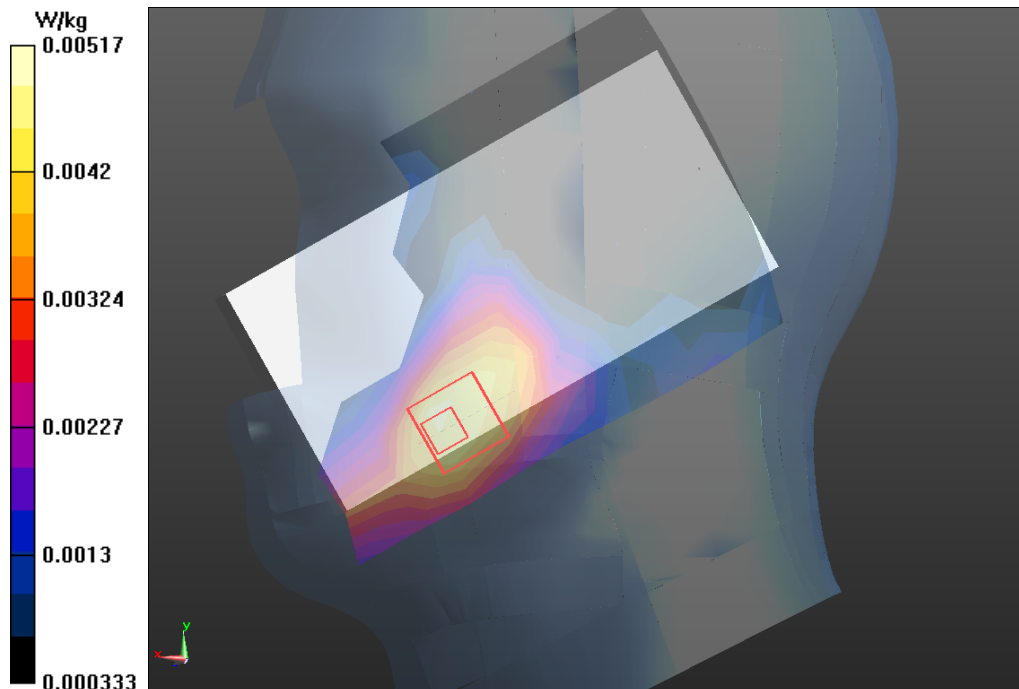
Left Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 0.00599 W/kg

SAR(1 g) = 0.005 W/kg; SAR(10 g) = 0.003 W/kg

Maximum value of SAR (measured) = 0.00517 W/kg



Plot 104 NR n5 (EN-DC) 50%RB Back Side High (Distance 15mm, ANT1)

Date: 12/9/2020

Communication System: UID 0, 5G NR (0); Frequency: 839 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 839$ MHz; $\sigma = 0.925$ S/m; $\epsilon_r = 42.206$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.38, 9.38, 9.38); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.040 W/kg

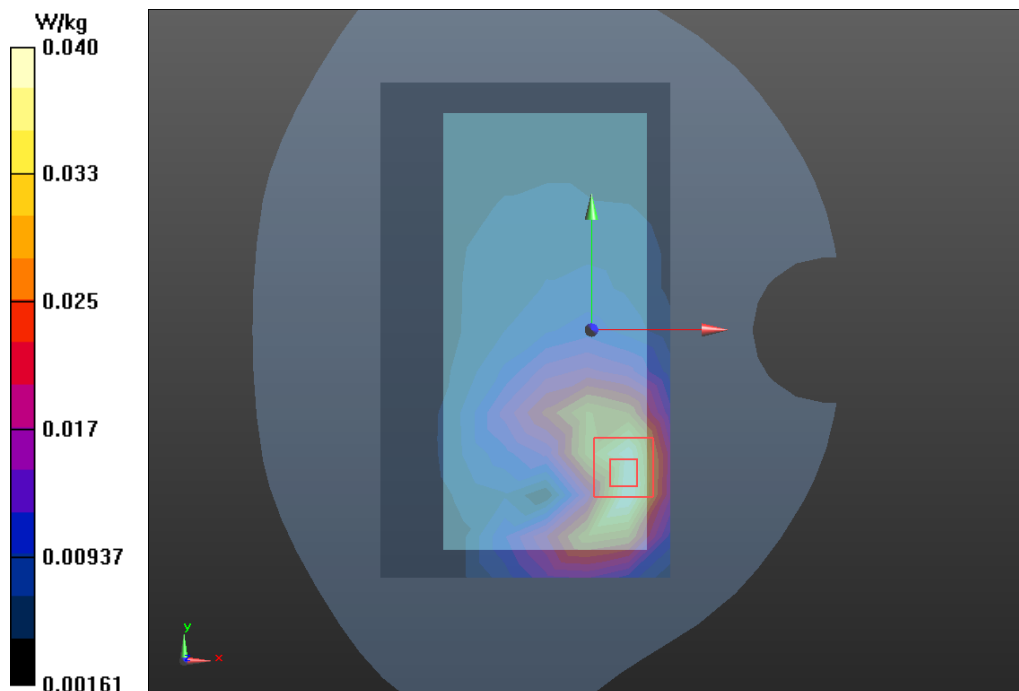
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.241 V/m; Power Drift = -0.068 dB

Peak SAR (extrapolated) = 0.0610 W/kg

SAR(1 g) = 0.038 W/kg; SAR(10 g) = 0.023 W/kg

Maximum value of SAR (measured) = 0.0404 W/kg



Plot 105 NR n5 (EN-DC) 50%RB Back Side High (Distance 10mm, ANT1)

Date: 12/9/2020

Communication System: UID 0, 5G NR (0); Frequency: 839 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 839$ MHz; $\sigma = 0.925$ S/m; $\epsilon_r = 42.206$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.38, 9.38, 9.38); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0788 W/kg

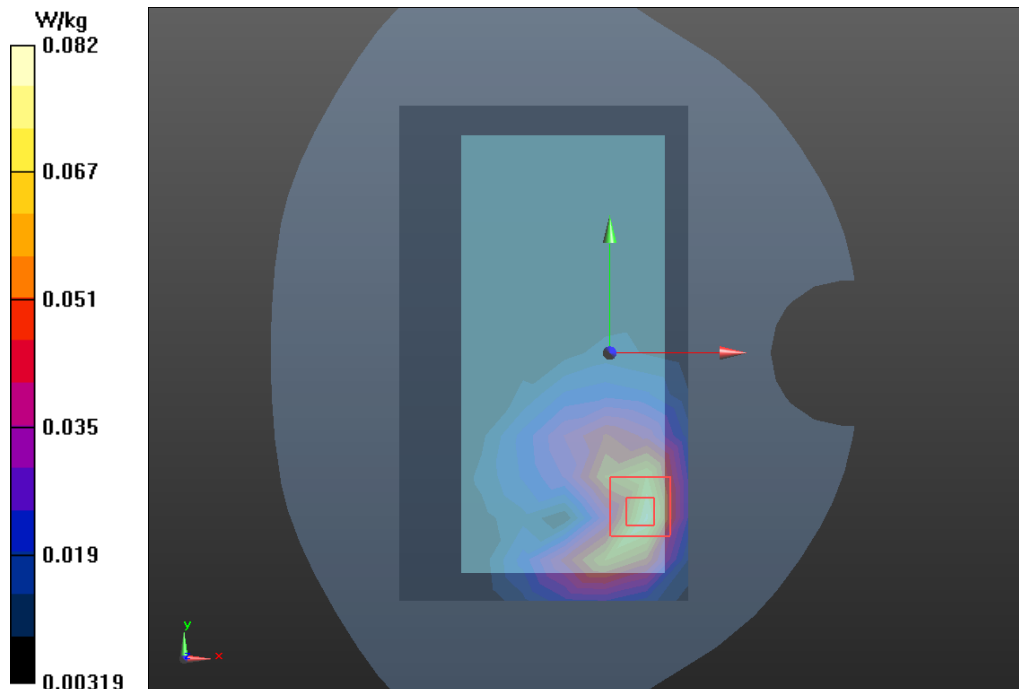
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.227 V/m; Power Drift = 0.061 dB

Peak SAR (extrapolated) = 0.134 W/kg

SAR(1 g) = 0.075 W/kg; SAR(10 g) = 0.043 W/kg

Maximum value of SAR (measured) = 0.082 W/kg



Plot 106 NR n7 (SA&EM-DC) 50%RB Right Tilt Middle (ANT3)

Date: 12/21/2020

Communication System: UID 0, 5G NR (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 1.876$ S/m; $\epsilon_r = 38.352$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt Middle/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.676 W/kg

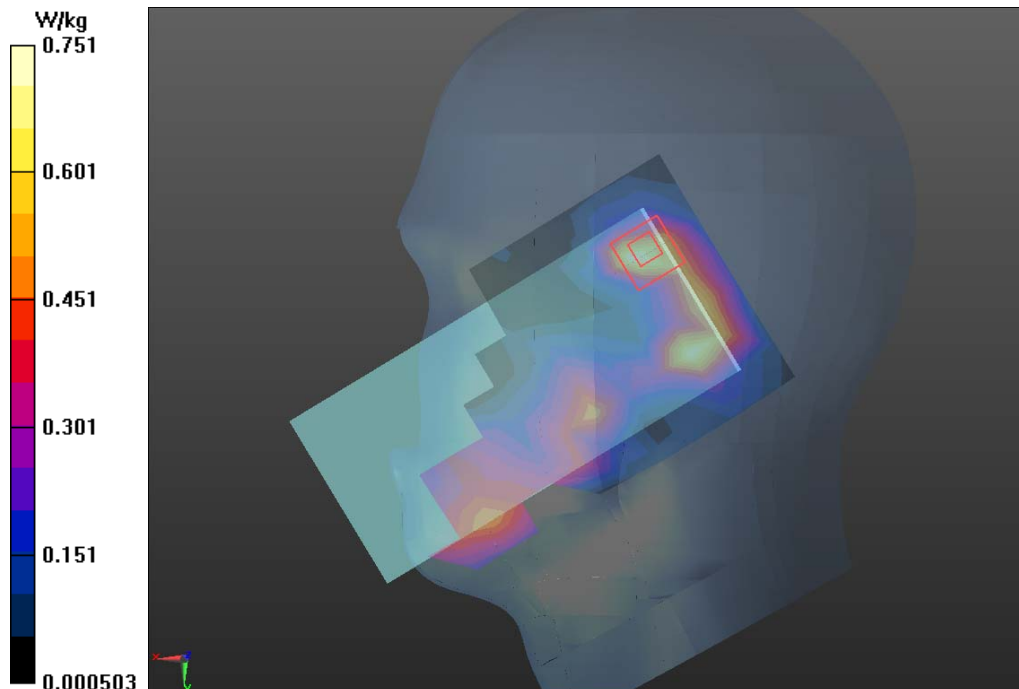
Right Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.896 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.638 W/kg; SAR(10 g) = 0.257 W/kg

Maximum value of SAR (measured) = 0.751 W/kg



Plot 107 NR n7 (SA&EM-DC) 50%RB Front Side Low (Distance 15mm, ANT3)

Date: 12/21/2020

Communication System: UID 0, 5G NR (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510$ MHz; $\sigma = 1.876$ S/m; $\epsilon_r = 38.352$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Low/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.152 W/kg

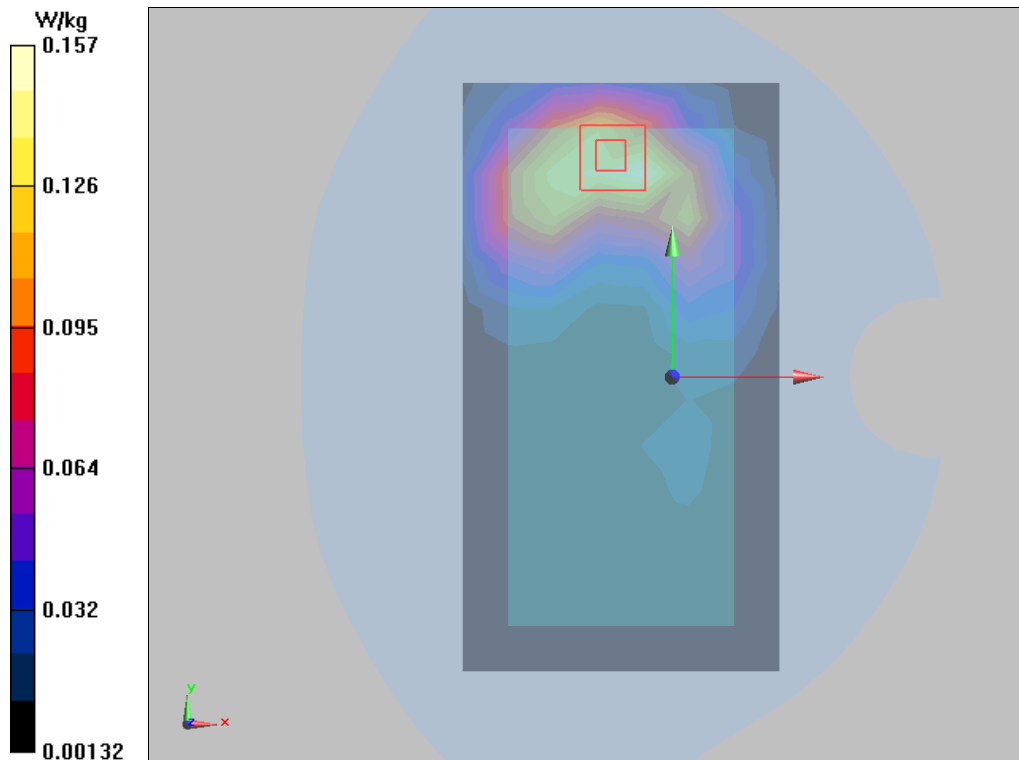
Front Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.193 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 0.302 W/kg

SAR(1 g) = 0.149 W/kg; SAR(10 g) = 0.078 W/kg

Maximum value of SAR (measured) = 0.157 W/kg



Plot 108 NR n7 (SA&EM-DC) 50%RB Top Edge Low (Distance 10mm, ANT3)

Date: 12/21/2020

Communication System: UID 0, 5G NR (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510 \text{ MHz}$; $\sigma = 1.876 \text{ S/m}$; $\epsilon_r = 38.352$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Low/Area Scan (5x10x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.602 W/kg

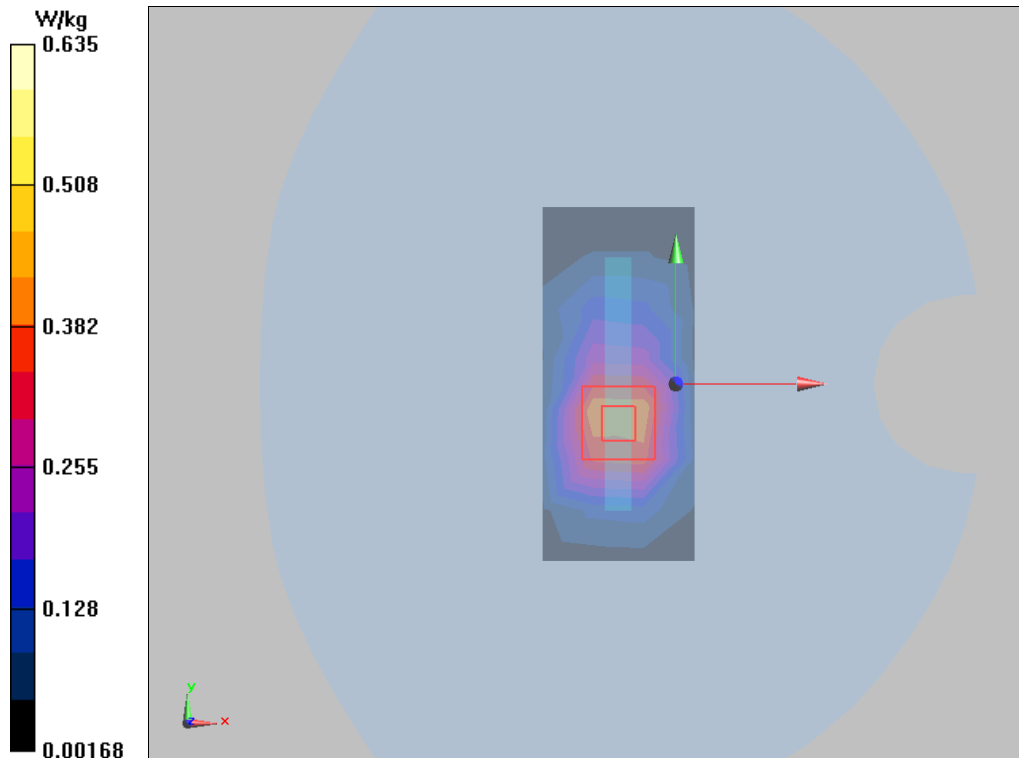
Top Edge Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.20 V/m ; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.591 W/kg ; SAR(10 g) = 0.247 W/kg

Maximum value of SAR (measured) = 0.635 W/kg



Plot 109 NR n41 (SA) 1RB Right Tilt High (ANT3)

Date: 12/19/2020

Communication System: UID 0, 5G NR (0); Frequency: 2616.51 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2616.51$ MHz; $\sigma = 1.997$ S/m; $\epsilon_r = 37.976$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.891 W/kg

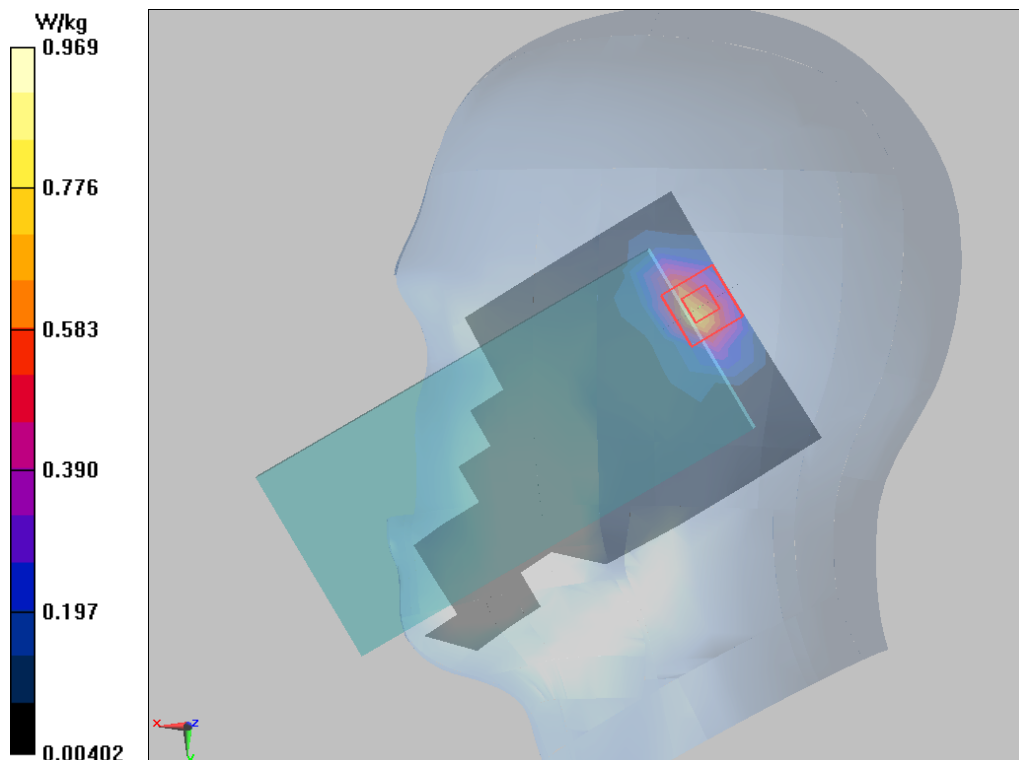
Right Tilt High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.30 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 2.15 W/kg

SAR(1 g) = 0.838 W/kg; SAR(10 g) = 0.334 W/kg

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



Plot 110 NR n41 (SA) 1RB Front Side Middle (Distance 15mm, ANT3)

Date: 12/19/2020

Communication System: UID 0, 5G NR (0); Frequency: 2616.51 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2616.51$ MHz; $\sigma = 1.999$ S/m; $\epsilon_r = 37.983$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.194 W/kg

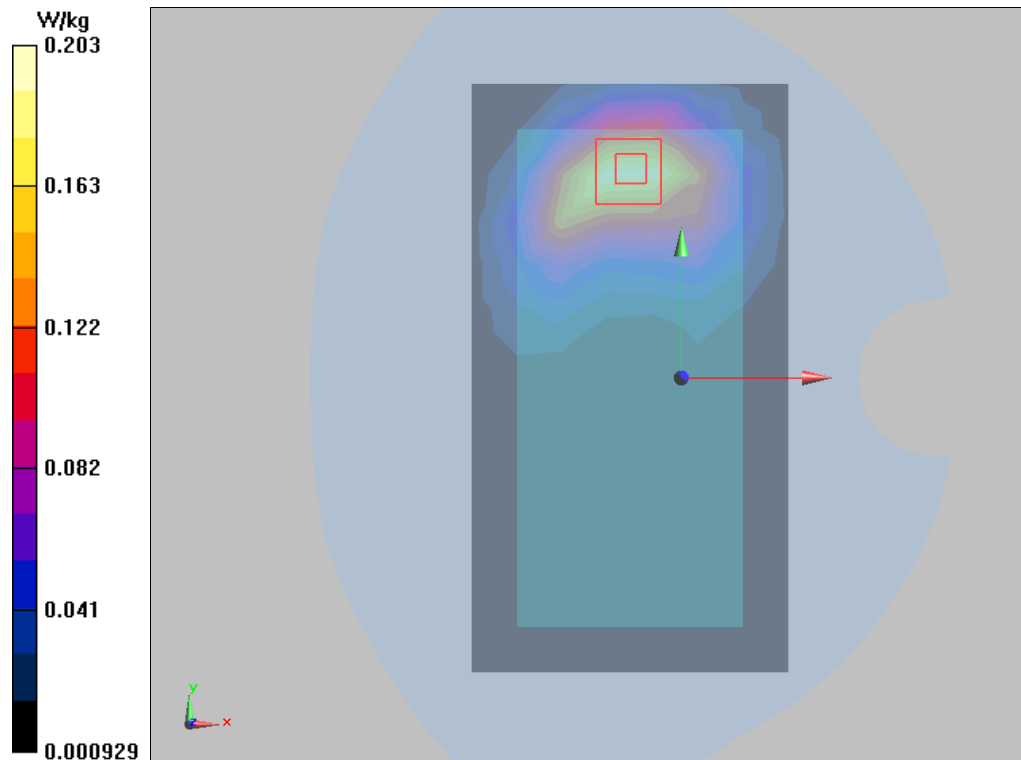
Front Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.710 V/m; Power Drift = -0.088 dB

Peak SAR (extrapolated) = 0.388 W/kg

SAR(1 g) = 0.189 W/kg; SAR(10 g) = 0.098 W/kg

Maximum value of SAR (measured) = 0.203 W/kg



Plot 111 NR n41 (SA) 50%RB Top Edge Middle (Distance 10mm, ANT3)

Date: 12/19/2020

Communication System: UID 0, 5G NR (0); Frequency: 2616.51 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2616.51$ MHz; $\sigma = 1.999$ S/m; $\epsilon_r = 37.983$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Middle/Area Scan (5x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.861 W/kg

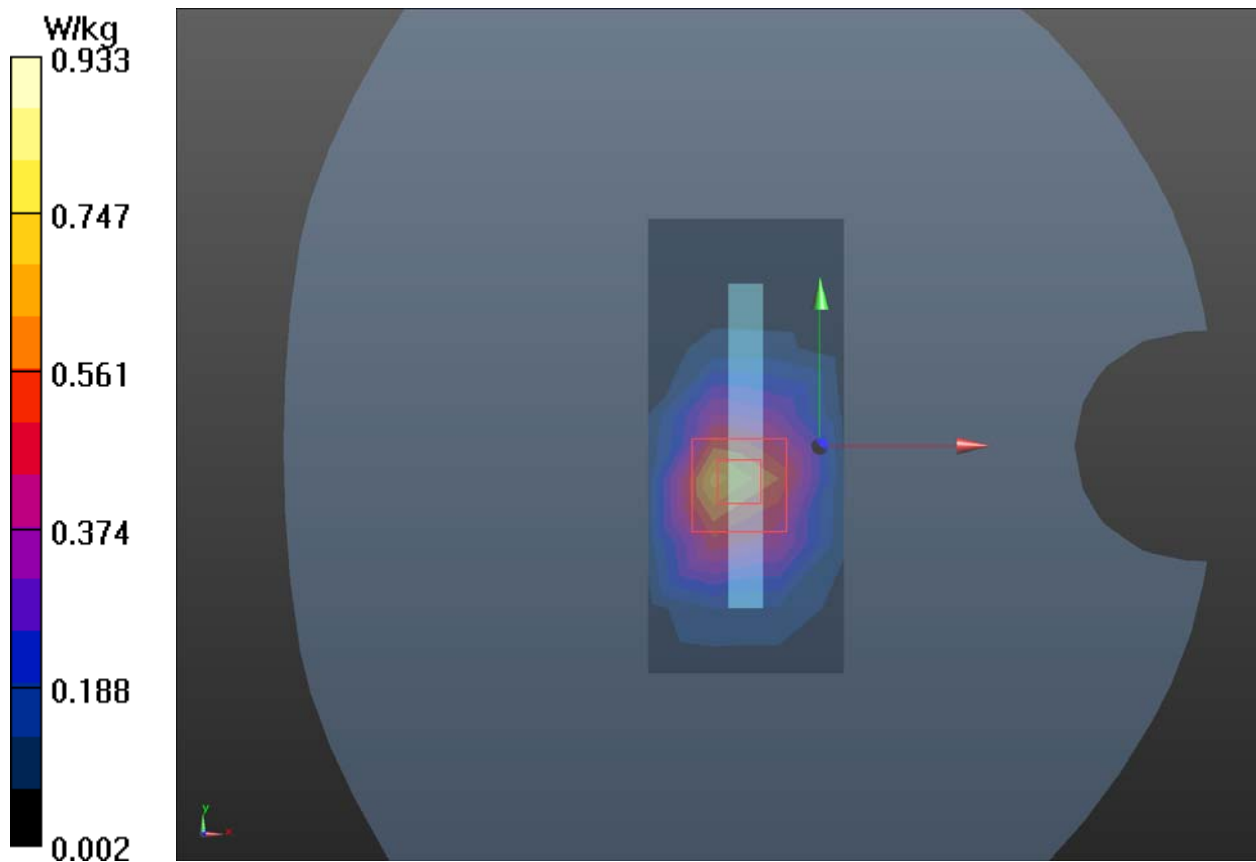
Top Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.75 V/m; Power Drift = -0.090 dB

Peak SAR (extrapolated) = 1.83 W/kg

SAR(1 g) = 0.804 W/kg; SAR(10 g) = 0.379 W/kg

Maximum value of SAR (measured) = 0.933 W/kg



Plot 112 NR n5 (EN-DC) 50%RB Right Cheek Middle (ANT0)

Date: 12/9/2020

Communication System: UID 0, 5G NR (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.923$ S/m; $\epsilon_r = 42.199$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.38, 9.38, 9.38); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Middle/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

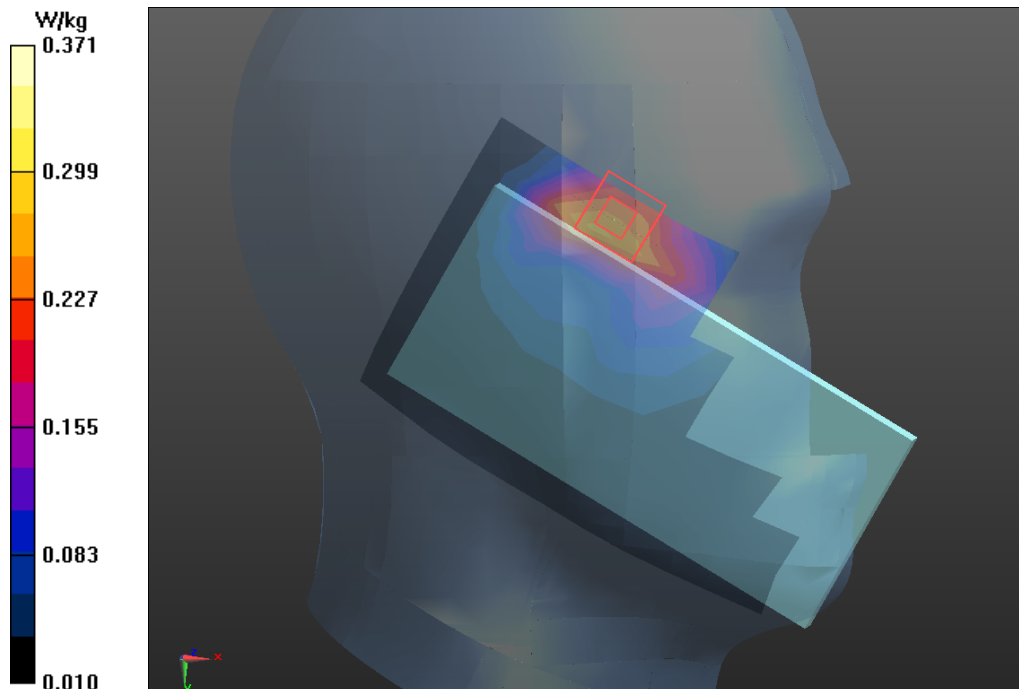
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.657 V/m; Power Drift = 0.048 dB

Peak SAR (extrapolated) = 0.624 W/kg

SAR(1 g) = 0.314 W/kg; SAR(10 g) = 0.167 W/kg

Maximum value of SAR (measured) = 0.371 W/kg



Plot 113 NR n5 (EN-DC) 50%RB Back Side Middle (Distance 15mm, ANT0)

Date: 12/9/2020

Communication System: UID 0, 5G NR (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.923$ S/m; $\epsilon_r = 42.199$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.38, 9.38, 9.38); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.0656 W/kg

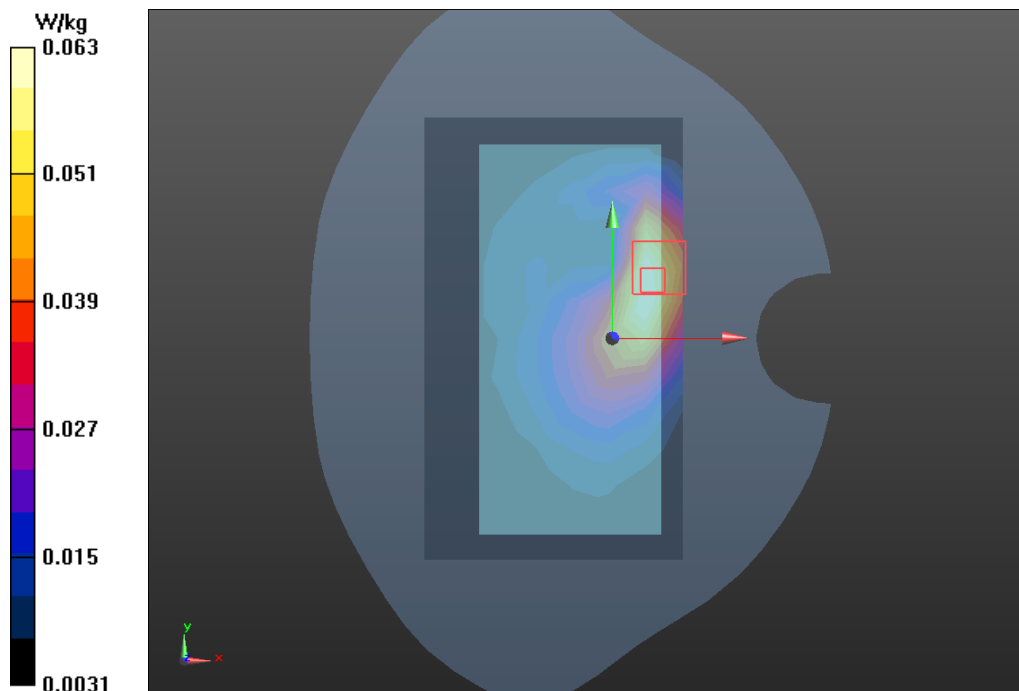
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.930 V/m; Power Drift = 0.063 dB

Peak SAR (extrapolated) = 0.0940 W/kg

SAR(1 g) = 0.060 W/kg; SAR(10 g) = 0.037 W/kg

Maximum value of SAR (measured) = 0.0630 W/kg



Plot 114 NR n5 (EN-DC) 50%RB Left Edge Middle (Distance 10mm, ANT0)

Date: 12/9/2020

Communication System: UID 0, 5G NR (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.923$ S/m; $\epsilon_r = 42.199$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.38, 9.38, 9.38); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Edge Middle/Area Scan (4x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.122 W/kg

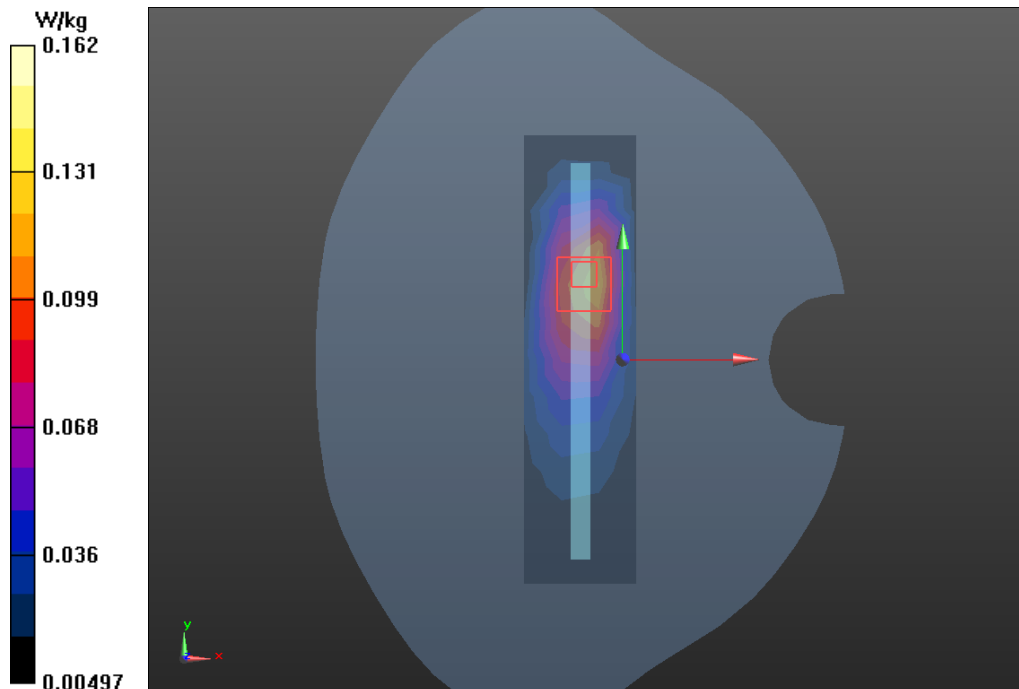
Left Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.867 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.256 W/kg

SAR(1 g) = 0.145 W/kg; SAR(10 g) = 0.081 W/kg

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



Plot 115 NR n7 (SA) 50%RB Right Cheek Middle (ANT4)

Date: 12/16/2020

Communication System: UID 0, 5G NR (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 1.905$ S/m; $\epsilon_r = 38.267$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Middle/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

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

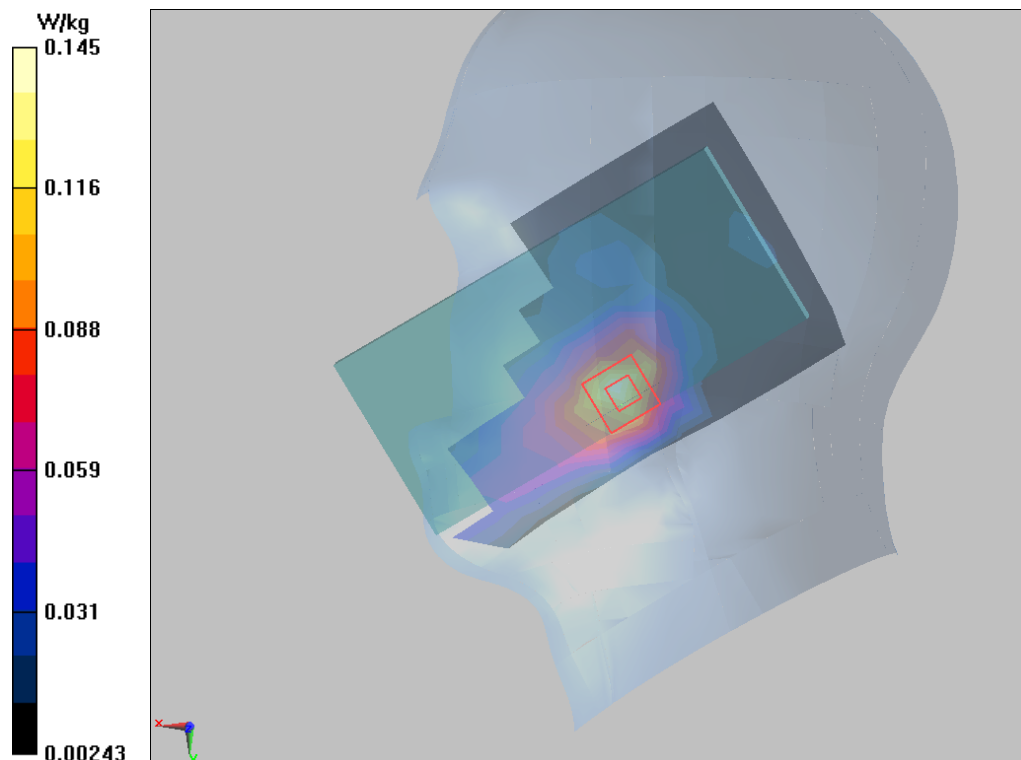
Right Cheek Middle/Zoom Scan(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.967 V/m; Power Drift = 0.169 dB

Peak SAR (extrapolated) = 0.242 W/kg

SAR(1 g) = 0.137 W/kg; SAR(10 g) = 0.074 W/kg

Maximum value of SAR (measured) = 0.145 W/kg



Plot 116 NR n7 (SA) 1RB Back Side Middle (Distance 15mm, ANT4)

Date: 12/16/2020

Communication System: UID 0, 5G NR (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535 \text{ MHz}$; $\sigma = 1.905 \text{ S/m}$; $\epsilon_r = 38.267$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan(10x18x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.247 W/kg

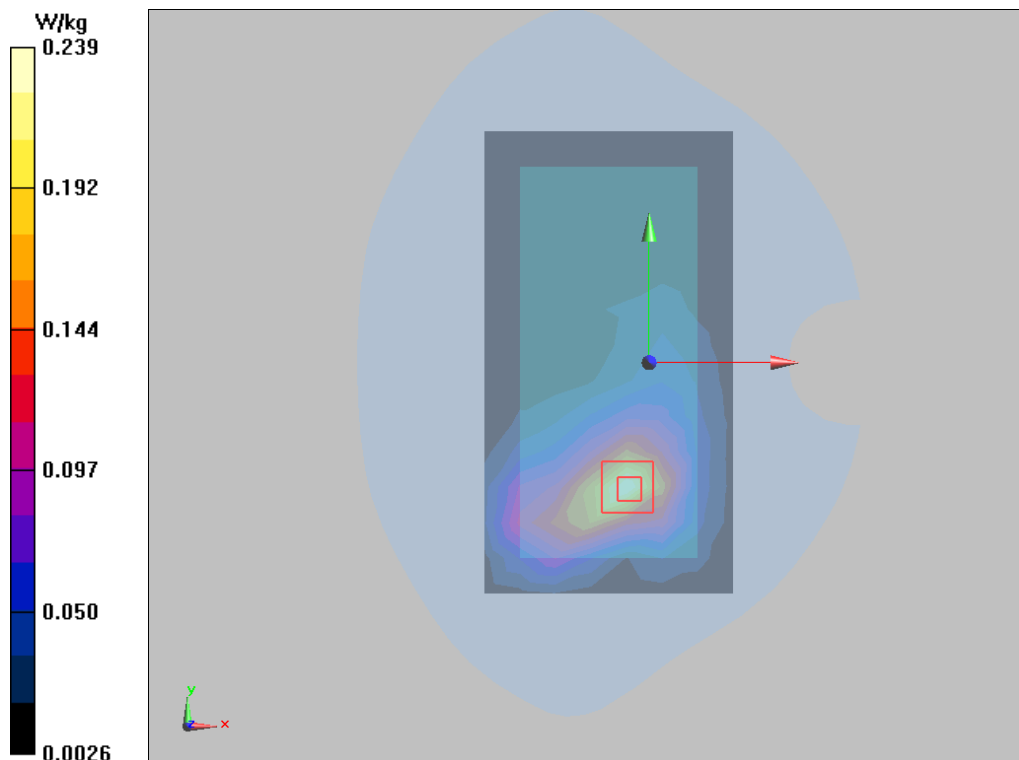
Back Side Middle/Zoom Scan(7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.167 V/m ; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 0.434 W/kg

SAR(1 g) = 0.221 W/kg ; SAR(10 g) = 0.114 W/kg

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



Plot 117 NR n7 (SA) 1RB Back Side Middle (Distance 10mm, ANT4)

Date: 12/16/2020

Communication System: UID 0, 5G NR (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 1.905$ S/m; $\epsilon_r = 38.267$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

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

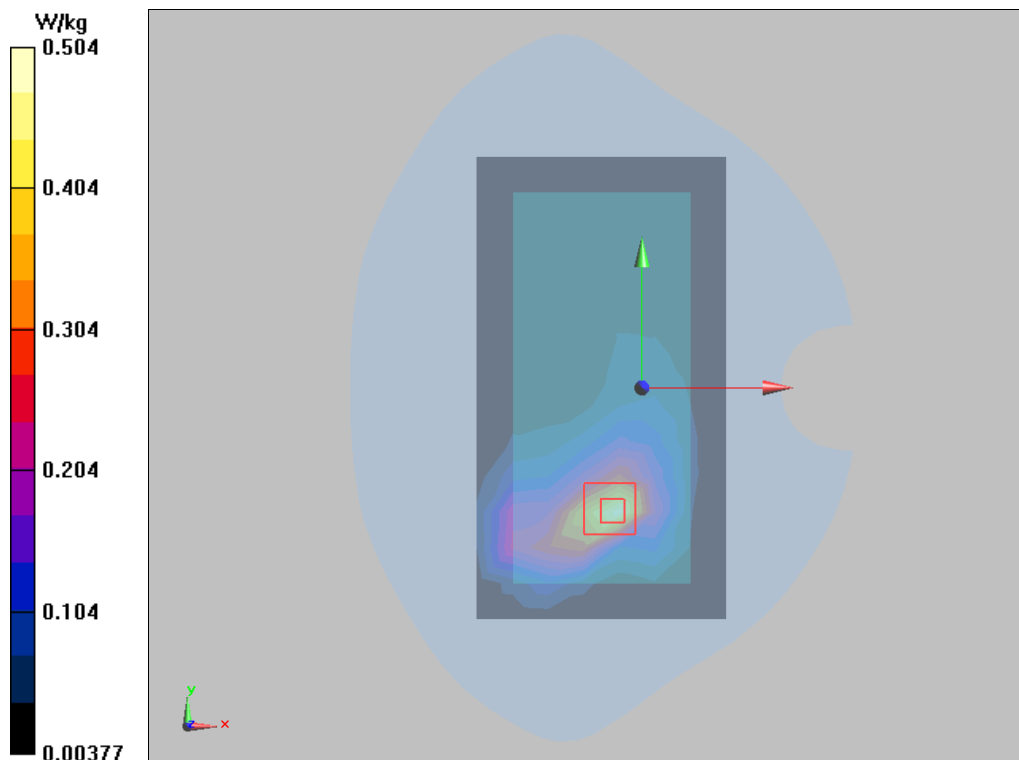
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.414 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.957 W/kg

SAR(1 g) = 0.450 W/kg; SAR(10 g) = 0.219 W/kg

Maximum value of SAR (measured) = 0.504 W/kg



Plot 118 NR n7 (EM-DC) 1RB Left Cheek Low (ANT5)

Date: 12/21/2020

Communication System: UID 0, 5G NR (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510$ MHz; $\sigma = 1.876$ 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: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

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

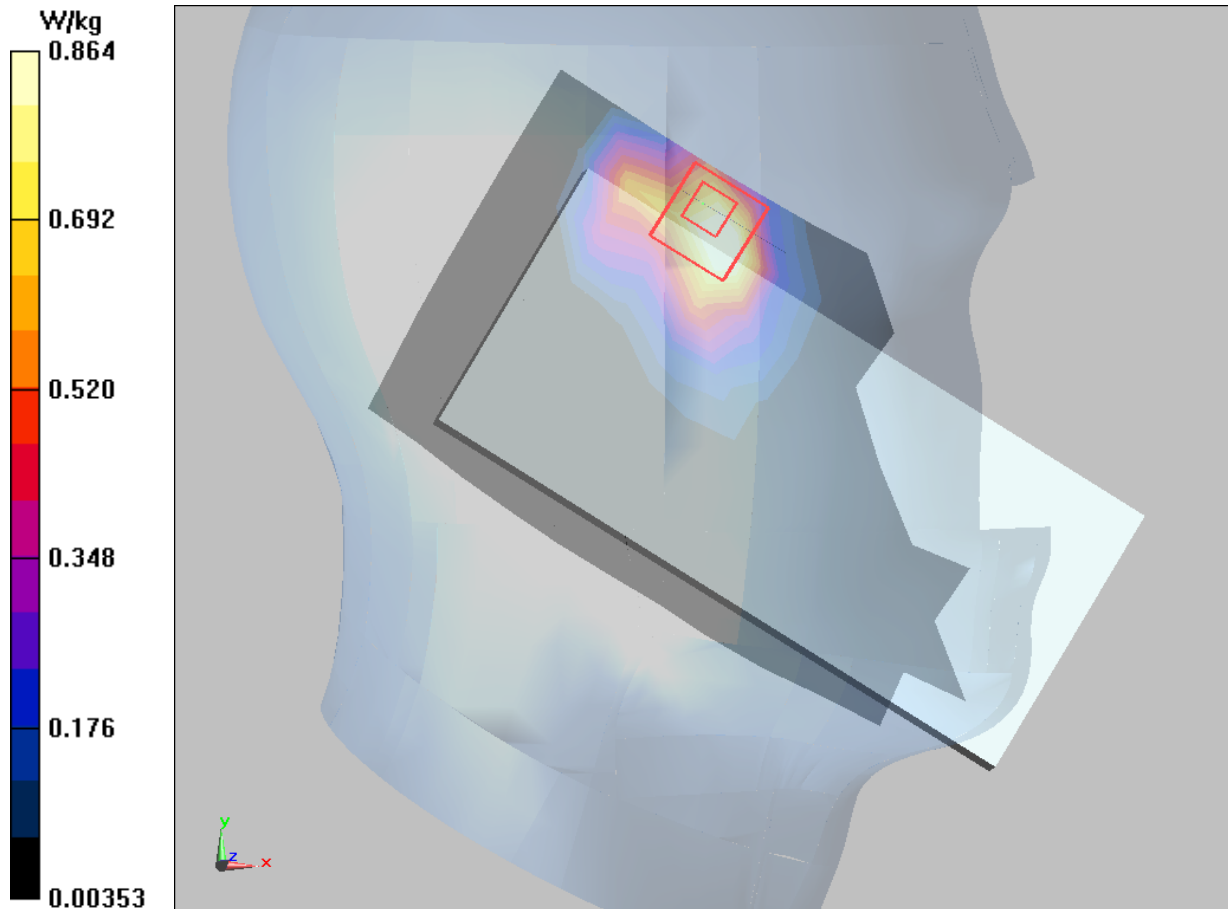
Left Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.608 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 1.85 W/kg

SAR(1 g) = 0.672 W/kg; SAR(10 g) = 0.316 W/kg

Maximum value of SAR (measured) = 0.864 W/kg



Plot 119 NR n7 (EM-DC) 50%RB Front Side Low (Distance 15mm, ANT5)

Date: 12/21/2020

Communication System: UID 0, 5G NR (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510$ MHz; $\sigma = 1.876$ S/m; $\epsilon_r = 38.352$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.066 W/kg

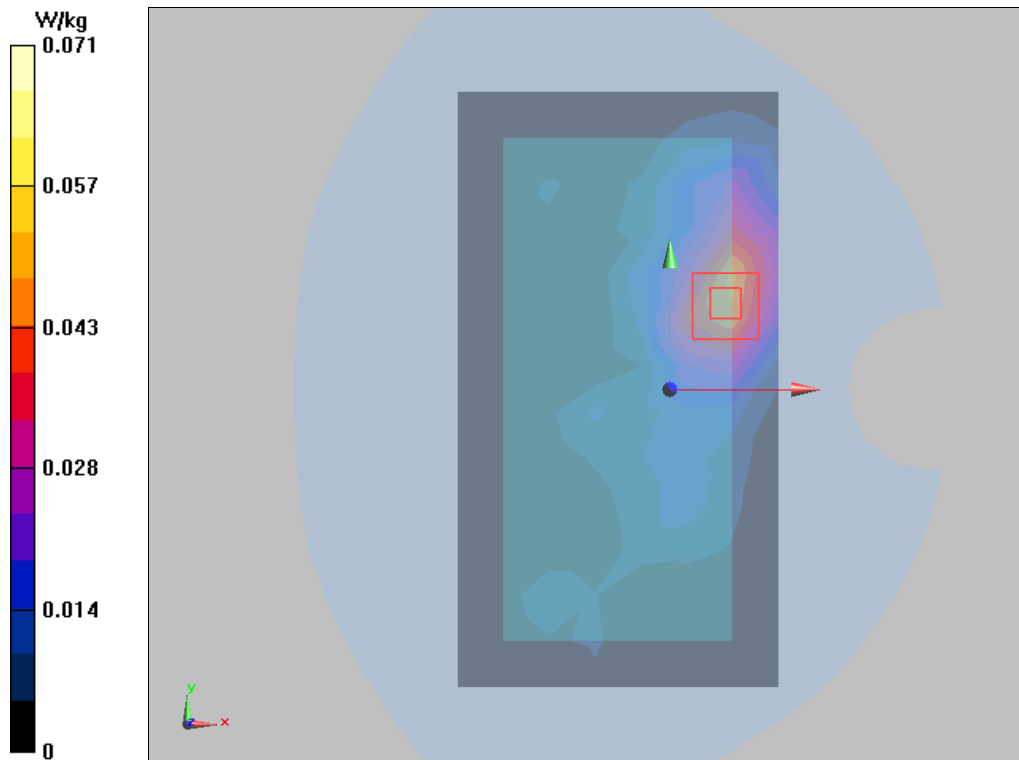
Front Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.857 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.098 W/kg

SAR(1 g) = 0.057 W/kg; SAR(10 g) = 0.027 W/kg

Maximum value of SAR (measured) = 0.071 W/kg



Plot 120 NR n7 (EM-DC)1RB Right Edge Middle (Distance 10mm, ANT5)

Date: 12/21/2020

Communication System: UID 0, 5G NR (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 1.905$ S/m; $\epsilon_r = 38.267$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

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

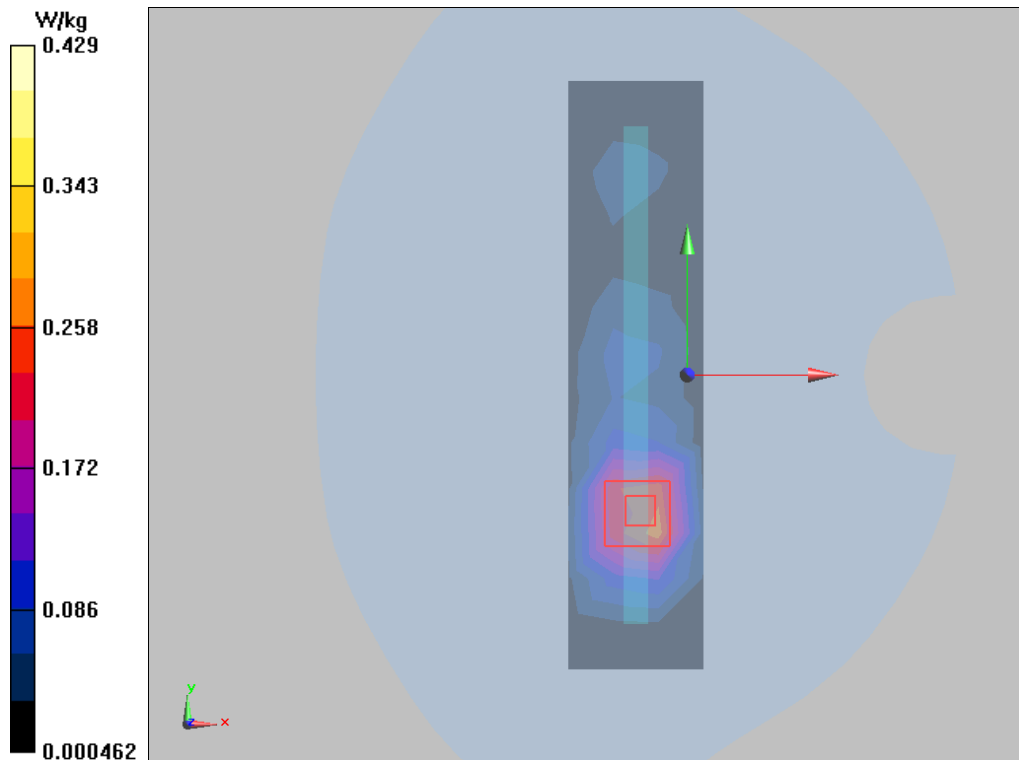
Right Edge Middle/Zoom Scan(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.169 V/m; Power Drift = 0.042 dB

Peak SAR (extrapolated) = 0.847 W/kg

SAR(1 g) = 0.371 W/kg; SAR(10 g) = 0.164 W/kg

Maximum value of SAR (measured) = 0.429 W/kg



Plot 121 NR n41 (EM-DC) 1RB Right Cheek High (ANT4)

Date: 12/19/2020

Communication System: UID 0, 5G NR (0); Frequency: 2640 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2640$ MHz; $\sigma = 2.022$ S/m; $\epsilon_r = 37.884$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.124 W/kg

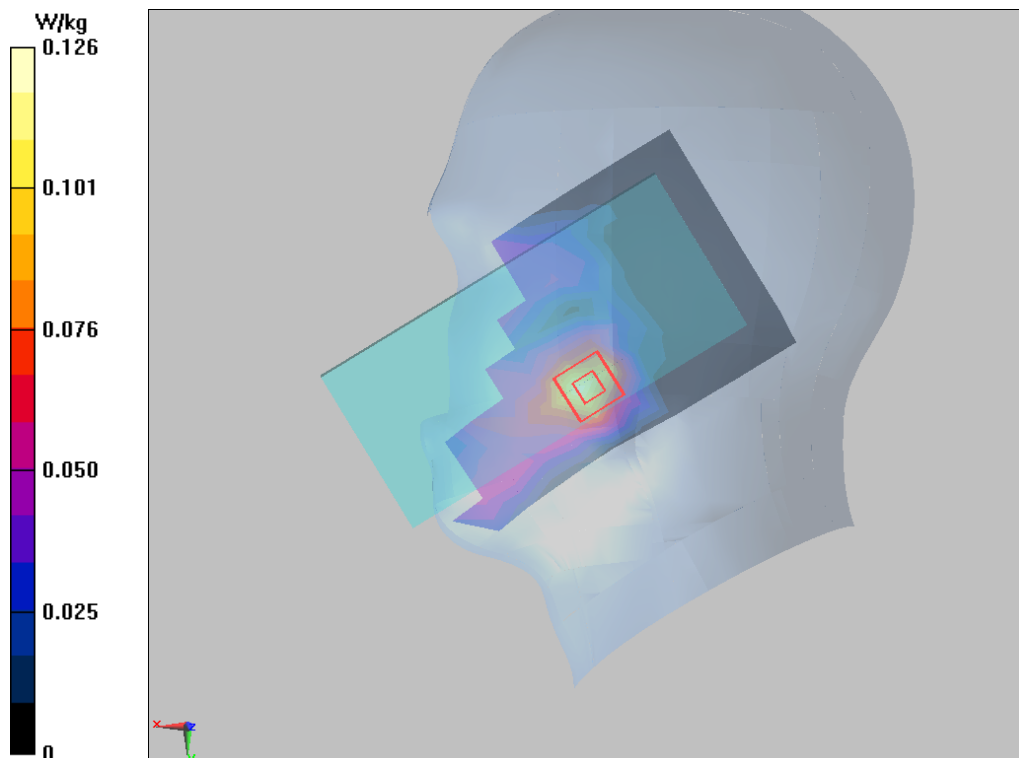
Right Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

Peak SAR (extrapolated) = 0.218 W/kg

SAR(1 g) = 0.117 W/kg; SAR(10 g) = 0.061 W/kg

Maximum value of SAR (measured) = 0.126 W/kg



Plot 122 NR n41 (EM-DC) 1RB Back Side Middle (Distance 15mm, ANT4)

Date: 12/19/2020

Communication System: UID 0, 5G NR (0); Frequency: 2616.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2616.5$ MHz; $\sigma = 1.997$ S/m; $\epsilon_r = 37.976$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.270 W/kg

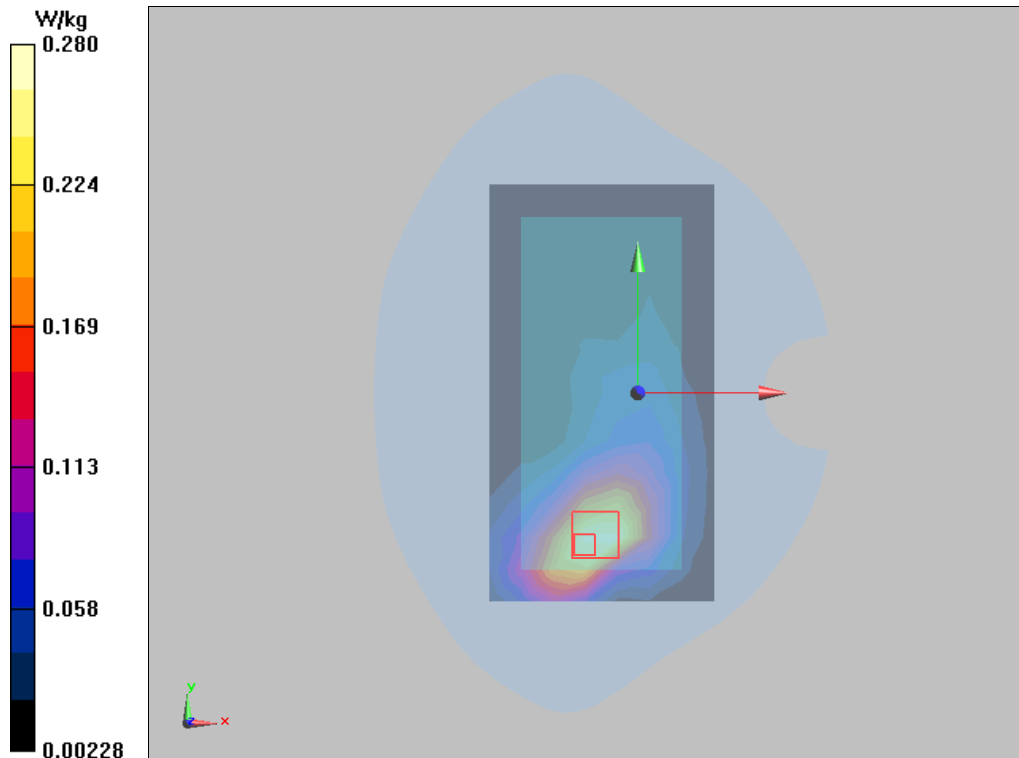
Back Side Middle/Zoom Scan(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.077 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.526 W/kg

SAR(1 g) = 0.260 W/kg; SAR(10 g) = 0.140 W/kg

Maximum value of SAR (measured) = 0.280 W/kg



Plot 123 NR n41 (EM-DC)1RB Bottom Edge Middle (Distance 10mm, ANT4)

Date: 12/19/2020

Communication System: UID 0, 5G NR (0); Frequency: 2569.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2569.5$ MHz; $\sigma = 1.943$ S/m; $\epsilon_r = 38.138$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bottom Edge Middle/Area Scan (5x10x1): Measurement grid: dx=12mm, dy=12mm

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

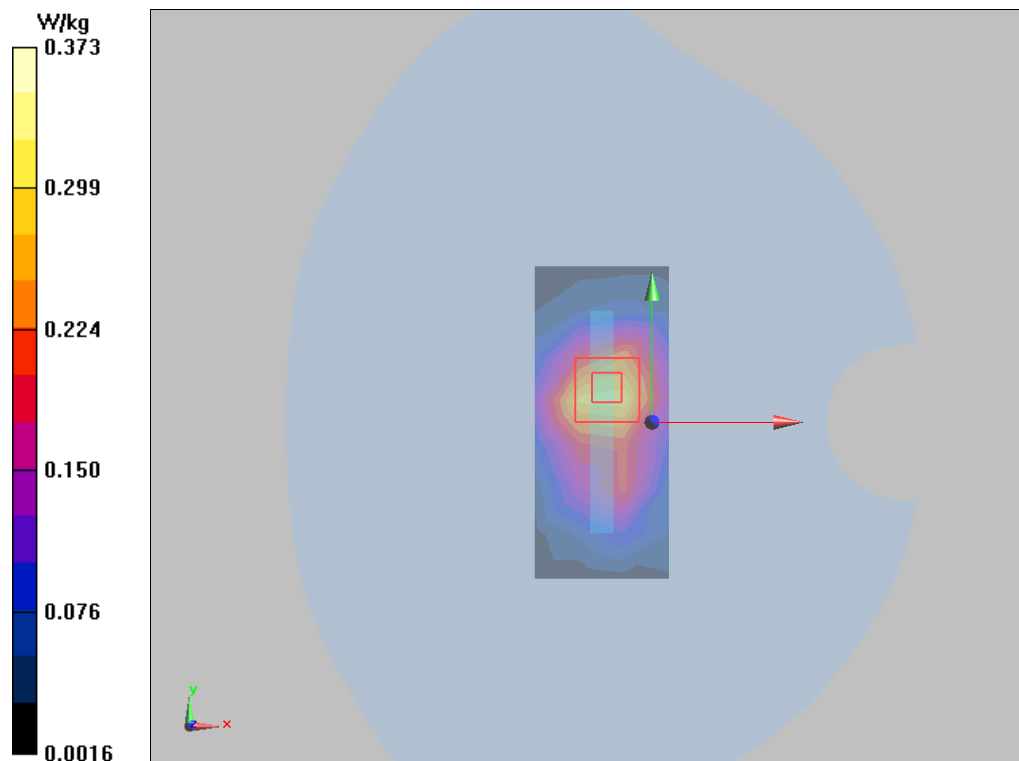
Bottom Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.29 V/m; Power Drift = 0.080 dB

Peak SAR (extrapolated) = 0.851 W/kg

SAR(1 g) = 0.362 W/kg; SAR(10 g) = 0.183 W/kg

Maximum value of SAR (measured) = 0.373 W/kg



Plot 124 LTE(EN-DC) Band 7 1RB Left Cheek Low(ANT 5)

Date: 12/16/2020

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

Medium parameters used: $f = 2510$ MHz; $\sigma = 1.876$ 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: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.542 W/kg

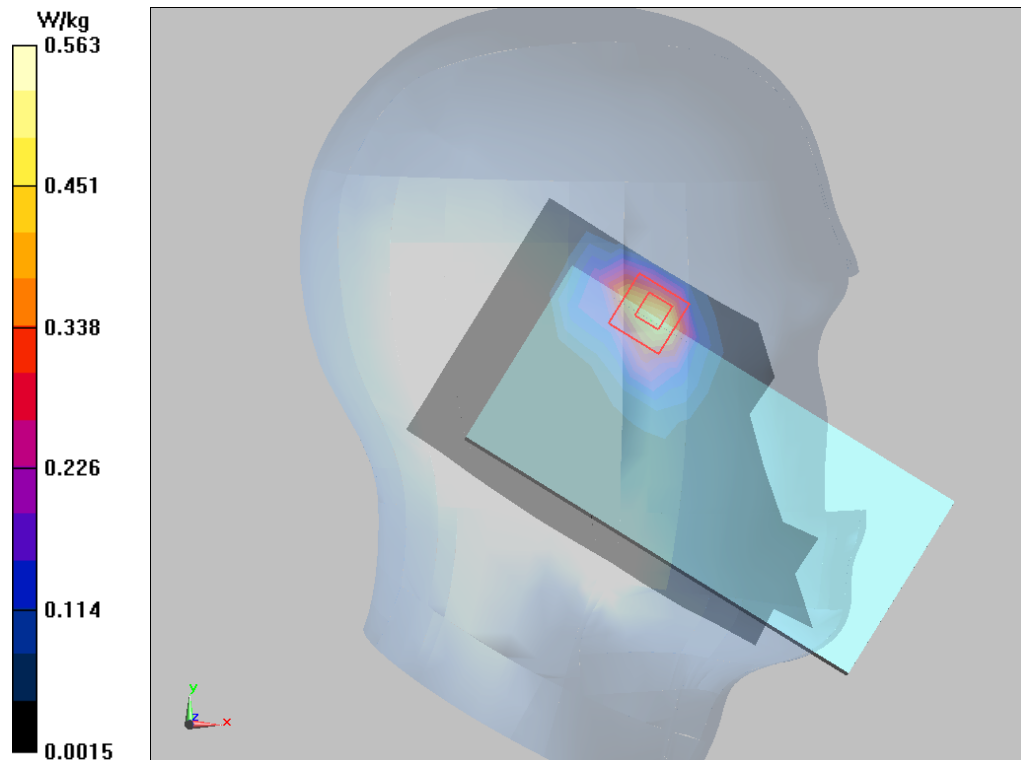
Left Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.435 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.534 W/kg; SAR(10 g) = 0.232 W/kg

Maximum value of SAR (measured) = 0.563 W/kg



Plot 125 LTE(EN-DC) Band 7 50%RB Back Side High (Distance 15mm, ANT5)

Date: 12/16/2020

Communication System: UID 0, LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.932$ S/m; $\epsilon_r = 38.175$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.182 W/kg

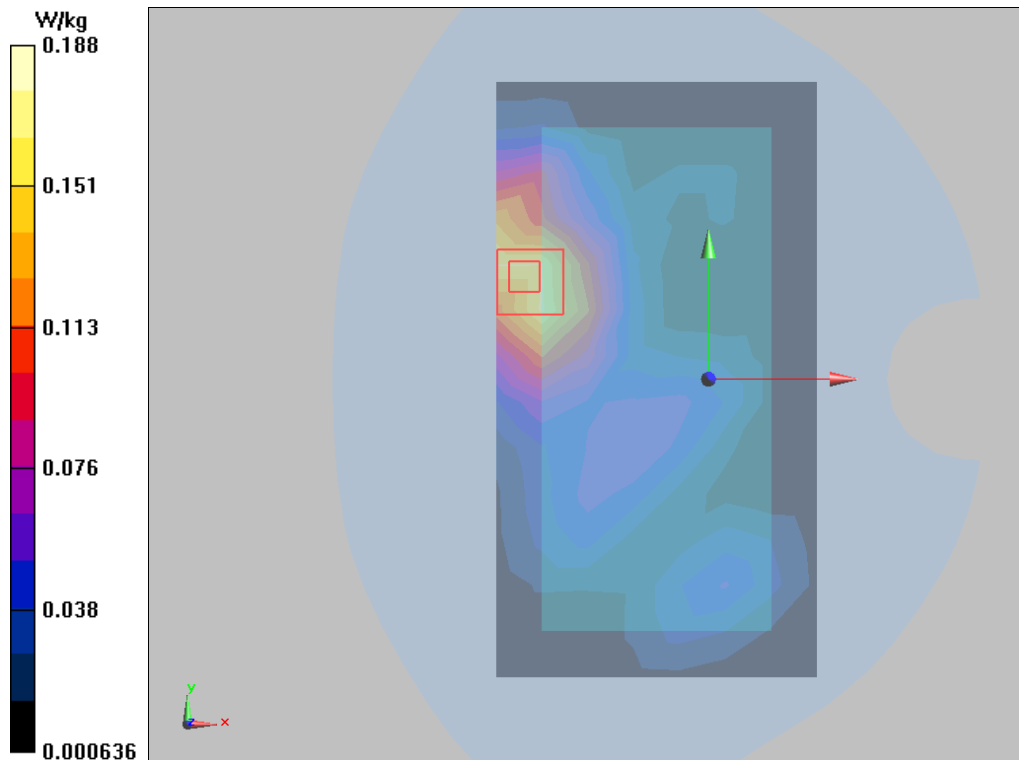
Back Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.830 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.359 W/kg

SAR(1 g) = 0.176 W/kg; SAR(10 g) = 0.093 W/kg

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



Plot 126 LTE(EN-DC) Band 7 50%RB Right Edge High (Distance 10mm, ANT5)

Date: 12/16/2020

Communication System: UID 0, LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.932$ S/m; $\epsilon_r = 38.175$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.736 W/kg

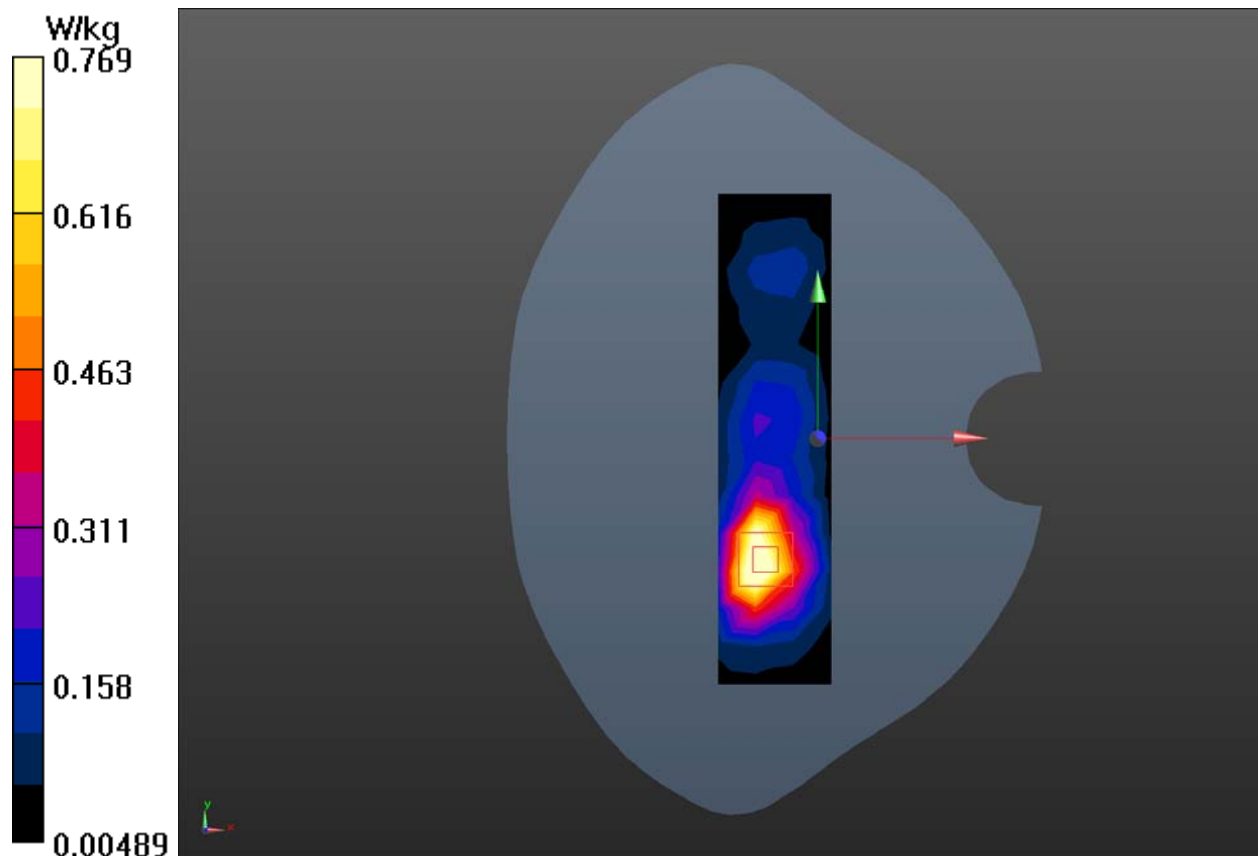
Right Edge High /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.95 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 1.39 W/kg

SAR(1 g) = 0.615 W/kg; SAR(10 g) = 0.294 W/kg

Maximum value of SAR (measured) = 0.769 W/kg



Plot 127 LTE (EN-DC) Band 7 50%RB Right Cheek Middle (ANT3)

Date: 12/25/2020

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

Medium parameters used: $f = 2535$ MHz; $\sigma = 1.905$ S/m; $\epsilon_r = 38.267$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt Low/Area Scan (10x18x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.451W/kg

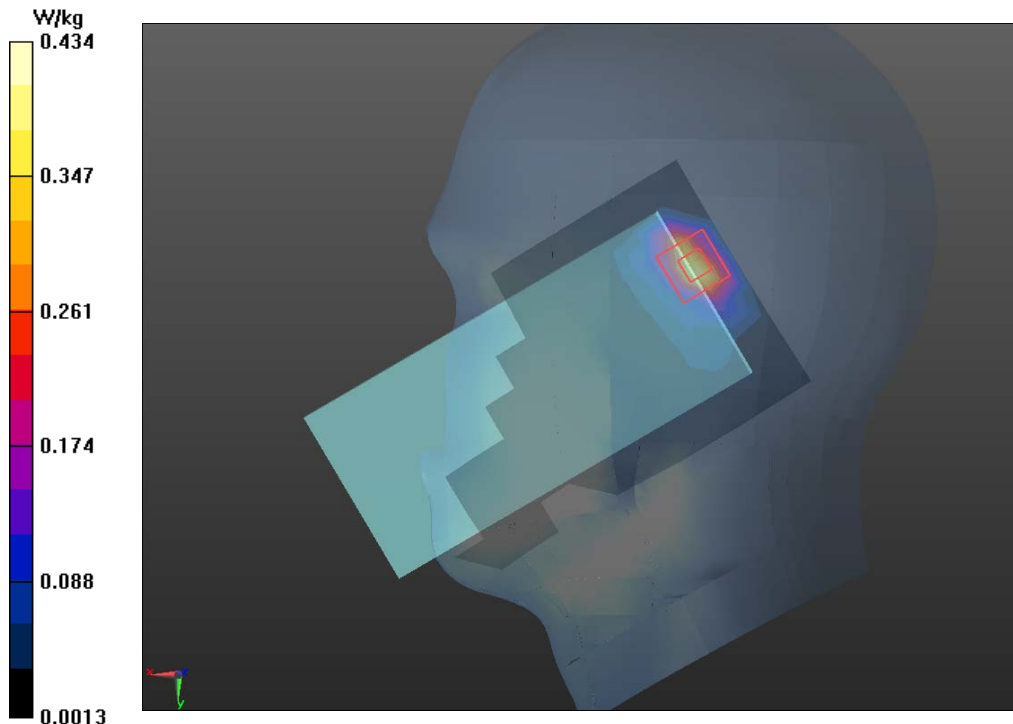
Right Tilt Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.70 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 1.69 W/kg

SAR(1 g) = 0.392 W/kg; SAR(10 g) = 0.179 W/kg

Maximum value of SAR (measured) = 0.434 W/kg



Plot 128 LTE Band 7 50%RB Back Side High (Distance 15mm, ANT3)

Date: 12/25/2020

Communication System: UID 0, LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.932$ S/m; $\epsilon_r = 38.175$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.281 W/kg

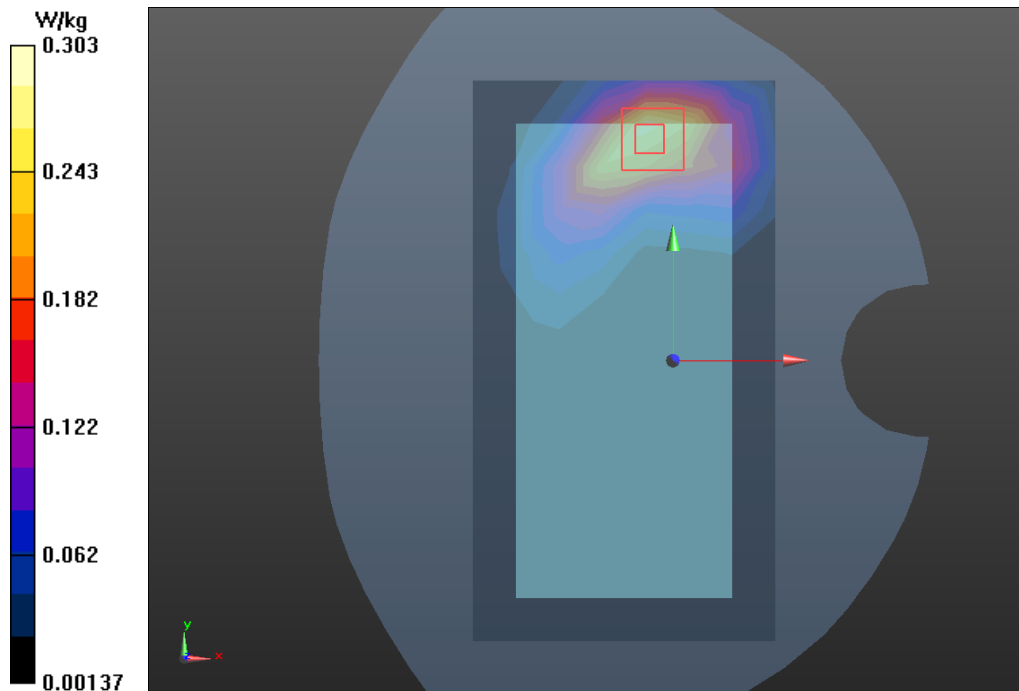
Back Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.486 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 0.549 W/kg

SAR(1 g) = 0.276 W/kg; SAR(10 g) = 0.143 W/kg

Maximum value of SAR (measured) = 0.303 W/kg



Plot 129 LTE Band 7 50%RB Top Edge Middle (Distance 10mm, ANT3)

Date: 12/25/2020

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

Medium parameters used: $f = 2535$ MHz; $\sigma = 1.905$ S/m; $\epsilon_r = 38.267$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Middle/Area Scan (5x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.968 W/kg

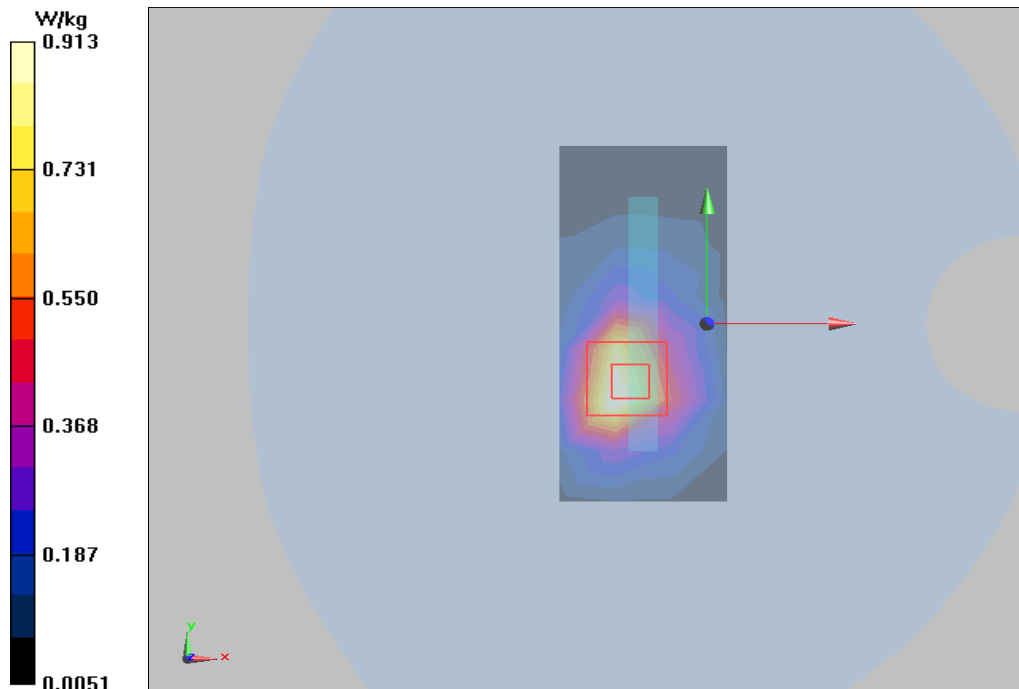
Top Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.70 V/m; Power Drift = 0.035 dB

Peak SAR (extrapolated) = 2.14 W/kg

SAR(1 g) = 0.579 W/kg; SAR(10 g) = 0.268 W/kg

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



Plot 130 LTE Band 7 100%RB Top Edge Low (Distance 0mm, ANT3)

Date: 12/25/2020

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

Medium parameters used: $f = 2510$ MHz; $\sigma = 1.876$ S/m; $\epsilon_r = 38.352$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.26, 7.26, 7.26); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Low/Area Scan (5x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 5.95 W/kg

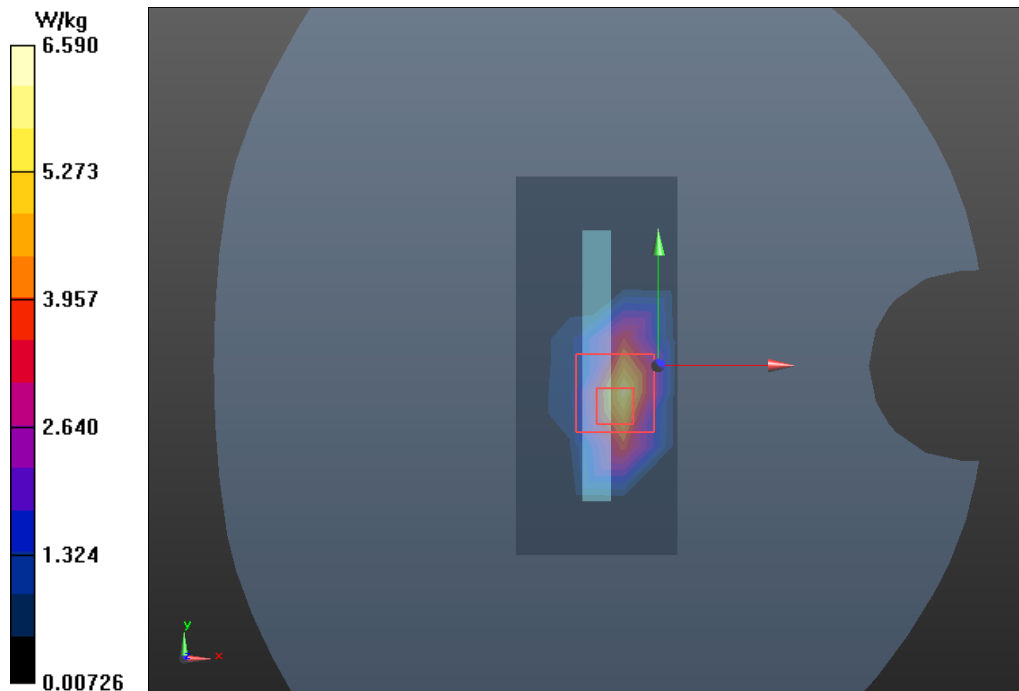
Top Edge Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 43.67 V/m; Power Drift = -0.079 dB

Peak SAR (extrapolated) = 16.3 W/kg

SAR(1 g) = 5.27 W/kg; SAR(10 g) = 1.98 W/kg

Maximum value of SAR (measured) = 6.59 W/kg



Plot 131 802.11b Left Tilt Middle (ANT 6)

Date: 12/18/2020

Communication System: UID 0, 802.11b (0); Frequency: 2437 MHz; Duty Cycle: 1:1.001

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.797$ S/m; $\epsilon_r = 38.629$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.54, 7.54, 7.54); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Tilt Middle/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.671 W/kg

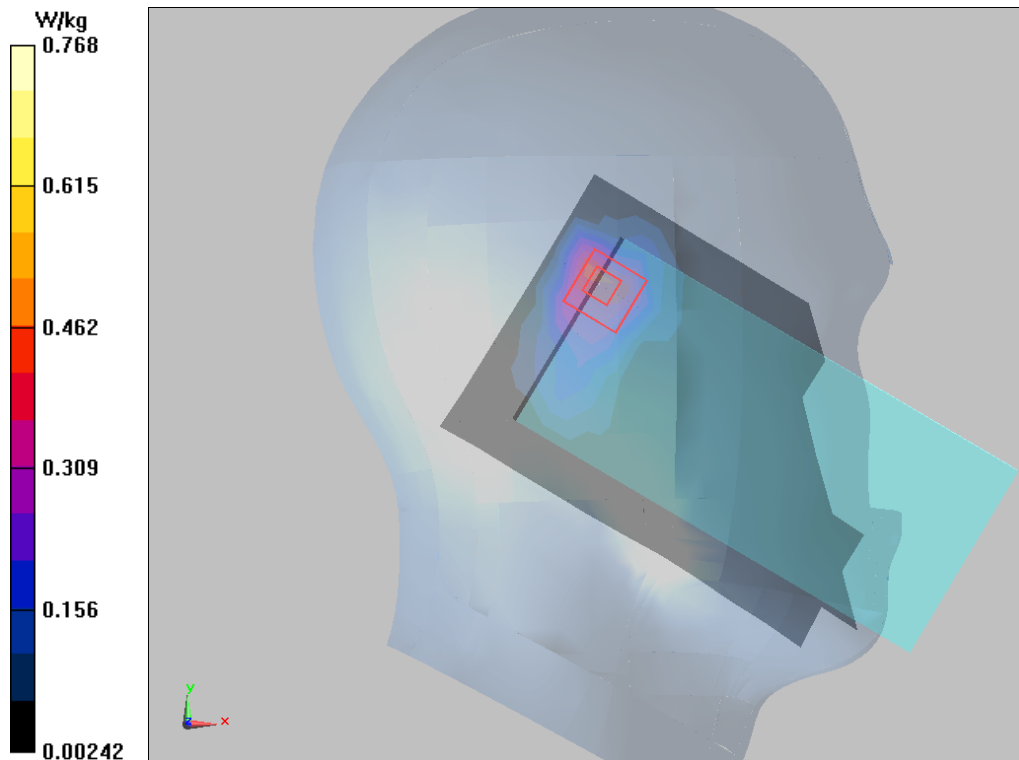
Left Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.26 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 0.646 W/kg; SAR(10 g) = 0.269 W/kg

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



Plot 132 802.11b Back Side Middle (Distance 15mm, ANT 6)

Date: 12/18/2020

Communication System: UID 0, 802.11g (0); Frequency: 2437 MHz; Duty Cycle: 1:1.008

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.797$ S/m; $\epsilon_r = 38.629$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.54, 7.54, 7.54); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.124 W/kg

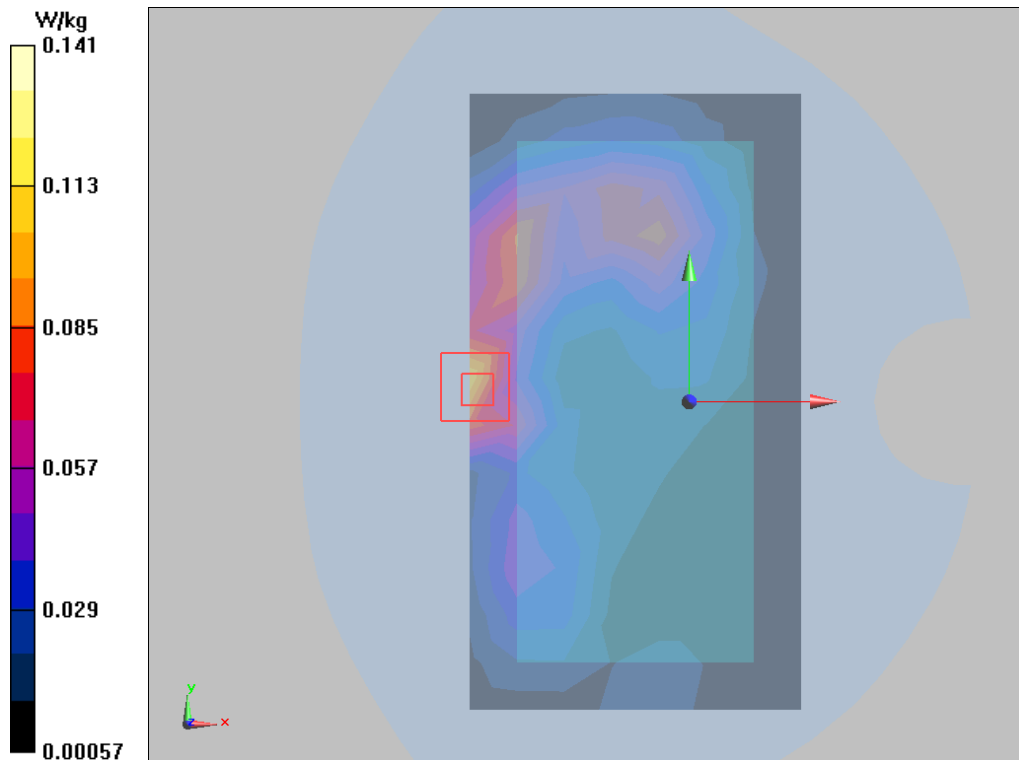
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.869 V/m; Power Drift = -0.081 dB

Peak SAR (extrapolated) = 0.222 W/kg

SAR(1 g) = 0.115 W/kg; SAR(10 g) = 0.054 W/kg

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



Plot 133 802.11b Top Edge Middle (Distance 10mm, ANT 6)

Date: 12/18/2020

Communication System: UID 0, 802.11b (0); Frequency: 2437 MHz; Duty Cycle: 1:1.008

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.797$ S/m; $\epsilon_r = 38.629$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.54, 7.54, 7.54); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Middle/Area Scan (5x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.131 W/kg

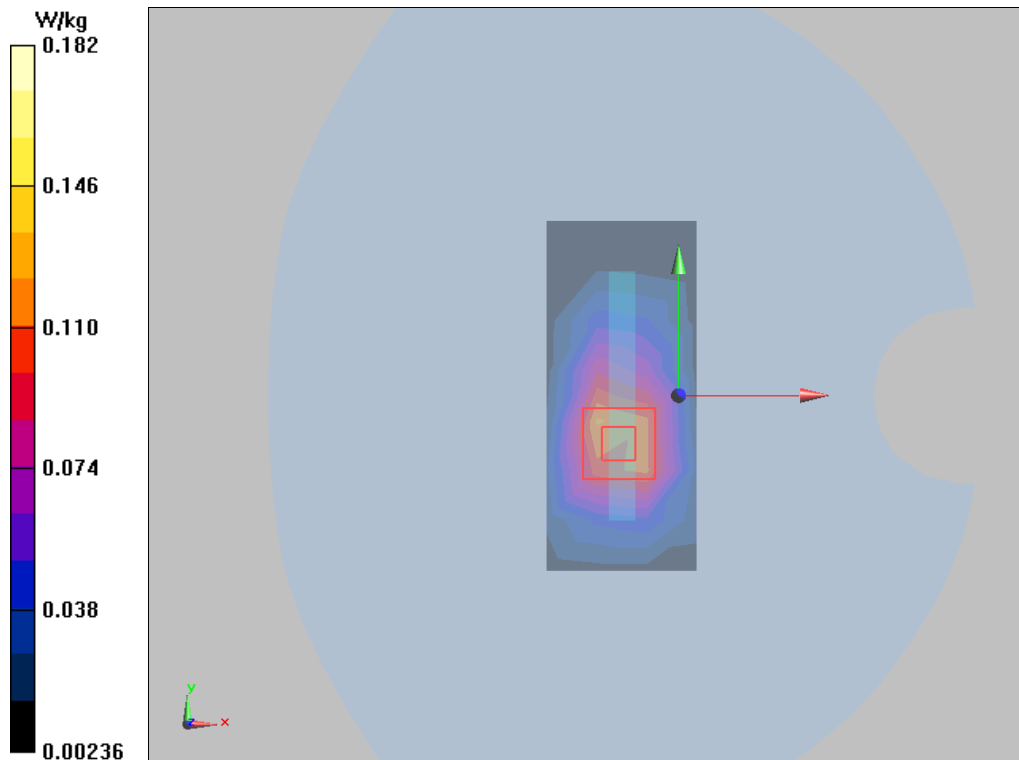
Top Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.18 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 0.316 W/kg

SAR(1 g) = 0.106 W/kg; SAR(10 g) = 0.049 W/kg

Maximum value of SAR (measured) = 0.182 W/kg



Plot 134 802.11b Right Cheek Middle (ANT 2)

Date: 12/18/2020

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

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.797$ S/m; $\epsilon_r = 38.629$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.54, 7.54, 7.54); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Middle/Area Scan(10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.382 W/kg

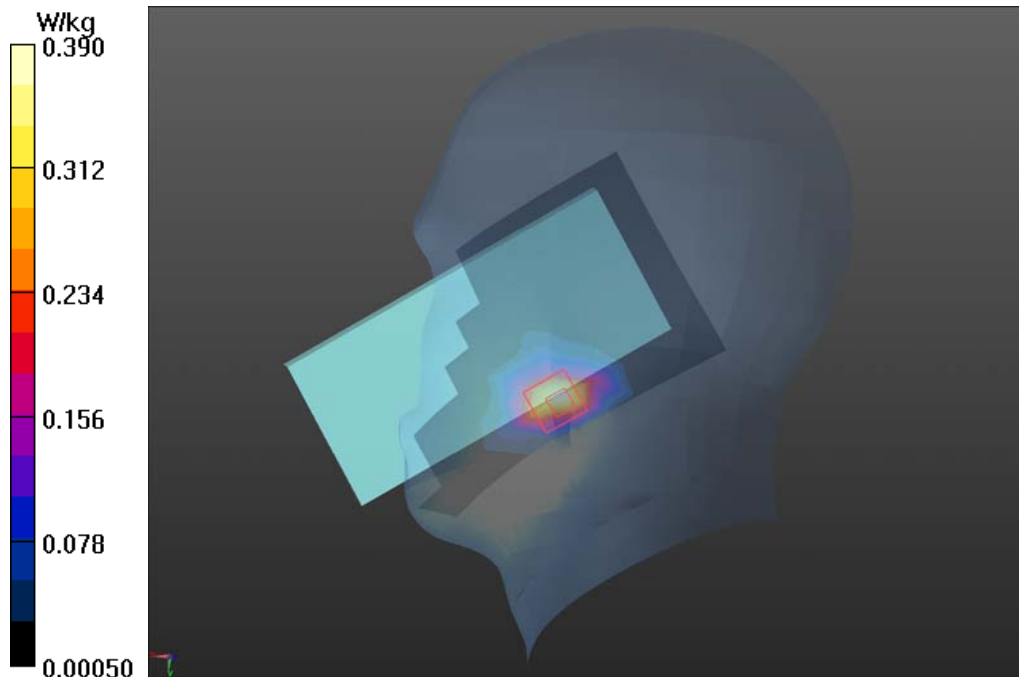
Right Cheek Middle/Zoom Scan(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.360 V/m; Power Drift = 0.097 dB

Peak SAR (extrapolated) = 0.977 W/kg

SAR(1 g) = 0.377 W/kg; SAR(10 g) = 0.154 W/kg

Maximum value of SAR (measured) = 0.39 W/kg



Plot 135 802.11b Back Side Middle (Distance 15mm, ANT 2)

Date: 12/18/2020

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

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.824$ S/m; $\epsilon_r = 38.534$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.54, 7.54, 7.54); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.106 W/kg

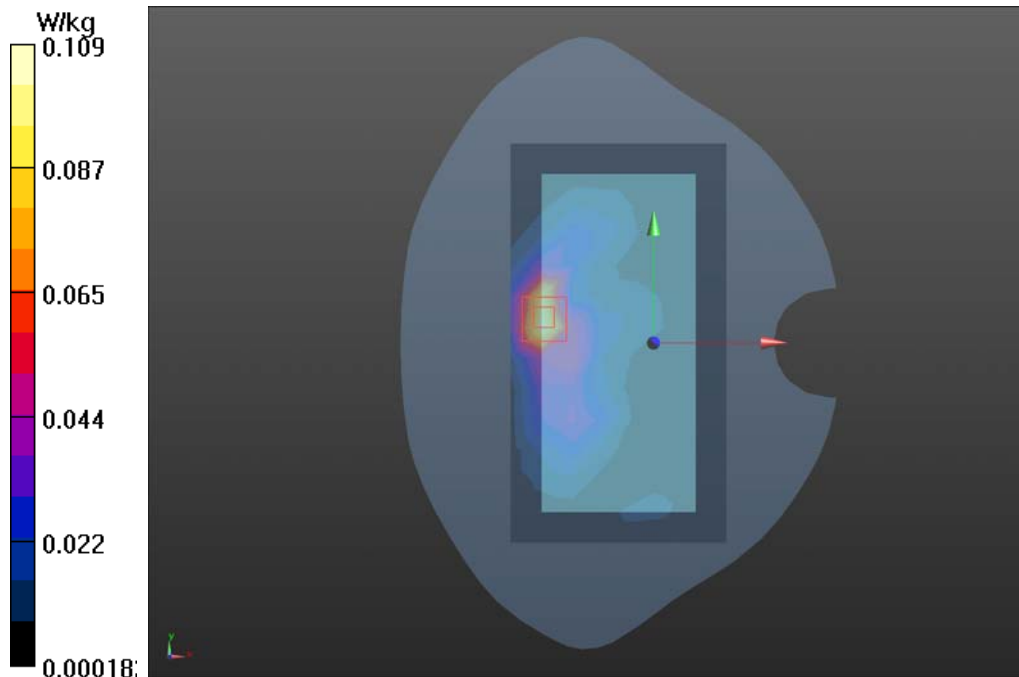
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.714 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 0.220 W/kg

SAR(1 g) = 0.103 W/kg; SAR(10 g) = 0.048 W/kg

Maximum value of SAR (measured) = 0.109 W/kg



Plot 136 802.11b Right Edge Middle (Distance 10mm, ANT 2)

Date: 12/18/2020

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

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.797$ S/m; $\epsilon_r = 38.629$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.54, 7.54, 7.54); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan (4x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.072 W/kg

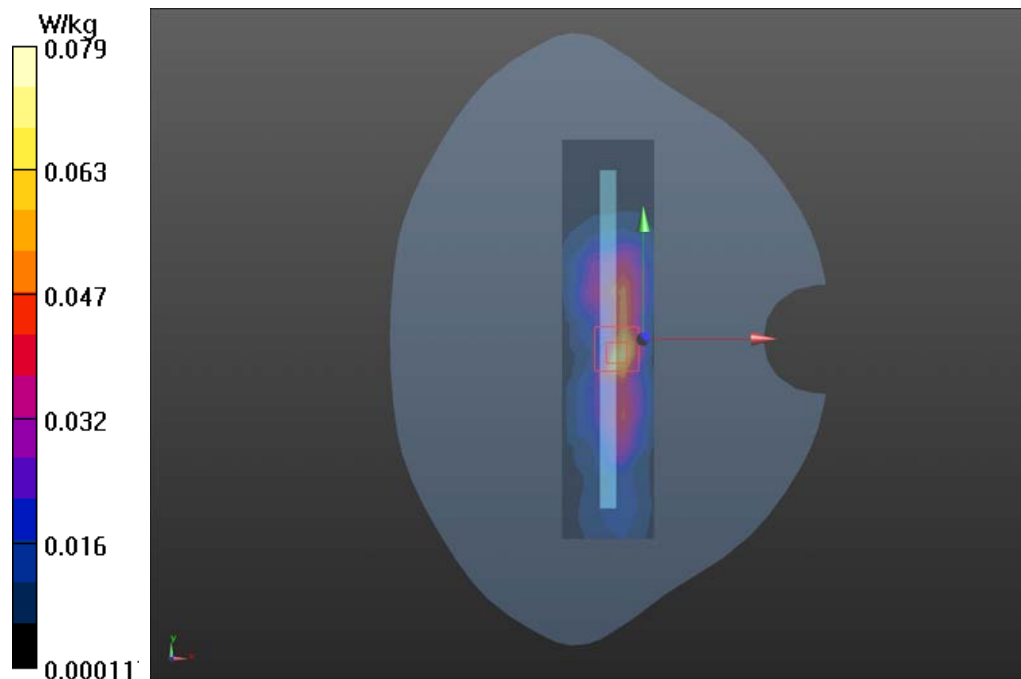
Right Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.07 V/m; Power Drift = 0.086 dB

Peak SAR (extrapolated) = 0.209 W/kg

SAR(1 g) = 0.065 W/kg; SAR(10 g) = 0.028 W/kg

Maximum value of SAR (measured) = 0.079 W/kg



Plot 137 802.11b Left Cheek Middle (MIMO)

Date: 12/18/2020

Communication System: UID 0, 802.11g (0); Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.797$ S/m; $\epsilon_r = 38.629$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.54, 7.54, 7.54); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.540 W/kg

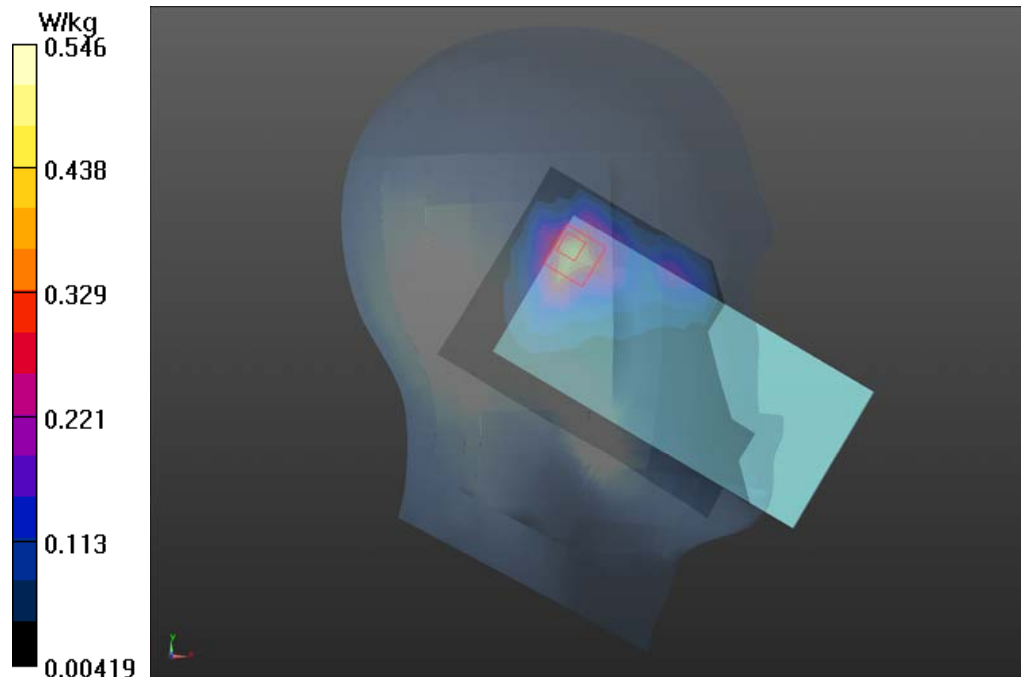
Left Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.42 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.513 W/kg; SAR(10 g) = 0.235 W/kg

Maximum value of SAR (measured) = 0.546 W/kg



Plot 138 802.11ac-VHT40 U-NII-1 Front Side Middle (Distance 15mm,ANT 9)

Date: 12/17/2020

Communication System: UID 0, 802.11ac-VHT40; Frequency: 5230 MHz;Duty Cycle: 1:1.003

Medium parameters used: $f = 5230$ MHz; $\sigma = 4.858$ S/m; $\epsilon_r = 36.82$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.206 W/kg

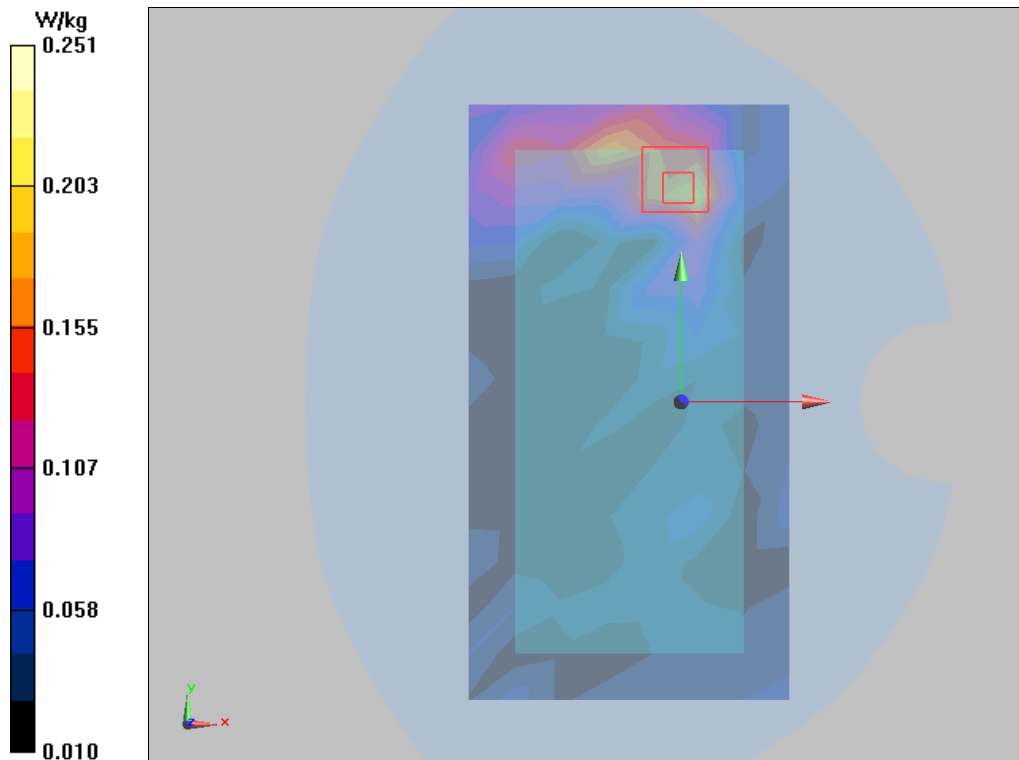
Front Side Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.770 V/m; Power Drift = 0.132 dB

Peak SAR (extrapolated) = 0.479 W/kg

SAR(1 g) = 0.194 W/kg; SAR(10 g) = 0.068 W/kg

Maximum value of SAR (measured) = 0.251 W/kg



Plot 139 802.11ac-VHT40 U-NII-1 Top Edge Middle (Distance 10mm, ANT 9)

Date: 12/17/2020

Communication System: UID 0, 802.11ac-VHT40; Frequency: 5230 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5230$ MHz; $\sigma = 4.858$ S/m; $\epsilon_r = 36.82$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Middle/Area Scan (6x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.152 W/kg

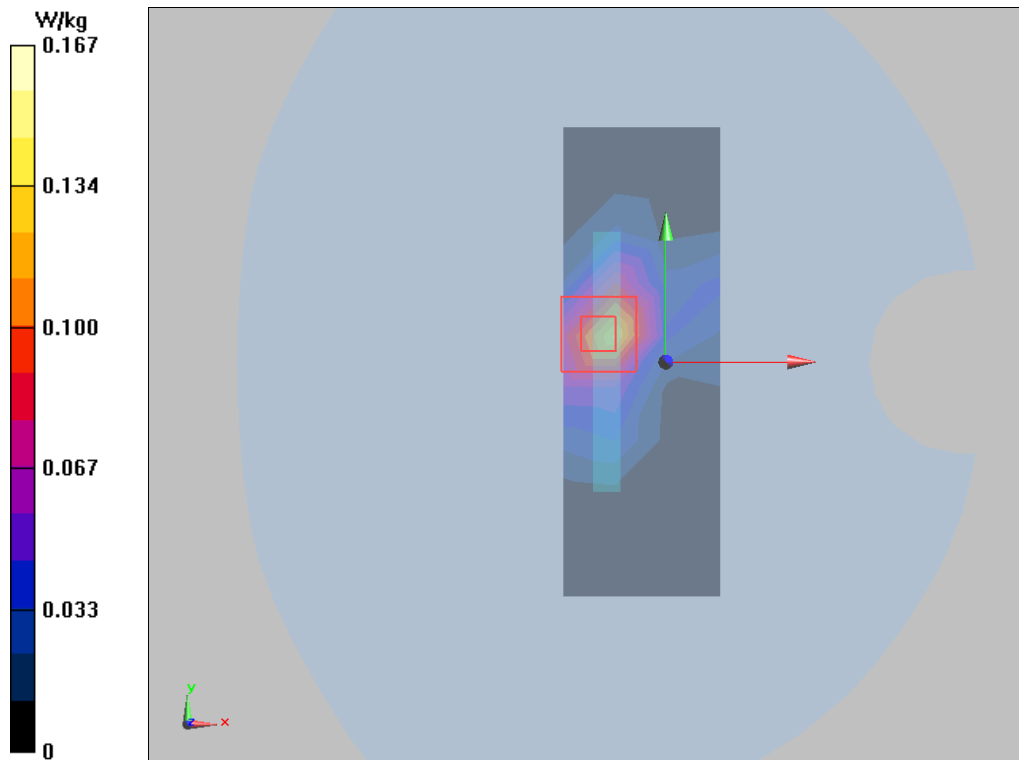
Top Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 7.322 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.411 W/kg

SAR(1 g) = 0.146 W/kg; SAR(10 g) = 0.049 W/kg

Maximum value of SAR (measured) = 0.167 W/kg



Plot 140 802.11ac-VHT40 U-NII-2A Left Cheek High (ANT 9)

Date: 12/17/2020

Communication System: UID 0, 802.11ac-VHT20; Frequency: 5320 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5320$ MHz; $\sigma = 4.95$ S/m; $\epsilon_r = 36.328$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek High/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.681 W/kg

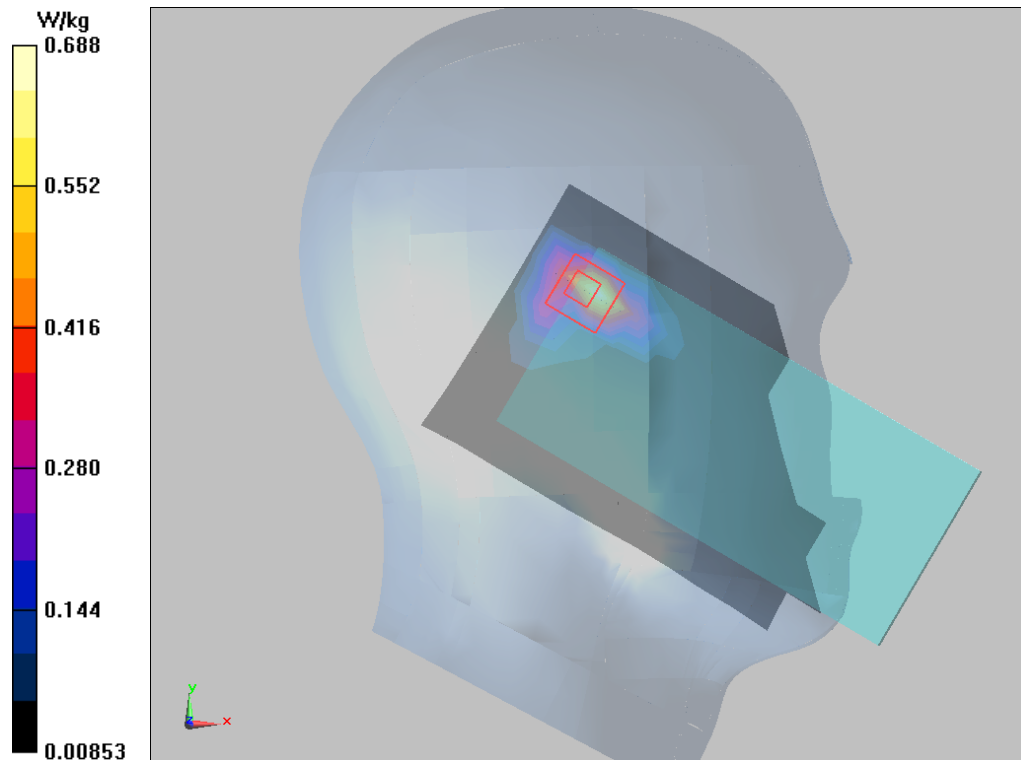
Left Cheek High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.823 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 1.80 W/kg

SAR(1 g) = 0.582 W/kg; SAR(10 g) = 0.215 W/kg

Maximum value of SAR (measured) = 0.688 W/kg



Plot 141 802.11ac-VHT40 U-NII-2A Front Side Middle (Distance 15mm, ANT 9)

Date: 12/17/2020

Communication System: UID 0, 802.11ac-VHT40; Frequency: 5310 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5310$ MHz; $\sigma = 4.906$ S/m; $\epsilon_r = 36.386$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.142 W/kg

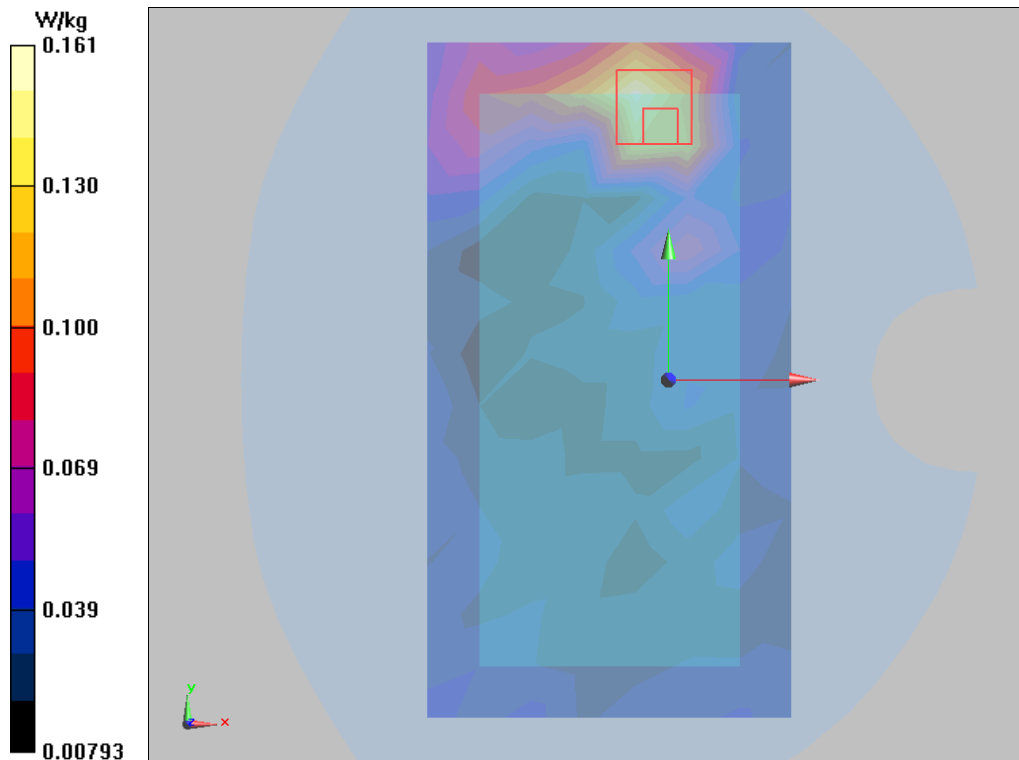
Front Side Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.768 V/m; Power Drift = -0.139 dB

Peak SAR (extrapolated) = 0.210 W/kg

SAR(1 g) = 0.136 W/kg; SAR(10 g) = 0.058 W/kg

Maximum value of SAR (measured) = 0.161 W/kg



Plot 142 802.11ac-VHT40 U-NII-2A Top Edge Middle (Distance0mm, ANT 9)

Date: 12/17/2020

Communication System: UID 0, 802.11ac-VHT40; Frequency: 5310 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5310$ MHz; $\sigma = 4.906$ S/m; $\epsilon_r = 36.386$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Middle/Area Scan (6x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 4.51 W/kg

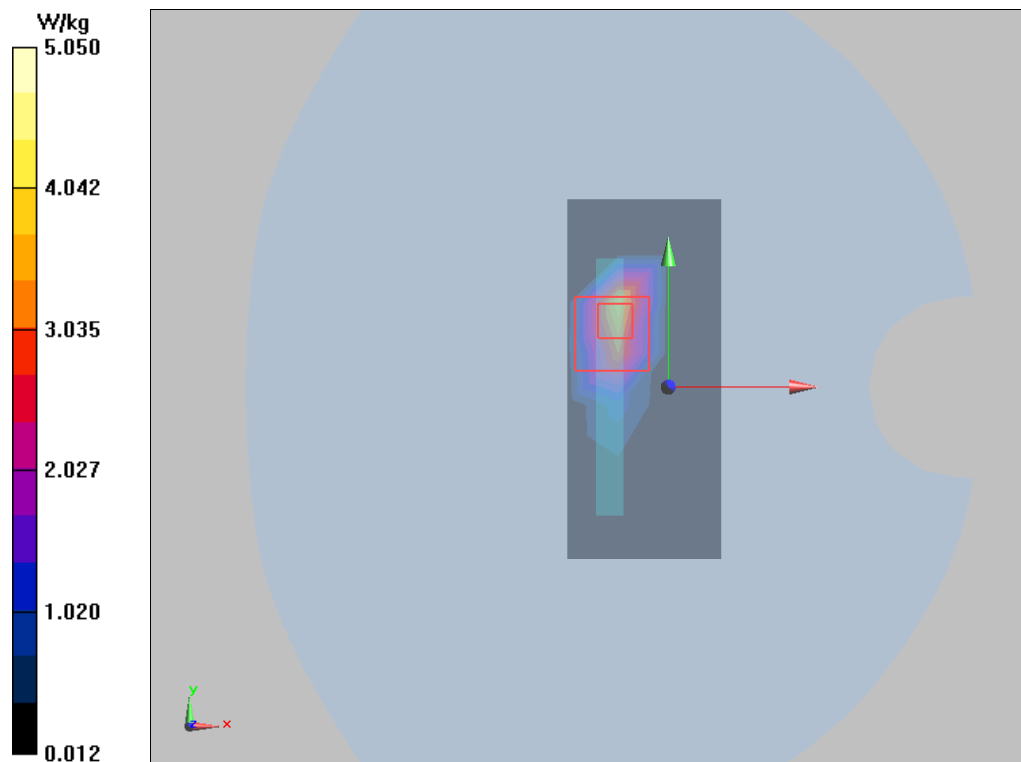
Top Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 18.87 V/m; Power Drift = -0.047 dB

Peak SAR (extrapolated) = 9.29 W/kg

SAR(1 g) = 4.12 W/kg; SAR(10 g) = 0.849 W/kg

Maximum value of SAR (measured) = 5.05 W/kg



Plot 143 802.11n-HT20 U-NII-2C Left Cheek High(ANT 9)

Date: 12/14/2020

Communication System: UID 0, 802.11ac-VHT20; Frequency: 5700 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5700$ MHz; $\sigma = 4.95$ S/m; $\epsilon_r = 36.328$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.97, 4.97, 4.97); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek High/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.751 W/kg

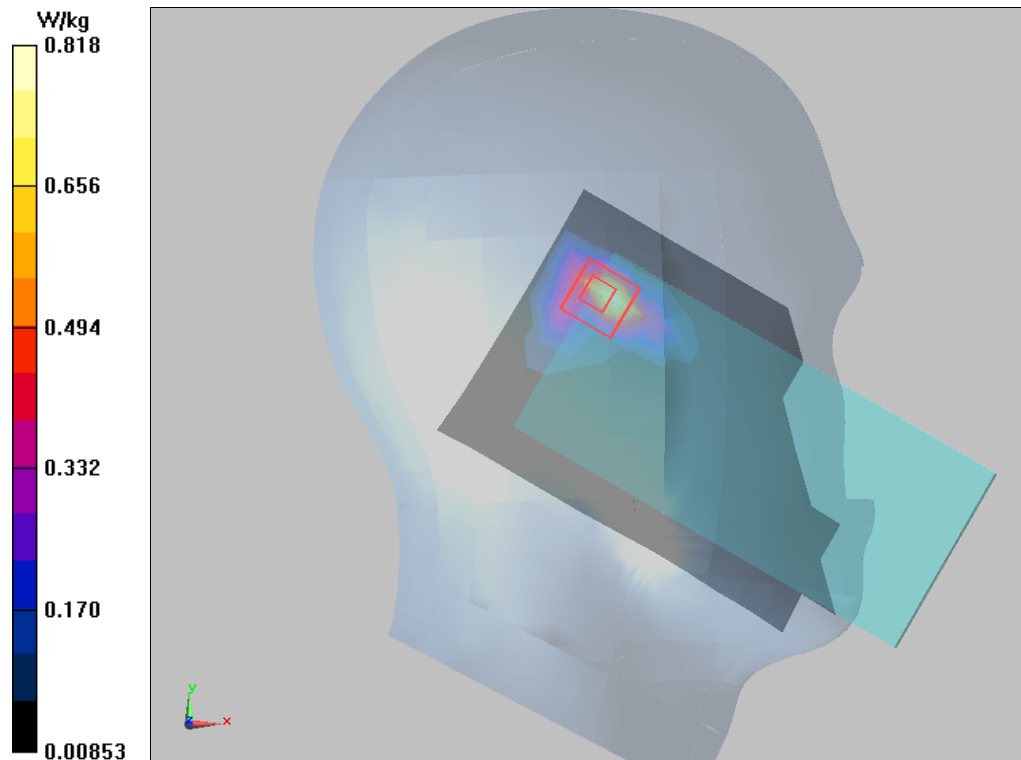
Left Cheek High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.823 V/m; Power Drift = 0.079 dB

Peak SAR (extrapolated) = 1.80 W/kg

SAR(1 g) = 0.730 W/kg; SAR(10 g) = 0.246 W/kg

Maximum value of SAR (measured) = 0.818 W/kg



Plot 144 802.11ac-HT40 U-NII-2C Front Side Middle (Distance 15mm, ANT 9)

Date: 12/14/2020

Communication System: UID 0, 802.11ac-VHT40; Frequency: 5670 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5670$ MHz; $\sigma = 4.906$ S/m; $\epsilon_r = 36.386$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.97, 4.97, 4.97); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Front Side Middle/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

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

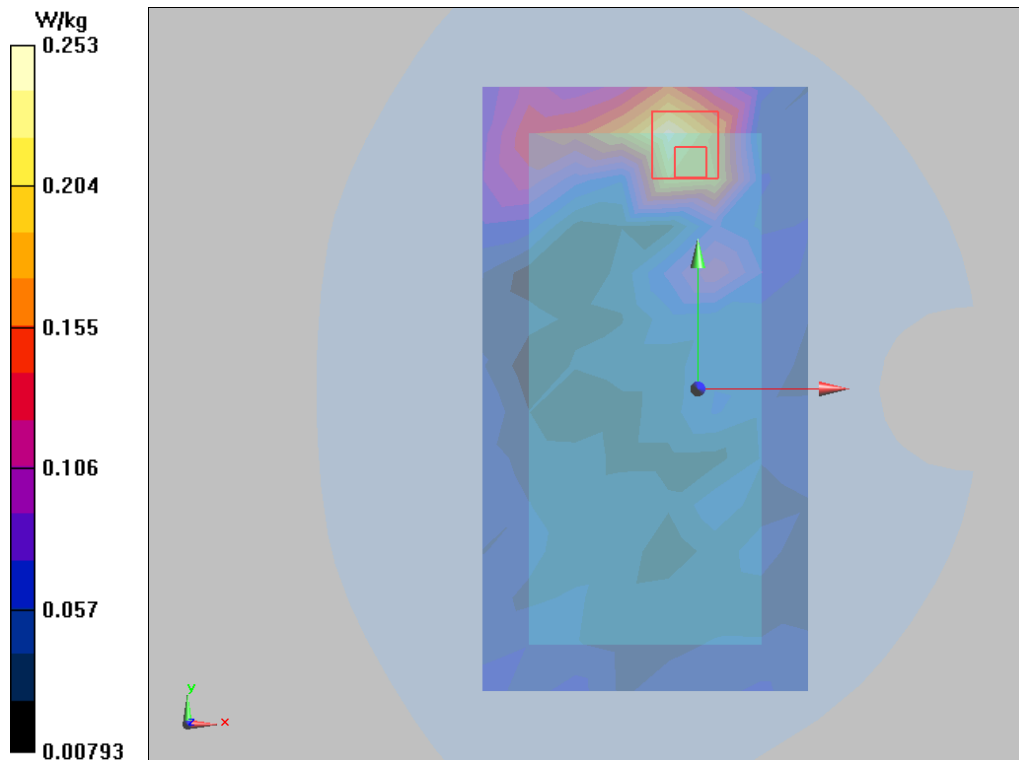
Front Side Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.768 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.410 W/kg

SAR(1 g) = 0.191 W/kg; SAR(10 g) = 0.078 W/kg

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



Plot 145 802.11ac-HT40 U-NII-2C Top Edge Middle (Distance 0mm, ANT 9)

Date: 12/14/2020

Communication System: UID 0, 802.11ac-VHT40; Frequency: 5670 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5670$ MHz; $\sigma = 4.906$ S/m; $\epsilon_r = 36.386$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.97, 4.97, 4.97); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Middle/Area Scan (6x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 4.81 W/kg

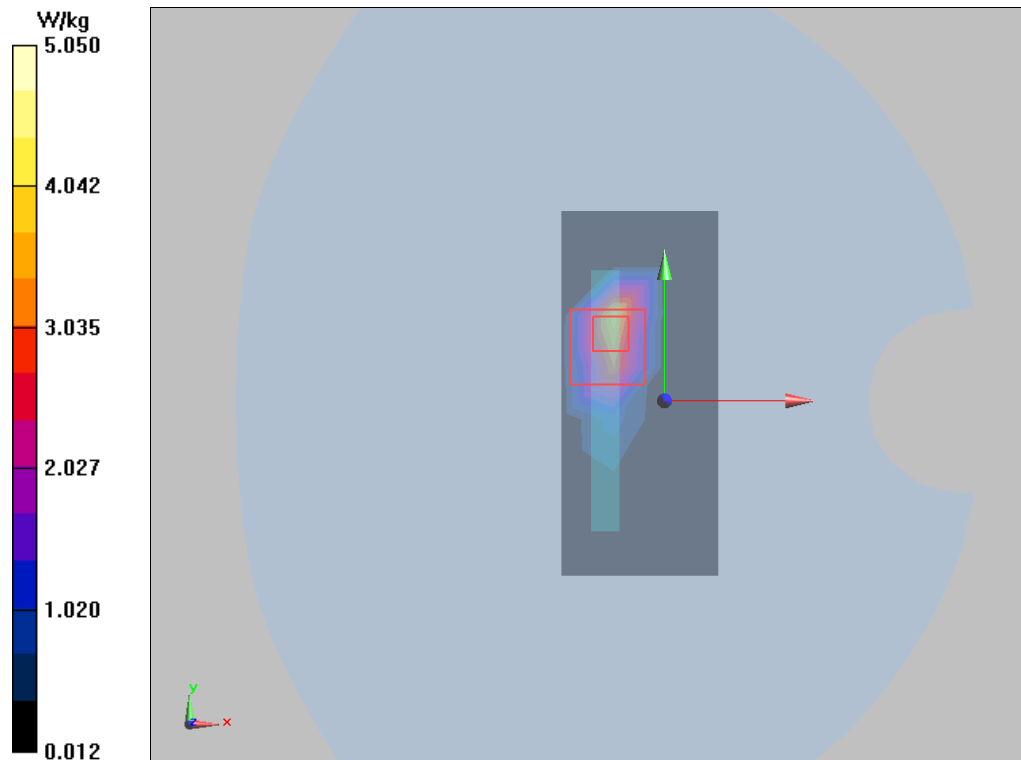
Top Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 18.87 V/m; Power Drift = -0.052 dB

Peak SAR (extrapolated) = 9.29 W/kg

SAR(1 g) = 4.73 W/kg; SAR(10 g) = 1.13 W/kg

Maximum value of SAR (measured) = 5.05 W/kg



Plot 146 802.11a U-NII-3 Left Cheek High (ANT 9)

Date: 12/15/2020

Communication System: UID 0, 802.11a (0); Frequency: 5825 MHz; Duty Cycle: 1:1.008

Medium parameters used: $f = 5825 \text{ MHz}$; $\sigma = 5.48 \text{ S/m}$; $\epsilon_r = 35.186$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek High/Area Scan (12x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

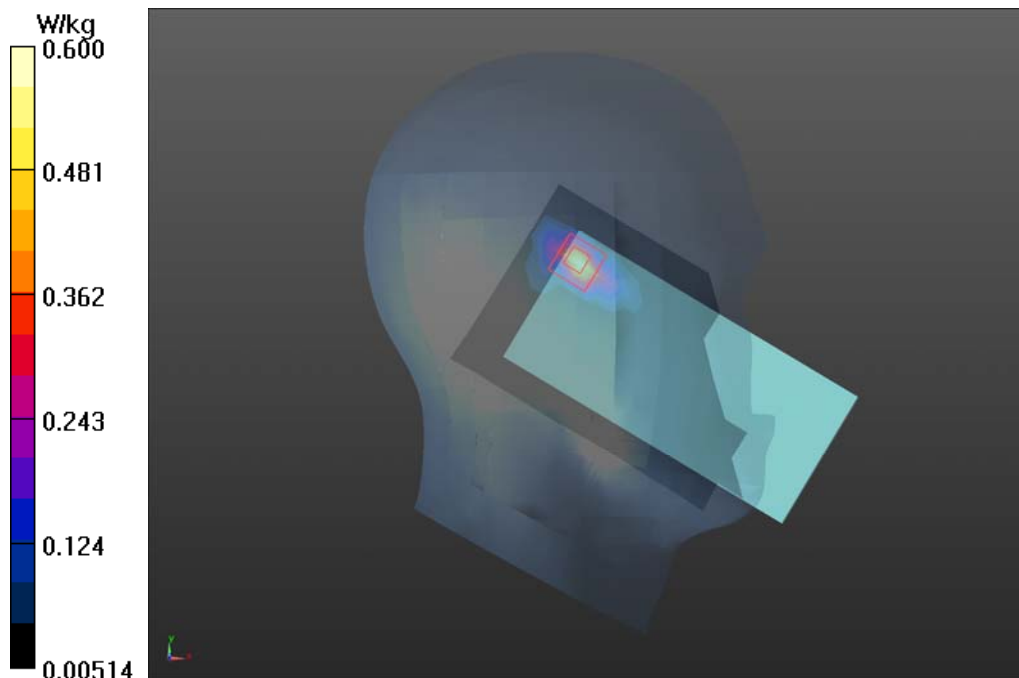
Left Cheek High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 3.290 V/m ; Power Drift = 0.115 dB

Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 0.489 W/kg ; SAR(10 g) = 0.163 W/kg

Maximum value of SAR (measured) = 0.6 W/kg



Plot 147 802.11a U-NII-3 Back Side High (Distance 15mm, ANT 9)

Date: 12/15/2020

Communication System: UID 0, 802.11a (0); Frequency: 5825 MHz; Duty Cycle: 1:1.008

Medium parameters used: $f = 5825$ MHz; $\sigma = 5.48$ S/m; $\epsilon_r = 35.186$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.086 W/kg

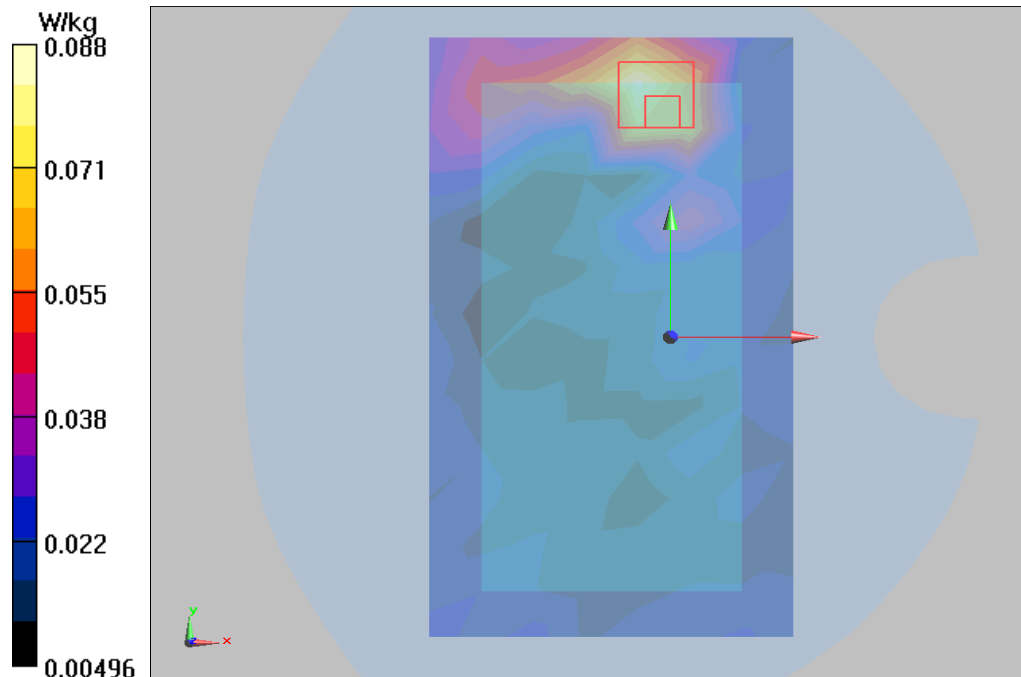
Back Side High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.191 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 0.140 W/kg

SAR(1 g) = 0.078 W/kg; SAR(10 g) = 0.031 W/kg

Maximum value of SAR (measured) = 0.088 W/kg



Plot 148 802.11a U-NII-3 Top Edge High (Distance 10mm, ANT 9)

Date: 12/15/2020

Communication System: UID 0, 802.11a (0); Frequency: 5825 MHz; Duty Cycle: 1:1.008

Medium parameters used: $f = 5825$ MHz; $\sigma = 5.48$ S/m; $\epsilon_r = 35.186$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge High/Area Scan (6x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.096 W/kg

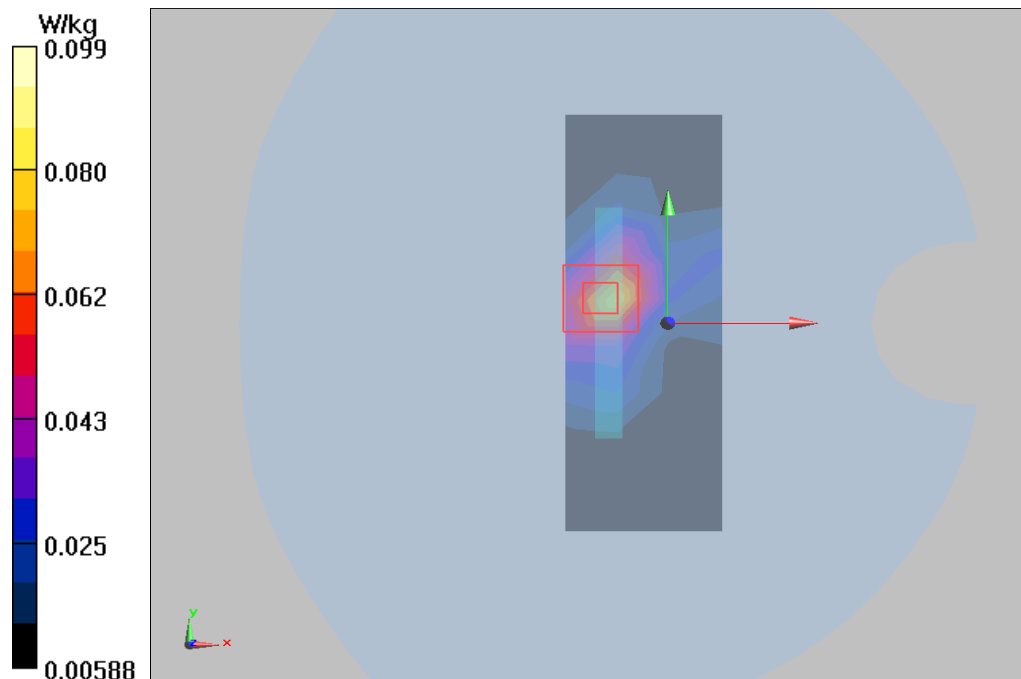
Top Edge High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.8340 V/m; Power Drift = 0.038 dB

Peak SAR (extrapolated) = 0.160 W/kg

SAR(1 g) = 0.089 W/kg; SAR(10 g) = 0.035 W/kg

Maximum value of SAR (measured) = 0.099 W/kg



Plot 149 802.11ac-VHT20 U-NII-1 Back Side Low (Distance 15mm,ANT 2)

Date: 12/17/2020

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5180 MHz;Duty Cycle: 1:1.003

Medium parameters used: $f = 5180$ MHz; $\sigma = 4.75$ S/m; $\epsilon_r = 36.766$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.0648 W/kg

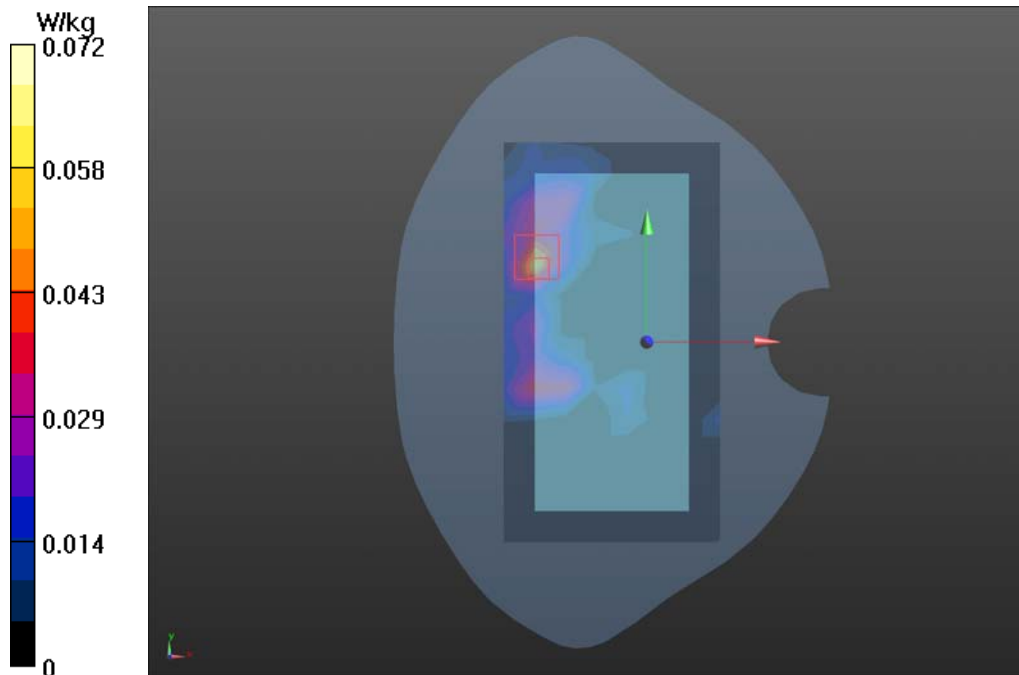
Back Side Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.166 W/kg

SAR(1 g) = 0.062 W/kg; SAR(10 g) = 0.024 W/kg

Maximum value of SAR (measured) = 0.072 W/kg



Plot 150 802.11ac-VHT20 U-NII-1 Right Edge Low (Distance 10mm, ANT 2)

Date: 12/17/2020

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5180 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5180$ MHz; $\sigma = 4.75$ S/m; $\epsilon_r = 36.766$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Low/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.107 W/kg

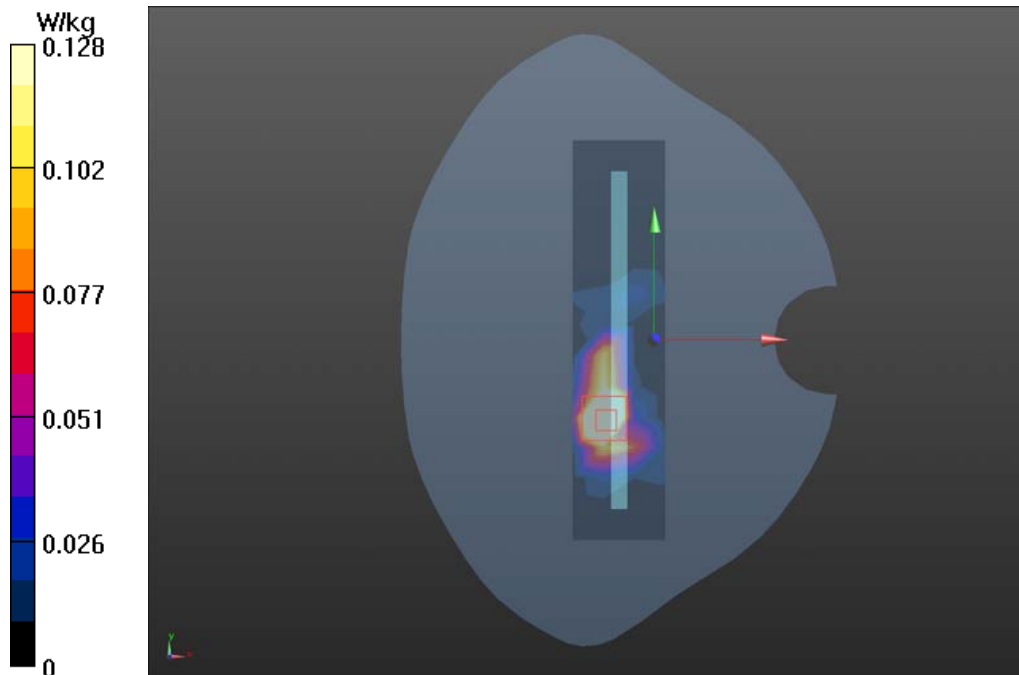
Right Edge Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.262 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.304 W/kg

SAR(1 g) = 0.088 W/kg; SAR(10 g) = 0.032 W/kg

Maximum value of SAR (measured) = 0.128 W/kg



Plot 151 802.11n-VHT20 U-NII-2A Left Cheek Low (ANT 2)

Date: 12/17/2020

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5260 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.808$ S/m; $\epsilon_r = 36.877$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

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

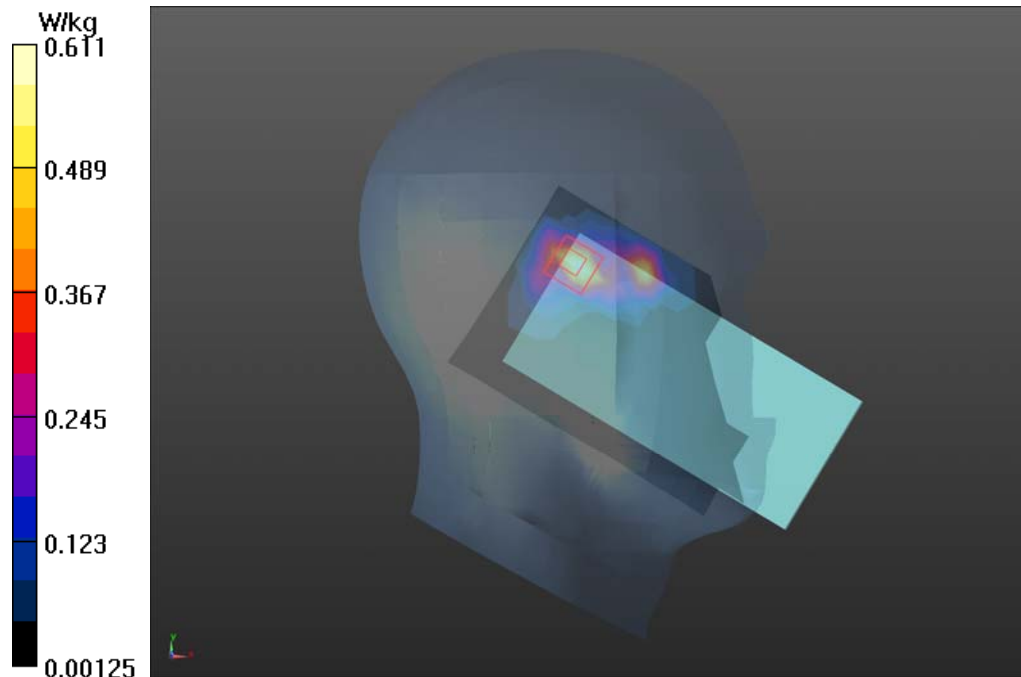
Left Cheek Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 6.510 V/m; Power Drift = 0.092 dB

Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.484 W/kg; SAR(10 g) = 0.207 W/kg

Maximum value of SAR (measured) = 0.611 W/kg



Plot 152 802.11ax-HE40 U-NII-2A Back Side Middle (Distance 15mm, ANT 2)

Date: 12/17/2020

Communication System: UID 0, 802.11ax-HE40; Frequency: 5270 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5270$ MHz; $\sigma = 4.8$ S/m; $\epsilon_r = 36.809$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.199 W/kg

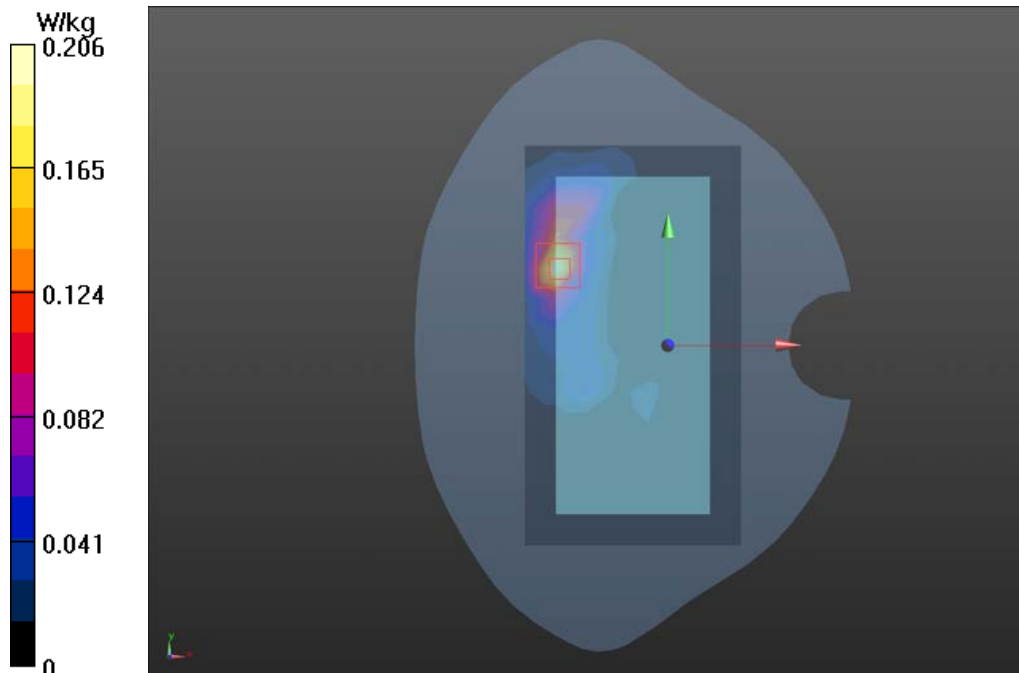
Back Side Middle/Zoom Scan(7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.7400 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 0.541 W/kg

SAR(1 g) = 0.183 W/kg; SAR(10 g) = 0.065 W/kg

Maximum value of SAR (measured) = 0.206 W/kg



Plot 153 802.11ax-HE40 U-NII-2A Right Edge Middle (Distance 0mm, ANT 2)

Date: 12/17/2020

Communication System: UID 0, 802.11ax-HE40; Frequency: 5270 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5270$ MHz; $\sigma = 4.8$ S/m; $\epsilon_r = 36.809$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 3.71 W/kg

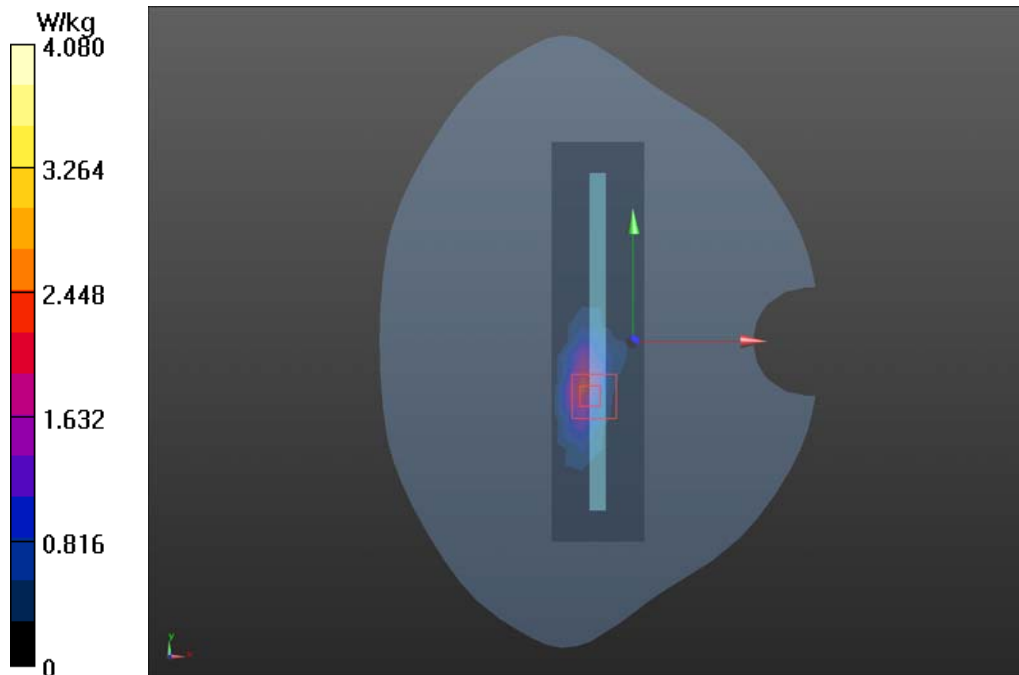
Right Edge Middle/Zoom Scan(7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 14.98 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 8.62 W/kg

SAR(1 g) = 3.11 W/kg; SAR(10 g) = 0.841 W/kg

Maximum value of SAR (measured) = 4.08 W/kg



Plot 154 802.11n-HT20 U-NII-2C Left Cheek High(ANT 2)

Date: 12/14/2020

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5700 MHz;Duty Cycle: 1:1.003

Medium parameters used: $f = 5700$ MHz; $\sigma = 5.38$ S/m; $\epsilon_r = 35.438$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.97, 4.97, 4.97); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek High/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.229 W/kg

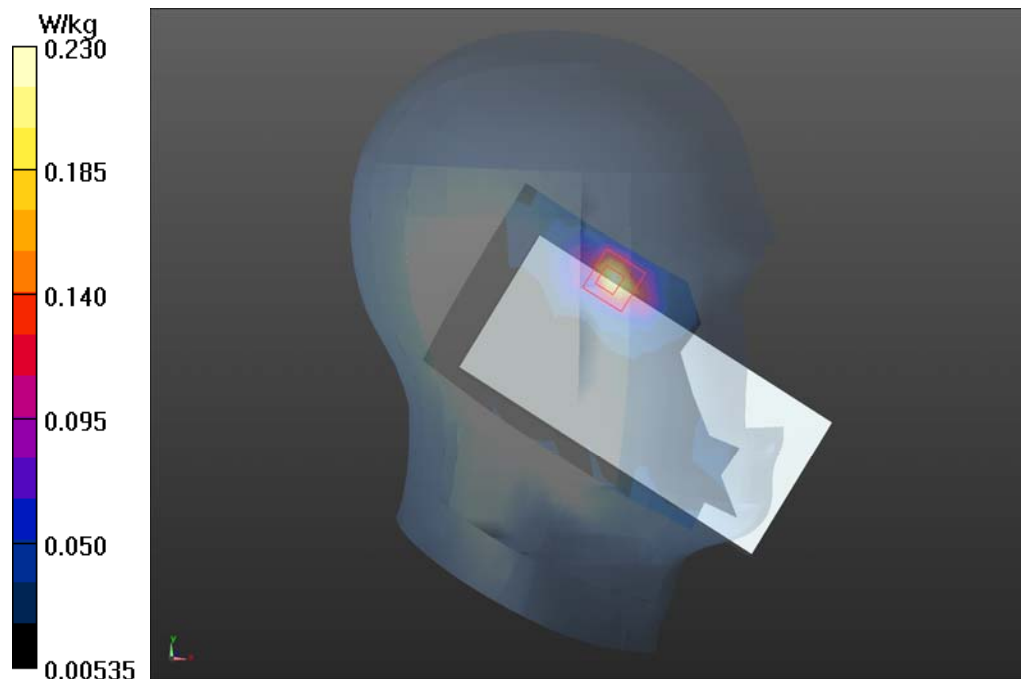
Left Cheek High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.208 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 0.595 W/kg

SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.076 W/kg

Maximum value of SAR (measured) = 0.230 W/kg



Plot 155 802.11n-HT40 U-NII-2C Back Side Middle (Distance 15mm, ANT 2)

Date: 12/14/2020

Communication System: UID 0, 802.11n HT40 (0); Frequency: 5510 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5510 \text{ MHz}$; $\sigma = 5.162 \text{ S/m}$; $\epsilon_r = 36.151$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.97, 4.97, 4.97); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan(12x21x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

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

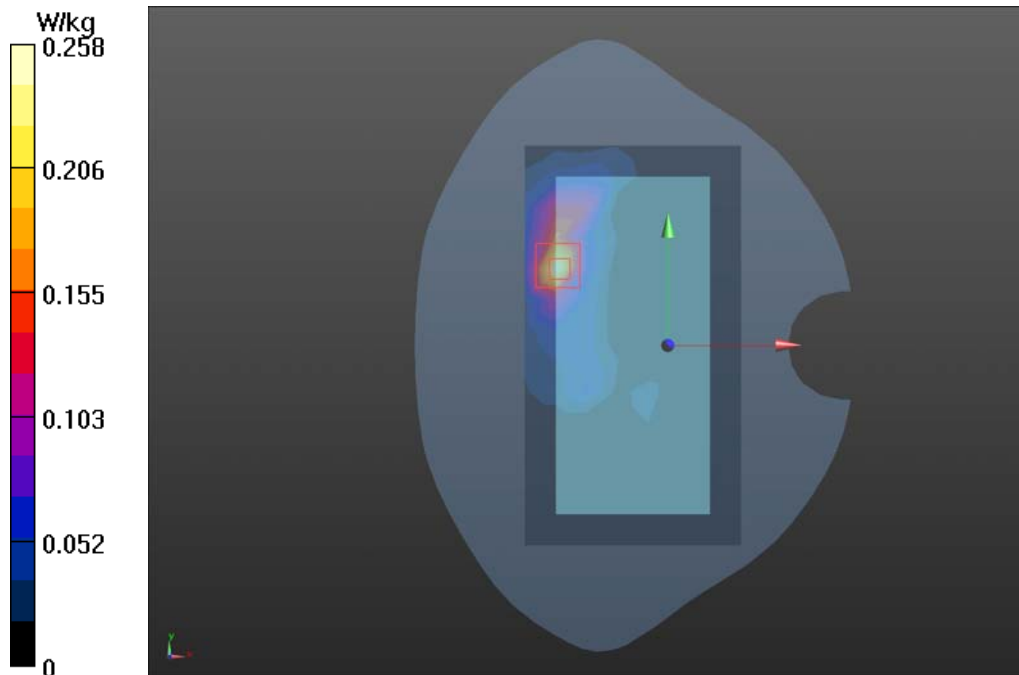
Back Side Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 0.7960 V/m ; Power Drift = 0.010 dB

Peak SAR (extrapolated) = 0.366 W/kg

SAR(1 g) = 0.213 W/kg ; SAR(10 g) = 0.093 W/kg

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



Plot 156 802.11n-HT40 U-NII-2C Right Edge Middle (Distance 0mm, ANT2)

Date: 12/14/2020

Communication System: UID 0, 802.11n HT40 (0); Frequency: 5510 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5510$ MHz; $\sigma = 5.162$ S/m; $\epsilon_r = 36.151$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.97, 4.97, 4.97); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 3.741 W/kg

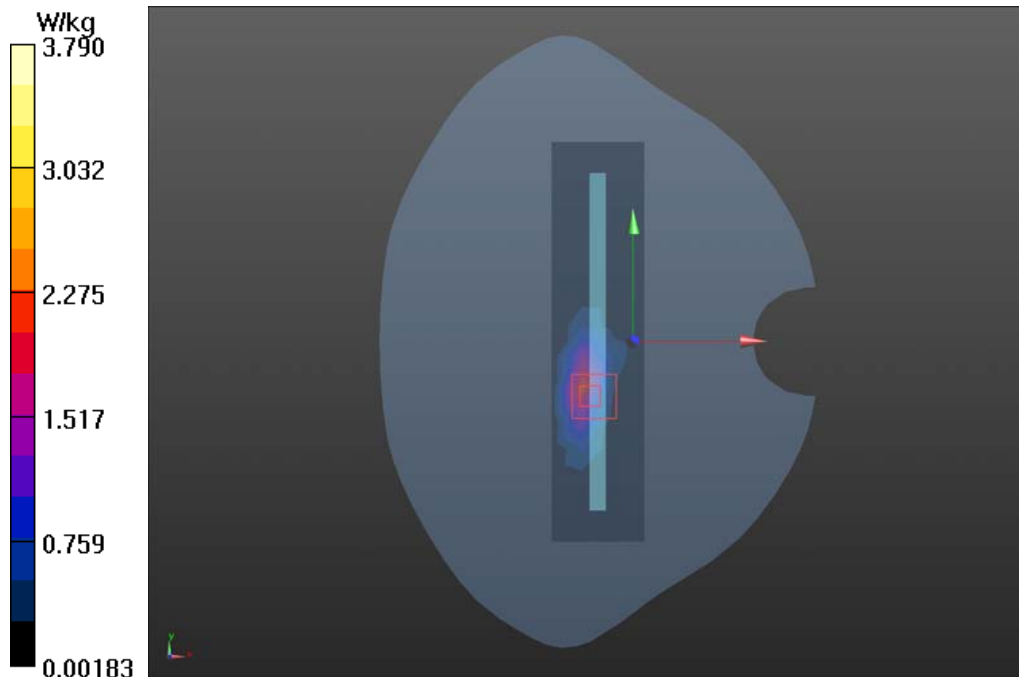
Right Edge Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 13.26 V/m; Power Drift = 0.056 dB

Peak SAR (extrapolated) = 11.4 W/kg

SAR(1 g) = 2.64 W/kg; SAR(10 g) = 0.696 W/kg

Maximum value of SAR (measured) = 3.79 W/kg



Plot 157 802.11ax-HE40 U-NII-3 Left Cheek Middle (ANT 2)

Date: 12/15/2020

Communication System: UID 0, 802.11aX-HE40; Frequency: 5795 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5795$ MHz; $\sigma = 5.48$ S/m; $\epsilon_r = 35.341$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.97, 4.97, 4.97); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.0816 W/kg

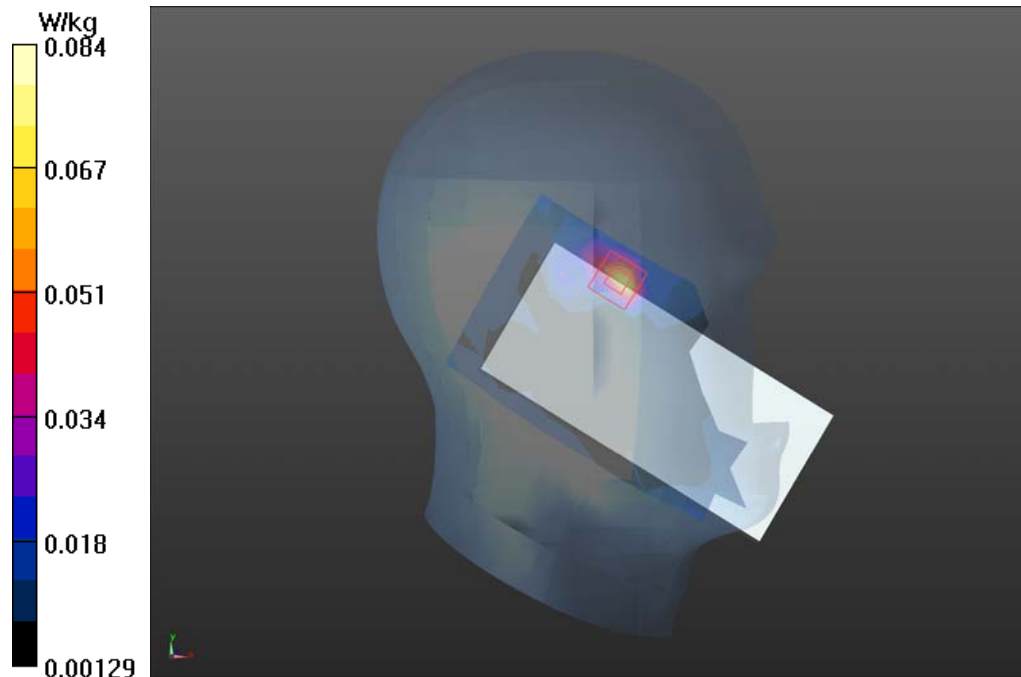
Left Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.122 V/m; Power Drift = 0.048 dB

Peak SAR (extrapolated) = 0.281 W/kg

SAR(1 g) = 0.077 W/kg; SAR(10 g) = 0.030 W/kg

Maximum value of SAR (measured) = 0.084 W/kg



Plot 158 802.11ax-HE40 U-NII-3 Back Side Middle (Distance 15mm, ANT 2)

Date: 12/15/2020

Communication System: UID 0, 802.11aX-HE40; Frequency: 5795 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5795$ MHz; $\sigma = 5.48$ S/m; $\epsilon_r = 35.341$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.042 W/kg

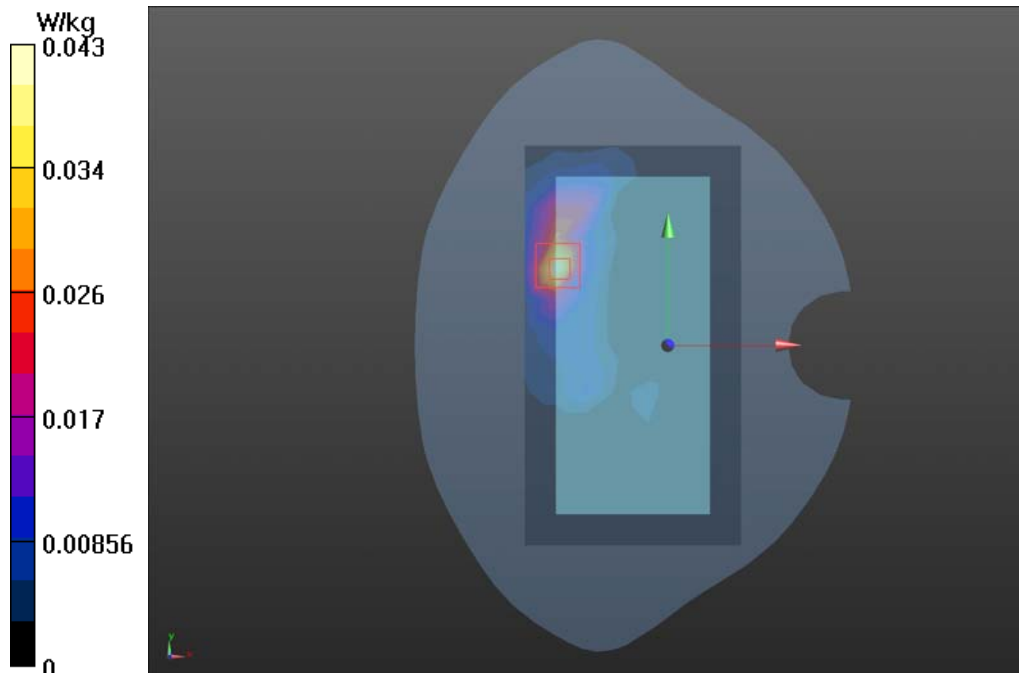
Back Side Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.7790 V/m; Power Drift = -0.094 dB

Peak SAR (extrapolated) = 0.128 W/kg

SAR(1 g) = 0.034 W/kg; SAR(10 g) = 0.009 W/kg

Maximum value of SAR (measured) = 0.043 W/kg



Plot 159 802.11ax-HE40 U-NII-3 Right Edge Middle (Distance 10mm, ANT 2)

Date: 12/15/2020

Communication System: UID 0, 802.11ax-HE40; Frequency: 5795 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5795$ MHz; $\sigma = 5.48$ S/m; $\epsilon_r = 35.341$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Edge Middle/Area Scan (6x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.099 W/kg

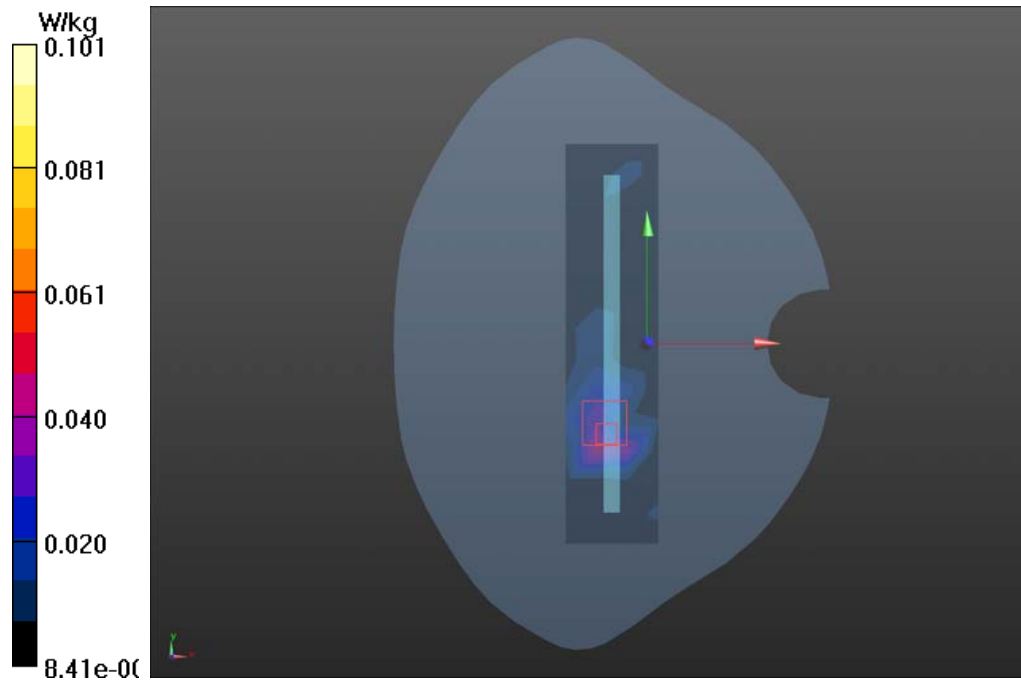
Right Edge Middle/Zoom Scan(7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.329 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.404 W/kg

SAR(1 g) = 0.095 W/kg; SAR(10 g) = 0.037 W/kg

Maximum value of SAR (measured) = 0.101 W/kg



Plot 160 802.11a U-NII-2A Left Cheek Low (MIMO)

Date: 12/17/2020

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5260$ MHz; $\sigma = 4.808$ S/m; $\epsilon_r = 36.877$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.55, 5.55, 5.55); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan(12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.502 W/kg

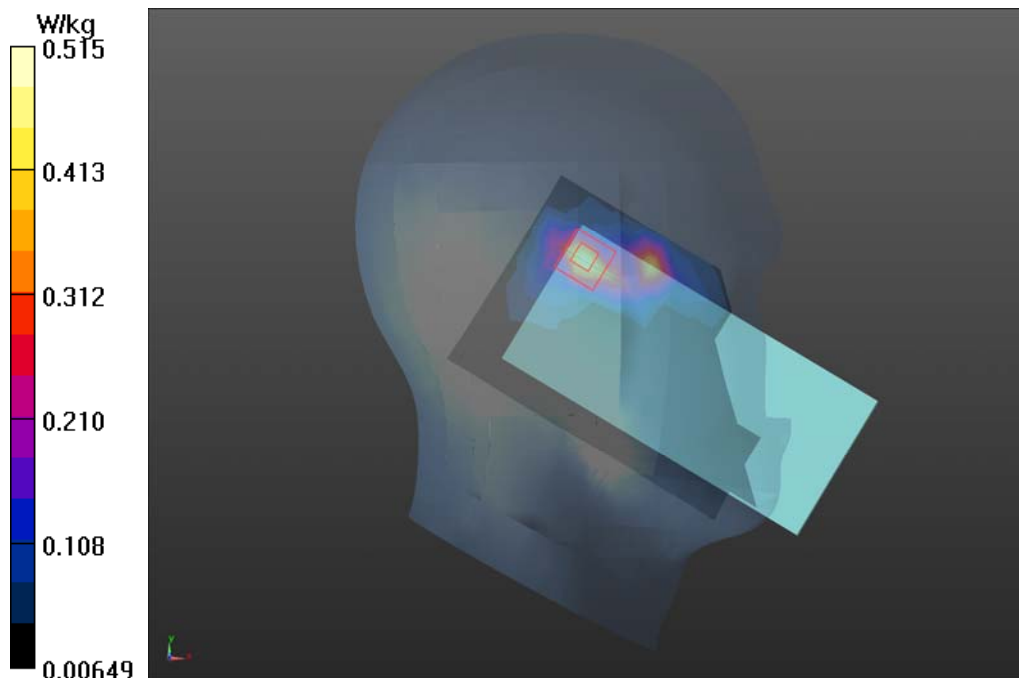
Left Cheek Middle/Zoom Scan(7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.362 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.302 W/kg; SAR(10 g) = 0.128 W/kg

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



Plot 161 802.11nHT20 U-NII-2C Left Cheek High (MIMO)

Date: 12/14/2020

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5700 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5700$ MHz; $\sigma = 5.38$ S/m; $\epsilon_r = 35.438$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(4.97, 4.97, 4.97); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek High/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.797 W/kg

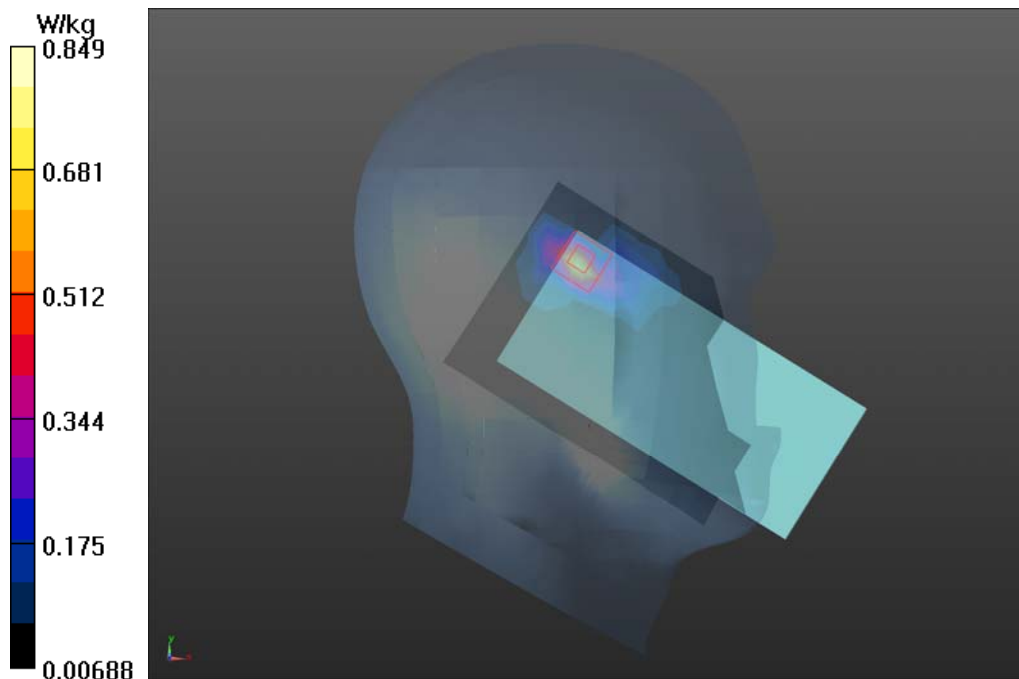
Left Cheek High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.916 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 2.45 W/kg

SAR(1 g) = 0.484 W/kg; SAR(10 g) = 0.165 W/kg

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



Plot 162 802.11ax-HE 40 U-NII-3 Left Cheek Middle (MIMO)

Date: 12/15/2020

Communication System: UID 0, 802.11ax-HE 40; Frequency: 5795 MHz; Duty Cycle: 1:1.003

Medium parameters used: $f = 5795$ MHz; $\sigma = 5.48$ S/m; $\epsilon_r = 35.341$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

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

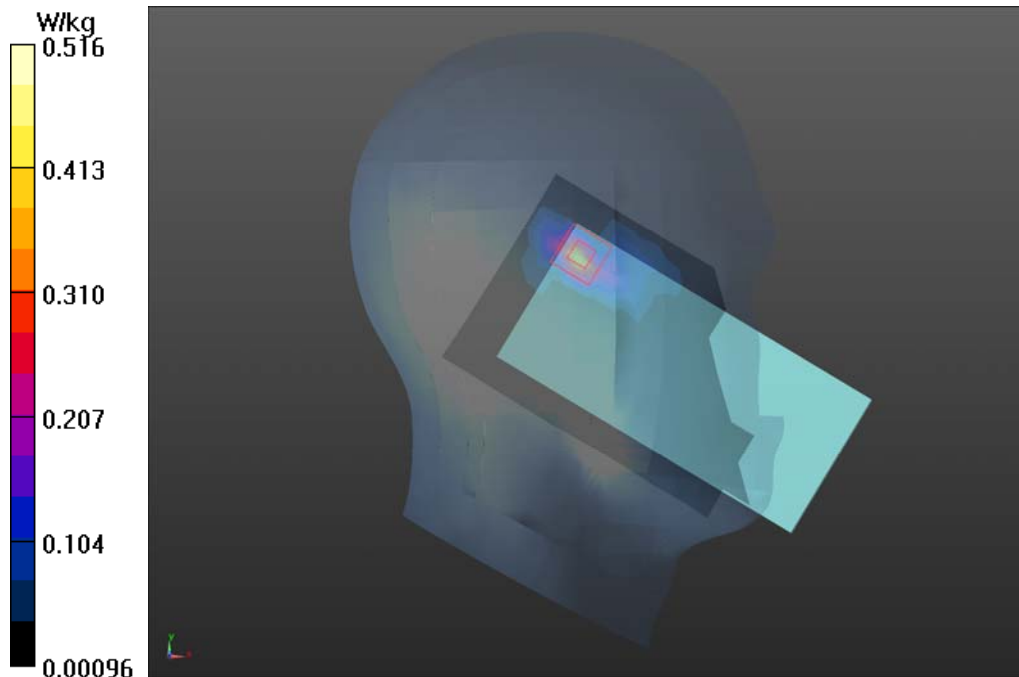
Left Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.083 V/m; Power Drift = 0.126 dB

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.462 W/kg; SAR(10 g) = 0.151 W/kg

Maximum value of SAR (measured) = 0.616 W/kg



Plot 163 BT Left Tilt Middle (ANT 6)

Date: 12/18/2020

Communication System: UID 0, BT (0); Frequency: 2441 MHz; Duty Cycle: 1:1.3

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.801$ S/m; $\epsilon_r = 38.617$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.54, 7.54, 7.54); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Tilt Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.361 W/kg

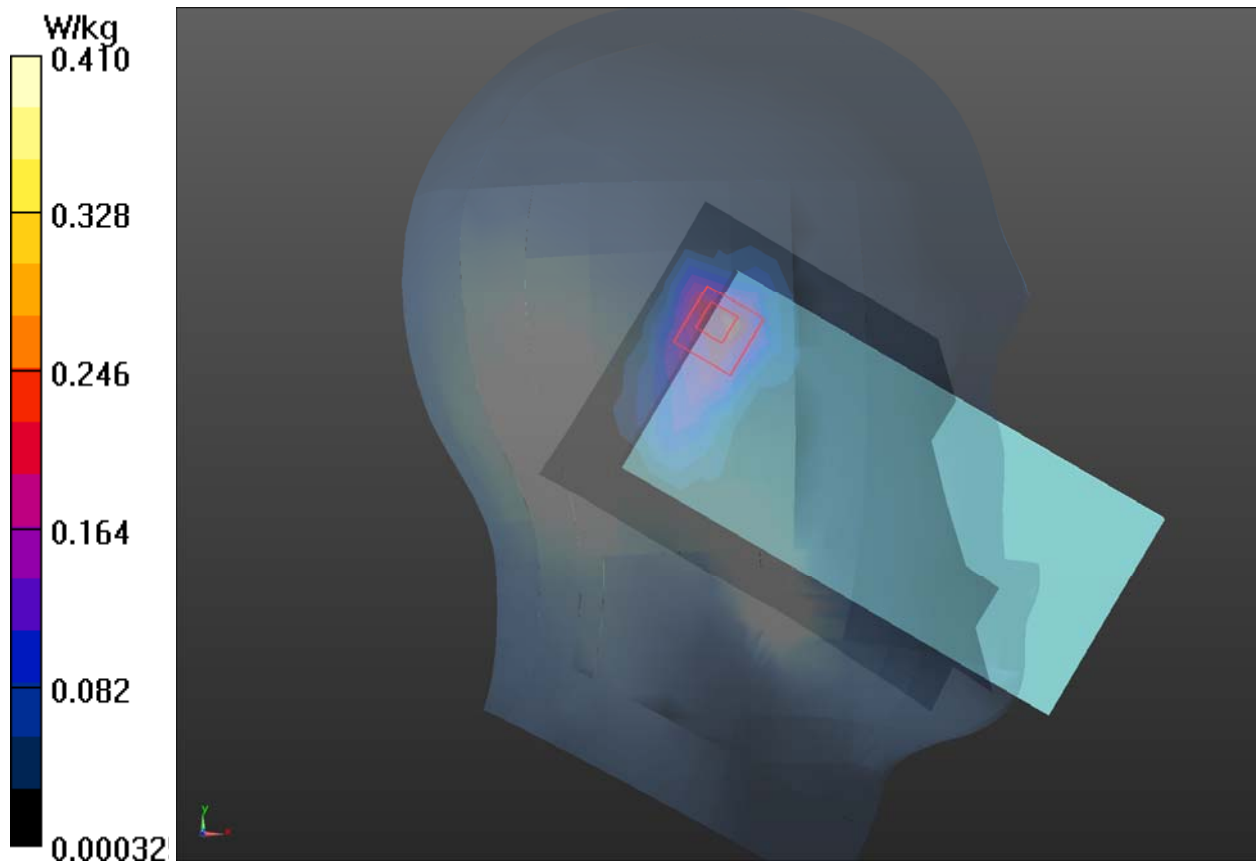
Left Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.19 V/m; Power Drift = -0.021 dB

Peak SAR (extrapolated) = 0.883 W/kg

SAR(1 g) = 0.343 W/kg; SAR(10 g) = 0.143 W/kg

Maximum value of SAR (measured) = 0.410 W/kg



Plot 164 BT Top Edge Middle(Distance 10mm, ANT 6)

Date: 12/18/2020

Communication System: UID 0, BT (0); Frequency: 2441 MHz;Duty Cycle: 1:1.3

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.801$ S/m; $\epsilon_r = 38.617$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.54, 7.54, 7.54); Calibrated: 7/6/2020;

Electronics: DAE4 SN1291; Calibrated: 2/24/2020

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

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top Edge Middle/Area Scan (5x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.079 W/kg

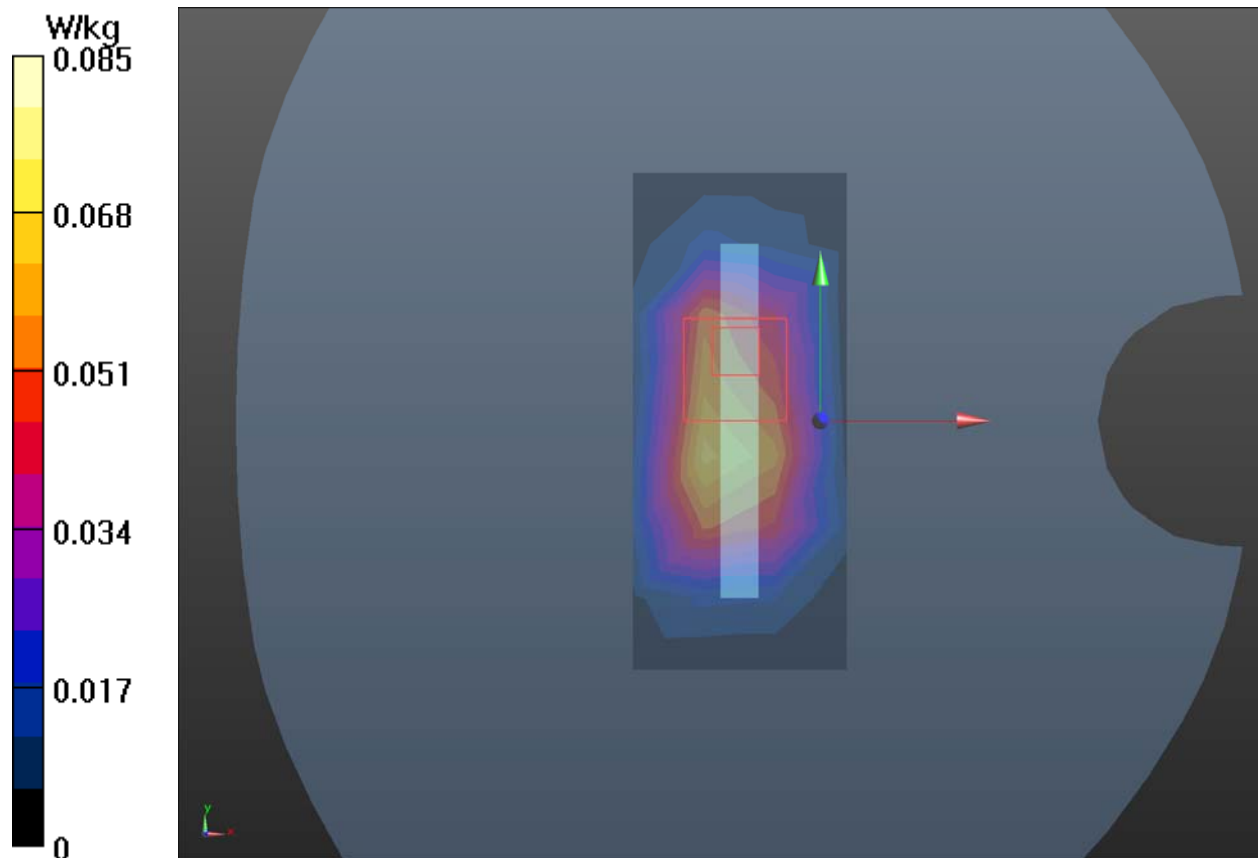
Top Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.841 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.210 W/kg

SAR(1 g) = 0.075 W/kg; SAR(10 g) = 0.035 W/kg

Maximum value of SAR (measured) = 0.085 W/kg





ANNEX D: Probe Calibration Certificate



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中国认可
国际互认
校准
CALIBRATION
CNAS L0570

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E-mail: cttl@chinattl.com Http://www.chinattl.cn

Client **TA(Shanghai)**Certificate No: **Z20-60218****CALIBRATION CERTIFICATE**

Object **EX3DV4 - SN : 3677**

Calibration Procedure(s) **FF-Z11-004-01
Calibration Procedures for Dosimetric E-field Probes**

Calibration date: **July 06, 2020**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Power sensor NRP-Z91	101547	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Power sensor NRP-Z91	101548	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Reference 10dBAttenuator	18N50W-10dB	10-Feb-20(CTTL, No.J20X00525)	Feb-22
Reference 20dBAttenuator	18N50W-20dB	10-Feb-20(CTTL, No.J20X00526)	Feb-22
Reference Probe EX3DV4	SN 3617	30-Jan-20(SPEAG, No.EX3-3617_Jan20/2)	Jan-21
DAE4	SN 1556	4-Feb-20(SPEAG, No.DAE4-1556_Feb20)	Feb-21
Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGenerator MG3700A	6201052605	23-Jun-20(CTTL, No.J20X04343)	Jun-21
Network Analyzer E5071C	MY46110673	10-Feb-20(CTTL, No.J20X00515)	Feb-21

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

Issued: July 08, 2020

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



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CALIBRATION LABORATORY

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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), i $\theta=0$ 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:

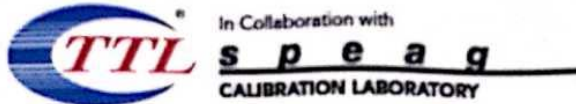
- IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
- IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) 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"

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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Page 2 of 9



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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($\mu V/(V/m)^2$) ^A	0.41	0.46	0.40	±10.0%
DCP(mV) ^B	100.7	102.6	102.1	

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	174.8	±2.0%
		Y	0.0	0.0	1.0		186.9	
		Z	0.0	0.0	1.0		173.5	

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 4).

^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

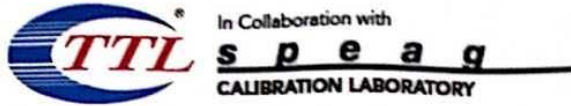
Calibration Parameter Determined in Head Tissue Simulating Media

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	9.78	9.78	9.78	0.40	0.75	±12.1%
835	41.5	0.90	9.38	9.38	9.38	0.21	1.11	±12.1%
1750	40.1	1.37	8.25	8.25	8.25	0.26	1.05	±12.1%
1900	40.0	1.40	7.90	7.90	7.90	0.28	1.06	±12.1%
2000	40.0	1.40	7.97	7.97	7.97	0.23	1.17	±12.1%
2300	39.5	1.67	7.69	7.69	7.69	0.66	0.68	±12.1%
2450	39.2	1.80	7.54	7.54	7.54	0.66	0.70	±12.1%
2600	39.0	1.96	7.26	7.26	7.26	0.74	0.67	±12.1%
3300	38.2	2.71	7.07	7.07	7.07	0.48	0.97	±13.3%
3500	37.9	2.91	7.03	7.03	7.03	0.49	0.93	±13.3%
3700	37.7	3.12	6.83	6.83	6.83	0.49	0.97	±13.3%
3900	37.5	3.32	6.76	6.76	6.76	0.40	1.20	±13.3%
4100	37.2	3.53	6.78	6.78	6.78	0.40	1.15	±13.3%
4400	36.9	3.84	6.47	6.47	6.47	0.40	1.20	±13.3%
4600	36.7	4.04	6.42	6.42	6.42	0.50	1.13	±13.3%
4800	36.4	4.25	6.35	6.35	6.35	0.45	1.25	±13.3%
4950	36.3	4.40	6.22	6.22	6.22	0.45	1.25	±13.3%
5250	35.9	4.71	5.55	5.55	5.55	0.50	1.15	±13.3%
5600	35.5	5.07	4.97	4.97	4.97	0.55	1.22	±13.3%
5750	35.4	5.22	5.00	5.00	5.00	0.55	1.27	±13.3%

^C Frequency validity above 300 MHz 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. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

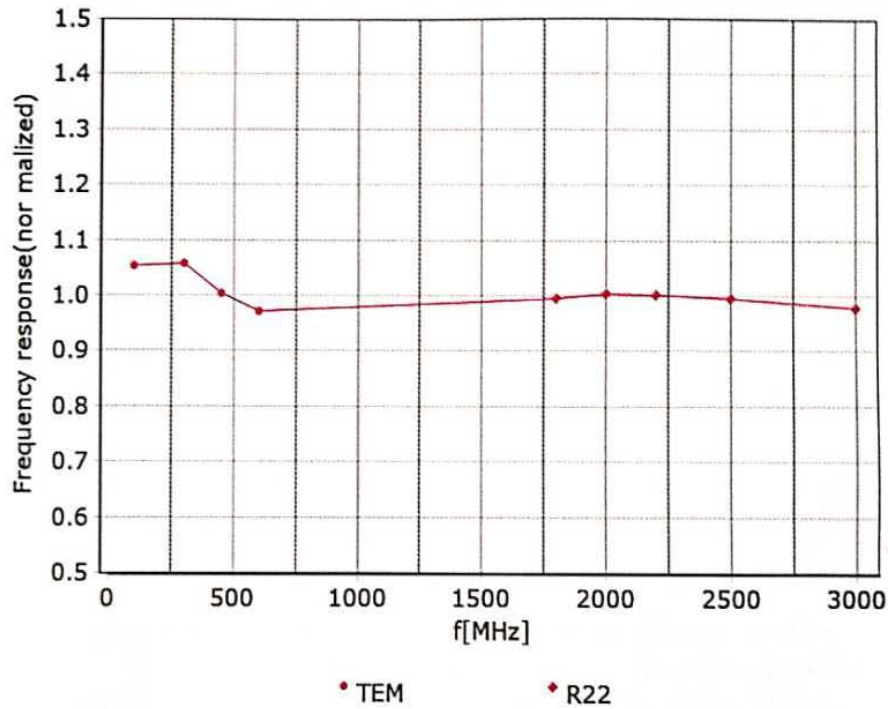
^F At frequency below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to ±5%. The uncertainty is the RSS of the ConvF uncertainty 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.

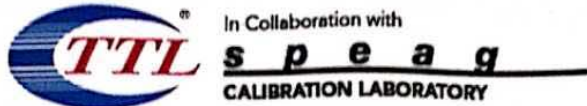


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Frequency Response of E-Field (TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: $\pm 7.4\%$ ($k=2$)

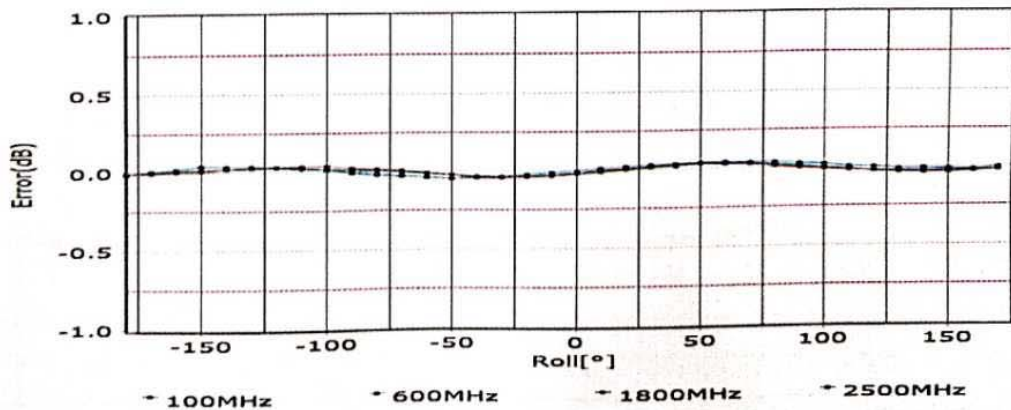
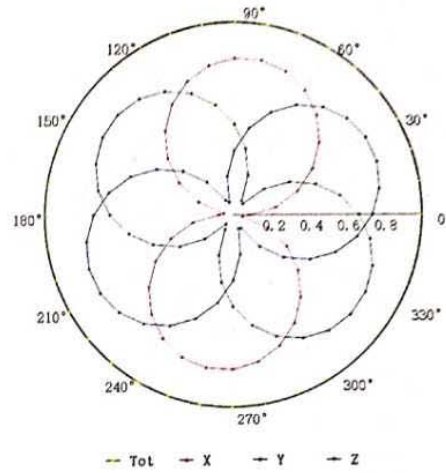
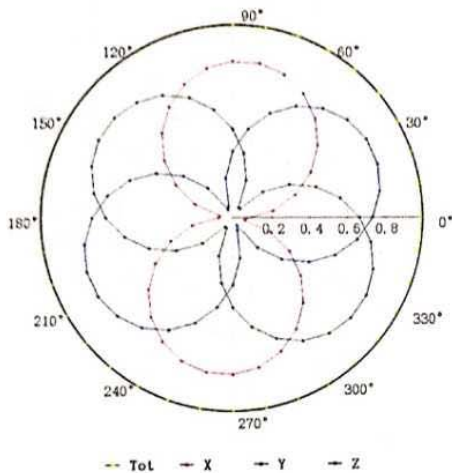


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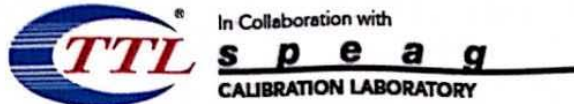
Receiving Pattern (Φ), $\theta=0^\circ$

f=600 MHz, TEM

f=1800 MHz, R22

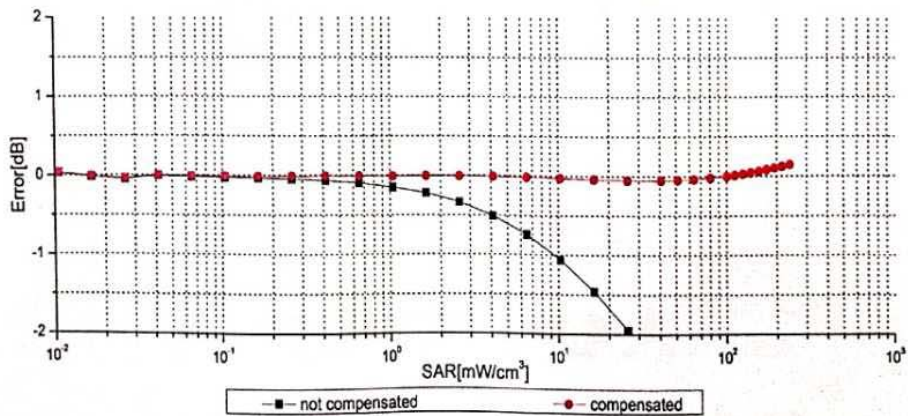
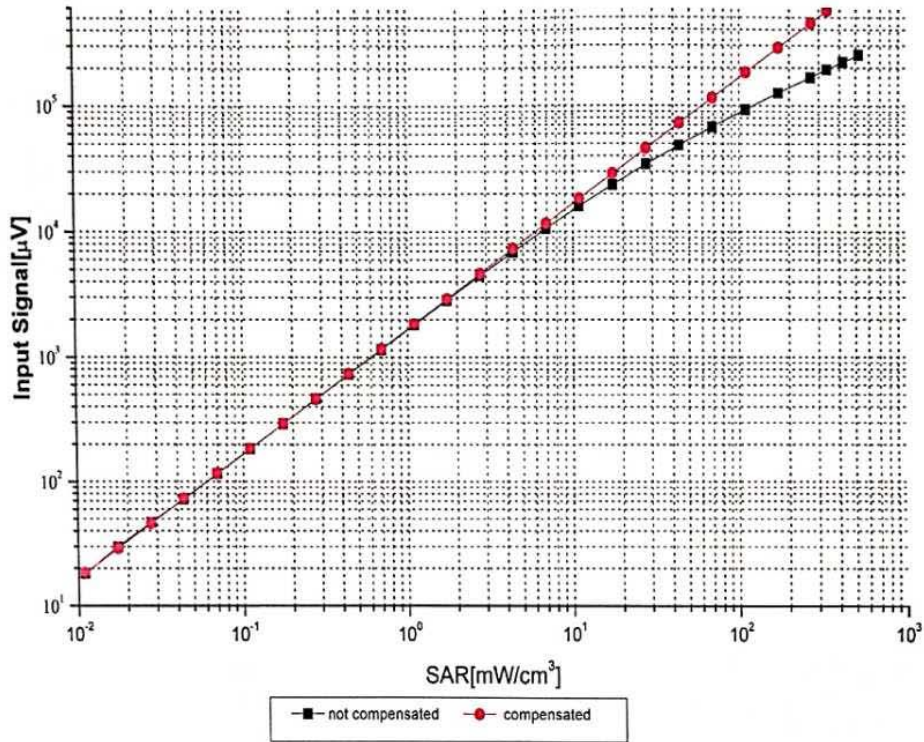


Uncertainty of Axial Isotropy Assessment: $\pm 1.2\%$ ($k=2$)



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Dynamic Range f(SAR_{head}) (TEM cell, f = 900 MHz)



Uncertainty of Linearity Assessment: ±0.9% (k=2)