Plot 148 802.11a U-NII-2A Back Side CH56 (Distance 0mm)

Date: 12/22/2016

Communication System: UID 0, 802.11a (0); Frequency: 5280 MHz; Duty Cycle: 1:1

Medium parameters used: f = 5280 MHz; σ = 5.464 S/m; $ε_r$ = 46.63; ρ = 1000 kg/m³

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.69, 4.69, 4.69); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Back Side CH56/Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

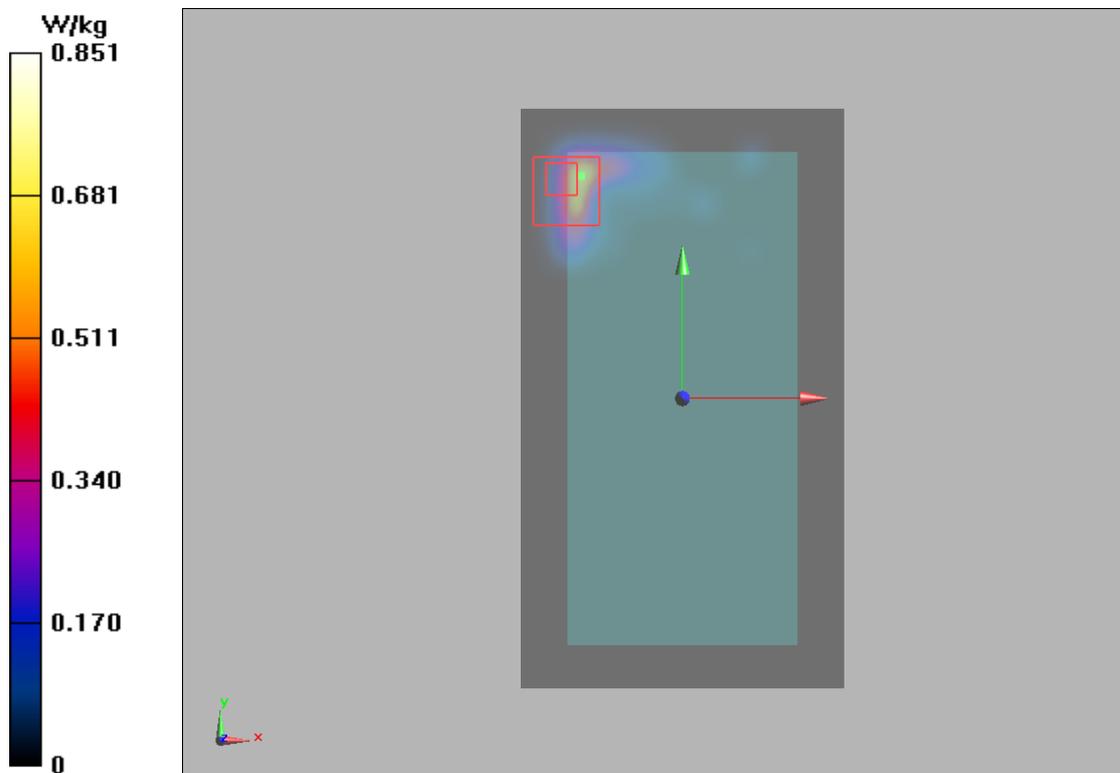Maximum value of SAR (interpolated) = 0.677 W/kg

Back Side CH56/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift = 0.100dB

Peak SAR (extrapolated) = 1.90 W/kg

SAR(1 g) = 0.643 W/kg; SAR(10 g) = 0.195 W/kg

Maximum value of SAR (measured) = 0.851 W/kg

Antenna 1
Plot 149 802.11a U-NII-1 Right Edge CH36 (Distance 10mm)

Date: 12/21/2016

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

Medium parameters used: f = 5180 MHz; σ = 5.29 S/m; ε_r = 47.113; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃　　　　Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.69, 4.69, 4.69); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Right Edge CH36 /Area Scan (51x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
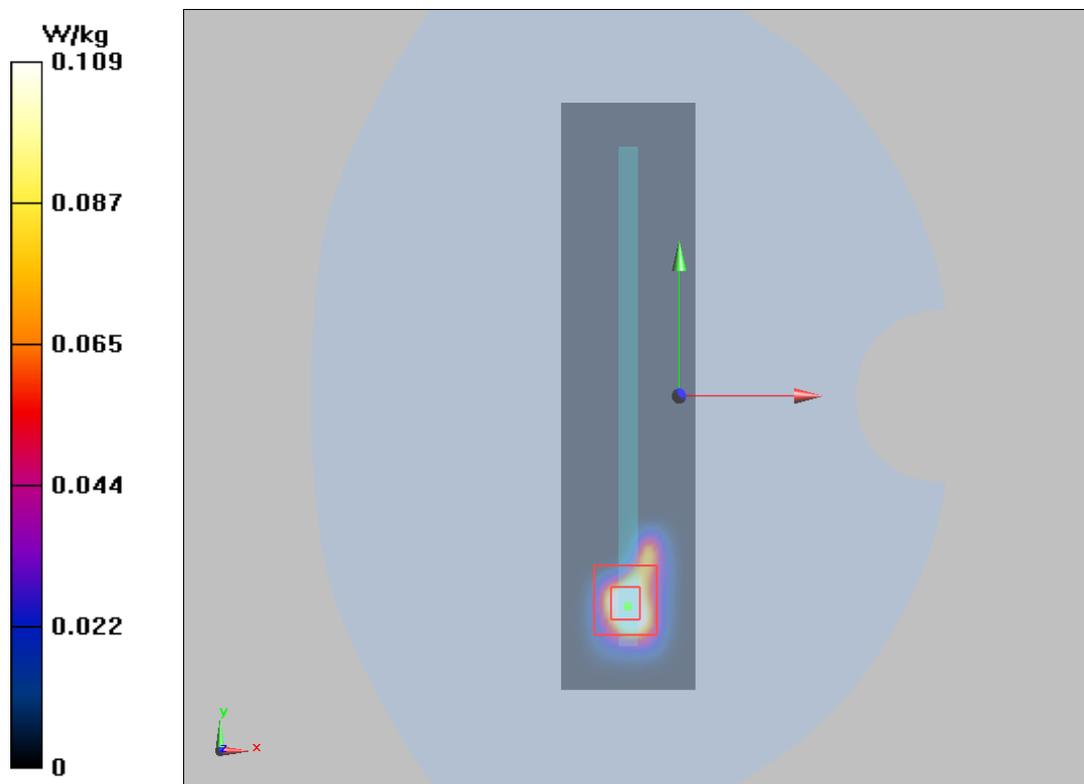
Maximum value of SAR (interpolated) = 0.149 W/kg

Right Edge CH36 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.928 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 0.423 W/kg

SAR(1 g) = 0.106 W/kg; SAR(10 g) = 0.037 W/kg

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

MIMO
Plot 150 802.11a U-NII-1 Right Edge CH48 (Distance 10mm)

Date: 12/21/2016

Communication System: UID 0, 802.11a (0); Frequency: 5240 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5240 MHz; σ = 5.402 S/m; $ε_r$ = 46.735; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.69, 4.69, 4.69); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Right Edge CH48/Area Scan (51x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

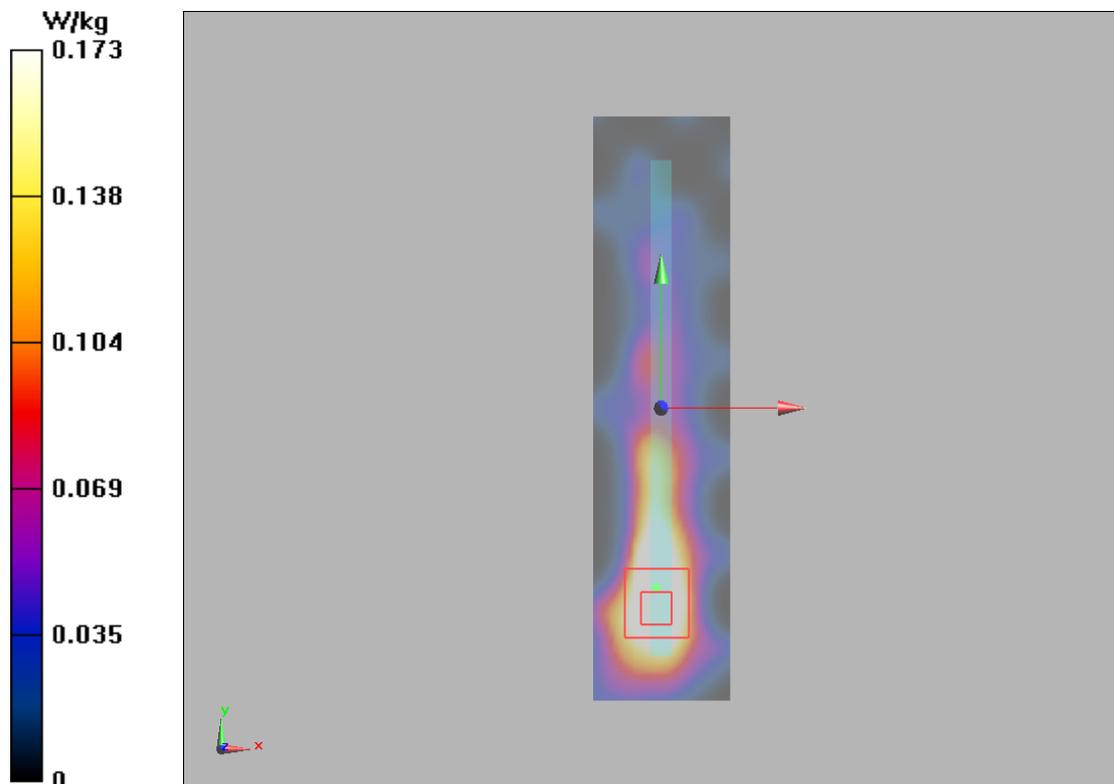Maximum value of SAR (interpolated) = 0.176 W/kg

Right Edge CH48/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.580 V/m; Power Drift = 0.194 dB

Peak SAR (extrapolated) = 0.241 W/kg

SAR(1 g) = 0.152 W/kg; SAR(10 g) = 0.084 W/kg

Maximum value of SAR (measured) = 0.173 W/kg

Antenna 1
Plot 151 802.11a U-NII-2C Left Cheek CH100 (Full Power)

Date: 12/24/2016

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

Medium parameters used: f = 5500 MHz; σ = 5.071 S/m; $ε_r$ = 35.318; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.61, 4.61, 4.61); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Left Cheek CH100 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
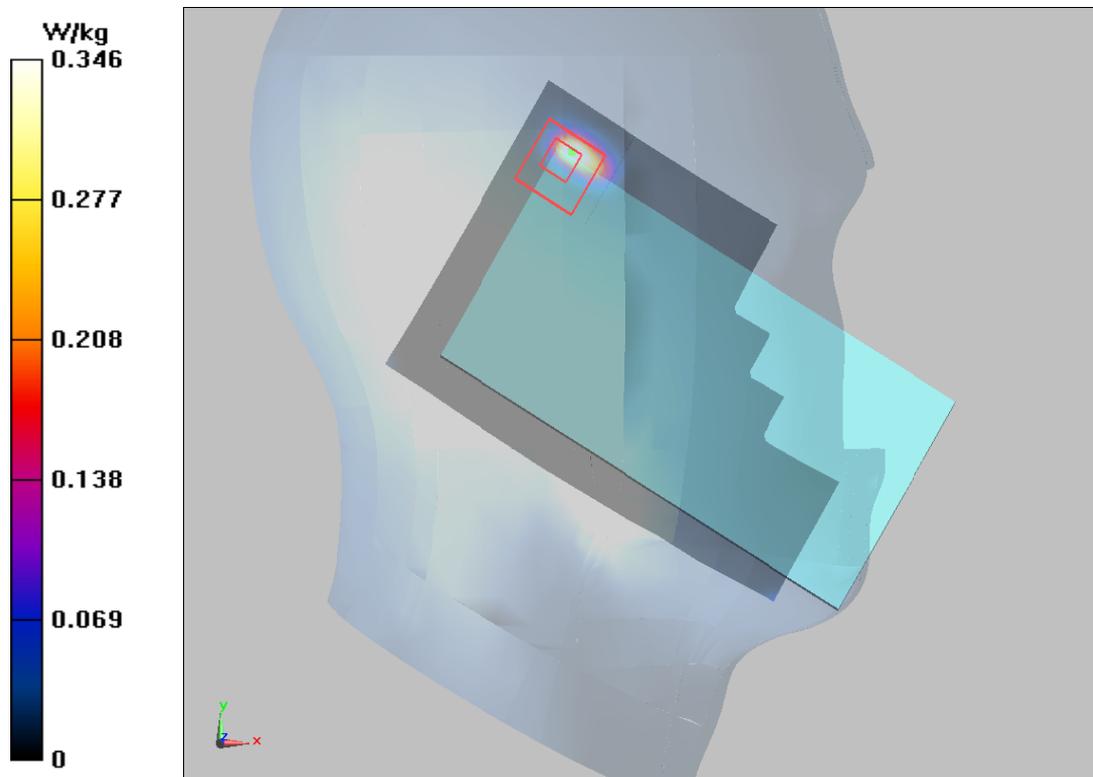
Maximum value of SAR (interpolated) = 0.219 W/kg

Left Cheek CH100 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.164 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 0.847 W/kg

SAR(1 g) = 0.274 W/kg; SAR(10 g) = 0.092 W/kg

Maximum value of SAR (measured) = 0.346 W/kg

Plot 152 802.11a U-NII-2C Left Cheek CH100 (Battery 2, Power Reduce)

Date: 12/24/2016

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

Medium parameters used: f = 5500 MHz; σ = 5.071 S/m; ε_r = 35.318; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF(4.61, 4.61, 4.61); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Left Cheek CH100 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

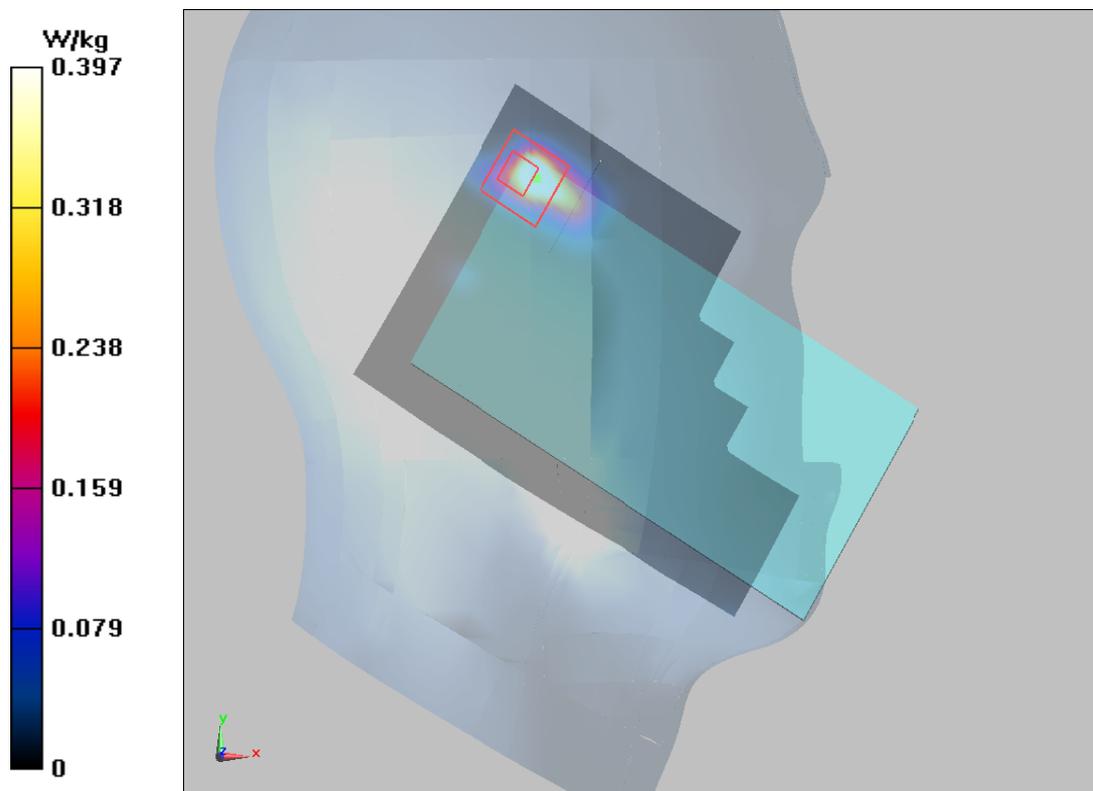Maximum value of SAR (interpolated) = 0.287 W/kg

Left Cheek CH100 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.212 V/m; Power Drift = 0.194 dB

Peak SAR (extrapolated) = 0.970 W/kg

SAR(1 g) = 0.300 W/kg; SAR(10 g) = 0.095 W/kg

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

TA Technology (Shanghai) Co., Ltd.   **Page 375 of 481**

This report shall not be reproduced except in full, without the written approval of TA Technology (Shanghai) Co., Ltd.

Plot 153 802.11a U-NII-2C Front Side CH100 (Distance 15mm)

Date: 12/25/2016

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

Medium parameters used: f = 5500 MHz; σ = 5.793 S/m; ε_r = 47.753; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF(3.87, 3.87, 3.87); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Front Side CH100 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
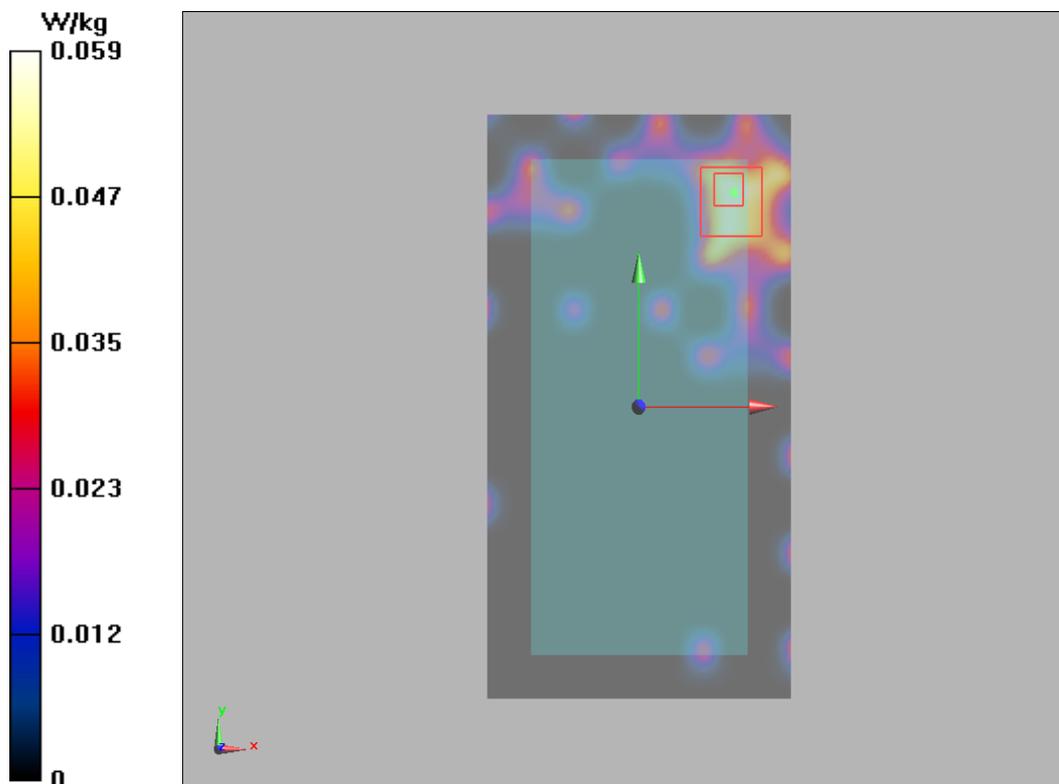
Maximum value of SAR (interpolated) = 0.061 W/kg

Front Side CH100 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift =0.090 dB

Peak SAR (extrapolated) = 0.262 W/kg

SAR(1 g) = 0.055 W/kg; SAR(10 g) = 0.019 W/kg

Maximum value of SAR (measured) = 0.0587 W/kg

Plot 154 802.11a U-NII-2C Front Side CH100 (Distance 0mm)

Date: 12/25/2016

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

Medium parameters used: f = 5500 MHz; σ = 5.793 S/m; $ε_r$ = 47.753; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF(3.87, 3.87, 3.87); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Front Side CH100 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

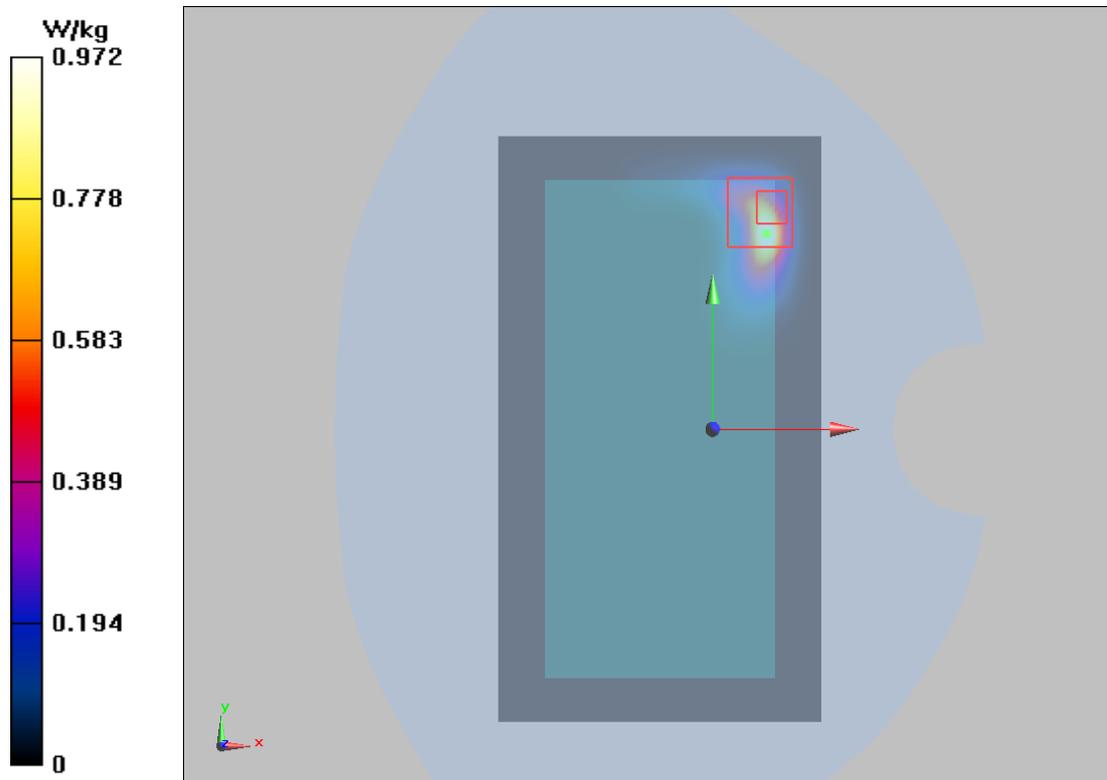Maximum value of SAR (interpolated) = 0.955 W/kg

Front Side CH100 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) =2.49 W/kg

SAR(1 g) = 0.860 W/kg; SAR(10 g) = 0.208 W/kg

Maximum value of SAR (measured) = 0.972 W/kg

Antenna 2
Plot 155 802.11a U-NII-2C Right Tilt CH132 (Battery 2)

Date: 12/24/2016

Communication System: UID 0, 802.11a (0); Frequency: 5660 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5660 MHz; σ = 5.071 S/m; $ε_r$ = 35.318; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF(4.61, 4.61, 4.61); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Right Tilt CH132 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

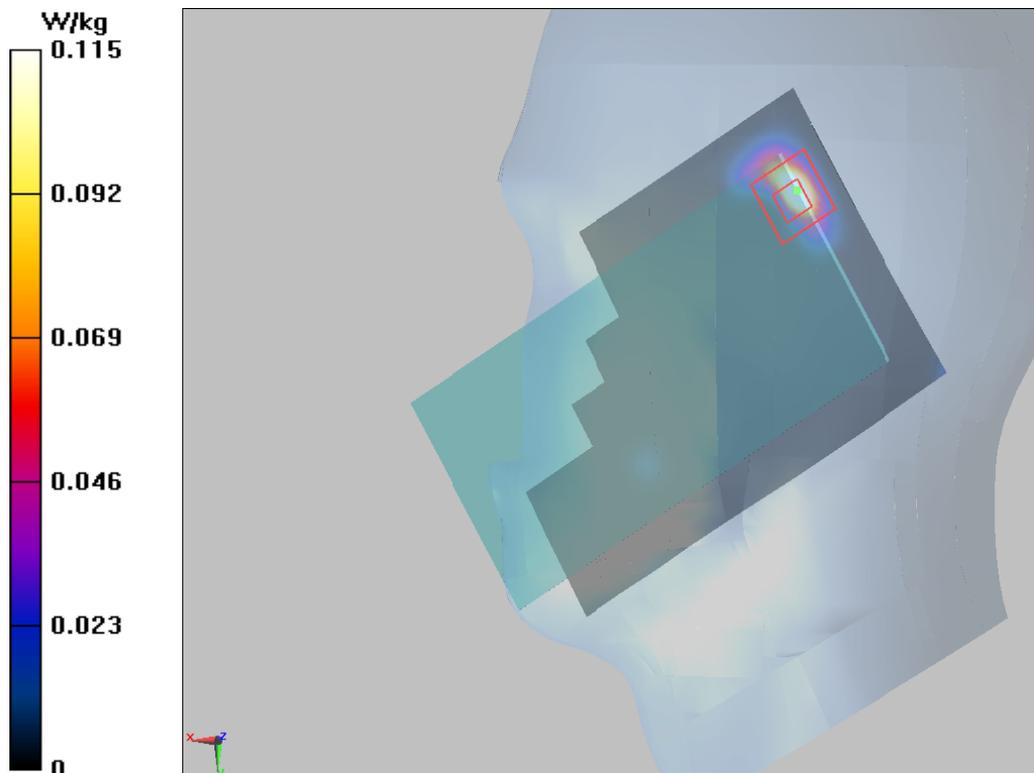Maximum value of SAR (interpolated) = 0.112 W/kg

Right Tilt CH132 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.6480 V/m; Power Drift = 0.012dB

Peak SAR (extrapolated) = 0.368 W/kg

SAR(1 g) = 0.102 W/kg; SAR(10 g) = 0.031 W/kg

Maximum value of SAR (measured) = 0.115 W/kg

Plot 156 802.11a U-NII-2C Front Side CH132 (Distance 0mm)

Date: 12/24/2016

Communication System: UID 0, 802.11a (0); Frequency: 5660 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5660 MHz; σ = 6.073 S/m; $ε_r$ = 45.546; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (3.87, 3.87, 3.87); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

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

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

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

Reference Value = 0.697 V/m; Power Drift = 0.052 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.406 W/kg; SAR(10 g) = 0.048 W/kg

Maximum value of SAR (measured) = 0.517 W/kg
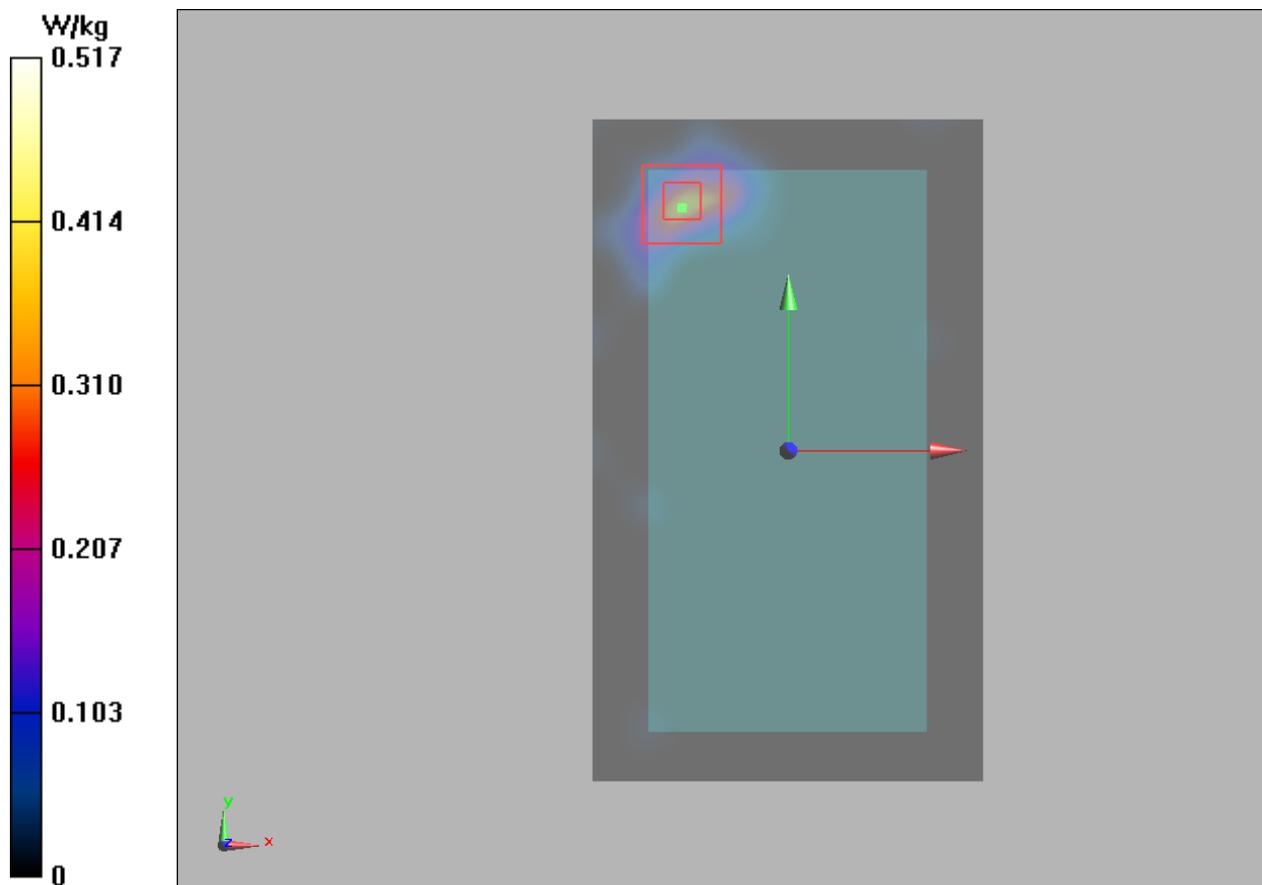
MIMO

Plot 157 802.11a U-NII-2C Left Cheek CH116 (Battery 2)

Date: 12/24/2016

Communication System: UID 0, 802.11a (0); Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: f = 5580 MHz; σ = 5.071 S/m; $ε_r$ = 35.318; ρ = 1000 kg/m³

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF(4.61, 4.61, 4.61); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Left Cheek CH116 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.439 W/kg

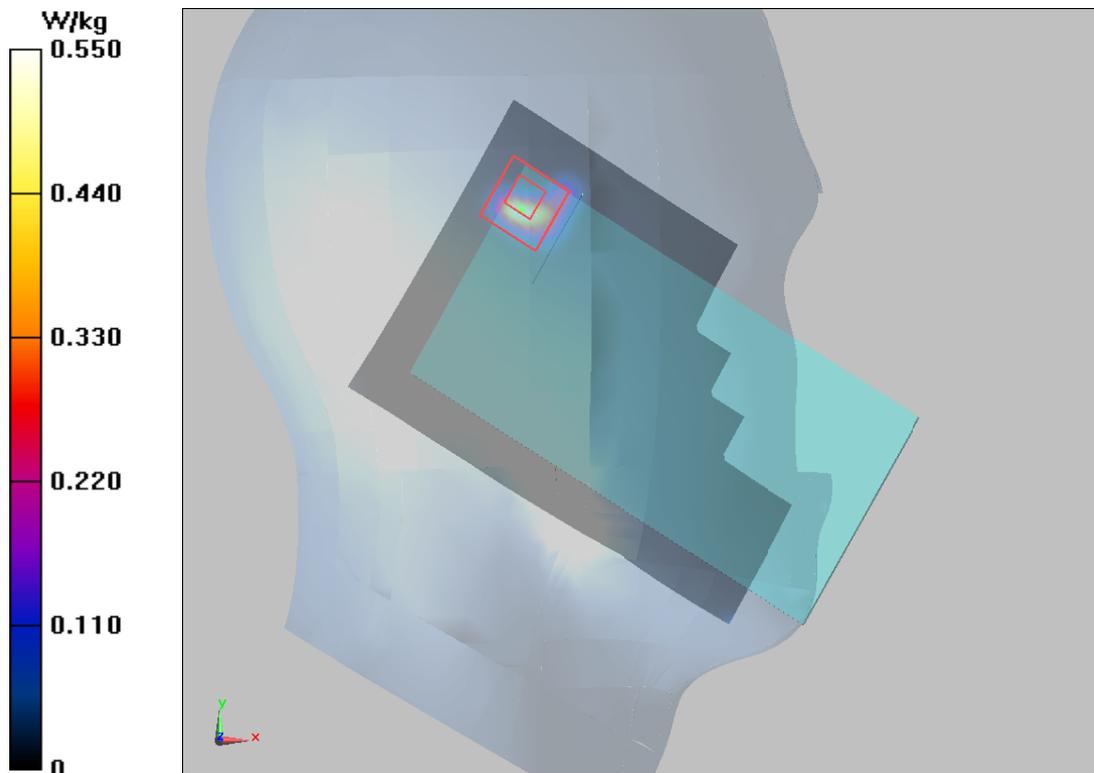**Left Cheek CH116 /Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 3.395 V/m; Power Drift = 0.118 dB

Peak SAR (extrapolated) = 1.28 W/kg

SAR(1 g) = 0.429 W/kg; SAR(10 g) = 0.143 W/kg

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

Plot 158 802.11a U-NII-2C Front Side CH116 (Distance 15mm)

Date: 12/25/2016

Communication System: UID 0, 802.11a (0); Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: f = 5580 MHz; σ = 5.924 S/m; $ε_r$ = 47.551; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (3.87, 3.87, 3.87); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Front Side CH116 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
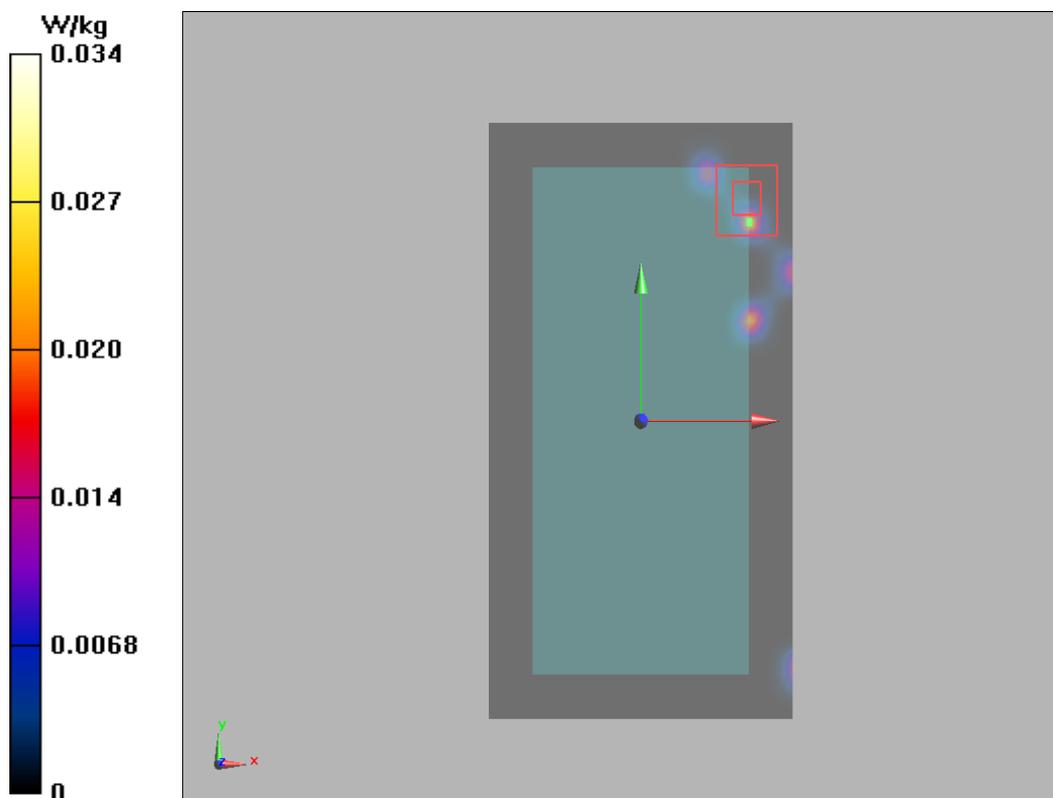
Maximum value of SAR (interpolated) = 0.014 W/kg

Front Side CH116 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.378 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.0820 W/kg

SAR(1 g) = 0.025 W/kg; SAR(10 g) = 0.00314 W/kg

Maximum value of SAR (measured) = 0.0340 W/kg

Plot 159 802.11a U-NII-2C Front Side CH116 (Distance 0mm)

Date: 12/25/2016

Communication System: UID 0, 802.11a (0); Frequency: 5580 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5580 MHz; σ = 5.924 S/m; $ε_r$ = 47.551; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (3.87, 3.87, 3.87); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Front Side CH116 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.975W/kg

Front Side CH116 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.4190 V/m; Power Drift = 0.101dB

Peak SAR (extrapolated) = 2.12 W/kg

SAR(1 g) = 0.791 W/kg; SAR(10 g) = 0.219 W/kg

Maximum value of SAR (measured) = 1.01 W/kg
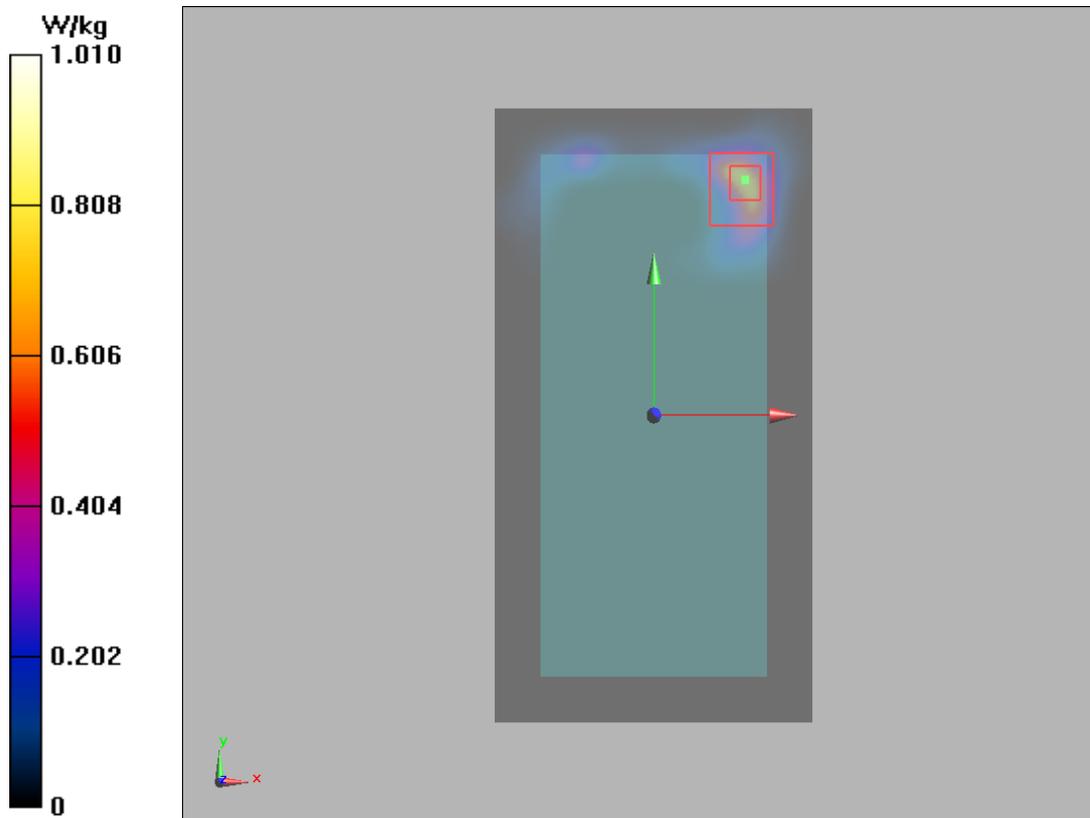
Antenna 1
Plot 160 802.11a U-NII-3 Left Cheek CH157 (Full Power)

Date: 12/19/2016

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

Medium parameters used: f = 5785 MHz; σ = 5.436 S/m; $ε_r$ = 34.587; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.82, 4.82, 4.82); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Left Cheek CH157 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.198 W/kg

Left Cheek CH157 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.083 V/m; Power Drift = 0.037 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.250 W/kg; SAR(10 g) = 0.089 W/kg

Maximum value of SAR (measured) = 0.380 W/kg
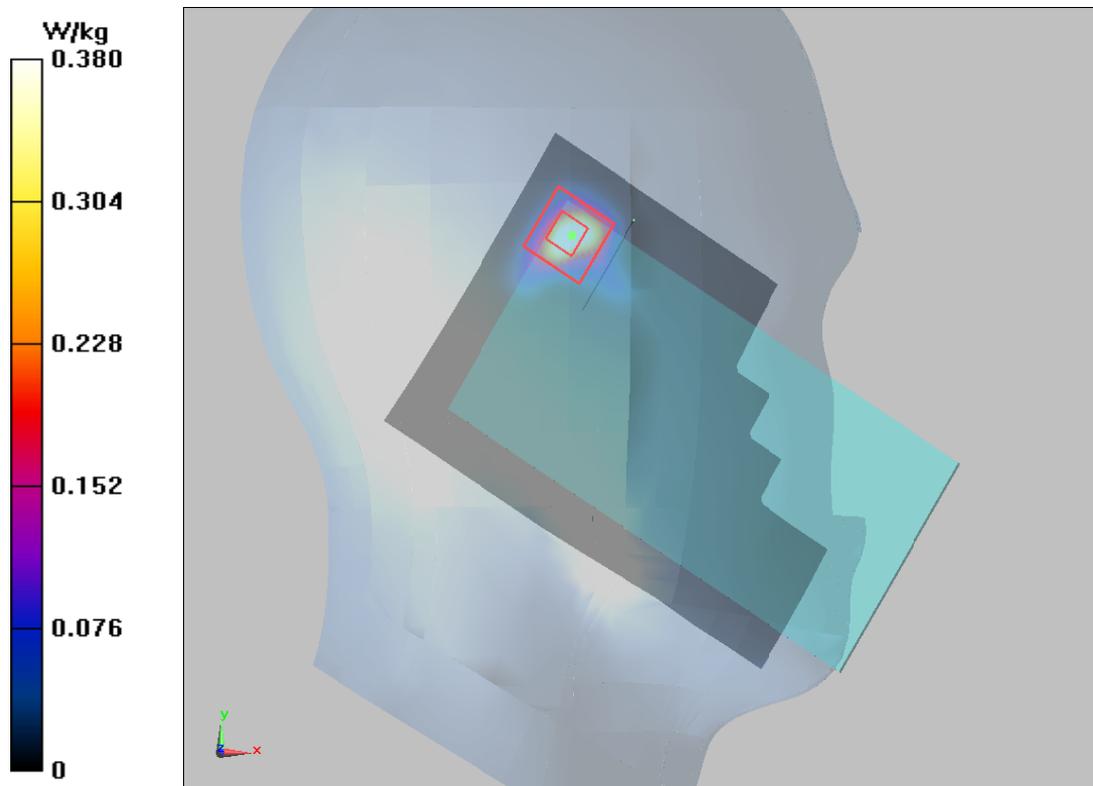
Plot 161 802.11a U-NII-3 Left Cheek CH157 (Battery 2, Power Reduce)

Date: 12/19/2016

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

Medium parameters used: f = 5785 MHz; σ = 5.436 S/m; ε_r = 34.587; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.82, 4.82, 4.82); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Left Cheek CH157 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.219 W/kg

Left Cheek CH157 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.035 V/m; Power Drift = 0.0292 dB

Peak SAR (extrapolated) = 0.805 W/kg

SAR(1 g) = 0.225 W/kg; SAR(10 g) = 0.072 W/kg

Maximum value of SAR (measured) = 0.264 W/kg

TA Technology (Shanghai) Co., Ltd.   **Page 384 of 481**

This report shall not be reproduced except in full, without the written approval of TA Technology (Shanghai) Co., Ltd.

Plot 162 802.11a U-NII-3 Front Side CH157 (Distance 15mm)

Date: 12/18/2016

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

Medium parameters used: f = 5785 MHz; σ = 6.06 S/m; $ε_r$ = 47.742; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.04, 4.04, 4.04); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Front Side CH157 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

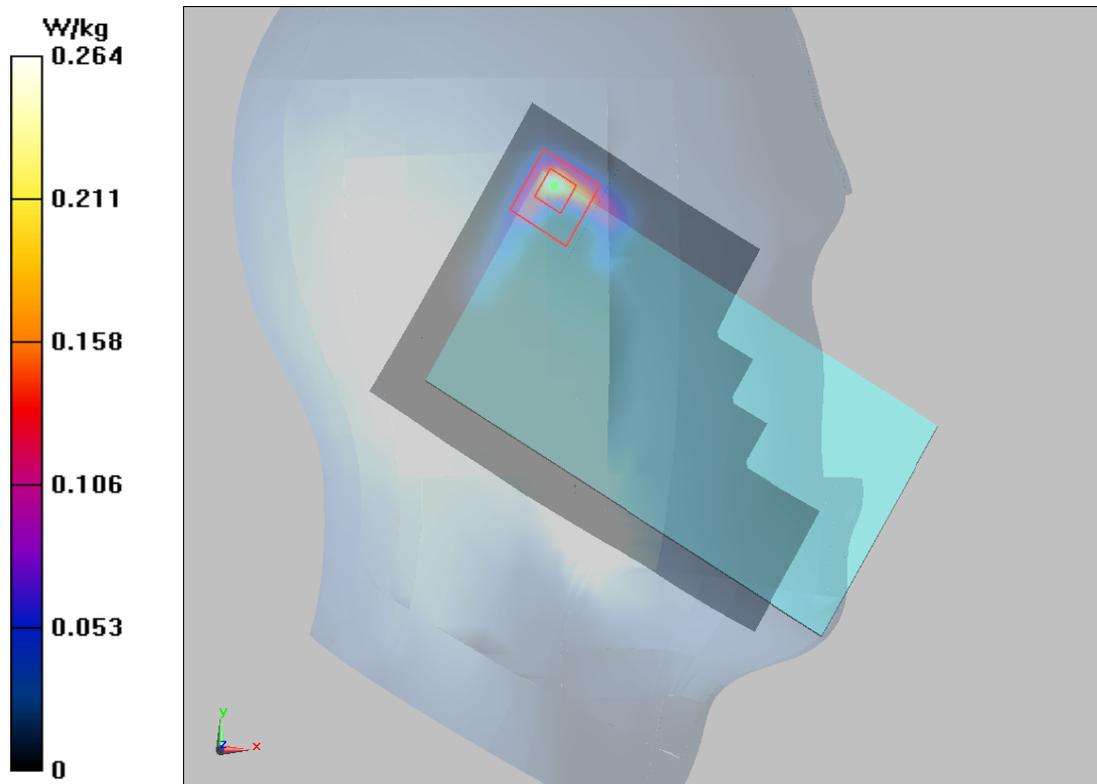Maximum value of SAR (interpolated) = 0.009 W/kg

Front Side CH157 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value =0.752V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.0510 W/kg

SAR(1 g) = 0.01 W/kg; SAR(10 g) = 0.0061 W/kg

Maximum value of SAR (measured) = 0.0231 W/kg

TA Technology (Shanghai) Co., Ltd.

Page 385 of 481

This report shall not be reproduced except in full, without the written approval of TA Technology (Shanghai) Co., Ltd.

Plot 163 802.11a U-NII-3 Right Edge CH157 (Distance 10mm)

Date: 12/18/2016

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

Medium parameters used: f = 5785 MHz; σ = 6.06 S/m; ε_r = 47.742; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.04, 4.04, 4.04); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Right Edge CH157 /Area Scan (51x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
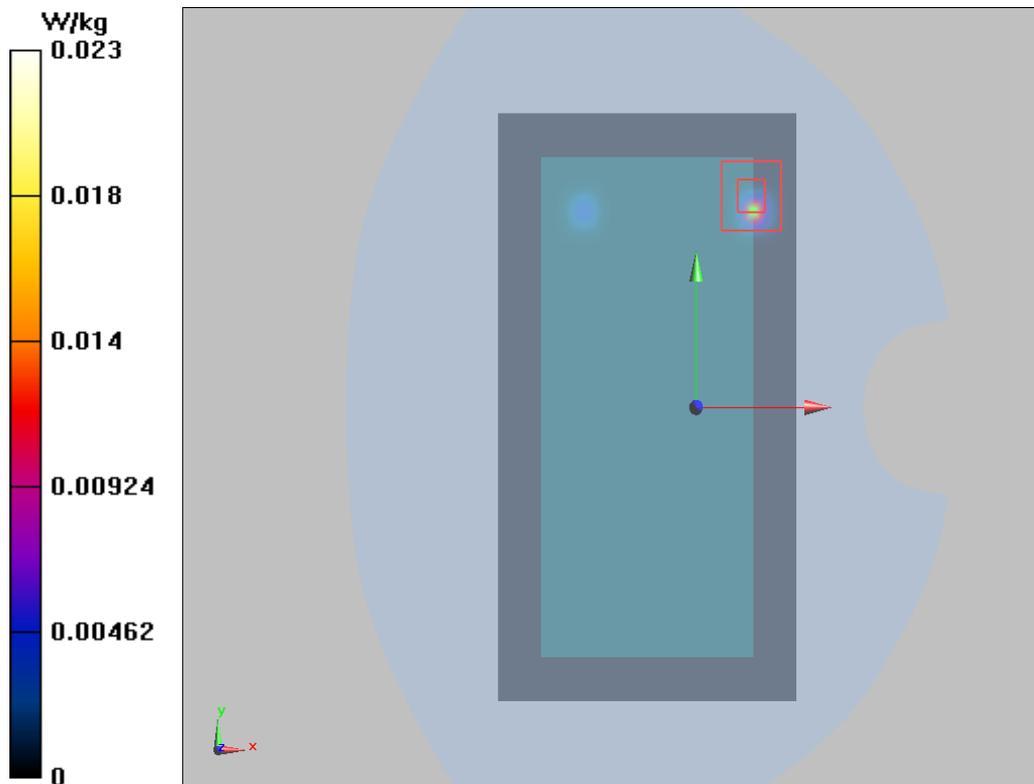
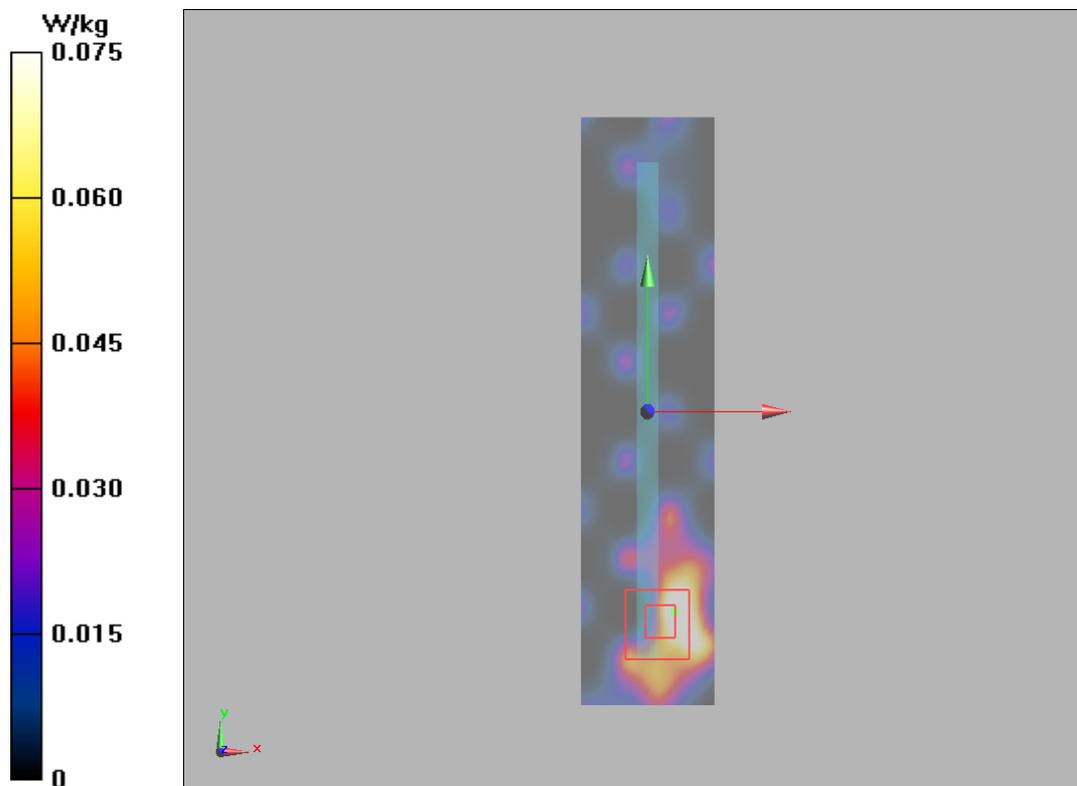Maximum value of SAR (interpolated) = 0.074 W/kg

Right Edge CH157 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.561 V/m; Power Drift = -0.011dB

Peak SAR (extrapolated) = 0.360 W/kg

SAR(1 g) = 0.071 W/kg; SAR(10 g) = 0.033 W/kg

Maximum value of SAR (measured) = 0.0746 W/kg

Antenna 2
Plot 164 802.11a U-NII-3 Right Cheek CH165

Date: 12/19/2016

Communication System: UID 0, 802.11a (0); Frequency: 5825 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5825 MHz; σ = 5.488 S/m; $ε_r$ = 34.499; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.82, 4.82, 4.82); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Right Cheek CH165 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.049 W/kg
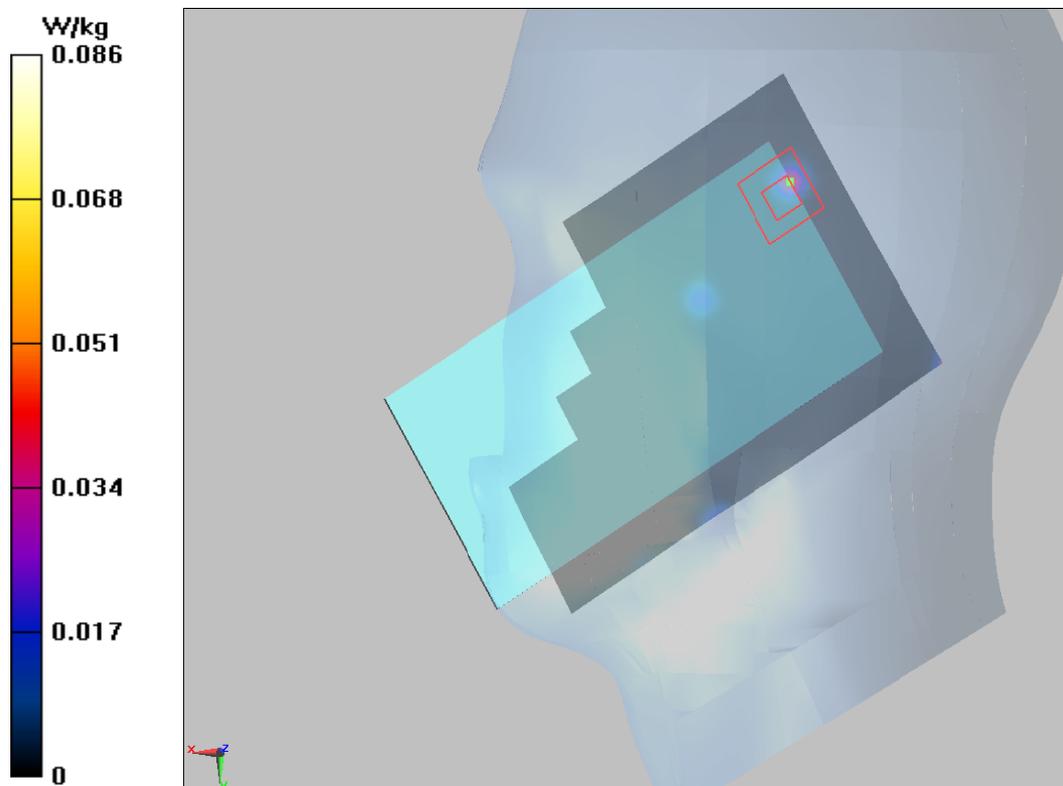

Right Cheek CH165 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.7030 V/m; Power Drift = 0.048 dB

Peak SAR (extrapolated) = 0.266 W/kg

SAR(1 g) = 0.062 W/kg; SAR(10 g) = 0.016 W/kg

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

Plot 165 802.11a U-NII-3 Front Side CH165

Date: 12/19/2016

Communication System: UID 0, 802.11a (0); Frequency: 5825 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5825 MHz; σ = 6.174 S/m; ε_r = 47.504; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.04, 4.04, 4.04); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

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

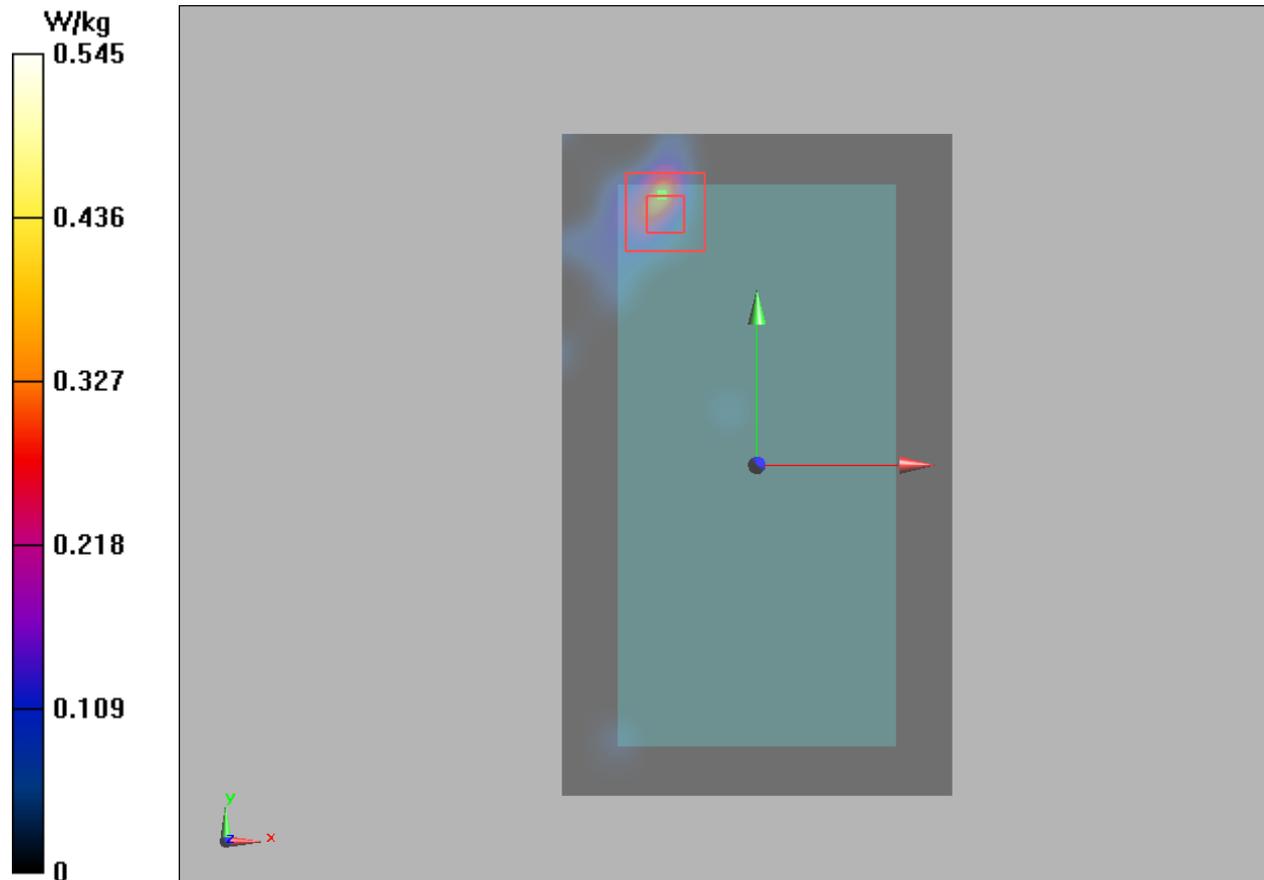Maximum value of SAR (interpolated) = 0.573 W/kg

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

Reference Value = 1.533 V/m; Power Drift = 0.048 dB

Peak SAR (extrapolated) = 0.822 W/kg

SAR(1 g) = 0.492 W/kg; SAR(10 g) = 0.0651 W/kg

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

MIMO
Plot 166 802.11a U-NII-3 Left Cheek CH157 (Battery 2)

Date: 12/19/2016

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

Medium parameters used: f = 5785 MHz; σ = 5.385 S/m; ε_r = 34.693; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.82, 4.82, 4.82); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Left Cheek CH157 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.322 W/kg

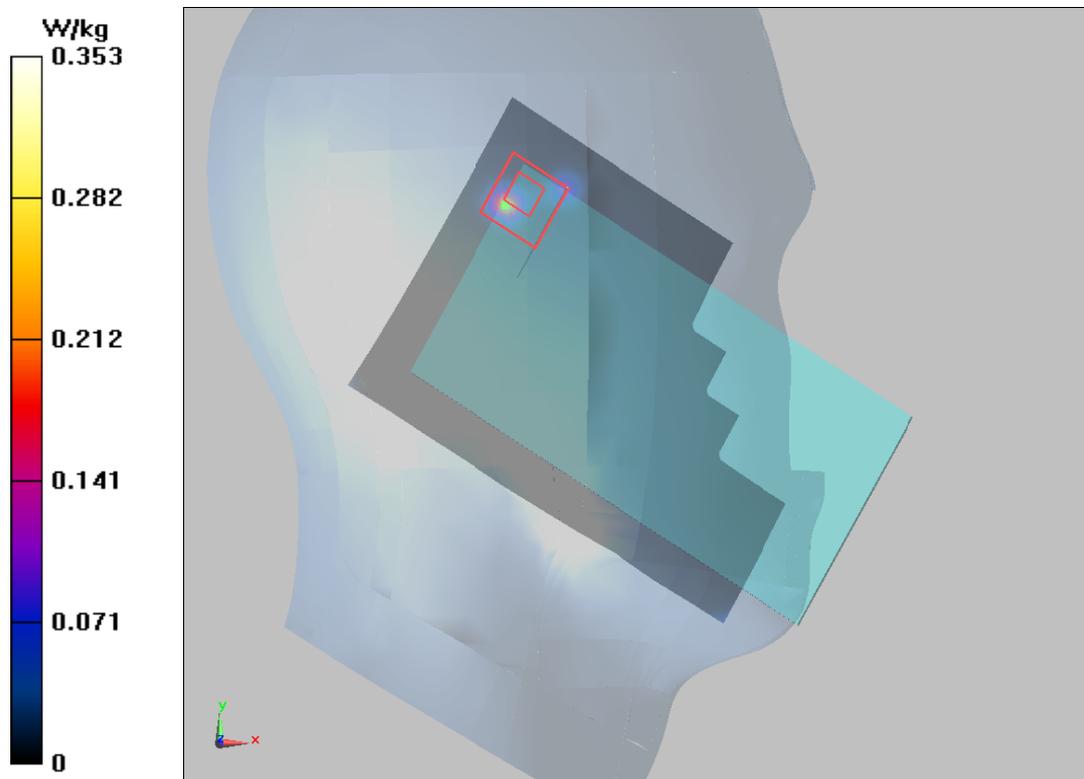**Left Cheek CH157 /Zoom Scan (7x7x12)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.185 V/m; Power Drift = 0.192 dB

Peak SAR (extrapolated) = 0.997 W/kg

SAR(1 g) = 0.303 W/kg; SAR(10 g) = 0.096 W/kg

Maximum value of SAR (measured) = 0.353 W/kg

Plot 167 802.11a U-NII-3 Front Side CH157 (Distance 15mm)

Date: 12/18/2016

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

Medium parameters used: f = 5785 MHz; σ = 6.06 S/m; $ε_r$ = 47.742; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃   Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.04, 4.04, 4.04); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Front Side CH157 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
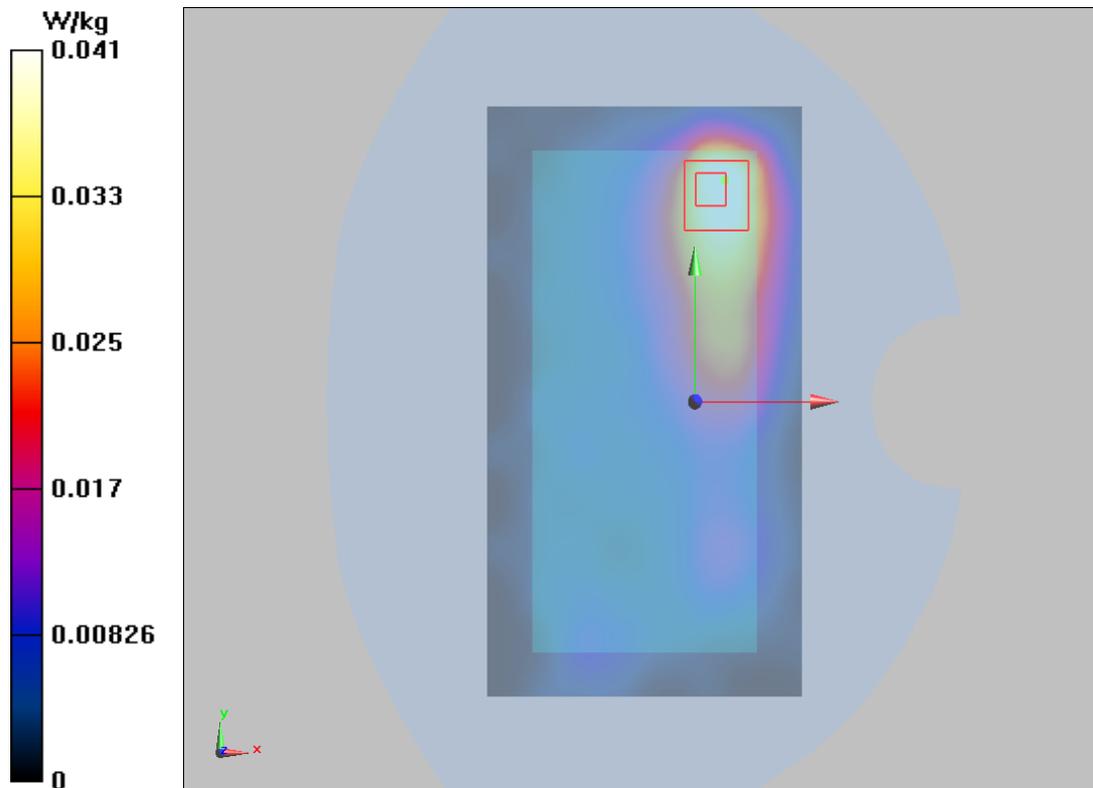
Maximum value of SAR (interpolated) = 0.025W/kg

Front Side CH157 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 0.6680 V/m; Power Drift = -0.012 dB

Peak SAR (extrapolated) = 0.147 W/kg

SAR(1 g) = 0.034 W/kg; SAR(10 g) = 0.012 W/kg

Maximum value of SAR (measured) = 0.0413 W/kg

Plot 168 802.11a U-NII-3 Front Side CH157 (Distance 10mm)

Date: 12/18/2016

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

Medium parameters used: f = 5785 MHz; σ = 6.06 S/m; ε_r = 47.742; ρ = 1000 kg/m^3

Ambient Temperature: 22.3 ℃　　　Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3898; ConvF (4.04, 4.04, 4.04); Calibrated: 7/11/2016;

Electronics: DAE4 Sn1317; Calibrated: 8/2/2016

Phantom: SAM 2; Type: SAM;

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

Front Side CH157 /Area Scan (111x181x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.067 W/kg

Front Side CH157 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=7mm, dy=7mm, dz=2mm

Reference Value = 0 V/m; Power Drift = 0.100dB

Peak SAR (extrapolated) = 0.189 W/kg

SAR(1 g) = 0.039 W/kg; SAR(10 g) = 0.0091 W/kg

Maximum value of SAR (measured) = 0.0457 W/kg

TA Technology (Shanghai) Co., Ltd.　　　　　　　　　　　　　　　　**Page 391 of 481**

This report shall not be reproduced except in full, without the written approval of TA Technology (Shanghai) Co., Ltd.
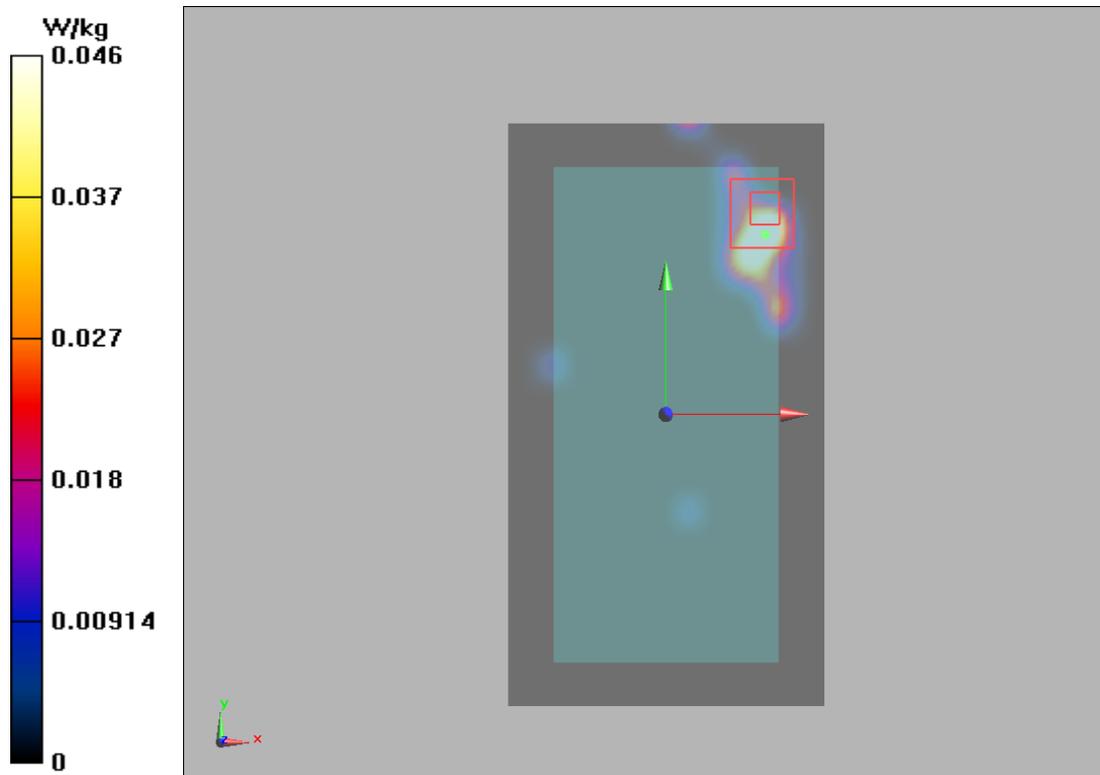
ANNEX D: Probe Calibration Certificate (SN: 3189)

Calibration Laboratory of
Schmid & Partner
   Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

ilac-MRA

S C S   Schweizerischer Kalibrierdienst
      Service suisse d'étalonnage
      Servizio svizzero di taratura
      Swiss Calibration Service

Accreditation No.: **SCS 0108**

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Client	**TA-SH (Auden)**	Certificate No: **ES3-3189_Jul16**

CALIBRATION CERTIFICATE

Object	ES3DV3 - SN:3189
Calibration procedure(s)	QA CAL-01.v9, QA CAL-12.v9, QA CAL-23.v5, QA CAL-25.v6 Calibration procedure for dosimetric E-field probes
Calibration date:	July 27, 2016

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	06-Apr-16 (No. 217-02288/02289)	Apr-17
Power sensor NRP-Z91	SN: 103244	06-Apr-16 (No. 217-02288)	Apr-17
Power sensor NRP-Z91	SN: 103245	06-Apr-16 (No. 217-02289)	Apr-17
Reference 20 dB Attenuator	SN: S5277 (20x)	05-Apr-16 (No. 217-02293)	Apr-17
Reference Probe ES3DV2	SN: 3013	31-Dec-15 (No. ES3-3013_Dec15)	Dec-16
DAE4	SN: 660	23-Dec-15 (No. DAE4-660_Dec15)	Dec-16

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-16)	In house check: Jun-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-15)	In house check: Oct-16

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: July 28, 2016

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

Certificate No: ES3-3189_Jul16   Page 1 of 11

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S   Schweizerischer Kalibrierdienst
C   Service suisse d'étalonnage
S   Servizio svizzero di taratura
    Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)   **Accreditation No.: SCS 0108**
The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,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.e., ϑ = 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:

a) 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
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
c) 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
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,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*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (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
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D* 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 ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,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 ± 50 MHz to ± 100 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 *NORMx* (no uncertainty required).

Certificate No: ES3-3189_Jul16   Page 2 of 11

ES3DV3 – SN:3189   July 27, 2016

Probe ES3DV3

SN:3189

Manufactured: March 25, 2008
Calibrated: July 27, 2016

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

Certificate No: ES3-3189_Jul16   Page 3 of 11

ES3DV3– SN:3189　　　　　　　　　　　　　　　　　　July 27, 2016

DASY/EASY - Parameters of Probe: ES3DV3 - SN:3189

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.89	0.75	1.04	± 10.1 %
DCP (mV)[B]	104.1	106.3	102.5	

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	176.4	±3.5 %
		Y	0.0	0.0	1.0		196.4	
		Z	0.0	0.0	1.0		191.3	

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 E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Certificate No: ES3-3189_Jul16　　　　　　　Page 4 of 11