

## 15.2 SAR test plots for WLAN 2.4GHz band

### WLAN 2.4G Ant Main 11b 1Mbps 2437MHz Edge1 0mm

Communication System: UID 0, WLAN (0); Communication System Band: 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.985$  S/m;  $\epsilon_r = 51.42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

**Area Scan (61x121x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.0309 W/kg

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

Reference Value = 3.489 V/m; Power Drift = 0.04 dB

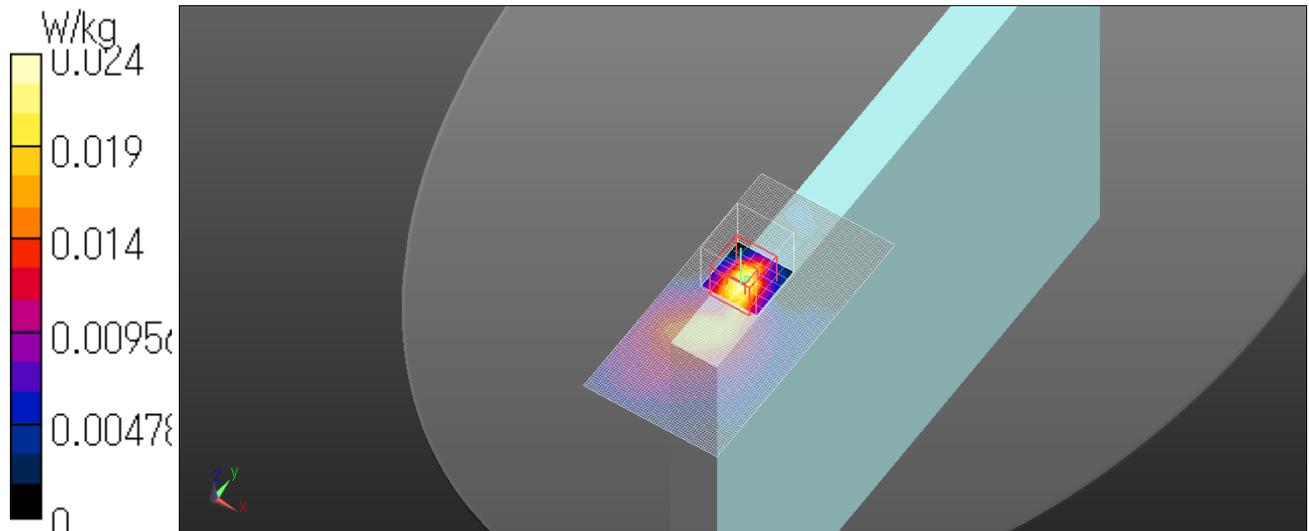
Peak SAR (extrapolated) = 0.0310 W/kg

**SAR(1 g) = 0.016 W/kg; SAR(10 g) = 0.00672 W/kg**

Maximum value of SAR (measured) = 0.0239 W/kg

Date: 2017/01/16

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**WLAN 2.4G Ant Main 11b 1Mbps 2437MHz Edge3 0mm**

Communication System: UID 0, WLAN (0); Communication System Band: 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.985$  S/m;  $\epsilon_r = 51.42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

**Area Scan (61x121x1):** Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm

Maximum value of SAR (interpolated) = 0.0807 W/kg

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

Reference Value = 5.906 V/m; Power Drift = -0.03 dB

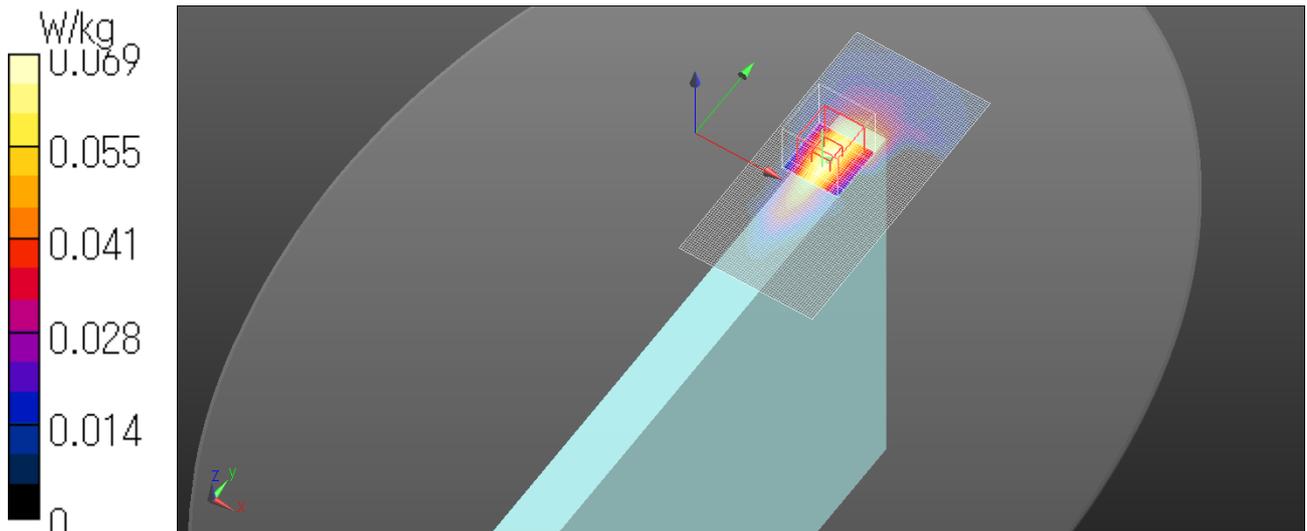
Peak SAR (extrapolated) = 0.0900 W/kg

**SAR(1 g) = 0.047 W/kg; SAR(10 g) = 0.024 W/kg**

Maximum value of SAR (measured) = 0.0690 W/kg

Date: 2017/01/16

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**WLAN 2.4G Ant Main 11b 1Mbps 2437MHz Edge4 0mm**

Communication System: UID 0, WLAN (0); Communication System Band: 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.985$  S/m;  $\epsilon_r = 51.42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

**Area Scan (61x101x1):** Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm

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

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

Reference Value = 25.54 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.81 W/kg

**SAR(1 g) = 0.718 W/kg; SAR(10 g) = 0.281 W/kg**

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

**Zoom Scan 2 (5x5x5mm) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 25.54 V/m; Power Drift = 0.06 dB

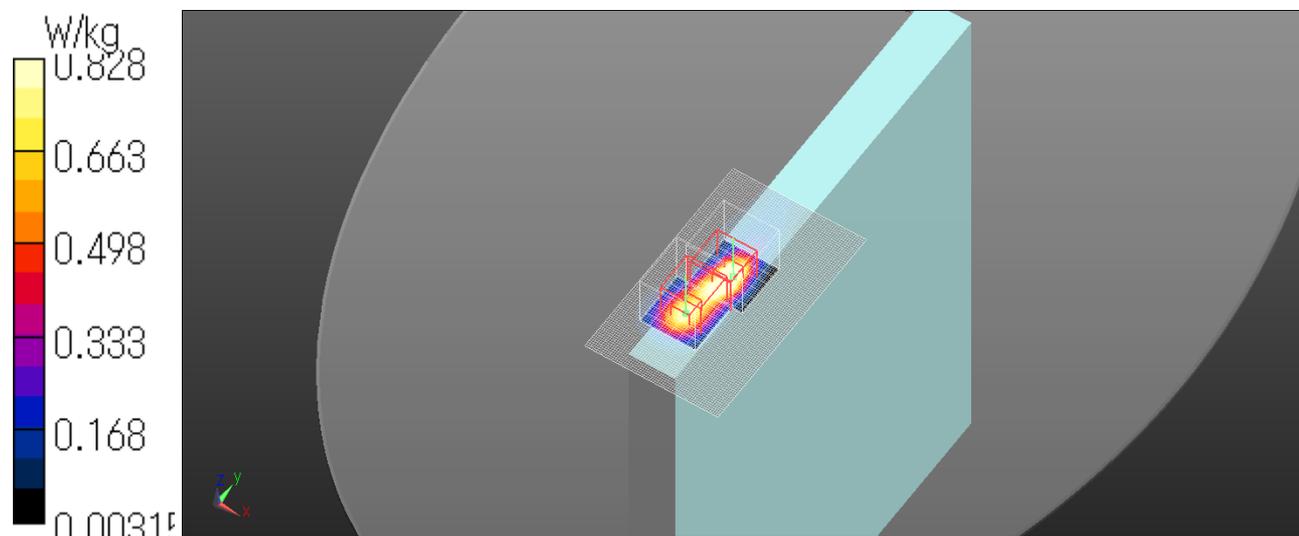
Peak SAR (extrapolated) = 1.35 W/kg

**SAR(1 g) = 0.552 W/kg; SAR(10 g) = 0.261 W/kg**

Maximum value of SAR (measured) = 0.828 W/kg

Date: 2017/01/16

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**WLAN 2.4G Ant Main 11b 1Mbps 2437MHz Edge4 tilt 0mm**

Communication System: UID 0, WLAN (0); Communication System Band: 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.996$  S/m;  $\epsilon_r = 51.498$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

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

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

**Zoom Scan (5x5x5mm) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.33 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.01 W/kg

**SAR(1 g) = 0.715 W/kg; SAR(10 g) = 0.263 W/kg**

Maximum value of SAR (measured) = 1.29 W/kg

**Zoom Scan 2 (5x5x5mm) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 24.33 V/m; Power Drift = 0.03 dB

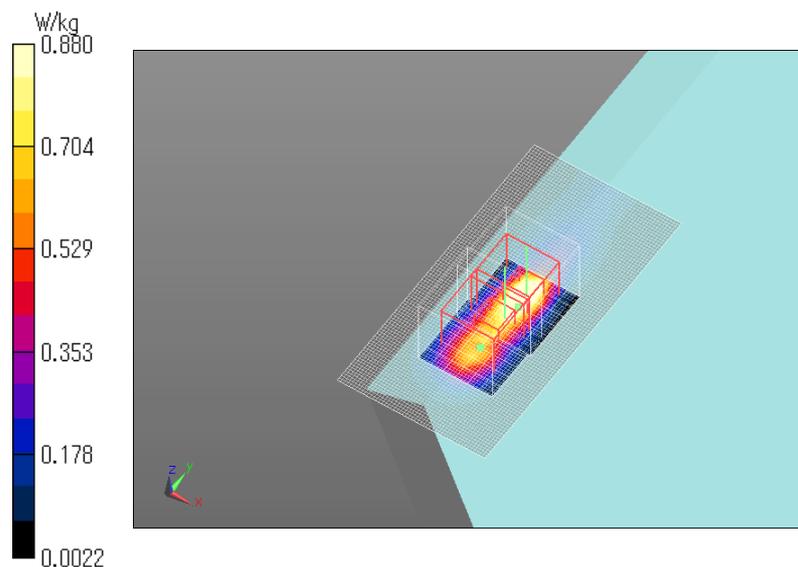
Peak SAR (extrapolated) = 1.29 W/kg

**SAR(1 g) = 0.482 W/kg; SAR(10 g) = 0.227 W/kg**

Maximum value of SAR (measured) = 0.880 W/kg

Date: 2017/02/10

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**WLAN 2.4G Ant Main 11b 1Mbps 2437MHz Rear 0mm**

Communication System: UID 0, WLAN (0); Communication System Band: 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.985$  S/m;  $\epsilon_r = 51.42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

**Area Scan (121x61x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.137 W/kg

**Zoom Scan (5x5x5mm) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.559 V/m; Power Drift = -0.06 dB

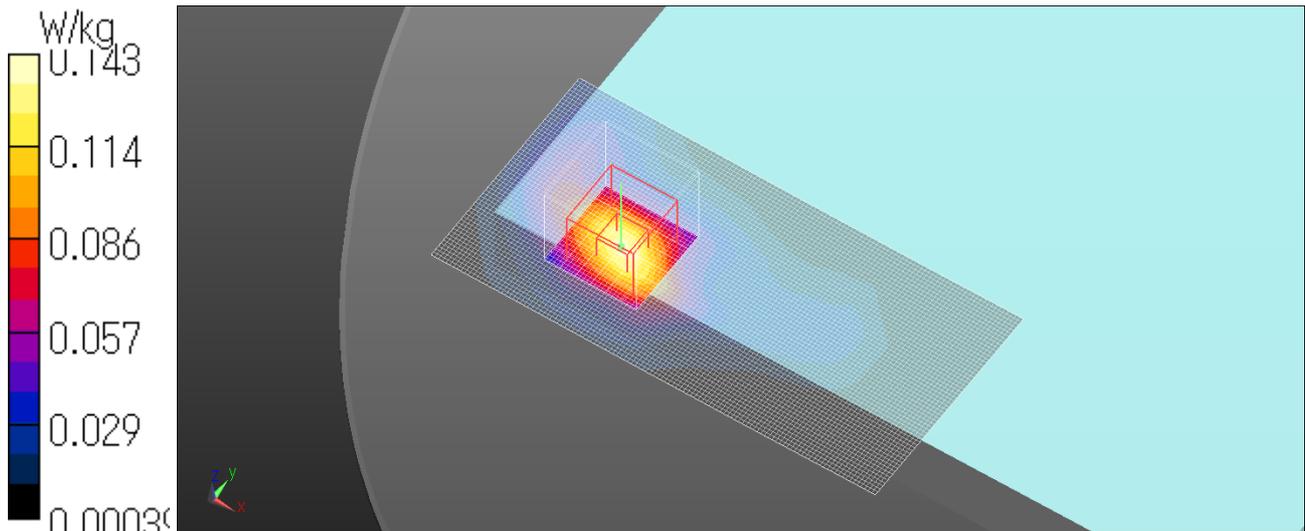
Peak SAR (extrapolated) = 0.198 W/kg

**SAR(1 g) = 0.095 W/kg; SAR(10 g) = 0.048 W/kg**

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

Date: 2017/01/16

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**WLAN 2.4G Ant Aux 11b 1Mbps 2437MHz Edge1 0mm**

Communication System: UID 0, WLAN (0); Communication System Band: 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.985$  S/m;  $\epsilon_r = 51.42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

**Area Scan (71x101x1):** Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm

Maximum value of SAR (interpolated) = 0.0368 W/kg

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

Reference Value = 3.784 V/m; Power Drift = -0.11 dB

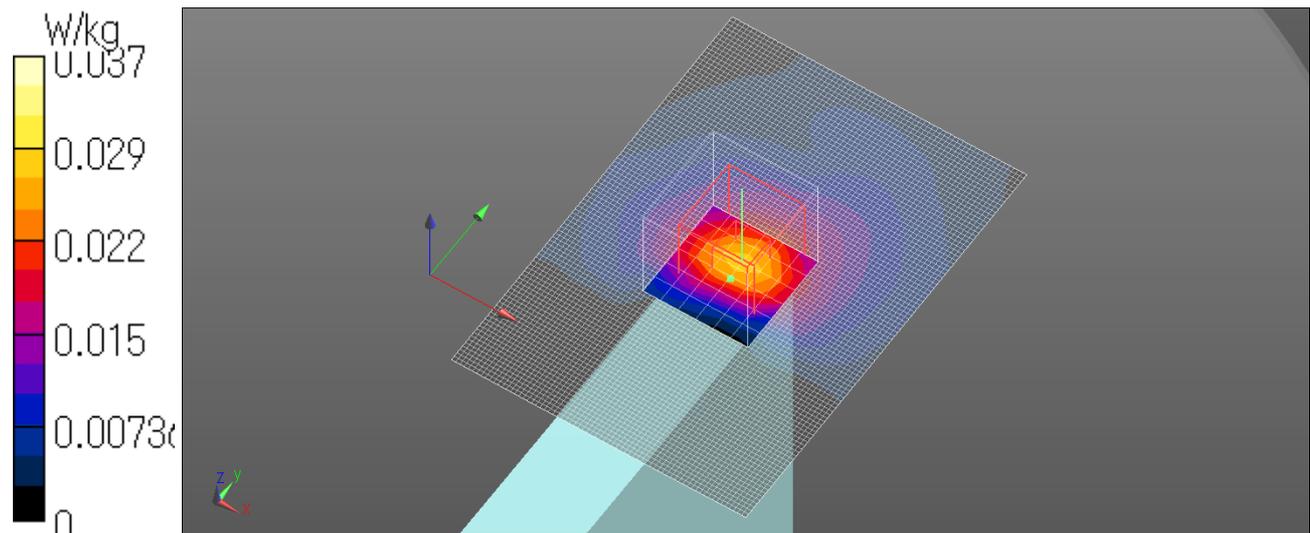
Peak SAR (extrapolated) = 0.109 W/kg

**SAR(1 g) = 0.020 W/kg; SAR(10 g) = 0.00982 W/kg**

Maximum value of SAR (measured) = 0.0290 W/kg

Date: 2017/01/16

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**WLAN 2.4G Ant Aux 11b 1Mbps 2437MHz Edge2 0mm**

Communication System: UID 0, WLAN (0); Communication System Band: 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.985$  S/m;  $\epsilon_r = 51.42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

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

Maximum value of SAR (interpolated) = 1.26 W/kg

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

Reference Value = 24.37 V/m; Power Drift = -0.08 dB

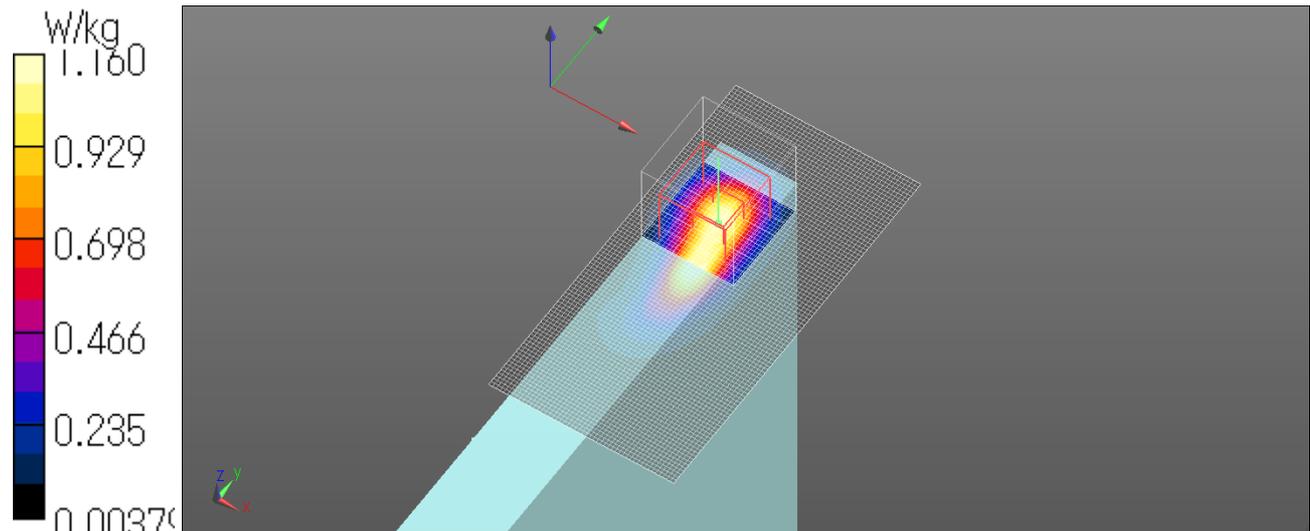
Peak SAR (extrapolated) = 1.68 W/kg

**SAR(1 g) = 0.760 W/kg; SAR(10 g) = 0.353 W/kg**

Maximum value of SAR (measured) = 1.16 W/kg

Date: 2017/01/16

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**WLAN 2.4G Ant Aux 11b 1Mbps 2437MHz Edge2 tilt 0mm**

Communication System: UID 0, WLAN 11a/b/g/n (0); Communication System Band: 11b/g/n (2.4G); Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2412$  MHz;  $\sigma = 1.965$  S/m;  $\epsilon_r = 51.57$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

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

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

**Zoom Scan (5x5x5mm) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 25.67 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 1.88 W/kg

**SAR(1 g) = 0.721 W/kg; SAR(10 g) = 0.301 W/kg**

Maximum value of SAR (measured) = 1.26 W/kg

**Zoom Scan 2 (5x5x5mm) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 25.67 V/m; Power Drift = 0.00 dB

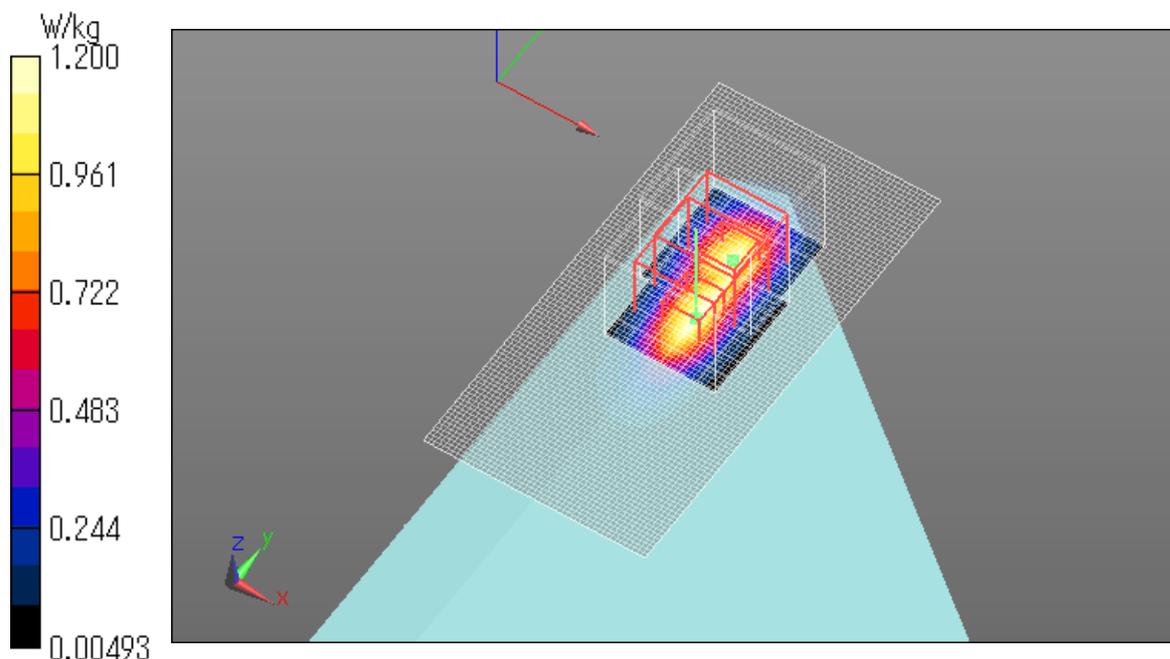
Peak SAR (extrapolated) = 1.99 W/kg

**SAR(1 g) = 0.737 W/kg; SAR(10 g) = 0.322 W/kg**

Maximum value of SAR (measured) = 1.20 W/kg

Date: 2017/02/10

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**WLAN 2.4G Ant Aux 11b 1Mbps 2437MHz Edge2 tilt 0mm**

Communication System: UID 0, WLAN (0); Communication System Band: 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.996$  S/m;  $\epsilon_r = 51.498$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

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

Maximum value of SAR (interpolated) = 1.46 W/kg

**Zoom Scan (5x5x5mm) (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 27.45 V/m; Power Drift = -0.09 dB

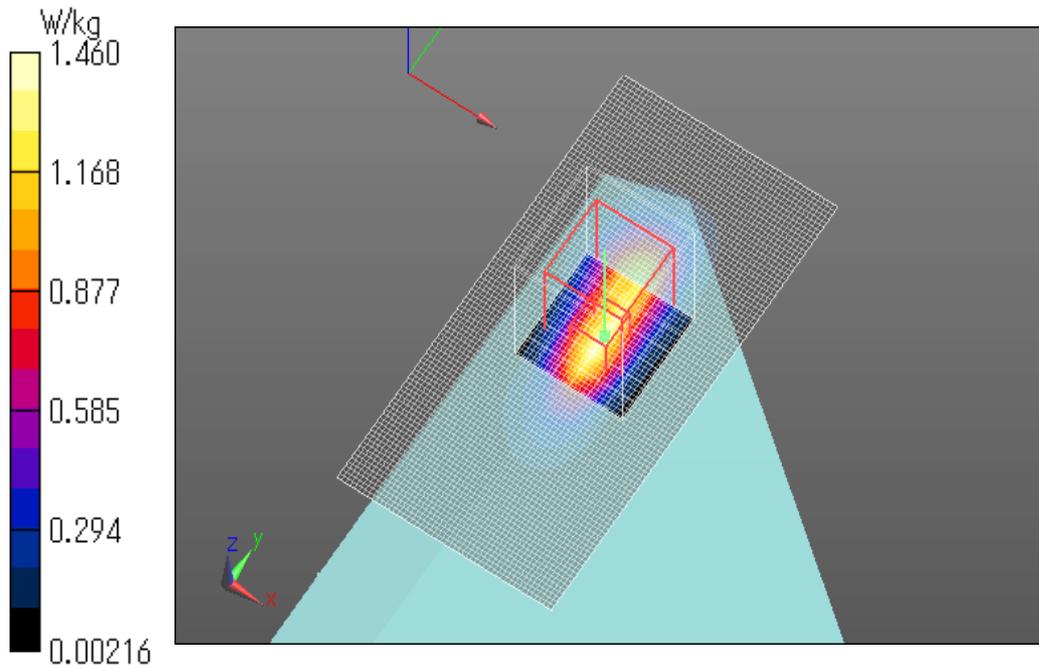
Peak SAR (extrapolated) = 2.19 W/kg

**SAR(1 g) = 0.841 W/kg; SAR(10 g) = 0.361 W/kg**

Maximum value of SAR (measured) = 1.46 W/kg

Date: 2017/02/10

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**WLAN 2.4G Ant Aux 11b 1Mbps 2437MHz Edge3 0mm**

Communication System: UID 0, WLAN (0); Communication System Band: 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.985$  S/m;  $\epsilon_r = 51.42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

**Area Scan (71x101x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.102 W/kg

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

Reference Value = 6.729 V/m; Power Drift = -0.10 dB

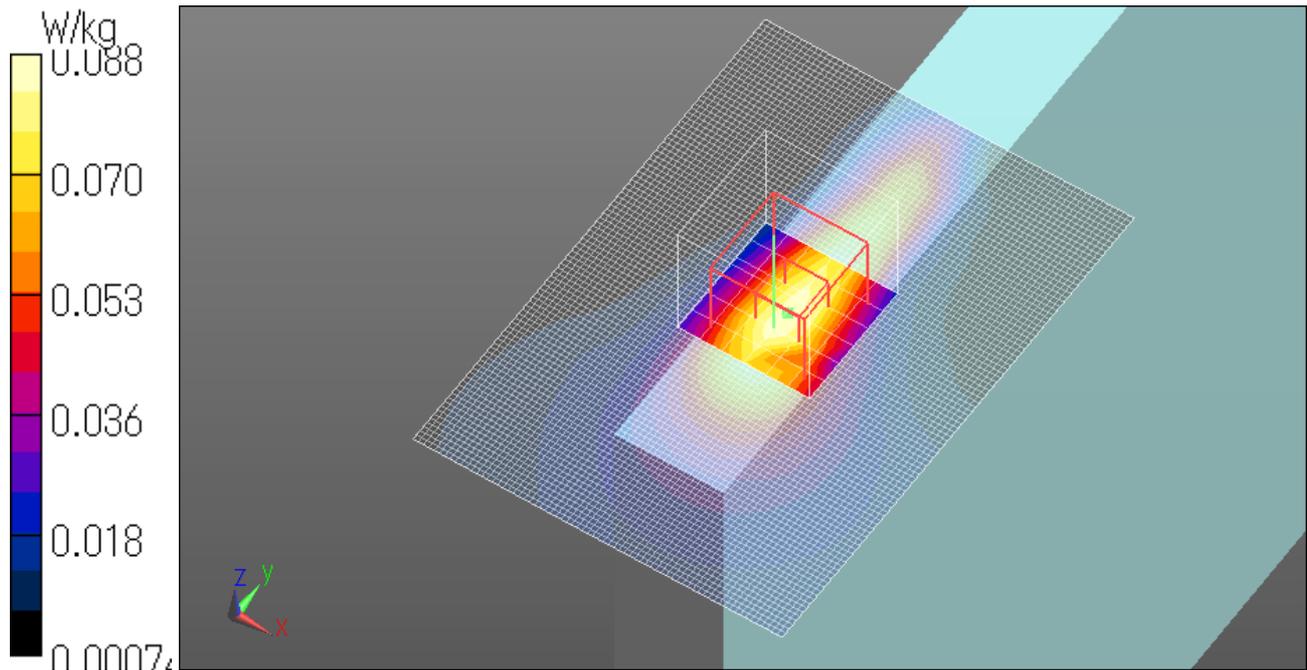
Peak SAR (extrapolated) = 0.121 W/kg

**SAR(1 g) = 0.061 W/kg; SAR(10 g) = 0.031 W/kg**

Maximum value of SAR (measured) = 0.0877 W/kg

Date: 2017/01/16

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**WLAN 2.4G Ant Aux 11b 1Mbps 2437MHz Rear 0mm**

Communication System: UID 0, WLAN (0); Communication System Band: 11b/g/n; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.985$  S/m;  $\epsilon_r = 51.42$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN3922; ConvF(7.59, 7.59, 7.59); Calibrated: 2016/12/14;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2016/06/10

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

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

**Area Scan (101x51x1):** Interpolated grid:  $dx=1.200$  mm,  $dy=1.200$  mm

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

**Zoom Scan (5x5x5mm) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 11.57 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.386 W/kg

**SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.077 W/kg**

Maximum value of SAR (measured) = 0.260 W/kg

Date: 2017/01/16

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

