

From: MET Laboratories, Inc.  
33439 Western Ave.  
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Re: OQO application for FCC ID SHD-A7YWFS

The EUT was initially evaluated for RF exposure with the WLAN swivel antenna in various positions relative to the phantom surface. Please see photos and SAR plots below. With the antenna in an “extreme position”, parallel to the surface of the phantom as shown in Fig. 2, the RF exposure was 0.567 mW/g @ 835MHz and 1.38 mW/g @ 1880MHz.

This position, however, was inconsistent with the intended end use as well as the user’s manual instructions for intended antenna positions.

As a result, the antenna was tested in a position consistent with the user manual, as shown in Figure 1, which gave SAR results of 0.094 mW/g @ 835MHz and 0.249 mW/g @ 1880MHz.

Based on the findings above it was concluded that this particular swivel antenna design is indeed sensitive to angles relative to the phantom surface but that small deviations,  $\pm 30^{\circ}$  from the intended user position, would give relatively small deviations from the observed RF exposure, excluding any measurement uncertainty.



Fig. 1: Intended operation position of WLAN swivel antenna with whip oriented vertically.



Fig. 2: Extreme position of swivel antenna

## Extreme Position, Parallel to Phantom Surface Mid CH 835MHz/Back side/std batt/ant parallel

Date/Time: 12/21/2006 8:13:36 AM

DUT: OQO Bottom Side; Type: WLAN Bottom; Serial: EVT3F065

Medium Notes: Ambient Temp: 23.1 deg C; Fluid Temp: 22.1 deg C

Communication System: CDMA; ; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: M900 Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 55.9$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

- Probe: ET3DV6 - SN1793; ConvF(6.3, 6.3, 6.3); Calibrated: 9/20/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**Area Scan (61x141x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 0.610 mW/g

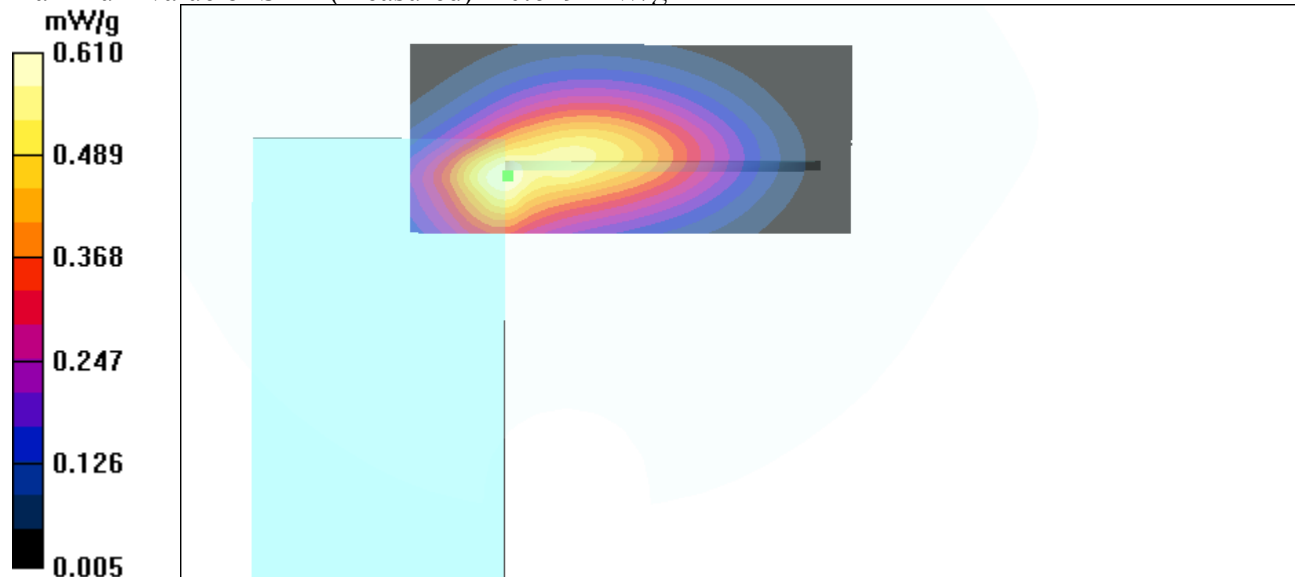
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.3 V/m; Power Drift = 0.085 dB

Peak SAR (extrapolated) = 1.18 W/kg

**SAR(1 g) = 0.567 mW/g; SAR(10 g) = 0.343 mW/g**

Maximum value of SAR (measured) = 0.619 mW/g



## Extreme Position, Parallel to Phantom Surface Mid Ch 1880MHz/back side/std batt/ant parallel

Date/Time: 12/21/2006 9:34:52 AM

DUT: OQO Bottom Side; Type: WLAN Bottom; Serial: EVT3F065

Medium Notes: Ambient Temp: 24.0 deg C, Fluid Temp: 22.3 deg C

Communication System: CDMA; ; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: M1800 Medium parameters used:  $f = 1800$  MHz;  $\sigma = 1.58$  mho/m;  $\epsilon_r = 55.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

- Probe: ET3DV6 - SN1793; ConvF(4.8, 4.8, 4.8); Calibrated: 9/20/2005
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn584; Calibrated: 9/22/2005
- Phantom: SAM with CRP; Type: SAM; Serial: TP 1310
- Measurement SW: DASY4, V4.7 Build 53; Postprocessing SW: SEMCAD, V1.8 Build 172

**Area Scan (61x141x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (interpolated) = 1.53 mW/g

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

Reference Value = 19.0 V/m; Power Drift = -0.009 dB

Peak SAR (extrapolated) = 3.65 W/kg

**SAR(1 g) = 1.38 mW/g; SAR(10 g) = 0.646 mW/g**

Maximum value of SAR (measured) = 1.56 mW/g

