

To: Federal Communications Commission  
7435 Oakland Mills Road  
Columbia, Maryland, 21046

From: ATCB, On behalf of:  
OQO  
583 Shotwell Street  
San Francisco, CA. 94110

**Regarding SHD-A6YWFS**

26 April 2007

Gentlemen,

There were several inquiries recently regarding our recent FCC certification on FCC ID SHD-A6YWFS. This device is a composite device and as such there were multiple grants issued, thus there were inquires sent for each grant of authorization. In order to simplify the response, we have combined all of the inquiries into this one reply document that will be submitted in response to each separate request for information. I hope that this does not cause too much confusion.

**WWAN GRANT**

Correspondence Reference Number: 37343  
731 Confirmation Number: TC332573  
Date of Original Email: 03/30/2007

**ISM 802.11 Grant**

Correspondence Reference Number: 37345  
731 Confirmation Number: TC304817  
Date of Original Email: 03/30/2007

**UNII 802.11 GRANT**

Correspondence Reference Number: 37347  
731 Confirmation Number: TC765557  
Date of Original Email: 03/30/2007

The table to the right outlines the different Correspondence reference numbers. These are also referenced below with each inquiry.

On Behalf of OQO,

Best Regards,



David Waite  
ATCB

**WWAN GRANT**

**37343 #1**

1) Please explain how eqpt class PCT not PCB is applicable, and/or revise where appropriate

**The correct equipment class should be PCB. This will be revised**

**WWAN GRANT**

**37343 #2**

2) SAR listing in grant remarks is not in accordance with FCC-TCB guidance, eg May03 FCC-TCB notes Harrington, ie please include rule parts, etc

**The current grant notes for the WWAN grants are shown below. The current RED notes will be replaced by the corresponding GREEN notes.**

Current WWAN Grant notes

Power output is ERP for Part 22 and EIRP for Part 24. SAR compliance for body worn conditions is limited to the specific configurations tested for this filing. Body worn operations are restricted to configurations that provide a minimum separation distance of 1.5cm between the antenna and all persons (including the user). End users must be informed of the body worn requirements for satisfying RF exposure requirements. The highest reported SAR values are: CDMA (Cellular, 850MHz band): 0.883 CDMA (PCS, 1900MHz band): 1.170 The antenna(s) used for this transmitter must not exceed 2dBi and must not be co-located or operating in conjunction with any other antenna or transmitter other than those included within this device. Brief (10 seconds or less) co-located transmissions are allowed during network handover as described in this filing.

**Revised WWAN Grant Notes**

Power output is ERP for Part 22 and EIRP for Part 24. SAR compliance for body worn conditions is limited to the specific configurations tested for this filing. Body worn operations are restricted to configurations that provide a minimum separation distance of 1.5cm between the antenna and all persons (including the user). End users must be informed of the body worn requirements for satisfying RF exposure requirements. The antenna(s) used for this transmitter must not exceed 2dBi and must not be co-located or operating in conjunction with any other antenna or transmitter other than those included within this device. Brief (10 seconds or less) co-located transmissions are allowed during network handover as described in this filing. The highest reported SAR values are:  
CDMA (Cellular, 848.31 MHz): 0.883 W/Kg  
CDMA (PCS, 1908.75 MHz): 1.170 W/Kg

**WWAN GRANT**

**37343 #3**

3) Internal photos are insufficient - please revise to show chassis assy, transmitter and antenna position(s), all boards and components, etc

**Additional internal / external photo exhibit has been uploaded**

**WWAN GRANT**

**37343 #4**

4) External photos are insufficient - please revise to show final-product and accessories in all operating configurations

**Additional internal / external photo exhibit has been uploaded**

37343 #5 **WWAN GRANT**

37345 #3 **ISM 802.11 Grant**

37347 #3 **UNII 802.11 GRANT**

5) Please submit final-product complete operating instructions [2.1033(b)(3), 2.1033(c)(3)]

**The final version of the user manual has been uploaded with this reply**

37345 #1 **ISM 802.11 Grant**

37347 #1 **UNII 802.11 GRANT**

1) SAR report contains data intended to represent 5250-5350 MHz & 5470-5725 MHz operations - we did not review it for this audit, but note this data may not be in accordance with default test channels required by FCC-TCB 802.11abg and 3-6 GHz SAR procedures. More importantly, this grant does not appear intended to include these 5250-5350 & 5470-5725 bands - please submit entire replacement SAR report omitting these bands.

**The unit was tested for SAR on all bands, however DFS was not operational on the bands that require DFS. Anticipating DFS functionality in the near future, OQO opted to verify SAR performance on these bands. That data was included in the report.**

**It was not deemed necessary at the time to remove the data from the SAR report since the FCC Grant of authorization did not indicate operation for these frequencies was allowed.**

**Per FCC request the SAR report has been revised and re-submitted.**

37345 #2 **ISM 802.11 Grant**

37347 #2 **UNII 802.11 GRANT**

2) SAR report does not appear to be in accordance with FCC-TCB 802.11abg procedures, ie channels tested, etc. - please explain and submit appropriate replacement SAR report.

**SAR testing was performed on this device from 30 Aug to 6 Sept 2006. At that time the generally accepted policy was to verify SAR performance on the L-M-H channel of each operating band, including 5 GHz. Typically the first channel tested was the middle channel. If the SAR result was 3dB below the limit, it was not necessary to test on the low and high channel. This was the case for 2.4 GHz as well as the 5 GHz bands.**

**The policy regarding test channels for 802.11A was revised by the commission and is outlined in the document "SAR measurement procedures for 802.11 a/b/g transmitters" released by the FCC October 2006, approximately 1 month after the device had been tested for SAR.**

It is noted that preliminary SAR measurement procedure guidance was released in May of 2006, however this guidance document addressed preliminary SAR procedure for 3G phones, not 802.11 devices. Thus, at the time SAR was evaluated, the SAR procedure at the time was used.

The reason for the delay between the SAR testing (Sep 2006) and the certification of the product (Dec 2006) is because, at the time, it was anticipated that TCBS would be allowed to issue grants for devices requiring SAR above 3 GHz as of the TCB meeting in October 2006. This was deemed the fastest route to product certification.

It is noteworthy that the 802.11 A channels tested for SAR yielded a maximum SAR value of .723 w/kg (at 5290MHz). Additionally, the maximum measured SAR in the certified bands of operation this is .69 W/kg (at 5210 MHz). This demonstrates greater than a 3dB margin below the allowed SAR limit.

**FOR REFERENCE ONLY**  
**THE ORIGINAL EMAILS ARE COPIED BELOW**

Applicant: OQO  
Correspondence Reference Number: 37343  
731 Confirmation Number: TC332573  
Date of Original Email: 03/30/2007

Subject: audit

TCB to coordinate response:

This three-part composite device application filing is not in accordance with 2.962(f)(1). Please address below items, or submit letter from grantee requesting application dismissal.

- 1) Please explain how eqpt class PCT not PCB is applicable, and/or revise where appropriate
- 2) SAR listing in grant remarks is not in accordance with FCC-TCB guidance, eg May03 FCC-TCB notes Harrington, ie please include rule parts, etc
- 3) Internal photos are insufficient - please revise to show chassis assy, transmitter and antenna position(s), all boards and components, etc
- 4) External photos are insufficient - please revise to show final-product and accessories in all operating configurations
- 5) Please submit final-product complete operating instructions [2.1033(b)(3), 2.1033(c)(3)]

Correspondence Reference Number: 37345  
731 Confirmation Number: TC304817  
Date of Original Email: 03/30/2007

Subject: audit

TCB to coordinate response:

This three-part composite device application filing is not in accordance with 2.962(f)(1). Please address below items, or submit letter from grantee requesting application dismissal.

- 1) SAR report contains data intended to represent 5250-5350 MHz & 5470-5725 MHz operations - we did not review it for this audit,

but note this data may not be in accordance with default test channels required by FCC-TCB 802.11abg and 3-6 GHz SAR procedures. More importantly, this grant does not appear intended to include these 5250-5350 & 5470-5725 bands - please submit entire replacement SAR report omitting these bands.

2) SAR report does not appear to be in accordance with FCC-TCB 802.11abg procedures, ie channels tested, etc. - please explain and submit appropriate replacement SAR report.

3) Please submit final-product complete operating instructions [2.1033(b)(3), 2.1033(c)(3)]

**Correspondence Reference Number:** 37347  
**731 Confirmation Number:** TC765557  
**Date of Original Email:** 03/30/2007

Subject: audit

TCB to coordinate response:

This three-part composite device application filing is not in accordance with 2.962(f)(1). Please address below items, or submit letter from grantee requesting application dismissal.

1) SAR report contains data intended to represent 5250-5350 MHz & 5470-5725 MHz operations - we did not review it for this audit, but note this data may not be in accordance with default test channels required by FCC-TCB 802.11abg and 3-6 GHz SAR procedures. More importantly, this grant does not appear intended to include these 5250-5350 & 5470-5725 bands - please submit entire replacement SAR report omitting these bands.

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3) Please submit final-product complete operating instructions [2.1033(b)(3), 2.1033(c)(3)]