

Chris Harvey

From: Sharman John-RBVT46 [john.sharman@motorola.com]
Sent: Wednesday, April 09, 2008 5:59 AM
To: Chris Harvey
Cc: Tina Chu; Neena Jain; Claire Hoque; FISHER CLEM-CFI002; Christine Vu
Subject: RE: 08U11581 additional questions: Orthogon Systems Ltd., FCC ID: QWP58500, Assessment NO.: AN08T7797, IC: 109AO-58500 AN08I2388, Notice#2

Attachments: 5.8G FCC-RP49755JD06A (2).pdf



5.8G
RP49755JD06A (2).pdf

Hi Chris (Harvey)

I trust that the following will resolve outstanding questions. Sorry I missed you on the phone last night, I had left the office. I will call you today. I hear you are East coast, 5 hours from UK? Therefore I will call you at 9am your time. Failing that, please call my office phone as below.

Q4:
The 3.3 dB TDD Tx correction factor is NOT the reason the Tx power was measured at 3.4dB below the 30dBm maximum permitted power. This is coincidence. Note: the actual device power is not stated as 30dBm in the Theory of Operation document (see extract below), only that the 'regulations' permit 30dBm and that as we have implemented two independent Tx chains, each chain Tx power is controlled to be not greater than 27dBm. In practice, the design output power was controlled (by software) to be less than this maximum legal limit. The 3.4dB is merely the margin we have between actual output v. the FCC regulatory limit.

Please be aware that for the powers recorded in section "7.2.5 Tx Max Peak Output Power" of the test report RFI/RPTE3/RP49755JD06A dated 4 Apr 08, the correction factor was applied to the recorded results (together with cable and attenuator losses) to get the peak power stated during the Tx burst. This is the correct measurement procedure as I understand.

Para 3.1.5.1 of our document "phn 1142: Th of Opn." states - The FCC/IC regulations limit the peak transmit power into the antenna (all ports) to 30dBm maximum. The PTP58500/PTP58300 operate with a pair of transmitters where each is connected to only a single port of the dual polarised antenna. Therefore, the closed loop power control system is designed to ensure that each transmitter individually does not exceed a mean power level of 27dBm.

Q5:
Section 2.4 of the test report states that the Integrated Ant. versions of the products use the MARS antenna. This is not listed on the Ant spec. sheet as this is a list of external fit ant. options. All the ext. fit antennas are dish types, we do not list or recommend an ext. panel antenna.

Section 5.2 of the report (page 10) states the final radiated measurements were made with both panel and dish (6 foot) ant. types. This dish is listed in section 2.4. and in the antennas list as having 37.6dBi gain.

Q6:
The transmitter was operated with a TDD Tx burst duration 1.3msec and total TDD frame period 2.8msec. Therefore the non Tx portion of the TDD interval was approx 1.5 msec. This

comprises of 1.3msec to receive data from the link far-end terminal plus various overheads such as the TDD range interval. Your use of the word "continuous" is therefore to me capable of misinterpretation because the Tx is a burst within the TDD frame interval but yes continuous in the sense that it is always there in every TDD frame period! The 3.3dB is not related to the power as explained in response to Q4.

IC comments:

Please find the 99% BW results on page 20 on the RFI report. Do you have the latest version ...RPTE3....? A copy is attached.

The point made by the test house RFI, is that as far as they were aware at that time they tested PTP58500 versions of the products as stated by the two model numbers referenced on their report. As such the Attestation as contained in the Appendix II Test Report Cover sheet, that they signed, can only refer to these two models numbers. Please note that the Annex I form signed by my boss Clem Fisher does contain all four model numbers. As we have discussed previously with Christine Vu and Michael Heckrotte we understand that CCS, as part of your Notified Body status, can attest that the two other model numbers can be included in the IC submission according to the declaration Motorola has made in the letter provided to you. OK? This seems to be the case for the 5.4GHz version product submission to IC. Is this being handled by a different person?

Regards

John Sharman

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-----Original Message-----

From: Christine Vu [mailto:christine.vu@ccsemc.com]

Sent: 08 April 2008 20:34

To: Sharman John-RBVT46

Cc: Chris Harvey; Tina Chu; Neena Jain; Claire Hoque; FISHER CLEM-CFI002

Subject: RE: 08U11581 additional questions: Orthogon Systems Ltd., FCC

ID: QWP58500, Assessment NO.: AN08T7797, IC: 109AO-58500 AN08I2388,

Notice#2

Importance: High

Hi John:

The reviewer have had the opportunity to review the response to Notice #1 and have the following comments and items for further clarification:

He has accepted the responses to questions 1, 2, 3, and 7 without additional comment.

However, pls see below of his additional comments to Q4, Q5, & Q6 for FCC. Also, there is still additional comments for IC as well. Pls see below and reply to all ASAP. Thanks, CK

FCC ADDITIONAL COMMENTS:

Question #4, although the response does not indicate so, the 3.4dB difference between the measured 26.6dBm combined power and the stated 30dBm power in the theory of operation is likely due to the Duty Cycle Correction factor of 3.3dB. Please confirm that this assumption is correct (see #6 below).

Question #5, You now have indicated that there are only 2 antenna type (per the FCC's definition) which are Panel and Dish (parabolic). The test report indicates that panel antenna MARS MA-WS57-30R was used for Radiated measurement. This antenna is not listed on the antenna

specification sheet. What are the antenna specifications for the antenna used during the Radiated Emissions testing? Is this the highest gain panel antenna being approved with this device?

Question #6, I will accept the additional explanation and calculation of the TDD Duty-cycle of 3.3dB, which is not clear in the test report. Also, the report does not clearly state that the transmitter is operated in continuous transmission mode and then a duty-cycle correction is applied. Please confirm that the transmitter was operated in continuous transmission mode. This also helps to explain the difference between the measured and stated power in the Theory of Operation exhibit (see #4 above).

IC ADDITIONAL COMMENTS:

As for the industry Canada application, I am not concerned that the test report does not list the models. The fact is that you are approving 4 different models, which must be listed on the Industry Canada forms. Also, the 99% bandwidth measurement is required for all Industry Canada applications, even if the 6dB bandwidth is required by the test standard. Please include the measured 99% bandwidth on the Appendix II Test report Cover Sheet.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Any questions about the content of this correspondence should be directed to the e-mail address listed below the name of the sender.