

Lisa Bevington (lbevingt)

Subject: FW: LDK7900001_ATCB004212

From: Dward ATCB [mailto:dward@atcb.com]
Sent: Thursday, 09 November, 2006 7:32 PM
To: Lisa Bevington (lbevingt)
Cc: whgraff@atcb.com
Subject: RE: LDK7900001_ATCB004212

Hi Lisa

Couple of issues with your responses,

Item 4 – The comment was meant to say that because the incorrect test method was referenced in the report and because there is no test procedure called out for this test and because the section says “Average Power with up to 3.2dBi antennas” there is no way to determine if the test was done correctly or even how it was done (i.e. radiated or conducted).

Item 8 – the power on the grant is to be the power from the EMC report. This is an FCC thing. What you must remember is that these two reports are for different reasons and as such do not address the same issues. It is not the intent of the SAR report to report the transmitter characteristics in relation to 47CFR15.247 rule part. The intent of the power in the SAR reports is to meet the requirements of IEEE1528. This power is to be measured just prior to actual SAR testing and is to insure that the max power is being produced. It is the intention of the EMC report to provide results of testing for the purpose of meeting the FCC rules. The grant power would then have to be that which is recorded as the maximum power in the EMC report.

Item 9 – I think the point of power correlation has been missed. First – as stated for item 8, power on the grant must come from the EMC report and NOT the SAR report. Second – while the FCC can accept different levels if they so choose, a TCB approval must be based on accepted FCC procedures and policies. There are no exceptions to this. Thus the power as measured in the EMC report and the power measured in the SAR MUST be within the FCC allowed tolerances (see FCC training and IEEE1528). These tolerances are 3dB for erp/eirp and 0.5db for conducted power. . Consequently the 1dB (actually 0.87dB) answer is not acceptable as it still means the mandate of the FCC for SAR vs EMC power has not been met. Please provide both EMC and SAR reports that are within 0.5dB of each other.

Item 11 – please note that this is not just a UNII band issue. Please note that you also did not test the “Maximum Output Channel” as required. For the 2.4GHz range the maximum output channel is at 2412MHz. You tested 2437MHz. Also, only the 5180-5320MHz band was tested on the maximum output channel. From 5500-5805MHz the channel tested was not the maximum output channel. For example, in the 5.7GHz band you measured 5765MHz with an output power of 12.8dB giving a 1Gm SAR of 0.472w/kg. However, the highest power is at 5805MHz and 14.1dB power. The KDB says it is optional only if the 1Gm SAR is less than 0.8 w/kg. The difference between the SAR measured and the SAR in the KDB is 48%. This difference between the frequency tested and the highest power frequency is 1.3dB or about 40% or so. This means that it is very possible you do not meet the .8w/kg exclusion and would have to test all three default frequencies in that band.

Therefore, while certain assumptions can be made, you really do not know if you meet the ‘optional’ clause in the KDB document or not. Certification cannot be made based on assumptions but must be backed up by data.

If the data was taken at 4805MHz and 2412MHz then a case may be made for the “optional” approach of frequency selection. However, as it was not and as the power differences may in fact exceed the exclusion for optional testing in the KDB you must address this issue possibly by additional testing at the frequencies of maximum output.

Item 13 – Well know or not, that is not the issue. As mentioned in the above items assumptions cannot be made about certification data. Each application, in accordance with FCC policy, must stand on its own merit. This means a full description as required in IEEE 1528 and OET65C must be given. This is especially true in the case where the FCC will be looking at each filing for those type devices recently released for TCB certification such as 5GHz SAR. This information needs to be in the report.

11/21/2006

Thanks

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Response from Cisco Systems, Inc. 11-21-06

Item 4 – The device was retested and the FCC report has been updated to reflect peak measurements.

Item 8 and 9 - Please refer to information previously provided by the FCC and the updated test reports.

Item 11 - During the SAR evaluation both the peak and average RF output power levels were measured.

The average values were used in the report to reference the average values in the EMC report.

Since the average values in the EMC report were removed, the average values in the SAR report were replaced with peak measurements.

Item 13 – Please see page 23 of the amended SAR report.