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NCEE Labs Response to ATCB Comments from 2 October 07

FCC ID: UWVLS300RX

IC:6897A-LS300RX

1. The model and applicant appear on a label on the reverse side of the unit. A photo of this label has been uploaded (LS300_label.jpg)
2. A new block diagram, fccdts_block_diagrams.pdf has been uploaded. It is a block diagram of the wireless module used in the EUT. The document is to be held confidential.
3. An REL listing letter for IC has been signed, scanned and uploaded.
4. The power output measurement field has been changed to a maximum field strength at 3m measurement. Power measurements are not required for part 15.249. The actual power output is 0dBm as measured directly from the antenna port. This is the only power setting possible with the EUT, The power listed in the user's manual was an error and has been corrected. A revised report, R101906-31-05A has been uploaded.
5. A new confidentiality letter has been uploaded with Schematics, Block Diagrams and Detailed Operational Descriptions included only (FCC confidentiality letter 2.pdf).
6. A confidentiality letter for IC has been uploaded
7. A new document "Theory of Operation Rev 2" has been uploaded to the ATCB website. This new theory of operation states that the EUT has an output power of 0dBm and that the antenna gain is -21.99dBi according to calculation using the maximum measured field strength at 3m and conducted output power from the antenna terminals. The description states that the device uses an FSK modulation scheme, not DTS. There is no bandwidth requirement for this type of device under 15.249. The description states that the device only operates on 1 channel.
8. Section 4.2.5 was modified to state that the EUT was transmitting a pulse train instead of continuously. The unit testing was transmitting a pulse train as can be seen in Appendix A. This is the only possible mode of operation for the EUT. A modified report, R101906-31-05A has been uploaded.

9. All quasi-peak measurements below 1GHz were deleted and replaced with peak measurements. A modified report, R101906-31-05A has been uploaded.
10. See item 9.
11. The RF exposure appendix has been removed from the report. A modified report, R101906-31-05A has been uploaded.
12. Page 3 of R101906-31-02 contained a typo listing it as a class A product. All testing in the remainder of the report lists class B limits. Page 3 has been modified to show class A and a modified report, R101906-31-02A has been uploaded.

See following pages for copy of original comments from ATCB



American Telecommunications Certification Body Inc.
6731 Whittier Ave, McLean, VA 22101

October 2, 2007

RE: VivoMetrics

FCC ID: UWVLS300RX

After a review of the submitted information, I have a few comments on the above referenced Application.

- 1) The revised label for a previous comment does not appear to have been received. Please provide.

Previous Comment:

Please note that IC requires 3 items on the label, (model, applicant, and Certification No. as Certified). The label does not appear to contain model and applicant for this application. If this appears elsewhere on the device, please show this information. Please revise.

- 2) The block diagram should show the frequencies of all oscillators in the TX device (CFR 2.1033(a)(5)). Please update.
- 3) It appears we are missing a REL listing letter for IC.
- 4) Test report still cites an output power of 9.31 dBm. Is this correct? Was power reduced to be compliant with 15.249. Note that an output power of 9.3 and unity antenna would be about 10 dB above the 15.249 limits.
- 5) The confidentiality Letter needs revising due to progress of this application. Originally it stated BOM and Work Instructions. We will not be submitting the BOM with the application. Additionally, in place of Work Instructions, it would be recommended to stated 'Detailed Operational Descriptions'.
- 6) As of a few weeks ago we must start submitting all documents to IC as well. Given IC's "Freedom of Information Act" – a confidentiality Letter for IC should also be provided. Please see attached letters.
- 7) A new or revised users manual or explanations were not received regarding:

Previous Comments:

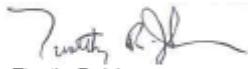
Users manual for the TX module (found on internet from Manufacturer) mentions max power of +11 dBm in one location, maximum of 14 dBm in another. However report shows 9.3 dBm. FCC expects unit to be TXing at maximum power to be used. Please review.

Users manual for the TX module mentions (found on internet from Manufacturer) device is capable of 32 channels covering most of the 902-928 MHz band but device appears to be tested to only a single channel of 915 MHz. Generally for this the FCC requires testing of a low, middle, and high channel. Please review.

Users manual for TX module (found on internet from Manufacturer) also mentions a LP mode which given the deviation, would likely not meet the required 6 dB bandwidth for a DTS device. Please review.

- 8) Section 4.2.5 (and other sections as well) states the device was modified to transmit continuously. Section 2.8 states the device was set to transmit as it normally would and not modified. Please clarify and explain exactly what duty factor, period, etc. the device transmitted at during test.

- 9) QP measurements were used < 1 GHz. Note that this is only allowed if the TX pulse train repeats at a greater than 20 Hz rep rate (see 15.35). The signals reported for < 1 GHz may be present with or without the TX chain activated. If any emissions pulsed with the TX on – off, the 20 Hz Rep Rate must be met. Additionally, note that the duty factor information shown appears to show that 20 Hz was not met using normal TX. Please explain/correct as necessary.
- 10) QP measurements were applied to the fundamental as well. Depending on answers to 9 and 10 above, this measurement may or may not be valid. Peak may be necessary. Please review/explain/correct as necessary.
- 11) FYI....For 15.249, RF exposure is not necessary and can be removed from the report.
- 12) FYI....An additional test report which appears for a different part of the system (RX – USB side) cites Class A report. Please note that the manual appears to shows statements citing Class B.



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Examining Engineer

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The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. 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 sender.