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January 28, 2005

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

RE: Comments of December 6, 2004
APPLICATION: LW9-CS458TXN / 2219B-CS458TXN

Dear Mr. Graff:

Below are the comments that you have provided regarding the application for certification referenced above. Our responses to those comments are in ***bold italic***. Many responses refer you to additional exhibit(s) which has been uploaded to the application folder at the ATCB website.

Thank you for your attention. Please feel free to contact us for any additional information that you may require.

Regards,

Gregory M. Snyder
Chief EMC Engineer, Wireless/Telco Services Manager

Brian J. Dettling
Documentation Specialist

WLL Project: 8321/2

1) It is not appropriate to call any transmitter other than a Part 15 Intentional Radiator an “Unlicensed Transmitter” regardless of the Rule section. Please specify a different description for this device and provide a revised Form 731.

R. The Form 731 has been corrected. Please see exhibit “CS458TXN Application Form - FCC Rev 1.pdf”.

2) The Block Diagram provided does little to describe the transmitter. Please provide a proper Block Diagram for this device.

R. Please see exhibit “CS458TXN Block Diagram Rev 1.pdf”.

3) All Licensed transmitters must have a Tune Up procedure. Please provide.

R. A Tune-up Procedure has been provided. Please see exhibit "CS458TXN Tune-up Procedure.pdf".

4) If the antenna is permanently attached, should not this product be rated for RF power in terms of radiated units? Please explain.

R. Yes, the output power should be rated in terms of Radiated Power (EIRP).

5) Kindly provide for me an understanding of how the transmitter was coupled to the spectrum analyzer. Was a loose coupling methodology used? I find it difficult to correlate the readings on the Occupied Bandwidth plots with the rated conducted Pout of ~40mW. Please explain.

R.. For the occupied bandwidth measurement a receive antenna was placed near the transmitter antenna.. No amplitude correction for attenuators, antenna, etc. were applied to the emissions levels measured and therefore the output level will not correlate to the true radiated power..

6) Was any conducted spurious emission data taken for this product as required by Part 2 of the Rules? If not, kindly explain.

R. The unit is a module with a fixed antenna. No conducted port was able to be obtained for conducted spurious emissions.

7) The plots labeled Figure 1 and Figure 2 do not have any vertical grid lines. This makes it very difficult to analyze. Please provide better plots.

R. Breakpoints for the limit are listed in the table at the bottom right of the plot. Vertical gridlines showing these points have been inserted.

8) Please provide a rationale for the selection of the tone used to modulate this device (Sect. 2.3). The Operational Description indicates that serial data rates of up to 9600 baud are possible. Please provide a detailed description of the modulating intelligence.

R. The digital data rate of 3kHz was chosen as this provided the highest peak frequency deviation. The data rate was increased up to 9600kHz but did not provide the highest peak frequency deviation

9) The EUT Description in Section 2.1 does not match the description provided in the Manual. Please review. Is Section 2.1 for a different product?

R. The test report has been amended to remove information from Section 2.1 that does not apply to this device.

10) The Test Setup photos show this device taped to a large rectangular object. Please identify. In addition, was this device tested in three orthogonal planes?

R. The device used to hold the unit in this orientation is an empty cardboard box. The unit was tested in three orthogonal planes with the worst case emissions reported.

11) Please provide a rationale for the requested emissions designator.

R. The emissions designator necessary bandwidth was based on the occupied bandwidth measured during testing.

12) Please provide the E and I through the finals.

R. Please see exhibit “CS458TXN Tune Up Procedure.pdf”.

13) Unity gain is assumed for the antenna in the RF Exposure Exhibit. Please explain your reasoning.

R. No assumption of unity gain for the antenna is made. The RF exposure calculations are based on the measured radiated power (EIRP) for the unit.

14) The Manual contains no required compliance information. Please provide.

R. The User Manual has been updated. Please see exhibit “CS458TXN User Manual Rev 1.pdf”.