



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

March 31, 2005

RE: FCC ID: NP4-242-5099-100_ATCB002252

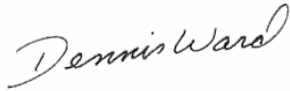
Attention: Mark A. Christensen

I have a few comments on this Application. Please note that further comments may arise in response to answers provided to the questions below.

1. Please provide the required technical contact information on the 731 form.
2. Please note that the antenna terminals appear to be standard type connectors.
3. Please provide a sample of the FCC ID label. Please also note that the label shown in the external photos is not a proper FCC ID label. Please note that the FCC ID label must follow the required format as shown in 47CFR 2.926 and 2.925. This format as in the example shown *Example:* FCC ID: XXX123. Please note that the photo only shows "FCC NP4-242-5099-100" and is incorrect. It should be "FCC ID: NP4-242-5099-100". As this is also an IC application, please provide a sample of the IC label. Please correct and provide the appropriate labels for the application.
4. Please provide a sample table showing the pseudo random nature of the hop sequence. Please note that the hop sequence is not only to be random in number but is to be equally random in forward hops channels but reverse hop channels as well (i.e. the hop channel selection should be equally + and – hops from the selected channel, etc). A sample of the hopping sequence shows this true random selection of channels.
5. Please provide the required test setup photos for part 15 devices.
6. Please note that the device appears to be more than sufficiently large to contain the 15.19(a)(3) (two condition) statement on the device itself. Please provide a sample label showing this two condition statement on the device.
7. Please provide a separate MPE calculation report. Please note that this is an FCC requirement.
8. Please note that DA000705 (the accepted FCC test procedure for FHSS devices) states that for channel separation measurements the resolution bandwidth must be equal to or greater than the span used. Please note that your test report shows that the resolution bandwidth used for this test was only 3 kHz and the span was 1MHz. While the channel separation appears to fully meet the criteria for FHSS devices in the 900MHz range, the test report does not follow acceptable procedures. Please explain and/or correct as necessary.
9. Please note that the 20dB bandwidth measurements are to be made where the resolution bandwidth is equal to or greater than 1% of the 20dB bandwidth. This means that for a device with a 20dB bandwidth of 488 kHz, the resolution bandwidth can be NO LESS than 4.8 kHz. Please note that your report states that a resolution bandwidth of 3 kHz was used. This means that the resolution bandwidth used is only approximately 0.6% of the 20dB bandwidth. Please note that the difference between the 3 kHz used and the minimum 4.8 kHz required could produce an error of approximately 2+dB in the readings. This 2+dB error, when projected as a correction factor onto the plots provided, may actually fail the maximum 500 kHz 20dB bandwidth limit. Consequently, because the device may actually fail the 500 kHz limit, the 20dB bandwidth measurement provided is not adequate to show compliance. Please re-measure the 20dB bandwidth using a resolution bandwidth EQUAL to or GREATER than 4.8 KHz.
10. Please note that on the radiated spurious emissions data tables on pages 29 through 31 are confusing and ambiguous. Please note that the tables on pages 29, 30, 34, 37 and 38 do not appear to give final result and do not actually appear to compare these readings to the limit. Please clearly explain the tables and show compliance to the limits.
11. Many of the data in the tables (see tables on page 31, 35 and 37) have no reference to units (i.e. what are they dBm, dBuV/m, dBc, dBW). Please note that the restricted band frequencies below 1GHz are QP limits of 54dBuV/m and the frequencies above 1GHz in the restricted bands have an average limit of 500uV/m (54dBuV/m) and a 20dB over the average limit of 5011uV/m (74dBuV/m). Please explain where you derived your limits in relation to the actual restricted band

limits as shown in 15.209. Please clearly show compliance to the limits in the restricted bands as shown in 15.209 and 15.205.

12. Please note that page 39 of the report references ANSI C63.4 1992. Please note that this is not an acceptable reference as the FCC has stated that ANSI C63.4 2003 must be used. As there are significant differences between the two editions, please verify that the data is in compliance to ANSI C63.4 2003.
13. Please provide a completed RSP100 form for IC application 773A – 5099100.



Dennis Ward

<mailto:dward@AmericanTCB.com>

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.