



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

November 13, 2002

RE: Belkin Corporation

FCC ID: K7SF8T003

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

- 1) The block diagram should show the frequencies of all oscillators in the device (CFR 2.1033(a)(5)). Please provide an updated version that includes this information.
- 2) Page 6 of the test report states that the report is issues as a supplementary report to the original report. Please explain.
- 3) The average radiated measurements in section 4.7.7 show about a 22 dB delta from the peak measurements at the fundamental. Please note that average measurements should only be made with the EUT hop stopped and in a continuous 100% duty cycle. Please explain how this measurement or duty cycle correction was made and correct the test report as necessary.

Note: The PEAK data may be corrected by the worse case duty cycle expected for each channel during actual use. Average measurements are not necessary but only calculated values based on actual worse case usage conditions. Since the duty cycle calculations are likely > 20 dB themselves, average measurements need not be made.

Note that Bluetooth theory of operation explains 3 different packet lengths that may be used in modes with different packet sizes. The theory of operation for Bluetooth states that their may be 1, 3, or 5 slots used for a transmit dwell time on a channel depending on the mode of operation. For a DH1 packet the TX is on 0.625 us per 49 mS per channel, while for a DH5 packet the TX is on 0.625 \* 5 per 247 ms per channel. These duty cycles equal the following:  $20 \log (.625/49) = 37.9 \text{ dB}$  or  $20 \log (3.125/100) = -30 \text{ dB}$ . All are greater than the 20 dB difference between the peak and average limits. However, the report should clearly identify the worse case duty cycle (based upon Bluetooth theory) and the data corrected appropriately. Additionally, changes to this section of the report may affect the bandedge compliance calculations you have provided. Please correct the report as necessary.

- 4) The bandedge measurements should be checked with the TX hop-stopped and transmitting normally. The plots shown in section 4.2 of the report show bandedge emissions on the high side much higher than reported. Please provide additional calculations/measurements to show compliance on the high bandedge with the TX hopping normally.

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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.