



# American Telecommunications Certification Body Inc.

6731 Whittier Ave, McLean, VA 22101

September 27, 2007

RE: FCC ID: VKB271828\_ATCB005478

Attention: Hoosamuddin Bandukwala

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 note that the FCC requires that actual end frequencies be listed for part 15 devices. Please note that the 731 lists the entire range between 2400-2483.5MHz. Please correct the 731 to show actual frequency usage.
2. Please note that the FCC has stated that testing for DTS devices is to be done in accordance with their accepted test procedure. Please note that while you list ANSI C63.4, you do not list or state that you have followed this accepted test procedure. Please confirm that all testing was done in accordance with this accepted test procedure for DTS devices, and please so state in the report for the applicable test section.
3. FYI – no action needed. Please note that you state you follow ANSI C63.4 procedures. Please note that section 4.2 of ANSI C63.4 states “When using a spectrum analyzer or other instrument providing a spectral display the **video bandwidth shall be set** to a value at least three times greater than the Intermediate Frequency (IF) bandwidth of the measuring instrument to avoid the introduction of amplitude smoothing.” Please consider this requirement and correct future report to reflect the requirements of ANSI C63.4.
4. Please note that for emissions above 1GHz there are 2 limits that must be meet within the restricted bands. The average limit using average measurement techniques and the peak limit (74dBuV/m) using the analyzer/receiver set to peak detector function. Please note that on the table of results on pdf page 19 (report page 13) you only show the average values. Please provide evidence that when the analyzer is set to peak detector function that the device is still compliant to the 74dBuV/m limits in the restricted bands.
5. Please note that 2.1033 requires a sample calculation be provided for correction factors used. Please note that your report states that you included the preamplifier, cable and transducer factors in the analyzer readings via an “offset” factor. Please provide a sample calculation as to how this was included (i.e. Reading + antenna factor + cable factor - preamplifier etc). Please also verify that the values entered into the analyzer offset are from the most current calibration factors available.
6. Please note that there are a couple ways that Industry Canada allows for the measurement of Occupied Bandwidth. The first is to simply measure 26dB (or the approximate 99% BW) down from the peak of the signal. The other method is to set the reference line to the measure unmodulated peak of the signal and then place the marker at the 20dB below the ref line. The plots provided on pdf pages 25 and 26 of the report do not make it clear as to how this was done and they do not appear to meet either of the two accepted methods. The dBc points for example are not 26dB down but only appear to be 16dB down from the peak of the signal. As the 6dB down points in the previous plots are 6dB down from the peak of the signal on the plot it is assumed the same technique was used. If this is the case then the plots mentioned above are not the 26dB down points but only the 16dB down points. Please explain and please correct/re-measure as necessary.
7. Please note that several pieces of test equipment listed are out of calibration. For example, SA 8563E (sn i00029) was out of cal as of Jan 26, 2007 but was used for conducted spurious emissions testing and occupied bandwidth testing a full 6 months after this date; The horn antenna 3115 (sn i00103) used for radiated testing above 1 GHz range was out of cal Sept 5, 2007 but testing appears to have been done between Sept 18-20, 2007; The power sensor used with the power meter E4418B (sn i00228) was out of cal Aug 1, 2007 but testing using this sensor was performed in Sept; SA 8566B (sn i000290) was out of cal June 16, 2007 but was used for band edge testing. As ANSI C63.4 requires measurements using calibrated

equipment, please clearly identify the specific dates for each test. If any of the equipment used was out of calibration at that time, please retest using properly calibrated test equipment.



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.