Date: May 19, 2010

FCC ID: E5MDS-LCT450 Industry Canada CN/UPN: 101D-LCT450

Dear Mark,

Please see replies to your comments inserted in BLUE text.

1. Transmitter spurious emissions were evaluated against an erp limit of -20dBm.
   a. Emissions mask C requires the out of band emissions to be attenuated by 43 + 10Log(P), or -13dBm.
   b. Emissions mask D requires the out of band emissions to be attenuated by 50 + 10Log(P), or -20dBm.
   c. Emissions mask E requires the out of band emissions to be attenuated by 55 + 10Log(P), or -25dBm. It also states that the maximum attenuation required is 65dB, so at power level above 40dBm the limit is -65dBc but below 40dBm the out of band limit is -25dBm.

   It looks like the radiated test data supports compliance with a -25dBm limit. However the conducted plots, taken at the highest power setting, do not. Please address.

Conducted plots with the radio set to 10 Watts and 1 watt have been added to the report showing compliance with the –25dBm unwanted emissions limit for these lower power settings. Please refer to the revised report that has been uploaded.

2. Test Report: Summary page lists measured bandwidths as 4KHz, 9.3KHz, and 16.5KHz. The original grants and certificate show a bandwidth of 11 KHz. Please explain why the occupied bandwidth is now 9.3 KHz and not 11 KHz as originally reported.

The original grant was in error. The calculated necessary bandwidth was used on the original grant instead of the occupied bandwidth. The calculated necessary bandwidth should only be used if it is less than the occupied bandwidth. Therefore, we are requesting that the authorized bandwidths listed on the grant change to 4, 9.3 and 16.5 kHz.

All power and spurious emissions measurements were performed with FSK modulation and 25 kHz channel. The report has been updated to indicate bandwidth and modulation used.

3. The test report summary table (p29 of report, p10 of 22 in the data) shows the maximum output power measured to be 35.5W but the power rating in your application and for the original device is 30W. Please explain.

The maximum rated power remains 30W. The power level that was used for unwanted emissions measurements was obtained at the software setting that produced the closest output power to the rated value. This was 0.4dB above the original value. The next (lower) software setting for the sample tested put the power below the rated power. To ensure compliance at rated power we tested at the higher power setting rather than at the lower setting.

4. The test report, original grant and Industry Canada certificate state that the device uses FSK with emissions designator F1D. The application form lists F1D, F2D and F3D … please explain.

These radios support both analog and digital modulations. There is a setting in software that allows external analog input into the DB25 connector. This analog is modulation limited the same as a digital input signal. We request that the analog modulation designators be added to the grant.

David W. Bare
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