Scott McCutchan

From: Scott McCutchan [scott@celectronics.com]
Sent: Thursday, March 19, 2009 8:21 AM
To: 'rey@celectronics.com'
Cc: 'ruby@celectronics.com'
Subject: FCC ID: VEDSTAR1000 (Revised 3-19-09)

Mr. Ramirez:

In order for processing of this certification application (FCC ID: VEDSTAR1000) to continue, the following item(s) must be addressed:

1) Please provide band-edge measurement data for the lowest and highest channel with plots.

2) Please provide Maximum Permissible Exposure (MPE) RF safety calculations.

3) The submitted sample label is not sufficient. It must be identical to the label that will be present on production units. The sample submitted shows only "FCC". It must have the entire FCC identifier, preceded by "FCC ID: ". It must also contain the verbiage contained in section 15.19(a)(3) of the FCC rules. In addition, it is not evident where the label will be placed on the device. Please submit a new sample label with the proposed location.

4) Please indicate the type of detector that was used for frequencies above 1 GHz, and also describe the measurement procedure used for this measurement.

5) The configuration of the device during testing must be described in more detail. The configuration only states that the EUT was set up in a tabletop configuration, and describes the modes of operation. The test setup photos show multiple devices on the test table, with multiple interconnecting cables. Each of the devices should be identified, and the connections between the devices (type of port, etc.) should be described.

6) For the RF antenna port conducted test, the video bandwidth (VBW) must be at least three times the resolution bandwidth (RBW). Also, it appears that the peak of the fundamental emission was clipping the top of the scale on the instrument display by almost 10 dB. This can lead to erroneous readings. Please submit new data with the reference level adjusted appropriately.

7) The plot for the RF antenna conducted port emissions test on the high channel shows the fundamental emission out of band.

8) For the peak power output test, the VBW must be at least three times the RBW. Also, it appears that the peak of the emission was clipping the top of the scale on the instrument display. This can lead to erroneous readings.

9) The calculations for the time of occupancy on page 19 of the test report do not correspond with the data shown on page E39.

10) Please indicate compliance with the voltage variation requirements contained in section 15.31(e) of the rules.

11) Please indicate the type of modulation employed by the device.

12) Please submit a block diagram of the device, as per section 2.1033(a)(5).

13) Are the four RF output ports identical? During normal operation of the device, are the four RF output ports ever operated simultaneously, or are they operated successively?

14) Does the RF output of the device always remain constant, or will it vary in relation to the RF input?

15) Since the device was modified during the testing, please submit a letter, signed by the applicant, stating that the modifications will be implemented into all production models.

16) The operational description must describe in more detail how the device operates.

17) As per FCC Public Notice DA 00-705, please address each of the following items:

a) Describe how the EUT meets the definition of a frequency hopping spread spectrum system, found in section 2.1 of the FCC rules.
b) Describe how the hopping sequence is generated. Provide an example of the hopping sequence channels, in order to demonstrate that the sequence meets the requirement that the sequence is pseudorandom.
c) Describe how each individual EUT meets the requirement that each of its hopping channels is used equally on average (e.g., that each new transmission event begins on the next channel in the hopping sequence after the final channel used in the previous transmission event).
d) Describe how the associated receiver(s) complies with the requirement that its input bandwidth (either RF or IF) matches the bandwidth of the transmitted signal.
e) Describe how the associated receiver(s) has the ability to shift frequencies in synchronization with the transmitted signal.
f) Describe how the device complies with the requirement that it not have the ability to be coordinated with other FHSS systems in an effort to avoid simultaneous occupancy of individual hopping frequencies by multiple transmitters.

The item(s) indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 60 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. Also, please note that partial responses increase processing time and should not be submitted. Please upload responses and/or exhibits to the electronic filing website. Your correspondence number is VEDSTAR1000-1
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Best regards,

Scott McCutchan
Operations Manager
Compatible Electronics TCB