

dward

From: webrobot@americantcb.com
Sent: 02/06/2008 1:21 PM
To: dward@americantcb.com
Cc: dward@americantcb.com; murban@americantcb.com; marianne@americantcb.com; tholman@americantcb.com
Subject: MESSAGE/uelfrftcb/AFJ307400_ATCB005894

From: Mr. Tri Luu (uelfrftcb) mailto:tri@ultratech-labs.com

Q1. Please note that TIA603 and the FCC rules require that ERP/EIRP values are to be actual measured values using antenna substitution methods and are not to be calculated. Please note that section 5.10 of the report states "(1) If the transmitter's antenna is an integral part of the EUT, the ERP is measured using substitution method. (2) If the transmitter's antenna is nonintegral and diverse, the lowest ERP of the carrier with 0 dBi antenna gain is used for calculation of the spurious/harmonic emissions in dBc." Then the tables in section 5.10.3 state ERP measured by substitution. The antenna is listed as a non-integral antenna. This is confusing as the methods stated do not appear to agree. In any event, antenna substitution method is to be used regardless of antenna type for spurious emissions. It would help if you verified the data by providing the signal generator values and antenna substitution gain values to confirm measured ERP was performed. Please confirm that measured ERP was performed in accordance to TIA603 and section 8.2.2 of the report and that item 2 of section 5.10 was not used.

A1. ERP for harmonics were performed using substitution method. the description of 5.10 was partially intended for ERP carrier to calculate dBc values for both ERP harmonics and Limit due to our existing report format. We will revise the format in the future project so that ERP harmonic in dBm can be directly compared to FCC's dBm limit.

Q2. Please note that in the 99% BW plots the reference level used is 10W (40dBm) and it looks like the 99% is taken from that level. However, that appears to be the limit from the standard and not the actual CW output of your device. The 99% BW should be taken using the CW reference from the actual output of the EUT or from the peak of the modulated signal in some instances. Please Explain.

A2. 99% OBW has been performed using the built in automatic function of spectrum analyzer and 40 dBm of reference level was simply selected as a value which will not saturate the output reading at the peak. In other words, 99% OBW was not taken from 40dBm reference level but was calculated automatically by analyzer. The revised test report has been uploaded to ATCB to explicitly indicate this. We don't see any reason that the peak of actual measurement should be used as reference level in 99% OBW measurement so please kindly advise us where we can find the reference or rule part for this requirement.

Q3. The FCC requires a letter from the FAA for the frequency band used by this device. Please provide the letter per 87.147(d)(2).

A3. FAA letter has been uploaded to ATCB.