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April 18, 2005

Mr. Stephen Dayhoff
Federal Communications Commission
FCC Laboratory Division
Equipment Authorization Branch
7435 Oakland Mills Road
Columbia Maryland 21046

Ref.: CRN 18694 and 18693
FCC ID: BV8P800 and BV8P801T

Dear Mr. Dayhoff,

I have reviewed your request for information and correction with regard to the emissions mask positioning relative to power, as submitted under the referenced correspondence.

The spectral mask data, as currently presented, actually uses a method for collecting and processing data that was submitted to, and granted general acceptance by, the FCC, in February 2004 (attached, please find a copy of that correspondence). In this method of measurement, a spectrum analyzer is configured with the following parameters:

Center Frequency:	as applicable
Resolution Bandwidth:	300 Hz
Video Bandwidth:	3 kHz
Span: (Resolution Bandwidth) * (Sweep Samples - 1) =	120 kHz
Detector Mode:	Peak
Trace Mode:	Max Hold

As you may note from these parameters, the configuration is conventional except for the Max Hold in Trace Mode. Next, the equipment under test is set to continuous transmission under applicable conditions and the Max Hold is reset on the analyzer. After a minimum of 50 sweeps, the peak spectrum is collected. The total power of the collected peak spectrum is calculated by integrating the spectrum across frequency. The collected spectrum power is then used to normalize the spectrum data and a comparison is made to the applicable spectral mask.

For this method of measurement, the integrated power of the spectrum does not equal the average power of the transmitted signal. Instead it measures the peak instantaneous power at each frequency bin and calculates the apparent power associated with this peak spectrum. Consequently, the normalization power for this method reports a normalization power much stronger than the average signal power.

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In retrospect, presenting the spectral mask normalized by this apparent spectral power can indeed be confusing. Perhaps going forward we can, instead, normalize the spectral mask to the average RF power of the equipment and normalize the peak hold spectrum by the ratio of average RF power to apparent peak spectral power.

I hope the above satisfies your request for information. Should you have any further questions or require additional data, please feel free to contact me at (978) 442-4966, or via e-mail at ericsond@tycoelectronics.com.

Sincerely,

Dan Ericson