



Federal Communications Commission
FCC Applications Processing Branch
Columbia MD
Attention: Mr. Frank Coperich

Re: 1) FCC ID NNSRTU2000-99
2) 731 Confirmation No. EA95653
3) Correspondence Reference No. 11948

Regarding your comment 1 ("..need to see modulated spectrum for both the highest and lowest frequency"):

The transmitter portion of this unit is intended for operation only in a 360 MHz band from 27.890 GHz to 28.350 GHz. The unit will have a transmission bandwidth from approximately 1.5 MHz to 15 MHz, depending on system data rates.

For all Certification tests, the unit was tuned to low, medium and high center frequencies within the operational band at both the narrowest and widest operational bandwidths. The higher tuned frequencies are near the upper LMDS band edge (28.350 GHz) and detail scans are presented in the test report showing compliance at the band edge (Figures C-3b on page 31 and C-6b on page 33). However, since the lower tuned frequencies are almost 500 MHz above the lower LMDS band edge, the emission mask would not be visible on scans of the lower tuned frequencies with the Spectrum Analyzer set to the same span as for the detailed scans for the higher tuned frequencies, and therefore were not included in this section of the test report.

Spectrum analyzer scans with a wide span (25.425 to 30.425 GHz) are included in the test report for low, mid and high tuned frequencies and for both wide and narrow bandwidths (refer to Figures C-1, C-2, C-3a, C-4, C-5 and C-6a). The 5 GHz span covers the +/- 250 % of the authorized LMDS band and shows the emission mask over that entire region. These scans indicate the emissions from the CPE Roof Unit transmitter at the various tuned frequencies and bandwidths as well as the regions where the limit is -56 dBc. For narrower-span scans of the low and mid tuned frequencies for both wide and narrow bandwidths, refer to the occupied bandwidth scans in the test report, Figures B-1, B-2, B-4 and B-5. These do not show the emission mask but do show the spectrum of the QPSK signal.

Regarding your comment 2 (If a lesser spectrum analyzer resolution bandwidth):

The emission limit has been vertically displaced by $10 \log_{10} (RBW/1MHz)$ to account for the narrower RBW. For instance, the emission mask in Figure C-3b was adjusted lower by 20 dB to compensate for the 10 kHz RBW. The limit at 28.350 GHz is 60.3 dB below the mean power output of the Roof Unit when measuring with a 10 kHz RBW. The emission mask in Figure C-6b was adjusted lower by 10 dB to compensate for the 100 kHz RBW. The limit at 28.350 GHz is 50.3 dB below the mean power output of the Roof Unit when measuring with a 100 kHz RBW.

We believe these Certification tests have been performed consistent with the methods you prefer. Also, the scans you question were omitted because these tuned frequencies are far from the band edge and were shown in detail in the occupied bandwidth test results. We hope that this letter satisfactorily provides the answers to your two questions – we feel the data you requested is contained in the Certification test report (Exhibit 6). However, if you desire more test data, please advise and we will perform those tests and submit the test data to you.

Regards,

E. W. Paschetag