BZ5MXD5U
Application for FCC Certification
5 Watt Digital Television Translator

Operational Description:

This application requests certification for a 5 Watt Digital Television Translator.

The intended use of this digital translator is to rebroadcast a television relay station or other legal source of ATSC digital television signal.

The MXD5U is a solid state digital regenerative translator designed to receive over-the-air ATSC signals, converting the RF signal to baseband digital format, processing the signal to eliminate noise, and then re-modulating, converting to the new broadcast channel, amplifying and filtering the signal before it is applied to the transmit antenna.

The receive section of the translator and the output modulation format conform with FCC Part 73.682(d), ATSC Digital Television Standards.

The MXD5U consists of three components: a 1RU RegenT Transcoder unit which receives processes and re-modulates the signal, a 2 RU RF amplifier, and an output filter. The power supply and amplifier are integral.

The translator meets all FCC requirements for both the simple emissions mask and the stringent emissions mask. The output filter along with additional filtering within the amplifier provide more than 85dB of attenuation within the GPS Frequency bands (1164-1240 MHz and 1559-1610 MHz). Note that since these products are frequency agile in that they can be field tuned for different channels within the UHF television band, each unit has this filtering included, regardless of the channel.

Testing results shown in this document were conducted on channel 27 (551 MHz center frequency) with the exception of the frequency stability testing which was conducted on channel 34 (650MHz). These test results are representative of performance on any channel in the UHF broadcast spectrum.

Wiring, shielding and construction are in accordance with accepted principles of good engineering practice. The translator's construction is such that all hazardous components are enclosed or protected against accidental contact by operating personnel.