BZ5MXD10U
Application for FCC Certification
10 Watt Digital Television Translator

Operational Description:

This application requests certification for a 10 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 MXD10U 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 MXD10U consists of three components: a 1RU RegenT Transcoder unit which receives processes and remodulates the signal, a 3 RU 10W RF amplifier, and an output filter. The power supply and amplifier employ integral cooling fans.

Depending on the specific application of the translator, the filter is either a simple mask type filter of a stringent mask type filter. With the exception of the output emission mask response, all other performance parameters as detailed in this report are identical for either type of filter. The 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.

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.