

BZ5DTT250M  
Application for FCC Certification  
250 Watt Digital Television Translator

**Operational Description:**

This application requests certification for a 250 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 DTT250 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 DTT250 is self contained in a single cabinet. The Unit consists of power supply, amplifier, and driver and control and metering circuitry. The output mask filter is contained within the cabinet also. The cabinet of the DTT250 contains the 1RU RegenT Transcoder unit which receives processes and re-modulates the signal.

The translator meets all FCC requirements for both the simple emissions mask and the stringent emissions mask. The output filter provides 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 VHF television band, each unit has this filtering included, regardless of the channel.

Testing results shown in this document were conducted on channel 5 (79 MHz center frequency) with the exception of the frequency stability testing which was conducted on channel 7 (173 MHz). These test results are representative of performance on any channel in the VHF 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.