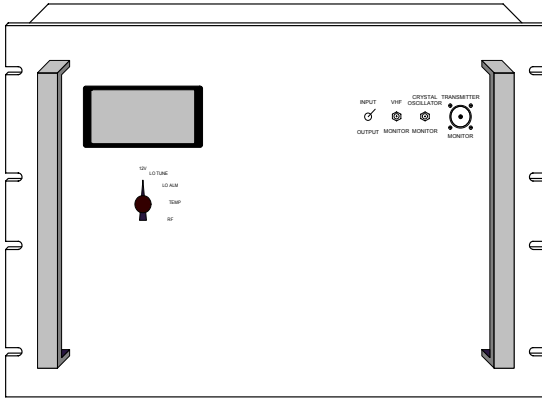


TRX02-250C TRANSCEIVER



- **Base Station Transceiver for multi-channel TV and two-way data transmission**
- **Downstream: Digital (64-QAM) or Analog TV, and 64-QAM Data Traffic**
- **Upstream Data Traffic over MDS Band**
- **Single Antenna Operation with Built- In Duplexer**
- **Broadband Design for Multi-Channel System Operation**

PRODUCT APPLICATION:

The TRX02-250C is an integrated broadband Transceiver operating in the MMDS band downstream (2.5 to 2.7 GHz) and the MDS band upstream (2.150 to 2.162 GHz).

The transceiver is the key Base Station RF element designed to simultaneously transmit multi-channel broadband TV and provide two-way data connectivity to any subscribers within the coverage area.

The TRX02-250C can transmit up to 31 downstream carriers, each 6 MHz wide. Each carrier can be either an analog TV signal (VSBAM), a digital MPEG-2 TV signal (64-QAM modulated) or a 64-QAM data carrier.

When connected to an omni-directional antenna, it can cover an area of approximately 24-Km radius under full channel load. The coverage range increases if less than 31 carriers are transmitted.

The receiver module of the TRX02-250C is designed to receive upstream data (QPSK or 16-QAM modulated) from any subscriber within the coverage area.

An integrated duplexer makes it possible to connect the transceiver to a single base station antenna for both transmit and receive functions. Connection to the antenna is through a Type "N" RF connector.

The transceiver input/output data streams are conveniently set at IF frequencies compatible with DOCSIS-compliant Base Station WMTS (Wireless Modem Termination Systems) modules.

The transceiver is very simple to install and operate. It features a modular design for ease of maintenance and service. Its compact design requires only 12.25 inches (31.2 cm) height in a standard 19 inch (48.3 cm) wide rack or cabinet.

TRX02-250C

Transmitter Section				
Input Signal Frequency:	222 to 408 MHz			
Input Level:	+20 dBmV (-29 dBm) per channel			
Output Frequency ² :	2.5 to 2.686 GHz			
Output Level for 50 dB C/CTB (measured with CW carriers ³)	Channels	Average Power dBm/channel	Peak Power dBm/channel	C/N (dB)
	9	30.5	34.0	64.5
	12	29.0	32.5	63.0
	18	27.0	30.5	61.0
	24	25.0	28.5	59.0
	30	24.0	27.5	58.0
Local Oscillator Frequency ² :	2278 MHz			
Frequency Response:	±1 dB			
Frequency Stability:	±10 KHz (+10°C to +50°C)			
Input Return Loss:	15 dB			
Input Connector:	Type "F" female			
Output Return Loss:	18 dB			
Receiver Section				
Input Frequency:	2150 to 2162 MHz			
Output Frequency:	14.375 to 26.375 MHz			
Gain:	42 dB			
Gain Flatness:	±1 dB			
Noise Figure:	4.5 dB			
LO #1 Frequency:	2278 MHz			
LO #2 Frequency:	142.375 MHz			
LO Frequency Stability:	±10 KHz (+10°C to +50°C)			
Output Return Loss:	15 dB			
Output Connector:	Type "F" female			
Mechanical				
RF Input/Output Connector:	Type "N" female			
Operating Temperature Range:	60° to 100°F (16° to 38°C)			
Humidity:	95% max.			
Primary Power:	120/240 VAC, 50/60Hz (per customer specification)			
Power Consumption:	840 VA RMS			
Mounting:	EIA Standard Relay Rack			
Weight:	58lb. (26.3 kg)			
Dimensions:	(48.3cm W x 31.8cm H x 61cm D)			

¹ Specifications subject to change without prior notice.

² Other frequencies available.

³ The C/CTB with modulated carriers is approximately 6 dB better than with CW carriers.