

## ITX02-050C TRANSMITTER (50Watts)



- **Broadband Indoor Transmitter with 31 Channel Analog or 150 Digital TV Program Capability**
- **Upgradeable to Higher Power Transmitters**
- **Modular Construction**
- **Efficient, Compact Design**

### PRODUCT APPLICATION:

The ITX02-050C is a broadband MMDS transmitter with a channel capacity up to 31 analog television channels or 150 digital channels with either 64QAM, 256 QAM or OFDM modulation.

It is designed to provide cost-effective coverage over a small area. With an omnidirectional transmit antenna it can cover an area of approximately 6 Km radius when loaded with 31 channels, or a 10 Km radius when loaded with 15 channels. A larger area can be covered if the desired coverage is less than 360 degrees in azimuth.

The input is a broadband signal in the 222-420 MHz range. The output is in the 2.5-2.7 GHz range. As in all broadband transmitters, the output power depends on the number of channels.

For example, with a 12 channel load the transmitter delivers over 200mW per channel (with a C/CTB of better than 50 dB), or approximately 400W per channel (peak power).

The transmitter is very easy to install and operate. Its compact design requires only 12.25 inches (31.2 cm) height in a standard 19 inch (48.3 cm) wide rack or cabinet. It is designed to operate indoors without air conditioning requirements.

The transmitter features a modular design for ease of maintenance and service. The key modules are the 12 VDC power supply, driver, power amplifier and diagnostic circuits.

One option offered with the transmitter is output monitoring at VHF frequencies.

# Product Specification<sup>1</sup>



<b>Transmitter</b>																									
Input Frequency <sup>2</sup> :	222 to 420 MHz																								
Nominal Input Level for 12 TV:	+20 dBmV (-29 dBm)																								
Output Frequency <sup>2</sup> :	2.5 to 2.7 GHz																								
Output Level for 50 dB C/CTB: (measured with CW carriers) <sup>3</sup>	<table border="1"> <thead> <tr> <th>Channels</th> <th>Average Power dBm/Channel</th> <th>Peak Power dBm/Channel</th> <th>C/N (dB)</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>24.5</td> <td>27.0</td> <td>61.5</td> </tr> <tr> <td>12</td> <td>23.0</td> <td>25.5</td> <td>60.0</td> </tr> <tr> <td>18</td> <td>21.0</td> <td>23.5</td> <td>58.0</td> </tr> <tr> <td>24</td> <td>19.0</td> <td>21.5</td> <td>56.0</td> </tr> <tr> <td>30</td> <td>18.0</td> <td>20.5</td> <td>55.0</td> </tr> </tbody> </table>	Channels	Average Power dBm/Channel	Peak Power dBm/Channel	C/N (dB)	9	24.5	27.0	61.5	12	23.0	25.5	60.0	18	21.0	23.5	58.0	24	19.0	21.5	56.0	30	18.0	20.5	55.0
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Local Oscillator Frequency <sup>2</sup>	2278 MHz																								
Gain:	50 dB																								
Input Return Loss:	15 dB																								
Input Connector:	Type "F"																								
Output Return Loss:	18 dB																								
Output Connector:	Type "N"																								
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:	500 VA RMS																								
Mounting:	EIA Standard Relay Rack																								
Weight:	56 lb. (25.4 kg)																								
Dimensions:	19" rack width x 12.5" H x 24" D (48.3cm W x 31.8cm H x 61cm D)																								

<sup>1</sup> Specifications subject to change without prior notice.

<sup>2</sup> Other frequencies available.

<sup>3</sup> The C/CTB with modulated carriers are approximately 6 dB better than with CW carriers.