



**OAR02-050  
OUTDOOR ACTIVE  
REPEATER  
(50 Watts)**

- ◆ **Broadband High Power Repeater**
- ◆ **31 Analog Channels or 150 Digital TV Programs**
- ◆ **Built-in VHF Monitoring Ports**
- ◆ **Rugged, Durable Outdoor Design**

**PRODUCT APPLICATION:**

The OAR02-050 is a broadband, on-frequency repeater designed to receive, amplify and retransmit up to 31 analog television channels or 150 digital channels (64QAM, 256 QAM or OFDM modulation).

The OAR02-050 is designed to provide cost-effective coverage over a wide area. With an omni-directional transmit antenna it can cover an area of approximately 6 Kmr 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 output power per channel depends on the number of channels. For 31 channels the repeater delivers a peak power of over 100 milliwatts per channel with a C/CTB of 50 dB.

The OAR02-050 is designed to operate outdoors in a variable temperature

environment. For increased reliability, an external cooled heatsink maintains component temperatures at desirable levels and an internal temperature sensor protects the high power amplifier from failure due to overheating.

To facilitate operational monitoring with a field strength meter or a TV monitor, the OAR02-050 includes VHF test point connectors. Operational diagnostic voltages can be monitored locally. An option allows the voltages to be monitored remotely via serial port interface to a standard Windows-equipped PC.

The repeater features an efficient, modular design, consisting of a DC Power Supply, a Low Noise Amplifier (LNA), microwave AGC (Automatic Gain Control) circuits and a Power Amplifier module, all packaged in a weather-proof rugged outdoor enclosure.

**OAR02-050**

<b>Repeater</b>			
Input Frequency <sup>2</sup> :	2.5 to 2.7 GHz		
Nominal Input Level for 31 Ch:	-50 dBm/ch		
Output Frequency:	2.5 to 2.7 GHz		
Output Level for 50 dB C/CTB: (measured with CW carriers) <sup>3</sup>	<b>Channels</b>	<b>Average Power dBm/Channel</b>	<b>Peak Power dBm/Channel</b>
	9	24.5	27.0
	12	23.0	25.5
	18	21.0	23.5
	24	19.0	21.5
	30	18.0	20.5
Frequency Response:	±1.0 dB		
Gain:	63 dB min.		
Noise Figure:	5 dB		
Input Return Loss:	15 dB		
Input Connector:	Type "N"		
Output Return Loss:	18 dB		
Output Connector:	Type "N"		
Temperature Range:	-40° to 122° F (-40° to 50° C)		
Primary Power:	60/120/240 VAC @ 50/60 Hz (per customer spec)		
Power Consumption:	750 VA RMS		
Mounting:	Antenna Pole		
Weight:	110 lbs (49.9 kg)		
Dimensions:	20" W x 24" H x 19" D (51cm x 61cm x 48cm)		

<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 is approximately 6 dB better than with CW carriers.