



## **OAR02-030 OUTDOOR ACTIVE REPEATER (30Watts)**

- **Broadband Repeater for 31 Analog Channels or 150 Digital Programs**
- **Upgradeable to Higher Power**
- **Built-in VHF Monitoring Ports**
- **Rugged, Durable Outdoor Design**

### **PRODUCT APPLICATION:**

The OAR02-030 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 OAR02-030 is designed to provide cost effective coverage over a small area. With an omnidirectional transmit antenna it can cover an area of approximately 4 km radius when loaded with 31 channels, or a 5 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 at the input. For example, with 12 channels the repeater delivers a total of over 100 milliwatts (20 dBm) per channel with a C/CTB of 50 dB (measured with CW carriers).

The OAR02-030 is designed to operate outdoors in a variable temperature environment.

For increased reliability, an external cooling heatsink maintains component temperatures at low 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 OAR02-030 includes a VHF input and output test point connector. 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.

<b>Repeater</b>			
Input Frequency <sup>2</sup> :	2.5 to 2.7 GHz		
Nominal Input Level for 12 TV:	-50 dBm/ch		
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>	Channels	Average Power dBm/Channel	Peak Power dBm/Channel
	9	22.3	24.8
	12	20.8	23.3
	18	18.8	21.3
	24	16.8	19.3
	30	15.8	18.3
Frequency Response:	±1 dB		
Gain:	61 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 @ 50/60Hz (per customer spec)		
Power Consumption:	400 VA RMS		
Mounting:	Antenna Pole Mount		
Weight:	50 lbs (22.7 kg)		
Dimensions:	16" W x 20" H x 10" D (40.6cm x 51.0cm x 25.4cm)		

<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.