

# 18 GHz Express - Low Noise Receiver and Repeater

RX180003 and RP18000A



## ○ Features & Benefits

- Phase Locked to Transmitter for Superior Frequency Stability
- AGC Circuitry
- High Performance, Trunk Amplifier Style Hybrid Module



## ○ Features & Benefits

- Microwave AGC Permits a 5 dB Increase in Rain Fade Margins
- 13 Pole Bandpass Filter to Prevent Out of Band Transmission
- DC Voltage Monitor

The RX18003 is a low noise, 18 GHz microwave receiver that accepts signals in the 18.142 to 18.580 GHz frequency range and block down-converts to the 54 to 492 MHz frequency range. The RX18003 receiver is phase locked to the transmitter via a integrated pilot tone. This reduces the interference from local broadcast signals and provides superior frequency stability. The AGC provides constant levels for the distribution plant at the receive site, while maintaining exceptional C/N and C/CTB performance.

The RX18003 is housed in compact, watertight, outdoor aluminum housings and can be pole or tower mounted. The receiver is provided with a WR42 waveguide choke flange and powered by standard 60 VAC CATV powering.

The RP18000A Series are 18 GHz microwave repeaters available in two output levels.

The primary purpose for a repeater is to provide a path around an obstruction should the receiver not have a direct line-of-sight to the transmitter. The RP18000 Series products are housed in compact, watertight, outdoor aluminum housings and can be pole or tower mounted. The units are provided with WR42 waveguide choke flanges. The repeaters are powered by standard 60 VAC CATV powering.

## ○ Receiver Specifications

### RF Input

Frequency Range: 18.142 to 18.580 GHz  
 Input Level (Nominal): -50 dBm/Ch  
 Return Loss (Minimum): 14 dB

### RF Output

Frequency Range: 54 to 492 MHz  
 Level (Nominal): +25 dBmV  
 Flatness: 1.5 dB  
 C/CTB:  $\geq 72$  dB  
 C/CSO:  $\geq 63$  dB  
 Impedance: 75 ohm  
 Return Loss (Minimum): 14 dB

### General

Power Requirements  
 Voltage: 60 VAC Square Wave  
 Frequency: 60 Hz  
 Current: 1.0 A  
 Operating Temperature Range: -40 to +55 °C  
 Humidity: 100 %

### Mechanical

Dimensions (LxWxH):  
 20.0 x 6.0 x 9.0 in  
 508 x 152 x 229mm  
 Weight: 33.0 lbs, 15.0 kg

### Connectors

RF Input:  
 WR42 Choke Flange Waveguide  
 RF Output/AC Input:  
 CATV Entry 5/8-24  
 (Gilbert Model G-CH-BAFF-KS)  
 Monitor: MS3112E14-15P

## ○ Repeater Specifications

### RF Input

Frequency Range: 18.142 to 18.580 GHz  
 Input Level (Max): -45 dBm/ch  
 Return Loss (Minimum): 14 dB

### RF Output

Frequency Range:  
 18.142 to 18.580 GHz  
 Flatness:  $\pm 1.0$  dB  
 Power Output  
 (@ 72 ch Loading/-80 dB CTB)  
 500 mW: (-22.6 dBm/ch)  
 3 W: (-13.6 dBm/ch)  
 Gain Customized to System  
 (Max. 3 dB into AGC)  
 500 mW: 27 dB  
 3 W: 36 dB  
 Return Loss (Minimum): 14 dB

### General

Power Requirements  
 Voltage: 60 VAC Square Wave  
 Frequency: 60 Hz  
 Current: 0.15 to 1.2 A  
 Operating Temperature Range:  
 -40 to +55 °C  
 Humidity: 100 %

### Mechanical

Dimensions (LxWxH):  
 20.0 x 6.0 x 9.0 in  
 508 x 508 x 229 mm  
 Weight: 33.0 lbs, 15.0 kg

### Connectors

RF Input:  
 WR42 Waveguide Choke Flange  
 RF Output:  
 WR42 Waveguide Choke Flange  
 AC Power: CATV Entry 5/8-24  
 Monitor: MS3112E14-15P

## ○ Ordering Information

Model	Stock No.	Description
RX18003	7150W	18 GHz Receiver Low Noise, Waveguide, CATV Powering
RP18005A	7325W A	18 GHz Microwave Repeater 500 Milliwatt, Waveguide, CATV Powering with AGC
RP18020A	7332W A	18 GHz Microwave Repeater 3.0 Watt, Waveguide, CATV Powering with AGC