

## RF-2000E Microwave RF Repeater

### General

|                                    |  |
|------------------------------------|--|
| Frequency Range                    | 1.7 ~ 2.3 GHz                          |
| Linear Amplifier Gain <sup>1</sup> | 66 dB typ., 64 dB min.                 |
| AGC/ALC                            | 15 MHz down fade<br>5 MHz up fade min. |
| Noise Figure <sup>1</sup>          | 3.5 dB at max gain                     |
| Antenna Ports                      | Type N Coaxial                         |
| Return Loss                        | ≥ 20 dB                                |

### Channel Response

|             |                              |
|-------------|------------------------------|
| Amplitude   | ± 1.0 dB, $f_0 \pm 7$ MHz    |
| Group Delay | 30 nsec P-P, $f_0 \pm 7$ MHz |

### Power Requirements: Duplex, 2 Amplifiers

|                            |                      |
|----------------------------|----------------------|
| Nominal Voltage            | +12 VDC <sup>3</sup> |
| Voltage Range              | +11 ~ +16.5 VDC      |
| Power Consumption, Level 1 | 23 W, Solar Rated    |
| Power Consumption, Level 2 | 35 W, Solar Rated    |
| Polarity                   | Negative Ground      |

### Nominal Transmit Power<sup>1,2</sup>

| Modulation      | Level 1  | Level 2  |
|-----------------|----------|----------|
| FM/FSK/MSK      | 26.0 dBm | 30.0 dBm |
| 4QAM/QPSK/OQPSK | 24.0     | 28.0     |
| 16QAM           | 20.0     | 24.0     |
| 32QAM           | 18.0     | 22.0     |
| 64QAM/64TCM     | 16.0     | 20.0     |
| 128QAM/128TCM   | 14.0     | 18.0     |
| 256QAM          | 13.0     | 17.0     |
| 32TCM           | 17.0     | 21.0     |
| 256TCM          | 12.0     | 16.0     |

### Dimensions: 1+0, 1+1 and 2+0 Configurations

|                        |   |
|------------------------|---|
| Height                 | 26.5 in, 673 mm   |
| Width, with vent hoods | 27.5 in, 699 mm   |
| Depth                  | 11.4 in, 290 mm   |
| Weight                 | 2 Amplifiers: 40 lb, 18 kg – 1+0<br>4 Amplifiers: 50 lb, 23 kg – 1+1, 2+0 |

### Reliability

|      |                     |
|------|---------------------|
| MTBF | 85,000 hours        |
| MTTR | 30 minutes, on-site |

### Frequency Plan

|                         |                                 |
|-------------------------|---------------------------------|
| Channel Passband        | 20 MHz, 1dB                     |
| Typical Channel Plan BW | 0.8, 1.6, 3.5, 5, 7, 10, 14 MHz |
| T-R Spacing             | 50 MHz, min.                    |
| T-T Spacing*            | 28 MHz, min                     |

\* on common feeders

<sup>1</sup>: Not including branching losses, see Operations Manual.

<sup>2</sup>: See Operations Manual for more details. Modulations listed are a sample only, contact PESi for more.

### Environmental

|                     |   |
|---------------------|---|
| Ambient Temperature | -40° C ~ +60° C                                   |
| Relative Humidity   | 90% - Housing Internal<br>100% - Housing External |
| Altitude            | 15,000 feet, 4600 meters                          |
| Enclosure Housing   | Weatherlight Aluminum                             |

<sup>3</sup>: +24V optional, contact PESi for details.

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**World Headquarters**  
39 Grand Canyon Lane  
San Ramon,  
California 94582 USA

**Telephone**  
+1 925 901 0103

**Facsimile**  
+1 925 901 0403

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