

# RF AMPLIFIER

# Medium Power Amplifier

## MODEL *BXMP1019*

Available as: TRMP1019, 4-Pin TO-8B (Tall)  
 WNMP1019, 10 Pin .625" Sq. Surface Mount (SG4)  
 BXMP1019, SMA Connectorized Housing

### Features

- High IP2: +70 dBm Typical
- High Output Power: +28 dBm Typical
- High Third Order Intercept: +42 dBm Typical
- Operating Temp. - 55 °C to +85 °C

### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +75 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +70 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +42 dBm (Typ.)

### Specifications

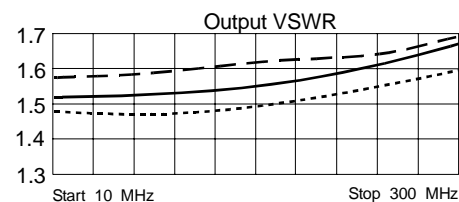
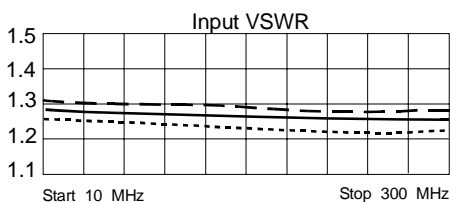
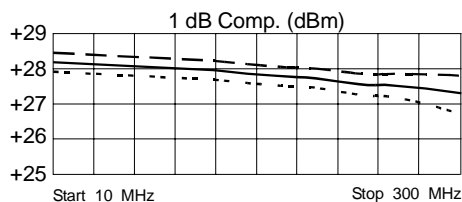
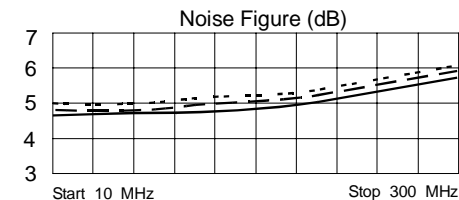
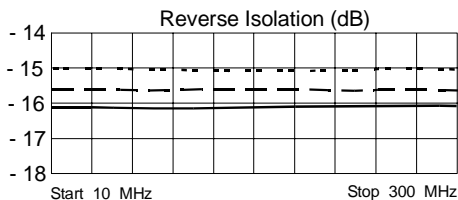
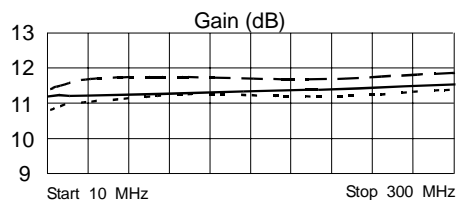
| CHARACTERISTIC              | TYPICAL<br>Ta= 25 °C | MIN/MAX<br>Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency                   | 10 - 300 MHz         | 10 - 250 MHz                     |
| Gain (dB)                   | 10.8                 | 9.5 Min.                         |
| Power @ 1 dB<br>Comp. (dBm) | +28.0                | +26.5 Min.                       |
| Reverse Isolation (dB)      | -16                  | -15 Max.                         |
| VSWR In                     | 1.5:1                | 2.0:1 Max.                       |
| VSWR Out                    | 1.5:1                | 2.0:1 Max.                       |
| Noise figure (dB)           | 5.0                  | 6.3 Max.                         |
| Power Vdc                   | +15                  | +15                              |
| mA                          | 235                  | 265 Max.                         |

### Maximum (No Damage) Ratings

Ambient Operating Temperature ..... -55°C to + 100 °C  
 Storage Temperature ..... -62°C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 17 Volts  
 Continuous RF Input Power ..... + 18 dBm  
 Short Term RF Input Power .... 200 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.2 Watt (3 µsec Max.)

Note: Care should always be taken to effectively ground the case of each unit.

### Typical Performance Data



Legend ——— + 25 °C - - - - + 85 °C - - - - - -55 °C

### Linear S-Parameters

| Freq.<br>MHz | ---S11--- |        | ---S21--- |       | ---S12--- |       | ---S22--- |       |
|--------------|-----------|--------|-----------|-------|-----------|-------|-----------|-------|
|              | Mag       | Deg    | Mag       | Deg   | Mag       | Deg   | Mag       | Deg   |
| 10           | 0.119     | -178.0 | 3.61      | 175.0 | 0.1550    | -1.0  | 0.205     | 173.0 |
| 50           | 0.121     | -174.0 | 3.63      | 173.0 | 0.1560    | -2.0  | 0.205     | 165.0 |
| 100          | 0.121     | -169.0 | 3.64      | 170.0 | 0.1560    | -3.0  | 0.209     | 156.0 |
| 140          | 0.119     | -165.0 | 3.67      | 166.0 | 0.1560    | -5.0  | 0.214     | 148.0 |
| 180          | 0.115     | -159.0 | 3.71      | 162.0 | 0.1560    | -6.0  | 0.220     | 139.0 |
| 220          | 0.112     | -151.0 | 3.76      | 158.0 | 0.1560    | -8.0  | 0.230     | 129.0 |
| 260          | 0.111     | -143.0 | 3.79      | 155.0 | 0.1570    | -9.0  | 0.240     | 122.0 |
| 300          | 0.114     | -134.0 | 3.83      | 151.0 | 0.1580    | -10.0 | 0.255     | 115.0 |



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05/03/05

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