

# RF AMPLIFIER

## MODEL *TM5125*

Available as: TM5125, 4 Pin TO-8 (T4)  
 TN5125, 4 Pin Surface Mount (SM3)  
 FP5125, 4 Pin Flatpack (FP4)  
 BX5125, Connectorized Housing (H1)

### Features

- High Gain: 20.5 dB Typical
- High Power: +24 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Specifications

| CHARACTERISTIC              | TYPICAL<br>Ta= 25 °C | MIN/MAX<br>Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency                   | 5-125 MHz            | 10-100 MHz                       |
| Gain (dB)                   | 20.5                 | 19.5 Min./21 Max                 |
| Power @ 1 dB<br>Comp. (dBm) | +24                  | +22.5 Min.                       |
| Reverse<br>Isolation (dB)   | -24                  | -23 Max.                         |
| VSWR In                     | 1.7:1                | 2.2:1 Max.                       |
| Out                         | 1.35:1               | 2.0:1 Max.                       |
| Noise Figure (dB)           | 2.0                  | 3.0 Max.                         |
| Power Vdc                   | +15                  | +15                              |
| mA                          | 80                   | 90 Max.                          |

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

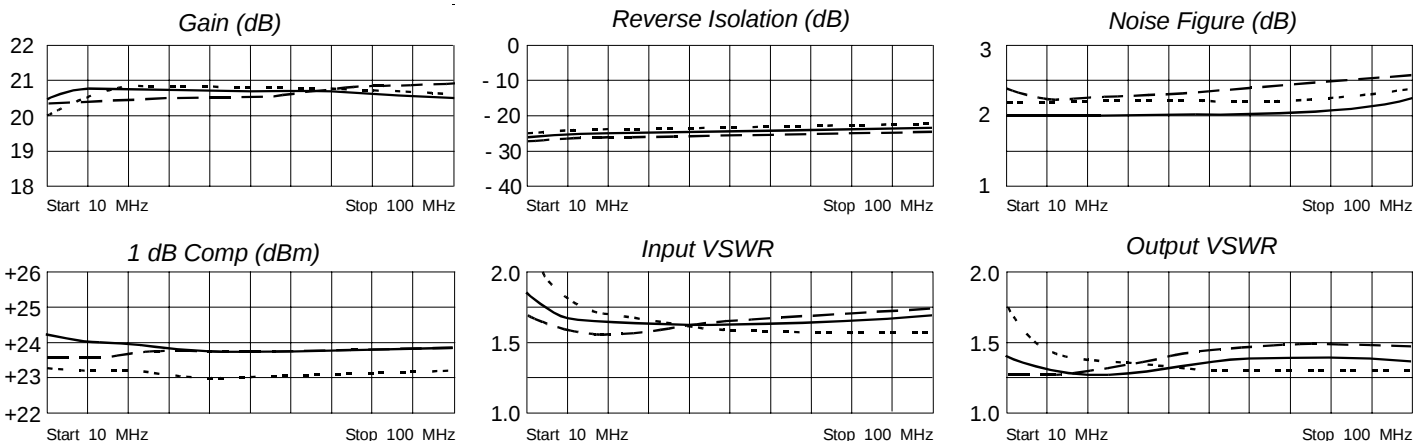
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point..... +58 dBm (Typ.)  
 Second Order Two Tone Intercept Point..... +52 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+40 dBm (Typ.)

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 100 °C  
 Storage Temperature ..... -62°C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 18Volts  
 Continuous RF Input Power ..... + 13 dBm  
 Short Term RF Input Power..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power..... 0.5 Watt (3 µsec Max.)

### Typical Performance Data



### Linear S-Parameters

| FREQ.<br>MHz | S11 |        | S21   |         | S12 |         | S22 |        |
|--------------|-----|--------|-------|---------|-----|---------|-----|--------|
|              | Mag | Deg    | Mag   | Deg     | Mag | Deg     | Mag | Deg    |
| 5            | .39 | -32.94 | 9.94  | -151.50 | .05 | -151.80 | .26 | -19.89 |
| 10           | .29 | -26.29 | 10.56 | -168.32 | .05 | -172.06 | .15 | -23.55 |
| 25           | .26 | -20.09 | 10.79 | 176.24  | .05 | 169.91  | .12 | 8.61   |
| 50           | .25 | -25.12 | 10.79 | 162.45  | .05 | 154.52  | .17 | 18.79  |
| 75           | .26 | -34.68 | 10.69 | 150.84  | .06 | 139.83  | .20 | 15.63  |
| 100          | .27 | -46.93 | 10.52 | 140.02  | .06 | 126.88  | .22 | 8.47   |



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