

# RF AMPLIFIER

## MODEL *TM5115*

Available as: TM5115, 4 Pin TO-8 (T4)  
 TN5115, 4 Pin Surface Mount (SM3)  
 BX5115, Connectorized Housing (H1)

### Features

- High Output Power: +26 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                   | 10 - 500 MHz         | 10 - 500 MHz                     |
| Gain (dB)                   | 12.3                 | 11.5 Min.                        |
| Power @ 1 dB<br>Comp. (dBm) | +26                  | +25 Min.                         |
| Reverse<br>Isolation (dB)   | -18                  | -16 Max.                         |
| VSWR In                     | <1.5:1               | 1.5:1 Max.                       |
| Out                         | <1.5:1               | 1.5:1 Max.                       |
| Noise Figure (dB)           | 7.8                  | 8.4 Max.                         |
| Power Vdc                   | +15                  | +15 Min.                         |
| mA                          | 165                  | 165 Max.                         |

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

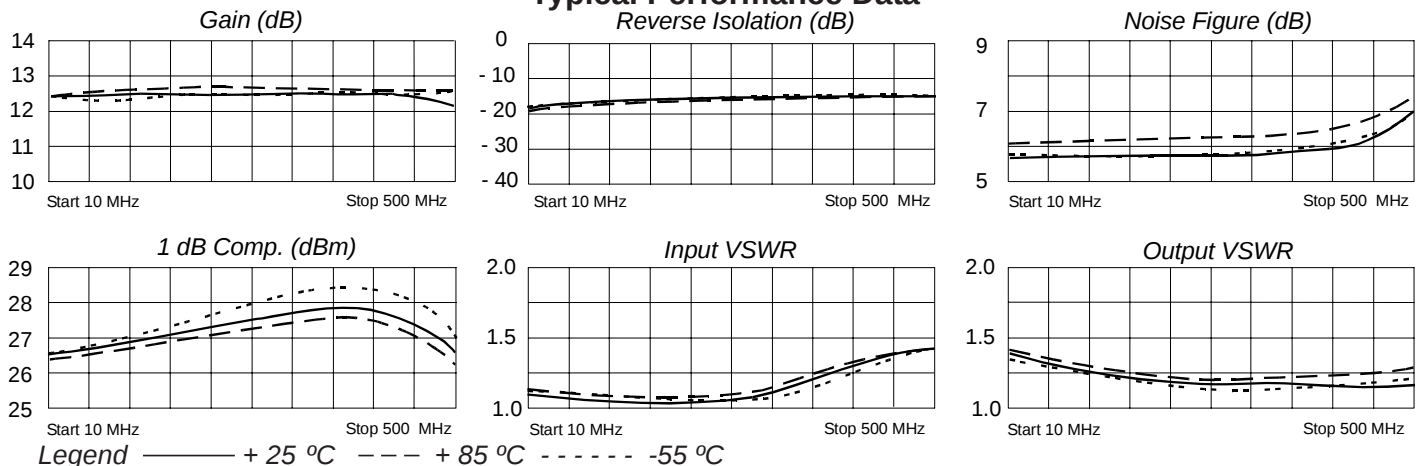
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +55 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +42 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +34 dBm (Typ.)

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 105 °C  
 Storage Temperature ..... -62°C to + 150 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 18 Volts  
 Continuous RF Input Power ..... + 15 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 |
| 10           | .18         | -146 | 4.15        | -173 | .1116       | 8   | .20         | 162 |
| 20           | .17         | -166 | 4.20        | 171  | .1127       | -1  | .18         | 164 |
| 50           | .17         | -167 | 4.20        | 171  | .1123       | -1  | .18         | 165 |
| 100          | .18         | -164 | 4.19        | 160  | .1121       | -4  | .18         | 154 |
| 150          | .20         | -163 | 4.19        | 149  | .1115       | -8  | .17         | 143 |
| 200          | .22         | -163 | 4.19        | 138  | .1115       | -10 | .17         | 134 |
| 250          | .24         | -164 | 4.19        | 128  | .1099       | -12 | .17         | 125 |
| 300          | .25         | -167 | 4.21        | 117  | .1090       | -16 | .17         | 118 |
| 350          | .26         | -170 | 4.22        | 107  | .1092       | -17 | .16         | 113 |
| 400          | .27         | -174 | 4.24        | 96   | .1090       | -20 | .16         | 109 |
| 450          | .27         | -179 | 4.27        | 85   | .1088       | -22 | .16         | 108 |
| 500          | .27         | 175  | 4.32        | 74   | .1097       | -24 | .16         | 109 |



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