

RF AMPLIFIER

MODEL *TM9123*

Available as: TM9123, 4 Pin TO-8 (T4)
 TN9123, 4 Pin Surface Mount (SM3)
 FP9123, 4 Pin Flatpack (FP4)
 BX9123, Connectorized Housing (H1)

Features

- Medium Gain: 12 dB Typical
- Medium Noise Figure: <4.0 dB Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

Specifications

| CHARACTERISTIC | TYPICAL Ta= 25 °C | MIN/MAX Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency | 10 - 1500 MHz | 10 - 1500 MHz |
| Gain (dB) | 12 | 10 Min. |
| Power @ 1 dB Comp. (dBm) | +4 | +3 Min. |
| Reverse Isolation (dB) | -16 | -14 Max. |
| VSWR In | <1.75:1 | 2.0:1 Max. |
| Out | <1.75:1 | 2.0:1 Max. |
| Noise Figure (dB) | <4.0 | 4.5 Max. |
| Power Vdc | +15 | +15 |
| mA | 14 | 16 Max. |

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

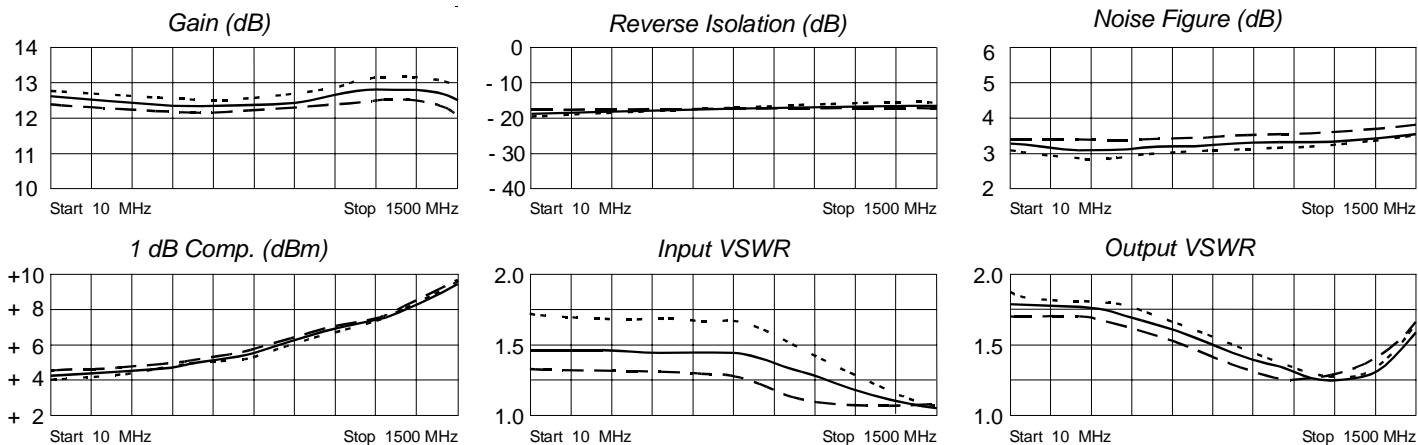
Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point.....+28 dBm (Typ.)
 Second Order Two Tone Intercept Point.....+22 dBm (Typ.)
 Third Order Two Tone Intercept Point.....+17 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 + 18 Volts
 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



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

Linear S-Parameters

| FREQ. MHz | S11 | | S21 | | S12 | | S22 | |
|--------------|-----|------|------|------|-----|-----|-----|------|
| | Mag | Deg | Mag | Deg | Mag | Deg | Mag | Deg |
| 5 | .20 | -175 | 4.00 | -178 | .13 | 4 | .30 | -175 |
| 50 | .19 | 173 | 3.98 | 175 | .13 | 0 | .29 | 174 |
| 100 | .19 | 166 | 3.95 | 169 | .13 | 0 | .29 | 167 |
| 250 | .19 | 143 | 3.92 | 153 | .13 | -1 | .28 | 147 |
| 500 | .18 | 113 | 3.82 | 129 | .13 | -3 | .25 | 115 |
| 800 | .18 | 75 | 3.80 | 99 | .15 | -9 | .19 | 76 |
| 1000 | .14 | 54 | 3.84 | 80 | .15 | -16 | .15 | 46 |
| 1200 | .11 | 34 | 4.06 | 59 | .16 | -21 | .12 | -2 |
| 1400 | .05 | -1 | 4.20 | 33 | .16 | -28 | .12 | -77 |
| 1600 | .06 | -170 | 4.09 | 2 | .16 | -32 | .20 | -144 |



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