

RF AMPLIFIER

MODEL *TM6143*

Available as: TM6143, 4 Pin TO-8 (T4)
 TN6143, 4 Pin Surface Mount (SM3)
 FP6143, 4 Pin Flatpack (FP4)
 BX6143, Connectorized Housing (H1)

Features

- High Gain: 15.7 dB Typical
- Low Noise Figure: 1.6 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 | 5 - 500 MHz | 5 - 500 MHz |
| Gain (dB) | 15.7 | 14.5 Min. |
| Power @ 1 dB Comp. (dBm) | +7.5 | +5.0 Min. |
| Reverse Isolation (dB) | -19 | -16 Max. |
| VSWR In | 1.7:1 | 2.5:1 Max. |
| Out | 1.6:1 | 2.5:1 Max. |
| Noise Figure (dB) | 1.6 | 2.5 Max. |
| Power Vdc | +15 | +15 |
| mA | 14.5 | 16 Max. |

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

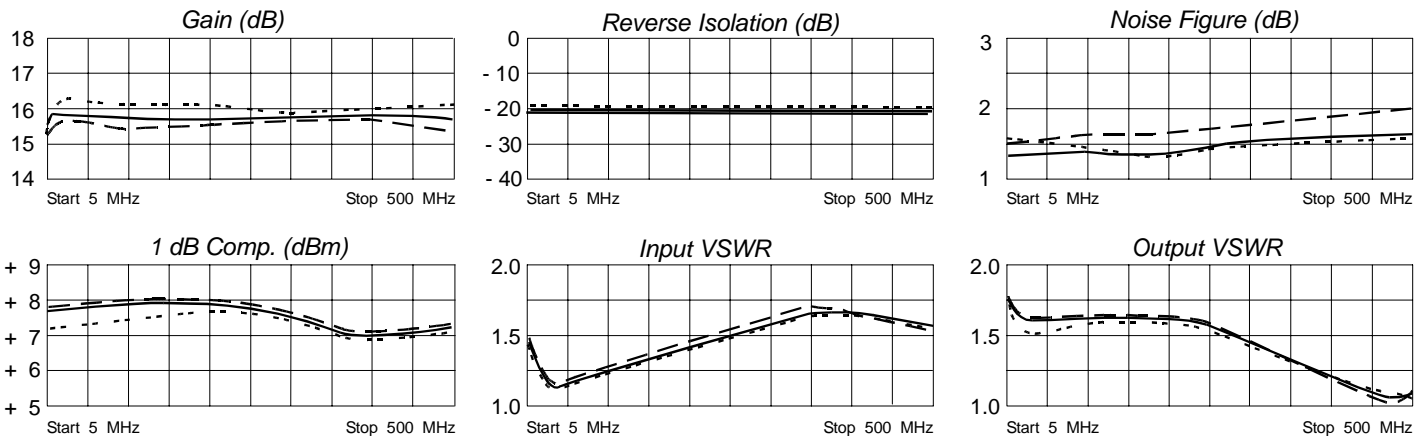
Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point.....+33 dBm (Typ.)
 Second Order Two Tone Intercept Point.....+28 dBm (Typ.)
 Third Order Two Tone Intercept Point.....+20 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 | .16 | - 65 | 6.00 | -165 | .09 | -165 | .28 | - 23 |
| 50 | .08 | - 72 | 6.14 | 167 | .10 | 165 | .24 | - 26 |
| 100 | .11 | - 92 | 6.12 | 153 | .10 | 147 | .23 | - 46 |
| 200 | .18 | -120 | 6.11 | 124 | .10 | 117 | .22 | - 85 |
| 300 | .23 | -143 | 6.14 | 95 | .11 | 89 | .19 | -122 |
| 400 | .25 | -171 | 6.25 | 64 | .11 | 65 | .09 | -158 |
| 500 | .22 | 145 | 6.07 | 27 | .11 | 41 | .04 | - 3 |



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