

RF AMPLIFIER

MODEL *TM7271*

Available as: TM7271, 4 Pin TO-8 (T4)
 TN7271, 4 Pin Surface Mount (SM3)
 FP7271, 4 Pin Flatpack (FP4)
 BX7271, Connectorized Housing (H1)

Features

- Low Noise Figure: 1.5 dB Typical
- High Gain: 18 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 | 1-300 MHz | 5-250 MHz |
| Gain (dB) | 18 | 16.0 Min. |
| Power @ 1 dB Comp. (dBm) | +0.5 | -1.0 Min. |
| Reverse Isolation (dB) | -23 | -22 Max. |
| VSWR In | <1.25:1 | 2.0:1 Max. |
| VSWR Out | <1.25:1 | 2.0:1 Max. |
| Noise Figure (dB) | 1.5 | 2.8 Max. |
| Power Vdc | +15 | +15 Min. |
| mA | 9 | 12 Max. |

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

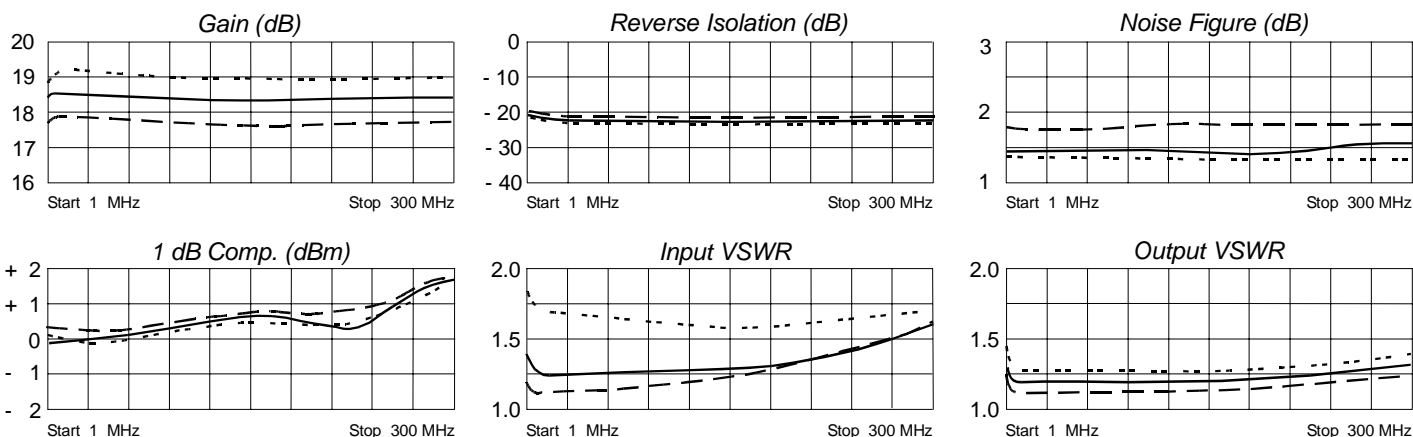
Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point..... +18 dBm (Typ.)
 Second Order Two Tone Intercept Point..... +13 dBm (Typ.)
 Third Order Two Tone Intercept Point..... +10 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 |
| 1 | .16 | -148 | 8.36 | -163 | .05 | 20 | .12 | -140 |
| 5 | .12 | -173 | 8.48 | -178 | .06 | 4 | .09 | -174 |
| 50 | .11 | -178 | 8.39 | 167 | .06 | - 1 | .08 | 162 |
| 100 | .11 | -171 | 8.31 | 154 | .06 | - 2 | .08 | 150 |
| 150 | .12 | -161 | 8.23 | 142 | .06 | - 4 | .08 | 143 |
| 200 | .14 | -155 | 8.25 | 129 | .06 | - 6 | .09 | 136 |
| 250 | .18 | -154 | 8.28 | 116 | .06 | - 9 | .12 | 130 |
| 300 | .22 | -157 | 8.33 | 103 | .07 | -11 | .15 | 121 |



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532

6/29/04

www.spectrummicrowave.com Spectrum Microwave (Europe) · 2707 Black Lake Place · Philadelphia, Pa. 19154 · PH (215) 464-4000 · Fax (215) 464-4001