# 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 ºC to +85 ºC
- Environmental Screening Available

## Specifications

| CHARACTERISTIC | TYPICAL Ta= 25 ºC | MIN/MAX Ta = -55 ºC to +85 ºC |
|---|---|---|
| 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<br>Out | <1.25:1<br><1.25:1 | 2.0:1 Max.<br>2.0:1 Max. |
| Noise Figure (dB) | 1.5 | 2.8 Max. |
| Power Vdc<br>mA | +15<br>9 | +15 Min.<br>12 Max. |

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

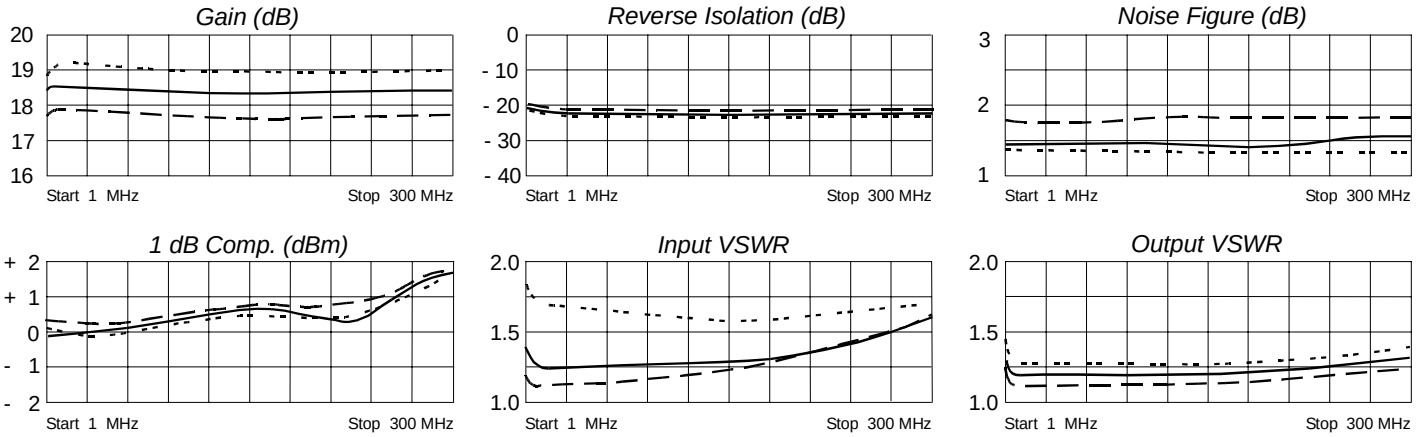
## Typical Intermodulation Performance at 25 º C

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 ..... -55ºC to + 100 ºC
Storage Temperature ..... -62ºC to + 125 ºC
Case Temperature ..... + 125 ºC
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 ºC* – – – *+ 85 ºC* - - - - - - *-55 ºC*

### Linear S-Parameters

| FREQ. MHz | S11 Mag | S11 Deg | S21 Mag | S21 Deg | S12 Mag | S12 Deg | S22 Mag | S22 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 |


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