

RF AMPLIFIER

MODEL *TM7148*

Available as: TM7148, 4 Pin TO-8 (T4)
 TN7148, 4 Pin Surface Mount (SM3)
 BX7148, Connectorized Housing (H1)

Features

- Medium Gain: 13.5 dB Typical
- High Output Power: +25 dBm 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 - 350 MHz | 10 - 250 MHz |
| Gain (dB) | 13.5 | 12 Min. |
| Power @ 1 dB Comp. (dBm) | +25 | +23.5 Min. |
| Reverse Isolation (dB) | -17.5 | -16.5 Max. |
| VSWR In | <1.5:1 | 1.8:1 Max. |
| VSWR Out | <1.5:1 | 1.8:1 Max. |
| Noise Figure (dB) | 3.2 | 4.5 Max. |
| Power Vdc | +15 | +15 Min. |
| mA | 108 | 114 Max. |

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

Typical Intermodulation Performance at 25 °C*

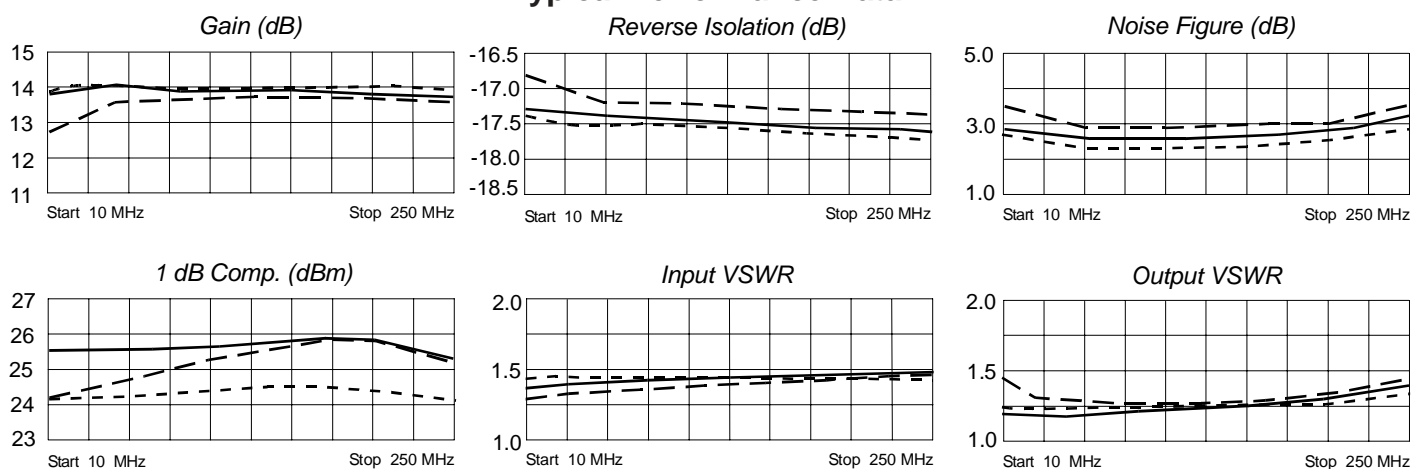
Second Order Harmonic Intercept Point +63 dBm (Typ.)
 Second Order Two Tone Intercept Point +57 dBm (Typ.)
 Third Order Two Tone Intercept Point +42 dBm (Typ.)

*Measured at 100 MHz.

Maximum Ratings

Ambient Operating Temperature -55°C to +100 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage + 17 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



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

Linear S-Parameters

| FREQ. MHz | S11 | | S21 | | S12 | | S22 | |
|--------------|-----|------|------|------|-------|------|-----|------|
| | Mag | Deg | Mag | Deg | Mag | Deg | Mag | Deg |
| 10 | .14 | - 14 | 5.01 | -169 | .1184 | -169 | .04 | - 41 |
| 50 | .15 | - 33 | 5.06 | 168 | .1185 | 168 | .02 | - 26 |
| 100 | .15 | - 61 | 5.02 | 153 | .1204 | 152 | .03 | - 13 |
| 150 | .16 | - 89 | 5.01 | 138 | .1217 | 138 | .04 | - 14 |
| 200 | .17 | -116 | 5.00 | 124 | .1238 | 123 | .06 | - 29 |
| 250 | .18 | -143 | 5.00 | 109 | .1259 | 109 | .08 | - 46 |
| 300 | .19 | -170 | 4.98 | 94 | .1284 | 94 | .11 | - 62 |
| 350 | .20 | 162 | 4.96 | 79 | .1311 | 80 | .15 | - 79 |



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