

RF AMPLIFIER

MODEL *TM5304*

Available as: TM5304, 4 Pin TO-8 (T4)
 TN5304, 4 Pin Surface Mount (SM3)
 FP5304, 4 Pin Flatpack (FP4)
 BX5304, Connectorized Housing (H1)

Features

- High Gain: 19.5 dB Typical
- Low Noise Figure: <2.5 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 - 200 MHz | 5 - 200 MHz |
| Gain (dB) | 19.5 | 18.5 Min. |
| Power @ 1 dB Comp. (dBm) | +10.5 | +9.5 Min. |
| Reverse Isolation (dB) | - 26 | - 25 Max. |
| VSWR In | <1.75:1 | 2.0:1 Max. |
| Out | <1.5:1 | 2.0:1 Max. |
| Noise figure (dB) | <2.5 | 3.0 Max. |
| Power Vdc | +15 | +15 |
| mA | 24 | 25 Max. |

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

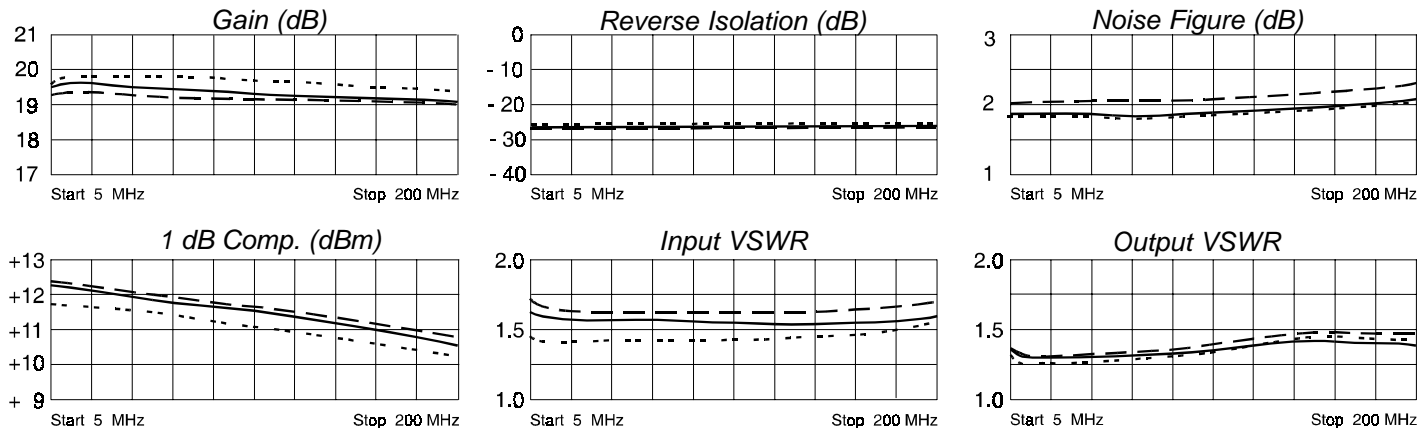
Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point +39 (Typ.)
 Second Order Two Tone Intercept Point +33 (Typ.)
 Third Order Two Tone Intercept Point +25 (Typ.)

Maximum Ratings

Ambient Operating Temperature -55°C to + 100 °C
 Storage Temperature -62°C to + 125 °C
 Case Temperature + 125 °C
 DC Voltage + 17Volts
 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 | .24 | - 18 | 9.29 | -173 | .05 | -172 | .15 | - 29 |
| 10 | .23 | - 14 | 9.37 | 180 | .05 | -179 | .13 | - 18 |
| 50 | .22 | - 32 | 9.27 | 160 | .05 | 157 | .13 | - 19 |
| 100 | .21 | - 65 | 9.20 | 138 | .05 | 137 | .15 | - 37 |
| 150 | .21 | -104 | 9.09 | 117 | .05 | 111 | .17 | - 60 |
| 200 | .24 | -145 | 8.85 | 94 | .05 | 89 | .16 | - 82 |
| 300 | .37 | 150 | 7.82 | 45 | .05 | 46 | .07 | -106 |



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