

RF AMPLIFIER

MODEL *TR3044*

Available as: TR3044, 4 Pin TO-8B (T8)
 RN3044, 4 Pin Surface Mount (SM19)
 BR3044, Connectorized Housing (H2)

Features

- High Gain: 32 dB Typical
- Low Noise Figure: 1.8 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 (MHz) | 200 - 300 MHz | 200 - 300 MHz |
| Gain (dB) | 32 | 30 Min. |
| Power @ 1 dB Comp. (dBm) | +21 | + 20 Min. |
| Reverse Isolation (dB) | -37.5 | -36 Max. |
| VSWR In | 1.4:1 | 1.5:1 Max. |
| Out | 1.4:1 | 1.5:1 Max. |
| Noise figure (dB) | 1.8 | 2.8 Max. |
| Power Vdc | +15 | +15 |
| mA | 90 | 100 Max. |

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

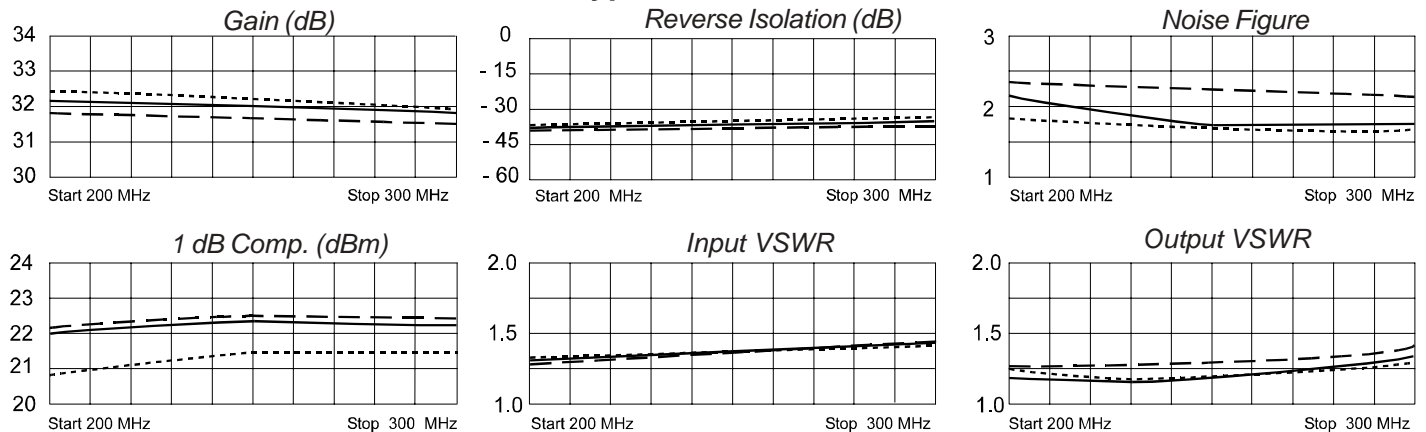
Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point +51 dBm (Typ.)
 Second Order Two Tone Intercept Point +45 dBm (Typ.)
 Third Order Two Tone Intercept Point +33 dBm (Typ.)

Maximum Ratings

Ambient Operating Temperature -55°C to + 140 °C
 Storage Temperature -62°C to + 150 °C
 Case Temperature + 150 °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 | | K | Del |
|--------------|-----|------|-------|------|-------|-----|-----|-----|------|-----|
| | Mag | Deg | Mag | Deg | Mag | Deg | Mag | Deg | | |
| 10 | .12 | -153 | 10.22 | -175 | .0707 | 6 | .10 | 150 | 1.05 | .73 |
| 30 | .12 | -176 | 10.38 | 180 | .0721 | 1 | .07 | 164 | 1.04 | .76 |
| 50 | .12 | 178 | 10.38 | 178 | .0724 | 1 | .07 | 169 | 1.04 | .76 |
| 100 | .12 | 168 | 10.34 | 174 | .0731 | 0 | .07 | 165 | 1.03 | .76 |
| 200 | .13 | 153 | 10.28 | 168 | .0740 | -1 | .08 | 162 | 1.03 | .77 |
| 300 | .13 | 138 | 10.18 | 161 | .0725 | -4 | .08 | 151 | 1.04 | .74 |
| 400 | .15 | 128 | 10.00 | 155 | .0727 | -6 | .09 | 143 | 1.04 | .73 |
| 500 | .16 | 117 | 9.86 | 149 | .0723 | -6 | .10 | 137 | 1.04 | .72 |



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