

RF AMPLIFIER

MODEL TR3020

Available as: TR3020, 4 Pin TO-8B (T8)
 RN3020, Surface Mount (SM19)
 BR3020, Connectorized Housings (H2)

Features

- High Output Power: +28 dBm Typical
- High Gain: 21.5 dB Typical
- Operating Temp. - 55 °C to +70 °C
- Environmental Screening Available

Specifications

| CHARACTERISTIC | TYPICAL Tc = 25 °C | MIN/MAX Tc = -55 °C to +70 °C |
|-----------------------------|-----------------------|----------------------------------|
| Frequency | 500 - 1000 MHz | 500 - 1000 MHz |
| Gain (dB) | 21.5 | 20.75 Min. |
| Power @ 1 dB Comp. (dBm) | +28 | +27 Min. |
| Reverse Isolation (dB) | -35 | -33 Max. |
| VSWR In | <1.8:1 | 2.0:1 Max. |
| Out | <1.5:1 | 2.0:1 Max. |
| Noise Figure (dB) | <4.4 | 5.4 Max. |
| VSWR Vdc | +15 | +15 |
| mA | 255 | 270 Max. |

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

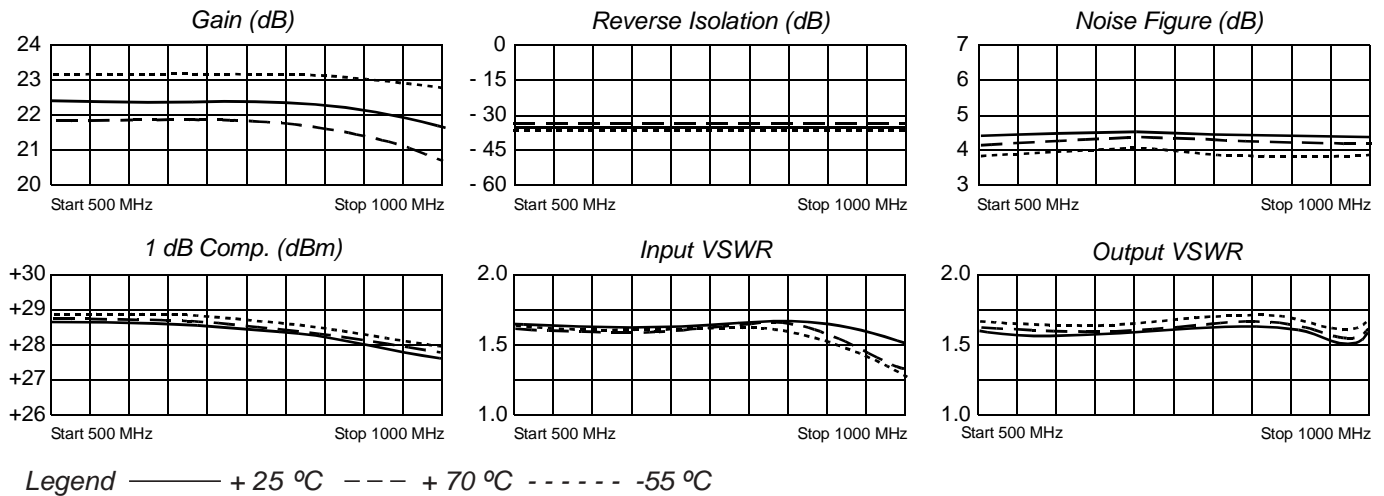
Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point +45 dBm (Typ.)
 Second Order Two Tone Intercept Point +42 dBm (Typ.)
 Third Order Two Tone Intercept Point +39 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 100 Milliwatts (1 Minute Max.)
 Maximum Peak 0.5 Watt (3 µsec Max.)

Typical Performance Data



Linear S-Parameters

| FREQ. MHz | S11 | | S21 | | S12 | | S22 | |
|--------------|-----|-----|-------|------|-------|------|-----|-----|
| | Mag | Deg | Mag | Deg | Mag | Deg | Mag | Deg |
| 500 | .29 | 108 | 13.41 | -155 | .0127 | -35 | .30 | 111 |
| 600 | .28 | 86 | 13.28 | 174 | .0175 | -45 | .29 | 97 |
| 700 | .24 | 62 | 13.04 | 142 | .0178 | -71 | .28 | 83 |
| 800 | .22 | 37 | 12.83 | 110 | .0164 | -64 | .26 | 72 |
| 900 | .18 | 10 | 12.42 | 78 | .0180 | -74 | .26 | 63 |
| 1000 | .14 | -18 | 12.52 | 46 | .0179 | -101 | .28 | 55 |



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