

# RF AMPLIFIER

## MODEL TR3029

Available as: TR3029, 4 Pin TO8B (T8)  
 WN3029, 10 Lead Gull-Wing (SG4)  
 BR3029, Connectorized Housing (H2)

### Features

- Low Noise Figure: 1.8 dB Typical
- High Third Order Intercept: +27 dBm Typical
- Operating Temp. -55 °C to +85 °C
- Units are Unconditionally Stable

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	100 - 500 MHz	100 - 500 MHz
Gain (dB)	26	24 Min.
Power @ 1 dB Comp. (dBm)	+16	+14 Min.
Reverse Isolation (dB)	-32	-30 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.75:1	2.0:1 Max.
Noise Figure (dB)	1.8	2.5 Max.
Power Vdc	+15	+15
mA	48	52 Max.

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

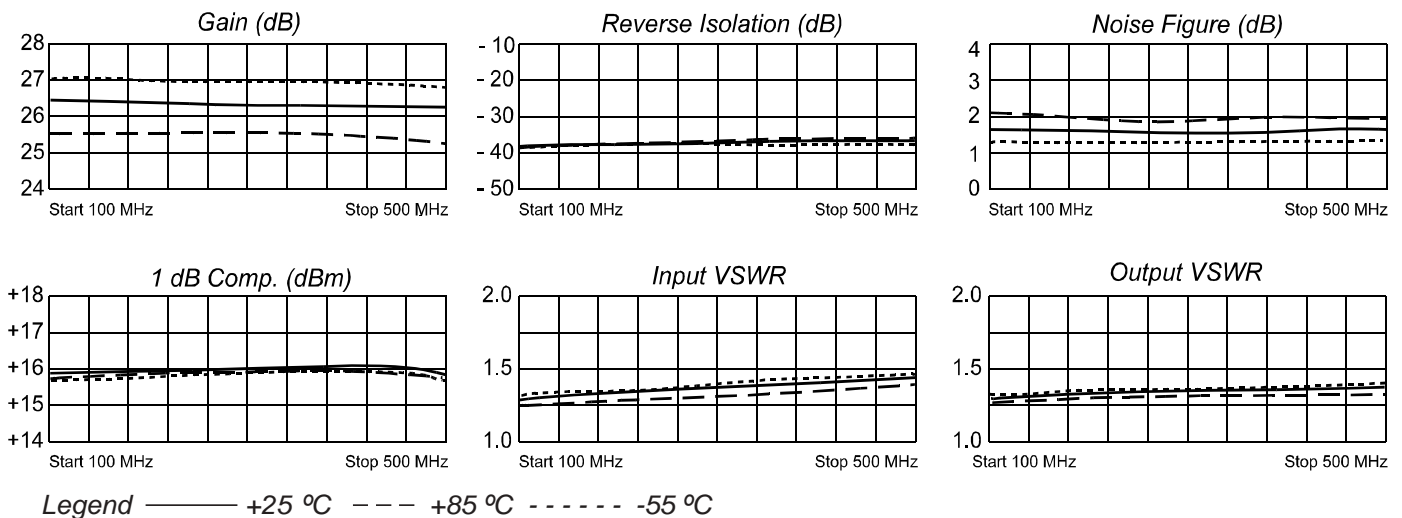
### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point ..... +43 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +35 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +27 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 ..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.2 Watt (3 µsec Max.)

### Typical Performance Data



### Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
100	0.13	-177	21.10	-20	0.01	-4	0.14	174
180	0.14	-177	21.12	-39	0.01	-6	0.14	171
260	0.15	-180	20.95	-57	0.01	-18	0.14	168
340	0.16	177	20.77	-74	0.01	-21	0.14	164
420	0.17	172	20.60	-92	0.01	-24	0.15	159
500	0.17	164	20.42	-109	0.01	-27	0.16	154



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 Rev. 6/17/09

www.SpectrumMicrowave.com Spectrum Microwave · 2707 Black Lake Place · Philadelphia, Pennsylvania 19154 · PH (215) 464-4000 · Fax (215) 464-4001