

# RF AMPLIFIER

## MODEL *TM9167*

Available as: TM9167, 4 Pin TO-8 (T4)  
 TN9167, 4 Pin Surface Mount (SM3)  
 FP9167, 4 Pin Flatpack (FP4)  
 BX9167, Connectorized Housing (H1)

### Features

- Gain: 12.5 dB Typical
- Output Power: +15.5 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	10-800 MHz	10-800 MHz
Gain (dB)	12.5	11.5 Min.
Power @ 1 dB Comp. (dBm)	+15.5	+14.5 Min.
Reverse Isolation (dB)	-15	-14 Max.
VSWR In	<1.5:1	2.0:1 Max.
Out	<1.75:1	2.0:1 Max.
Noise Figure (dB)	<4.5	5.5 Max.
Power Vdc	+15	+15
mA	32	35

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

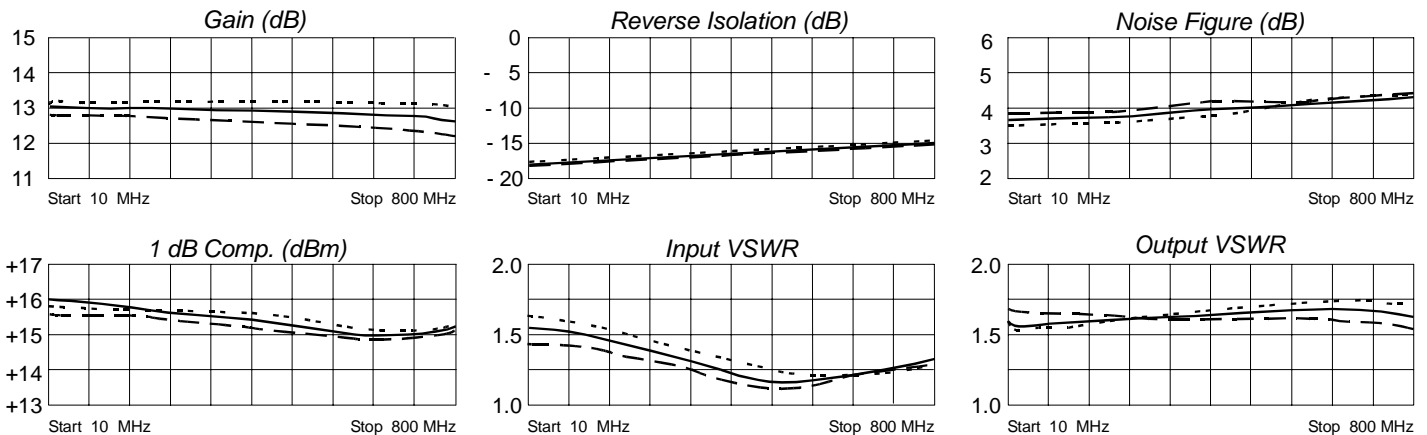
### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point..... +51 dBm (Typ.)  
 Second Order Two Tone Intercept Point..... +45 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +30 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 ..... 0.5 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	.22	-172	4.49	-179	.13	4	.24	177
50	.21	172	4.49	170	.13	- 1	.23	179
100	.21	161	4.48	159	.13	- 4	.23	177
200	.18	140	4.45	137	.13	- 7	.24	174
400	.11	90	4.42	94	.14	-17	.24	168
600	.08	- 13	4.38	48	.16	-32	.25	153
800	.12	-101	4.28	- 3	.18	-51	.25	109
1000	.09	144	3.65	- 71	.20	-82	.30	- 23



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 8/2/04

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