

# RF AMPLIFIER

## MODEL *TM9165*

Available as: TM9165, 4 Pin TO-8 (T4)  
 TN9165, 4 Pin Surface Mount (SM3)  
 FP9165, 4 Pin Flatpack (FP4)  
 BX9165, Connectorized Housing (H1)

### Features

- Gain: 10.5 dB Typical
- Output Power: +11 dBm 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	10-1000 MHz	10-1000 MHz
Gain (dB)	10.5	9.0 Min.
Power @ 1 dB Comp. (dBm)	+11	+9.0 Min.
Reverse Isolation (dB)	-15.5	-14 Max.
VSWR In	<1.5:1	2.0:1 Max.
Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	<4.5	6.0 Max.
Power Vdc	+15	+15
mA	30	34 Max.

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

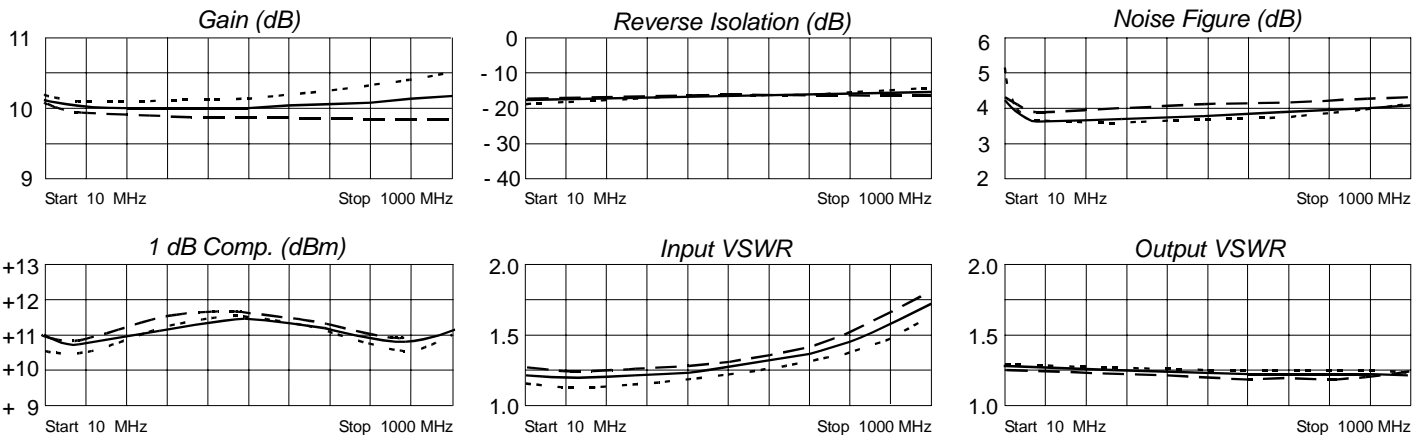
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point..... +42 dBm (Typ.)  
 Second Order Two Tone Intercept Point..... +37 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +24 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	.10	- 4	3.22	-180	.14	0	.12	-175
50	.09	- 7	3.19	175	.14	- 1	.12	178
100	.09	- 12	3.18	170	.14	- 1	.12	177
300	.10	- 25	3.16	149	.14	- 3	.11	168
500	.12	- 49	3.18	128	.15	- 6	.10	166
700	.16	- 74	3.18	107	.16	- 11	.09	167
900	.22	-104	3.24	85	.16	- 18	.09	174
1000	.27	-119	3.26	73	.16	- 20	.09	-179



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