

# RF AMPLIFIER

## MODEL *TM9121*

Available as: TM9121, 4 Pin TO-8 (T4)  
 TN9121, 4 Pin Surface Mount (SM3)  
 FP9121, 4 Pin Flatpack (FP4)  
 BX9121, Connectorized Housing (H1)

### Features

- Medium Gain: 15 dB Typical
- Medium Output Power: +13.5 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 - 1500 MHz	10 - 1500 MHz
Gain (dB)	15	13.5 Min.
Power @ 1 dB Comp. (dBm)	+13.5	+12.0 Min.
Reverse Isolation (dB)	-16	-15 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.75:1	2.0:1 Max.
Noise Figure (dB)	<4.0	5.0 Max.
Power Vdc	+15	+15
mA	34	37 Max.

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

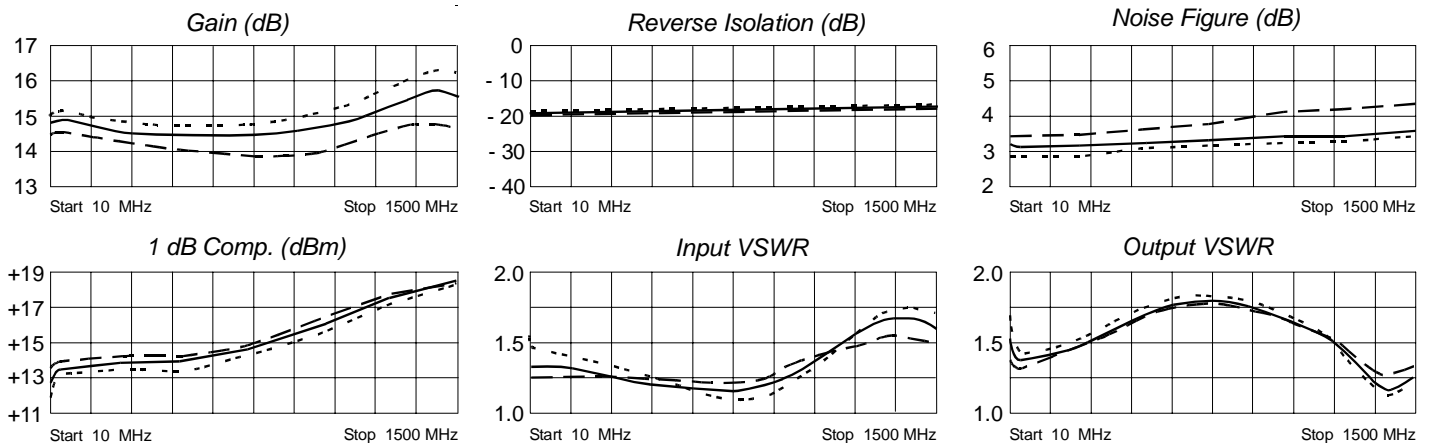
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point.....+40 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+34 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+26 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	.15	-139	5.42	-173	.11	9	.20	148
50	.14	-171	5.56	176	.11	1	.15	150
100	.15	-176	5.57	168	.11	-1	.15	138
250	.13	174	5.48	147	.12	-7	.19	99
500	.08	-178	5.32	115	.12	-16	.25	51
750	.06	-135	5.22	83	.13	-30	.29	9
1000	.13	-103	5.30	50	.13	-42	.25	-29
1250	.21	-112	5.62	12	.13	-52	.16	-82
1500	.19	-130	5.81	-40	.17	-66	.14	104



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