

# RF AMPLIFIER

## MODEL **TM9312**

Available as: TM9312, 4 Pin TO-8 (T4)  
 TN9312, 4 Pin Surface Mount (SM3)  
 FP9312, 4 Pin Flatpack (FP4)  
 BX9312, Connectorized Housing (H1)

### Features

- Low Noise Figure: <3 dB Typical
- Medium Gain: +16.5 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	5 - 1000 MHz	5 - 1000 MHz
Gain (dB)	16.5	15.0 Min.
Power @ 1 dB Comp. (dBm)	+7	+5 Min.
Reverse Isolation (dB)	- 18	- 17 Max.
VSWR In	<1.5:1	2.0:1 Max.
VSWR Out	<1.75:1	2.0:1 Max.
Noise figure (dB)	<3.0	4.0 Max.
Power Vdc	+15	+15 Max.
mA	18	20 Max.

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

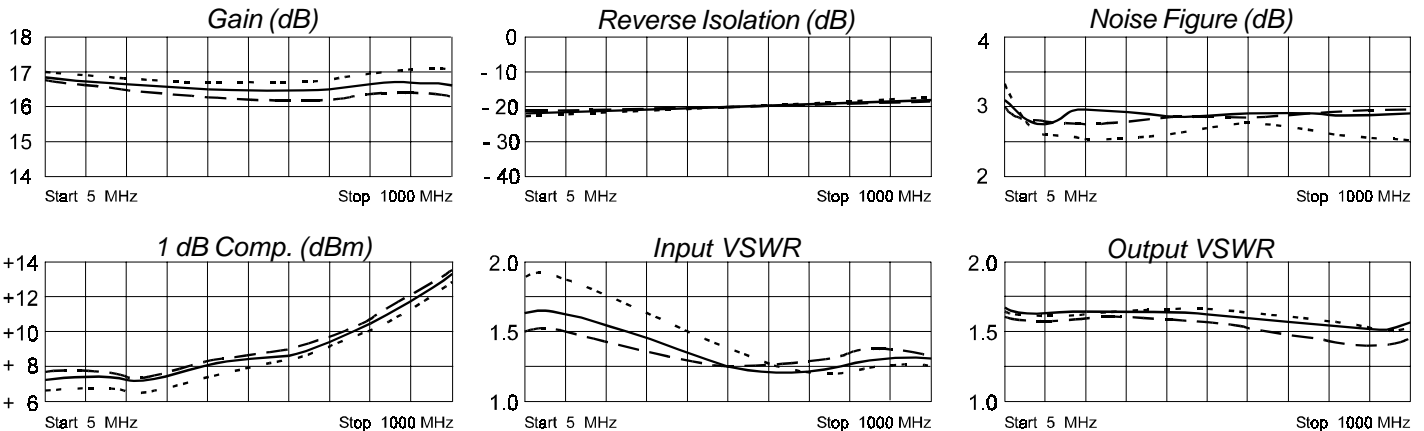
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +30 (Typ.)  
 Second Order Two Tone Intercept Point ..... +24 (Typ.)  
 Third Order Two Tone Intercept Point ..... +20 (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
5	.24	-174	7.30	-176	.08	4	.26	-176
50	.24	174	6.90	171	.09	0	.25	169
100	.23	166	6.88	162	.08	0	.25	160
200	.22	151	6.83	143	.09	- 3	.25	138
400	.15	132	6.69	108	.09	-12	.24	101
600	.10	145	6.65	71	.10	-20	.24	69
800	.13	155	6.78	33	.11	-34	.22	43
1000	.14	120	6.80	- 13	.12	-48	.23	39



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