

# RF AMPLIFIER

## MODEL *TM9331*

Available as: TM9331, 4 Pin TO-8 (T4)  
 TN9331, 4 Pin Surface Mount (SM3)  
 FP9331, 4 Pin Flatpack (FP4)  
 BX9331, Connectorized Housing (H1)

### Features

- Gain: +11.5 dB Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point.....+27 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+21 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+14 dBm (Typ.)

### Specifications

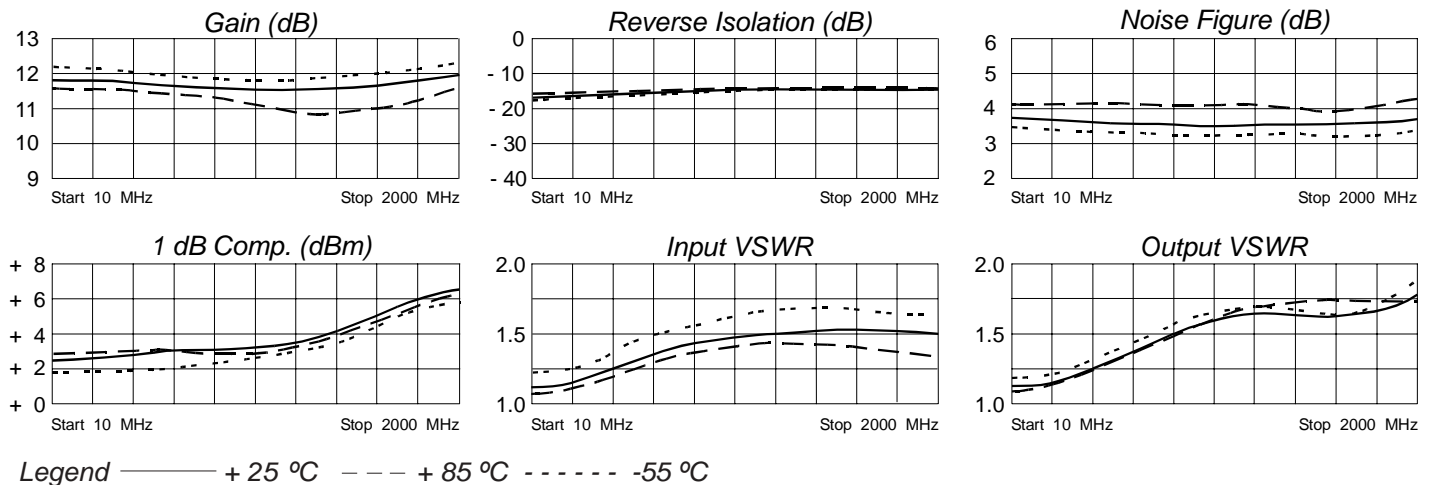
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 2000 MHz	10 - 2000 MHz
Gain (dB)	11.5	10.5 Min.
Power @ 1 dB Comp. (dBm)	>+2	0 Min.
Reverse Isolation (dB)	-15	-14 Max.
VSWR In	<1.5:1	2.0:1 Max.
VSWR Out	<1.75:1	2.0:1 Max.
Noise figure (dB)	<4.0	4.5 Max.
Power Vdc	+15	+15
mA	11	12 Max.

### 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 ..... + 6 dBm  
 Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.5 Watt (3 µsec Max.)

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

### Typical Performance Data



### Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.07	-176	3.92	-179	.15	2	.06	-176
100	.07	149	3.90	172	.15	1	.06	141
200	.08	127	3.89	164	.15	2	.08	111
400	.11	89	3.85	150	.15	2	.12	71
600	.14	63	3.83	135	.16	2	.16	43
800	.17	42	3.79	120	.16	1	.19	15
1000	.19	21	2.73	106	.17	- 3	.21	- 9
1200	.20	1	3.72	91	.17	- 5	.23	- 34
1400	.21	- 21	3.74	76	.17	- 9	.24	- 59
1600	.20	- 41	3.84	62	.18	- 10	.25	- 87
1800	.19	- 68	3.99	47	.18	- 11	.26	-116
2000	.19	- 97	4.10	31	.18	- 12	.27	149



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