

# RF AMPLIFIER

## MODEL *TM9144*

Available as: TM9144, 4 Pin TO-8 (T4)  
 TN9144, 4 Pin Surface Mount (SM3)  
 FP9144, 4 Pin Flatpack (FP4)  
 BX9144, Connectorized Housing (H1)

### Features

- Low Noise Figure: 2.5 dB Typical
- Output Power: 13 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	20 - 1000 MHz	20 - 1000 MHz
Gain (dB)	11	9 Min.
Power @ 1 dB Comp. (dBm)	13	11 Min.
Reverse Isolation (dB)	-16	-15 Max.
VSWR In	1.8:1	2.0:1 Max.
Out	1.8:1	2.0:1 Max.
Noise Figure (dB)	2.5	5.0 Max.
Power Vdc	+15	+15
mA	30	35 Max.

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

### Typical Intermodulation Performance at 25 ° C

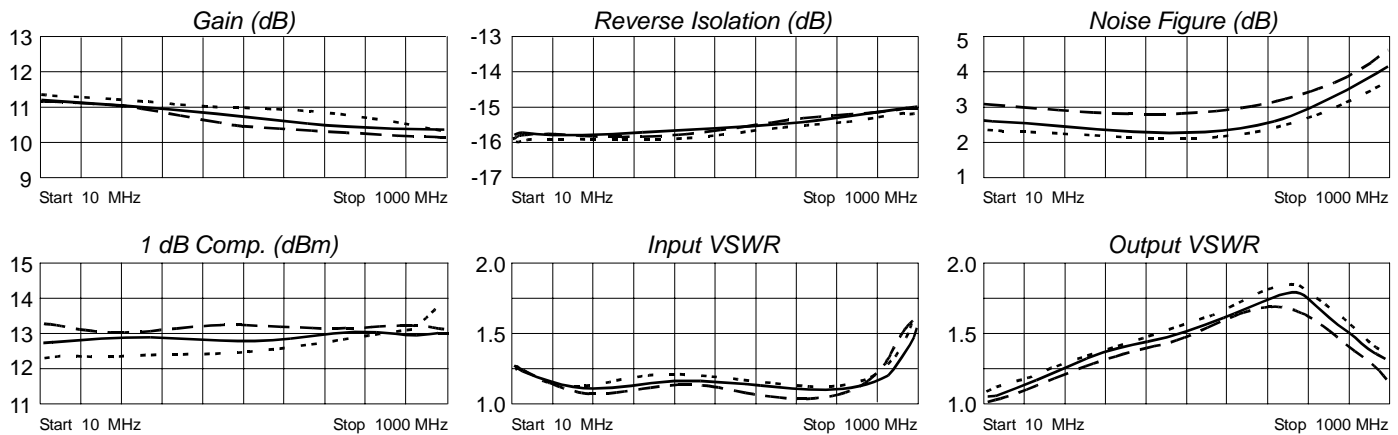
Second Order Harmonic Intercept Point .....+40 dBm (Typ.)  
 Second Order Two Tone Intercept Point .....+35 dBm (Typ.)  
 Third Order Two Tone Intercept Point .....+25 dBm (Typ.)

### 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.)

Legend ——— + 25 °C - - - - + 85 °C - - - - - - - - - -55 °C

### Typical Performance Data



### Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.06	-83	6.40	-174	.1031	7	.09	91
100	.05	74	6.37	164	.1050	-2	.04	50
200	.10	63	6.25	147	.1064	-5	.06	33
300	.14	53	6.13	131	.1092	-9	.07	18
400	.18	41	6.02	115	.1115	-13	.08	1
500	.20	30	5.94	99	.1156	-17	.09	-17
600	.21	20	5.88	84	.1213	-22	.08	-36
700	.21	8	5.86	68	.1231	-27	.08	-52
800	.20	-6	5.91	51	.1305	-32	.07	-69
900	.16	-23	5.95	33	.1337	-39	.05	-79
1000	.09	-53	6.02	13	.1418	-45	.04	-63



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