

# RF AMPLIFIER

## MODEL TZ9404

Available as: TZ9404, 4 Pin TO-8 (T4)  
 TN9404, 4 Pin Surface Mount (SM3)  
 FP9404, 4 Pin Flatpack (FP4)  
 BX9404, Connectorized Housing (H1)  
 PN9404, Reduced Size Surface Mount (SM11)

### Features

- Low Cost
- Cascadable
- Operating Temp. -55 °C to +85 °C
- Environmental Screening Available

### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point ..... +44 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +38 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +30 dBm (Typ.)

### Specifications

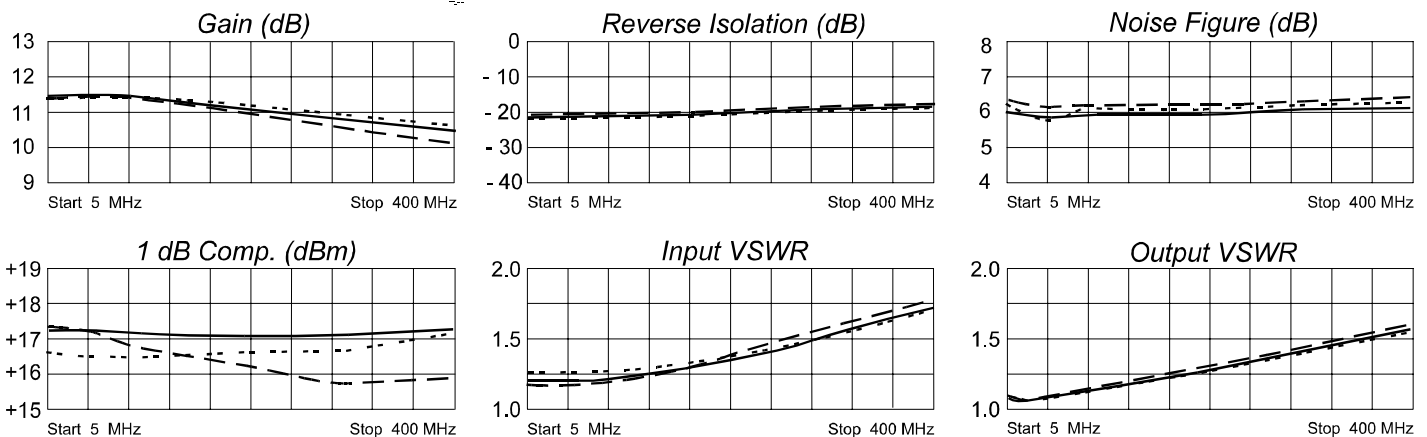
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5 - 400 MHz	5 - 400 MHz
Gain (dB)	11	9.5 Min.
Power @ 1 dB Comp. (dBm)	+17	+15.0 Min.
Reverse Isolation (dB)	-17	-15 Max.
VSWR In	<1.75:1	2.0:1 Max.
VSWR Out	<1.75:1	2.0:1 Max.
Noise Figure (dB)	<6.5	7.5 Max.
Power Vdc	+15	+15
mA	65	72 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 ..... +18 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



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	.11	-167	3.89	-178	.09	4	.03	-111
10	.11	-172	3.90	179	.09	2	.02	-120
50	.11	-167	3.89	167	.09	2	.03	-113
100	.13	-160	3.86	154	.09	5	.07	-120
200	.19	-160	3.76	129	.10	5	.13	-139
300	.26	-174	3.63	103	.12	3	.19	-160
400	.31	164	3.45	78	.13	-4	.25	-179



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 09/24/91

www.SpectrumMicrowave.com Spectrum Microwave · 2707 Black Lake Place · Philadelphia, Pennsylvania 19154 · PH (215) 464-4000 · Fax (215) 464-4001