

# RF AMPLIFIER

## MODEL TZ9409

Available as: TZ9409, 4 Pin TO-8 (T4)  
 TN9409, 4 Pin Surface Mount (SM3)  
 FP9409, 4 Pin Flatpack (FP4)  
 BX9409, Connectorized Housing (H1)  
 PN9409, 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 ..... +43 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +38 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +26 dBm (Typ.)

### Specifications

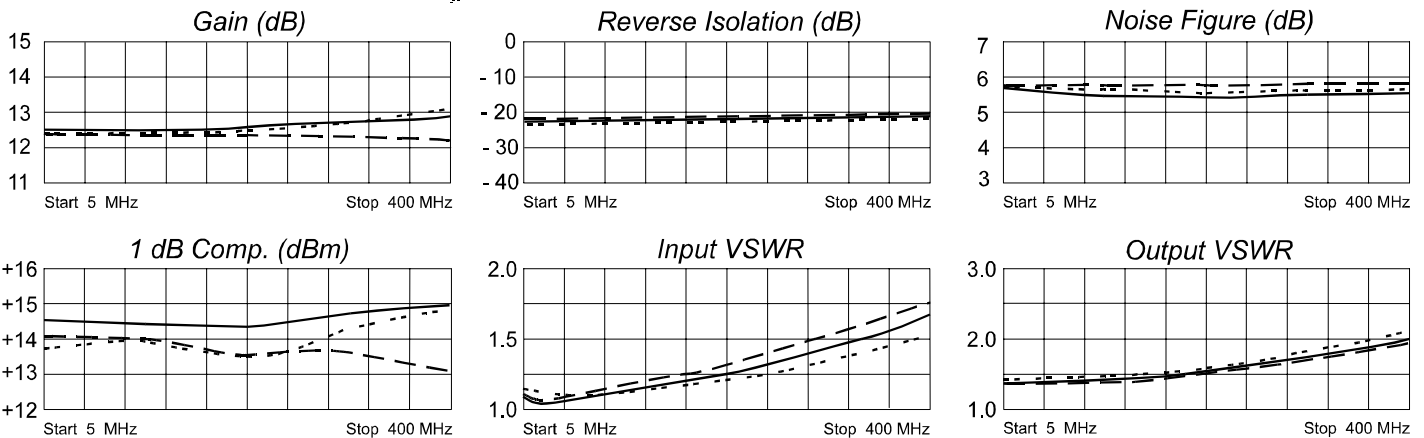
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5 - 400 MHz	5 - 400 MHz
Gain (dB)	12.5	11.0 Min.
Power @ 1 dB Comp. (dBm)	+14.5	+12.5 Min.
Reverse Isolation (dB)	-21.5	-20 Max.
VSWR In	<1.75:1	2.0:1 Max.
VSWR Out	<2.0:1	2.2:1 Max.
Noise Figure (dB)	<5.5	6.5 Max.
Power Vdc	+15	+15
mA	50	55 Max.

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

### 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	.02	-102	4.48	-178	.07	4	.15	- 8
50	.03	-103	4.48	171	.07	1	.15	- 23
100	.05	-100	4.49	160	.07	0	.17	- 43
200	.11	-100	4.55	140	.07	- 1	.21	- 78
300	.17	-106	4.65	118	.08	- 2	.28	-109
400	.25	-114	4.69	95	.08	- 4	.34	-140



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