

# RF AMPLIFIER

## MODEL TZ9402

Available as: TZ9402, 4 Pin TO-8 (T4)  
 TN9402, 4 Pin Surface Mount (SM3)  
 FP9402, 4 Pin Flatpack (FP4)  
 BX9402, Connectorized Housing (H1)  
 PN9402, 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 ..... +33 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +27 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +21 dBm (Typ.)

### Specifications

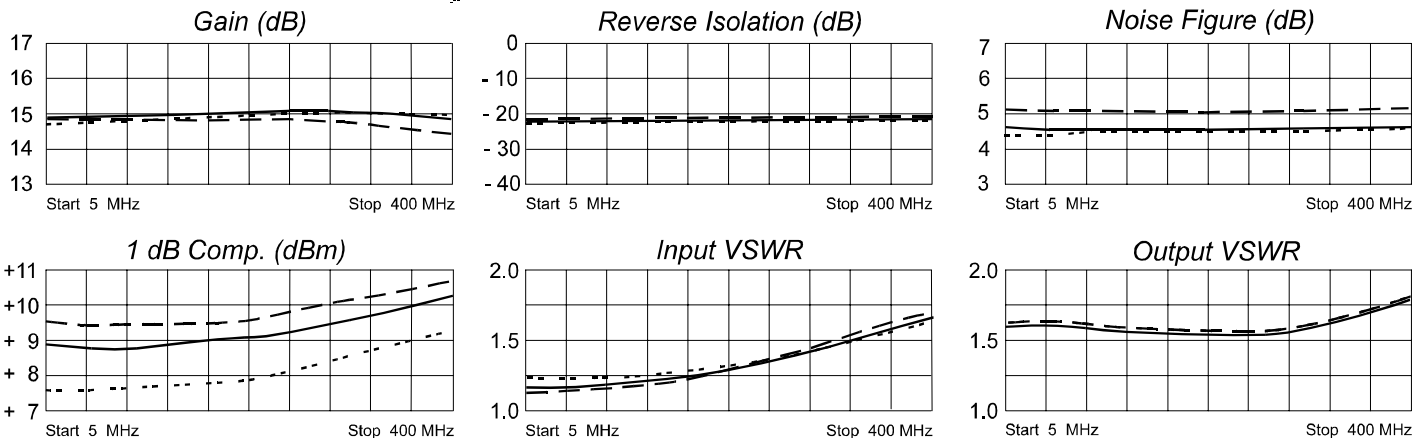
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5 - 400 MHz	5 - 400 MHz
Gain (dB)	15	13.0 Min.
Power @ 1 dB Comp. (dBm)	+8.5	+7.0 Min.
Reverse Isolation (dB)	-20.5	-19 Max.
VSWR In	<1.5:1	2.0:1 Max.
VSWR Out	<1.75:1	2.0:1 Max.
Noise Figure (dB)	<5	6 Max.
Power Vdc	+15	+15
mA	25	28 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	.08	-162	5.70	-178	.07	4	.23	-2
10	.08	-168	5.69	180	.07	1	.23	-3
50	.08	-162	5.69	171	.07	2	.23	-14
100	.09	-148	5.72	160	.07	4	.23	-31
200	.14	-136	5.74	140	.08	5	.22	-67
300	.21	-137	5.80	118	.08	7	.23	-113
400	.28	-145	5.60	93	.09	4	.29	-163



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