

# RF AMPLIFIER

## MODEL *TM9502*

Available as: TM9502, 4 Pin TO-8 (T4)  
 TN9502, 4 Pin Surface Mount (SM3)  
 FP9502, 4 Pin Flatpack (FP4)  
 BX9502, Connectrized Housing (H1)  
 PN9502, Reduced Size Surface Mount (SM11)

### Features

- Medium Gain: 10.5 dB Typical
- Frequency Range: 5 to 1500 MHz
- 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	5 - 1500 MHz	5 - 1500 MHz
Gain (dB)	10.5	8.5 Min.
Power @ 1 dB Comp. (dBm)	+9	+7 Min.
Reverse Isolation (dB)	-13.5	-12.5 Max.
VSWR In	<1.5:1	2.0:1 Max.
VSWR Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	4.0	5.5 Max.
Power Vdc	+15	+15
mA	23	25 Max.

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

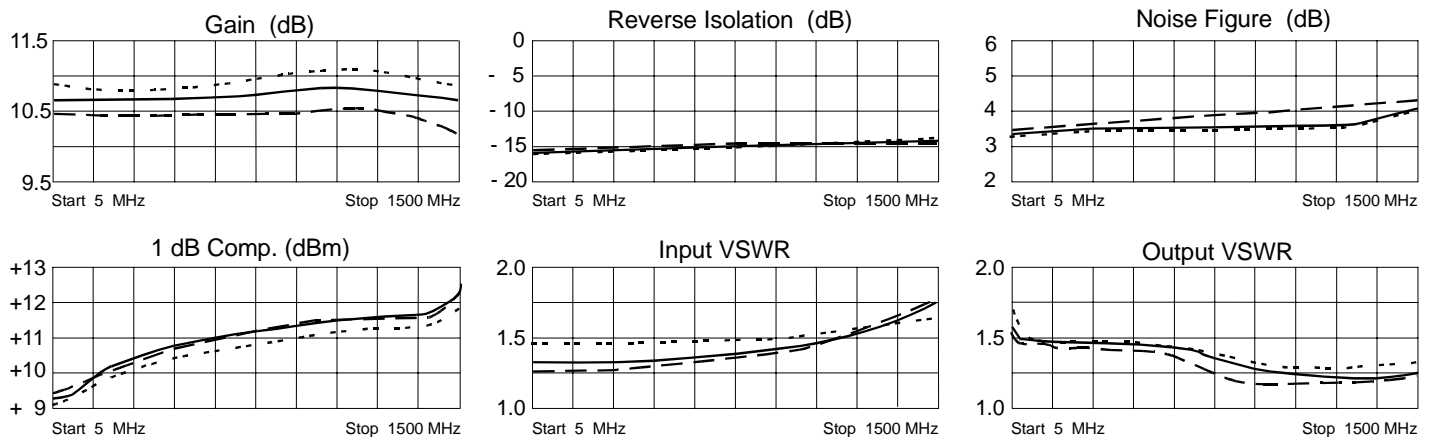
### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point.....+37 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+32 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+24 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.)

### Typical Performance Data



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

### Linear S-Parameters

FREQ. MHz	S11		S12		S21		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
5	.17	-142	3.39	-170	.16	12	.17	152
50	.14	-178	3.40	176	.17	1	.13	168
100	.14	178	3.41	170	.17	- 1	.12	163
250	.15	167	3.40	153	.17	- 3	.12	146
500	.16	155	3.41	126	.17	- 7	.11	120
750	.17	141	3.43	100	.18	-12	.09	94
1000	.18	134	4.43	73	.18	-15	.06	76
1250	.24	123	4.59	42	.20	-23	.08	92
1500	.30	111	3.44	12	.21	-28	.10	87



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