

# RF AMPLIFIER

## MODEL *TM7102*

Available as: TM7102, 4 Pin TO-8 (T4)  
 TN7102-3, 4 Pin Surface Mount (SM3)  
 FP7102-4, 4 Pin Flatpack (FP4)  
 BX7102, Connectorized Housing (H1)

### Features

- Low Noise Figure: 2 dB Typical
- Medium Output Power: +17 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 - 150 MHz	20 - 150 MHz
Gain (dB)	24.5	22.5 Min.
Power @ 1 dB Comp. (dBm)	+17	+16.0 Min.
Reverse Isolation (dB)	-28	-27 Max.
VSWR In	<1.5:1	2.0:1 Max.
VSWR Out	<1.5:1	2.0:1 Max.
Noise figure (dB)	2.0	3.0 Max.
Power Vdc	+15	+15
mA	31	35 Max.

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

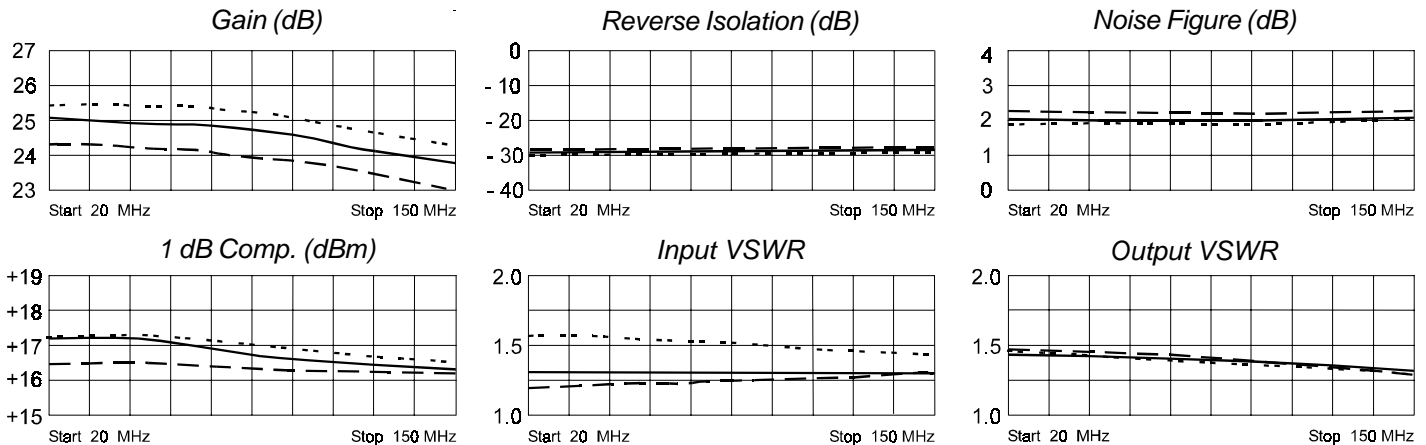
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +46 (Typ.)  
 Second Order Two Tone Intercept Point ..... +40 (Typ.)  
 Third Order Two Tone Intercept Point ..... +29 (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		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.13	-148	17.84	-179	.04	6	.20	163
20	.13	-162	17.93	173	.03	2	.18	169
50	.13	-169	17.64	157	.04	4	.17	174
100	.12	-171	16.64	133	.03	-5	.16	178
150	.12	-166	15.32	111	.04	-7	.13	-180
200	.12	-158	13.90	90	.04	-13	.10	-165



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