

# RF AMPLIFIER

## MODEL *TM7104*

Available as: TM7104, 4 Pin TO-8 (T4)  
 TN7104, 4 Pin Surface Mount (SM3)  
 FP7104, 4 Pin Flatpack (FP4)  
 BX7104, Connectorized Housing (H1)

### Features

- High Gain: 24 dB Typical
- Low Noise Figure: 1.9 dB 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	5-150 MHz	5-150 MHz
Gain (dB)	24	22.5 Min.
Power @ 1 dB Comp. (dBm)	+12	+10.5 Min.
Reverse Isolation (dB)	-27	-26 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.75:1	2.0:1 Max.
Noise figure (dB)	1.9	2.5 Max.
Power Vdc	+5	+5 Min.
mA	20	23 Max.

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

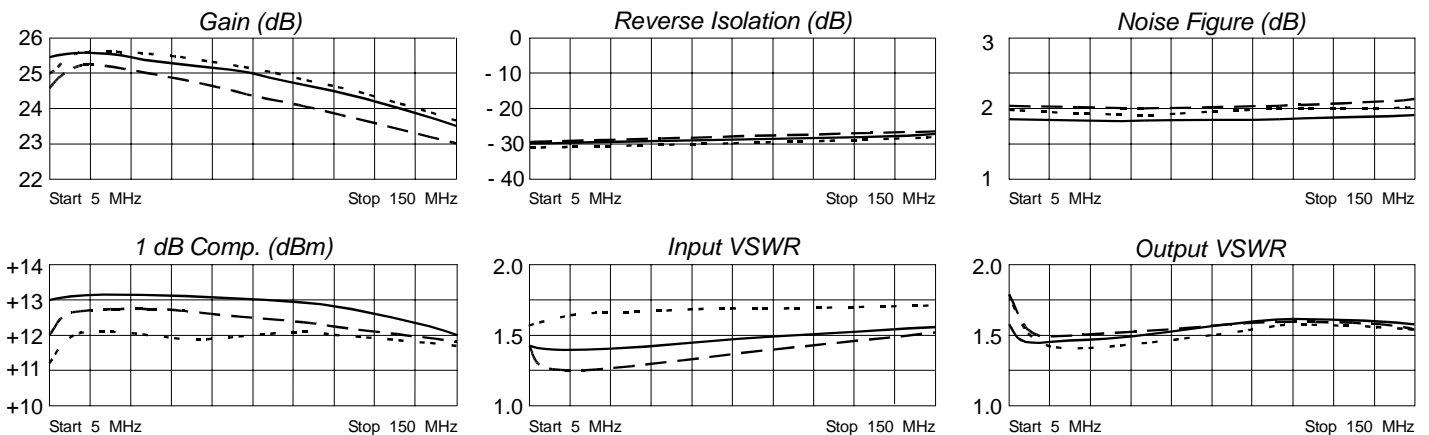
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point..... +37 dBm (Typ.)  
 Second Order Two Tone Intercept Point..... + 31 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +25 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 ..... + 8 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	.20	-146	18.83	-173	.03	9	.24	169
10	.19	-162	19.10	179	.03	5	.21	171
20	.20	-170	19.08	170	.03	1	.20	174
50	.21	-174	18.44	149	.03	- 2	.20	173
100	.24	-180	16.68	118	.04	- 6	.22	161
150	.27	-172	14.75	91	.04	-12	.21	137
200	.30	-160	12.98	65	.04	-23	.19	101

