

# RF AMPLIFIER

## MODEL *TM7103*

Available as: TM7103, 4 Pin TO-8 (T4)  
 TN7103, 4 Pin Surface Mount (SM3)  
 FP7103, 4 Pin Flatpack (FP4)  
 BX7103, Connectorized Housing (H1)

### Features

- High Gain: 26.5 dB Typical
- Low Noise Figure: 2.3 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)	26.5	25.0 Min.
Power @ 1 dB Comp. (dBm)	+9.5	+8.0 Min.
Reverse Isolation (dB)	-31	-30 Max.
VSWR In	1.40:1	2.0:1 Max.
Out	1.40:1	2.0:1 Max.
Noise Figure (dB)	2.3	2.75 Max.
Power Vdc	+5	+5 Min.
mA	15.5	18 Max.

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

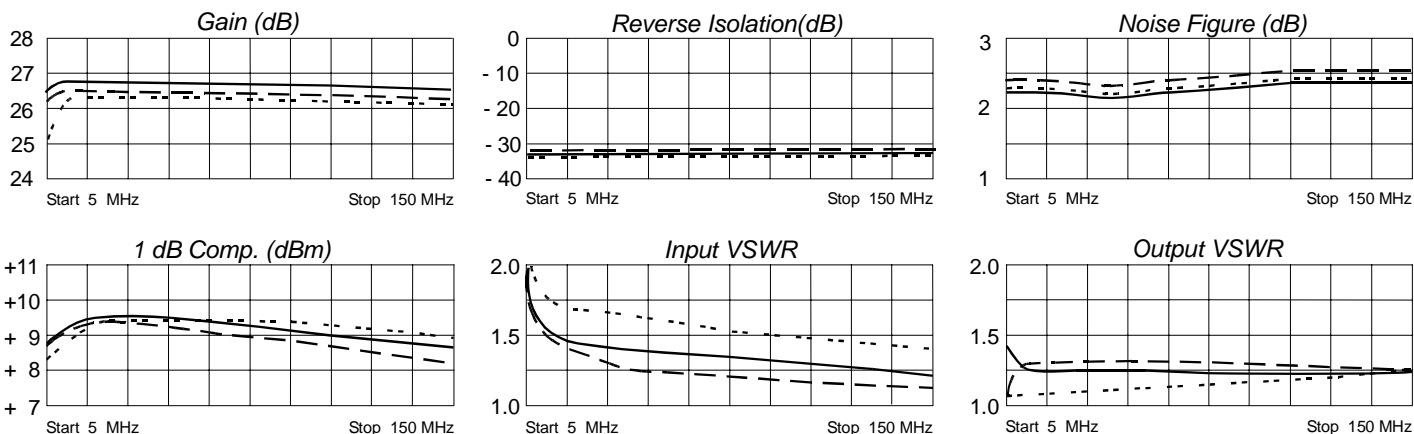
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point..... +34 dBm (Typ.)  
 Second Order Two Tone Intercept Point..... +28 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +23 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	.36	- 97	22.85	-152	.02	5	.06	91
25	.21	-169	25.53	171	.02	1	.07	23
50	.19	162	25.21	153	.03	2	.07	16
100	.16	124	24.55	123	.03	- 5	.07	15
150	.13	83	23.90	94	.03	-13	.08	20

