

# RF AMPLIFIER

## MODEL *TM3004*

Available as: TM3004, 4 Pin TO-8 (T4)  
 TN3004, 4 Pin Surface Mount (SM3)  
 BX3004, Connectorized Housing (H1)

### Features

- High Gain: 22.8 dB Typical
- Low Noise Figure: 1.8 dB Typical
- Operating Temp. - 30 °C to + 55 °C
- Environmental Screening Available

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -30 °C to +55 °C
Frequency	225 - 400 MHz	225 - 400 MHz
Gain (dB)	22.8	22.0 Min.
Power @ 1 dB Comp. (dBm)	+6.5	+5.5 Min.
Reverse Isolation (dB)	-26	-25 Max.
VSWR In	<1.25:1	2.0:1 Max.
Out	<1.25:1	2.0:1 Max.
Noise Figure (dB)	1.8	2.5 Max.
Power Vdc	+15	+15
mA	15	16 Max.

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

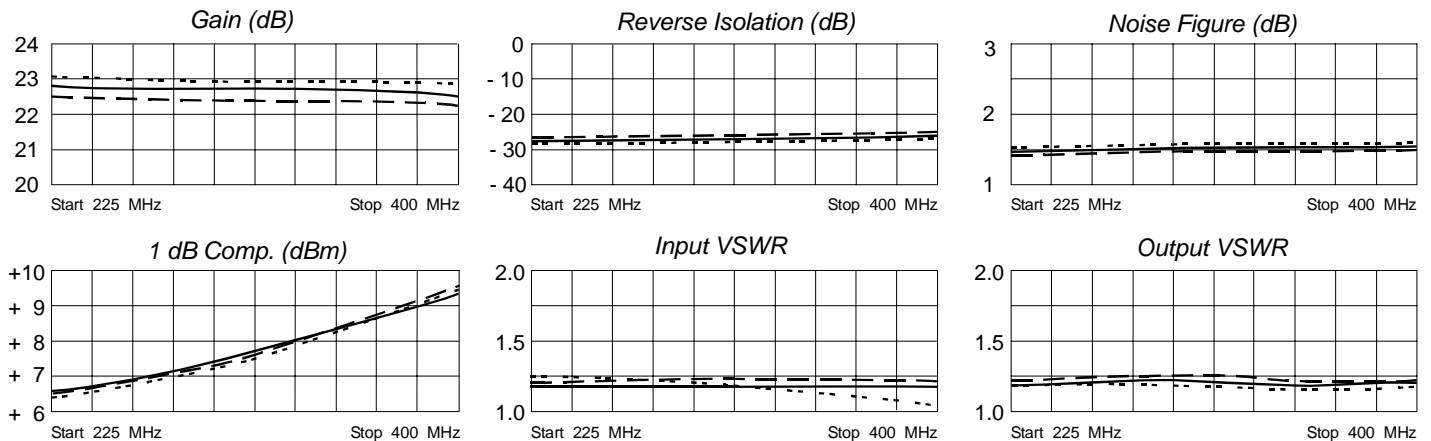
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point.....+26 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+20 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+18 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 - - - - + 55 °C ······ -30 °C

#### Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
200	.08	26	13.85	113	.04	- 6	.09	- 28
225	.08	13	13.70	105	.04	- 9	.10	- 42
250	.09	3	13.63	96	.04	- 9	.10	- 55
300	.09	- 22	13.49	80	.05	- 12	.11	- 87
350	.10	- 50	13.42	62	.05	- 17	.10	-125
400	.10	- 83	13.29	42	.05	- 19	.09	175
450	.10	-122	12.88	20	.05	-25	.14	107
500	.10	-167	11.80	- 3	.06	-33	.24	57

