

# RF AMPLIFIER

## MODEL *TM3013*

Available as: TM3013, 4 Pin TO-8 (T4)  
 TN3013, 4 Pin Surface Mount (SM3)  
 FP3013, 4 Pin Flatpack (FP4)  
 BX3013, Connectorized Housing (H1)

### Features

- High Output Power with Low Noise Figure
- High Third Order Intercept: +37 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	10 - 1700 MHz	10 - 1700 MHz
Gain (dB)	14.0	13.0 Min.
Power @ 1 dB Comp. (dBm)	>+23.0	+22.5 Min.
Reverse Isolation (dB)	- 20	-18 Max.
VSWR In	<1.8:1	2:0:1 Max.
Out	<1.5:1	2:0:1 Max.
Noise Figure (dB) *	<2.5	3.2 Max.
Power Vdc	+15	+15
mA	108	115 Max.

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

\* Noise Figure is greater below 50 MHz

### Typical Intermodulation Performance at 25 ° C

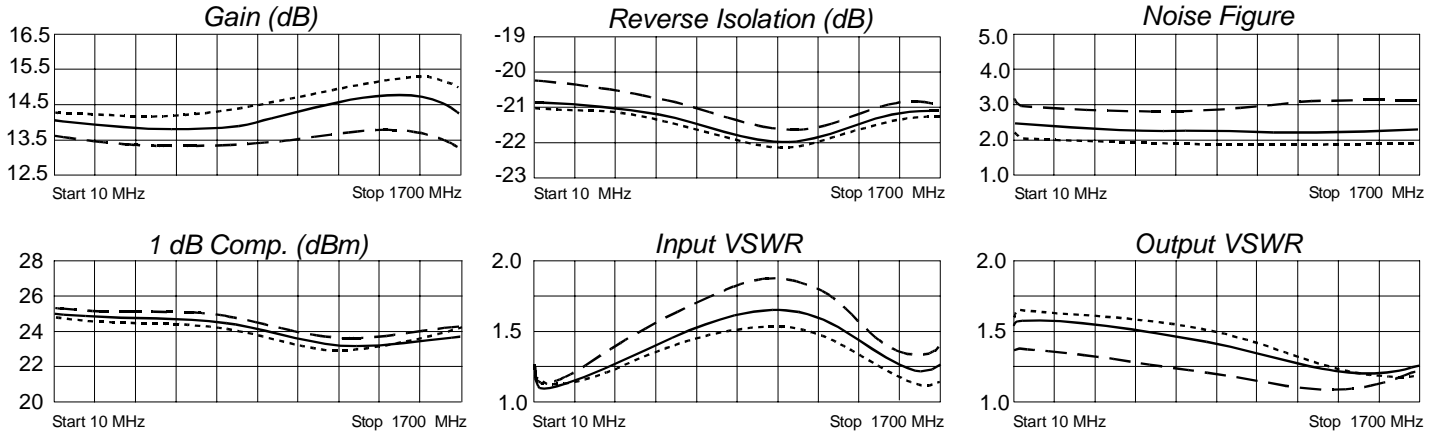
Second Order Harmonic Intercept Point ..... +56 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +50 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +37 dBm (Typ.)

### 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 ..... + 20 dBm  
 Short Term RF Input Power .... 150 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.5 Watt (3 µsec Max.)

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

### Typical Performance Data



### Linear S-Parameters

Freq. MHz	---S11---		---S21---		---S12---		---S22---	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.09	-85	5.04	-172	.09	0	.21	1.25
200	.07	-103	5.04	161	.09	-8	.22	1.27
500	.16	-124	5.05	132	.09	-20	.20	1.29
800	.21	-147	5.09	103	.09	-32	.17	1.29
1100	.23	-176	5.19	72	.09	-45	.12	1.28
1400	.17	139	5.38	36	.09	-60	.10	1.24
1700	.14	34	5.15	-7	.09	-83	.17	1.27



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