

# RF AMPLIFIER

## MODEL *TM6171*

Available as: TM6171, 4 Pin TO-8 (T4)  
 TN6171, 4 Pin Surface Mount (SM3)  
 FP6171, 4 Pin Flatpack (FP4)  
 BX6171, Connectorized Housing (H1)

### Features

- Low Noise Figure: 2.3 dB Typical
- High Gain: 15.2 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 - 500 MHz	5 - 500 MHz
Gain (dB)	15.2	14.0 Min.
Power @ 1 dB Comp. (dBm)	+05	-2 Min.
Reverse Isolation (dB)	-21	-20 Max.
VSWR In	<1.6:1	2.0:1 Max.
Out	<1.4:1	2.0:1 Max.
Noise Figure (dB)	2.3	3.0 Max.
Power Vdc	+15	+15
mA	11	12 Max.

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

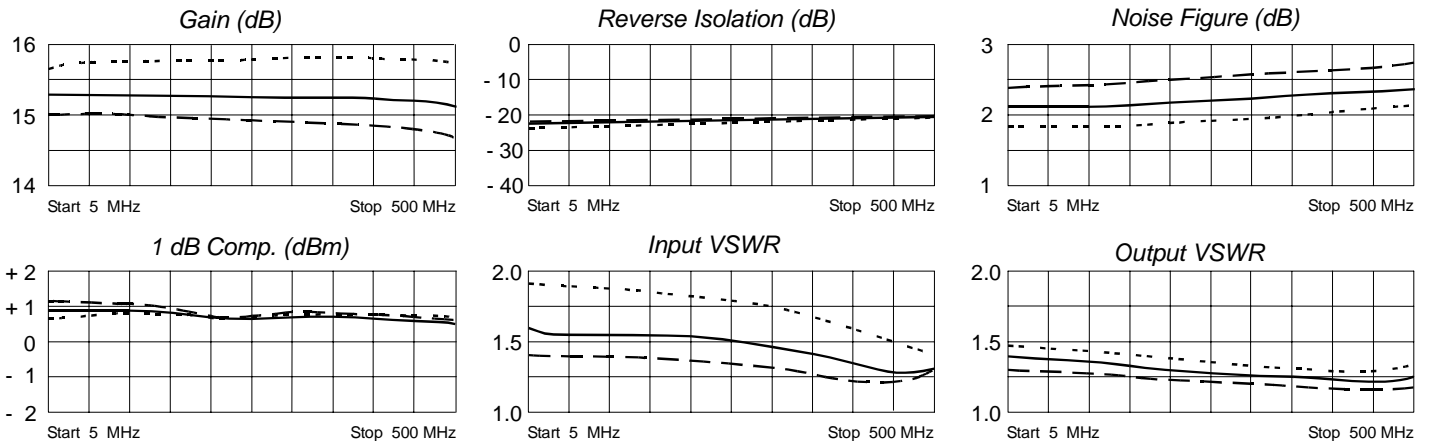
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point.....+21 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+15 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+12 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 ..... + 10 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	.22	-175	5.74	-178	.07	4	.16	-175
50	.21	165	5.75	167	.07	- 2	.16	170
100	.21	150	5.73	153	.08	- 5	.15	160
200	.20	123	5.71	127	.08	-11	.13	138
300	.18	102	5.73	99	.08	-18	.12	114
400	.14	95	5.75	70	.09	-28	.10	84
500	.13	126	5.71	38	.09	-40	.11	35
600	.29	136	5.37	2	.10	-53	.16	- 17



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