

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.

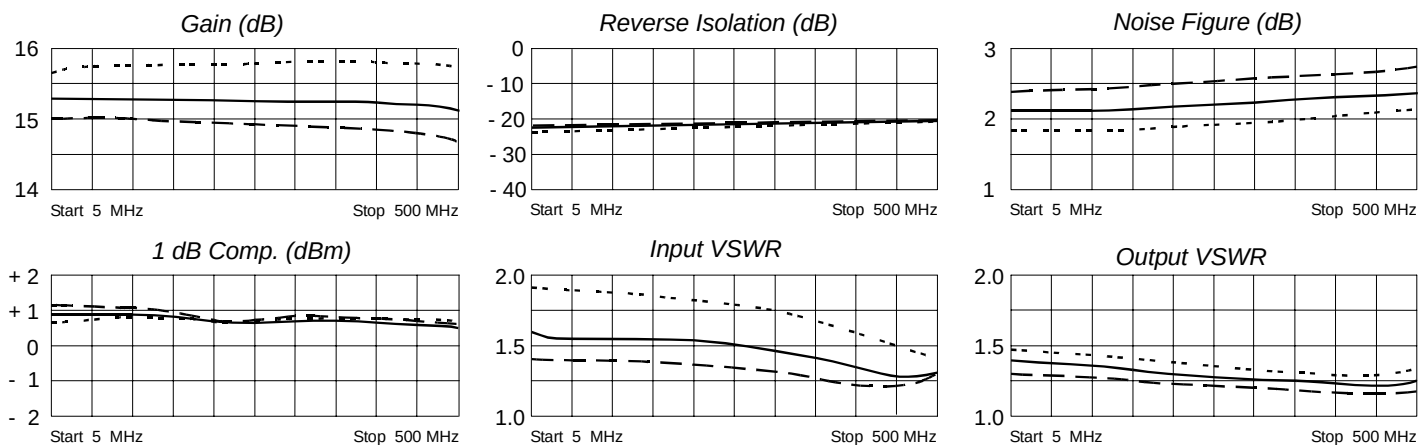
Typical Intermodulation Performance at 25 ° C

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



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 06/30/04

www.spectrummicrowave.com Spectrum Microwave (Europe) · 2707 Black Lake Place · Philadelphia, Pa. 19154 · PH (215) 464-4000 · Fax (215) 464-4001