

# RF AMPLIFIER

## MODEL *TM6176*

Available as: TM6176, 4 Pin TO-8 (T4)  
 TN6176, 4 Pin Surface Mount (SM3)  
 FP6176, 4 Pin Flatpack (FP4)  
 BX6176, Connectorized Housing (H1)

### Features

- Noise Figure: <4.0 dB Typical
- Medium Output Power: +14 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	5-1000 MHz	5-1000 MHz
Gain (dB)	13.5	12.0 Min.
Power @ 1 dB Comp. (dBm)	+14	+12.0 Min.
Reverse Isolation (dB)	-16	-15 Max.
VSWR In	<1.5:1	2.0:1 Max.
Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	<4.0	5.0 Max.
Power Vdc	+15	+15 Min.
mA	38	41 Max.

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

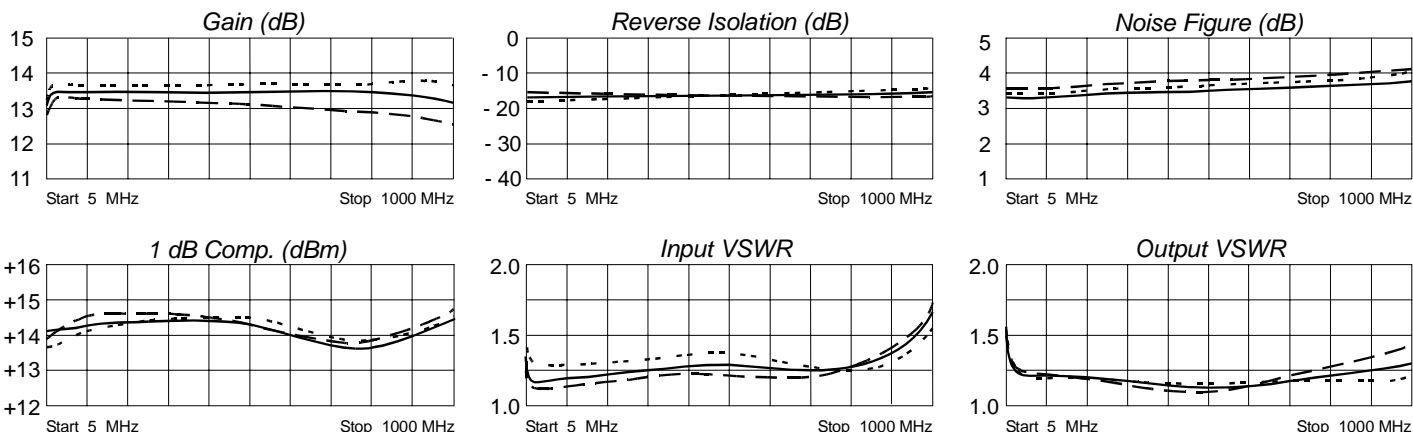
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point..... +46 dBm (Typ.)  
 Second Order Two Tone Intercept Point..... +40 dBm (Typ.)  
 Third Order Two Tone Intercept Point..... +27 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	.12	- 51	4.60	-170	.11	10	.17	144
50	.05	1	4.73	173	.11	- 1	.09	165
100	.06	18	4.72	164	.11	- 3	.08	165
200	.08	26	4.71	148	.12	- 6	.07	159
400	.14	12	4.70	115	.12	-15	.04	168
600	.16	- 25	4.65	81	.13	-25	.04	-140
800	.14	- 93	4.49	46	.13	-38	.07	-124
1000	.23	172	4.23	6	.13	-52	.14	-118



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 05/11/05

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