

# RF AMPLIFIER

## MODEL *TM6181*

Available as: TM6181, 4 Pin TO-8 (T4)  
 TN6181, 4 Pin Surface Mount (SM3)  
 FP6181-4, 4 Pin Flatpack (FP4)  
 BX6181, Connectorized Housing (H1)

### Features

- Low Noise Figure: 1.7 dB Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +45 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +40 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +23 dBm (Typ.)

### Specifications

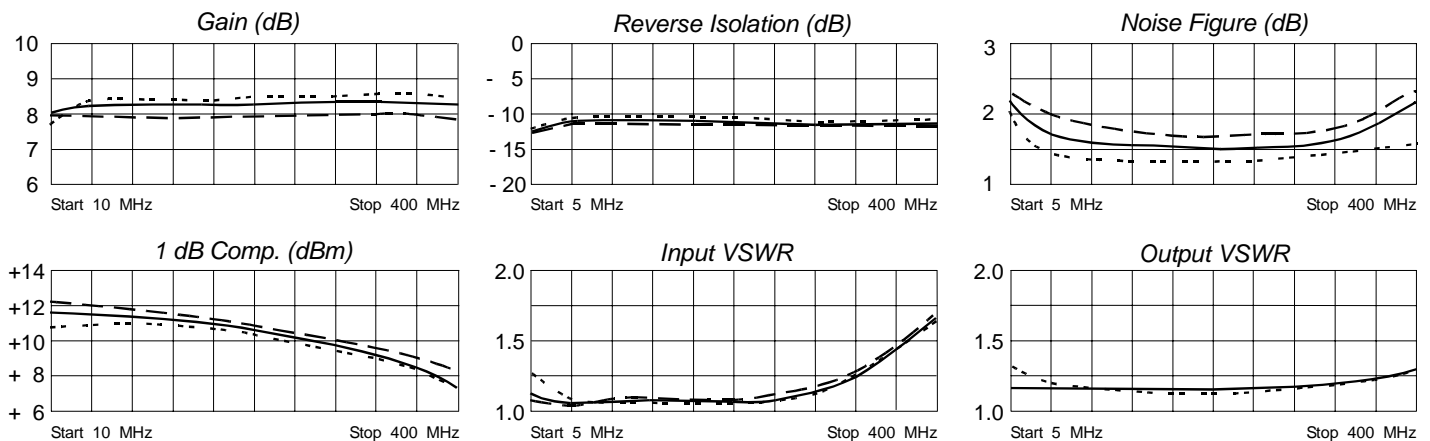
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 400 MHz	10 - 400 MHz
Gain (dB)	8.5	7.5 Min.
Power @ 1 dB Comp. (dBm)	> +8	+7.0 Min.
Reverse Isolation (dB)	-10.5	-10 Max.
VSWR In	1.15:1	2.0:1 Max.
Out	1.20:1	2.0:1 Max.
Noise Figure (dB)	1.7	2.5 Max.
Power Vdc	+15	+15
mA	11	15 Max.

### 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.)

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

### Typical Performance Data



### Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
5	.05	172	2.56	3	.29	3	.06	168
50	.04	169	2.58	-10	.29	-10	.05	171
100	.04	168	2.57	-21	.29	-20	.05	160
200	.04	-169	2.58	-43	.28	-41	.06	158
300	.11	-157	2.60	-66	.26	-63	.11	159
400	.25	-177	2.61	-92	.25	-88	.21	147

