

# RF AMPLIFIER

## MODEL *TM6191PM*

Available as: TM6191PM, 4 Pin TO-8 (T4)  
 TN6191PM, 4 Pin Surface Mount (SM3)  
 FP6191PM, 4 Pin Flatpack (FP4)  
 BX6191PM, Connectorized Housing (H1)

### Features

- Low Noise Figure: 2.5 dB Typical
- Medium Output Power: +21.5 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	100 - 600 MHz	100 - 600 MHz
Gain (dB)	23.5	22.0 Min.
Power @ 1 dB Comp. (dBm)	+21.5	+20 Min.
Reverse Isolation (dB)	-35	-33 Max.
VSWR In	<1.25:1	2.0:1 Max.
VSWR Out	<1.50:1	3.0:1 Max.
Noise Figure (dB)	2.5	4.0 Max.
Power Vdc	+15	+15
mA	95	100 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 ..... +57 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +52 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +36 dBm (Typ.)

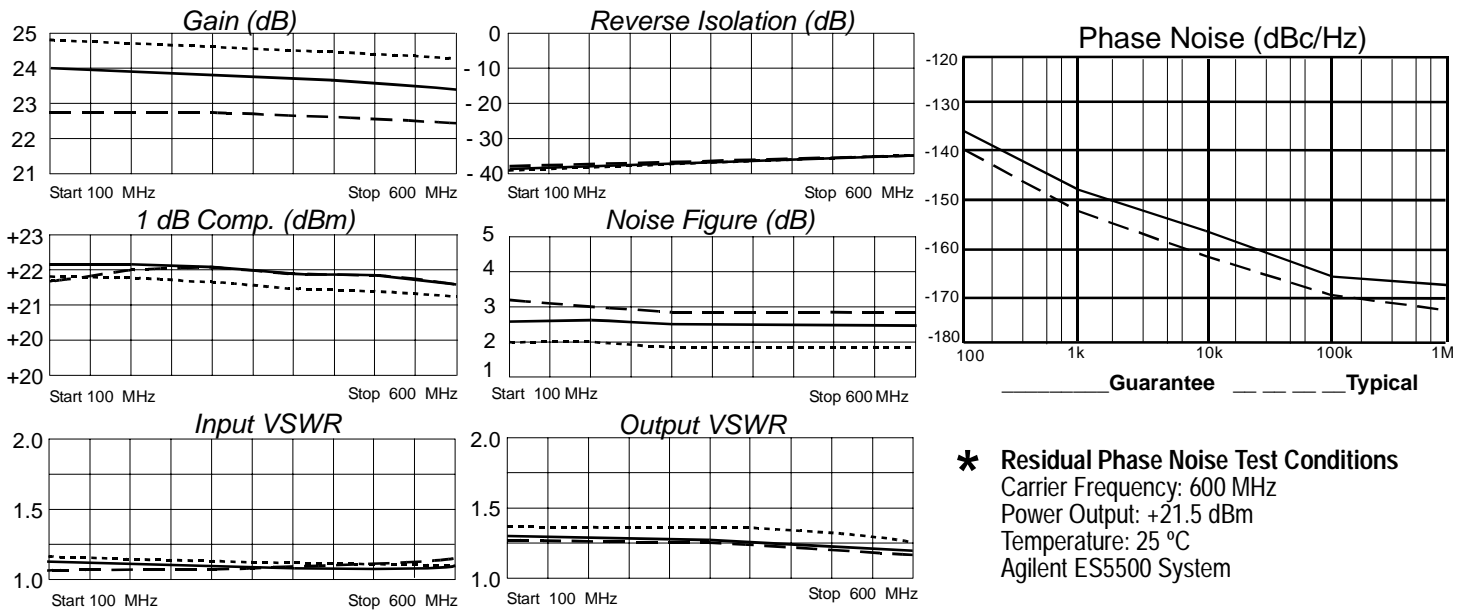
### Maximum Ratings

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 ..... +13 dBm  
 Short Term RF Input Power.... 200 Milliwatts (1 Minute Max.)  
 Maximum Peak Power..... 0.5 Watt (3 µsec Max.)

### Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee
100 Hz	-140	-136
1 kHz	-152	-148
10 kHz	-161	-157
100 kHz	-169	-165
1 MHz	-172	-168

### Typical Performance Data



\* Residual Phase Noise Test Conditions  
 Carrier Frequency: 600 MHz  
 Power Output: +21.5 dBm  
 Temperature: 25 °C  
 Agilent ES5500 System

### Linear S-Parameters

FREQ. MHz	---S11---		---S21---		---S12---		---S22---	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
100	.05	175	15.95	-17	.0131	3	.12	-173
200	.04	175	15.83	-39	.0129	2	.09	173
300	.03	-179	15.73	-59	.0146	4	.13	162
400	.02	-170	15.60	-80	.0155	5	.14	177
500	.02	-139	15.42	-101	.0163	1	.10	-167
600	.01	-98	14.93	-122	.0172	-1	.04	148

