

# RF AMPLIFIER

## MODEL **TM3121PM**

Available as: TM3121PM, 4 Pin TO-8 (T4)  
 TN3121PM, 4 Pin Surface Mount (SM3)  
 FP3121PM, 4 Pin Flatpack (FP4)  
 BX3121PM, Connectorized Housing (H1)

### Features

- Superior Phase Noise Performance
- High Output Power: +27.5 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 (MHz)	10 - 300 MHz	10 - 300 MHz
Gain (dB)	13.5	13 Min.
Power @ 1 dB Comp. (dBm)	+27.5	+27 Min.
Reverse Isolation (dB)	-17	-16 Max.
VSWR In	1.5:1	2.0:1 Max.
VSWR Out	1.5:1	2.0:1 Max.
Noise Figure (dB)	5.0	6.0 Max.
Power Vdc	+12	+12
mA	180	185 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 ..... +65 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +60 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +44 dBm (Typ.)

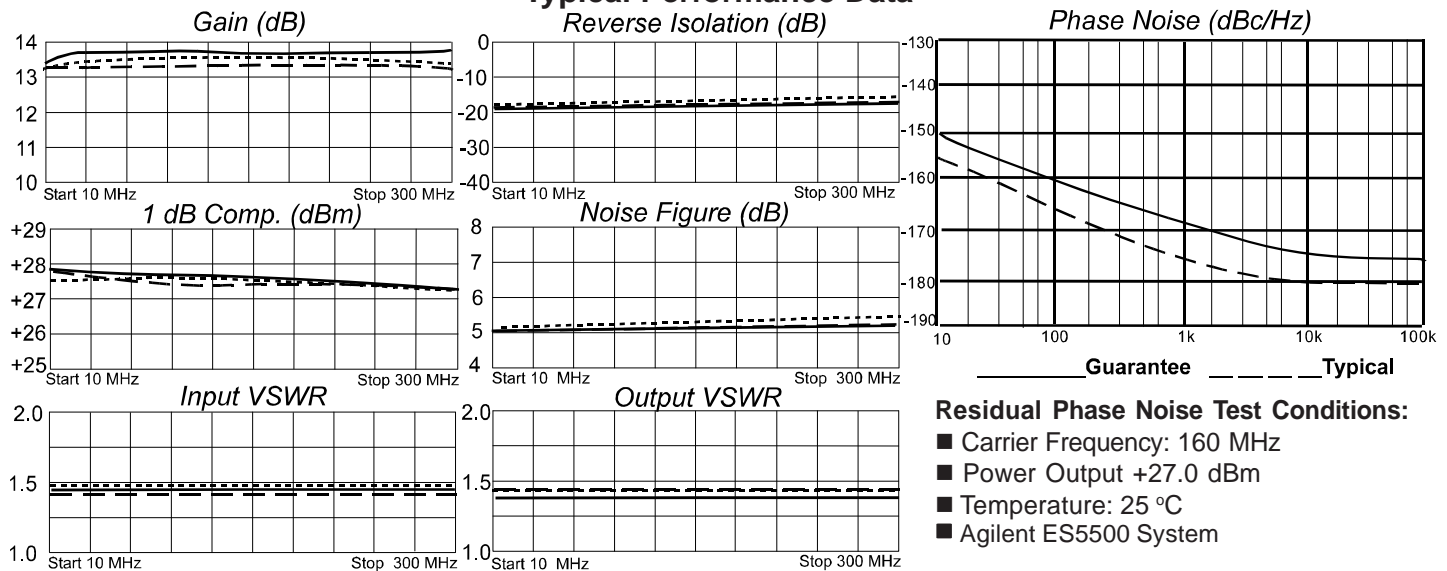
### Maximum (No Damage) Ratings

Ambient Operating Temperature ..... -55°C to +100 °C  
 Storage Temperature ..... -62°C to +125 °C  
 Case Temperature ..... +125 °C  
 DC Voltage ..... +15 Volts  
 Continuous RF Input Power ..... +15 dBm  
 Short Term RF Input Power ..... 100 mW (1 Minute Max.)  
 Maximum Peak Power ..... 0.2 Watt (3 µsec Max.)

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

Frequency	Typical	Guarantee
10 Hz	-155	-150
100 Hz	-165	-160
1 kHz	-175	-170
10 kHz	-180	-175
100 kHz	-180	-175
1 MHz	-180	-175

### Typical Performance Data



Legend ——— +25 °C - - - +85 °C ····· -55 °C

### Residual Phase Noise Test Conditions:

- Carrier Frequency: 160 MHz
- Power Output +27.0 dBm
- Temperature: 25 °C
- Agilent ES5500 System

