

RF AMPLIFIER

MODEL *TM5119PM*

Available as: TM5119PM, 4 Pin TO-8 (T4)
 TN5119PM, 4 Pin Surface Mount (SM3)
 FP5119PM, 4 Pin Flatpack (FP4)
 BX5119PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- Low Noise Figure: 2.25 dB Typical
- Medium Output Power: +16 dBm Typical
- Operating Temp. -55 °C to +85 °C

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5 - 500 MHz	5 - 500 MHz
Gain (dB)	15.5	14.0 Min.
Power @ 1 dB Comp. (dBm)	+16	+14 Min.
Reverse Isolation (dB)	-19	-18 Max.
VSWR In	<1.75:1	2.0:1 Max.
Out	<1.75:1	2.0:1 Max.
Noise Figure (dB)	2.25	3.0 Max.
Power Vdc	+15	+15
mA	30	35 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 +49 dBm (Typ.)
 Second Order Two Tone Intercept Point +44 dBm (Typ.)
 Third Order Two Tone Intercept Point +32 dBm (Typ.)

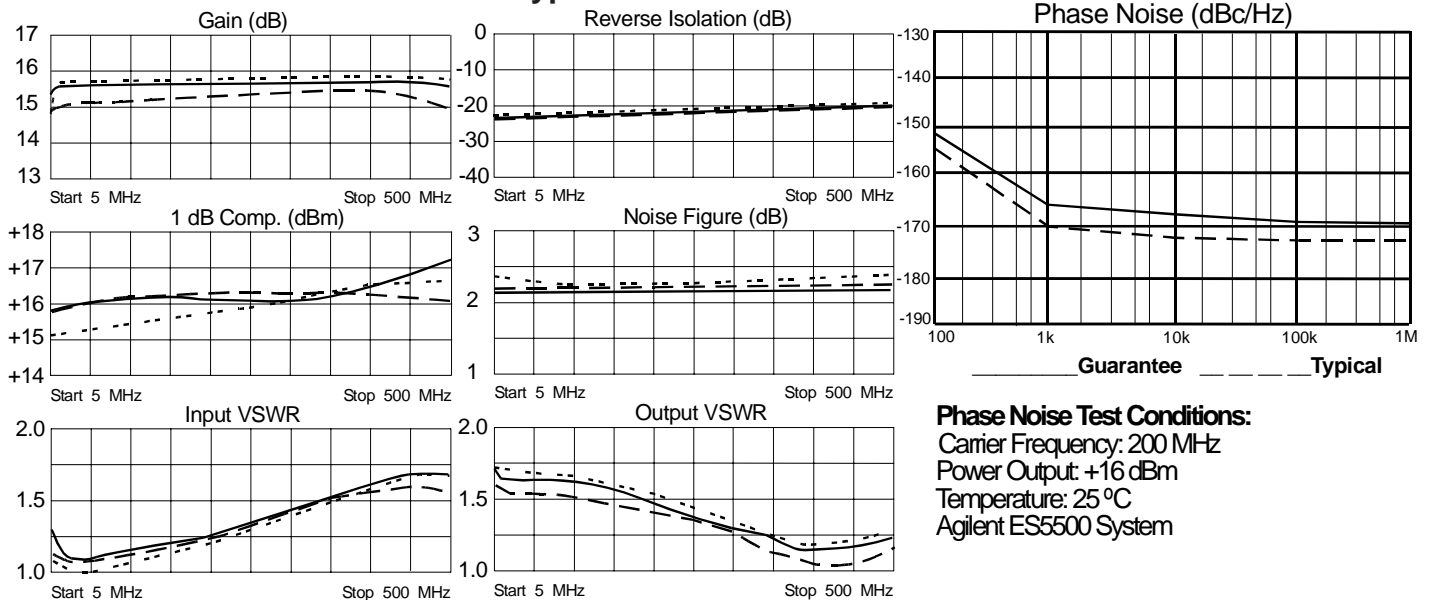
Maximum Ratings

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 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 μsec Max.)

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee (Min.)
100 Hz	-155	-151
1 kHz	-170	-166
10 kHz	-172	-168
100 kHz	-173	-169
1 MHz	-173	-169

Typical Performance Data



Phase Noise Test Conditions:

Carrier Frequency: 200 MHz
 Power Output: +16 dBm
 Temperature: 25 °C
 Agilent ES5500 System

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	.11	- 57	5.84	-164	.09	-163	.26	- 14
50	.05	- 29	6.00	169	.09	168	.24	- 12
100	.06	- 41	6.00	157	.10	151	.23	- 22
200	.11	- 66	6.04	132	.10	123	.19	- 44
300	.18	-100	6.13	106	.11	98	.12	- 77
400	.23	-139	6.12	78	.11	75	.05	-150
500	.26	178	5.89	48	.11	52	.12	104



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