

RF AMPLIFIER

MODEL *TM9119PM*

Available as: TM9119PM, 4 Pin TO-8 (T4)
 TN9119PM, 4 Pin Surface Mount (SM3)
 FP9119PM, 4 Pin Flatpack (FP4)
 BX9119PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- High Output Power: +21 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	10 - 1000 MHz	10 - 1000 MHz
Gain (dB)	9.0	7.0 Min.
Power @ 1 dB Comp. (dBm)	+21	+19.0 Min.
Reverse Isolation (dB)	-13	-12 Max.
VSWR In	<1.5:1	2.0:1 Max.
VSWR Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	8.5	11.0 Max.
Power Vdc	+15	+15
Power mA	100	110 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 +45 dBm (Typ.)
 Second Order Two Tone Intercept Point +40 dBm (Typ.)
 Third Order Two Tone Intercept Point +34 dBm (Typ.)

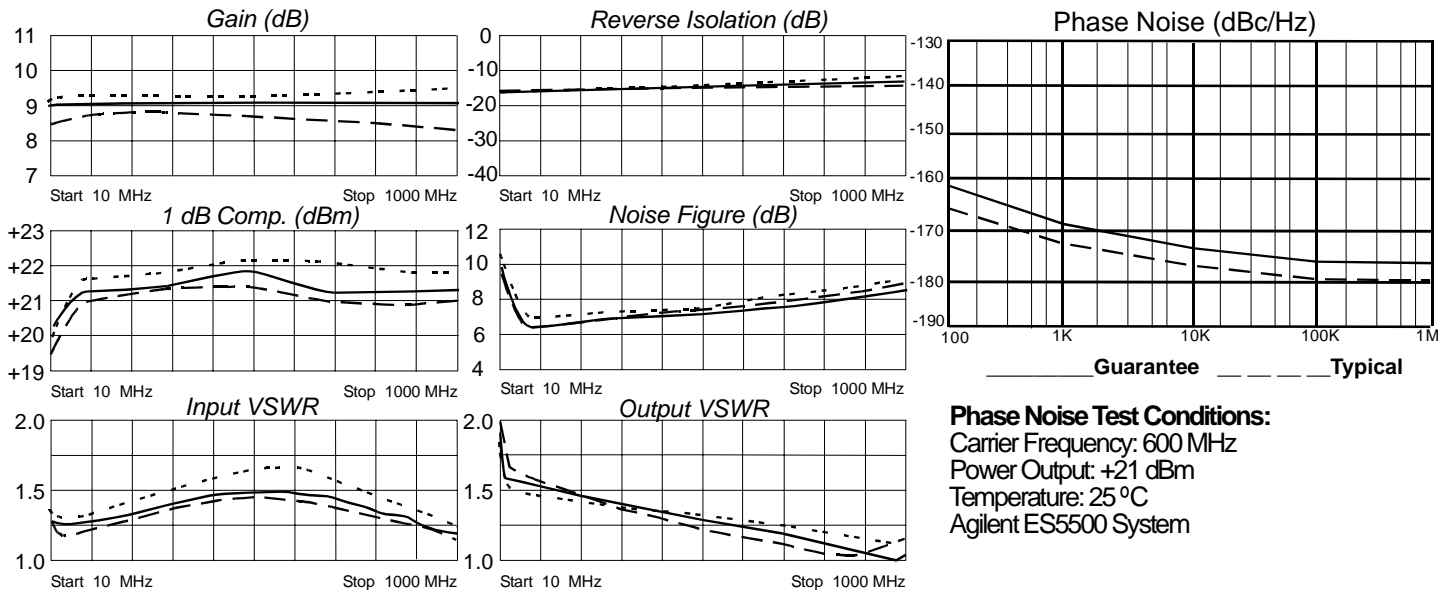
Maximum Ratings

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 +18 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	-165	-161
1 kHz	-172	-168
10 kHz	-177	-173
100 kHz	-179	-175
1 MHz	-179	-175

Typical Performance Data



Phase Noise Test Conditions:

Carrier Frequency: 600 MHz
 Power Output: +21 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
10	.16	-131	2.82	-170	.15	13	.27	154
50	.15	174	2.83	175	.17	2	.22	167
100	.16	154	2.84	167	.17	0	.21	165
300	.22	101	2.84	136	.18	-5	.17	144
500	.27	67	2.83	106	.19	-11	.13	131
700	.27	41	2.83	75	.21	-20	.08	121
900	.19	26	2.85	44	.22	-31	.03	101
1000	.13	38	2.84	27	.22	-39	.02	-47



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 3/31/04

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