

RF AMPLIFIER

MODEL *TM5125PM*

Available as: TM5125PM, 4 Pin TO-8 (T4)
 TN5125PM, 4 Pin Surface Mount (SM3)
 BX5125PM, Connectorized Housing (H1)

Features

- High Gain: 20.5 dB Typical
- High Power: +24 dBm Typical
- Low Noise: 2.0 dB 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	5 - 125 MHz	10 - 100 MHz
Gain (dB)	20.5	19.5 Min/21 Max.
Power @ 1 dB Comp. (dBm)	+24.0	+22.5 Min.
Reverse Isolation (dB)	-24	-23 Max.
VSWR In	1.7:1	2.0:1 Max.
Out	1.35:1	2.0:1 Max.
Noise Figure (dB)	2.0	3.0 Max.
Power Vdc	+15	+15
mA	80	90 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 +58 dBm (Typ.)
 Second Order Two Tone Intercept Point +52 dBm (Typ.)
 Third Order Two Tone Intercept Point +40 dBm (Typ.)

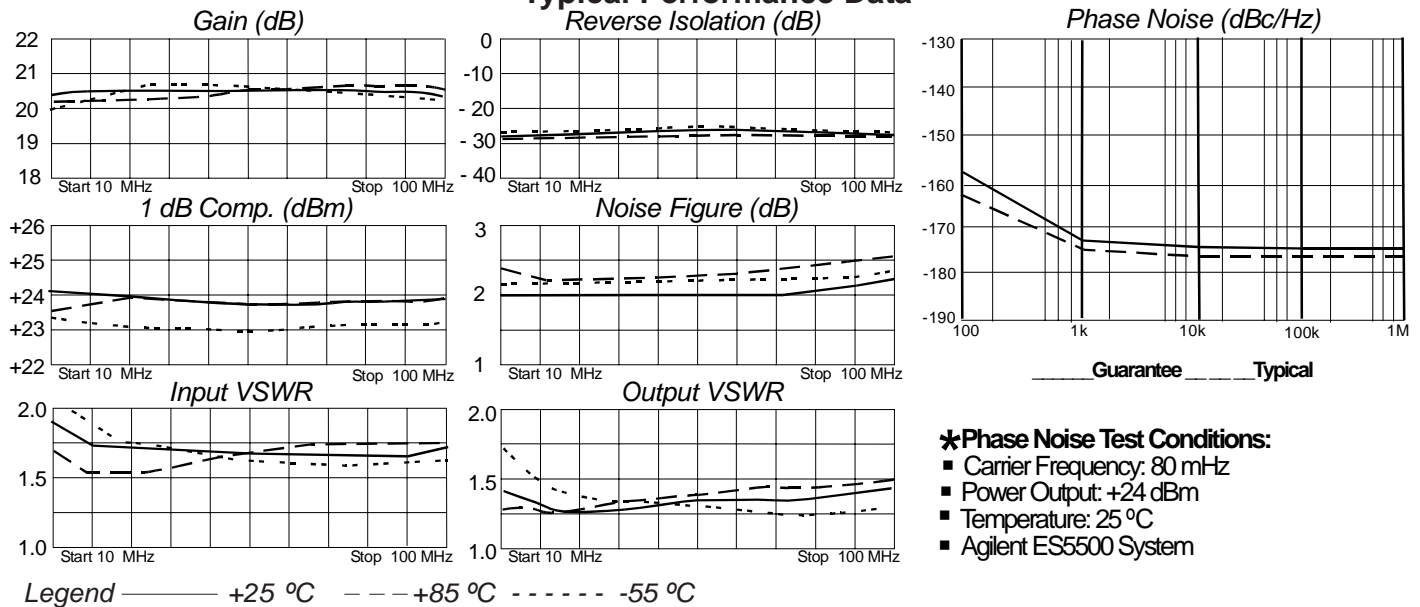
Maximum Ratings

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

Guaranteed Phase Noise Performance (dBc/Hz) *

Frequency	Typical	Guarantee (min.)
100 Hz	- 162	-158
1 kHz	- 175	-172
10 kHz	- 176	-174
100 kHz	- 176	-174
1 MHz	- 176	-174

Typical Performance Data



*Phase Noise Test Conditions:

- Carrier Frequency: 80 MHz
- Power Output: +24 dBm
- Temperature: 25 °C
- Agilent ES5500 System

Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
5	.39	-32.94	9.94	-151.50	.05	-151.80	.26	-19.89
10	.29	-26.29	10.56	-168.32	.05	-172.06	.15	-23.55
25	.26	-20.09	10.79	176.24	.05	169.91	.12	8.61
50	.25	-25.12	10.79	162.45	.05	154.52	.17	18.79
75	.26	-34.68	10.69	150.84	.06	139.83	.20	15.63
100	.27	-46.93	10.52	140.02	.06	126.88	.22	8.47



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