

RF AMPLIFIER

MODEL *TM5122PM*

Available as: TM5122PM, 4 Pin TO-8 (T4)
 TN5122PM, 4 Pin Surface Mount (SM3)
 FP5122PM, 4 Pin Flatpack (FP4)
 BX5122PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- Output Power: +20 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	10-500 MHz	10-500 MHz
Gain (dB)	17	15.5 Min.
Power @ 1 dB Comp. (dBm)	+20	+ 19 Min.
Reverse Isolation (dB)	-22	-20 Max.
VSWR In	<1.8:1	2.0:1 Max.
VSWR Out	<1.8:1	2.0:1 Max.
Noise Figure (dB)	4.2	4.6 Max.
Power Vdc	+15	+15
mA	60	65 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 +43 dBm (Typ.)
 Second Order Two Tone Intercept Point +38 dBm (Typ.)
 Third Order Two Tone Intercept Point +30 dBm (Typ.)

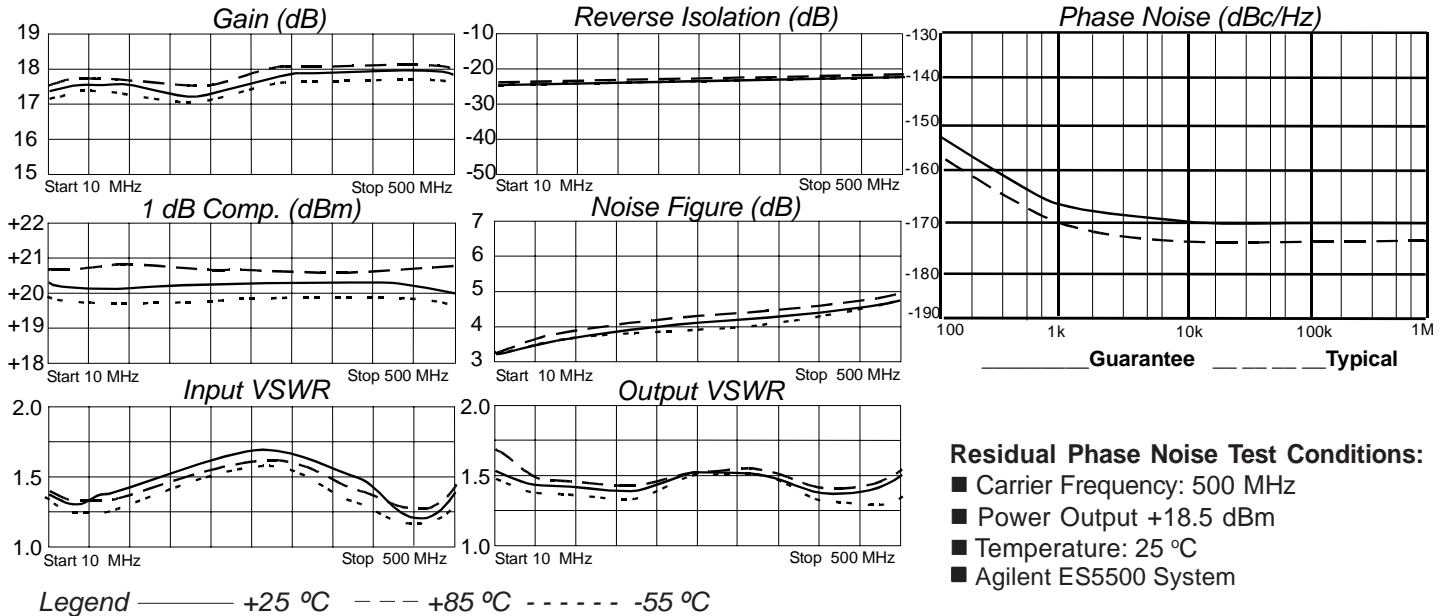
Maximum Ratings

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 100 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	-157	-153
1 kHz	-170	-166
10 kHz	-173	-170
100 kHz	-173	-170
1 MHz	-173	-170

Typical Performance Data



Residual Phase Noise Test Conditions:

- Carrier Frequency: 500 MHz
- Power Output +18.5 dBm
- Temperature: 25 °C
- Agilent ES5500 System

Linear S-Parameters

FREQ. MHz	--- S11 ---		--- S21 ---		--- S12 ---		--- S22 ---	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
5	.16	-76	6.84	-156	.09	-155	.15	-33
50	.04	-87	7.19	166	.09	163	.08	20
100	.07	-94	7.15	148	.09	145	.12	23
200	.15	-123	7.16	114	.10	108	.18	3
300	.24	-159	7.21	80	.11	75	.18	-30
400	.29	155	7.38	43	.11	41	.16	-82
500	.29	89	7.30	1	.11	5	.19	-161



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