

RF AMPLIFIER

MODEL TM7111PM

Available as: TM7111PM, 4 Pin TO-8 (T4)
 TN7111PM, 4 Pin Surface Mount (SM3)
 FP7111PM, 4 Pin Flatpack (FP4)
 BX7111PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- Low Noise Figure: 1.4 dB Typical
- Output Power: +17dBm Typical
- Operating Temp. - 55 °C to +85 °C

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 100 MHz	10 - 100 MHz
Gain (dB)	12.5	11.0 Min.
Power @ 1 dB Comp. (dBm)	+17	+15.5 Min.
Reverse Isolation (dB)	-15	-14 Max.
VSWR In	<1.75:1	2.0:1 Max.
VSWR Out	<1.75:1	2.0:1 Max.
Noise Figure (dB)	1.4	2.0 Max.
Power Vdc	+15	+15
mA	14	15 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 +53 dBm (Typ.)
 Second Order Two Tone Intercept Point +47 dBm (Typ.)
 Third Order Two Tone Intercept Point +33 dBm (Typ.)

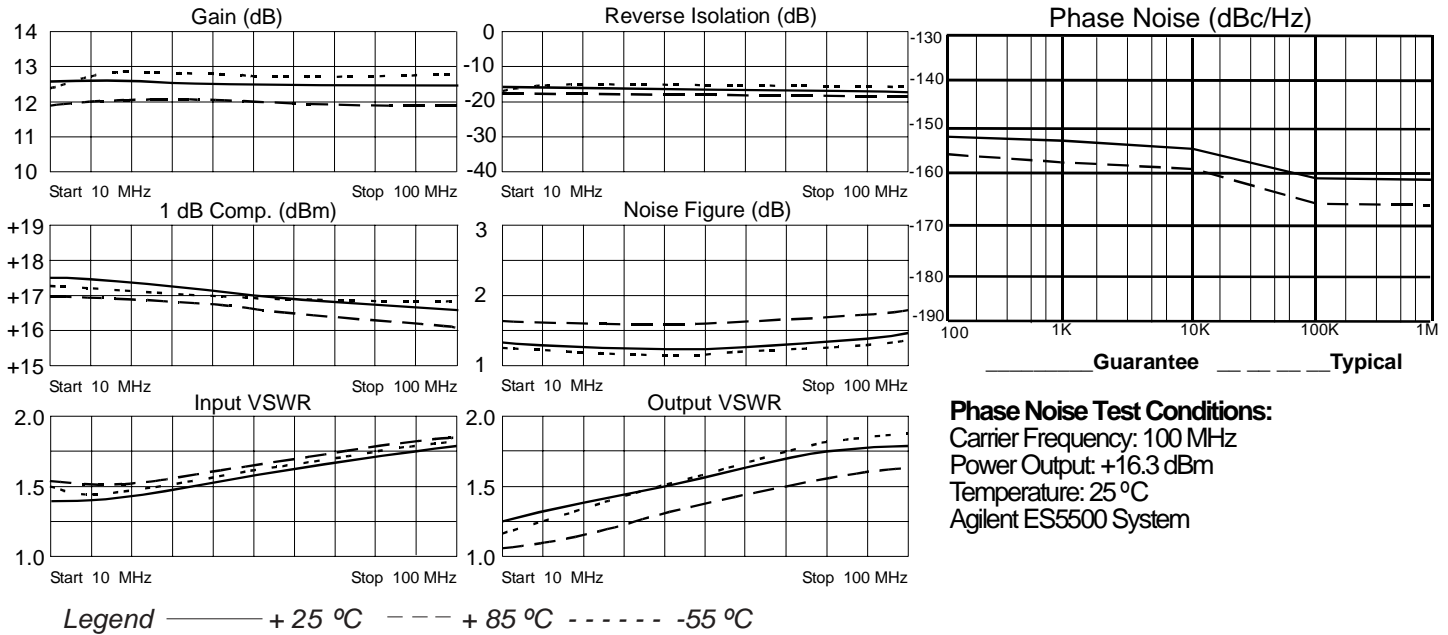
Maximum Ratings

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	-156	-152
1 kHz	-157	-153
10 kHz	-158	-154
100 kHz	-165	-161
1 MHz	-165	-161

Typical Performance Data



Phase Noise Test Conditions:

Carrier Frequency: 100 MHz
 Power Output: +16.3 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	177	4.24	5	.17	5	.10	23
10	.15	178	4.32	- 3	.17	- 3	.11	- 6
25	.16	-178	4.32	- 18	.17	- 17	.15	- 46
50	.21	175	4.26	- 38	.16	- 36	.21	- 80
75	.25	160	4.21	- 58	.16	- 56	.27	-102
100	.28	141	4.17	- 77	.15	- 74	.29	-119
150	.19	109	4.25	-123	.14	-119	.17	-128



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