RF AMPLIFIER
MODEL *TM7211PM*

Available as: TM7211PM, 4 Pin TO-8 (T4)
TN7211PM, 4 Pin Surface Mount (SM3)
FP7211PM, 4 Pin Flatpack (FP4)
BX7211PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- Low Noise Figure: 1.8 dB Typical
- High Output Power: +20 dBm Typical
- Operating Temp. -55 ºC to +85 ºC

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -55 ºC to +85 ºC
Frequency	10 - 200 MHz	30 - 200 MHz
Gain (dB)	8.5	7.5 Min.
Power @ 1 dB Comp. (dBm)	+20	+19 Min.
Reverse Isolation (dB)	-12	-11 Max.
VSWR In	<1.75:1	2.0:1 Max.
VSWR Out	<1.35:1	2.0:1 Max.
Noise Figure (dB)	1.8	3.0 Max.
Power Vdc	+15	+15
Power mA	30	33 Max.

Note: Care should always be taken to effectively ground the case of each unit.

Typical Intermodulation Performance at 25 ºC

Second Order Harmonic Intercept Point ..... +61 dBm (Typ.)
Second Order Two Tone Intercept Point ..... +55 dBm (Typ.)
Third Order Two Tone Intercept Point ..... +40 dBm (Typ.)

Maximum Ratings

Ambient Operating Temperature.....-55ºC to +100 ºC
Storage Temperature.....-62ºC to +125 ºC
Case Temperature.....+125 ºC
DC Voltage.....+18 Volts
Continuous RF Input Power.....+15 dBm
Short Term RF Input Power..... 50 Milliwatts (1 Minute Max.)
Maximum Peak Power..... 0.5 Watt (3 µsec Max.)
Thermal Resistance (Theta J C) ..... 81 ºC/Watt
Junction Temperature Rise Above the Case Temp.....+24ºC
Maximum Operating Junction Temperature.....+109ºC
Maximum Junction Temperature of Die.....+205ºC

Revision 9/24/2012

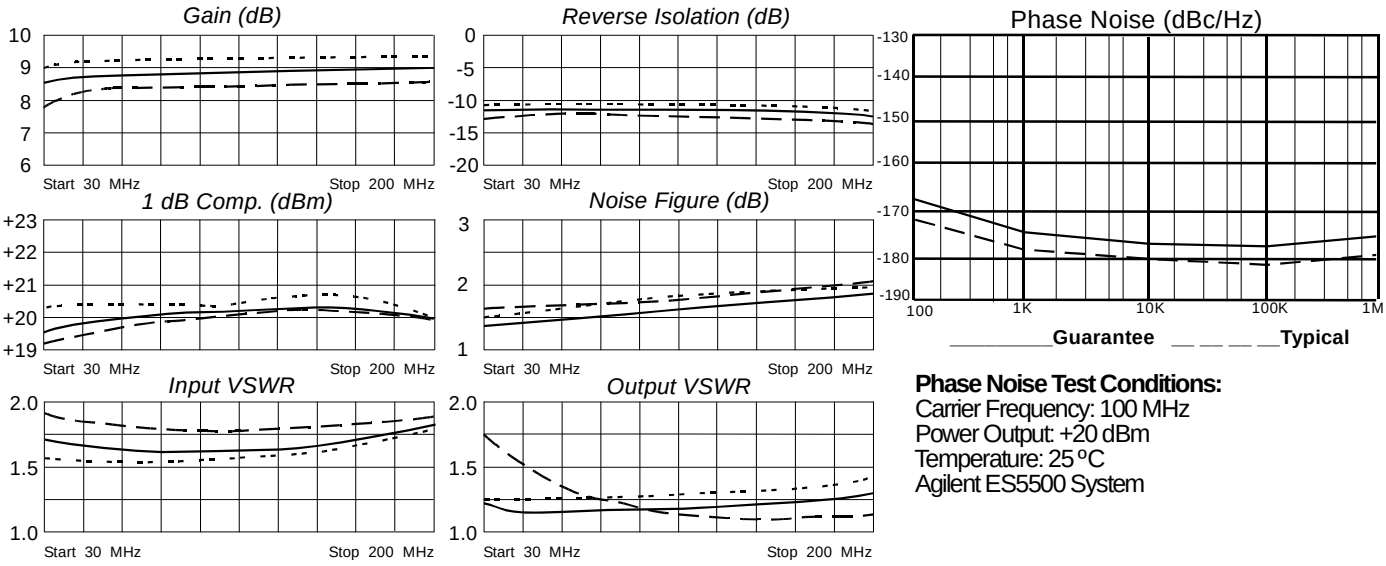
MTBF Calculation for Ground Benign Environment

@ 25 ºC .....23,314,857 hrs

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee (Min.)
100 Hz	-172	-168
1 kHz	-178	-174
10 kHz	-180	-176
100 kHz	-181	-177
1 MHz	-179	-175

Typical Performance Data



Legend ——— *+25 ºC* – – – *+85 ºC* - - - - - - *-55 ºC*

Phase Noise Test Conditions:
Carrier Frequency: 100 MHz
Power Output: +20 dBm
Temperature: 25 ºC
Agilent ES5500 System

Linear S-Parameters

FREQ. MHz	S11 Mag	S11 Deg	S21 Mag	S21 Deg	S12 Mag	S12 Deg	S22 Mag	S22 Deg
20	.33	155	2.61	11	.24	12	.21	95
50	.28	165	2.71	- 1	.25	- 2	.08	60
100	.27	169	2.73	-14	.25	-14	.05	-25
150	.28	172	2.76	-24	.24	-23	.08	-74
200	.31	171	2.78	-34	.23	-33	.13	-96

Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532
www.SpectrumMicrowave.com *Spectrum Microwave · 2707 Black Lake Place · Philadelphia, Pennsylvania 19154 · PH (215) 464-4000 · Fax (215) 464-4001*