RF AMPLIFIER
MODEL *TM7278PM*

Available as: TM7278PM, 4 Pin TO-8 (T4)
TN7278PM, 4 Pin Surface Mount (SM3)
FP7278PM, 4 Pin Flatpack (FP4)
BX7278PM, Connectorized Housing (H1)

Features

- Supeior Phase Noise Performance
- High Output Power +21.5 dBm Typical
- Operating Temp. -55 ºC to +85 ºC
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -55 ºC to +85 ºC
Frequency	5 - 300 MHz	5 - 300 MHz
Gain (dB)	13.5	12.5 Min.
Power @ 1 dB Comp. (dBm)	21.5	19 Min.
Reverse Isolation (dB)	-15	-14 Max.
VSWR In Out	<1.25:1 <1.5:1	2.0:1 Max. 2.0:1 Max.
Noise Figure (dB)	4	5.5 Max.
Power Vdc mA	+15 65	+15 75 Max.

Typical Intermodulation Performance at 25 ºC

Second Order Harmonic Intercept Point ..... +55 dBm (Typ.)
Second Order Two Tone Intercept Point ..... +49 dBm (Typ.)
Third Order Two Tone Intercept Point ..... +36 dBm (Typ.)

Maximum Ratings

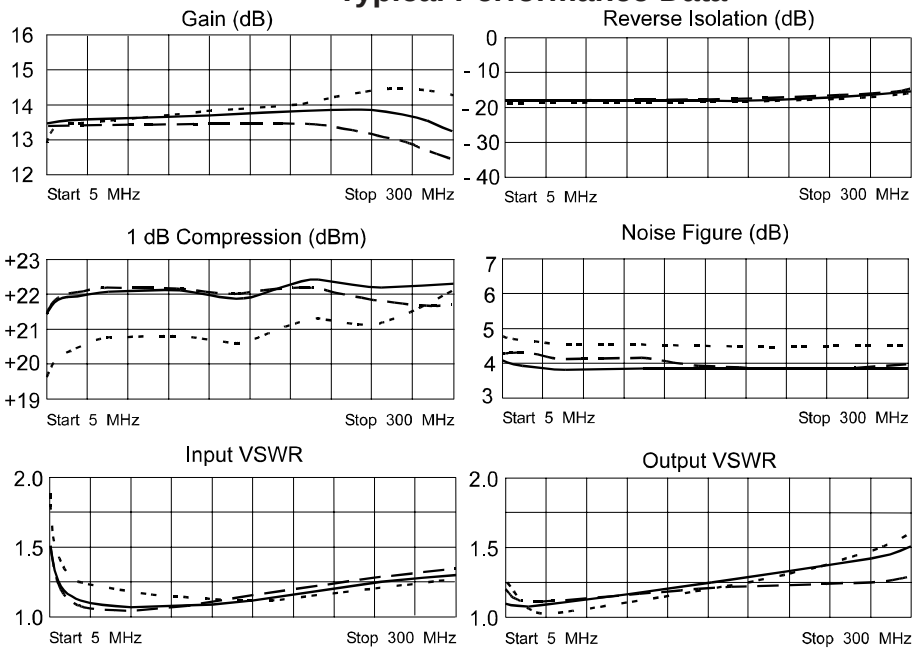
Ambient Operating Temperature ..... -55ºC to +100 ºC
Storage Temperature ..... -62ºC to +125 ºC
Case Temperature ..... +125 ºC
DC Voltage ..... +18 Volts
Continuous RF Input Power ..... +13 dBm
Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)
Maximum Peak Power ..... 0.5 Watt (3 µsec Max.)

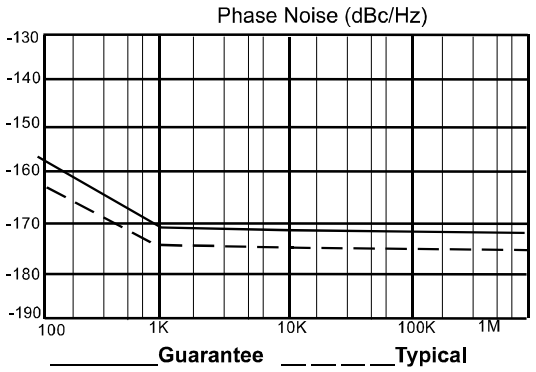
Note: Care should always be taken to effectively ground the case of each unit.

Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee
100 Hz	-158	-155
1 kHz	-174	-171
10 kHz	-175	-172
100 kHz	-176	-172
1 MHz	-176	-172

Typical Performance Data





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

✱ Residual Phase Noise Test Conditions
Carrier Frequency: 200 MHz
Power Output: +21 dBm
Temperature: 25 C
Agilent ES5500 System

Linear S-Parameters

FREQ. MHz	S11 Mag	S11 Deg	S21 Mag	S21 Deg	S12 Mag	S12 Deg	S22 Mag	S22 Deg
5	.20	-92	4.67	-162	.13	6	.07	135
20	.06	-140	4.80	178	.13	2	.05	174
50	.04	160	4.80	165	.13	2	.05	-159
100	.05	97	4.84	147	.14	3	.08	-149
150	.06	44	4.90	128	.14	2	.11	-161
200	.09	2	4.95	108	.15	2	.14	176
250	.12	-37	4.92	85	.16	-2	.16	137
300	.14	-72	4.61	59	.18	-7	.21	84

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*