

RF AMPLIFIER

MODEL *TM9128PM*

Available as: TM9128PM, 4 Pin TO-8 (T4)
 TN9128PM, 4 Pin Surface Mount (SM3)
 FP9128PM, 4 Pin Flatpack (FP4)
 BX9128PM, Connectorized Housing (H1)

Features

- Output Power: +15 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 - 1500 MHz	10 - 1500 MHz
Gain (dB)	11.5	10 Min.
Power @ 1 dB Comp. (dBm)	+15	+13.5 Min.
Reverse Isolation (dB)	-14.4	-13.5 Max.
VSWR In	1.5:1	2.0:1 Max.
VSWR Out	1.5:1	2.0:1 Max.
Noise Figure (dB)	4.5	6.0 Max.
Power Vdc	+15	+15
mA	40	45 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 +49 dBm (Typ.)
 Second Order Two Tone Intercept Point +43 dBm (Typ.)
 Third Order Two Tone Intercept Point +29 dBm (Typ.)

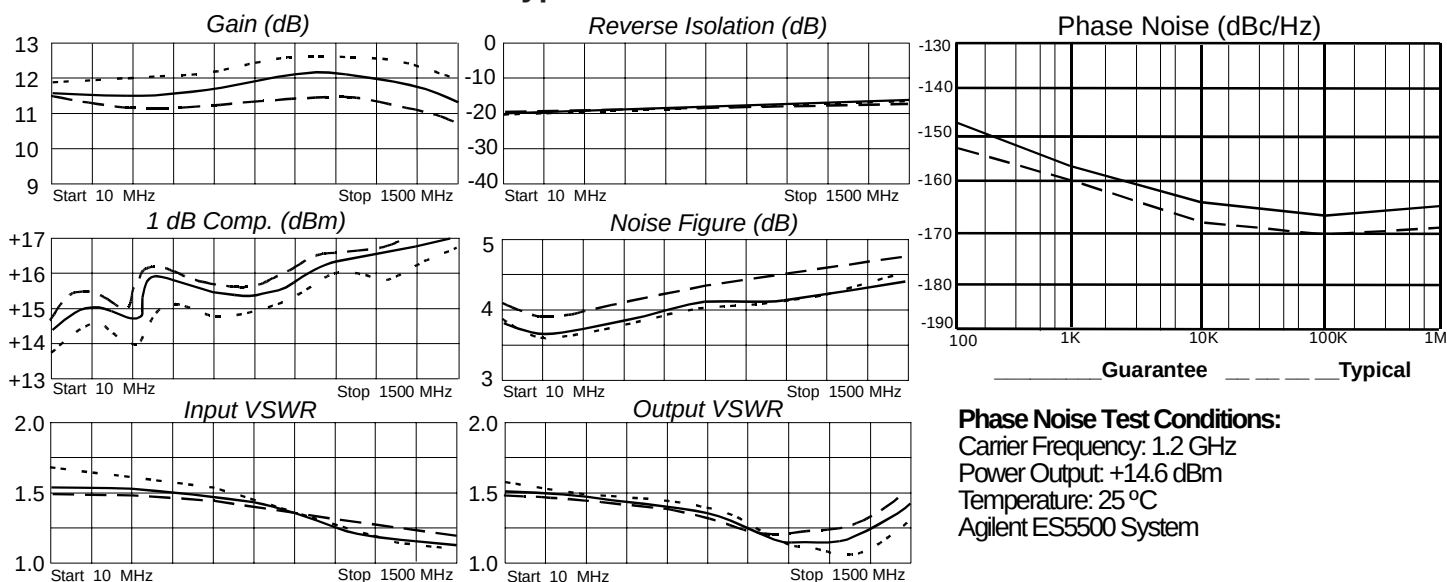
Maximum Ratings

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	-152	-148
1 kHz	-160	-156
10 kHz	-168	-164
100 kHz	-170	-166
1 MHz	-169	-165

Typical Performance Data



Phase Noise Test Conditions:
 Carrier Frequency: 1.2 GHz
 Power Output: +14.6 dBm
 Temperature: 25 °C
 Agilent ES5500 System

Legend ——— +25 °C --- +85 °C -55 °C

Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.22	-161	3.85	-174	.14	7	.24	167
50	.22	-177	3.89	176	.15	1	.21	168
100	.22	179	3.90	169	.15	- 0	.21	163
300	.21	167	3.88	146	.15	- 4	.20	132
500	.20	157	3.92	124	.16	- 8	.19	100
700	.17	149	3.98	100	.16	-14	.16	67
900	.14	140	4.02	76	.17	-19	.11	25
1100	.10	139	4.04	51	.17	-24	.07	- 42
1300	.09	131	3.96	23	.18	-31	.07	-143
1500	.05	128	3.71	- 5	.19	-37	.16	167



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