

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

- Superior Phase Noise Performance
- High Output Power +21.5 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	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	<1.25:1	2.0:1 Max.
VSWR Out	<1.5:1	2.0:1 Max.
Noise Figure (dB)	4	5.5 Max.
Power Vdc	+15	+15
mA	65	75 Max.

Typical Intermodulation Performance at 25 °C

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

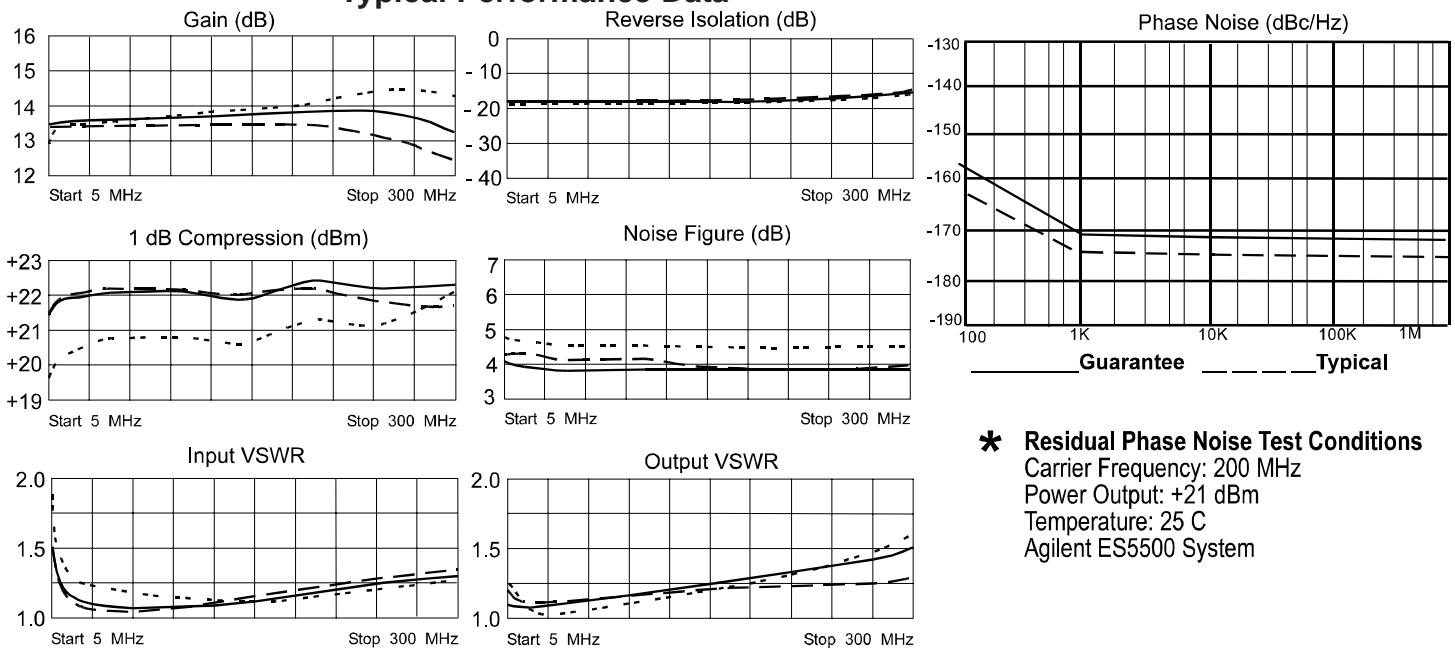
Ambient Operating Temperature -55°C to +100 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage +18 Volts
 Continuous RF Input Power +13 dBm
 Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

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



* Residual Phase Noise Test Conditions

Carrier Frequency: 200 MHz
 Power Output: +21 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
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