

# RF AMPLIFIER

## MODEL *TM5325PM*

Available as: TM5325PM, 4 Pin TO-8 (T4)  
 TN5325PM, 4 Pin Surface Mount (SM3)  
 FP5325PM, 4 Pin Flatpack (FP4)  
 BX5325PM, Connectorized Housing (H1)

### Features

- Superior Phase Noise Performance
- Low Noise Figure: 2.0 dB Typical
- High Output Power: +24 dBm Typical
- Operating Temp. -55 °C to +85 °C

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	5 - 125 MHz	5 - 125 MHz
Gain (dB)	20.5	20.5 ± 1.0
Power @ 1 dB Comp. (dBm)	+24	+22.5 Min.
Reverse Isolation (dB)	-24	-23 Max.
VSWR In	1.70:1	2.2:1 Max.
Out	1.35:1	2.0:1 Max.
Noise Figure (dB)	2.0	3.0 Max.
Power Vdc	+12	+12
mA	85	95 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 ..... +58 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +52 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +40 dBm (Typ.)

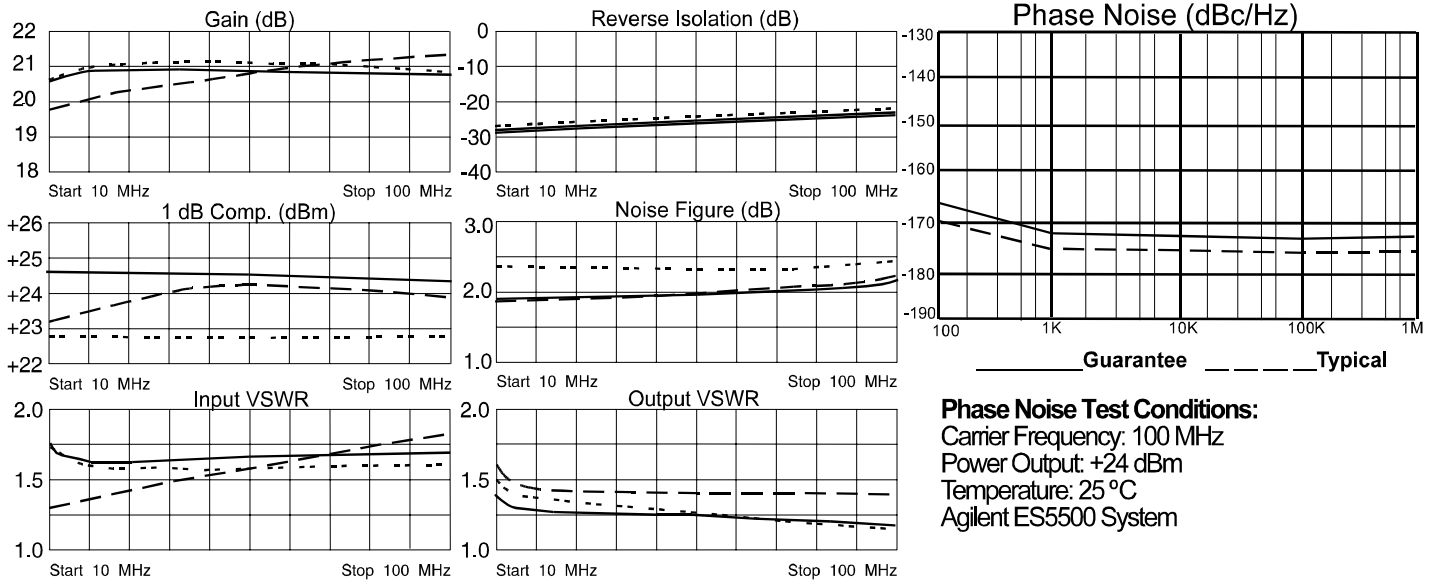
### Maximum Ratings

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	-170	-166
1 kHz	-175	-171
10 kHz	-175	-171
100 kHz	-176	-172
1 MHz	-175	-171

### Typical Performance Data



#### Phase Noise Test Conditions:

Carrier Frequency: 100 MHz  
 Power Output: +24 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	.35	-32	10.28	-157	.05	-159	.27	-27
10	.27	-28	10.95	-171	.05	-174	.16	-32
50	.23	-36	11.12	161	.06	151	.11	-3
100	.26	-68	11.10	139	.06	127	.10	-10
150	.32	-106	10.87	115	.07	103	.06	-29



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 12/18/03

www.SpectrumMicrowave.com Spectrum Microwave · 2707 Black Lake Place · Philadelphia, Pennsylvania 19154 · PH (215) 464-4000 · Fax (215) 464-4001