

# RF AMPLIFIER

## MODEL **TM7347PM**

Available as: TM7347PM, 4 Pin TO-8 (T4)  
 TN7347PM, 4 Pin Surface Mount (SM3)  
 FP7347PM, 4 Pin Flatpack (FP4)  
 BX7347PM, Connectorized Housing (H1)

### Features

- Superior Phase Noise Performance
- Low Noise Figure: 2 dB 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)	16	15 Min.
Reverse Isolation (dB)	-22	-21 Max.
VSWR In	<1.5:1	1.7:1 Max.
Out	<1.5:1	1.5:1 Max.
Noise Figure (dB)	2	3 Max.
Power Vdc	+15	+15
mA	45	50 Max.

### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point ..... +50 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +44 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +32 dBm (Typ.)

### Maximum Ratings

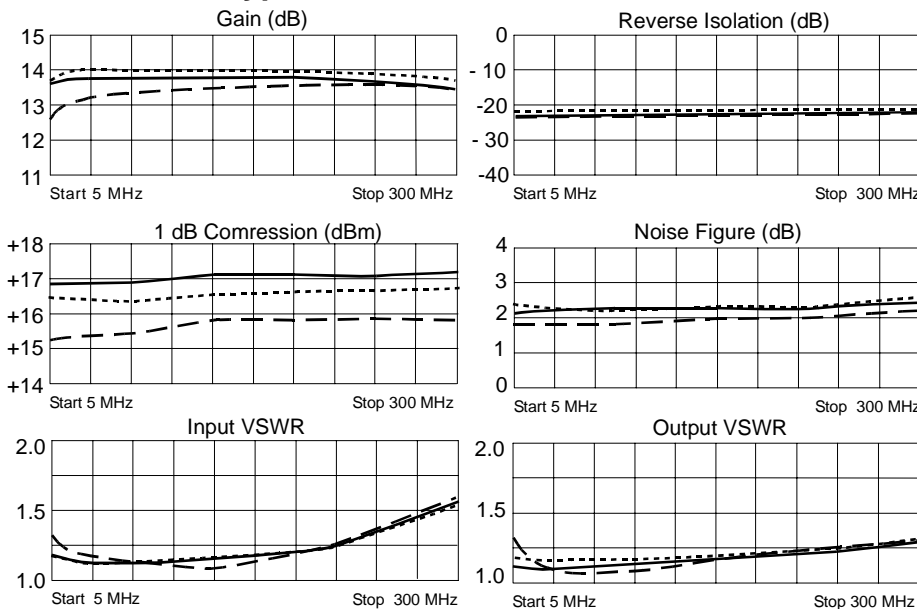
Ambient Operating Temperature ..... -55°C to +100 °C  
 Storage Temperature ..... -62°C to +125 °C  
 Case Temperature ..... +125 °C  
 DC Voltage ..... +18 Volts  
 Continuous RF Input Power ..... +13 dBm  
 Short Term RF Input Power .... 100 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.2 Watt (3 µsec Max)

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

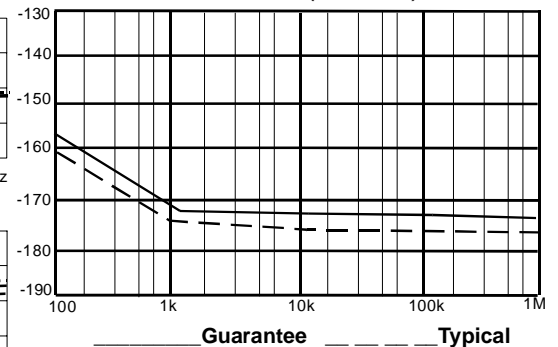
### Guaranteed Phase Noise Performance (dBc/Hz)

Frequency	Typical	Guarantee
100 Hz	-160	-156
1 kHz	-173	-170
10 kHz	-175	-172
100 kHz	-175	-172
1 MHz	-175	-172

### Typical Performance Data



### Phase Noise (dBc/Hz)



### \* Residual Phase Noise Test Conditions

Carrier Frequency: 200 MHz  
 Power Output: +15 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	.19	-98	4.72	-159	.076	-158		-27
20	.10	-150	4.92	179	.076	178		-18
50	.09	-168	4.92	170	.077	171		- 9
100	.08	-173	4.93	156	.077	157		- 7
150	.07	-162	4.92	142	.077	145		-13
200	.07	-141	4.93	129	.077	129		-13
250	.11	-135	4.93	116	.076	117		24
300	.16	-141	4.88	102	.077	107		55



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