

# RF AMPLIFIER

## MODEL *TM6345PM*

Available as: TM6345PM, 4 Pin TO-8 (T4)  
 TN6345PM, 4 Pin Surface Mount (SM3)  
 FP6345PM, 4 Pin Flatpack (FP4)  
 BX6345PM, Connectorized Housing (H1)

### Features

- Superior Phase Noise Performance
- Output Power: +17 dBm Typical
- Low Noise Figure: 2.5 dB Typical
- Operating Temp. -55 °C to +85 °C
- Environmental Screening Available

### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point ..... +54 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +46 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +33 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 mW (1 Minute Max.)  
 Maximum Peak Power ..... 0.5 Watt (3 µsec Max.)

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

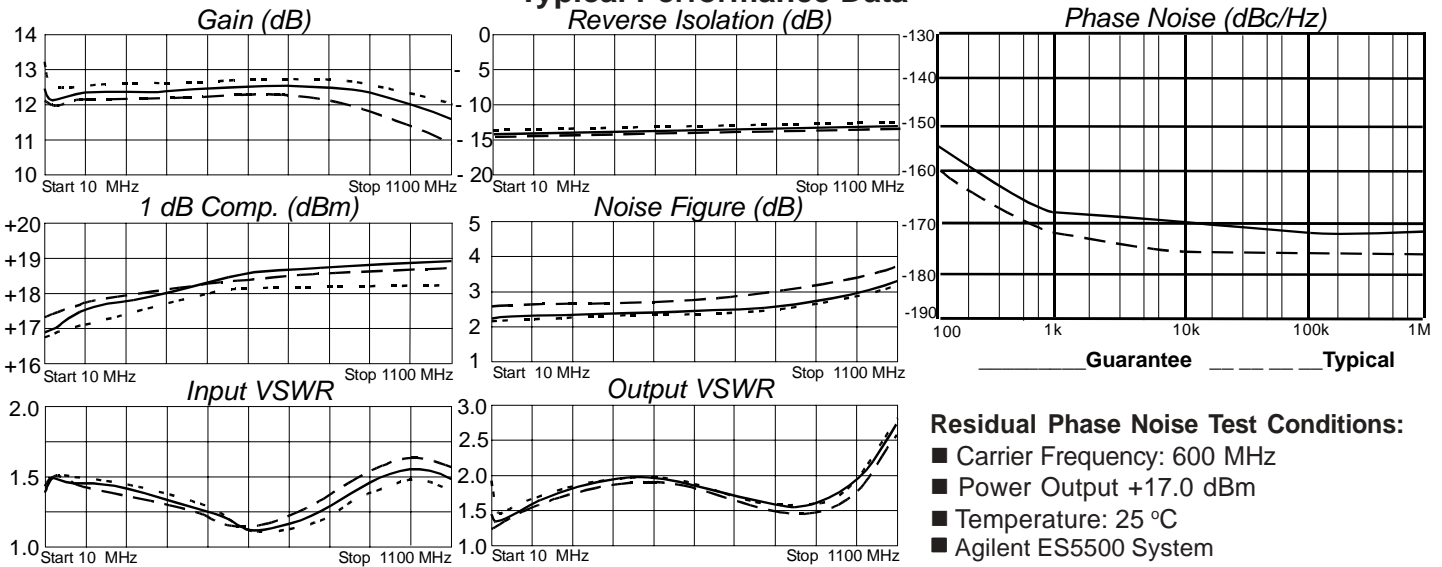
Frequency	Typical	Guarantee (min.)
100 Hz	-160	-156
1 kHz	-172	-168
10 kHz	-175	-170
100 kHz	-175	-172
1 MHz	-175	-172

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency (MHz)	10 - 1100 MHz	10 - 1100 MHz
Gain (dB)	12.3	10.5
Power @ 1 dB Comp. (dBm)	+17.0	+15.0 Min.
Reverse Isolation (dB)	- 13.5	- 12 Max.
VSWR In	1.5:1	2.0:1 Max.
VSWR Out	1.75:1	3.0:1 Max.
Noise Figure (dB)	2.5	4.0 Max.
Power Vdc	+15	+15
mA	45	48 Max.

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

### Typical Performance Data



### Residual Phase Noise Test Conditions:

- Carrier Frequency: 600 MHz
- Power Output +17.0 dBm
- Temperature: 25 °C
- Agilent ES5500 System

### Linear S-Parameters

FREQ. MHz	S11		S21		S12		S22	
	Mag	Deg	Mag	Deg	Mag	Deg	Mag	Deg
10	.17	179	4.20	-166	.17	-169	.18	18
100	.18	132	4.14	162	.18	163	.20	9
200	.17	93	4.13	140	.18	144	.24	1
400	.13	26	4.14	99	.18	109	.24	- 26
600	.05	- 83	4.15	57	.20	73	.20	- 53
800	.15	144	4.10	12	.20	36	.13	-111
1100	.19	44	3.73	- 61	.21	- 23	.24	144



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