

# RF AMPLIFIER

## MODEL *TM6442PM*

Available as: TM6442PM, 4 Pin TO-8 (T4)  
 TN6442PM, 4 Pin Surface Mount (SM3)  
 FP6442PM, 4 Pin Flatpack (FP4)  
 BX6442PM, Connectorized Housing (H1)

### Features

- Superior Phase Noise Performance
- Higher Output Power: +22 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	20 - 400 MHz	20 - 400 MHz
Gain (dB)	14	12.5 Min.
Power @ 1 dB Comp. (dBm)	+22	+19 Min.
Reverse Isolation (dB)	-19	-17 Max.
VSWR In	1.15:1	2.0:1 Max.
Out	1.25:1	2.0:1 Max.
Noise Figure (dB)	4.5	6.0 Max.
Power Vdc	+15	+15
mA	62	65 Max.

### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point ..... +57 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +51 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +37 dBm (Typ.)

### Maximum Ratings

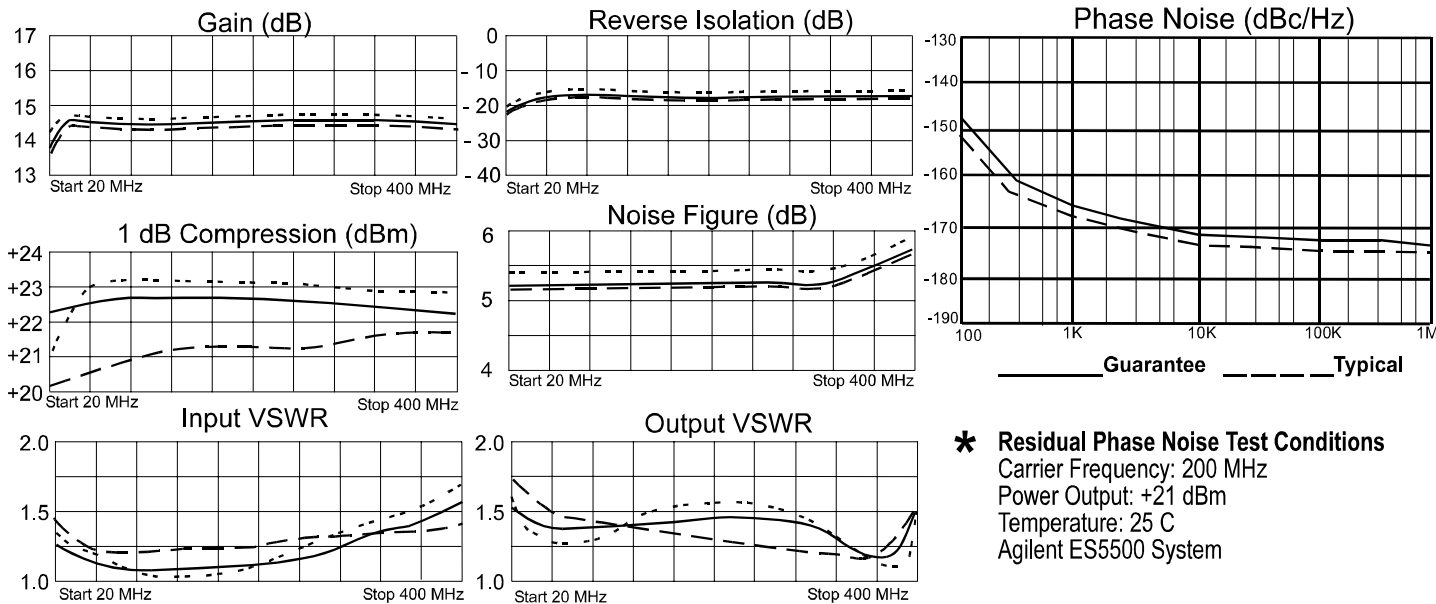
Ambient Operating Temperature ..... -55°C to +100 °C  
 Storage Temperature ..... -62°C to +125 °C  
 Case Temperature ..... +125 °C  
 DC Voltage ..... +18 Volts  
 Continuous RF Input Power ..... +18 dBm  
 Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.5 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 (Min.)
100 Hz	-150	-145
1 kHz	-169	-165
10 kHz	-173	-169
100 kHz	-175	-171
1 MHz	-175	-171

### Typical Performance Data



Legend ——— +25 °C - - - +85 °C ····· -55 °C

### \* Residual Phase Noise Test Conditions

Carrier Frequency: 200 MHz  
 Power Output: +21 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	.13	-115	5.08	-173	.10	10	.23	153
50	.08	-168	5.23	161	.10	- 6	.16	177
100	.06	-170	5.19	138	.10	- 18	.16	-171
200	.07	-123	5.07	93	.11	- 39	.18	-169
300	.15	-155	5.04	45	.11	- 66	.11	159
400	.22	97	4.82	- 16	.12	-108	.12	- 14



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