

RF AMPLIFIER

MODEL *TM6487PM*

Available as: TM6487PM, 4 Pin TO-8 (T4)
 TN6487PM, 4 Pin Surface Mount (SM3)
 FP6487PM, 4 Pin Flatpack (FP4)
 BX6487PM, Connectorized Housing (H1)

Features

- Superior Phase Noise Performance
- Higher Output Power: +17.5 dBm Typical
- High Third Order Intercept: +32 dBm Typical
- Operating Temp. -55 °C to +85 °C

Specifications

| CHARACTERISTIC | TYPICAL Ta= 25 °C | MIN/MAX Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency | 10 - 400 MHz | 10 - 400 MHz |
| Gain (dB) | 15.5 | 14.0 Min. |
| Power @ 1 dB Comp. (dBm) | +17.5 | +15.0 Min. |
| Reverse Isolation (dB) | -20 | -18 Max. |
| VSWR In | 1.5:1 | 2.0:1* Max. |
| VSWR Out | 1.5:1 | 2.0:1 Max. |
| Noise Figure (dB) | 3.2 | 5.0 Max. |
| Power Vdc | +15 | +15 |
| mA | 33 | 37 Max. |

Note: Care should always be taken to effectively ground the case of each unit.
 *2.5:1 from 300 to 400 MHz

Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +51 dBm (Typ.)
 Second Order Two Tone Intercept Point +45 dBm (Typ.)
 Third Order Two Tone Intercept Point +32 dBm (Typ.)

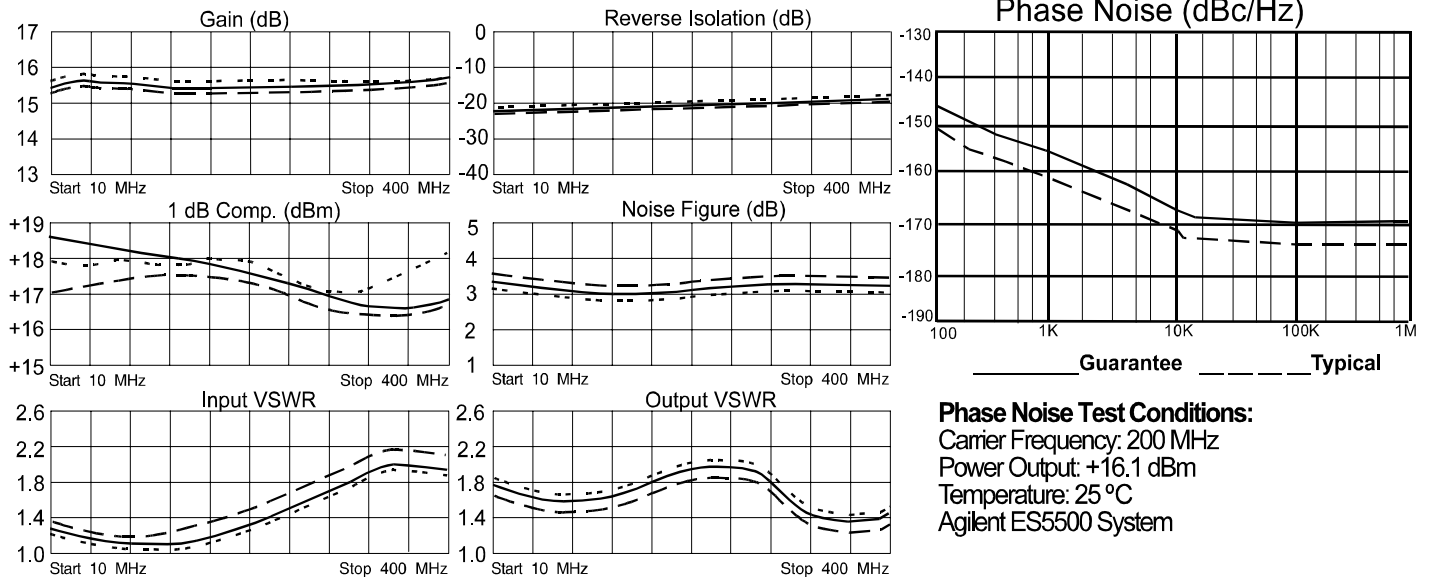
Maximum Ratings

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 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 | -152 | -148 |
| 1 kHz | -163 | -159 |
| 10 kHz | -173 | -169 |
| 100 kHz | -174 | -170 |
| 1 MHz | -174 | -170 |

Typical Performance Data



Phase Noise Test Conditions:

Carrier Frequency: 200 MHz
 Power Output: +16.1 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 |
| 10 | .15 | -136 | 6.09 | -175 | .09 | 8 | .28 | 166 |
| 50 | .13 | 174 | 6.25 | 161 | .09 | -7 | .23 | -180 |
| 100 | .09 | 155 | 6.17 | 139 | .09 | -18 | .24 | -172 |
| 200 | .02 | -79 | 5.95 | 97 | .10 | -39 | .26 | -166 |
| 300 | .15 | -111 | 5.93 | 54 | .10 | -61 | .24 | -170 |
| 400 | .20 | 178 | 5.91 | 4 | .11 | -93 | .05 | -156 |
| 500 | .38 | 39 | 4.77 | -64 | .10 | -146 | .55 | -69 |



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