

RF AMPLIFIER

MODEL *TM4002PM*

Available as: TM4002PM, 4 Pin TO-8 (T4)
 TN4002PM, 4 Pin Surface Mount (SM3)
 BX4002PM, Connectorized Housing (H1)

Features

- High Gain: 20 dB Typical
- Output Power: +19.5 dBm Typical
- Low 15 Volt Supply
- Operating Temp. -55 °C to +85 °C

Specifications

| CHARACTERISTIC | TYPICAL Ta= 25 °C | MIN/MAX Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency | 10 - 500 MHz | 10 - 500 MHz |
| Gain (dB) | +20 | +19 Min. |
| Power @ 1 dB Comp. (dBm) | +19.5 | +18.5 Min. |
| Reverse Isolation (dB) | -23 | -22 Max. |
| VSWR In | 1.4:1 | 1.75:1 Max. |
| Out | 1.3:1 | 1.75:1 Max. |
| Noise Figure (dB) | 4.0 | 5.0 Max. |
| Power Vdc | +15 | +15 |
| mA | 80 | 85 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 +51 dBm (Typ.)
 Second Order Two Tone Intercept Point +45 dBm (Typ.)
 Third Order Two Tone Intercept Point +35 dBm (Typ.)

Absolute Maximum (No Damage) Ratings

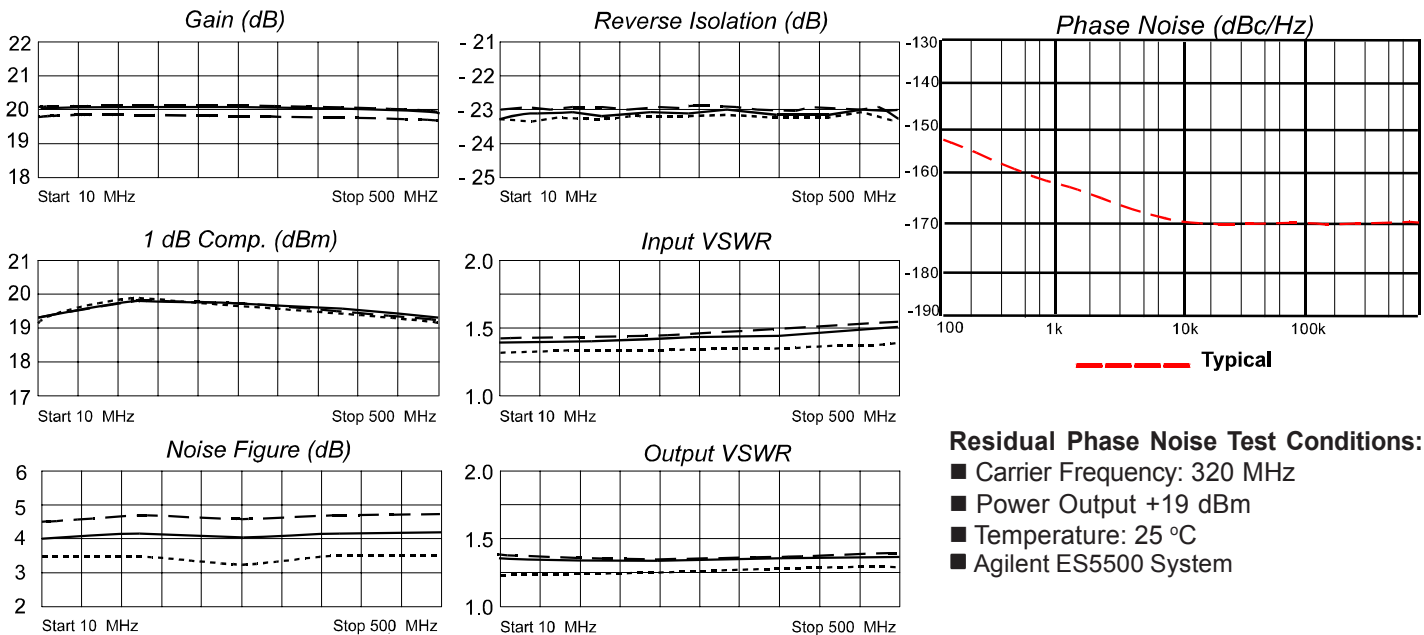
Ambient Operating Temperature -55°C to +100 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage +18 Volts
 Continuous RF Input Power +10 dBm
 Short Term RF Input Power 200 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 μsec Max.)

Guaranteed @ 25 °C (320 MHz) Phase Noise Performance (dBc/Hz)*

| Frequency | Typical | Guarantee (min.) |
|-----------|---------|------------------|
| 100 Hz | 152 | 150 |
| 1 kHz | 162 | 160 |
| 10 kHz | 170 | 165 |
| 100 kHz | 170 | 165 |
| 1 MHz | 170 | 165 |

*Note: Phase Noise Performance typically tested at midband.
 Bandedge performance may vary.

Typical Performance Data



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

Residual Phase Noise Test Conditions:

- Carrier Frequency: 320 MHz
- Power Output +19 dBm
- Temperature: 25 °C
- Agilent ES5500 System

