

# RF AMPLIFIER

## MODEL *TM3074*

Available as: TM3074, 4 Pin TO-8 (T4)  
 TN3074, 4 Pin Surface Mount (SM3)  
 FP3074, 4 Pin Flatpack (FP4)  
 BX3074, Connectorized Housing (H1)

### Features

- Low Noise Figure: 1.5 dB Typical
- Output Power: 17 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Specifications

| CHARACTERISTIC              | TYPICAL<br>Ta= 25 °C | MIN/MAX<br>Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency                   | 1400 - 1800 MHz      | 1400 - 1800 MHz                  |
| Gain (dB)                   | 16.0                 | 15.0 Min.                        |
| Power @ 1 dB<br>Comp. (dBm) | +17                  | +16 Min.                         |
| Reverse<br>Isolation (dB)   | -22                  | -21 Max.                         |
| VSWR In                     | <1.70:1              | 2.0:1 Max.                       |
| Out                         | <1.70:1              | 2.0:1 Max.                       |
| Noise Figure (dB)           | 1.5                  | 2.5 Max.                         |
| Power Vdc                   | +5                   | +5                               |
| mA                          | 63                   | 70 Max.                          |

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

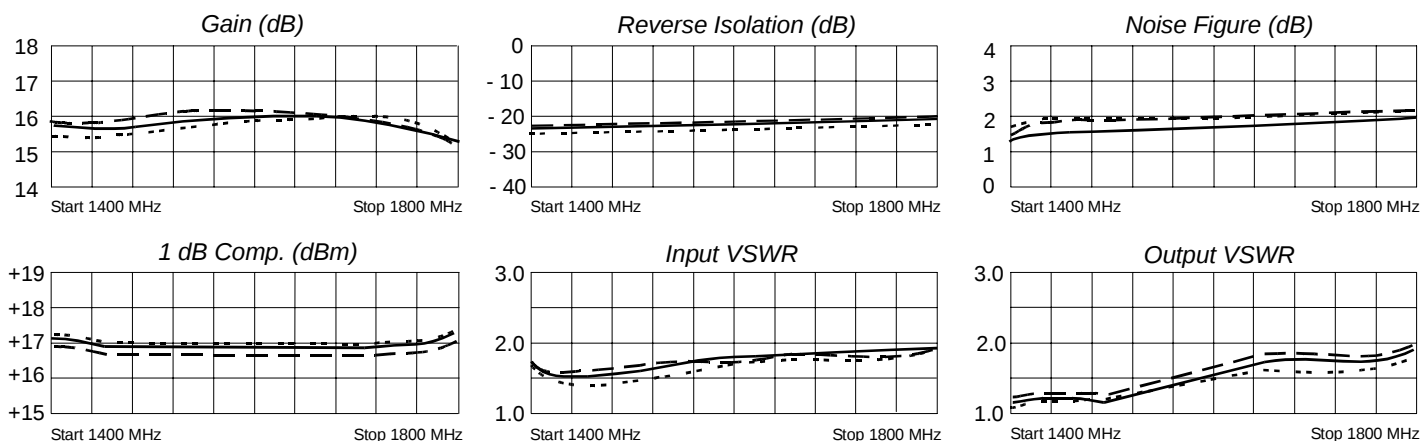
### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point.....+42 dBm (Typ.)  
 Second Order Two Tone Intercept Point.....+38 dBm (Typ.)  
 Third Order Two Tone Intercept Point.....+28 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 ..... + 8 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.)

### Typical Performance Data



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

### Linear S-Parameters

| Freq.<br>MHz | ---S11--- |     | ---S21--- |      | ---S12--- |     | ---S22--- |      |
|--------------|-----------|-----|-----------|------|-----------|-----|-----------|------|
|              | Mag       | Deg | Mag       | Deg  | Mag       | Deg | Mag       | Deg  |
| 1400         | .24       | 53  | 6.38      | -111 | .0565     | 155 | .08       | 12   |
| 1500         | .21       | 33  | 6.34      | -139 | .0608     | 132 | .10       | -10  |
| 1600         | .15       | 14  | 6.38      | -167 | .0649     | 107 | .13       | -40  |
| 1700         | .08       | 5   | 6.42      | 163  | .0696     | 83  | .14       | -76  |
| 1800         | .05       | 98  | 6.22      | 132  | .0762     | 57  | .16       | -117 |



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 05/10/05

www.spectrummicrowave.com Spectrum Microwave (Europe) · 2707 Black Lake Place · Philadelphia, Pa. 19154 · PH (215) 464-4000 · Fax (215) 464-4001