

# RF AMPLIFIER

## MODEL *TM6574*

Available as: TM6574, 4 Pin TO-8 (T4)  
 TN6574, 4 Pin Surface Mount (SM3)  
 FP6574, 4 Pin Flatpack (FP4)  
 BX6574, Connectorized Housing (H1)

### Features

- High Gain: 30 dB Typical
- Medium Output Power: +9 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                   | 5 - 500 MHz          | 5 - 500 MHz                      |
| Gain (dB)                   | 30                   | 27 Min.                          |
| Power @ 1 dB<br>Comp. (dBm) | +9                   | +7 Min.                          |
| Reverse<br>Isolation (dB)   | -36                  | -33 Max.                         |
| VSWR In                     | 1.35:1               | 2.0:1 Max.                       |
| VSWR Out                    | 1.65:1               | 2.0:1 Max.                       |
| Noise figure (dB)           | 3.5                  | 6.0 Max.                         |
| Power Vdc                   | +15                  | +15                              |
| mA                          | 37                   | 40 Max.                          |

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

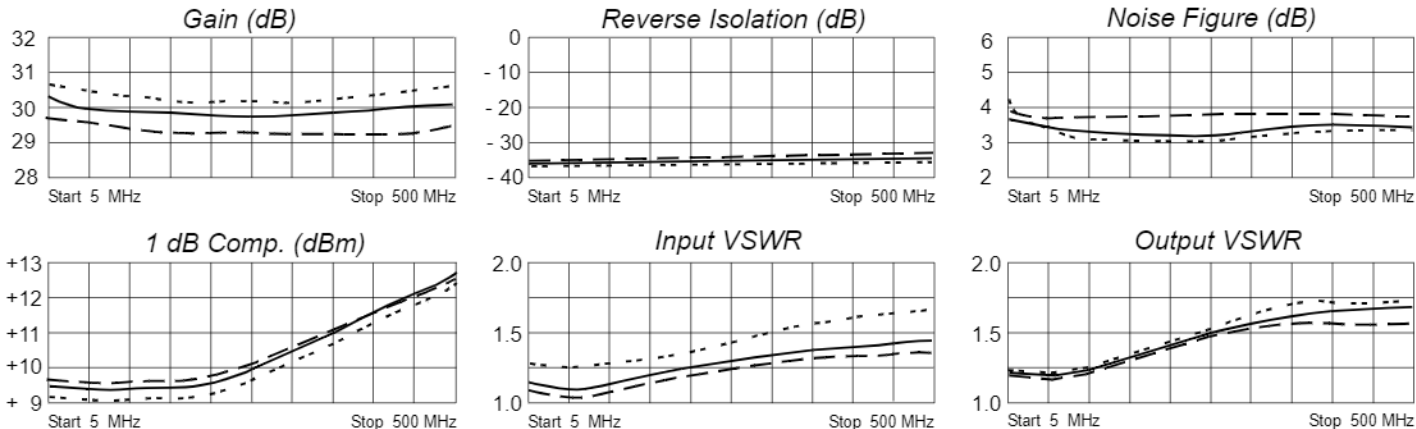
### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point ..... +41 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +36 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +22 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 ..... + 6 dBm  
 Short Term RF Input Power..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.5 Watt (3  $\mu$ sec 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  |
| 5            | .06 | -148 | 32.67 | 3    | .01 | 7   | .07 | -162 |
| 50           | .06 | 163  | 31.75 | - 21 | .01 | 2   | .08 | -165 |
| 100          | .07 | 147  | 31.43 | - 41 | .01 | 6   | .11 | -162 |
| 200          | .11 | 112  | 31.15 | - 82 | .01 | 14  | .17 | -176 |
| 300          | .15 | 85   | 31.19 | -123 | .01 | 13  | .23 | 163  |
| 400          | .19 | 61   | 31.59 | -166 | .02 | - 3 | .26 | 140  |
| 500          | .21 | 39   | 32.23 | 149  | .02 | -11 | .26 | 123  |



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