

# RF AMPLIFIER

## MODEL *TM6547*

Available as: TM6547, 4 Pin TO-8 (T4)  
 TN6547, 4 Pin Surface Mount (SM3)  
 FP6547, 4 Pin Flatpack (FP4)  
 BX6547, Connectorized Housing (H1)  
 PN6547, Reduced Size Surface Mount (SM11)

### Features

- Low Noise Figure: < 4.0 dB Typical
- High Output Power: +19 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                   | 10 - 500 MHz         | 10 - 500 MHz                     |
| Gain (dB)                   | 12.5                 | 11.0 Min.                        |
| Power @ 1 dB<br>Comp. (dBm) | +19                  | +17.5 Min.                       |
| Reverse<br>Isolation (dB)   | - 17                 | - 15 Max.                        |
| VSWR In                     | 1.75:1               | 2.0:1 Max.                       |
| Out                         | 1.5:1                | 2.0:1 Max.                       |
| Noise figure (dB)           | <4.0                 | 4.5 Max.                         |
| Power Vdc                   | +15                  | +15                              |
| mA                          | 55                   | 58 Max.                          |

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

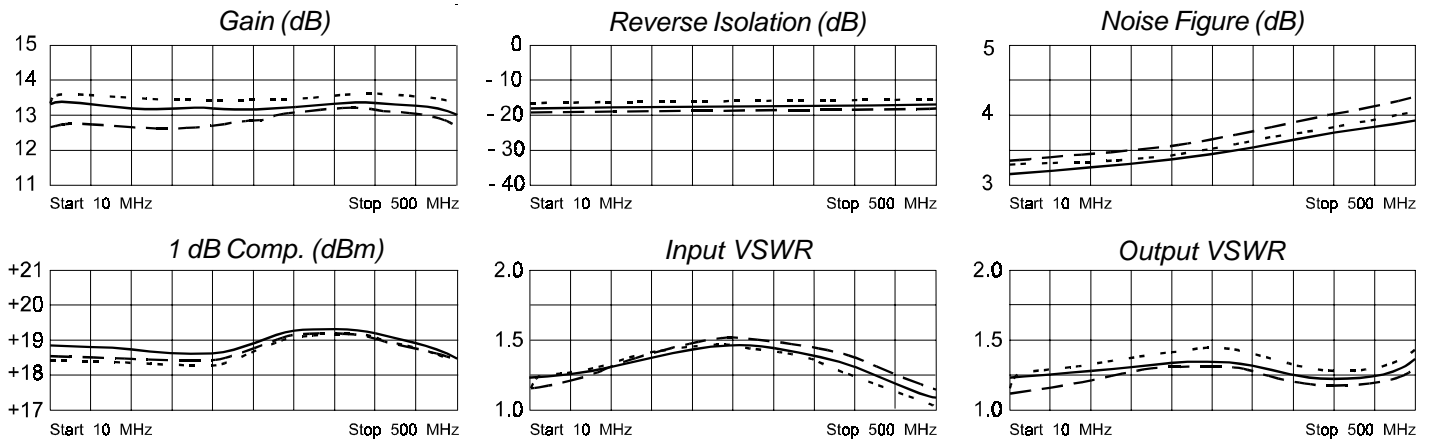
### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point ..... +54 (Typ.)  
 Second Order Two Tone Intercept Point ..... +48 (Typ.)  
 Third Order Two Tone Intercept Point ..... +35 (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 ..... 0.2 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  |
| 10           | .10 | - 13 | 4.62 | -173 | .13 | -174 | .10 | - 8  |
| 50           | .10 | 7    | 4.62 | 169  | .13 | 169  | .11 | 3    |
| 100          | .12 | 14   | 4.57 | 155  | .13 | 153  | .12 | 5    |
| 200          | .17 | 6    | 4.54 | 129  | .13 | 127  | .15 | - 8  |
| 300          | .18 | - 16 | 4.53 | 103  | .13 | 102  | .14 | - 39 |
| 400          | .13 | - 44 | 4.52 | 75   | .14 | 76   | .12 | - 94 |
| 500          | .04 | - 89 | 4.43 | 43   | .14 | 50   | .17 | -170 |
| 600          | .09 | 92   | 4.05 | 10   | .15 | 22   | .31 | 140  |



2707 Black Lake Place, Philadelphia, PA 19154

TEL 215-464-4000 ···· FAX 215-464-4001 Rev. A 06/11/01