

# RF AMPLIFIER

## MODEL *TM7481*

Available as: TM7481, 4 Pin TO-8 (T4)  
 TN7481, 4 Pin Surface Mount (SM3)  
 FP7481, 4 Pin Flatpack (FP4)  
 BX7481, Connectorized Housing (H1)

### Features

- Low Noise Figure: 2.3 dB Typical
- Medium Output Power: +16.2 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 - 300 MHz         | 15 - 300 MHz                     |
| Gain (dB)                   | 28.5                 | 27.0 Min.                        |
| Power @ 1 dB<br>Comp. (dBm) | +16.2                | +14.5 Min.                       |
| Reverse<br>Isolation (dB)   | -32                  | -30 Max.                         |
| VSWR In                     | <1.5:1               | 2.0:1 Max.                       |
| Out                         | <1.8:1               | 2.0:1 Max.                       |
| Noise Figure (dB)           | 2.3                  | 3.0 Max.                         |
| Power Vdc                   | +15                  | +15                              |
| mA                          | 27                   | 32 Max.                          |

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

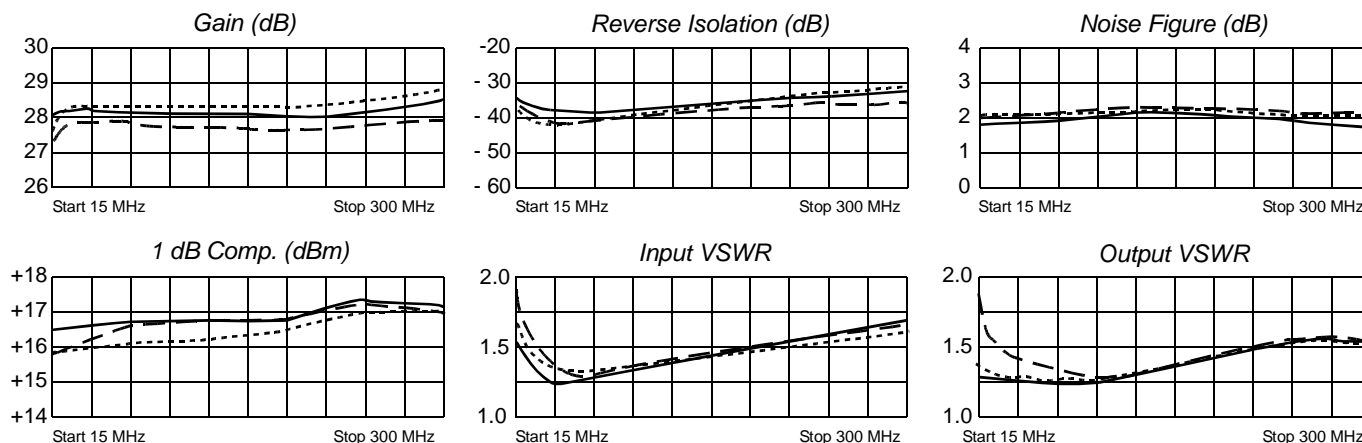
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +39 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +33 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +29 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 ..... + 19 Volts  
 Continuous RF Input Power ..... + 10 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.  |
| 15           | .25  | - 80 | 25.44 | - 163 | .0220 | - 2  | .04  | - 93  |
| 50           | .02  | 95   | 26.48 | 158   | .0213 | - 3  | .03  | - 159 |
| 100          | .12  | 57   | 26.03 | 129   | .0223 | - 7  | .04  | - 115 |
| 150          | .19  | 35   | 25.57 | 103   | .0231 | - 11 | .09  | - 121 |
| 200          | .25  | 13   | 25.36 | 77    | .0233 | - 21 | .15  | - 139 |
| 250          | .29  | - 11 | 25.61 | 50    | .0232 | - 30 | .19  | - 160 |
| 300          | .33  | - 41 | 26.53 | 21    | .0231 | - 37 | .21  | - 177 |



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