

# RF AMPLIFIER

## MODEL *TM5325*

Available as: TM5325, 4 Pin TO-8 (T4)  
 TN5325, 4 Pin Surface Mount (SM3)  
 FP5325, 4 Pin Flatpack (FP4)  
 BX5325, Connectorized Housing (H1)  
 PN5325, 4 Pin Surface Mount (SM11)

### Features

- Low Noise Figure: 2.0 dB Typical
- High Output Power: +24 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                   | 5-125 MHz            | 10-100 MHz                       |
| Gain (dB)                   | 20.5                 | 20.5 ± 1.0                       |
| Power @ 1 dB<br>Comp. (dBm) | +24                  | +22.5 Min.                       |
| Reverse<br>Isolation (dB)   | -24                  | -23 Max.                         |
| VSWR In                     | 1.70:1               | 2.2:1 Max.                       |
| Out                         | 1.35:1               | 2.0:1 Max.                       |
| Noise Figure (dB)           | 2.0                  | 3.0 Max.                         |
| Power Vdc                   | +12                  | +12 Min.                         |
| mA                          | 85                   | 95                               |

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

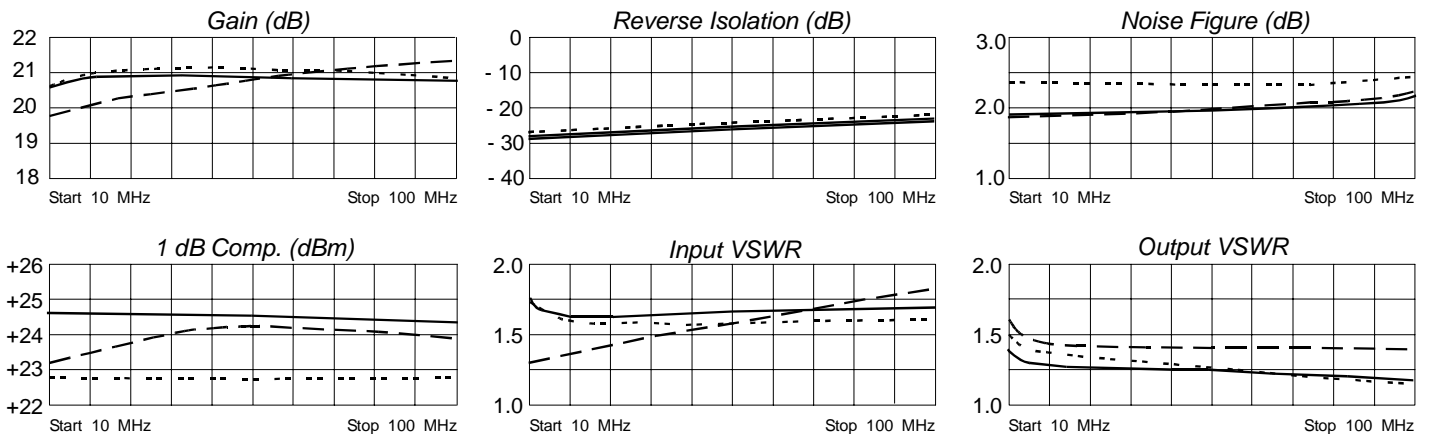
### Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point ..... +58 dBm (Typ.)  
 Second Order Two Tone Intercept Point ..... +52 dBm (Typ.)  
 Third Order Two Tone Intercept Point ..... +40 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 ..... + 15 Volts  
 Continuous RF Input Power ..... + 18 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  |
| 5            | .35 | - 32 | 10.28 | -157 | .05 | -159 | .27 | - 27 |
| 10           | .27 | - 28 | 10.95 | -171 | .05 | -174 | .16 | - 32 |
| 50           | .23 | - 36 | 11.12 | 161  | .06 | 151  | .11 | - 3  |
| 100          | .26 | - 68 | 11.10 | 139  | .06 | 127  | .10 | - 10 |
| 150          | .32 | -106 | 10.87 | 115  | .07 | 103  | .06 | - 29 |



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