

RF AMPLIFIER

MODEL **TM5519**

Available as: TM5519, 4 Pin TO-8 (T4)
 TN5519, 4 Pin Surface Mount (SM3)
 FP5519, 4 Pin Flatpack (FP4)
 BX5519, Connectorized Housing (H1)

Features

- 5 Volt Operation
- Low Noise Figure: 2.25 dB Typical
- Operating Temp. -55 °C to +85 °C
- Environmental Screening Available

Specifications

| CHARACTERISTIC | TYPICAL Ta= 25 °C | MIN/MAX Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency | 5 - 500 MHz | 5 - 500 MHz |
| Gain (dB) | 15 | 14.0 Min. |
| Power @ 1 dB Comp. (dBm) | +14.5 | +11.5 Min. |
| Reverse Isolation (dB) | -18 | -17 Max. |
| VSWR In | 1.5:1 | 2.0:1 Max. |
| VSWR Out | 1.9:1 | 2.2:1 Max. |
| Noise figure (dB) | 2.25 | 3.0 Max. |
| Power Vdc | +5 | +5 |
| mA | 30 | 35 Max. |

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

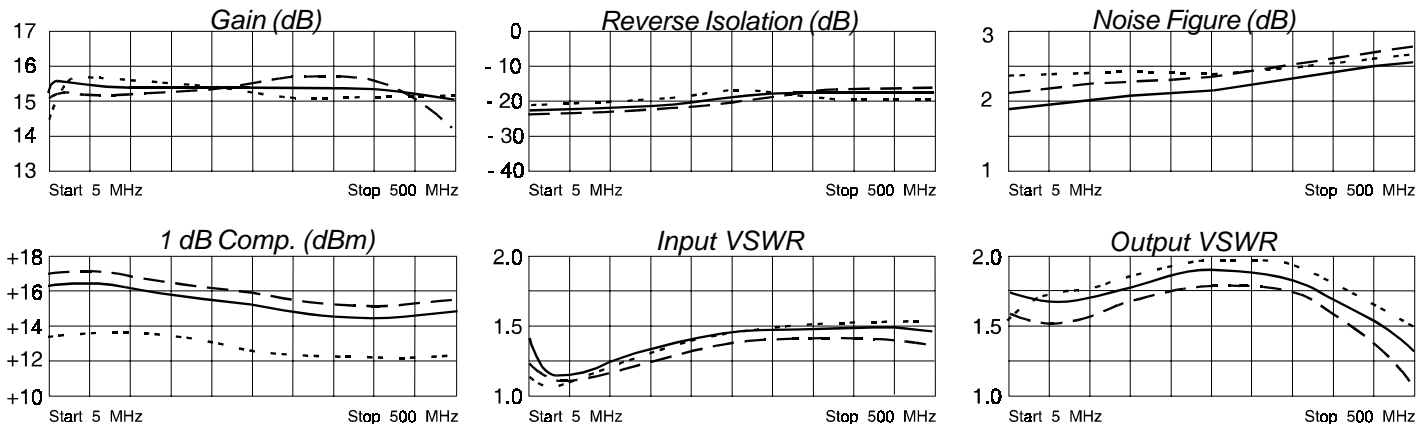
Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +43 (Typ.)
 Second Order Two Tone Intercept Point +39 (Typ.)
 Third Order Two Tone Intercept Point +29 (Typ.)

Maximum Ratings

Ambient Operating Temperature -55°C to + 100 °C
 Storage Temperature -62°C to + 125 °C
 Case Temperature + 125 °C
 DC Voltage + 10 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. MHz | S11 | | S21 | | S12 | | S22 | |
|--------------|-----|------|------|------|-----|------|-----|------|
| | Mag | Deg | Mag | Deg | Mag | Deg | Mag | Deg |
| 5 | .15 | -57 | 5.84 | -165 | .09 | -165 | .28 | -16 |
| 50 | .08 | -76 | 6.01 | 166 | .09 | 161 | .25 | -30 |
| 100 | .12 | -105 | 5.92 | 150 | .09 | 140 | .26 | -53 |
| 200 | .18 | -147 | 5.78 | 119 | .10 | 105 | .31 | -92 |
| 300 | .21 | 175 | 5.71 | 90 | .11 | 76 | .32 | -122 |
| 400 | .20 | 137 | 5.73 | 57 | .12 | 49 | .28 | -146 |
| 500 | .20 | 103 | 5.58 | 19 | .13 | 24 | .16 | -163 |



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