

RF AMPLIFIER

MODEL *TM6519*

Available as: TM6519, 4 Pin TO-8 (T4)
 TN6519, 4 Pin Surface Mount (SM3)
 FP6519, 4 Pin Flatpack (FP4)
 BX6519, Connectorized Housing (H1)
 PN6519, Reduced Size Surface Mount (SM11)

Features

- High Output Power: +19 dBm Typical
- High Third Order Intercept: > +33 dBm 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 | 10 - 500 MHz | 10 - 500 MHz |
| Gain (dB) | 14.3 | 12.0 Min. |
| Power @ 1 dB Comp. (dBm) | >+19 | +17.0 Min. |
| Reverse Isolation (dB) | - 16 | -15.0 Max. |
| VSWR In | <1.5:1 | 2.0:1 Max. |
| VSWR Out | <1.6:1 | 2.0:1 Max. |
| Noise figure (dB) | <5.5 | 6.0 Max. |
| Power Vdc | +15 | +15 |
| mA | 70 | 73 Max. |

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

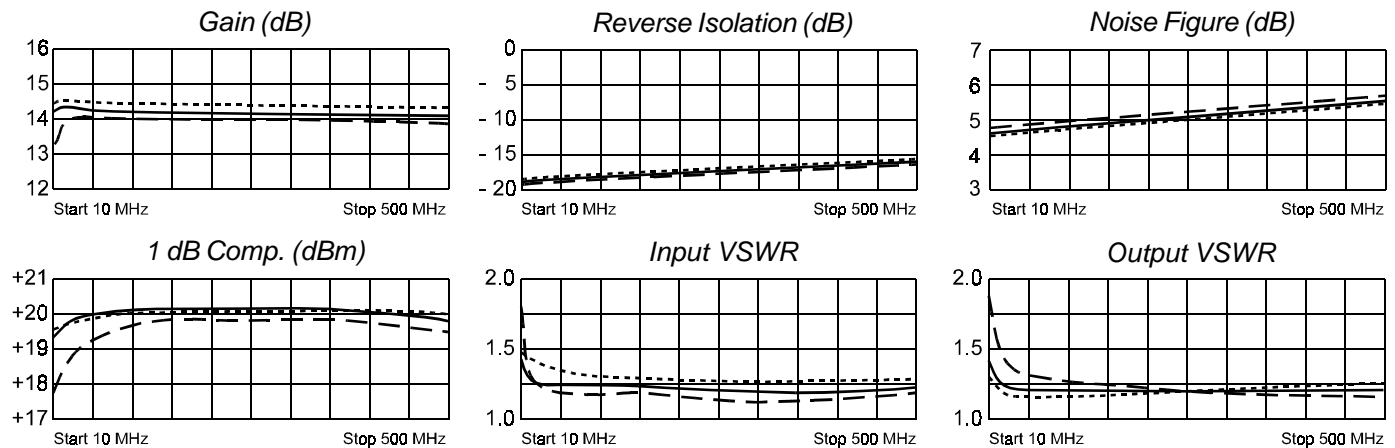
Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point +45 (Typ.)
 Second Order Two Tone Intercept Point +40 (Typ.)
 Third Order Two Tone Intercept Point +34 (Typ.)

Maximum Ratings

Ambient Operating Temperature -55°C to + 100 °C
 Storage Temperature -62°C to + 125 °C
 Case Temperature + 125 °C
 DC Voltage + 18Volts
 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. MHz | ---- S11 ---- | | ---- S21 ---- | | ---- S12 ---- | | ---- S22 ---- | |
|--------------|---------------|------|---------------|------|---------------|------|---------------|------|
| | Mag. | Deg. | Mag. | Deg. | Mag. | Deg. | Mag. | Deg. |
| 5 | .17 | -109 | 5.21 | -164 | .11 | 18 | .22 | 135 |
| 10 | .12 | -135 | 5.33 | -174 | .11 | 9 | .13 | 139 |
| 50 | .09 | -179 | 5.39 | 172 | .12 | 1 | .09 | 160 |
| 100 | .09 | 168 | 5.39 | 162 | .12 | - 1 | .08 | 156 |
| 200 | .07 | 119 | 5.40 | 142 | .12 | - 4 | .07 | 150 |
| 300 | .06 | 73 | 5.39 | 122 | .13 | - 9 | .07 | 136 |
| 400 | .07 | 17 | 5.38 | 102 | .14 | - 15 | .07 | 133 |
| 500 | .08 | - 30 | 5.34 | 82 | .15 | - 22 | .08 | 121 |



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