

RF AMPLIFIER

MODEL **TM6183**

Available as: TM6183, 4 Pin TO-8 (T4)
 TN6183, 4 Pin Surface Mount (SM3)
 FP6183, 4 Pin Flatpack (FP4)
 BX6183, Connectorized Housing (H1)
 PN6183, Reduced Size Surface Mount (SM11)

Features

- High Gain: 29 dB Typical
- Low Noise Figure: <4 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 | 10 - 1000 MHz | 10 - 1000 MHz |
| Gain (dB) | 29.0 | 28.0 Min. |
| Power @ 1 dB Comp. (dBm) | +15 | +13.5 Min. |
| Reverse Isolation (dB) | - 36 | - 34 Max. |
| VSWR In | <1.5:1 | 2.0:1 Max. |
| Out | <1.5:1 | 2.0:1 Max. |
| Noise figure (dB) | <4.0 | 5.0 Max. |
| Power Vdc | +15 | +15 |
| mA | 70 | 83 Max. |

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

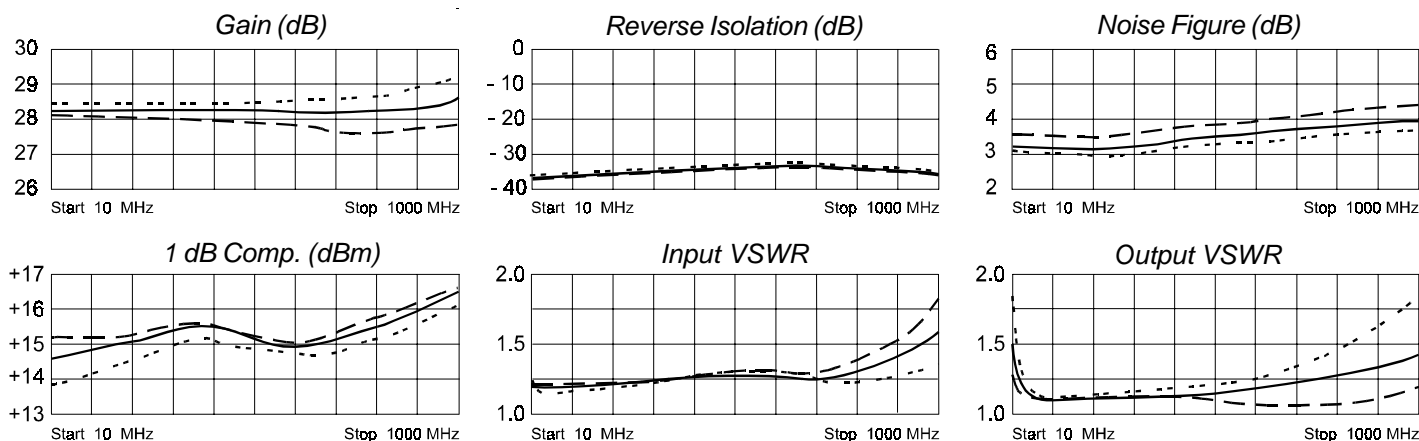
Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point +37 (Typ.)
 Second Order Two Tone Intercept Point +32 (Typ.)
 Third Order Two Tone Intercept Point +25 (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 + 6 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 | .18 | 33 | 22.77 | 23 | .01 | 24 | .36 | 113 |
| 10 | .19 | 13 | 23.76 | 10 | .01 | 12 | .17 | 99 |
| 50 | .18 | -10 | 23.90 | -9 | .02 | 8 | .05 | 76 |
| 100 | .18 | -22 | 23.93 | -21 | .01 | 2 | .04 | 66 |
| 200 | .17 | -47 | 24.04 | -44 | .01 | 3 | .04 | 54 |
| 400 | .15 | -93 | 23.87 | -89 | .01 | -6 | .04 | 41 |
| 600 | .12 | -129 | 23.38 | -134 | .02 | 1 | .05 | 75 |
| 800 | .10 | -130 | 23.59 | -178 | .02 | -12 | .12 | 91 |
| 1000 | .24 | -135 | 25.96 | 132 | .02 | -26 | .31 | 62 |

Amplifonix

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