

RF AMPLIFIER

MODEL *TM6603*

Available as: TM6603, 4 Pin TO-8 (T4)
 TN6603, 4 Pin Surface Mount (SM3)
 FP6603, 4 Pin Flatpack (FP4)
 BX6603, Connectorized Housing (H1)

Features

- 24 Volt Operation
- Medium Output Power: +15.5 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 | 5 - 500 MHz | 5 - 500 MHz |
| Gain (dB) | 10 | 8.5 Min. |
| Power @ 1 dB Comp. (dBm) | +15.5 | +14.0 Min. |
| Reverse Isolation (dB) | - 15.5 | - 14 Max. |
| VSWR In | 1.5:1 | 2.0:1 Max. |
| VSWR Out | 1.5:1 | 2.0:1 Max. |
| Noise figure (dB) | 5.5 | 7.0 Max. |
| Power Vdc | +24 | +24 |
| mA | 50 | 55 Max. |

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

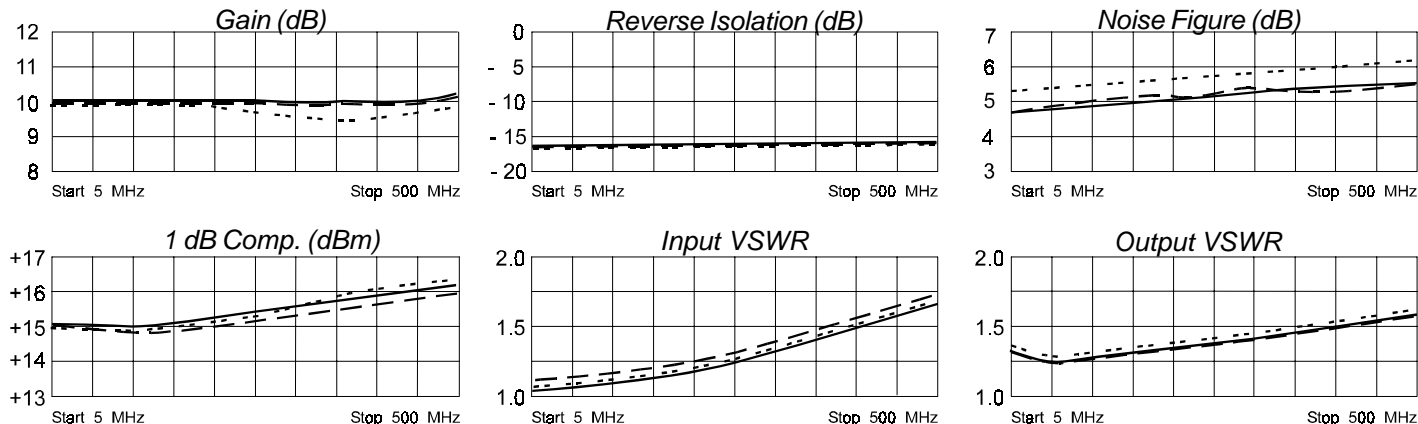
Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +48 (Typ.)
 Second Order Two Tone Intercept Point +42 (Typ.)
 Third Order Two Tone Intercept Point +30 (Typ.)

Maximum Ratings

Ambient Operating Temperature -55°C to + 100 °C
 Storage Temperature -62°C to + 125 °C
 Case Temperature + 125 °C
 DC Voltage + 26 Volts
 Continuous RF Input Power + 13 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 | .02 | - 72 | 3.20 | -178 | .14 | 4 | .13 | -164 |
| 50 | .02 | - 87 | 3.30 | 172 | .14 | 1 | .13 | -176 |
| 100 | .04 | - 89 | 3.19 | 164 | .14 | 0 | .13 | -174 |
| 200 | .09 | -107 | 3.19 | 148 | .15 | -0 | .15 | -170 |
| 300 | .14 | -120 | 3.18 | 132 | .15 | -1 | .17 | -169 |
| 400 | .19 | -132 | 3.21 | 116 | .16 | -2 | .20 | -174 |
| 500 | .26 | -145 | 3.24 | 100 | .17 | -2 | .23 | -180 |

Amplifonix

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