

RF AMPLIFIER

MODEL *TM6012*

Available as: TM6012, 4 Pin TO-8 (T4)
 TN6012, 4 Pin Surface Mount (SM3)
 FP6012, 4 Pin Flatpack (FP4)
 BX6012, Connectorized Housing (H1)

Features

- High Output Power: +23 dBm Typical
- High IP3: +36 dBm Typical
- Lower +12 Vdc Supply
- Environmental Screening Available

Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point +56 dBm (Typ.)
 Second Order Two Tone Intercept Point +50 dBm (Typ.)
 Third Order Two Tone Intercept Point +36 dBm (Typ.)

Specifications

| CHARACTERISTIC | TYPICAL Ta= 25 °C | MIN/MAX Ta = -55 °C to +85 °C |
|-----------------------------|----------------------|----------------------------------|
| Frequency | 5 - 500 MHz | 5 - 500 MHz |
| Gain (dB) | 14.5 | 13.0 Min. |
| Power @ 1 dB Comp. (dBm) | +23 | +20 Min. |
| Reverse Isolation (dB) | -18 | -15 Max. |
| VSWR In | <1.4:1 | 2.0:1 Max. |
| VSWR Out | <1.2:1 | 2.0:1 Max. |
| Noise Figure (dB) | 4.6 | 6.0 Max. |
| Power Vdc | +12 | +12 |
| mA | 88 | 95 Max. |

Maximum Ratings

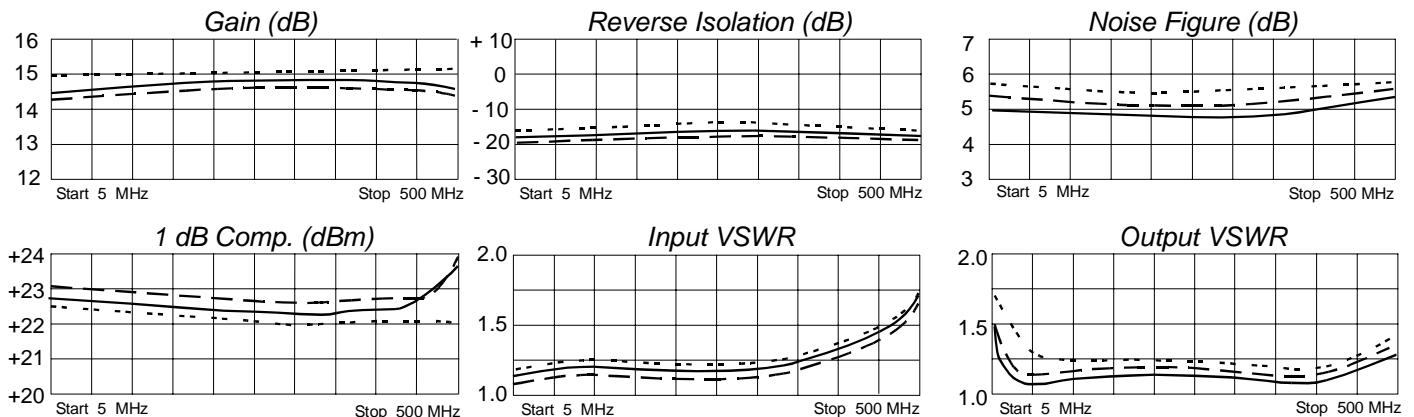
Ambient Operating Temperature -55°C to +100 °C
 Storage Temperature -62°C to +125 °C
 Case Temperature +125 °C
 DC Voltage +15 Volts
 Continuous RF Input Power +13 dBm
 Short Term RF Input Power 50 mW (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 µsec Max.)

MTBF Calculation for Ground Benign Environment

@ 25 °C 3,721,883.58 hrs

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

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 | .23 | -41 | 5.86 | -163 | .08 | 19 | .27 | 86 |
| 100 | .13 | 80 | 5.46 | 159 | .11 | 3 | .05 | 23 |
| 200 | .40 | 24 | 5.51 | 137 | .12 | 3 | .04 | 23 |
| 300 | .58 | -31 | 5.50 | 114 | .14 | 2 | .04 | 45 |
| 400 | .10 | -91 | 5.53 | 90 | .15 | -1 | .08 | 71 |
| 500 | .20 | -137 | 5.45 | 64 | .17 | -9 | .17 | 66 |



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