# RF AMPLIFIER MODEL *TM6712*

**Available as:** TM6712, 4 Pin TO-8 (T4)
TN6712, 4 Pin 0.450" Surface Mount (SM3)
FP6712, 4 Pin Flatpack (FP4)
BX6712, SMA Connectorized Housing (H1)

## Features

- Low Noise Figure: <1.7 dB Typical
- Medium Output Power: +9 dBm Typical
- Operating Temp. - 55 ºC to +85 ºC
- Environmental Screening Available

## Typical Intermodulation Performance at 25 º C

Second Order Harmonic Intercept Point ..... +42 dBm (Typ.)
Second Order Two Tone Intercept Point ..... +36 dBm (Typ.)
Third Order Two Tone Intercept Point ..... +20 dBm (Typ.)

## Specifications

| CHARACTERISTIC | TYPICAL Ta= 25 ºC | MIN/MAX Ta = -55 ºC to +85 ºC |
|---|---|---|
| Frequency | 5 - 500 MHz | 5 - 500 MHz |
| Gain (dB) | 33 | 31.0 Min. |
| Power @ 1 dB Comp. (dBm) | +9 | +8.0 Min. |
| Reverse Isolation (dB) | -42 | -40 Max. |
| VSWR In<br>Out | 1.75:1<br>1.5:1 | 2.0:1 Max.<br>2.0:1 Max. |
| Noise figure (dB) | 1.7 | 2.0 Max. |
| Power Vdc<br>mA | +12<br>35 | +12<br>38 Max. |

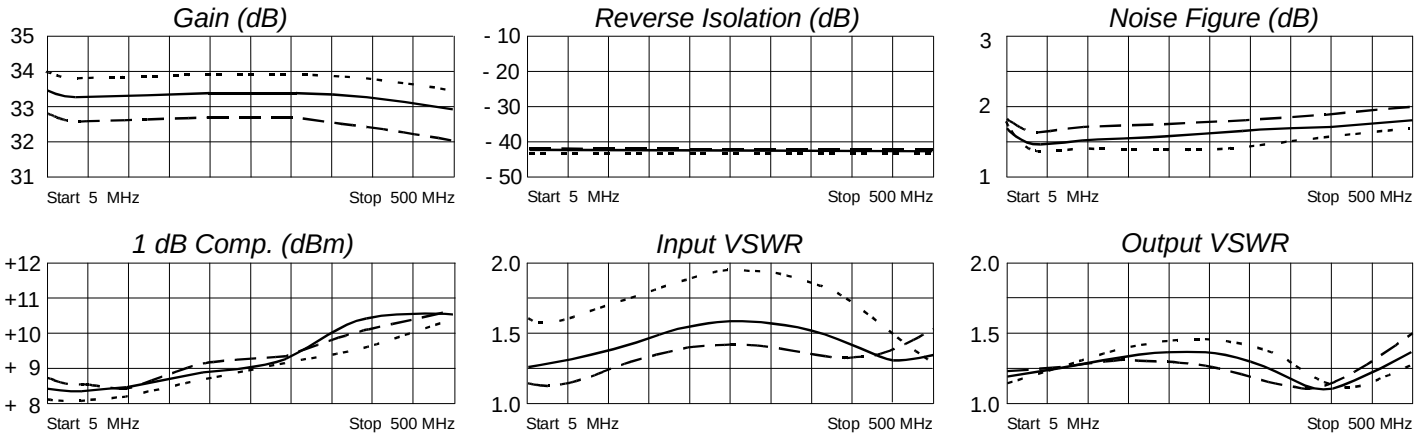
Note: Care should always be taken to effectively ground the case of each unit.

Revision 7/18/2013

## Maximum (No Damage) Ratings

Ambient Operating Temperature ..... -55ºC to + 100 ºC
Storage Temperature ..... -62ºC to + 125 ºC
Case Temperature ..... + 125 ºC
DC Voltage ..... + 15 Volts
Continuous RF Input Power ..... + 6 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 ºC* – – – *+ 85 ºC* - - - - - - *-55 ºC*

### Linear S-Parameters

| FREQ. MHz | S11 Mag | S11 Deg | S21 Mag | S21 Deg | S12 Mag | S12 Deg | S22 Mag | S22 Deg |
|---|---|---|---|---|---|---|---|---|
| 5 | .11 | -163 | 47.18 | 3 | .01 | 12 | .09 | -163 |
| 50 | .13 | -166 | 46.15 | -24 | .01 | -20 | .10 | -165 |
| 100 | .16 | -165 | 45.93 | -48 | .01 | -5 | .13 | -164 |
| 200 | .20 | -173 | 46.18 | -97 | .01 | -8 | .16 | 179 |
| 300 | .21 | 171 | 46.31 | -147 | .01 | -16 | .13 | 160 |
| 400 | .17 | 165 | 46.10 | 160 | .01 | -25 | .06 | -171 |
| 500 | .16 | -158 | 44.77 | 104 | .01 | -41 | .17 | -148 |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