

RF AMPLIFIER

MODEL *TM6681*

Available as: TM6681, 4 Pin TO-8 (T4)
 TN6681, 4 Pin Surface Mount (SM3)
 FP6681, 4 Pin Flatpack (FP4)
 BX6681, Connectorized Housing (H1)

Features

- High Gain: -37 dB Typical
- Very Low Output VSWR: 1.1:1 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 | 20 - 500 MHz |
| Gain (dB) | 17.5 | 15.5 Min. |
| Power @ 1 dB Comp. (dBm) | +9.5 | +7.0 Min. |
| Reverse Isolation (dB) | -37 | -35 Max. |
| VSWR In | 1.40:1 | 2.00:1 Max. |
| Out | 1.10:1 | 1.25:1 Max. |
| Noise figure (dB) | 3.0 | 4.0 Max. |
| Power Vdc | +15 | +15 |
| mA | 29 | 32 Max. |

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

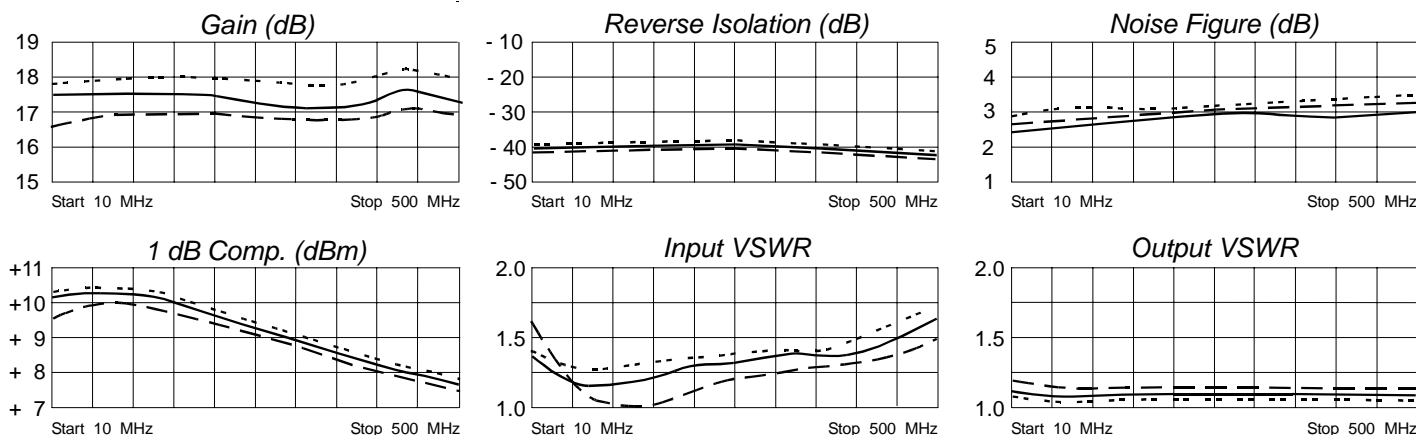
Typical Intermodulation Performance at 25 ° C

Second Order Harmonic Intercept Point+33 dBm (Typ.)
 Second Order Two Tone Intercept Point +28 dBm (Typ.)
 Third Order Two Tone Intercept Point +23 dBm (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 + 10 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 |
| 10 | .30 | - 84 | 7.21 | -156 | .01 | 15 | .03 | 165 |
| 50 | .06 | -161 | 7.55 | 164 | .01 | 16 | .03 | 167 |
| 100 | .07 | 107 | 7.53 | 139 | .01 | - 19 | .02 | -179 |
| 200 | .14 | 41 | 7.29 | 94 | .01 | - 19 | .03 | -111 |
| 300 | .18 | - 8 | 7.11 | 48 | .01 | - 32 | .04 | -126 |
| 400 | .19 | - 77 | 7.46 | - 2 | .01 | - 60 | .02 | -114 |
| 500 | .29 | 152 | 7.37 | - 81 | .01 | -123 | .03 | -123 |



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 04/12/05

www.spectrummicrowave.com Spectrum Microwave (Europe) · 2707 Black Lake Place · Philadelphia, Pa. 19154 · PH (215) 464-4000 · Fax (215) 464-4001