

# RF AMPLIFIER

## MODEL QB-101

Available as: QB-101, Housing (E52-19044)

### Features

- High Gain: 21.9 dB Typical
- High Power: +31 dBm Typical
- Operating Temp. 0 °C to +50 °C
- Environmental Screening Available

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta =0 °C to +50 °C
Frequency	2 - 70 MHz	2 - 70 MHz
Gain (dB)	21.9 ± 0.5	—
Gain vs. Temperature	—	+0.2/ -0.5 Max.
Gain Flatness	0.5	0.8 Max.
Reverse Isolation (dB)	31	31 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+31	+31 Min.
Output Intercept point		
3rd Order	+54	+54 Min.
2nd Order	+115	+105 Min.
Noise Figure (dB)	4.0	4.5 Max.
Power Vdc	+24	+24
mA	420	420 Max.

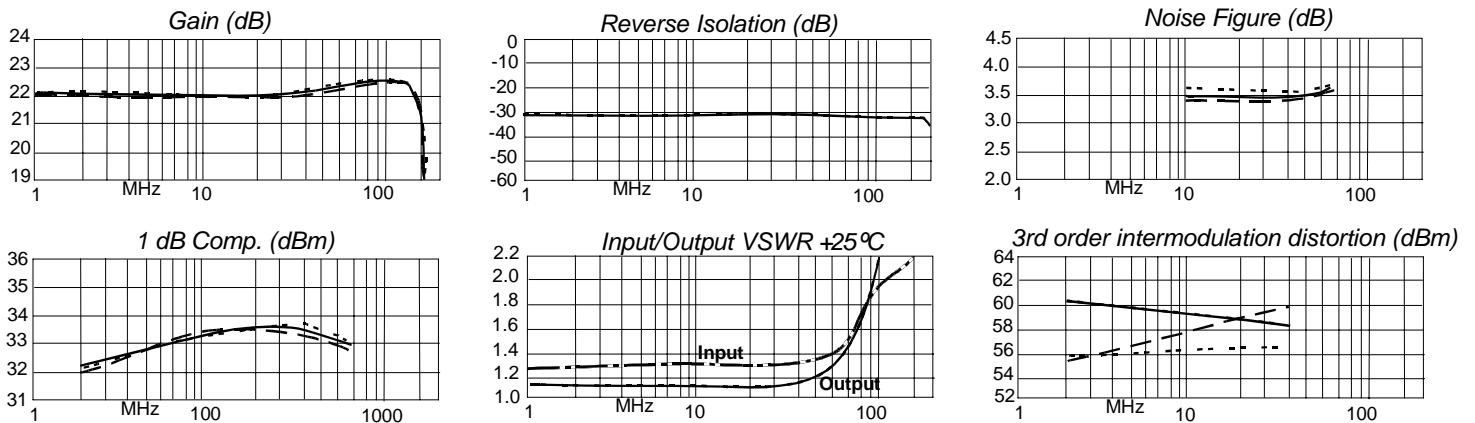
### Maximum Ratings

Ambient Operating Temperature ..... -54 °C to +71 °C  
 Storage Temperature ..... -65 °C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 25 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.)

**Note:**

1. Specifications are guaranteed when tested in a 50 Ohm system. Specifications indicated as typical are not guaranteed.

### Typical Performance Data



Legend ——— + 25 °C    - - - - + 50 °C    ······ 0 °C

### Linear S-Parameters Data

FREQ. MHz	-- S11-- dB    Ang	-- S21-- dB    Ang	-- S12-- dB    Ang	-- S22-- dB    Ang
2	-17.8    7.2	22.1    -178.6	-31.3    -174.3	-25.9    -2.3
5	-17.3    -3.3	22.1    174.1	-31.2    177.2	-25.5    -7.7
7	-17.3    -9.6	22.1    170.4	-31.1    174.0	-25.4    -13.1
8	-17.3    -12.1	22.1    168.7	-31.2    172.1	-25.3    -15.8
10	-17.3    -15.6	22.1    165.4	-31.2    169.8	-25.2    -21.4
30	-17.5    -60.3	22.2    134.4	-31.4    145.0	-23.3    -74.7
40	-17.3    -81.0	22.2    118.9	-31.6    133.5	-21.6    -99.7
60	-16.0    -130.6	22.4    87.1	-32.0    111.4	-17.1    -143.5
70	-15.2    -153.8	22.5    71.1	-32.2    100.6	-15.0    -163.6



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