

# 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	+105	+105 Min.
Noise Figure (dB)	4.0	4.5 Max.
Power Vdc	+24	+24
mA	420	420 Max.

### Maximum Ratings

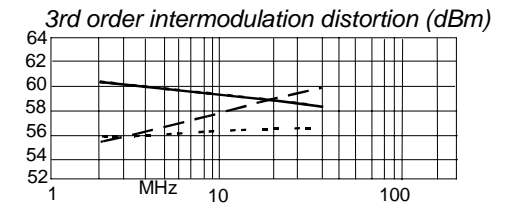
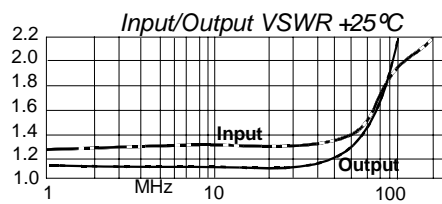
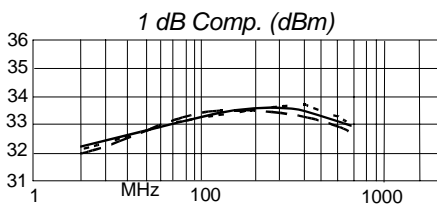
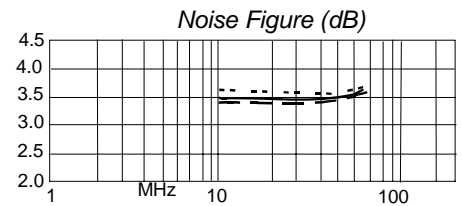
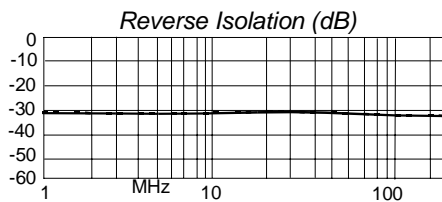
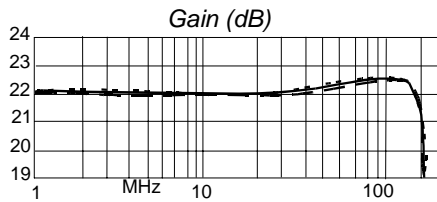
Ambient Operating Temperature ..... -54 °C to +71 °C  
 Storage Temperature ..... -65 °C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 25 Volts  
 Continuous RF Input Power ..... + 13 dBm  
 Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 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.

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

### Typical Performance Data



### 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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