

# RF AMPLIFIER

## MODEL QB-188

Available as: QB-188; Housing (E52-0184)  
 QB-188-01, (BNC connectors)  
 QB-188-02, (SMA connectors)

### Features

- High Gain: 15.0 dB Typical
- High Power: +21 dBm Typical
- Operating Temp. - 55 °C to +71 °C

### Specifications

CHARACTERISTIC	TYPICAL Ta = 25 °C	MIN/MAX Ta = -55 °C to +71 °C
Frequency	0.5 - 100 MHz	0.5 - 100 MHz
Gain (dB)	15.0 ± 1.0	—
Gain vs. Temperature	—	+0.3/-0.3 Max.
Gain Flatness	0.5	0.5 Max.
Reverse Isolation (dB)	28	28 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+21	+21 Min.
Output Intercept point 3rd Order	+37	+37 Min.
2nd Order	+47	+47 Min.
Noise Figure (dB)	3.0	3.6 Max.
Power Vdc	+15	+15
mA	100	100 Max.

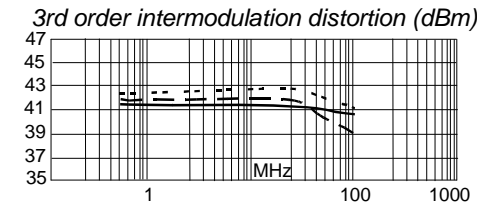
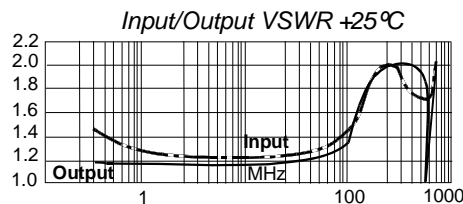
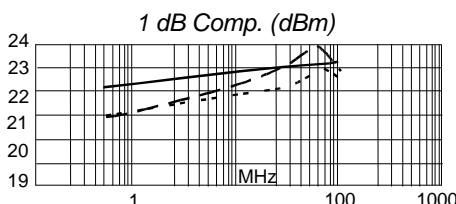
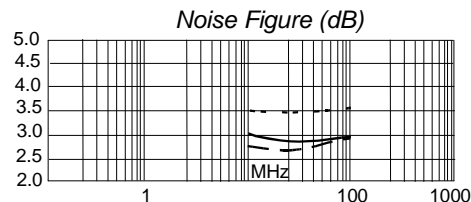
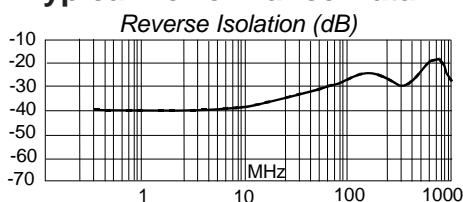
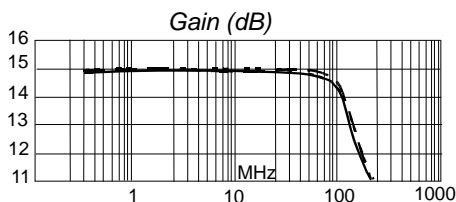
### Maximum Ratings

Ambient Operating Temperature ..... -55 °C to +85 °C  
 Storage Temperature ..... -65 °C to + 125 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 16 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    - - - - + 71 °C    - - - - -55 °C

### Linear S-Parameters Data

FREQ. MHz	-- S11 --		-- S21 --		-- S12 --		-- S22 --	
	dB	Ang	dB	Ang	dB	Ang	dB	Ang
0.5	-16.4	-27.8	14.8	-175.0	-37.3	34.5	-20.7	8.8
1	-17.6	-17.9	14.9	-177.9	-37.7	21.6	-20.7	3.8
3	-18.1	-9.0	14.8	177.7	-37.8	9.5	-20.8	-4.0
6	-18.2	-10.7	14.8	174.2	-37.5	10.5	-20.9	-9.4
9	-18.1	-14.1	14.8	170.9	-37.4	11.9	-20.9	-14.3
20	-18.1	-29.2	14.8	159.5	-36.1	18.7	-20.8	-33.3
50	-18.0	-73.7	14.8	128.0	-31.9	18.9	-20.1	-89.2
80	-16.8	-128.4	14.7	95.1	-28.5	3.6	-17.1	-146.6
100	-15.3	-167.5	14.5	71.2	-26.9	-12.6	-14.3	176.3

