

# RF AMPLIFIER

## MODEL QBH-834

Available as: QBH-834, 4 Pin TO-8 (T4)  
 QBH-5834, 0.450" Square (E52-18563)  
 QBH-9-834, Connectorized Housing (ES E52-1501)

### Features

- High Gain: 19.7 dB Typical
- High Power: +27 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Maximum Ratings

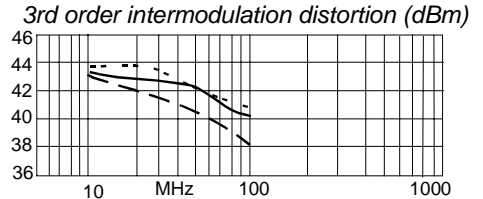
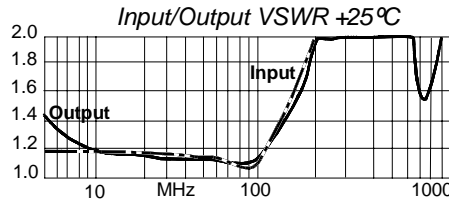
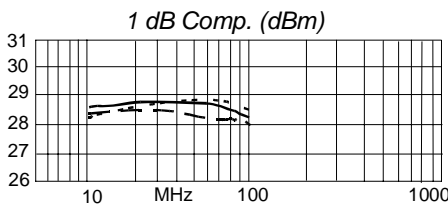
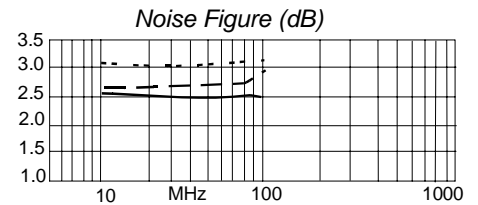
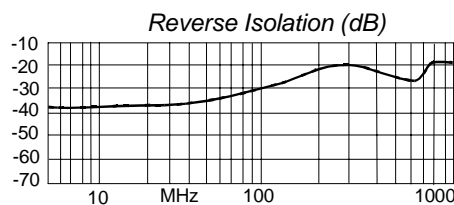
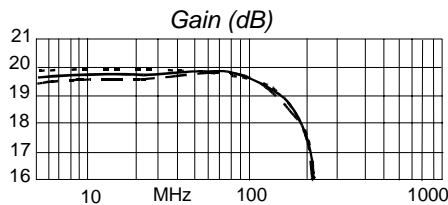
Ambient Operating Temperature ..... -55°C to + 105 °C  
 Storage Temperature ..... -65°C to + 150 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 17 Volts  
 Continuous RF Input Power ..... + 18 dBm  
 Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.5 Watt (3 µsec Max.)

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

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 100 MHz	10 - 100 MHz
Gain (dB)	19.7 ± 0.5	—
Gain vs. Temperature	—	+0.5/-0.5 Max.
Gain Flatness	0.5	0.6 Max.
Reverse Isolation (dB)	-26	-26 Min.
VSWR In	1.5:1	1.5:1 Max.
Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+27	+26 Min.
Output Intercept point		
3rd Order	+37	+35 Min.
2nd Order	+47	+45 Min.
Noise Figure (dB)	5.5	6.5 Max.
Power Vdc	+15	+15
mA	135	139 Max.

### Typical Performance Data



Legend ——— + 25 °C    - - - - + 85 °C    - - - - - - - - - -55 °C

### Linear S-Parameters Data

FREQ. MHz	-- S11-- dB    Ang	-- S21-- dB    Ang	-- S12-- dB    Ang	-- S22-- dB    Ang
10	-21.6 -168.3	19.7 -179.8	-36.2 23.2	-19.7 60.4
30	-22.2 173.5	19.7 163.9	-34.7 26.1	-24.0 11.2
40	-22.9 169.7	19.7 157.6	-33.9 29.4	-24.6 -5.4
50	-23.9 167.6	19.7 151.2	-32.9 32.6	-25.1 -22.2
60	-25.4 166.3	19.7 145.0	-32.0 33.7	-25.8 -42.8
70	-27.3 178.6	19.7 138.8	-31.1 33.7	-26.5 -69.2
80	-29.3 -170.6	19.7 132.3	-30.3 33.9	-27.2 -103.6
90	-31.0 -146.8	19.7 125.8	-29.4 33.5	-27.7 -137.7
100	-28.6 -131.4	19.6 119.2	-28.6 31.8	-28.2 -162.5



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532    Rev. 7/28/08

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