

# RF AMPLIFIER

Available as: QBH-870, 4 Pin TO-8 (080-10114-0001)  
 QBH-9-870, Connectorized Housing (ES E52-1501)

## MODEL QBH-870

### Features

- Gain: 7.9 dB Typical
- High Power: +20 dBm Typical
- Operating Temp. -55 °C to +85 °C
- Environmental Screening Available

### Specifications

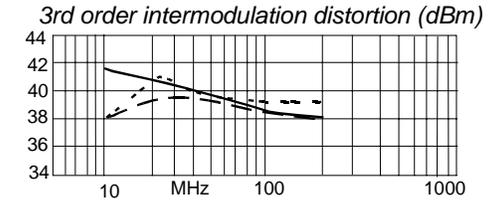
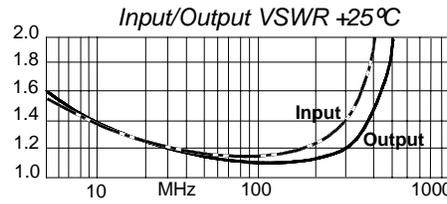
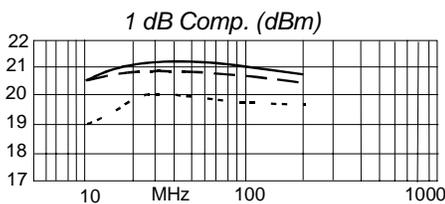
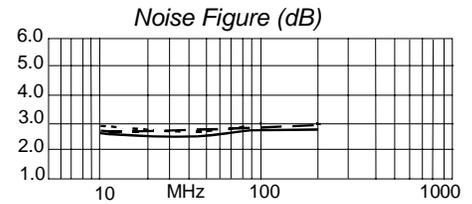
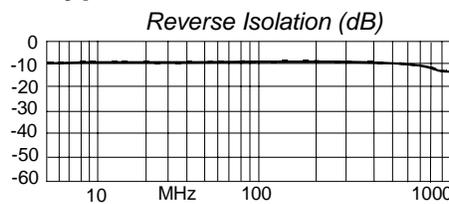
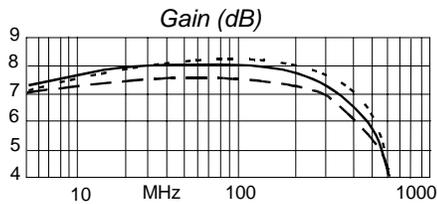
CHARACTERISTIC	TYPICAL Ta = 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 200 MHz	10 - 200 MHz
Gain (dB)	7.9 ± 0.5	—
Gain vs. Temperature	—	+0.7/-0.8 Max.
Gain Flatness	0.8	1.4 Max.
Reverse Isolation (dB)	-10	-9 Min.
VSWR In	1.5:1	1.6:1 Max.
VSWR Out	1.5:1	1.6:1 Max.
1 dB Compression (dBm)	+20	+19 Min.
Output Intercept point 3rd Order	+36	+32 Min.
2nd Order	+49	+48 Min.
Noise Figure (dB)	3.2	3.5 Max.
Power Vdc	+15	+15
mA	31	33 Max.

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to +125 °C  
 Storage Temperature ..... -65°C to +150 °C  
 Case Temperature ..... +125 °C  
 DC Voltage ..... +18.5 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: Specifications are guaranteed when tested in a 50 Ohm system.  
 Specifications indicated as typical are not guaranteed.

### 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	-16.9 143.6	7.8 8.2	-11.1 8.3	-16.7 145.9
40	-21.7 154.1	8.1 -10.2	-10.9 -10.4	-21.4 141.9
50	-22.1 155.7	8.2 -14.2	-10.8 -14.5	-22.0 139.6
60	-22.5 157.2	8.1 -18.1	-10.8 -18.4	-22.5 137.0
80	-23.1 162.0	8.1 -25.4	-10.8 -25.8	-23.2 130.8
90	-23.1 161.9	8.1 -29.0	-10.8 -29.5	-23.5 127.8
100	-23.1 162.2	8.1 -32.5	-10.8 -33.0	-23.8 124.3
150	-22.2 168.9	8.0 -49.8	-10.8 -50.7	-24.7 108.7
200	-20.0 174.1	7.9 -66.7	-10.9 -68.1	-25.3 102.6



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