

# RF AMPLIFIER

Available as: QBH-125, 4 Pin TO-8 (080-22502-0001)  
 QBH-9-125, Connectorized Housing (ES E52-1501)

## MODEL QBH-125

### Features

- High Gain: 19.6 dB Typical
- High Power: +23 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Maximum Ratings

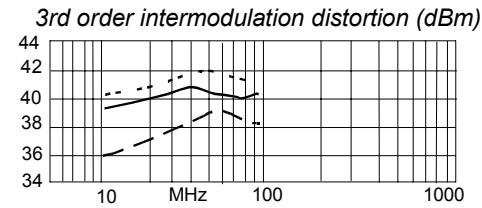
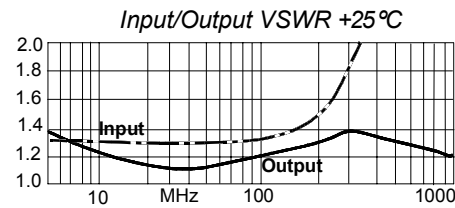
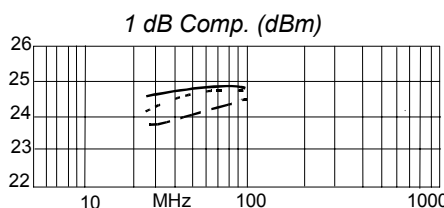
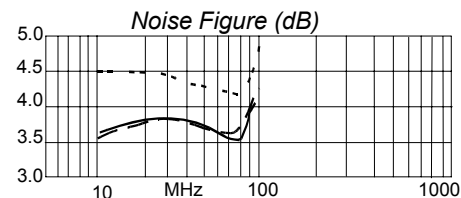
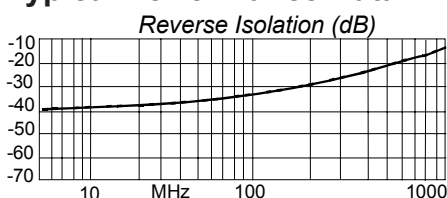
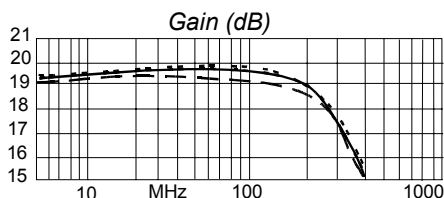
Ambient Operating Temperature ..... -55°C to + 125 °C  
 Storage Temperature ..... -65°C to + 150 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 16.5 Volts  
 Continuous RF Input Power ..... + 13 dBm  
 Short Term RF Input Power ..... 50 Milliwatts (1 Minute Max.)  
 Maximum Peak Power ..... 0.5 Watt (3 µsec Max.)

### Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 100 MHz	10 - 100 MHz
Gain (dB)	19.6 ± 0.8	—
Gain vs. Temperature	—	+0.5/-1.0 Max.
Gain Flatness	0.5	0.6 Max.
Reverse Isolation (dB)	-29	-29 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+23	+21 Min.
Output Intercept point		
3rd Order	+38	+33 Min.
2nd Order	+50	+43 Min.
Noise Figure (dB)	4.5	5.0 Max.
Power Vdc	+15	+15
mA	132	137 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

FREQ. MHz	-- S11-- dB    Ang	-- S21-- dB    Ang	-- S12-- dB    Ang	-- S22-- dB    Ang
10	-17.4   -174.7	19.5   -176.3	-40.5   37.0	-21.0   87.0
30	-17.7   -176.9	19.7   171.3	-39.3   36.3	-24.1   50.9
40	-17.7   -176.4	19.7   166.9	-38.5   38.6	-23.7   43.7
50	-17.7   -175.8	19.7   162.6	-37.6   41.9	-23.1   38.0
60	-17.7   -174.8	19.6   158.5	-36.7   44.4	-22.4   33.2
70	-17.6   -173.7	19.6   154.5	-36.0   45.5	-21.8   28.5
80	-17.5   -172.7	19.6   150.5	-35.3   48.0	-21.1   24.8
90	-17.4   -171.4	19.6   146.5	-34.5   47.7	-20.5   20.6
100	-17.2   -170.4	19.5   142.6	-33.8   49.0	-19.9   16.7

