

# RF AMPLIFIER

Available as: QBH-845, 4 Pin TO-8 Tall (080-22502-0001)  
 QBH-9-845, Connectorized Housing (ES E52-1501)

## MODEL QBH-845

### Features

- High Gain: 17.0 dB Typical
- High Power: +16 dBm Typical
- Operating Temp. -55 °C to +85 °C
- Environmental Screening Available

### Specifications

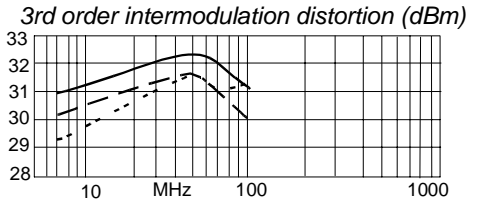
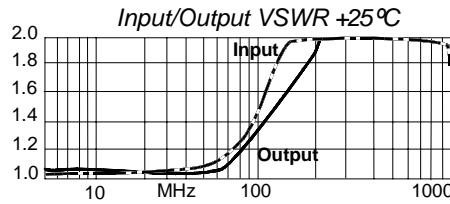
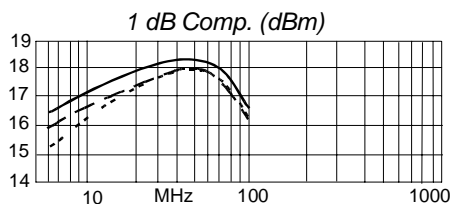
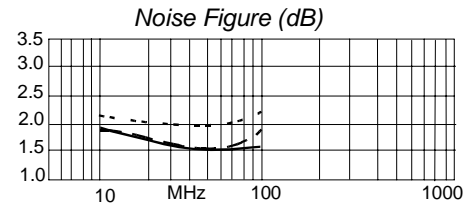
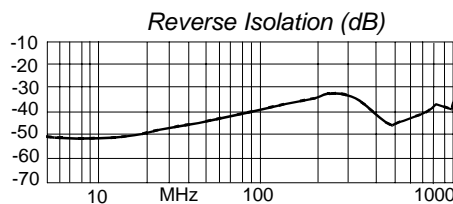
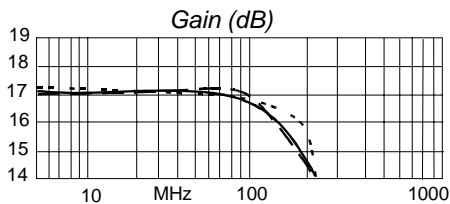
CHARACTERISTIC	TYPICAL Ta = 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	3 - 100 MHz	3 - 100 MHz
Gain (dB)	17.0 ± 0.5	—
Gain vs. Temperature	—	+0.8/-0.8 Max.
Gain Flatness	0.6	1.0 Max.
Reverse Isolation (dB)	-34	-34 Min.
VSWR In	1.6:1	1.7:1 Max.
VSWR Out	1.6:1	1.7:1 Max.
1 dB Compression (dBm)	+16	+15 Min.
Output Intercept point		
3rd Order	+29	+27 Min.
2nd Order	+43	+41 Min.
Noise Figure (dB)	1.9	2.4 Max.
Power Vdc	+15	+15
mA	30	32 Max.

### 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.)

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
3	-37.7    151.8	17.1    -176.6	-51.9    66.1	-28.4    37.6
6	-40.5    133.7	17.0    179.2	-52.6    51.6	-29.2    20.5
8	-40.4    119.4	17.1    177.4	-52.4    41.7	-29.3    14.7
10	-41.3    117.3	17.1    175.8	-51.1    40.3	-29.4    10.3
30	-29.2    -87.0	17.1    161.9	-46.4    44.9	-31.6    -8.0
50	-23.8    -105.7	17.2    148.5	-42.8    29.8	-33.7    147.9
70	-20.2    -120.8	17.2    134.5	-39.9    22.6	-24.9    139.9
90	-17.1    -136.3	17.2    119.0	-37.8    7.4	-18.8    122.2
100	-15.8    -144.5	17.0    110.3	-37.1    -4.2	-16.4    109.6



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