

# RF AMPLIFIER

Available as: QBH-859, 4 Pin TO-8 (080-10114-0001)  
 QBH-9-859, Connectorized Housing (ES E52-1501)

## MODEL QBH-859

### Features

- Low Noise Figure: 3 dB Typical
- High Dynamic Range
- 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 (MHz)	1000 - 3000	1000 - 3000
Gain (dB)	10.0 ± 1.0	8.0 - 12.0
Gain Flatness	±0.5	±0.75 Max.
Reverse Isolation (dB)	18	17 Max.
Pout @1 dB Compression (dBm)	+18	+16 Min.
VSWR In	1.8:1	2.0:1 Max.
Out	1.5:1	2.0:1 Max.
Noise Figure (dB)	3.0	4.0 Max.
Power Vdc	+15	+15
mA	90	115 Max.

Note: Specifications are guaranteed when tested in a 50 Ohm system with a DC supply voltage tolerance of ±1%.

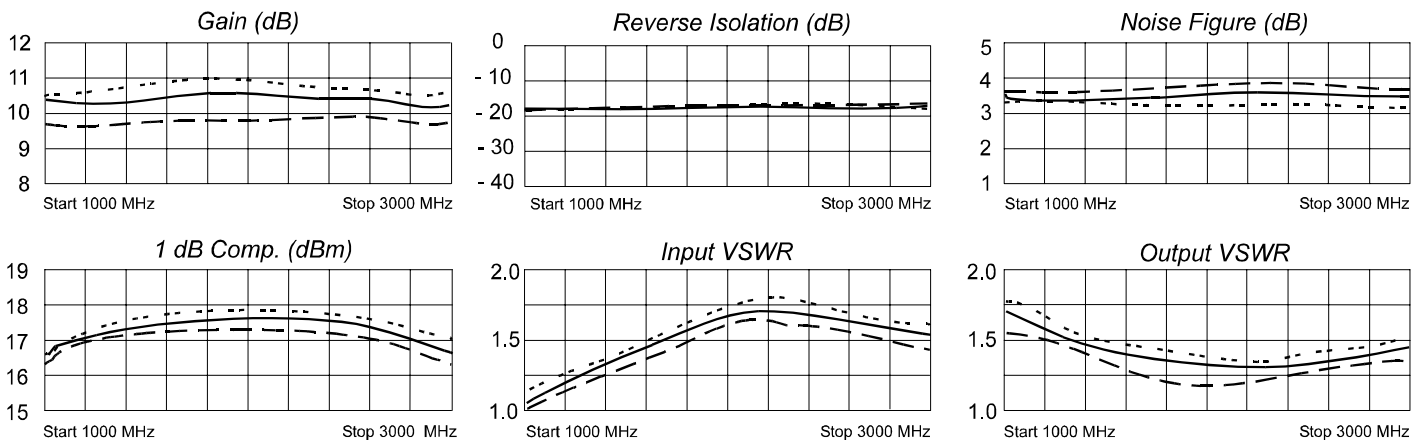
### Typical Intermodulation Performance at 25 °C

Second Order Harmonic Intercept Point..... +49 dBm  
 Second Order Two Tone Intercept Point..... +43 dBm  
 Third Order Two Tone Intercept Point..... +33 dBm

### Absolute Maximum Ratings

Operating Temperature ..... -55°C to +100 °C  
 Storage Temperature ..... -65°C to +150 °C  
 DC Voltage ..... +16 Volts  
 Continuous RF Input Power ..... +10 dBm  
 Short Term RF Input Power ..... +13 dBm (1 Minute 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
1000	-28.8	-6.8	10.5	63.4	-18.5	-107.0	-11.6	98.3
1300	-19.2	-61.7	10.5	20.6	-18.4	-144.0	-12.2	59.8
1500	-16.4	-90.9	10.5	-7.2	-18.4	-169.0	-12.7	35.8
1800	-13.7	-132.0	10.5	-48.4	-18.3	153.0	-13.7	-0.5
2000	-12.6	-160.0	10.5	-75.7	-18.2	128.0	-14.7	-25.6
2300	-11.5	159.0	10.3	-117.0	-18.0	88.8	-16.6	-63.8
2500	-11.3	132.0	10.1	-143.0	-17.9	61.7	-17.6	-90.2
2800	-11.9	93.0	10.0	179.0	-17.8	19.3	-16.7	-136.0
3000	-12.5	74.1	10.3	155.0	-17.7	-7.7	-14.5	-178.0



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