

# RF AMPLIFIER

Available as: QBH-854, 4 Pin TO-8 (T4)  
QBH-9-854, Connectorized Housing (ES E52-1501)

## MODEL QBH-854

### Features

- High Gain: 20.0 dB Typical
- High Power: +24 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Specifications

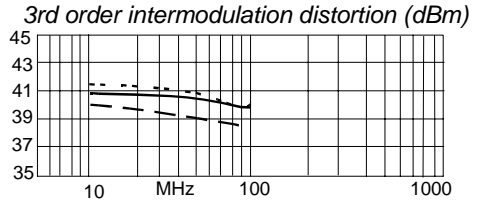
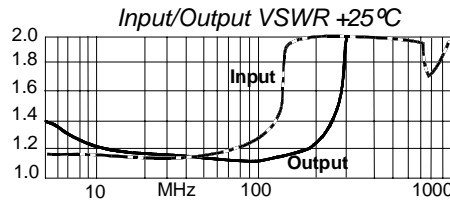
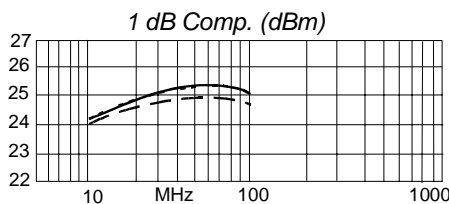
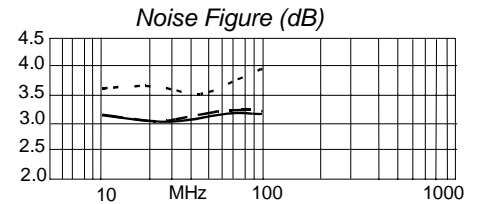
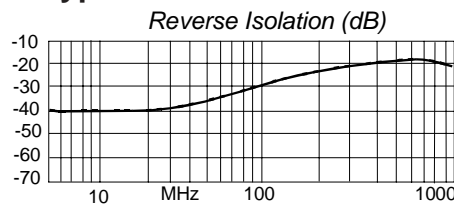
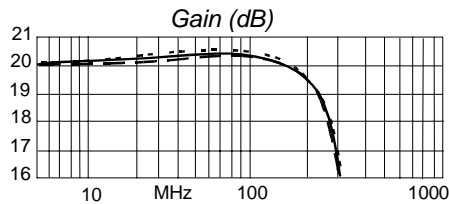
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 100 MHz	10 - 100 MHz
Gain (dB)	20.0 ± 0.5	—
Gain vs. Temperature	—	+0.4/-0.5 Max.
Gain Flatness	0.5	0.6 Max.
Reverse Isolation (dB)	-27	-27 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+24	+23 Min.
Output Intercept point		
3rd Order	+38	+37 Min.
2nd Order	+48	+46 Min.
Noise Figure (dB)	4.0	5.0 Max.
Power Vdc	+15	+15
mA	82	85 Max.

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 125 °C  
Storage Temperature ..... -65°C to + 150 °C  
Case Temperature ..... + 125 °C  
DC Voltage ..... + 17 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	-23.5	179.2	20.3	-179.0	-38.9	29.1	-20.7	122.6
30	-25.0	-162.6	20.3	165.5	-36.7	34.8	-33.1	122.4
40	-24.7	-150.2	20.3	159.5	-35.6	37.8	-23.3	114.9
50	-23.7	-141.1	20.3	153.5	-34.2	39.2	-23.4	106.0
60	-22.4	-134.7	20.3	147.7	-33.4	42.0	-23.5	96.9
70	-21.0	-129.3	20.3	141.9	-32.4	40.6	-23.7	87.8
80	-19.6	-127.9	20.3	136.1	-31.5	43.1	-23.9	79.5
90	-18.2	-127.3	20.4	130.2	-30.6	38.9	-24.4	71.9
100	-16.9	-128.2	20.4	124.2	-29.8	38.7	-25.0	63.9



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 03/11/05

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