

# RF AMPLIFIER

## MODEL QBH-147

Available as: QBH-147, 4 Pin TO-8 (T4)  
QBH-9-147, Connectorized Housing (ES E52-1501)

### Features

- High Gain: 13.5 dB Typical
- High Power: +10 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Specifications

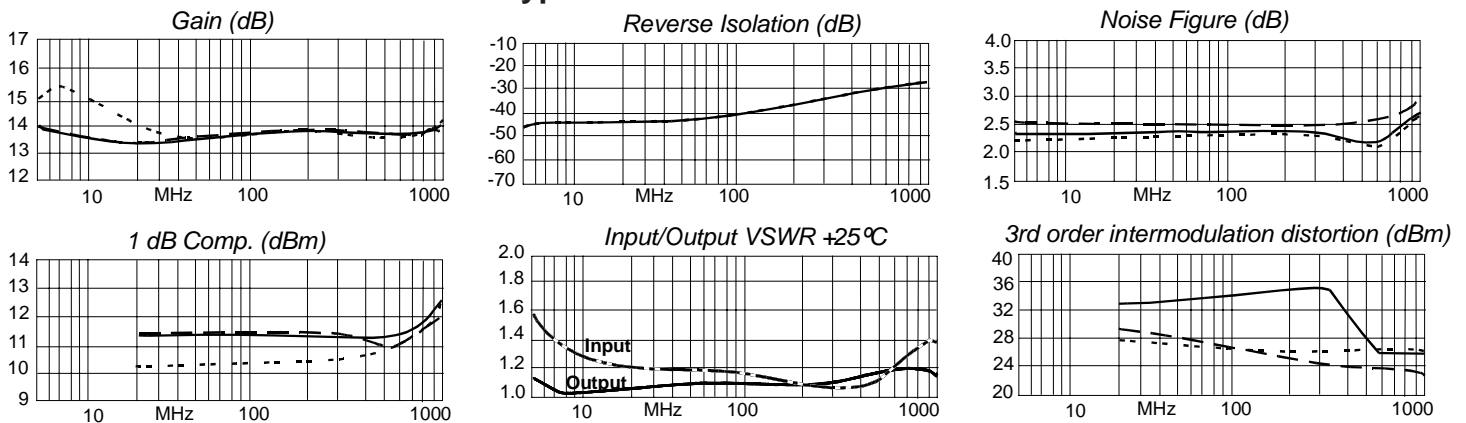
CHARACTERISTIC	TYPICAL	MIN/MAX
	Ta= 25 °C	Ta = -55 °C to +85 °C
Frequency	20 - 1000 MHz	20 - 1000 MHz
Gain (dB)	13.5 ± 0.5	—
Gain vs. Temperature	—	+0.8/-1.2 Max.
Gain Flatness	0.8	1.4 Max.
Reverse Isolation (dB)	-22	-22 Min.
VSWR In	1.5:1	1.7:1 Max.
VSWR Out	1.5:1	1.7:1 Max.
1 dB Compression (dBm)	+10	+9 Min.
Output Intercept point		
3rd Order	+23	+22 Min.
2nd Order	+33	+30 Min.
Noise Figure (dB)	3.5	3.9 Max.
Power Vdc	+15	+15
Power mA	27	29 Max.

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 125 °C  
 Storage Temperature ..... -65°C to + 150 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 19 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 --		-- S21 --		-- S12 --		-- S22 --	
	dB	Ang	dB	Ang	dB	Ang	dB	Ang
20	-19.8	166.8	13.5	-177.4	-43.6	19.0	-32.4	27.9
60	-21.8	140.1	13.7	169.7	-41.9	23.2	-28.4	15.2
80	-22.6	130.7	13.7	164.3	-41.0	25.8	-27.7	13.5
100	-23.5	122.2	13.8	159.1	-39.9	26.9	-27.0	11.5
300	-31.3	1.0	13.8	109.6	-33.4	13.5	-23.9	-0.7
500	-23.5	-76.3	13.7	61.7	-29.8	-14.2	-21.7	-22.6
700	-17.5	-127.5	13.7	14.3	-27.6	-47.0	-20.8	-50.3
900	-15.4	-175.4	13.9	-37.1	-26.1	-81.7	-23.4	-73.0
1000	-16.0	158.4	13.8	-62.4	-25.4	-100.7	-26.8	-73.8



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