

# RF AMPLIFIER

## MODEL QBH-149

Available as: QBH-149, 4 Pin TO-8 (T4)  
QBH-9-149, Connectorized Housing (ES E52-1501)

### Features

- High Gain: 23.0 dB Typical
- High Power: +17.5 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Specifications

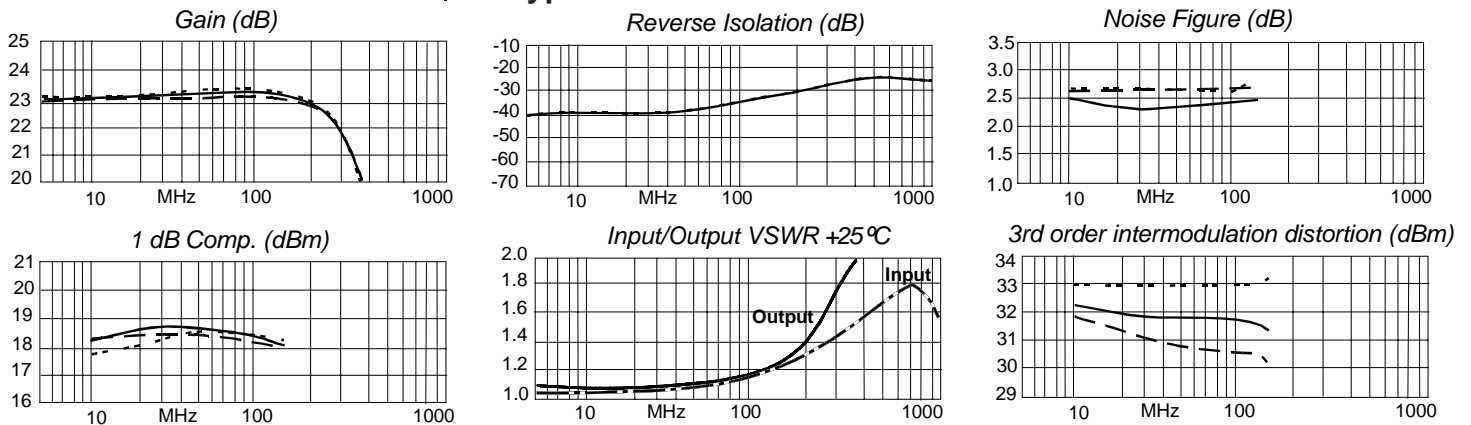
CHARACTERISTIC	TYPICAL	MIN/MAX
	Ta= 25 °C	Ta = -55 °C to +85 °C
Frequency	10 - 150 MHz	10 - 150 MHz
Gain (dB)	23.0 ± 0.5	—
Gain vs. Temperature	—	+0.4/-1.2 Max.
Gain Flatness	0.6	0.8 Max.
Reverse Isolation (dB)	-30	-30 Min.
VSWR In	1.5:1	1.5:1 Max.
Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+17.5	+16.5 Min.
Output Intercept point		
3rd Order	+29	+27 Min.
2nd Order	+39	+37 Min.
Noise Figure (dB)	3.2	3.5 Max.
Power Vdc	+15	+15
mA	39	40 Max.

### Maximum Ratings

Ambient Operating Temperature ..... -55°C to + 125 °C  
 Storage Temperature ..... -65°C to + 150 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 20 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	-31.6    -6.1	23.2    179.4	-39.6    12.7	-27.1    47.1
40	-27.9    -32.9	23.3    163.3	-38.2    15.4	-26.4    -19.5
50	-27.3    -43.9	23.3    158.7	-37.7    18.3	-25.7    -30.3
70	-25.9    -61.2	23.2    149.7	-36.8    22.2	-24.3    -48.0
80	-25.2    -69.2	23.2    145.2	-36.2    24.7	-23.5    -55.4
90	-24.5    -75.7	23.2    140.8	-35.6    25.8	-22.8    -62.3
110	-23.2    -90.5	23.2    131.7	-34.6    25.9	-21.3    -75.4
130	-22.0    -103.5	23.2    122.6	-33.5    24.5	-19.9    -87.7
150	-20.8    -116.2	23.1    113.2	-32.5    22.3	-18.6    -99.8



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