

# RF AMPLIFIER

## MODEL QBH-131

Available as: QBH-131, 4 Pin TO-8 (T4)  
 QBH-9-131, Connectorized Housing (ES E52-1501)

### Features

- High Gain: 18.0 dB Typical
- High Power: +7 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

### Specifications

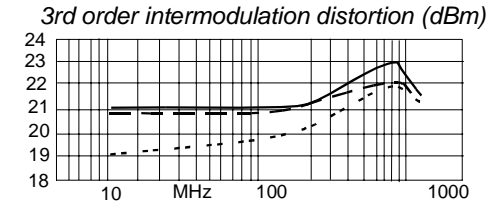
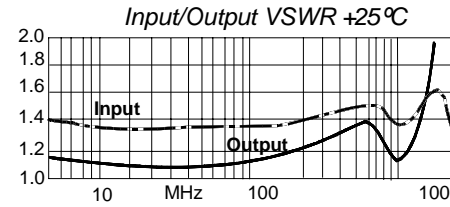
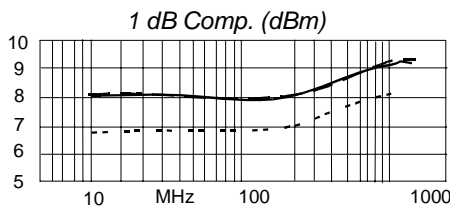
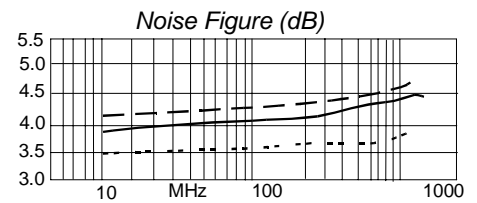
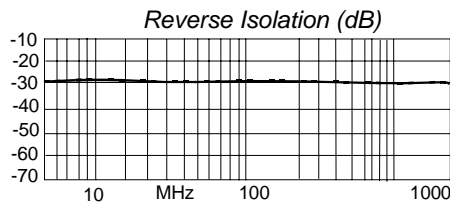
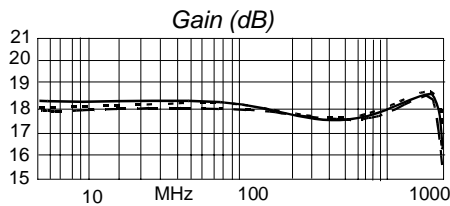
CHARACTERISTIC	TYPICAL	MIN/MAX
	Ta = 25 °C	Ta = -55 °C to +85 °C
Frequency	5 - 1300 MHz	5 - 1300 MHz
Gain (dB)	18.0 ± 0.7	—
Gain vs. Temperature	—	+0.6/-0.9 Max.
Gain Flatness	1.0	1.2 Max.
Reverse Isolation (dB)	-27	-27 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+7	+6 Min.
Output Intercept point		
3rd Order	+20	+19 Min.
2nd Order	+35	+32 Min.
Noise Figure (dB)	5.0	5.5 Max.
Power Vdc	+15	+15
mA	41	43 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

FREQ. MHz	-- S11 -- dB    Ang		-- S21 -- dB    Ang		-- S12 -- dB    Ang		-- S22 -- dB    Ang	
5	-16.0	-158.0	18.2	12.4	-29.5	19.3	-24.4	-134.9
10	-16.5	-169.4	18.3	4.2	-29.3	8.7	-27.6	-149.1
40	-16.8	179.8	18.4	-9.7	-29.2	-2.9	-28.5	-152.6
70	-16.8	177.1	18.3	-19.0	-29.2	-6.5	-26.8	-146.2
100	-16.8	174.3	18.3	-27.7	-29.3	-11.5	-25.2	-142.8
400	-15.1	140.6	18.0	-111.1	-29.3	-47.9	-16.7	173.9
700	-15.1	81.1	17.9	167.3	-29.2	-84.4	-17.0	109.4
1000	-16.8	-9.6	18.0	84.1	-29.2	-129.3	-26.4	-26.1
1300	-15.3	-116.8	18.1	0.2	-29.3	-175.6	-16.0	179.1



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