

RF AMPLIFIER

MODEL QBH-171

Available as: QBH-171, 4 Pin TO-8 Tall (080-22502-0001)
 QBH-5171, 4 pin 0.450" Sq. Surface-mount (SM3)
 QBH-9-171, Connectorized Housing (ES E52-1501)

Features

- High Gain: 13.5 dB Typical
- High Power: +27 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 - 150 MHz	10 - 150 MHz
Gain (dB)	13.5 ± 0.5	—
Gain vs. Temperature	—	+0.3/-0.5 Max.
Gain Flatness	0.5	0.5 Max.
Reverse Isolation (dB)	-25	-25
VSWR In	1.5:1	1.6:1 Max.
VSWR Out	1.5:1	1.6:1 Max.
1 dB Compression (dBm)	+27	+26 Min.
Output Intercept point		
3rd Order	+40	+39 Min.
2nd Order	+50	+45 Min.
Noise Figure (dB)	7.0	7.1 Max.
Power Vdc	+15	+15
Power mA	105	108 Max.

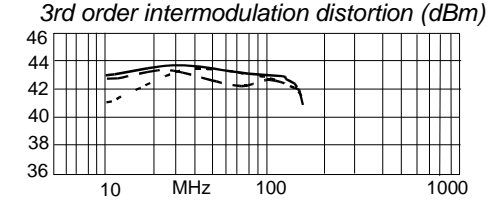
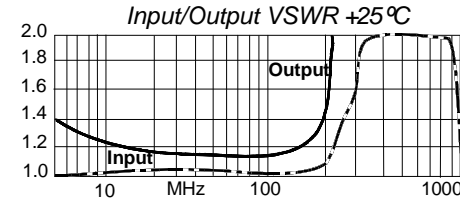
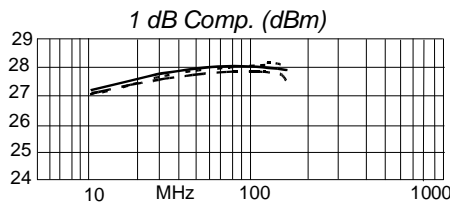
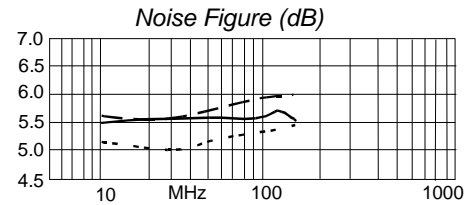
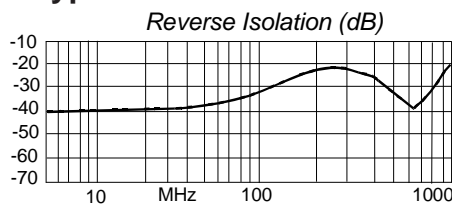
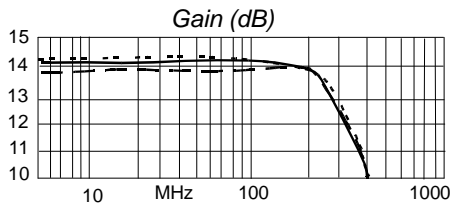
Maximum (No Damage) Ratings

Ambient Operating Temperature -55°C to +125 °C
 Storage Temperature -65°C to +150 °C
 Case Temperature +125 °C
 DC Voltage +16 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.

Revision: 3-10-2017 (Added QBH-5171 part number)

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	-30.4	28.8	13.8	-178.9	-39.5	31.2	-19.7	108.2
40	-27.1	9.3	13.8	160.9	-36.8	37.9	-25.0	74.7
50	-27.1	5.8	13.8	155.4	-35.5	39.0	-25.1	63.2
70	-27.2	-0.2	13.8	144.9	-33.3	39.9	-24.9	42.0
80	-27.5	-3.3	13.7	139.8	-32.5	37.2	-24.7	31.3
90	-28.0	-3.6	13.7	134.6	-31.5	36.1	-24.3	20.6
110	-29.4	-6.4	13.7	124.2	-30.1	32.3	-23.5	-2.2
130	-31.6	-2.0	13.7	113.9	-28.7	27.3	-22.6	-28.0
150	-34.7	19.7	13.7	103.4	-27.5	20.7	-21.4	-58.3



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