RF AMPLIFIER MODEL QBH-171

Available as: QBH-171, 4 Pin TO-8 (T4)
QBH-9-171, Connectorized Housing (ES E52-1501)

Features

- High Gain: 13.5 dB Typical
- High Power: +27 dBm Typical
- Operating Temp. - 55 ºC to +85 ºC
- Environmental Screening Available

Maximum Ratings

Ambient Operating Temperature ..... -55ºC to + 125 ºC
Storage Temperature ..... -65ºC to + 150 ºC
Case Temperature ..... + 125 ºC
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.)

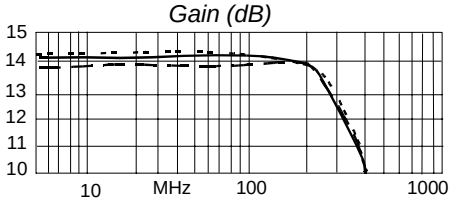
Note: Specifications are guaranteed when tested in a 50 Ohm system. Specifications indicated as typical are not guaranteed.

Specifications

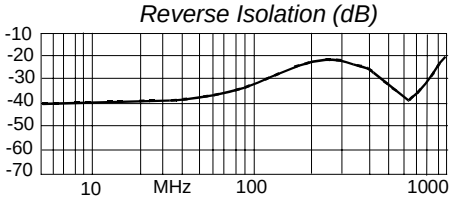
CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -55 ºC to +85 ºC
Frequency	10 - 150 MHz	10 - 150 MHz
Gain (dB)	13.5 ± 0.5	—
Gain vs. Temperature	—	+0.3/-0.5 Max.
Gain Flatness	0.5	0.5 Max.
Reverse Isolation (dB)	-25	-25 Min.
VSWR In	1.5:1	1.6:1 Max.
VSWR Out	1.5:1	1.6:1 Max.
1 dB Compression (dBm)	+27	+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.

Typical Performance Data

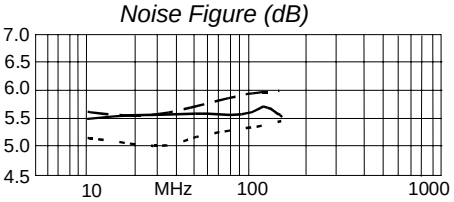
Gain (dB)



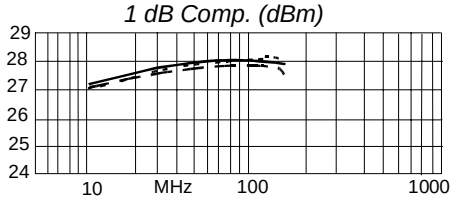
Reverse Isolation (dB)



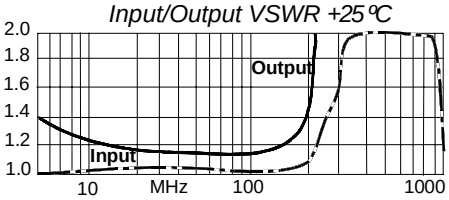
Noise Figure (dB)



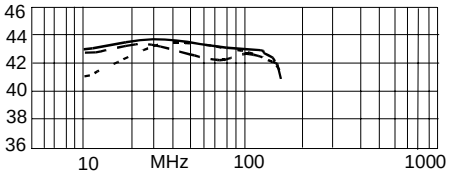
1 dB Comp. (dBm)



Input/Output VSWR +25ºC



3rd order intermodulation distortion (dBm)



Legend ——— + 25 ºC – – – + 85 ºC - - - - - - -55 ºC

Linear S-Parameters Data

FREQ. MHz	S11 dB	S11 Ang	S21 dB	S21 Ang	S12 dB	S12 Ang	S22 dB	S22 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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