RF Amplifier
High Gain: 12.3 dB

Model QBH-8115
10 to 500 MHz

Features

- High Gain: 12.3 dB Typical
- High Power: +26 dBm Typical
- Operating Temp. - 55 ºC to +71 ºC
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -55 ºC to +71 ºC
Frequency	10 - 500 MHz	10 - 500 MHz
Gain (dB)	12.3 ± 0.8	—
Gain vs. Temperature	—	+0.8/-0.8 Max.
Gain Flatness	1.0	1.2 Max.
Reverse Isolation (dB)	-23	-22 Min.
VSWR In	1.6:1	1.7:1 Max.
VSWR Out	1.6:1	1.7:1 Max.
1 dB Compression (dBm)	+26	+25 Min.
Output Intercept point		
3rd Order	+35	+35 Min.
2nd Order	+42	+42 Min.
Noise Figure (dB)	7.8	8.4 Max.
Power Vdc	+15	+15
Power mA	165	165 Max.

Maximum Ratings

Ambient Operating Temperature ..... -55ºC to +105 ºC
Storage Temperature ..... -65ºC to + 150 ºC
Case Temperature ..... + 125 ºC
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:
1. Specifications are guaranteed when tested in a 50 Ohm system. Specifications indicated as typical are not guaranteed.

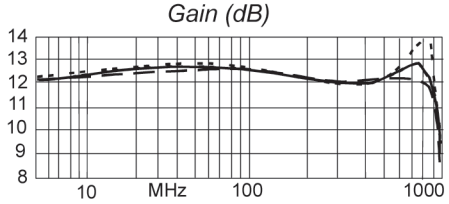
Packaging Options (see Appendix)

QBH-8115, Hybrid SM (E52-19422)

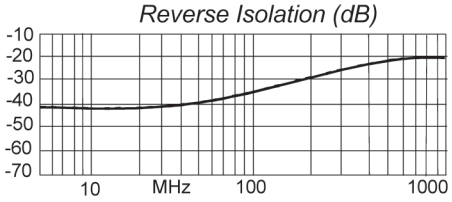
Legend ——— + 25 ºC – – – + 71 ºC - - - - - - -55 ºC

Typical Performance Data

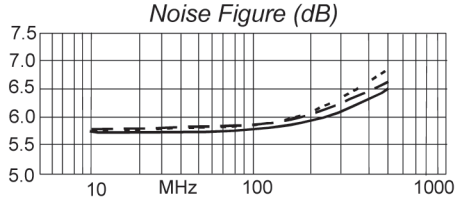
Gain (dB)



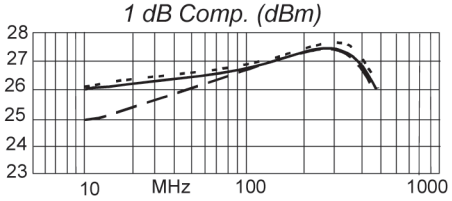
Reverse Isolation (dB)



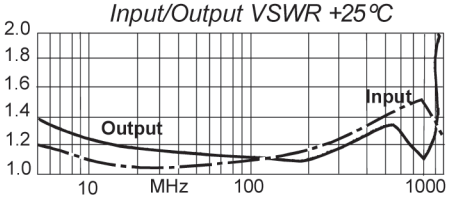
Noise Figure (dB)



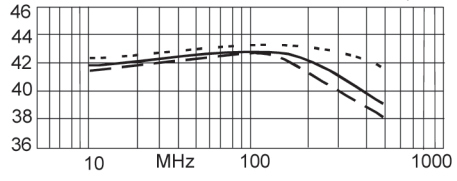
1 dB Comp. (dBm)



Input/Output VSWR +25ºC



3rd order intermodulation distortion (dBm)



Linear S-Parameters Data

FREQ. MHz	S11 dB	S11 Ang	S21 dB	S21 Ang	S12 dB	S12 Ang	S22 dB	S22 Ang
10	-29.0	-92.1	12.5	-175.6	-42.3	35.3	-20.3	141.5
40	-33.7	-61.1	12.6	169.1	-40.3	41.4	-24.8	137.2
60	-31.8	-71.2	12.6	162.0	-38.2	44.3	-25.9	127.3
70	-31.2	-78.0	12.5	158.7	-37.4	46.2	-26.4	121.1
90	-29.5	-86.2	12.5	152.1	-35.8	45.8	-27.4	107.7
100	-28.8	-93.4	12.5	148.8	-35.1	45.6	-27.8	100.6
300	-19.9	-172.5	12.2	87.4	-26.4	15.4	-23.3	-71.8
400	-17.4	153.7	12.1	57.0	-24.2	-6.5	-19.4	-123.5
500	-15.7	117.8	12.2	25.0	-22.9	-29.0	-17.9	-169.2

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