RF Amplifier
High Gain: 12.5 dB

Model QBH-204
5 to 700 MHz

Features

- High Gain: 12.5 dB Typical
- High Power: +22 dBm Typical
- Operating Temp. - 54 ºC to +85 ºC
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -54 ºC to +85 ºC
Frequency	5 - 700 MHz	5 - 700 MHz
Gain (dB)	12.5 ± 0.5	—
Gain vs. Temperature	—	+0.9/-0.9 Max.
Gain Flatness	1.0	1.0 Max.
Reverse Isolation (dB)	-20	-20 Min.
VSWR In	1.5:1	1.5:1 Max.
Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+22	+22 Min.
Output Intercept point		
3rd Order	+34	+34 Min.
2nd Order	+50	+50 Min.
Noise Figure (dB)	7.0	7.6 Max.
Power Vdc	+15	+15
mA	95	100 Max.

Maximum Ratings

Ambient Operating Temperature ..... -54ºC to + 100 ºC
Storage Temperature ..... -54ºC to + 150 ºC
Case Temperature ..... + 125 ºC
DC Voltage ..... + 17.5 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.

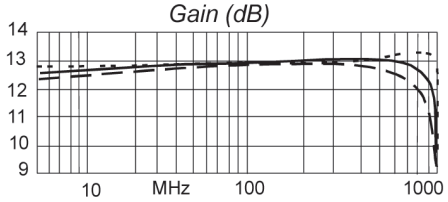
Packaging Options (see Appendix)

QBH-204, F-Pack (E52-5006)

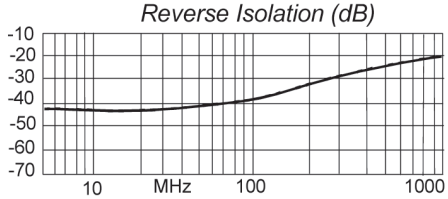
Legend ——— + 25 ºC – – – + 85 ºC - - - - - - -54 ºC

Typical Performance Data

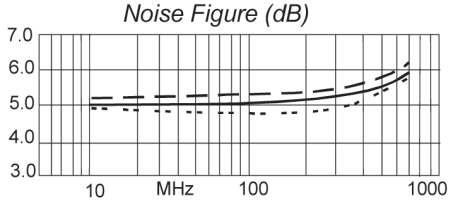
Gain (dB)



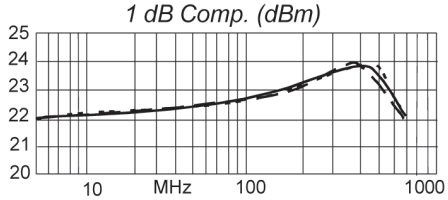
Reverse Isolation (dB)



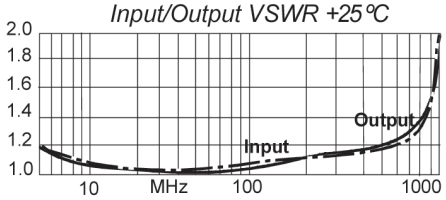
Noise Figure (dB)



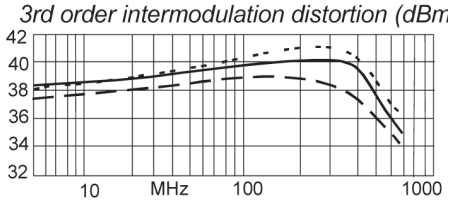
1 dB Comp. (dBm)



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
5	-21.2	-79.3	12.6	-168.3	-43.3	33.1	-22.7	111.0
9	-26.9	-60.2	12.7	-175.4	-43.4	24.2	-26.4	96.6
20	-29.9	-20.6	12.7	177.2	-43.2	19.8	-31.1	70.8
50	-29.4	1.3	12.7	166.0	-41.3	32.2	-34.1	41.8
70	-28.8	5.3	12.7	159.5	-40.0	37.7	-33.6	32.9
90	-28.2	7.5	12.7	153.2	-38.6	39.2	-32.7	26.2
300	-23.5	-9.8	12.7	88.5	-29.9	12.6	-23.9	-43.8
500	-21.3	-34.9	12.7	26.6	-25.8	-27.2	-19.5	-118.2
700	-17.8	-53.7	12.6	-39.0	-23.1	-72.1	-15.4	169.0

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