RF Amplifier
High Gain: 16.3 dB

Model QBH-828
10 to 1000 MHz

Features
- High Gain: 16.3 dB Typical
- High Power: +19.5 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	10 - 1000 MHz	10 - 1000 MHz
Gain (dB)	16.3 ± 0.5	—
Gain vs. Temperature	—	+0.5/-1.0 Max.
Gain Flatness	1.0	1.0 Max.
Reverse Isolation (dB)	-16	-16 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+19.5	+18.5 Min.
Output Intercept point		
3rd Order	+30	+28 Min.
2nd Order	+45	+43 Min.
Noise Figure (dB)	4.8	5.4 Max.
Power Vdc	+15	+15
Power mA	110	120 Max.

Maximum Ratings
Ambient Operating Temperature ..... -55ºC to + 125 ºC
Storage Temperature ..... -65ºC to + 150 ºC
Case Temperature ..... + 125 ºC
DC Voltage ..... + 18 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.)

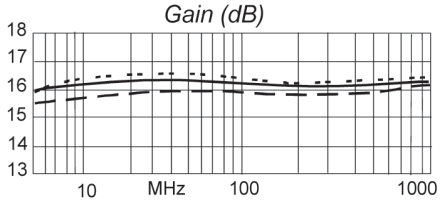
Note: Specifications are guaranteed when tested in a 50 Ohm system. Specifications indicated as typical are not guaranteed.

Packaging Options (see Appendix)
QBH-828, 4 Pin TO-8 (T4)
QBH-9-828, Connectorized Housing (ES E52-1501)

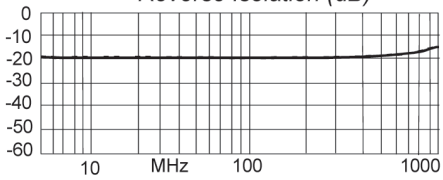
Legend ——— *+ 25 ºC* – – – *+ 85 ºC* - - - - - - *-54 ºC*

Typical Performance Data

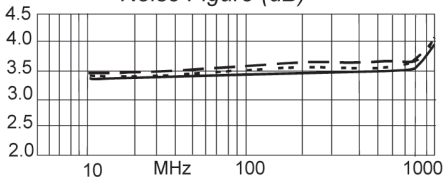
Gain (dB)



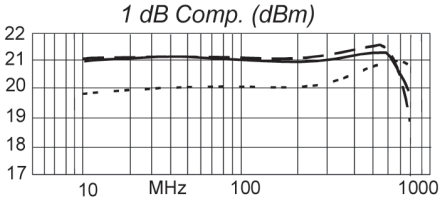
Reverse Isolation (dB)



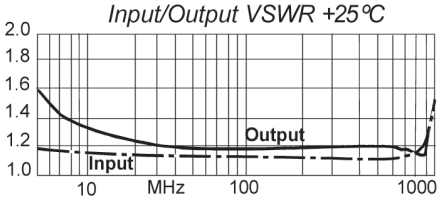
Noise Figure (dB)



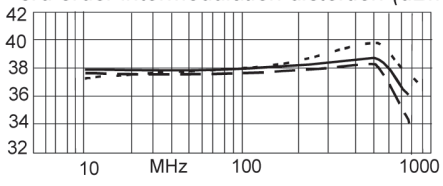
1 dB Comp. (dBm)



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
10	-23.4	-117.9	16.2	-174.9	-19.9	5.4	-17.3	143.7
50	-24.6	-172.5	16.3	169.4	-19.6	-3.6	-21.0	147.9
70	-24.6	179.1	16.3	164.0	-19.6	-6.2	-21.3	142.8
90	-24.7	172.5	16.3	158.8	-19.6	-8.3	-21.5	136.5
200	-24.9	140.1	16.3	131.6	-19.3	-20.5	-21.4	97.4
400	-26.0	92.3	16.2	83.2	-18.6	-43.6	-21.9	25.4
600	-26.0	30.4	16.2	34.7	-17.7	-69.9	-24.6	-51.8
800	-21.4	-13.8	16.3	-14.6	-16.7	-98.8	-21.9	-146.2
1000	-15.4	-57.4	16.3	-65.8	-15.8	-131.2	-13.8	126.2