RF Amplifier
High Gain: 16.3 dB

Model QBH-118
3 to 100 MHz

Features
- High Gain: 16.3 dB Typical
- High Power: +11dBm Typical
- Operating Temp. - 55 ºC to +85 ºC
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = -55 ºC to +85 ºC
Frequency	3 - 100 MHz	3 - 100 MHz
Gain (dB)	16.3 ± 0.5	—
Gain vs. Temperature	—	+0.7/-0.5 Max.
Gain Flatness	0.4	0.8 Max.
Reverse Isolation (dB)	-35	-35 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+11	+8 Min.
Output Intercept point		
3rd Order	+26	+23 Min.
2nd Order	+38	+35 Min.
Noise Figure (dB)	1.9	2.1 Max.
Power Vdc	+15	+15
Power mA	21	22 Max.

Maximum Ratings
Ambient Operating Temperature ..... -55ºC to +125 ºC
Storage Temperature ..... -65ºC to + 150 ºC
Case Temperature ..... + 125 ºC
DC Voltage ..... + 20.0 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.)

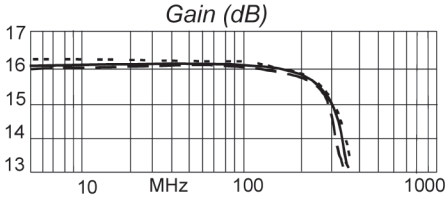
Note:
1. Specifications are guaranteed when tested in a 50 Ohm system. Specifications indicated as typical are not guaranteed.

Packaging Options (see Appendix)
QBH-118, 4 Pin TO-8 (T4)
QBH-9-118, Connectorized Housing (ES E52-1501)

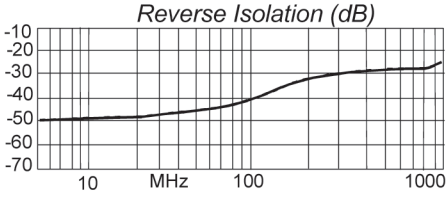
Legend ——— + 25 ºC – – – + 85 ºC - - - - - - -55 ºC

Typical Performance Data

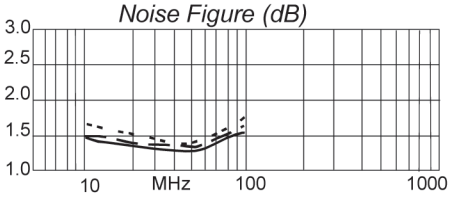
Gain (dB)



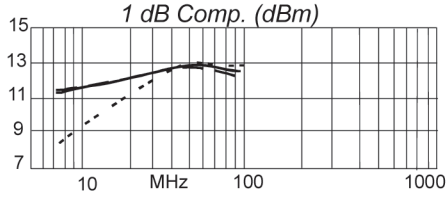
Reverse Isolation (dB)



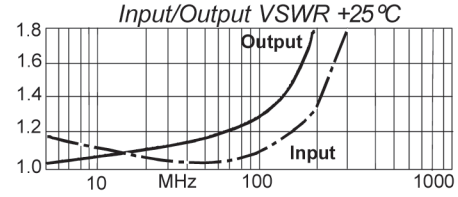
Noise Figure (dB)



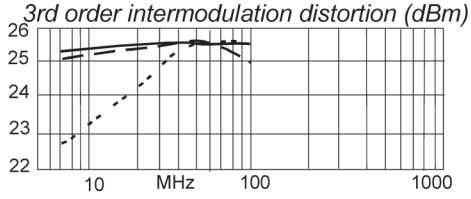
1 dB Comp. (dBm)



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
3	-22.8	-101.9	16.3	-178.6	-50.1	74.8	-31.6	48.5
7	-28.4	-129.9	16.1	-177.8	-50.0	47.5	-32.0	3.4
9	-29.9	-139.5	16.1	176.7	-49.4	42.2	-31.6	-9.9
20	-33.2	-162.2	16.1	171.4	-47.8	51.3	-28.9	-49.2
30	-34.0	-163.9	16.1	166.8	-46.2	46.8	-26.4	-67.4
50	-33.5	-155.7	16.2	157.3	-42.5	47.3	-22.6	-89.3
70	-31.1	-151.7	16.2	147.9	-39.6	47.3	-19.8	-104.4
80	-29.7	-152.3	16.2	143.2	-38.7	45.3	-18.7	-111.0
100	-27.0	-157.9	16.2	133.6	-36.8	38.7	-16.7	-122.8

SPECTRUM MICROWAVE • 2144 Franklin Drive N.E. • Palm Bay, Florida 32905 • Phone: (888) 553-7531 • Fax: (888) 553-7532
www.specwave.com SPECTRUM CONTROL GmbH • Hansastrasse 6 • 91126 Schwabach, Germany • Phone: (49)-9122-795-0 • Fax: (49)-9122-795-58