RF AMPLIFIER MODEL QBH-116

Available as: QBH-116, 4 Pin TO-8 (T4)
QBH-9-116, Connectorized Housing (ES E52-1501)

Features

- High Gain: 12.2 dB Typical
- High Power: +16 dBm 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	5 - 400 MHz	5 - 400 MHz
Gain (dB)	12.2 ± 0.5	—
Gain vs. Temperature	—	+0.5/-0.5 Max.
Gain Flatness	0.6	0.8 Max.
Reverse Isolation (dB)	-25	-24 Min.
VSWR In	1.5:1	1.6:1 Max.
VSWR Out	1.5:1	1.6:1 Max.
1 dB Compression (dBm)	+16	+15 Min.
Output Intercept point		
3rd Order	+29	+28 Min.
2nd Order	+38	+37 Min.
Noise Figure (dB)	6.0	6.4 Max.
Power Vdc	+15	+15
Power mA	47	48 Max.

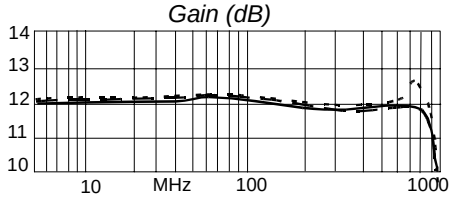
Maximum Ratings

Ambient Operating Temperature ..... -55ºC to +125 ºC
Storage Temperature ..... -65ºC to + 150 ºC
Case Temperature ..... + 125 ºC
DC Voltage ..... + 18.5 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.)

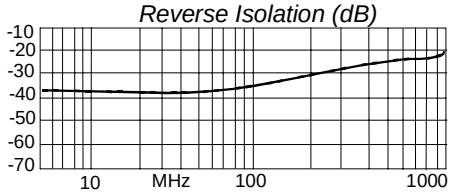
Note:
1. Specifications are guaranteed when tested in a 50 Ohm system. Specifications indicated as typical are not guaranteed.

Typical Performance Data

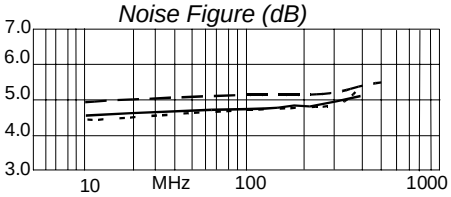
Gain (dB)



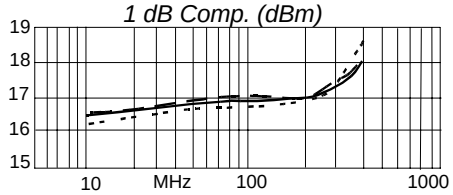
Reverse Isolation (dB)



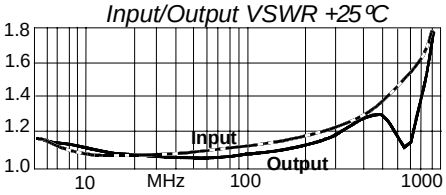
Noise Figure (dB)



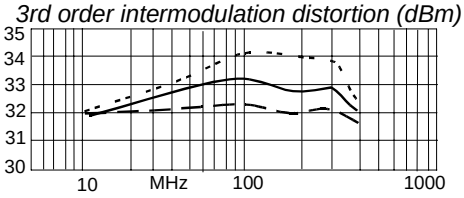
1 dB Comp. (dBm)



Input/Output VSWR +25 ºC



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
5	-24.2	-84.3	11.9	-168.1	-37.4	13.8	-24.0	117.5
9	-30.8	-67.1	12.0	-175.3	-37.4	10.4	-27.1	101.0
20	-32.9	-33.2	12.1	176.6	-37.2	10.0	-32.0	65.6
40	-29.8	-38.6	12.1	167.8	-36.7	14.7	-35.5	16.1
60	-28.2	-52.0	12.1	160.2	-36.0	17.1	-34.0	-17.4
80	-26.8	-64.8	12.1	152.9	-35.1	22.1	-32.0	-38.1
100	-25.6	-76.5	12.1	145.7	-34.1	22.3	-30.2	-52.5
300	-19.8	-168.7	11.9	74.6	-27.6	0.1	-20.5	-137.6
400	-18.7	149.3	11.8	38.6	-26.0	-20.5	-18.9	-175.1

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