

RF AMPLIFIER

Available as: QBH-116, 4 Pin TO-8 Tall (080-22502-0001)
 QBH-9-116, Connectorized Housing (ES E52-1501)

MODEL QBH-116

Features

- High Gain: 12.2 dB Typical
- High Power: +16 dBm Typical
- Operating Temp. -55 °C to +85 °C
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta = 25 °C	MIN/MAX Ta = -55 °C to +85 °C
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.
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
mA	47	48 Max.

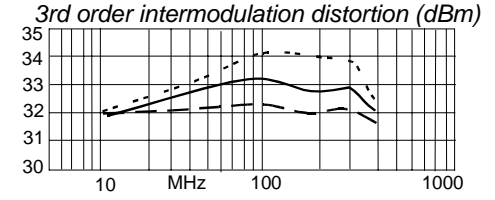
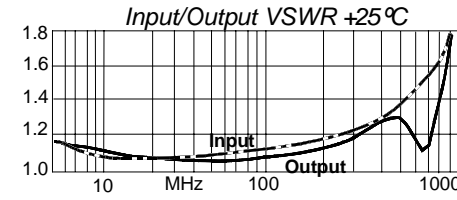
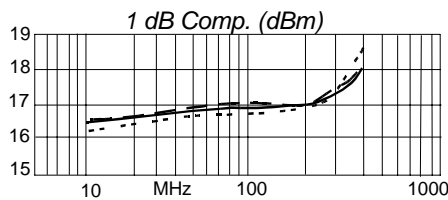
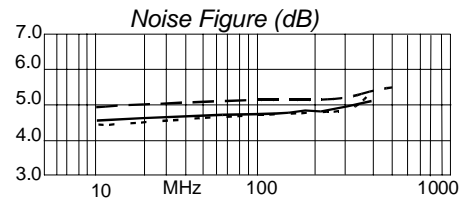
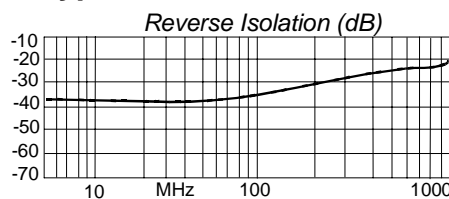
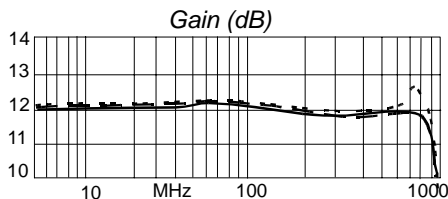
Maximum Ratings

Ambient Operating Temperature -55°C to +125 °C
 Storage Temperature -65°C to +150 °C
 Case Temperature +125 °C
 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



Legend ——— +25 °C - - - - +85 °C - - - - - - -55 °C

Linear S-Parameters Data

FREQ. MHz	-- S11 --		-- S21 --		-- S12 --		-- S22 --	
	dB	Ang	dB	Ang	dB	Ang	dB	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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