

RF AMPLIFIER

Available as: QBH-102, 4 Pin TO-8 (T4)
QBH-9-102, Connectorized Housing (ES E52-1501)

MODEL QBH-102

Features

- High Gain: 12.3 dB Typical
- High Power: +21 dBm Typical
- Operating Temp. - 55 °C to +80 °C
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -55 °C to +80 °C
Frequency	5 - 500 MHz	5 - 500 MHz
Gain (dB)	12.3 ± 0.5	—
Gain vs. Temperature	—	+0.4/-1.0 Max.
Gain Flatness	0.8	1.2 Max.
Reverse Isolation (dB)	-23	-22 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+21	+21 Min.
Output Intercept point		
3rd Order	+34	+32 Min.
2nd Order	+49	+43 Min.
Noise Figure (dB)	7.0	7.5 Max.
Power Vdc	+15	+15
mA	93	95 Max.

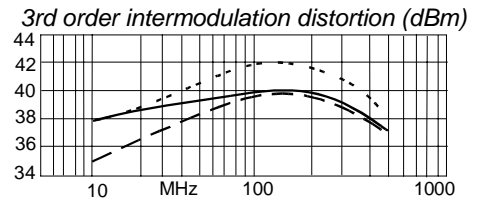
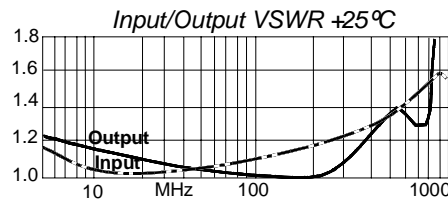
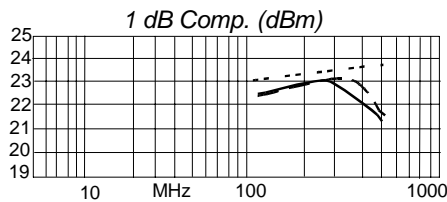
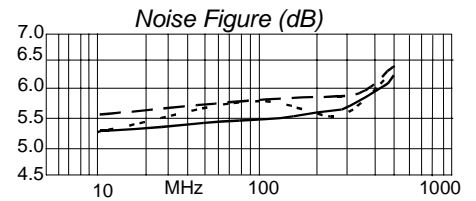
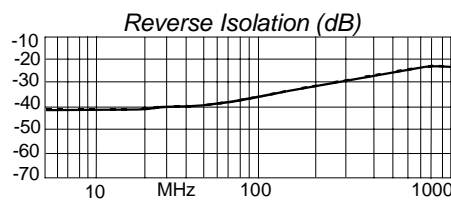
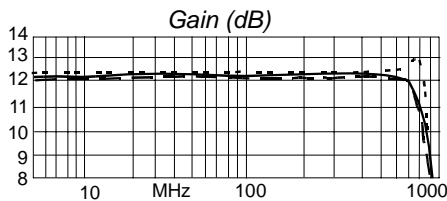
Maximum Ratings

Ambient Operating Temperature -55°C to +125 °C
Storage Temperature -65°C to + 150 °C
Case Temperature + 125 °C
DC Voltage + 17 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 - - - - +80 °C ······ -55 °C

Linear S-Parameters Data

FREQ. MHz	-- S11 --		-- S21 --		-- S12 --		-- S22 --	
	dB	Ang	dB	Ang	dB	Ang	dB	Ang
5	-24.4	-93.5	12.2	-166.8	-39.9	19.9	-19.3	126.7
9	-32.0	-76.8	12.2	-174.9	-39.9	14.9	-22.9	125.2
20	-37.2	-25.1	12.3	-176.5	-39.3	18.8	-27.1	128.7
50	-31.4	-35.5	12.2	163.4	-37.2	30.5	-31.6	127.8
70	-29.5	-48.4	12.2	155.8	-35.7	33.0	-34.3	124.9
90	-27.8	-62.5	12.2	148.5	-34.1	33.9	-37.6	119.1
150	-24.5	-94.9	12.2	127.0	-30.8	27.6	-36.7	-93.8
300	-19.4	-169.9	12.3	71.9	-25.8	-2.8	-21.6	-164.7
500	-16.1	107.0	12.2	-6.3	-23.1	-55.0	-15.4	101.6



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