

RF AMPLIFIER

MODEL QBH-103

Available as: QBH-103, 4 Pin TO-8 Tall (080-22502-0001)
 QBH-9-103, Connectorized Housing (ES E52-1501)

Features

- High Gain: 11.3 dB Typical
- High Power: +22 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 - 300 MHz	5 - 300 MHz
Gain (dB)	11.3 ± 0.5	—
Gain vs. Temperature	—	+0.3/-0.6 Max.
Gain Flatness	0.4	0.6 Max.
Reverse Isolation (dB)	-22	-22 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+22	+21 Min.
Output Intercept point		
3rd Order	+37	+36 Min.
2nd Order	+51	+49 Min.
Noise Figure (dB)	6.8	7.5 Max.
Power Vdc	+15	+15
mA	91	95 Max.

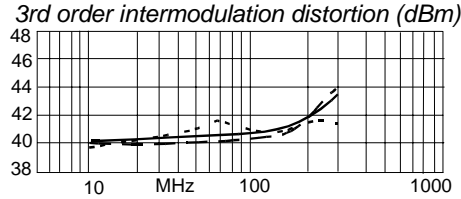
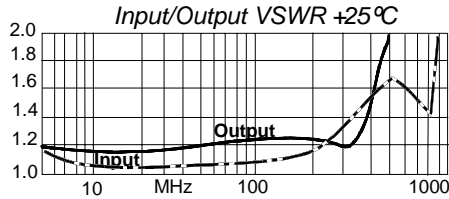
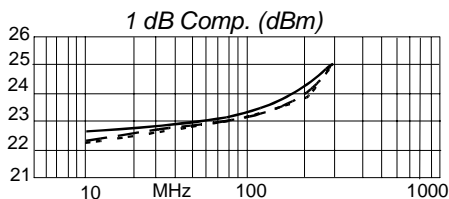
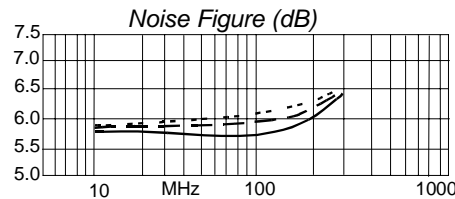
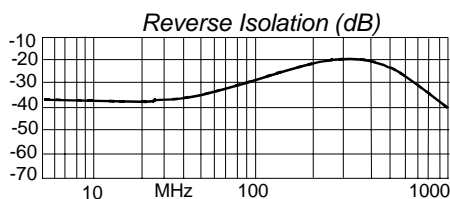
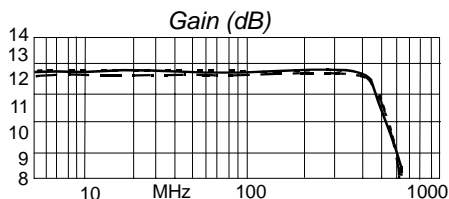
Maximum Ratings

Ambient Operating Temperature -55°C to +125 °C
 Storage Temperature -65°C to +150 °C
 Case Temperature +125 °C
 DC Voltage +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 -- dB Ang	-- S21 -- dB Ang	-- S12 -- dB Ang	-- S22 -- dB Ang
5	-23.7 -89.8	11.6 -170.6	-36.4 14.9	-24.7 43.7
8	-28.6 -69.6	11.6 -176.1	-36.4 13.1	-24.3 33.4
10	-30.2 -53.4	11.6 -178.4	-36.4 12.8	-24.0 30.1
30	-29.9 -31.4	11.7 168.9	-35.4 23.1	-22.5 21.9
50	-28.9 -47.2	11.7 159.5	-34.0 30.2	-21.4 19.8
70	-28.1 -65.4	11.7 150.5	-32.5 34.5	-20.5 17.3
90	-27.3 -81.6	11.7 141.6	-31.0 34.7	-19.6 13.0
200	-21.9 -161.5	11.6 93.8	-25.2 19.6	-18.7 -26.1
300	-16.5 143.5	11.6 49.2	-22.2 -7.1	-23.1 -94.7



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