

RF AMPLIFIER

MODEL QBH-4009

Available as: QBH-4009, 4 Pin TO-8 (080-10114-0001)
QBH-9-4009, Connectorized Housing (ES E52-1501)

Features

- High Gain: 10.0 dB Typical
- High Power: +25.5 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	10 - 2000 MHz	10 - 2000 MHz
Gain (dB)	10.0 ± 1.0	—
Gain vs. Temperature	—	+1.0/-1.0 Max.
Gain Flatness	1.0	1.4 Max.
Reverse Isolation (dB)	-16	-16 Min.
VSWR In	2.0:1	2.0:1 Max.
VSWR Out	2.0:1	2.5:1 Max.
1 dB Compression (dBm)	+25.5	+25.5 Min.
Output Intercept point		
3rd Order	+39	+37 Min.
2nd Order	+46	+44 Min.
Noise Figure (dB)	4.5	5.5 Max.
Power Vdc	+15	+15
mA	195	205 Max.

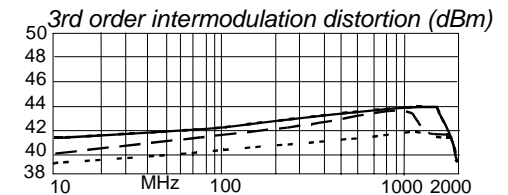
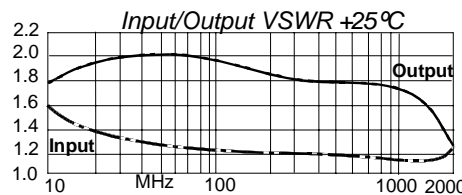
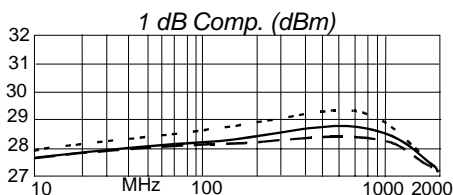
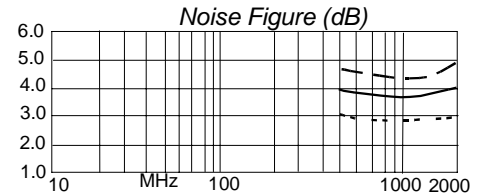
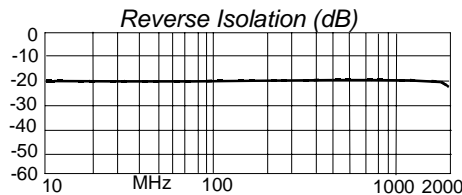
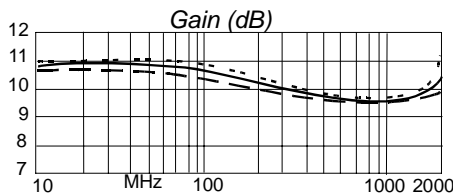
Maximum Ratings

Ambient Operating Temperature -55°C to +85 °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.
2. Noise Figures increase below 500 NHz

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
10	-13.2 -114.1	10.8 -160.1	-18.7 4.7	-10.8 173.3
50	-17.8 -168.2	10.8 174.5	-19.3 -5.0	-9.6 169.5
90	-18.1 177.9	10.7 164.9	-19.3 -9.7	-9.7 160.3
300	-20.1 150.9	10.2 126.5	-19.0 -35.4	-10.9 119.3
700	-20.5 111.7	10.1 58.2	-19.4 -86.4	-11.2 51.0
1000	-21.6 75.5	10.1 6.2	-19.9 -124.1	-11.6 -0.8
1400	-24.2 18.1	10.1 -63.4	-20.8 -172.9	-12.8 -65.7
1700	-21.9 -25.0	10.4 -118.4	-21.5 146.9	-14.6 -102.3
2000	-18.4 -51.7	10.6 -177.5	-23.3 107.3	-20.0 -116.6



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