

# RF AMPLIFIER

## MODEL QBH-4009

Available as: QBH-4009, 4 Pin TO-8 (T4)

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.

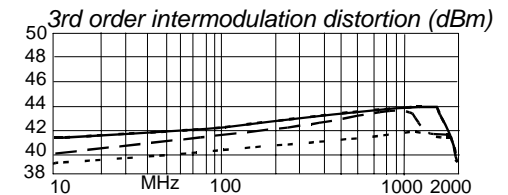
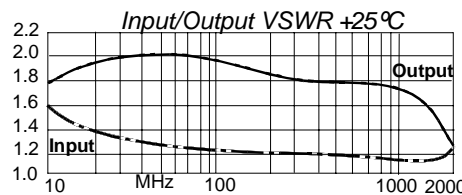
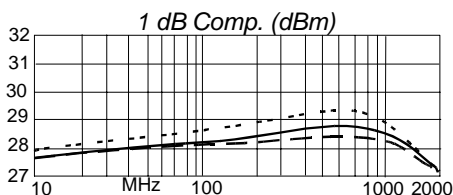
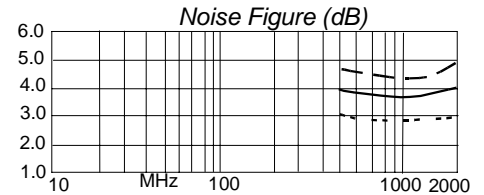
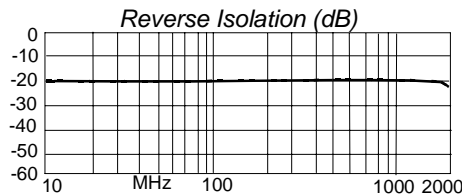
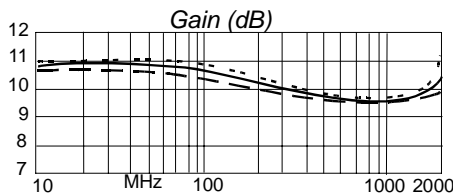
### Maximum Ratings

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



Spectrum Microwave · 2144 Franklin Drive N.E. · Palm Bay, Florida 32905 · PH (888) 553-7531 · Fax (888) 553-7532 03/11/05

www.SpectrumMicrowave.com Spectrum Microwave (Europe) · 2707 Black Lake Place · Philadelphia, Pa. 19154 · PH (215) 464-4000 · Fax (215) 464-4001