

# RF AMPLIFIER

## MODEL QBH-4010

Available as: QBH-4010, 4 Pin TO-8 (080-10114-0001)  
 QBH-9-4010, Connectorized Housing (ES E52-1501)

### Features

- Wide Bandwidth: 10 - 2500 MHz
- High Power: +26 dBm Typical
- Operating Temp. -55 °C to +85 °C
- Environmental Screening Available

### Specifications<sup>1</sup>

CHARACTERISTIC	TYPICAL Ta = 25 °C	MIN/MAX Ta = -55 °C to +85 °C
Frequency	10 - 2500 MHz	10 - 2500 MHz
Gain (dB)	7.5 ± 0.7	—
Gain vs. Temperature	—	+1.0/-1.0 Max.
Gain Flatness (dB p-p)	1.0	2.1 Max.
Reverse Isolation (dB)	16	11 Min.
VSWR In	1.5:1	2.0:1 Max.
VSWR Out	1.6:1	2.5:1 Max.
1 dB Compression (dBm)	+26	+24.5 Min.
Output Intercept point		
3rd Order	+36	+33 Min.
2nd Order	+44	+42 Min.
Noise Figure (dB) <sup>2</sup>	6.5	7.5 Max.
Power Vdc	+15	+15
mA	190	195 Max.

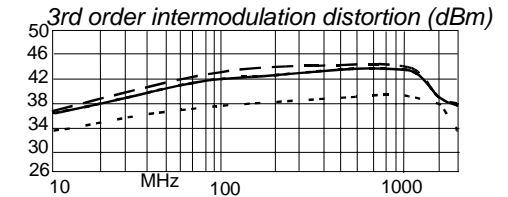
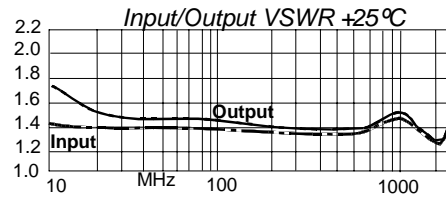
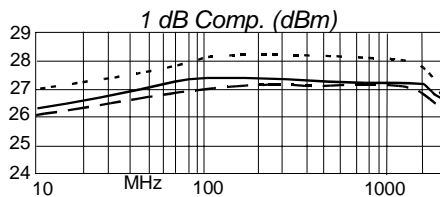
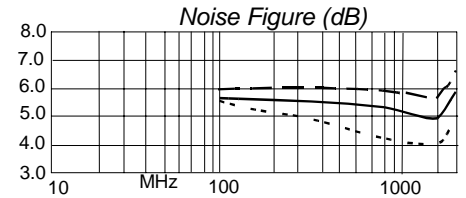
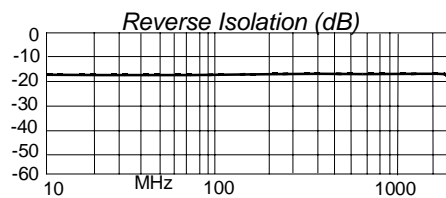
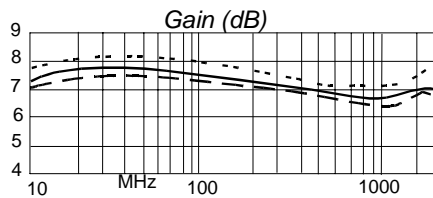
### Absolute Maximum (No Damage) Ratings

Ambient Operating Temperature ..... -55°C to +85 °C  
 Storage Temperature ..... -65°C to +150 °C  
 Case Temperature ..... +95 °C  
 DC Voltage ..... +17 Volts  
 Continuous RF Input Power<sup>3</sup> ..... +23 dBm  
 Short Term RF Input Power<sup>3</sup> ..... +27 dBm (1 Minute Max.)

#### Notes:

1. Min/max specifications are guaranteed when tested in a 50 Ohm system.
2. Noise figure measured from 100 - 2500 MHz.
3. RF output terminated into 50 ohms.

### Typical Performance Data



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

### S-Parameters

FREQ. MHz	-- S11-- dB    Ang	-- S21-- dB    Ang	-- S12-- dB    Ang	-- S22-- dB    Ang
10	-14.9 -138.1	7.5 -177.0	-18.1 7.2	-11.9 -165.1
70	-16.1 176.4	7.7 168.9	-17.9 -6.7	-14.6 158.1
120	-16.3 168.6	7.6 158.6	-17.9 -12.8	-14.8 147.8
180	-16.7 164.6	7.4 147.7	-17.7 -20.4	-15.3 132.5
400	-16.4 148.6	7.2 110.7	-17.7 -48.8	-15.7 95.6
900	-15.3 92.3	6.9 26.3	-17.9 -110.3	-14.4 16.0
1500	-16.6 6.3	6.9 -75.0	-17.8 174.2	-15.1 -60.8
2000	-18.7 -95.1	7.1 -163.2	-17.7 107.6	-17.6 -98.4
2500	-18.5 164.8	7.5 100.8	-18.4 33.9	-17.6 -115.0



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

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