

# RF AMPLIFIER

## MODEL QBH-4012

Available as: QBH-4012, 4 Pin TO-8B (T8)  
 QBH-7-4012, Connectorized Housing (080-22513-0001)

### Features

- High Gain: 19.5 dB Typical
- High Power: +23 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	100 - 2000 MHz	100 - 2000 MHz
Gain (dB)	19.5 ± 0.5	—
Gain vs. Temperature	—	+1.5/-1.0 Max.
Gain Flatness	1.0	1.0 Max.
Reverse Isolation (dB)	-35	-35 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.8:1	2.0:1 Max.
1 dB Compression (dBm)	+23	+22 Min.
Output Intercept point 3rd Order	+33	+33 Min.
2nd Order	+52	+45 Min.
Noise Figure (dB)	3.2	4.0 Max.
Power Vdc	+15	+15
mA	190	200 Max.

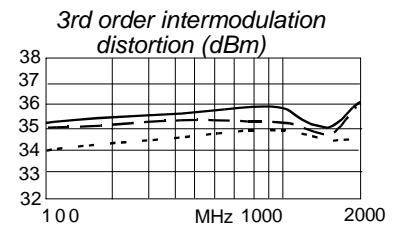
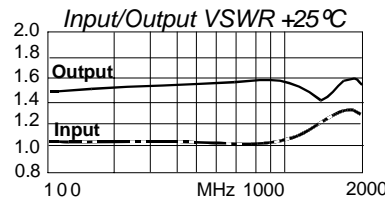
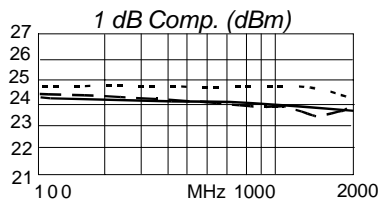
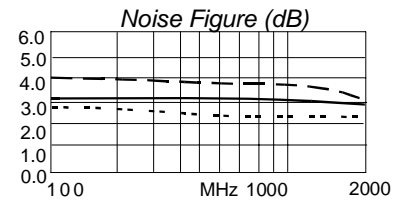
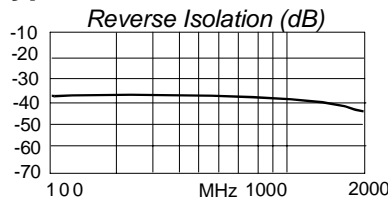
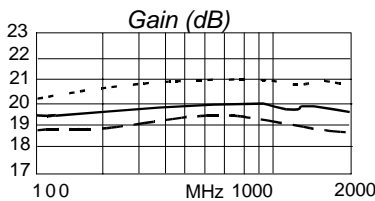
### Maximum Ratings

Ambient Operating Temperature ..... -55°C to +125 °C  
 Storage Temperature ..... -65°C to + 150 °C  
 Case Temperature ..... + 125 °C  
 DC Voltage ..... + 18 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 MHz

### 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
100	-31.5    149.1	19.4    -13.8	-36.5    -6.7	-14.2    -172.4
400	-35.8    156.9	19.8    -80.3	-36.9    -40.5	-13.7    140.2
600	-37.2    136.3	19.9    -123.4	-37.0    -60.3	-13.5    113.4
900	-34.5    -79.6	20.0    171.2	-37.3    -88.5	-13.5    59.3
1100	-26.9    -85.5	19.9    127.1	-37.4    -106.1	-13.2    16.6
1300	-20.9    -130.5	19.7    85.8	-37.2    -133.3	-14.7    -31.2
1600	-18.7    -166.7	19.5    19.8	-39.9    -162.4	-13.0    -97.6
1800	-17.8    154.8	19.5    -23.8	-41.3    175.9	-12.8    -142.2
2000	-17.7    110.8	19.4    -69.5	-44.0    160.7	-13.2    170.9



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