

RF AMPLIFIER

MODEL QBH-172

Available as: QBH-172, 4 Pin TO-8 (T4)
QBH-9-172, Connectorized Housing (ES E52-1501)

Features

- High Gain: 15.0 dB Typical
- High Power: +16 dBm Typical
- Operating Temp. - 55 °C to +85 °C
- Environmental Screening Available

Maximum Ratings

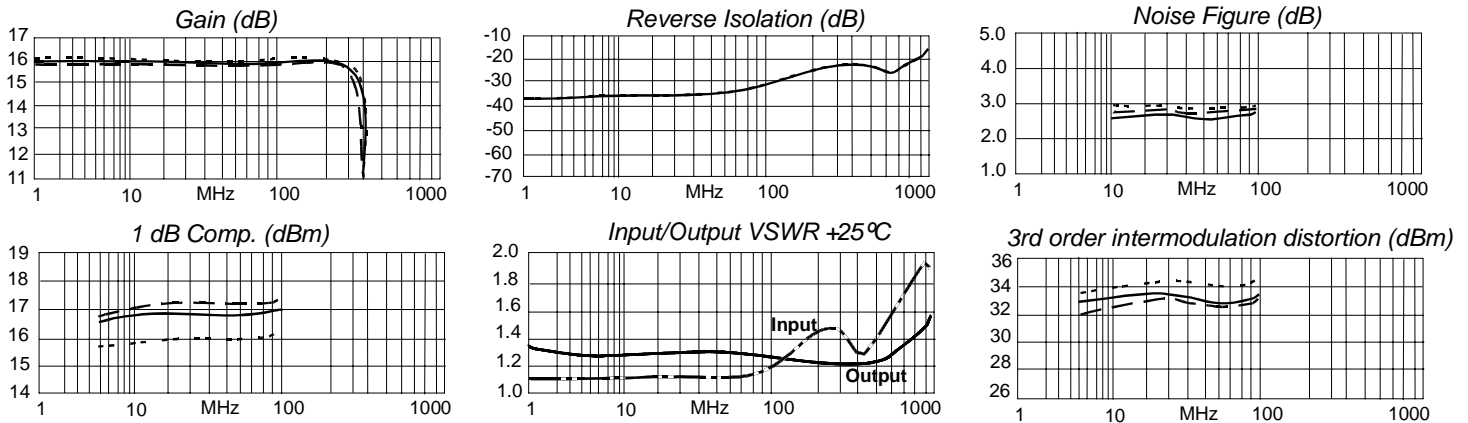
Ambient Operating Temperature -55°C to + 125 °C
Storage Temperature -65°C to + 150 °C
Case Temperature + 125 °C
DC Voltage + 16.5 Volts
Continuous RF Input Power + 13 dBm
Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
Maximum Peak Power 0.5 Watt (3 μsec Max.)

Specifications

CHARACTERISTIC	TYPICAL	MIN/MAX
	Ta = 25 °C	Ta = -55 °C to +85 °C
Frequency	1 - 100 MHz	1 - 100 MHz
Gain (dB)	15.0 ± 0.5	—
Gain vs. Temperature	—	+0.2/-0.8 Max.
Gain Flatness	0.6	0.8 Max.
Reverse Isolation (dB)	-27	-27 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.6:1 Max.
1 dB Compression (dBm)	+16	+15 Min.
Output Intercept point		
3rd Order	+31	+30 Min.
2nd Order	+45	+42 Min.
Noise Figure (dB)	3.3	3.8 Max.
Power Vdc	+15	+15
mA	51	54 Max.

Note: 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
1	-24.6 -17.8	15.2 -177.2	-35.7 10.2	-17.3 41.2
5	-24.1 0.1	15.3 178.9	-35.2 4.7	-18.4 8.9
7	-24.0 2.1	15.3 178.0	-35.1 4.8	-18.4 5.4
9	-23.9 3.3	15.3 177.1	-35.1 5.8	-18.3 3.0
20	-23.3 7.6	15.3 173.0	-34.9 7.7	-18.3 -4.0
40	-22.0 11.5	15.3 165.9	-34.3 15.1	-18.3 -12.1
60	-20.5 11.2	15.2 159.0	-33.5 21.5	-18.3 -19.3
80	-19.2 7.8	15.2 152.1	-32.6 24.5	-18.3 -26.1
100	-18.0 2.2	15.2 145.3	-31.7 26.6	-18.2 -33.0



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