

RF AMPLIFIER

MODEL QBH-172

Available as: QBH-172, 4 Pin TO-8 Tall (080-22502-0001)
 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

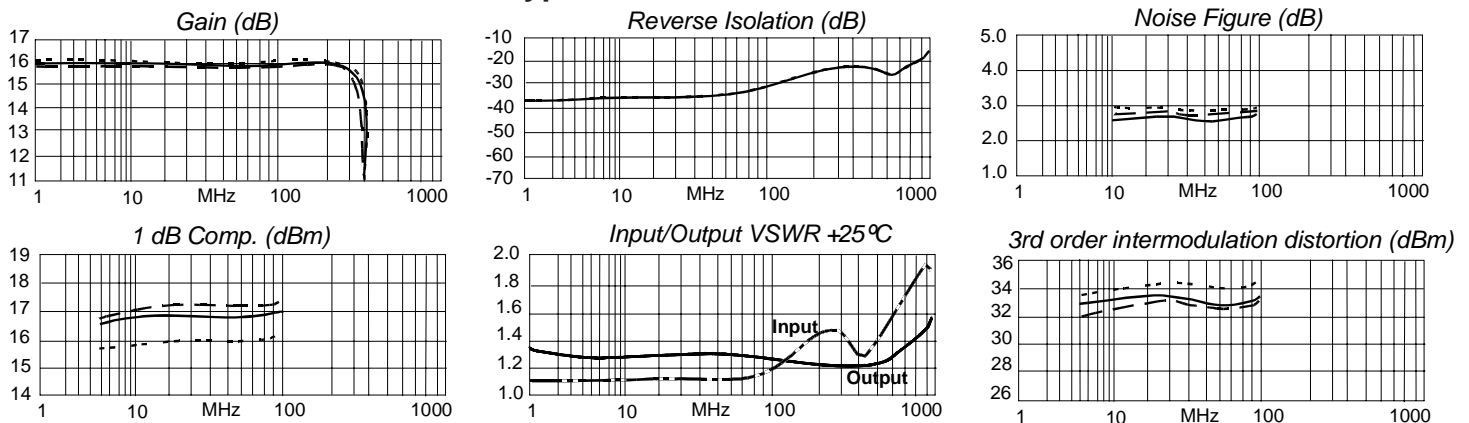
Ambient Operating Temperature -55°C to +125 °C
 Storage Temperature -65°C to +150 °C
 Case Temperature +125 °C
 DC Voltage +16.5 Volts
 Continuous RF Input Power +13 dBm
 Short Term RF Input Power 50 Milliwatts (1 Minute Max.)
 Maximum Peak Power 0.5 Watt (3 μsec Max.)

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



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