

RF AMPLIFIER

Available as: QBH-8171, Hybrid SM (E52-19422)

MODEL QBH-8171

Features

- High Gain: 14.0 dB Typical
- High Power: +27 dBm Typical
- Operating Temp. - 40 °C to +70 °C
- Environmental Screening Available

Specifications

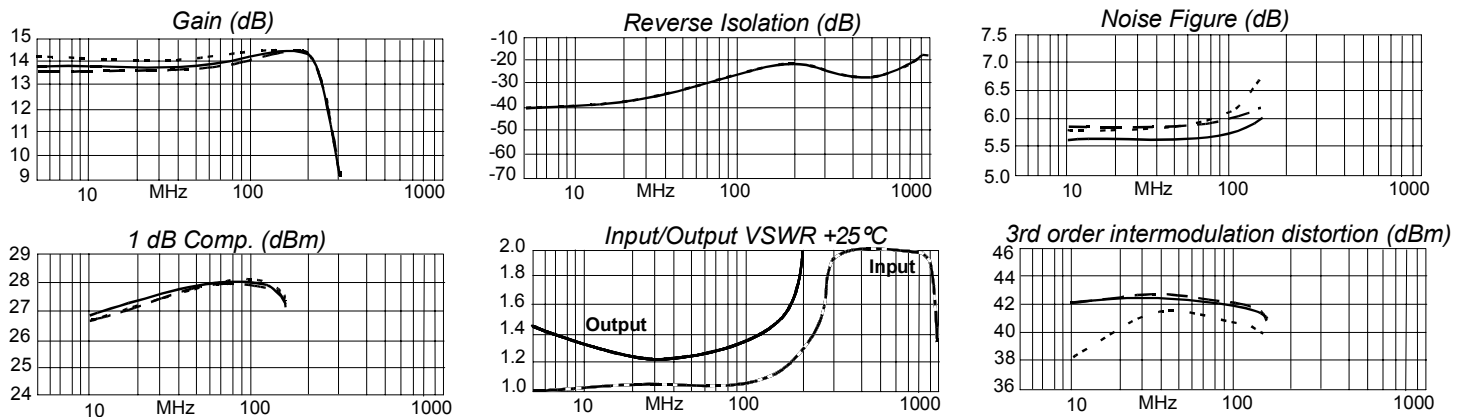
CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = -40 °C to +70 °C
Frequency	10 - 150 MHz	10 - 150 MHz
Gain (dB)	14.0 ±0.5	—
Gain vs. Temperature	—	+0.5/-0.5 Max.
Gain Flatness	0.5	0.6 Max.
Reverse Isolation (dB)	-23.5	-23 Min.
VSWR In	1.5:1	1.6:1 Max.
VSWR Out	1.6:1	1.7:1 Max.
1 dB Compression (dBm)	+27	+26 Min.
Output Intercept Point 3rd Order	+40	+39 Min.
2nd Order	+50	+45 Min.
Noise Figure (dB)	7.5	8.1 Max.
Power Vdc	+15	+15
mA	105	108 Max.

Absolute Maximum (No Damage) 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.)

Note: Specifications are guaranteed when tested in a 50 Ohm system.
 Specifications indicated as typical are not guaranteed.

Typical Performance Data



Legend ——— +25 °C - - - - +70 °C ······ -40 °C

Linear S-Parameters Data

FREQ. MHz	-- S11-- dB Ang	-- S21-- dB Ang	-- S12-- dB Ang	-- S22-- dB Ang
10	-34.1 10.5	13.6 -178.7	-38.9 35.3	-18.5 112.1
40	-29.0 21.7	13.7 159.9	-34.4 44.3	-20.6 74.7
50	-28.9 23.1	13.7 154.1	-33.0 44.9	-20.0 62.8
60	-29.0 25.0	13.7 148.4	-31.7 43.5	-19.3 50.6
80	-29.3 33.5	13.9 136.9	-29.5 39.6	-18.1 27.1
90	-29.5 39.8	13.9 131.1	-28.6 36.9	-17.6 15.0
100	-29.4 47.9	14.0 125.2	-27.8 33.8	-17.1 2.7
120	-28.1 66.3	14.2 113.1	-26.3 26.7	-16.1 -23.2
150	-22.9 82.1	14.4 93.6	-24.4 14.5	-14.4 -66.3



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