

RF AMPLIFIER

Available as: QB-101, Housing (E52-19044)

MODEL QB-101

Features

- High Gain: 21.9 dB Typical
- High Power: +31 dBm Typical
- Operating Temp. 0 °C to +50 °C
- Environmental Screening Available

Specifications

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta=0 °C to +50 °C
Frequency	2 - 70 MHz	2 - 70 MHz
Gain (dB)	21.9 ± 0.5	—
Gain vs. Temperature	—	+0.2/ -0.5 Max.
Gain Flatness	0.5	0.8 Max.
Reverse Isolation (dB)	31	31 Min.
VSWR In	1.5:1	1.5:1 Max.
VSWR Out	1.5:1	1.5:1 Max.
1 dB Compression (dBm)	+31	+31 Min.
Output Intercept point		
3rd Order	+54	+54 Min.
2nd Order	+115	+105 Min.
Noise Figure (dB)	4.0	4.5 Max.
Power Vdc	+24	+24
mA	420	420 Max.

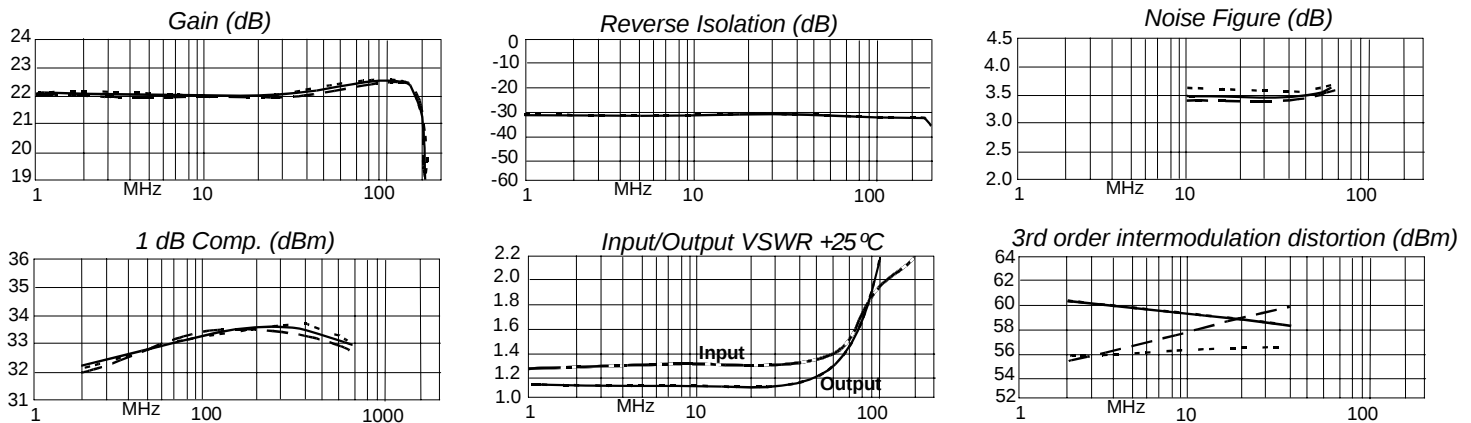
Note:

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

Maximum Ratings

Ambient Operating Temperature -54 °C to +71 °C
Storage Temperature -65 °C to + 125 °C
Case Temperature + 125 °C
DC Voltage + 25 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.)

Typical Performance Data



Legend ——— + 25 °C --- + 50 °C 0 °C

Linear S-Parameters Data

FREQ. MHz	-- S11-- dB	-- Ang	-- S21-- dB	-- Ang	-- S12-- dB	-- Ang	-- S22-- dB	-- Ang
2	-17.8	7.2	22.1	-178.6	-31.3	-174.3	-25.9	-2.3
5	-17.3	-3.3	22.1	174.1	-31.2	177.2	-25.5	-7.7
7	-17.3	-9.6	22.1	170.4	-31.1	174.0	-25.4	-13.1
8	-17.3	-12.1	22.1	168.7	-31.2	172.1	-25.3	-15.8
10	-17.3	-15.6	22.1	165.4	-31.2	169.8	-25.2	-21.4
30	-17.5	-60.3	22.2	134.4	-31.4	145.0	-23.3	-74.7
40	-17.3	-81.0	22.2	118.9	-31.6	133.5	-21.6	-99.7
60	-16.0	-130.6	22.4	87.1	-32.0	111.4	-17.1	-143.5
70	-15.2	-153.8	22.5	71.1	-32.2	100.6	-15.0	-163.6



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

Rev.
11/14/08

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