

RF AMPLIFIER

MODEL QB-166

Available as: QB-166, Housing (E52-19044)

Features

- High Gain: 12.7 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	1 - 32 MHz	1 - 32 MHz
Gain (dB)	12.7 ± 0.5	—
Gain vs. Temperature	—	+0.3/ -0.3 Max.
Gain Flatness	0.5	0.5 Max.
Reverse Isolation (dB)	40	40 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	+55	+55 Min.
2nd Order	+110	+110 Min.
Noise Figure (dB)	7.8	8.0 Max.
Power Vdc	+24	+24
mA	450	450 Max.

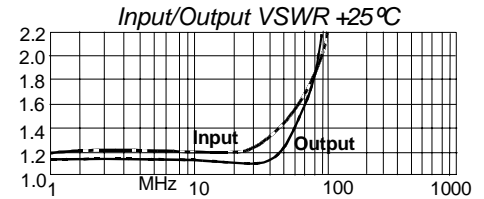
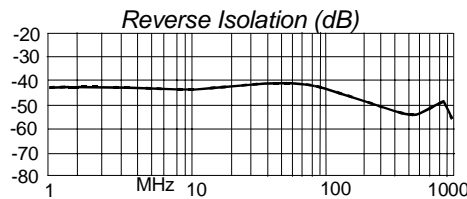
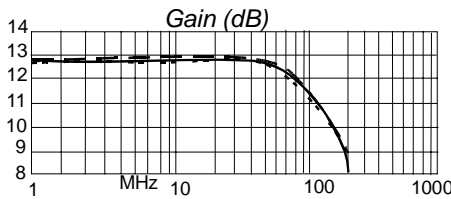
Maximum Ratings

Ambient Operating Temperature 0 °C to +50 °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.)

Note:

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

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
1	-21.0 6.7	12.8 179.5	-43.9 -176.8	-24.1 -177.0
4	-20.6 -7.4	12.8 172.0	-43.9 177.4	-24.6 161.2
6	-20.5 -13.9	12.7 167.6	-44.0 174.1	-24.9 151.6
7	-20.5 -17.4	12.7 165.5	-44.1 171.3	-25.1 146.5
9	-20.3 -23.0	12.7 161.3	-44.0 169.8	-25.5 137.2
12	-20.2 -32.1	12.7 155.1	-44.1 166.0	-26.3 141.9
20	-19.6 -55.5	12.7 138.7	-44.1 152.8	-28.6 70.4
30	-18.4 -85.2	12.7 117.9	-44.1 138.8	-30.9 4.0
32	-18.2 -89.9	12.7 113.8	-43.3 132.6	-29.1 -6.7



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