RF AMPLIFIER
MODEL QB-166

Available as: QB-166, Housing (080-22509-0001)

Features

- High Gain: 12.7 dB Typical
- High Power: +31 dBm Typical
- Operating Temp. 0 ºC to +50 ºC
- Environmental Screening Available

Specifications[1]

CHARACTERISTIC	TYPICAL Ta= 25 ºC	MIN/MAX Ta = 0 ºC to +50 ºC
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	+115	+110 Min.
Noise Figure (dB)	7.8	8.0 Max.
Power Vdc	+24	+24
mA	450	450 Max.

Absolute Maximum (No Damage) Ratings

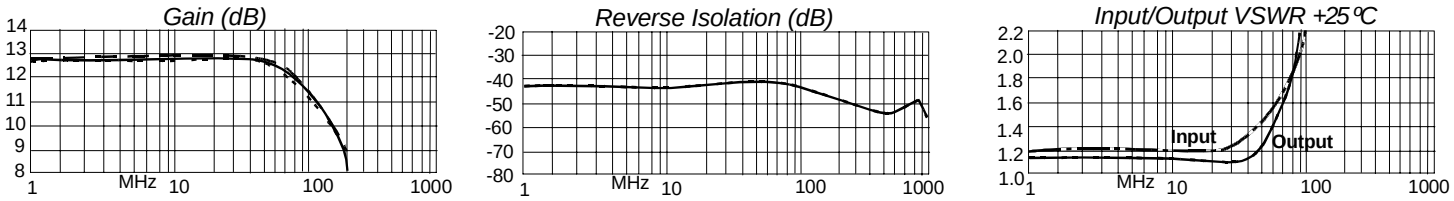
Ambient Operating Temperature ..... 0 ºC to +50 ºC
Storage Temperature ..... -65 ºC to +125 ºC
Case Temperature ..... +125 ºC
DC Voltage ..... +25 Volts
Continuous RF Input Power[2] ..... +23 dBm
Short Term RF Input Power[2] ..... +27 dBm (1 Minute Max.)

Notes:
1. Specifications are guaranteed when tested in a 50 Ohm system with a DC supply voltage tolerance of ±2%.
2. RF output terminated into 50 Ohms.

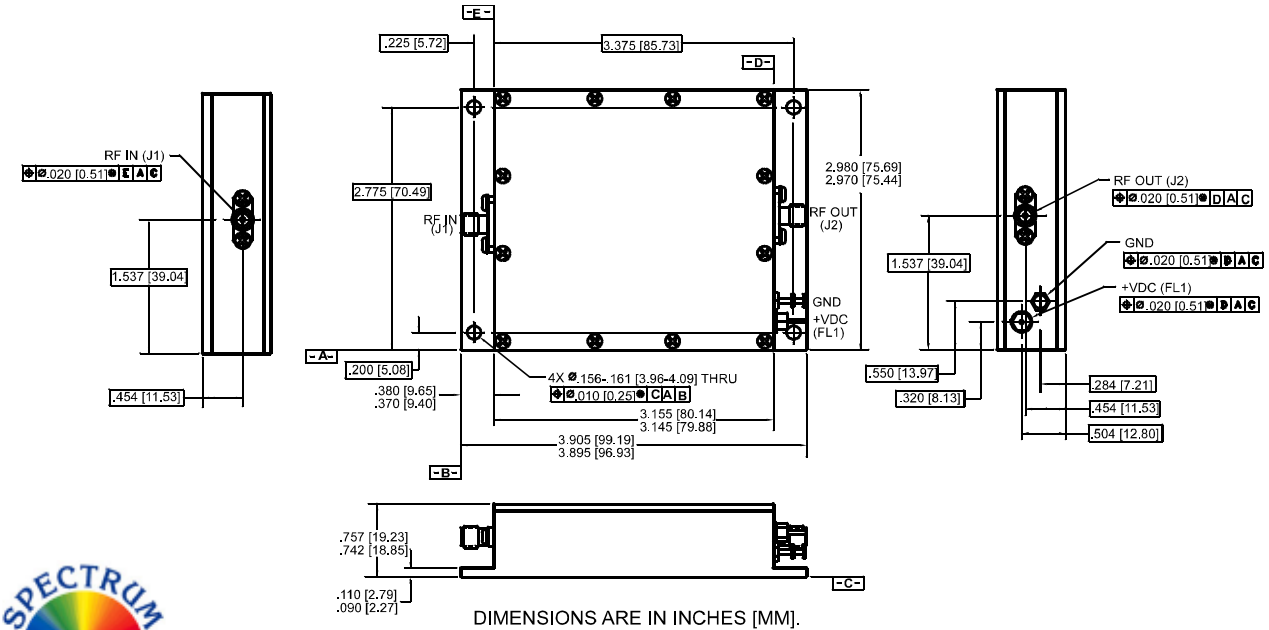
Typical S-Parameter Data

FREQ. MHz	S11 dB	S11 Ang	S21 dB	S21 Ang	S12 dB	S12 Ang	S22 dB	S22 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

Typical Performance Data



Legend ——— + 25 ºC – – – + 50 ºC - - - - - - 0 ºC



DIMENSIONS ARE IN INCHES [MM].

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