

RF AMPLIFIER MODEL QB-446

Features

- Ultra High Linearity, IP2: +100 dBm Minimum
- Higher Power: +31 dBm
- High IP3: +50 dBm Minimum
- Environmental Screening Available

Specifications¹

CHARACTERISTIC	TYPICAL Ta= 25 °C	MIN/MAX Ta = 0 °C to +50 °C	
Frequency	0.5 - 32 MHz	0.5 - 32 MHz	
Gain (dB)	16.0 ± 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 Out	1.5:1 1.5:1	1.5:1 Max. 1.5:1 Max.
1 dB Compression (dBm)	+31	+31 Min.	
Output Intercept point			
3rd Order (dBm)	+55	+50 Min.	
2nd Order (dBm)	+115	+100 Min.	
Noise Figure (dB)	7.8	8.0 Max.	
Power	Vdc mA	+24 450	+24 450 Max.

Absolute Maximum (No Damage) 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 Power².....+20 dBm
 Short Term RF Input Power².....+27 dBm (3 μsec Max.)

Notes:

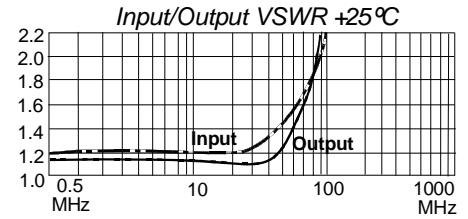
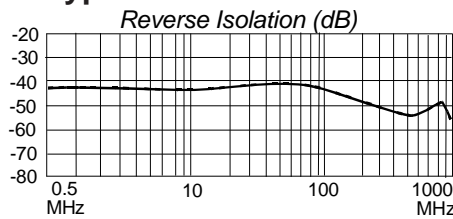
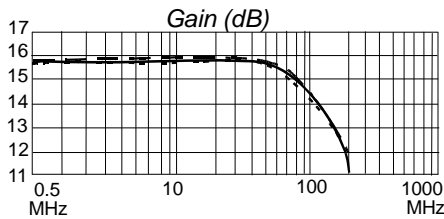
1. Specifications are guaranteed when tested in a 50 Ohm system with a DC supply voltage tolerance of ±/-2%.

2. RF output terminated into 50 Ohms.

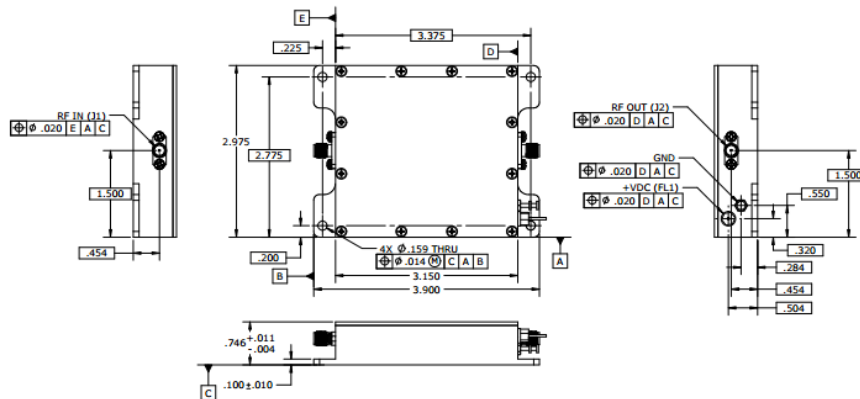
Rev 1-20-2022

Freq MHz	S11 Input		S21 Gain		S12 Iso.		S22 Output	
	dB	Ang	dB	Ang	dB	Ang	dB	Ang
0.50	-31.01	132	15.82	-177	-49.3	-166	-22.88	-161
1.00	-33.20	152	15.77	180	-49.8	-173	-21.94	-172
5.00	-35.36	-161	15.71	170	-49.5	179	-22.40	-179
10.00	-31.61	-139	15.65	159	-50.2	167	-22.94	-175
15.00	-28.22	-134	15.61	149	-49.7	166	-23.10	-169
20.00	-25.66	-137	15.57	139	-50.0	159	-22.72	-161
25.00	-23.54	-141	15.56	129	-50.6	149	-21.92	-155
30.00	-21.71	-147	15.55	119	-50.0	153	-20.81	-149
32.00	-21.09	-149	15.54	115	-48.2	148	-20.27	-147

Typical Performance Data



Legend ——— +25 °C - - - - +50 °C - - - - - 0 °C



DIMENSIONS ARE IN INCHES [MM].