

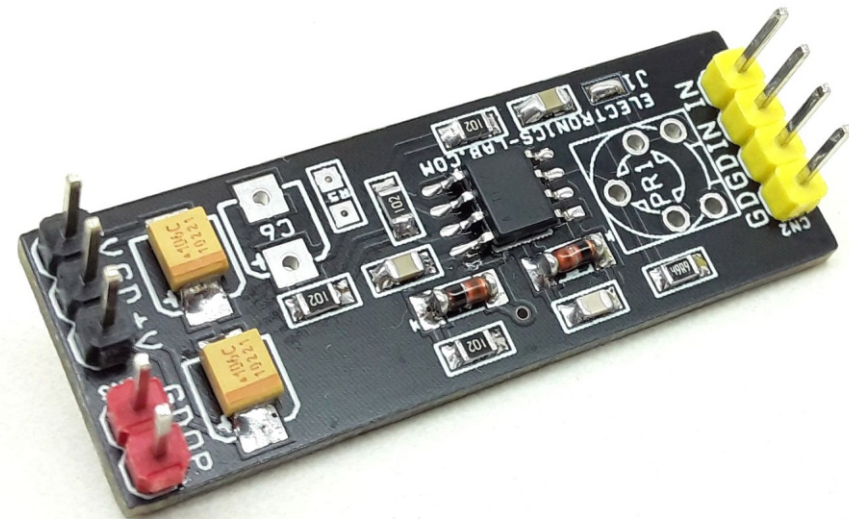
## Precision Full-Wave Rectifier, Dual-Supply

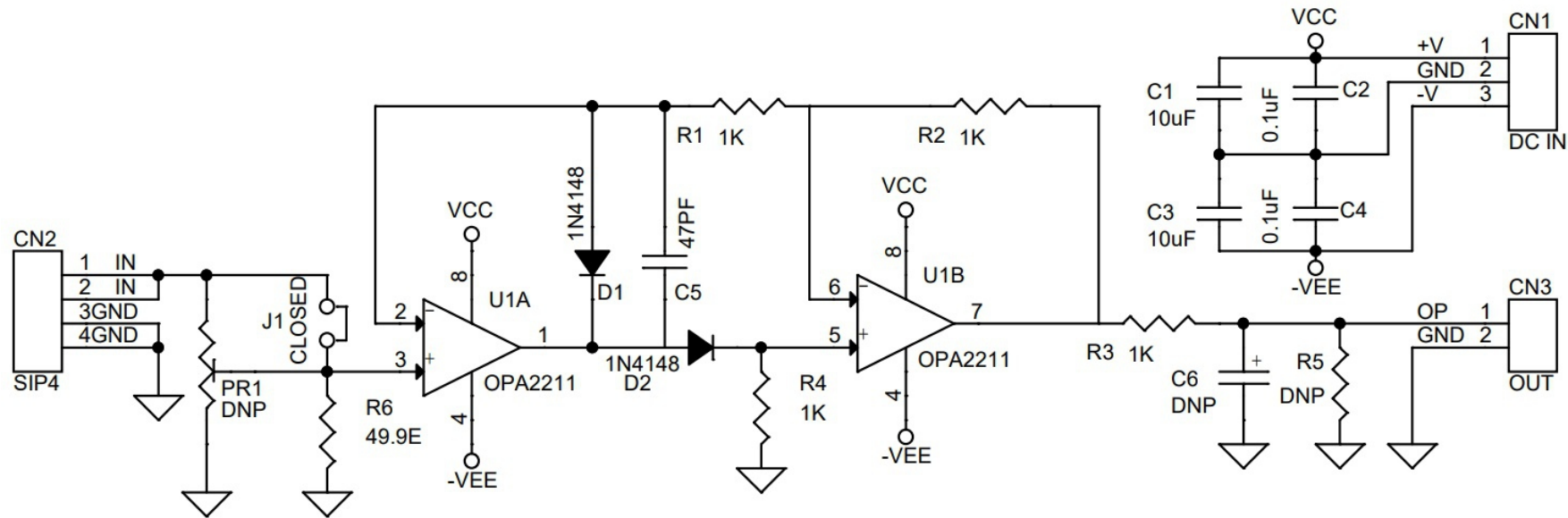
This is a dual-supply precision full-wave rectifier board that can turn alternating current (AC) signals into single polarity signals. The OPAMPs, U1A, and U1B, buffer the input signal and compensate for the voltage drops across D1 and D2 allowing for small signal inputs. This implementation functions with limited distortion for 20Vpp input signals at frequencies up to 50 kHz and for signals as small as 50 mVpp at frequencies up to 1kHz. The circuit can be used in applications that need to quantify the absolute value of input signals which have both positive and negative polarities.

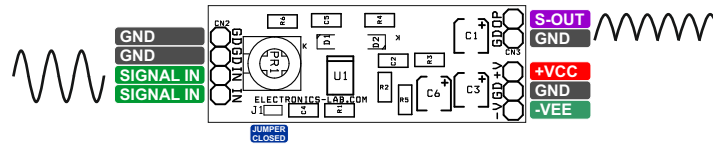
- Connector CN1 DC Supply Input +/-15V DC
- Connector CN2 AC Signal Input
- CN3 Full-Wave Signal Output
- Jumper J1 PCB Jumper Closed
- Use PR1 if the input Signal Peak to Peak is more than 20V
- For DC Voltage Output: Use C6=10uF/25V and R5=100K Size 0805 (Full-Wave AC to DC Voltage Output)

### Features

- Supply Voltage +/-15V DC
- Input AC Signal +/-50mV To +/-10V
- Output 50mV to 10V Full-Wave Rectified Output
- Frequency Response 1Khz to 50Khz







BOM						
NO.	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	3 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5316-ND
2	1	CN2	4 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5317-ND
3	1	CN3	2 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5315-ND
4	2	C1,C3	10uF/25V SMD SIZE 1206 OR 1210	AVX	DIGIKEY	478-2363-1-ND
5	2	C2,C4	0.1uF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
6	1	C5	47PF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
7	3	PR1,R5,C6	DNP	OPTIONAL		DO NOT INSTALL
8	2	D1,D2	1N4148 SMD	NEXPERIA	DIGIKEY	1727-2967-1-ND
9	1	J1	CLOSED-SOLDER JUMPER			
10	4	R1,R2,R3,R4	1K 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
11	1	R6	49.9E 1% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
12	1	U1	OPA2211	TI	DIGIKEY	296-24510-5-ND

