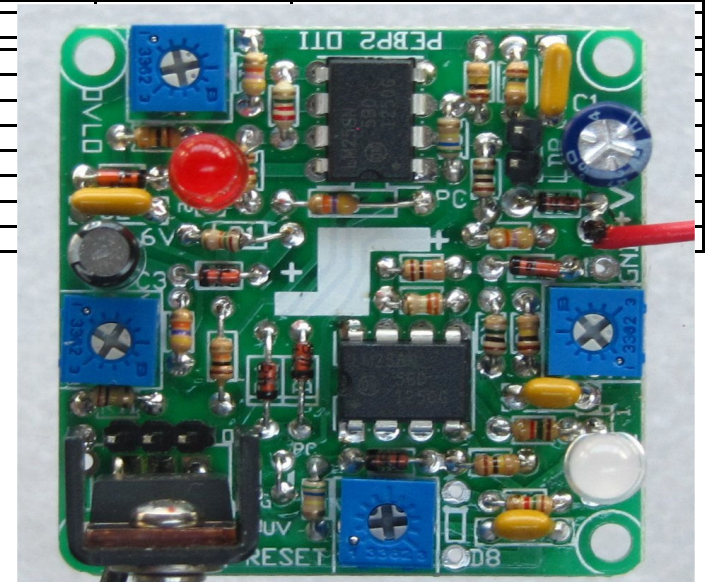




Name:	Batter Protector, Full Version	12VDC, OVLO, UVLO, CHARGE, SHUNT, LOW, PC, MOSFET
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Line #	PCB Part Label	Qty.	Value	Description	Kit Parts	Notes
1	R1, R7, R12	3	10K	Resistor, 10k Ohms, 1/8W 5% carbon film	Y	
2	R2, R4	2	560k	Resistor, 560k Ohms, 1/8W 5% carbon film	Y	
3	R3, R5, R11, R14	4	100k	Resistor, 100k Ohms, 1/8W 5% carbon film	Y	
4	R6, R10, R15	3	47k	Resistor, 47k Ohms, 1/8W 5% carbon film	Y	R6/R10 input +V divider
5	R8, R21	2	1.0M	Resistor, 1.0M Ohms, 1/8W 5% carbon film	Y	
6	R9, R13, R16	3	1.5k	Resistor, 1.5k Ohms, 1/8W 5% carbon film	Y	LED brightness
7	R17	1	2.2M	Resistor, 2.2M Ohms, 1/8W 5% carbon film	Y	over-voltage reset hysteresis
8	R18	1	27k	Resistor, 27k Ohms, 1/8W 5% carbon film	Y	
9	R19, R22	2	150k	Resistor, 150k Ohms, 1/8W 5% carbon film	Y	R22 120-150k PC divider.
10	R20	1	220k	Resistor, 220k Ohms, 1/8W 5% carbon film	Y	
11	C1, C3	2	16V100	Capacitor, >16V (25V) 47-100uF, electrolytic, 0.1"	Y	input power filter
12	C2, C4, C5, C6	4	104	Capacitor, 25-50V 0.1uF, ceramic, 0.2"	Y	filters
13	D1, D2, D4, D5, D6	5	diode	Diode, signal diode, 500mW, 1N4148 generic	Y	
14	D3, D7	2	6.2V Zener	Diode, 6.2V zener, 500mW, 1N5234B generic	Y	Vreference
15	IC1, IC2	2	dual op-amp	IC, dual op-amp, LM258N DIP8 generic	Y	
16	VR1, VR2, VR4	3	100k trimmer	Resistor, 100k variable, 3362, top/side adjust	Y	
17	VR3	1	500k trimmer	Resistor, 500k variable, 3362, top/side adjust	Y	fixed VR3 =R center 220k
18	Q1	1	N-CH MOSFET	Power N-CH MOSFET, TO-220, >30V 10A rating	Y	load, UVLO
19	LED1	1	bi-color LED	V status, red/green bi-color, 3/5mm, diffused	Red/Green	status indicator, LED +=pin 1
20	LED2	1	LED	OVLO/charging, red 3/5mm diffused any	red	LED + PIN1
21	PCB-PEBP2	1	PCB	PCB, Battery Protector, V2, PCB-PEBP2	Y	Onstate BP2 PCB
22	LDR1	1	LDR (optional)	LDR, photocell resistor, 10k-1.0M Ohms	N	auto day/night ON/OFF
23	JP1	1	bare wire	jumper, select PC-G/OV-G/UV-G		
24	WIRE1	-	user supply	Wire, 22AWG, red		
25	WIRE2	-	user supply	Wire, 20AWG, black		
26	WIRE3	-	user supply	Wire, 20AWG, blue		
27	HTSNK1	-	user supply	Heatsink, TO-220		
28	SCRW1	-	user supply	Hardware, screw, #4 x 1/4"		
29	NUT1	-	user supply	Hardware, nut, #4		
30	LW1	-	user supply	Hardware, lockwasher, #4		



Full version (see tech sheet for more info): set VR1 CCW, VR2 CW, VR3 center, VR4 center  
 Set Vin= OVLO off (14.8V). Adj VR4 CW until LED2=ON. Decrease Vin to reset OVLO (LED OFF).  
 Set Vin=UVLO (11.4V). Wait 5s for Vsense to stabilize. Adj VR1 CW until LED trips (fast blink).  
 Increase Vin for UVLO ΔVreset.(~12.4V@VR3 cen) from VR1 set. Adj VR3 CCW->+ΔV.  
 Set Vin to low flashing (12V). LED should be on. Adj VR2 CCW-> until LED starts flashing.