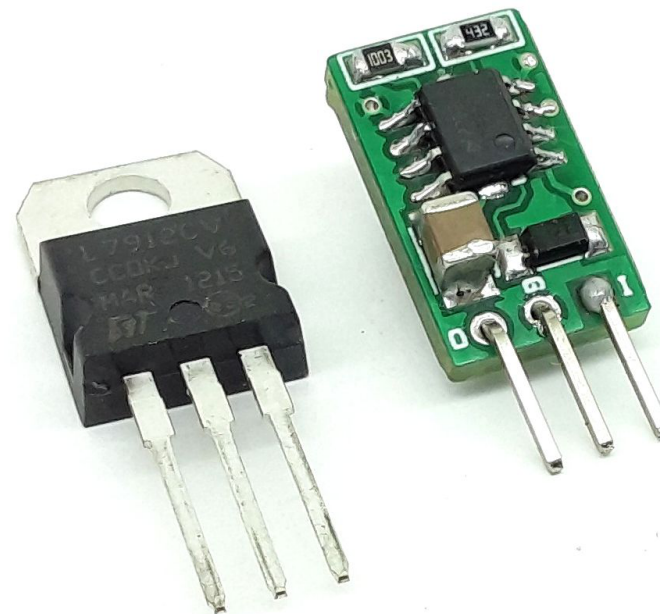


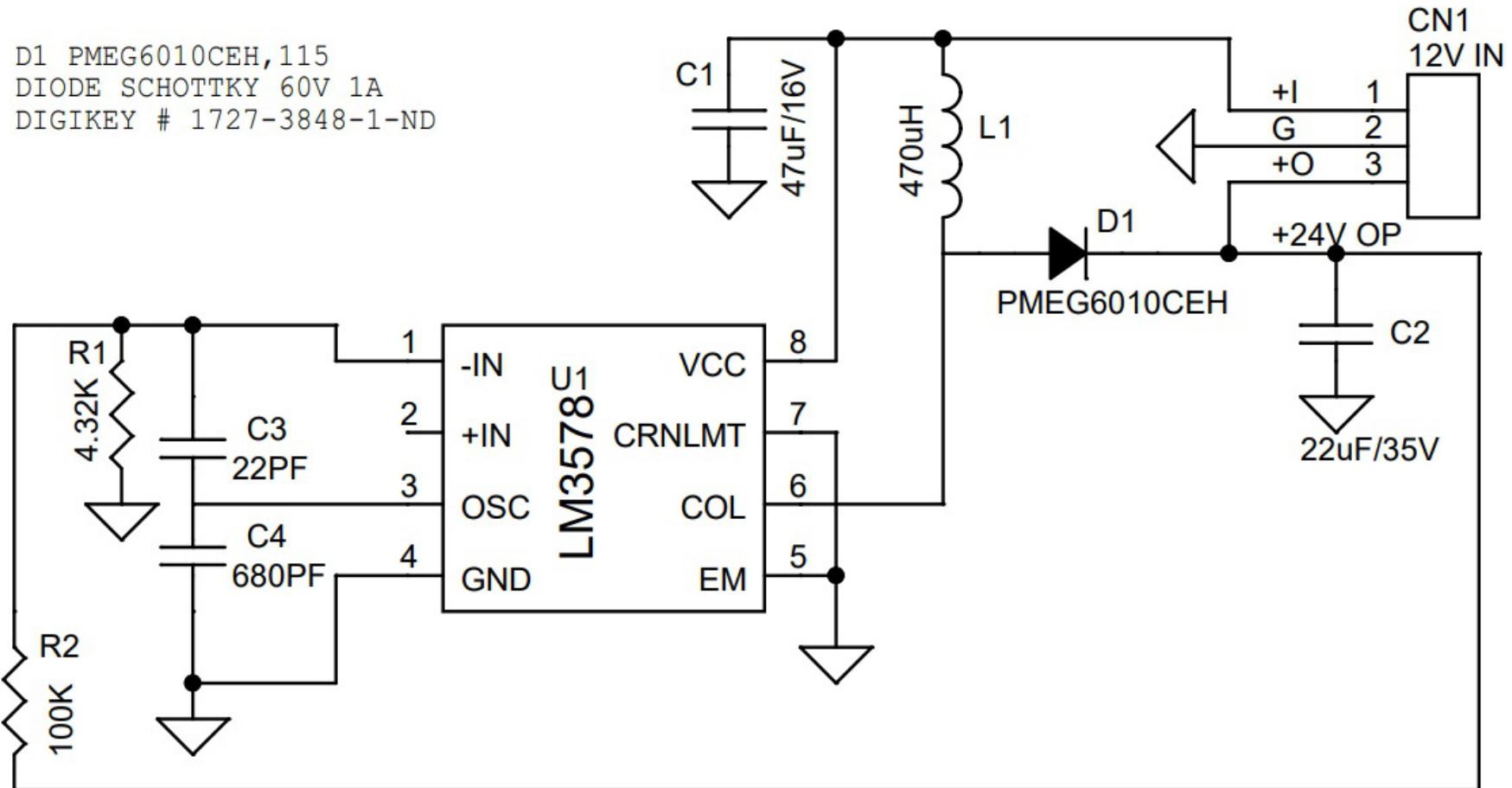
Step Up DC-DC Converter - 24V/10mA Output from 12V DC Input, Compatible to TO220 LDO

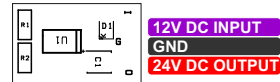
The project demonstrated here is a small-size solution, high-efficiency, low-cost, and low-EMI step-up DC/DC module for LDO regulator replacement. This small size module helps save on solution size and cost while also eliminating the need for a heatsink. The module takes up the same amount of space as a TO-220 package and is pin-to-pin compatible with TO-220 regulators, such as LM7805. The project is based on LM3578, which is a switching regulator that can easily be set up for such DC-to-DC voltage conversion circuits as the buck, boost, and inverting configurations. In this board, the chip is configured as a boost converter. Switching frequency sets at 100Khz. The project provides 24V output from 12V input. The project can output up to 20mA of current but it is safe to draw continuous 10mA.

Features

- Input Voltage V_{IN} = 12V DC
- Output Voltage V_{OUT} = 24V DC
- Load Current 10mA
- Switching Frequency 100Khz
- 3 Pin Header Connector for Input and Output
- Pin to Pin Compatible as Lm7805
- Output Ripple 60mV
- PCB Dimensions 16.19 X 9.53mm

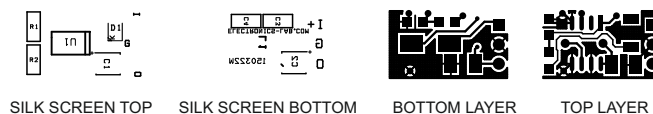






BOM						
NO	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	CN1	3 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5316-ND
2	1	C1	47uF/16V CERAMIC SMD SIZE 1210 OR 1206	MURATA/YAGEO	DIGIKEY	
3	1	C2	22uF/35V CERAMIC SMD SIZE 1210 OR 1206	MURATA/YAGEO	DIGIKEY	
4	1	C3	22PF/50V CERAMIC SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
5	1	C4	680PF/50V CERAMIC SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
6	1	D1	PMEG6010CEH SMD DIODE	NEXPERIA	DIGIKEY	1727-3848-1-ND
7	1	L1	470uH SMD OR THT 5MM-8MM	ALLIED	DIGIKEY	3475-PC0503-471K-RCTR-ND
8	1	R1	4.32K 1% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
9	1	R2	100K 1% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
10	1	U1	LM3578 SOIC8		DIGIKEY	296-35906-1-ND





PCB DIMENSIONS 16.19 X 9.53MM

