

DC-HV DC Converter – 200V @ 20mA Output with 12V DC Input

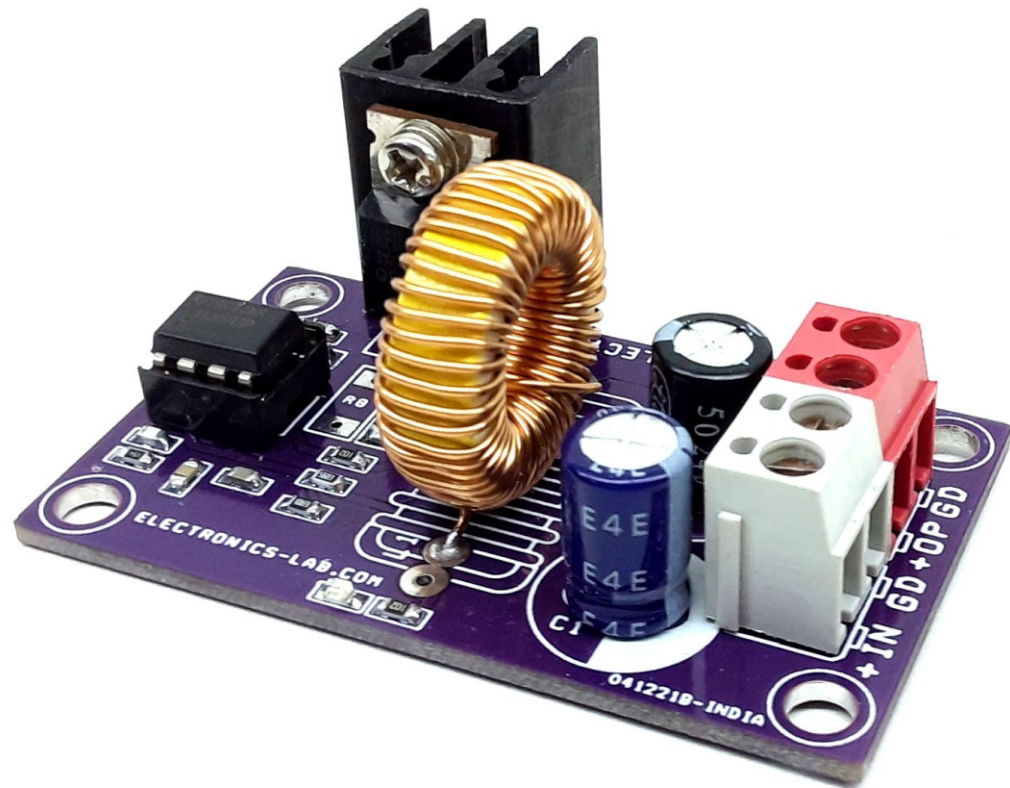
This is a low-cost DC-HV DC converter built using TL3843 Low-Power Current-Mode PWM Controller from TI. Screw terminal connectors are provided for input and output, onboard LED D1 indicates the input supply. The project provides 200V DC @ 20mA output from 12V DC supply input.

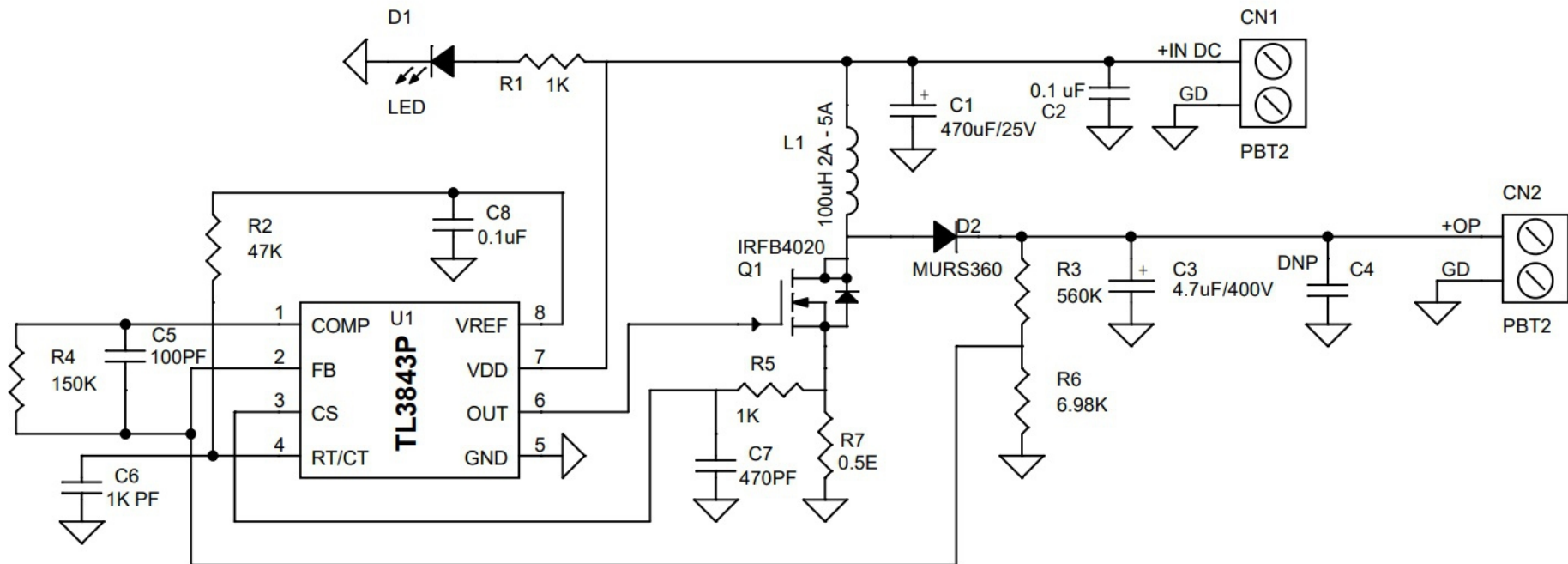
Note: Output of this project is 150V @ 50mA DC to 200V @ 20mA DC, this project also can provide lower voltage outputs, read TL3843 data sheet for configuration.

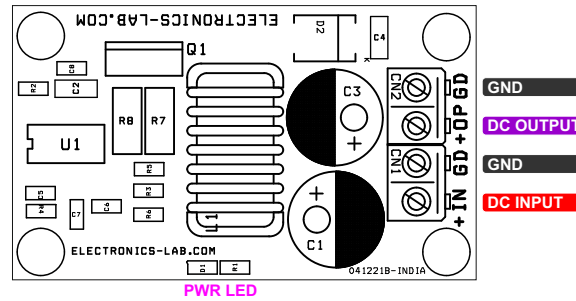
HIGH VOLTAGE: Dangerous voltage exists until power light is off. Wait at least 1 minute after input power is disconnected before touching the board.

Features

- Operating Power Supply 12V DC @ 1A (Range 10V to 15V DC)
- Output 150V DC @ 50mA to 200V DC @ 20mA
- Operating Frequency 40Khz
- Over Current Protection
- D1 Power LED
- Screw Terminal Connectors for Input and Output
- PCB Dimensions 61.28 x 36.04 mm



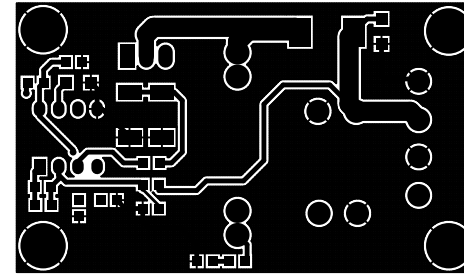
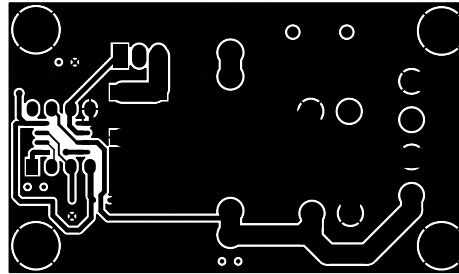
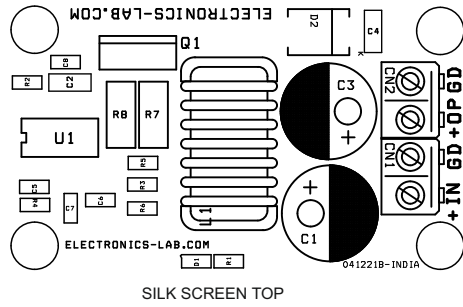




PWR LED

BOM						
NO.	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	2	CN1,CN2	2 PIN SCREW TERMINAL PITCH 5.08MM	WURTH	DIGIKEY	277-1247-ND
2	1	C1	470uF/25V ELECTROLYTIC	PANASONIC	DIGIKEY	10-EEU-TA1E471S-ND
3	1	C2	0.1 uF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
4	1	C3	4.7uF/400V	WURTH	DIGIKEY	732-8886-1-ND
5	1	C4	DNP			
6	1	C5	100PF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
7	1	C6	1K PF/50V SMD SIZE 0806	MURATA/YAGEO	DIGIKEY	
8	1	C7	470PF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
9	1	C8	0.1uF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
10	1	D1	LED RED SMD SIZE 0805	LITE ON INC	DIGIKEY	160-1427-1-ND
11	1	D2	MURS360	ON SEMI	DIGIKEY	MURS360T3GOSTR-ND
12	1	L1	100uH 5A	WURTH	DIGIKEY	732-1425-ND
13	1	Q1	IRFB4020	INFINION	DIGIKEY	IRFB4020PBF-ND
14	2	R1,R5	1K 5% SMD SZIE 0805	MURATA/YAGEO	DIGIKEY	
15	1	R2	47K 1% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
16	1	R3	560K 1% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
17	1	R4	150K 1% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
18	1	R6	6.98K 1% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
19	1	R7	0.5E/2W 1% SMD SIZE 2512	MURATA/YAGEO	DIGIKEY	
20	1	U1	TL3843P	TI	DIGIKEY	296-10176-5-ND
21	1	U1	8 PIN DIP SOCKET	AMPHENOL	DIGIKEY	609-4717-ND





PCB DIMENSIONS 61.28MM 36.04MM