Dual +5 V/-5V @ 200 mA Regulated Linear Power Supply

The project presented here is a dual AC to DC output linear power supply. This power supply provides low ripple low noise DC regulated output. Usually, transformer-based linear power supplies are considered very bulky and inefficient, but this power supply still is very important for sensitive applications such as analog circuits, communications devices, radio devices, audio circuits, OPAMP-based projects etc.

CN1 is AC input, Jumper J2 for 230V AC input, Jumper J1/J3 for 115V AC, Transformer T1-Step down transformer provides 6.3V-0V-6.3V AC Outputs, Bridge Rectifier BR1 converts AC into DC, Capacitor C2/C4 DC filter capacitors, CN2 unregulated DC output approx. +/-9V DC, U1 +5V regulator, U2 -5V regulator, D1 +5 power LED, D2 -5V power LED, R1/R2 current limiting resistors for LEDs, C1/C3/C5/C6 output DC capacitors, CN3 Male header +/-5V regulated output, CN4 screw terminal +/-5V regulated output.

Note1: Power supply supports 230V AC input and 115V AC input. Jumpers are located under PCB for input voltage selection, remove input power cable while changing Jumper selection.

- For 230V AC Input Close Jumper J2 Jumper J1 and J3 Open,
- For 115V AC Input Close Jumper J1 and J3 Open Jumper 2

Note 2: This power supply contains hazardous voltage at input side, PCB must be installed in an encloser which prevents accidental contact. Use Plastic screws to mount this power supply PCB.

Features

- Input 230V or 115V AC Input (Use Jumpers to Select In 230V or 115V AC)
- Output +/-5V DC (Dual Output)
- Output Ripple Approx. 5mV
- Maximum Load Current 400mA (+5V@200mA, -5V@200mA)
- 2 X Power LEDs, for 5V and -5V
- Screw Terminal for AC Input
- Screw Terminal for Regulated DC Output
- 3 Pin Male Header Provides Unregulated DC Output
- 4 Pin Male Header for Regulated DC Output
- PCB Dimensions 88.42MM X 36.67MM



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ВОМ						
NO.	QNTY.	REF.	DESC.	MANUFACTURER	SUPPLIER	SUPPLIER PART NO
1	1	BR1	BRIDGE GBL08 OR GBL06	VISHAY	DIGIKEY	GBL06-E3/45GI-ND
2	1	CN1	3 PIN SCREW TERMINAL PITCH 5.08MM	PHOENIX	DIGIKEY	277-1248-ND
3	1	CN2	3 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5316-ND
4	1	CN3	4 PIN MALE HEADER PITCH 2.54MM	WURTH	DIGIKEY	732-5317-ND
5	1	CN4	3 PIN SCREW TERMINAL PITCH 5.08MM	PHOENIX	DIGIKEY	277-1248-ND
6	2	C1,C5	0.1uF/50V SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
7	2	C2,C4	1000uF/25V	RUBYCON	DIGIKEY	1189-2960-ND
8	2	C3,C6	10uF/25V SMD SIZE 1206	MURATA/YAGEO	DIGIKEY	
9	1	D1	RED LED SMD SIZE 0805	LITE ON	DIGIKEY	160-1427-1-ND
10	1	D2	GREEN LED SMD SIZE 0805	DIALIGHT	DIGIKEY	350-2044-1-ND
11	3	J1,J2,J3	SOLDER JUMPER 0-OHMS RESSISTOR SIZE 1206	MURATA/YAGEO	DIGIKEY	
12	2	R1,R2	470E 5% SMD SIZE 0805	MURATA/YAGEO	DIGIKEY	
13	1	T1	TAMURA 3FD-312	TAMURA	DIGIKEY	MT2102-ND
14	1	U1	LM7805 TO220	TI	DIGIKEY	296-44520-1-ND
15	1	U2	LM7905 TO220	TI	DIGIKEY	LM7905CTNS/NOPB-ND

















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