- Dual Voltage regulation 0 to 25V
- Output current up to 3A
- Based on linear LM317 and ML337 regulators
- Power Supply input +/- 30V
- 0.1% line and load regulation
- Protections: current limiting, thermal shutdown

Configuration at 1A

Configuration at 3A

DESCRIPTION

The Dual Linear Top Bench Power Supply is designed to be used as configurable, linear and simple Power Supply in the laboratory. The same PCB can be used for different configuration, by using a different assembly bill of materials.

TECHNICAL DATA

PARAMETER	DESCRIPTION	VALUE			UNIT
		MIN	TYP	MAX	
SVR	Supply voltage rejection	66	80		dB
eN	Output noise voltage (percentage of VO)		0.003		%
ΔVO/VO	Output voltage temperature stability		1		%
ΔVO	Load regulation		0.1	0.5	%
V_{IN}	Power Supply Voltage	28	30	32	V
I_{OUT}	Output Current	10		3000	mA

PCB TECHNICAL DATA

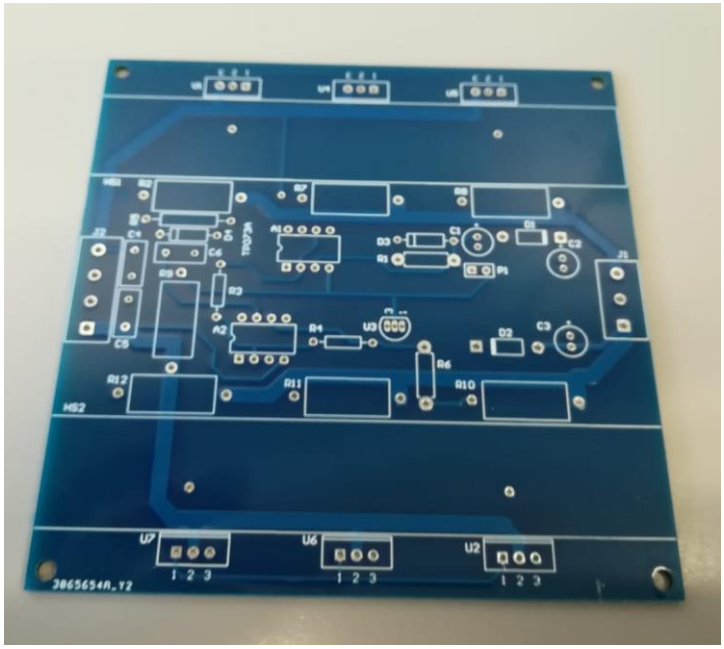
PARAMETER	VALUE	UNIT
Dimensions Lenght x Width	100x100	mm
Colors	BLUE	
PCB thickness (RED, YELLOW)	1.6	mm
Layers	2	
Surface finish	HASL	
Copper Weight	1	oz
Material Details	FR4-Standard Tg 130-140C	

BILL OF MATERIALS

- A1, A2: OPA27 Operational Amplifier
- C1,C2,C3: 10uF 50V
- C4,C5: 470nF ceramic
- C6: 100nF ceramic
- D1, D2: 33V 1W zener diode
- D3: 1N4007 diode
- D4: 5.1V 0.5W zener diode
- R1,R6: 121 ohm
- R2,R7,R8,R10,R11,R12: 0.12 ohm 3W
- R3,R4:20Kohm 0.25W
- R5: 4.7Kohm 1W
- R9: 1.5Kohm 2W
- J1: Phoenix 3 way 5mm connector
- J2: Phoenix 4 way 5mm connector
- HS1, HS2 A60M Dissipator
- P12: header male 2 2,54mm
- U1,U4,U5: LM317 Voltage Regulator
- U2,U6,U7: LM337KC Voltage Regulator
- U3: TLV431CLP

ASSEMBLY INFORMATION

- **1A Configuration:** Assembly only U1 and U2 voltage regulator and use two dissipators with Rth = 5 °C/W
- **3A Configuration:** Assembly all U1,U4,U5, U2,U6,U7and U2 voltage regulators and use two dissipators with Rth = 3 °C/W



PCB References

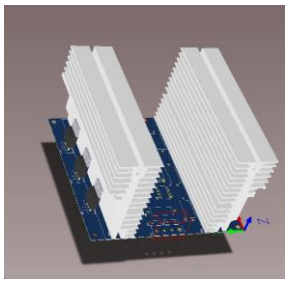
USER INFORMATION

1. Connect the P1 header male with a jumper
2. Connect the output connector J2 to the Input Power Supply, and the output connector J1 to the load
3. Provide a +30V/-30V power supply (Pin 4 is the positive rail, Pin 1 is the negative rail, Pin 3 is the ground)
4. Check the output voltage \ current not exceding the 25V 3 A
5. For current around 4A use fan

ADDITIONAL INFORMATION

Cable to be measured shall be connected in the HSelect the output impedance, by

Bills of materials for 3A release



3D rendering

ORDERING INFORMATION

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