



## 5V 1.5A Linear Voltage Regulator - 7805 TO-220

PRODUCT ID: 2164

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## DESCRIPTION

Ah the venerable 7805, who amongst us has not used this popular linear regulator? This big chunky regulator will help you get your 7-35V battery or wall adapter down to a nice clean 5.0V with 2% regulation. Perfect for just about all electronics! This is the TO-220 version, with up to 1.5A current capability, and has internal current limiting + thermal shut-down protection which makes it sturdy and pretty much indestructible - at least electronics-wise (we're pretty sure a hammer might work...)

This regulator has a ~2V linear drop-out. That means you must give it at *least* 7V to get a clean 5V out. There is a constant 'quiescent' current draw of 6mA.

This regulator can provide up to 1.5A as long as it has proper heat-sinking. The higher your input voltage and output current, the more heat it will generate. Without an extra heatsink, you can burn off up to 2W. [We like this calculator for determining your heat sink requirements](#) It's a TO-220 package, so use 62.5°C/Watt junction thermal resistance. The wattage of your set up is = (InputVoltage - 5V) \* AverageCurrentInAmps. E.g. a 9V battery and 1 Amp of average output current means the regulator is burning off (9 - 5)\*1 = 4 Watts! [This setup would definately need a heat sink!](#)

This regulator does not require capacitors for stability, [but we recommend at least 10uF electrolytic capacitors on both input and output.](#)

# TECHNICAL DETAILS

- [Datasheet](#)
- Dimensions: 29mm x 10mm x 4mm / 1.1" x 0.4" x 0.2"
- Pin Length: 13mm / 0.5"



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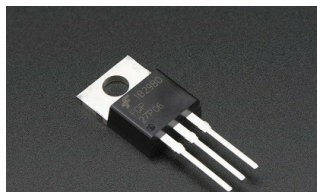


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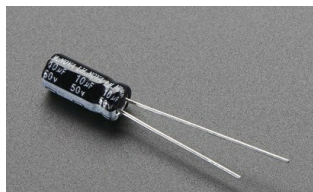
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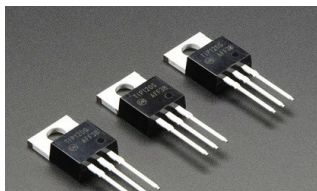
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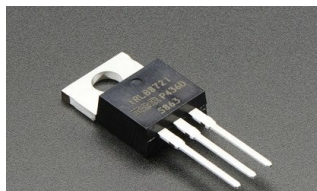
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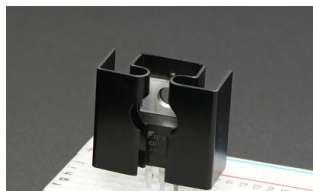
10uF 50V Electrolytic



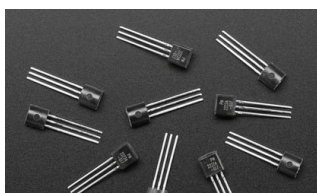
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TO-220 Clip-On Heatsink



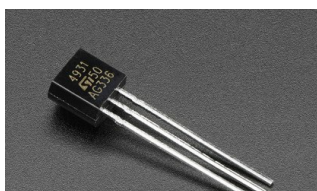
NPN Bipolar Transistors



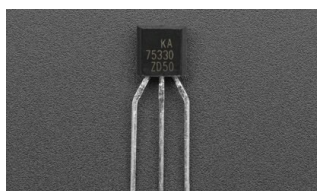
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