

## **The Data Book Project**

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**5 V VOLTAGE REGULATOR**  
**12 V VOLTAGE REGULATOR**  
**15 V VOLTAGE REGULATOR**

**7805**  
276-1770  
**7812**  
276-1771  
**7815**  
276-1772

**GENERAL DESCRIPTION**

This series of three terminal regulators is available with several fixed output voltages making them useful in a wide range of applications. One of these is local on card regulation, eliminating the distribution problems associated with single point regulation. The voltages available allow these regulators to be used in logic systems, instrumentation, HiFi, and other solid state electronic equipment. Although designed primarily as fixed voltage regulators these devices can be used with external components to obtain adjustable voltages and currents.

This series will allow over 1.5A load current if adequate heat sinking is provided. Current limiting is included to limit the peak output current to a safe value. Safe area protection for the output transistor is provided to limit internal power dissipation. If internal power dissipation becomes too high for the heat sinking provided, the thermal shutdown circuit takes over preventing the IC from overheating.

**FEATURES**

- Internal thermal overload protection
- No external components required
- Output transistor safe area protection
- Internal short circuit current limit

**VOLTAGE RANGE**

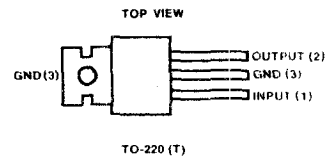
7805.....	5V
7812.....	12V
7815.....	15V

**ABSOLUTE MAXIMUM RATINGS**

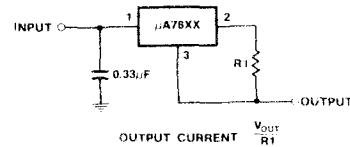
Input Voltage	
[Output Voltage Options 5V through 18V].....	35V
[Output Voltage Option 24V].....	40V
Internal Power Dissipation.....	Internally Limited
Operating Temperature Range.....	0°C to +70°C
Maximum Junction Temperature.....	150°C
Storage Temperature Range.....	-65°C to +150°C
Lead Temperature (Soldering, 10 seconds).....	300°C

**TYPICAL APPLICATIONS**

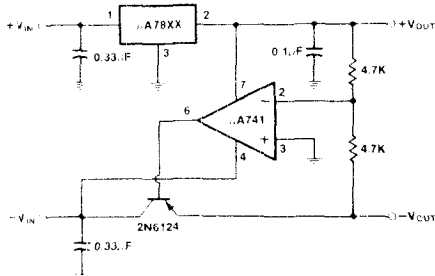
**PIN CONNECTION**



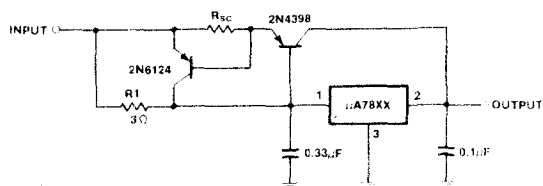
**Current Regulator**



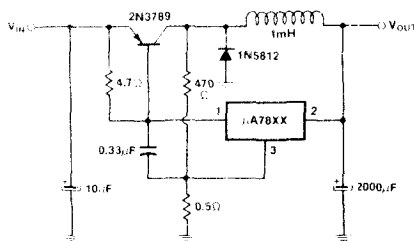
**± Tracking Voltage Regulator**



**High Output Current, Short Circuit Protected**



**Switching Regulator**



**Positive and Negative Regulator**

