

MC7800
Series

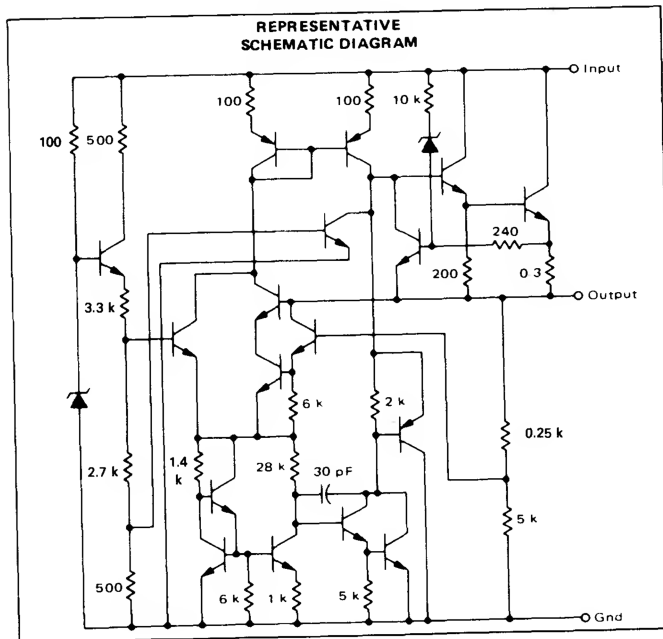
**THREE-TERMINAL
 POSITIVE FIXED
 VOLTAGE REGULATORS**
**SILICON MONOLITHIC
 INTEGRATED CIRCUITS**

3

THREE-TERMINAL POSITIVE VOLTAGE REGULATORS

These voltage regulators are monolithic integrated circuits designed as fixed-voltage regulators for a wide variety of applications including local, on-card regulation. These regulators employ internal current limiting, thermal shutdown, and safe-area compensation. With adequate heatsinking they can deliver output currents in excess of 1.0 ampere. Although designed primarily as a fixed voltage regulator, these devices can be used with external components to obtain adjustable voltages and currents.

- Output Current in Excess of 1.0 Ampere
- No External Components Required
- Internal Thermal Overload Protection
- Internal Short-Circuit Current Limiting
- Output Transistor Safe-Area Compensation
- Output Voltage Offered in 2% and 4% Tolerance

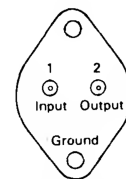
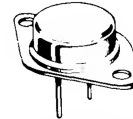


ORDERING INFORMATION

Device	Output Voltage Tolerance	Tested Operating Junction Temp. Range	Package
MC78XXK	4%	-55 to +150°C	Metal Power
MC78XXAK*	2%		
MC78XXCK	4%	0 to +125°C	Plastic Power
MC78XXACK*	2%		
MC78XXCT	4%	-40 to +125°C	
MC78XXACT	2%		
MC78XXBT	4%		

*2% regulators in Metal Power packages are available in 5, 12 and 15 volt devices.

**K SUFFIX
 METAL PACKAGE
 CASE 1**

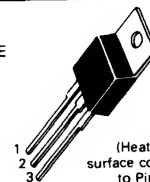


(Bottom View)

Pins 1 and 2 electrically isolated from case. Case is third electrical connection

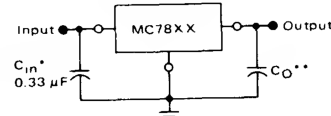
**T SUFFIX
 PLASTIC PACKAGE
 CASE 221A**

PIN 1. INPUT
 2. GROUND
 3. OUTPUT



(Heatsink surface connected to Pin 2.)

STANDARD APPLICATION



A common ground is required between the input and the output voltages. The input voltage must remain typically 2.0 V above the output voltage even during the low point on the input ripple voltage.

XX = these two digits of the type number indicate voltage.

* = C_{in} is required if regulator is located an appreciable distance from power supply filter.

** = C_{O} is not needed for stability; however, it does improve transient response.

XX indicates nominal voltage

TYPE NO./VOLTAGE

MC7805	5.0 Volts	MC7812	12 Volts
MC7806	6.0 Volts	MC7815	15 Volts
MC7808	8.0 Volts	MC7818	18 Volts
MC7809	9.0 Volts	MC7824	24 Volts