

78L00 Series 3 Terminal Positive Voltage Regulators

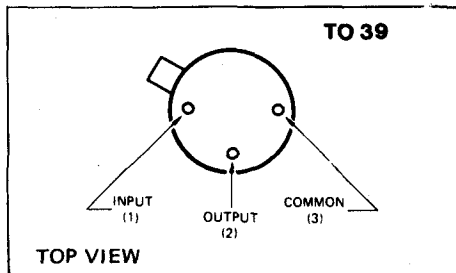
GENERAL DESCRIPTION

The 78L00 series of 3-terminal positive voltage regulators is constructed using the Fairchild Planar epitaxial process. These regulators employ internal current limiting and thermal shutdown, making them essentially indestructible. If adequate heat sinking is provided, they can deliver up to 100mA output current. They are intended as fixed-voltage regulators in a wide range of applications including local, on-card regulation for elimination of noise and distribution problems associated with single point regulation. In addition, they can be used with power pass elements to make high current voltage regulators. The μ A78L00 used as a Zener diode/resistor combination replacement, offers an effective impedance improvement of typically two orders of magnitude, along with lower quiescent current.

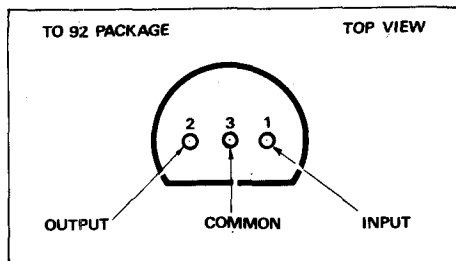
FEATURES

- Output current up to 100mA.
- No external components.
- Internal thermal overload protection.
- Internal short circuit current limiting.
- Available in jedec TO-92 and low profile TO-39 package.
- Output voltages of 2.6V, 5V, 6.2V, 12V and 15V.
- Output voltage tolerances of $\pm 5\%$ (78L00AC) and $\pm 10\%$ (78L00C) over the temperature range.

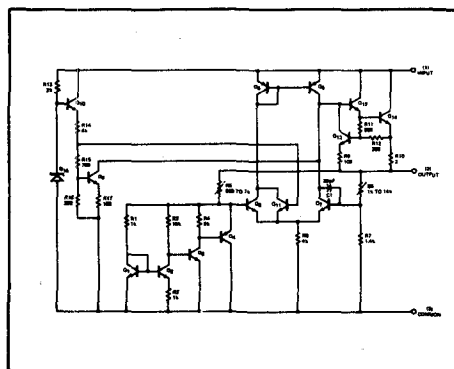
CONNECTION DIAGRAM



CONNECTION DIAGRAM



EQUIVALENT CIRCUIT



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MANUFACTURER'S CURRENT LIST PRICES ARE ALWAYS CHARGED

78L00 Series—continued

ABSOLUTE MAXIMUM RATINGS

Input voltage 2.6V, 5V and 6.2V 12V and 15V	30V 35V	Operating junction temperature range	0°C to +150°C
Internal power dissipation	Limited internally	Lead temperatures	
Storage temperature range		Metal can (soldering, 60 second time limit)	300°C
Metal can (TO-39 type)	-65°C to +150°C	Molded TO-92 (soldering, 10 second time limit)	260°C
Molded TO-92	-55°C to +150°C		

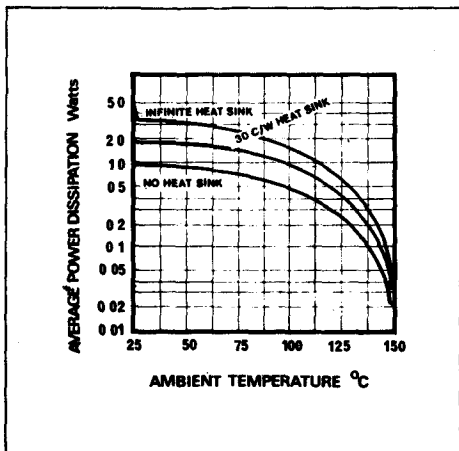
REFERENCE TABLE

Code	Voltage range	Tolerance	Package	Stock No.
78L02WC	2.6V	10%	TO92	35883H
79L02AWC	2.6V	5%	TO92	35884F
78L05WC	5V	10%	TO92	35885D
78L05HC	5V	10%	TO39	35886B
78L05AWC	5V	5%	TO92	35887X
78L05AHC	5V	5%	TO39	35888R
78L06WC	6V	10%	TO92	35889G
78L06AWC	6V	5%	TO92	35890X
78L12WC	12V	10%	TO92	35891H
78L12HC	12V	10%	TO39	35892D
78L12AWC	12V	5%	TO92	35893B
78L12AHC	12V	5%	TO39	35894F
78L15WC	15V	10%	TO92	35895X
78L15HC	15V	10%	TO39	35896R
78L15AWC	15V	5%	TO92	35897G
78L15AHC	15V	5%	TO39	35898E

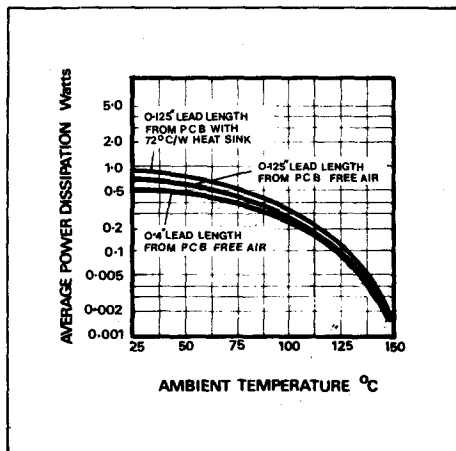
Performance Curves on next page

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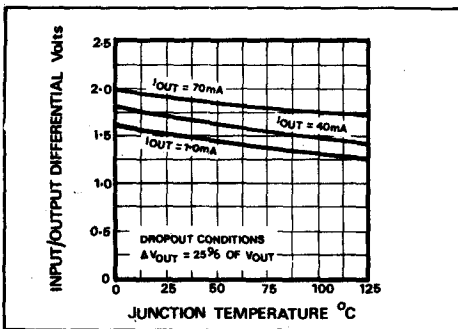
78L00 Series—Typical Performance Curves



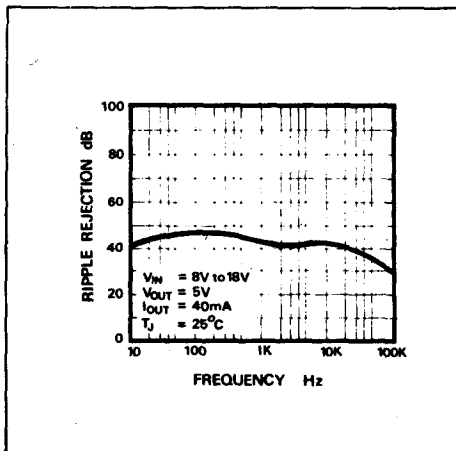
Maximum average power dissipation as a function of ambient temperature TO39.



Maximum average power dissipation as a function of ambient temperature TO92.



Dropout voltage as a function of junction temperature.



Ripple rejection as a function of frequency.

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