



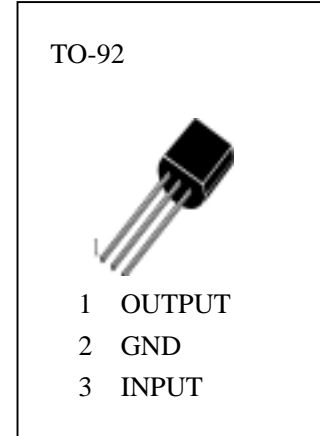
H78L10

Description

H78L10 is the three terminal positive Regulators with single chip, and in a wide range of applications. It supplies fixed output voltages of 10V, deliver over 100mA output current, and employs internal current limiting, thermal shut down and safe operating area protection, making it essentially indestructible.

Features

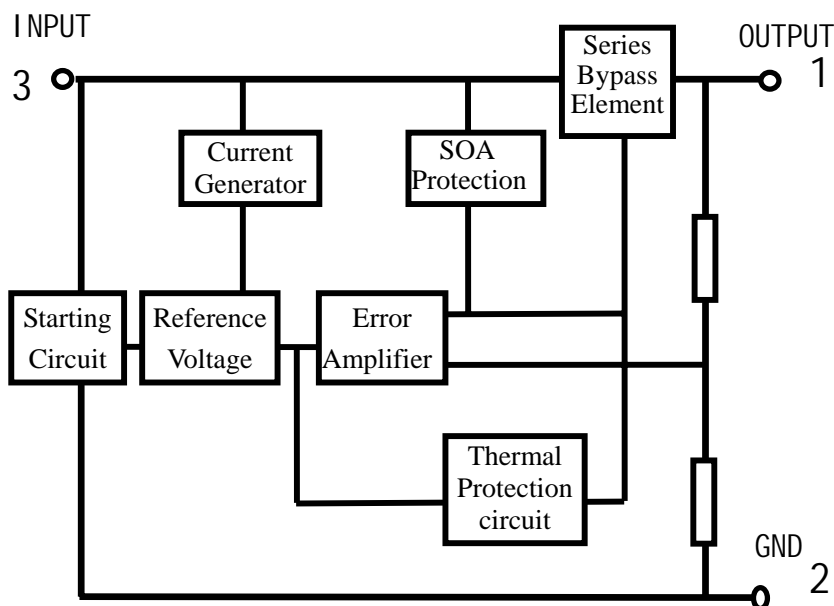
- Output current up to 100mA
- Low noise
- High Ripple Rejection
- Power Amplify Output Protection
- Thermal Overload Protection
- Current Overload Protection and Short Circuit Protection



Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

V_{IN} —Input Voltage.....	30V
T_{amb} —Operating Temperature Range.....	-20~85
T_{stg} —Storage Temperature Range.....	-55~150
T_j —Junction Temperature.....	-55~150

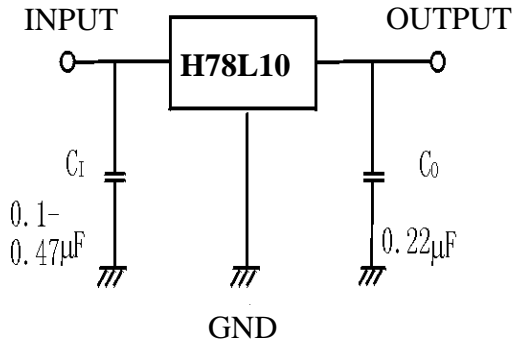
Internal Block Diagram





H78L10

Typical Application



ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, $V_{IN}=16V, I_o=40mA, T_j = 125^\circ\text{C}, C_{IN}=0.33 \mu\text{F}, C_{OUT}=0.1 \mu\text{F}$)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
V_o	Output Voltage	9.6	10	10.4	V	$T_j=25^\circ\text{C}$
		9.5		10.5		12.5V V_{IN} 25V, 1mA I_o 40mA
		9.5		10.5		12.5V V_1 V_{MAX} , 1mA I_o 70mA
V_o	Line Regulation		100	220	mV	$T_j=25^\circ\text{C}, 12.5V V_{IN} 25V$
			100	170		$T_j=25^\circ\text{C}, 14V V_{IN} 25V$
V_o	Load Regulation		20	94	mV	$T_j=25^\circ\text{C}, 1mA I_o 100mA$
			10	47		$T_j=25^\circ\text{C}, 1mA I_o 70mA$
I_o	Quiescent Current		4.2	6.5	mA	$T_j=25^\circ\text{C}$
I_o	Quiescent Current Change			1.5	mA	12.5V $V_{IN} 25V$
				0.1		1mA $I_o 40mA$
V_n	Output Noise Voltage		74		μV	$T_j=25^\circ\text{C}, 10\text{Hz} f 100\text{kHz}$
RR	Ripple Rejection	38	43		dB	$T_j=25^\circ\text{C}, 15V V_{IN} 25V, f=120\text{Hz}$
V_o/T	Temperature coefficient of V_o		0.95		mV/	$I_o=5mA$