



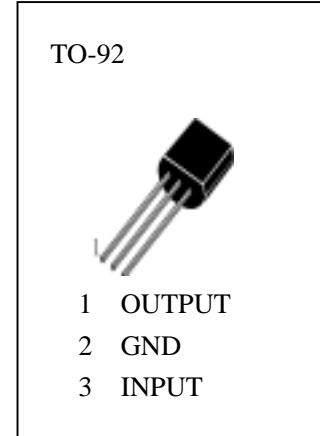
H78L08

Description

H78L08 is the three terminal positive Regulators with single chip, and in a wide range of applications. It supplies fixed output voltages of 8V, deliver over 100mA output current ,and employs internal current limiting, thermal shut down and safe operating area protection, making it essentially indestructible.

Features

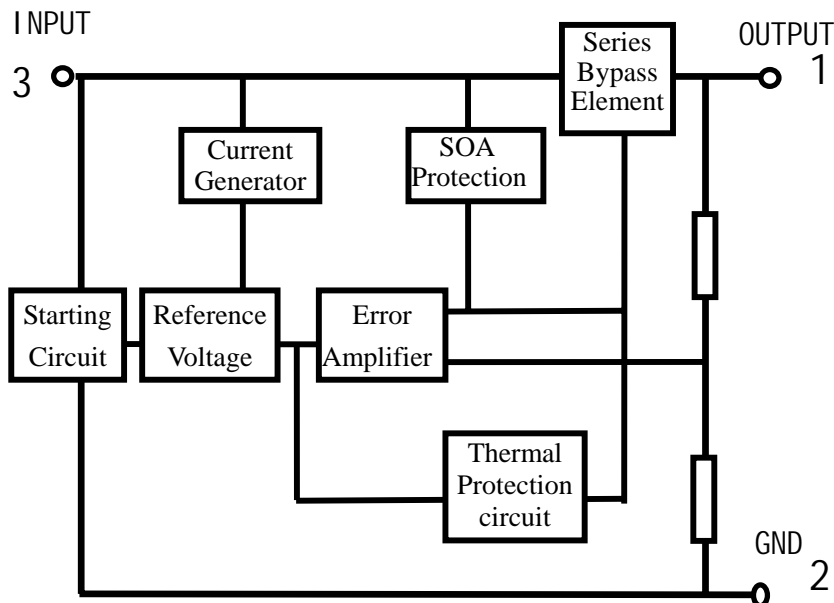
- Output current up to 100mA
- Low noise
- High Ripple Rejection
- Power Amplify Output Protection
- Thermal Overload Protection
- Current Overload Protection and Short Circuit Protection



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

V_{IN} —Input Voltage.....	30V
P_D —Power of Dissipation	700mW
T_{amb} —Operating Temperature Range.....	-20~85
T_{stg} —Storage Temperature Range.....	-55~150
T_j —Junction Temperature.....	-55~150
R_{th} —thermal resistance (junction to environment)	180 $^\circ\text{C}/\text{W}$

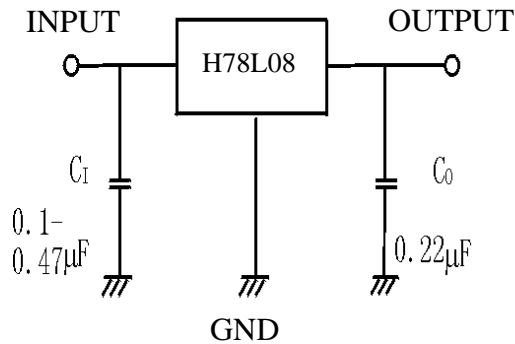
Internal Block Diagram





H78L08

Typical Application



ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, $V_{IN}=14V, I_o=40mA, T_j = 125^\circ C, C_{IN}=0.33\mu F, C_{OUT}=0.1\mu F$)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
V_o	Output Voltage	7.70	8.0	8.3	V	$T_j=25$
		7.70		8.3		$10.5V \leq V_{IN} \leq 23V, I_o = 40mA$
		7.70		8.3		$V_{IN}=14V, I_o = 70mA$
V_o	Line Regulation		10	175	mV	$T_j=25, 10.5V \leq V_{IN} \leq 23V$
			6	125		$T_j=25, 11V \leq V_{IN} \leq 23V$
V_o	Load Regulation		14	80	mV	$T_j=25, I_o = 100mA$
			6	40		$T_j=25, I_o = 40mA$
I_o	Quiescent Current		2.4	5.5	mA	$T_j=25$
I_o	Quiescent Current Change			1.5	mA	$12V \leq V_{IN} \leq 23V, I_o=40mA$
				0.1		$V_{IN}=14V, I_o = 40mA$
V_N	Output Noise Voltage		85	190	μV	$T_j=25, 10Hz \leq f \leq 100kHz$
RR	Ripple Rejection	51	73		dB	$T_j=25, 12V \leq V_{IN} \leq 22V, f=120Hz$
V_D	Dropout Voltage		1.7		V	$T_j=25$
I_{SC}	Short Circuit Current		80		mA	$T_j=25, V_{IN}=23V$
I_{PK}	Peak Current	125	160	205	mA	$T_j=25$
V_o/T	Temperature coefficient of V_o		0.6		mV/	$I_o=5mA$