



H78L15

Description

H78L15 is the three terminal positive Regulators with single chip, and in a wide range of applications. It supplies fixed output voltages of 15V, 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

TO-92



- 1—OUTPUT
- 2—GND
- 3—INPUT

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

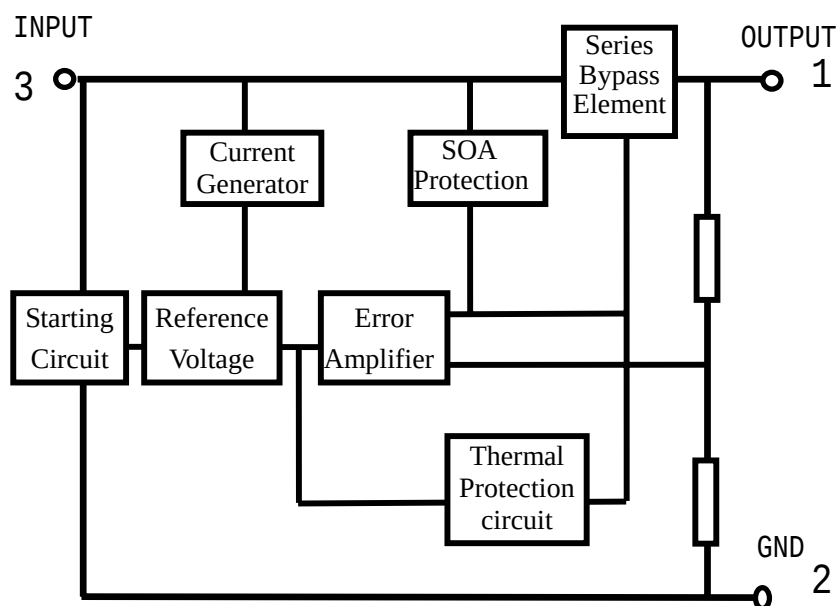
V_{IN} — Input Voltage 35 V

T_{amb} — Operating Temperature Range $-20\sim 85^{\circ}\text{C}$

T_{stg} — Storage Temperature Range $-55\sim 150^{\circ}\text{C}$

T_j — Junction Temperature $-55\sim 150^{\circ}\text{C}$

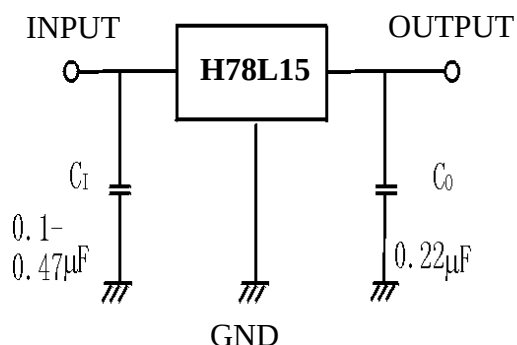
Internal Block Diagram





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Typical Application



ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, $V_{IN}=23V$, $I_O=40mA$, $0^{\circ}C \leq T_j \leq 125^{\circ}C$, $C_{IN}=0.33\mu F$, $C_{OUT}=0.1\mu F$)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
V_O	Output Voltage	14.4	15	15.6	V	$T_j=25^{\circ}C$
		14.25		15.75		$17.5V \leq V_{IN} \leq 30V, 1mA \leq I_O \leq 40mA$
		14.25		15.75		$17.5V \leq V_{IN} \leq V_{MAX}, 1mA \leq I_O \leq 70mA$
ΔV_O	Line Regulation		25	300	mV	$T_j=25^{\circ}C, 17.5V \leq V_{IN} \leq 30V$
			20	250		$T_j=25^{\circ}C, 20V \leq V_{IN} \leq 30V$
ΔV_O	Load Regulation		25	150	mV	$T_j=25^{\circ}C, 1mA \leq I_O \leq 100mA$
			12	75		$T_j=25^{\circ}C, 1mA \leq I_O \leq 40mA$
I_Q	Quiescent Current		2.2	6.0	mA	$T_j=25^{\circ}C$
ΔI_Q	Quiescent Current Change			1.5	mA	$20V \leq V_{IN} \leq 30V,$
				0.1		$1mA \leq I_O \leq 40mA$
V_N	Output Noise Voltage		90		μV	$T_j=25^{\circ}C, 10Hz \leq f \leq 100kHz$
RR	Ripple Rejection	34	60		dB	$T_j=25^{\circ}C, 18.5V \leq V_{IN} \leq 28.5V,$ $f=120Hz$
V_O	Dropout Voltage		1.7		V	$T_j=25^{\circ}C$
$\Delta V_O / \Delta T$	Temperature coefficient of V_O		-1.3		mV/ $^{\circ}C$	$I_O=5mA$