



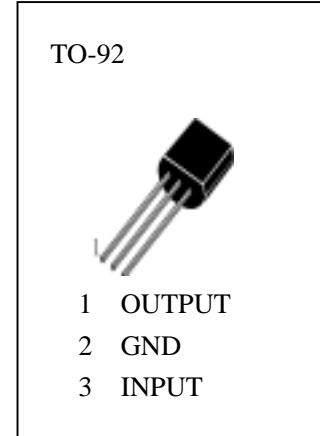
# H78L06

## Description

H78L06 is the three terminal positive Regulators with single chip, and in a wide range of applications. It supplies fixed output voltages of 6V, deliver over 100mA output current, and employs internal current limiting, thermal shut down and safe operating area protection, making it essentially indestructible.

## Features

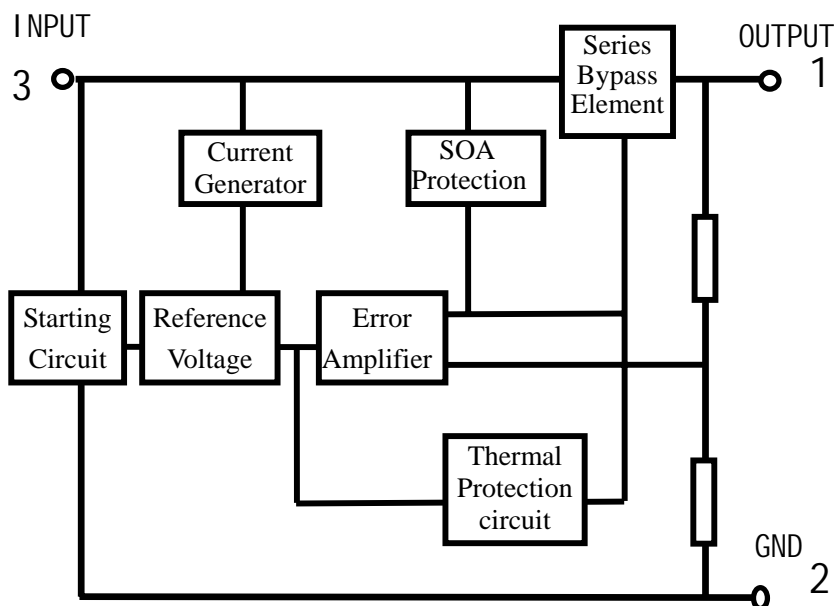
- Output current up to 100mA
- Low noise
- High Ripple Rejection
- Power Amplify Output Protection
- Thermal Overload Protection
- Current Overload Protection and Short Circuit Protection



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

$V_{IN}$	— Input Voltage .....	3.0 V
$T_{amb}$	— Operating Temperature Range.....	-20~85
$T_{stg}$	— Storage Temperature Range.....	-55~150
$T_j$	— Junction Temperature.....	-55~150

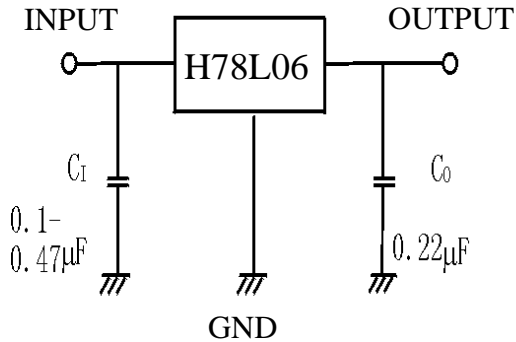
## Internal Block Diagram





# H78L06

## Typical Application



## ELECTRICAL CHARACTERISTICS

( Unless otherwise specified,  $V_{IN}=12V, I_o=40mA, T_j = 125^\circ C, C_{IN}=0.33\mu F, C_{OUT}=0.1\mu F$  )

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
$V_o$	Output Voltage	5.75	6.0	6.25	V	$T_j=25^\circ C$
		5.70		6.3		8.5V $V_{IN} > 20V, 1mA < I_o < 40mA$
		5.70		6.3		$V_{IN}=12V, 1mA < I_o < 70mA$
$V_o$	Line Regulation		64	175	mV	$T_j=25^\circ C, 8.5V < V_{IN} < 20V$
			54	125		$T_j=25^\circ C, 9V < V_{IN} < 20V$
$V_o$	Load Regulation		12.8	80	mV	$T_j=25^\circ C, 1mA < I_o < 100mA$
			5.8	40		$T_j=25^\circ C, 1mA < I_o < 70mA$
$I_o$	Quiescent Current		3.9	6.0	mA	$T_j=25^\circ C$
$I_o$	Quiescent Current Change			1.5	mA	9V $V_{IN} < 20V, 1mA < I_o < 40mA$
				0.1		$V_{IN}=14V, 1mA < I_o < 40mA$
$V_n$	Output Noise Voltage		49		$\mu V$	$T_j=25^\circ C, 10Hz < f < 100kHz$
RR	Ripple Rejection	40	46		dB	$T_j=25^\circ C, 10V < V_{IN} < 20V, f=120Hz$
$V_o/T$	Temperature coefficient of $V_o$		0.75		mV/	$I_o=5mA$