



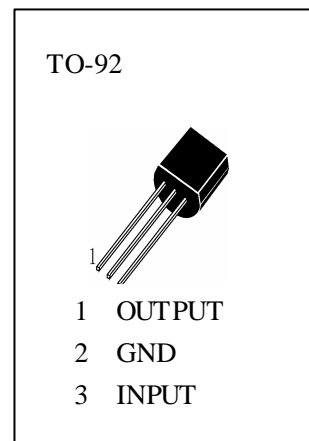
H78L05

Description

H78L05 is the three terminal positive Regulators with single chip, and in a wide range of applications. It supplies fixed output voltages of 5V, deliver over 100mA output current ,and employs internal current limiting, thermal shut down and safe operating area protection, making it essentially indestructible.

Features

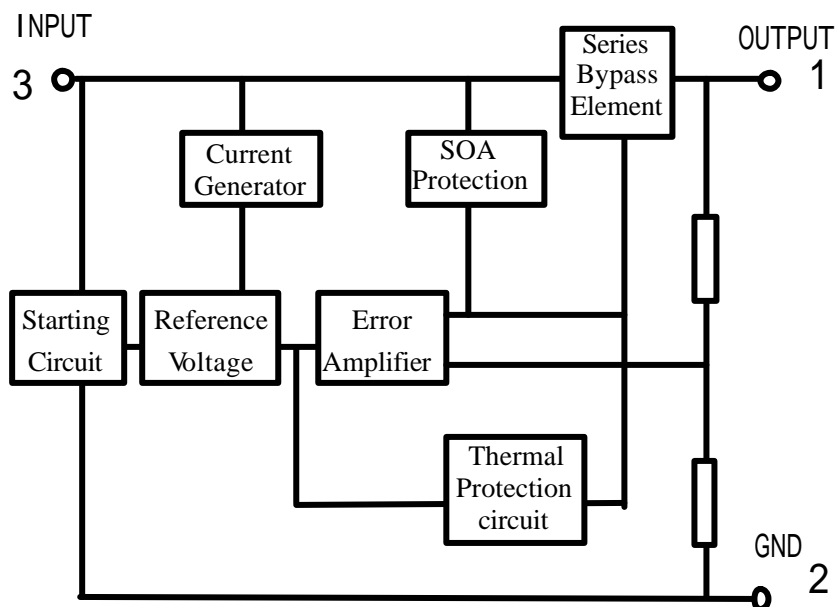
- Output current up to 100mA
- Low noise
- High Ripple Rejection
- Power Amplify Output Protection
- Thermal Overload Protection
- Current Overload Protection and Short Circuit Protection



Absolute Maximum Ratings ($T_a=25$)

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 /W

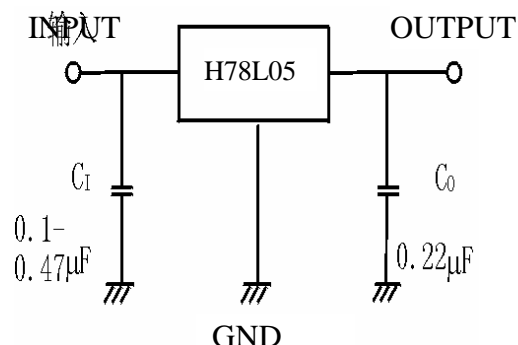
Internal Block Diagram





H78L05

Typical Application



ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, $V_{IN}=10V, I_o=40mA, T_j = 125^\circ\text{C}, C_{IN}=0.33 \mu\text{F}, C_{OUT}=0.1 \mu\text{F}$)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
V_o	Output Voltage	4.8	5.0	5.2	V	$T_j=25$
		4.8		5.2		$7V \leq V_{IN} \leq 20V, I_o = 40mA$
		4.8		5.2		$V_{IN}=10V, 1mA \leq I_o \leq 70mA$
V_o	Line Regulation		6	150	mV	$T_j=25, 7V \leq V_{IN} \leq 20V$
			4	100		$T_j=25, 8V \leq V_{IN} \leq 20V$
V_o	Load Regulation		9	60	mV	$T_j=25, 1mA \leq I_o \leq 100mA$
			4	30		$T_j=25, 1mA \leq I_o \leq 40mA$
I_o	Quiescent Current		2.3	6.0	mA	$T_j=25$
I_o	Quiescent Current Change			1.5	mA	$8V \leq V_{IN} \leq 20V, I_o=40mA$
				0.1		$V_{IN}=10V, 1mA \leq I_o \leq 40mA$
V_N	Output Noise Voltage		45	120	μV	$T_j=25, 10\text{Hz} \leq f \leq 100\text{kHz}$
RR	Ripple Rejection	55	75		dB	$T_j=25, 8V \leq V_{IN} \leq 18V, f=120\text{Hz}$
V_D	Dropout Voltage		1.7		V	$T_j=25$
I_{SC}	Short Circuit Current		88		mA	$T_j=25, V_{IN}=20V$
I_{PK}	Peak Current	125	160	205	mA	$T_j=25$
V_o/T	Temperature coefficient of V_o		0.4		mV/	$I_o=5mA$