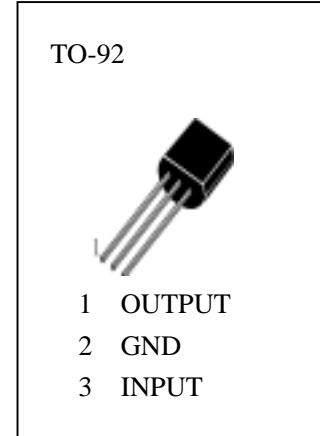**Shantou Huashan Electronic Devices Co.,Ltd.**

H78L12

Description

H78L12 is the three terminal positive Regulators with single chip, and in a wide range of applications It supplies fixed output voltages of 12V, deliver over 100mA output current ,and employs internal current limiting, thermal shut down and safe operating area protection, making it essentially indestructible.

TO-92
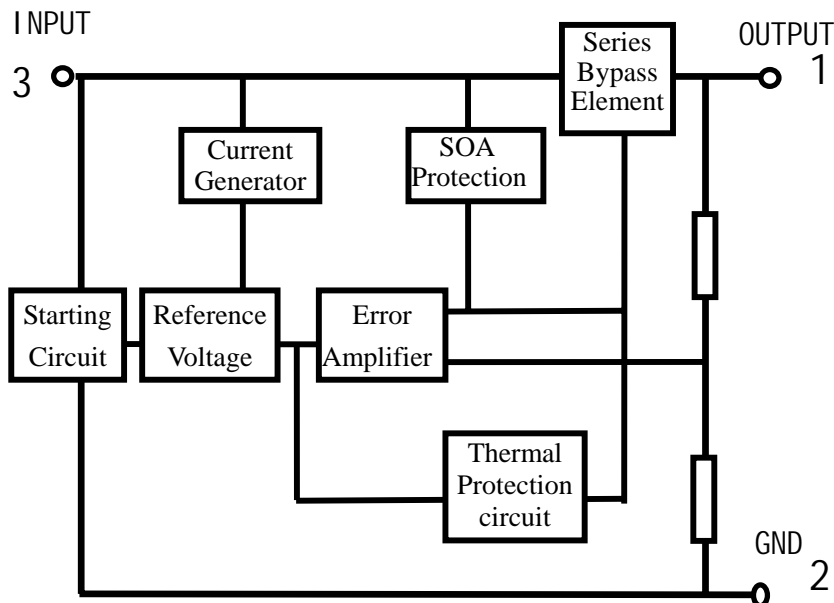
1　OUTPUT
2　GND
3　INPUT

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……………………………………………………　35V

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

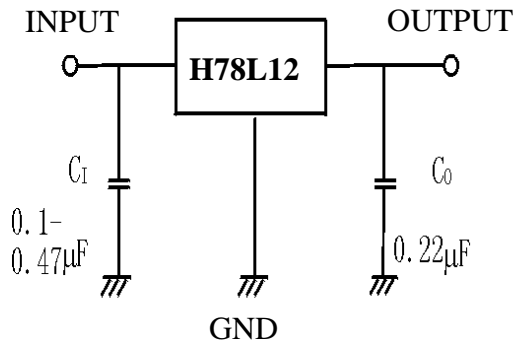R_{th}——thermal resistance　junction to environment　………………　180　/W

Internal Block Diagram

Typical Application

ELECTRICAL CHARACTERISTICS

Unless otherwise specified, $V_{IN}=19V$, $I_o=40mA$, $0 \leqslant T_j \leqslant 125$, $C_{IN}=0.33\mu F$, $C_{OUT}=0.1\mu F$

Symbol	Parameter	Min.	Typ.	Max.	Unit	Conditions
V_o	Output Voltage	11.5	12.0	12.5	V	$T_j=25$
		11.5		12.5		$14V \leqslant V_{IN} \leqslant 27V$, $1mA \leqslant I_o \leqslant 40mA$
		11.5		12.5		$V_{IN}=19V$, $1mA \leqslant I_o \leqslant 70mA$
V_o	Line Regulation		14	250	mV	$T_j=25$, $14.5V \leqslant V_{IN} \leqslant 27V$
			10	200		$T_j=25$, $16V \leqslant V_{IN} \leqslant 27V$
V_o	Load Regulation		20	100	mV	$T_j=25$, $1mA \leqslant I_o \leqslant 100mA$
			10	50		$T_j=25$, $1mA \leqslant I_o \leqslant 40mA$
I_Q	Quiescent Current		2.6	6.0	mA	$T_j=25$
I_Q	Quiescent Current Change			1.5	mA	$16V \leqslant V_{IN} \leqslant 27V$, $I_o=40mA$
				0.1		$V_{IN}=19V$, $1mA \leqslant I_o \leqslant 40mA$
V_N	Output Noise Voltage		115	280	μV	$T_j=25$, $10Hz \leqslant f \leqslant 100kHz$
RR	Ripple Rejection	47	66		dB	$T_j=25$, $15V \leqslant V_{IN} \leqslant 25V$, $f=120Hz$
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		1.1		mV/	$I_o=5mA$