



SOT-23 Encapsulate Three-terminal Voltage Regulators

78L12 Three-terminal positive voltage regulator

FEATURES

Maximum output current

I_{OM} : 0.1A

Output voltage

V_o : 12 V

Continuous total dissipation

P_D : 0.625W

SOT-23



- 1. OUT
- 2. IN
- 3. GND

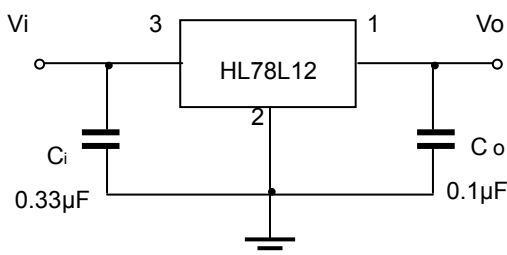
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Operating Junction Temperature Range	T_{OPR}	0~+150	°C
Storage Temperature Range	T_{STG}	-55~+150	°C

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i=19V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	V_o	$25^\circ C$	11.5	12	12.5	V	
		0-125°C	$14V \leq V_i \leq 27V, I_o = 1mA - 40mA$	11.4	12	12.6	V
			$I_o = 1mA - 70mA$	11.4	12	12.6	V
Load Regulation	ΔV_o	$I_o = 1mA - 100mA$	$25^\circ C$	22	100	mV	
		$I_o = 1mA - 40mA$	$25^\circ C$	13	50	mV	
Line regulation	ΔV_o	$14.5V \leq V_i \leq 27V$	$25^\circ C$	55	250	mV	
		$16V \leq V_i \leq 27V$	$25^\circ C$	49	200	mV	
Quiescent Current	I_q		$25^\circ C$	4.3	6.5	mA	
Quiescent Current Change	ΔI_q	$16V \leq V_i \leq 27V$	0-125°C		1.5	mA	
	ΔI_q	$1mA \leq I_o \leq 40mA$	0-125°C		0.1	mA	
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$	$25^\circ C$	70		uV	
Ripple Rejection	RR	$15V \leq V_i \leq 25V, f = 120Hz$	0-125°C	37	42	dB	
Dropout Voltage	V_d		$25^\circ C$	1.7		V	

TYPICAL APPLICATION



Note : Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

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