

SOT-89 Encapsulate Three Terminal Voltage Regulator

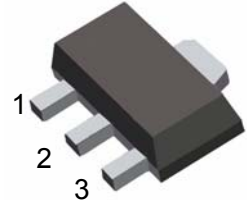
78L12 Three-terminal positive voltage regulator

FEATURES

Maximum Output current
 I_{OM} : 0.1 A
 Output voltage
 V_o : 12 V
 Continuous total dissipation
 P_D : 0.50 W

SOT-89

1. OUT
 2. GND
 3. IN



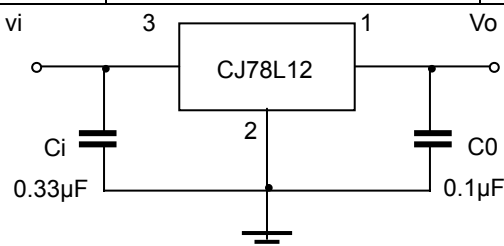
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_I	35	V
Operating Junction Temperature Range	T_{OPR}	0-+125	°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°C	11.5	12	12.5	V	
		0-125°C	14V ≤ V_I ≤ 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°C	22	100	mV	
		$I_o=1mA-40mA$	25°C	13	50	mV	
Line regulation	ΔV_o	14.5V ≤ V_I ≤ 27V	25°C	55	250	mV	
		16V ≤ V_I ≤ 27V	25°C	49	200	mV	
Quiescent Current	I_q		25°C	4.3	6.5	mA	
Quiescent Current Change	ΔI_q	16V ≤ V_I ≤ 27V	0-125°C		1.5	mA	
	ΔI_q	1mA ≤ I_o ≤ 40mA	0-125°C		0.1	mA	
Output Noise Voltage	V_N	10Hz ≤ f ≤ 100KHz	25°C	70		uV	
Ripple Rejection	RR	15V ≤ V_I ≤ 25V, f=120Hz	0-125°C	37	42	dB	
Dropout Voltage	V_d		25°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.