



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-89 Encapsulate Three Terminal Voltage Regulator

CJ78L12 Three-terminal positive voltage regulator

FEATURES

Maximum Output current

 I_{OM} : 0.1 A

Output voltage

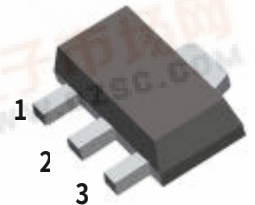
 V_O : 12 V

SOT-89

1. OUT

2. GND

3. IN



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

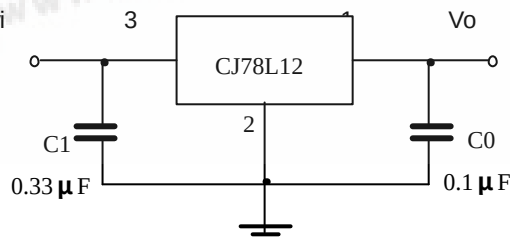
Parameter	Symbol	Value	Units
Input Voltage	V_I	35	V
Operating Junction Temperature Range	T_{OPR}	0—+125	°C
Storage Temperature Range	T_{STG}	-5—+150	°C

UTC78L05 ELECTRICAL CHARACTERISTICS

($V_I=19V, I_O=40mA, 0^{\circ}C < T_J < 125^{\circ}C, C_1=0.33\mu F, C_O=0.1\mu F$, unless otherwise specified)

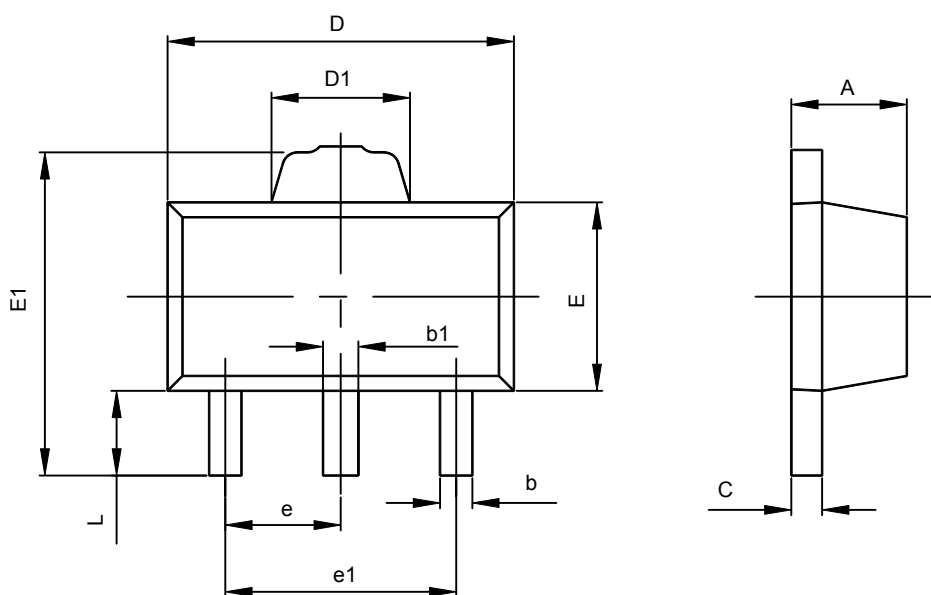
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_O	$T_J=25^{\circ}C$	11.5	12	12.5	V
		$14V \leq V_I \leq 27V, I_O=1mA-40mA$	11.4	12	12.6	V
		$14.5V \leq V_I \leq V_{MAX}, I_O=1mA-70mA$	11.4	12	12.6	V (note)
Load Regulation	ΔV_O	$T_J=25^{\circ}C, I_O=1mA-100mA$		22	100	mV
		$T_J=25^{\circ}C, I_O=1mA-40mA$		13	50	mV
Line regulation	ΔV_O	$14.5V \leq V_I \leq 27V, T_J=25^{\circ}C$		55	250	mV
		$16V \leq V_I \leq 27V, T_J=25^{\circ}C$		49	200	mV
Quiescent Current	I_q			4.3	6.5	mA
Quiescent Current Change	ΔI_q	$16V \leq V_I \leq 27V$			1.5	mA
	ΔI_q	$1mA \leq I_O \leq 40mA$			0.1	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$		70		μV
Ripple Rejection	RR	$15V \leq V_I \leq 25V, f=120Hz, T_J=25^{\circ}C$	37	42		dB
Dropout Voltage	V_d	$T_J=25^{\circ}C$		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.

SOT-89-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.360	0.560	0.014	0.022
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.400	1.800	0.055	0.071
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500TYP		0.060TYP	
e1	2.900	3.100	0.114	0.122
L	0.900	1.100	0.035	0.043