



**SOT-89 Encapsulate Three Terminal Voltage Regulator**

**CJ78L12** Three-terminal positive voltage regulator

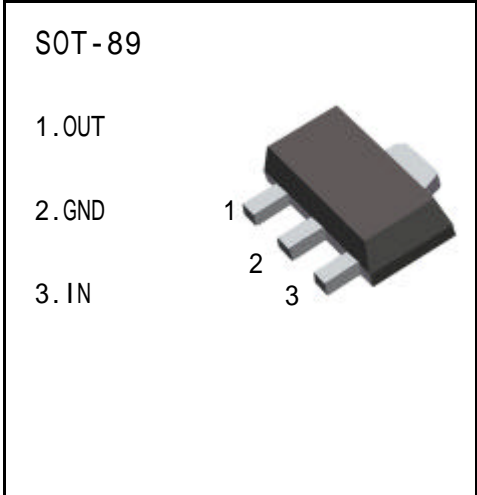
**FEATURES**

Maximum Output current

$I_{OM}$ : 0.1 A

Output voltage

$V_o$ : 12 V



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

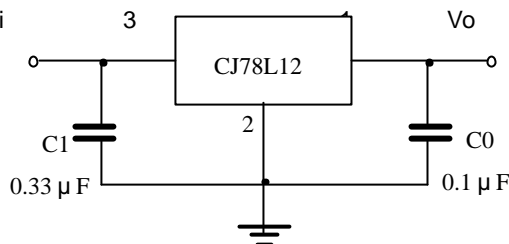
Parameter	Symbol	Value	Units
Input Voltage	$V_1$	35	V
Operating Junction Temperature Range	$T_{OPR}$	0—+125	
Storage Temperature Range	$T_{STG}$	-5—+150	

**UTC78L05 ELECTRICAL CHARACTERISTICS**

( $V_I=19V, I_o=40mA, 0 < T_j < 125$  ,  $C_1=0.33 \mu F, C_o=0.1 \mu F$  , unless otherwise specified )

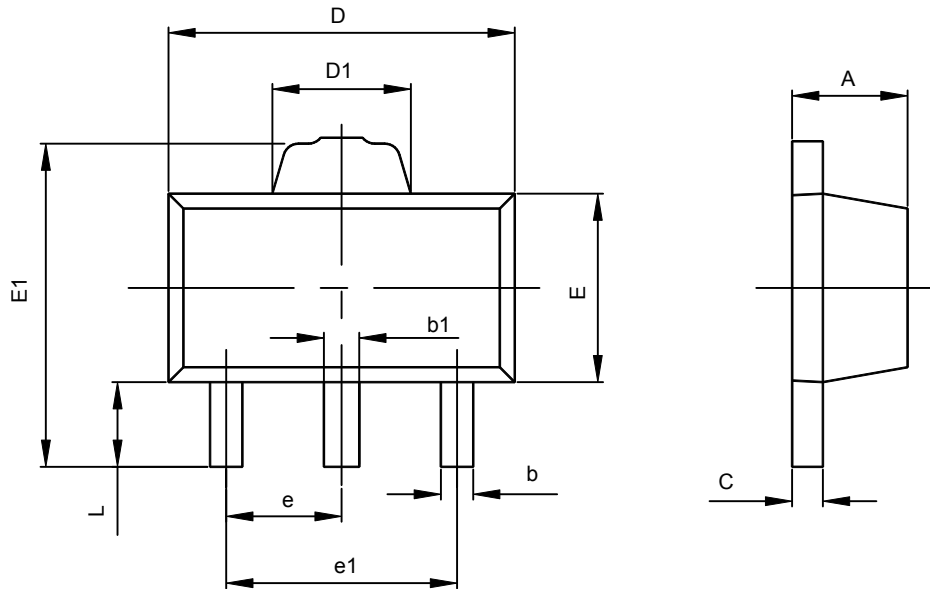
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_j=25$	11.5	12	12.5	V
		14V $V_1$ 27V, $I_o=1mA-40mA$	11.4	12	12.6	V
		14.5V $V_1$ $V_{MAX}$ , $I_o=1mA-70mA$	11.4	12	12.6	V (note)
Load Regulation	$V_o$	$T_j=25$ , $I_o=1mA-100mA$		22	100	mV
		$T_j=25$ , $I_o=1mA-40mA$		13	50	mV
Line regulation	$V_o$	14.5V $V_1$ 27V, $T_j=25$		55	250	mV
		16V $V_1$ 27V, $T_j=25$		49	200	mV
Quiescent Current	$I_q$			4.3	6.5	mA
Quiescent Current Change	$I_q$	16V $V_1$ 27V			1.5	mA
	$I_q$	1mA $I_o$ 40mA			0.1	mA
Output Noise Voltage	$V_N$	10Hz f 100KHz		70		$\mu V$
Ripple Rejection	RR	15V $V_1$ 25V, $f=120Hz, T_j=25$	37	42		dB
Dropout Voltage	$V_d$	$T_j=25$		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