



TO-92 Encapsulate Three-terminal Voltage Regulator

CJ78L12 Three-terminal positive voltage regulator

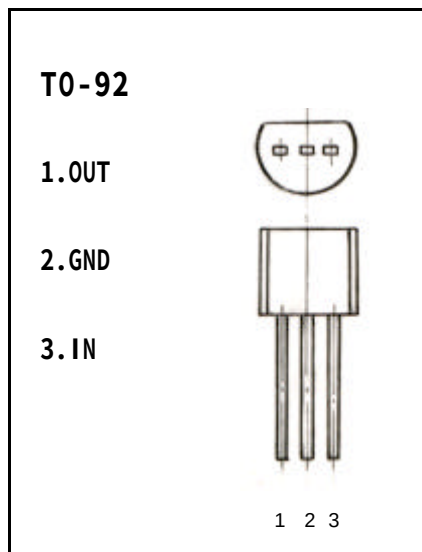
FEATURES

Maximum Output current

I_{OM} : 0.1A

Output voltage

V_o : 12 V



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

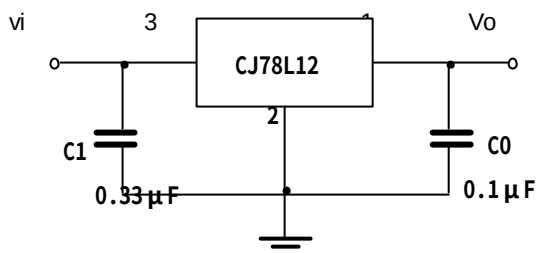
Parameter	Symbol	Value	Units
Input Voltage	V_i	35	V
Operating Junction Temperature Range	T_{OPR}	0—+125	°C
Storage Temperature Range	T_{STG}	-55—+150	°C

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)

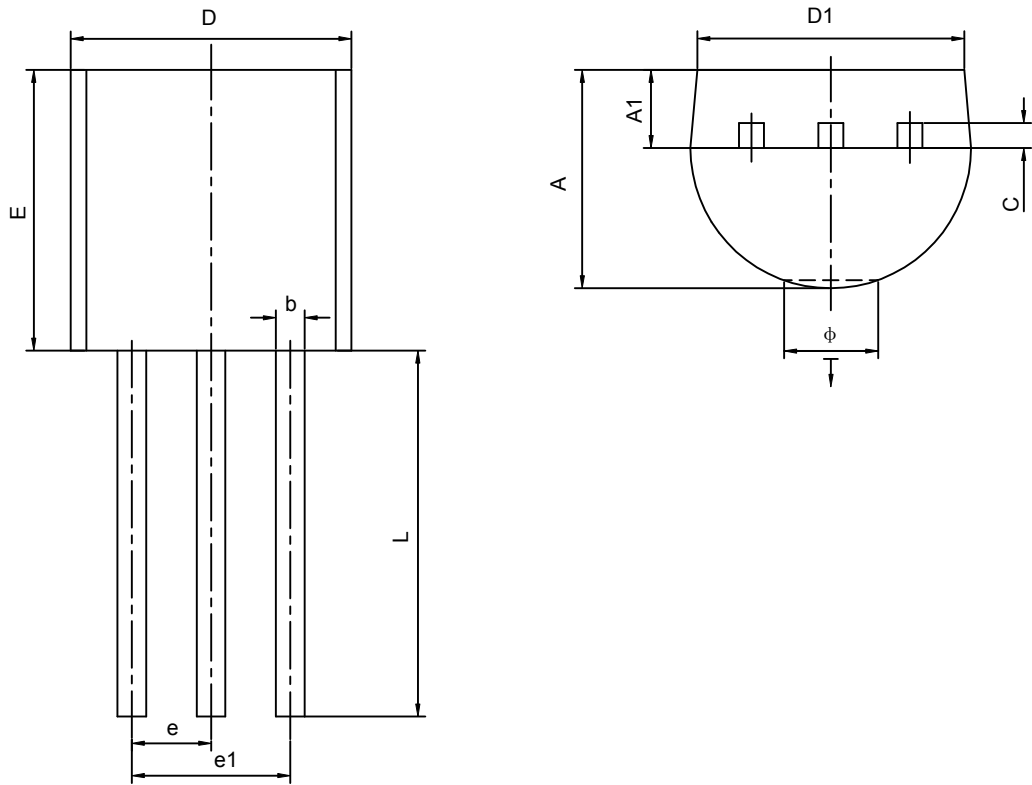
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25^{\circ}C$	11.5	12	12.5	V
		$14.5V \leq V_i \leq 27V, I_o=1mA-40mA$	11.4	12	12.6	V
		$14.5V \leq V_i \leq 27V, I_o=1mA-70mA$	11.4	12	12.6	V (note)
Load Regulation	ΔV_o	$T_j=25^{\circ}C, I_o=1mA-100mA$		22	100	mV
		$T_j=25^{\circ}C, I_o=1mA-40mA$		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		uV
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.

TO-92 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.400	4.700	0.173	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270TYP		0.050TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Ö		1.600		0.063
↓	0.000	0.380	0.000	0.015