



TO-92 Encapsulate Three-terminal Voltage Regulator

CJ78L08 Three-terminal positive voltage regulator

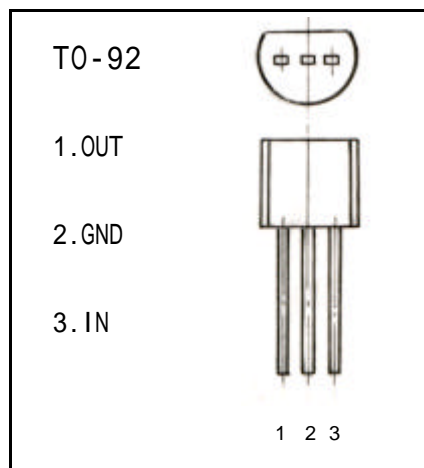
FEATURES

Maximum Output current

$I_{OM}: 0.1\text{ A}$

Output voltage

$V_o: 8\text{ V}$



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

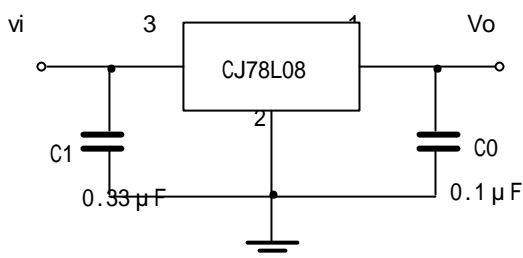
Parameter	Symbol	Value	Unlts
Input Voltage	V_i	30	V
Operating Junction Temperature Range	T_{OPR}	0—+125	
Storage Temperature Range	T_{STG}	-55—+150	

ELECTRICAL CHARACTERISTICS

($V_i=14\text{V}, I_o=40\text{mA}, 0 < T_j < 125$, $C_1=0.33\ \mu\text{F}, C_o=0.1\ \mu\text{F}$, unless otherwise specified)

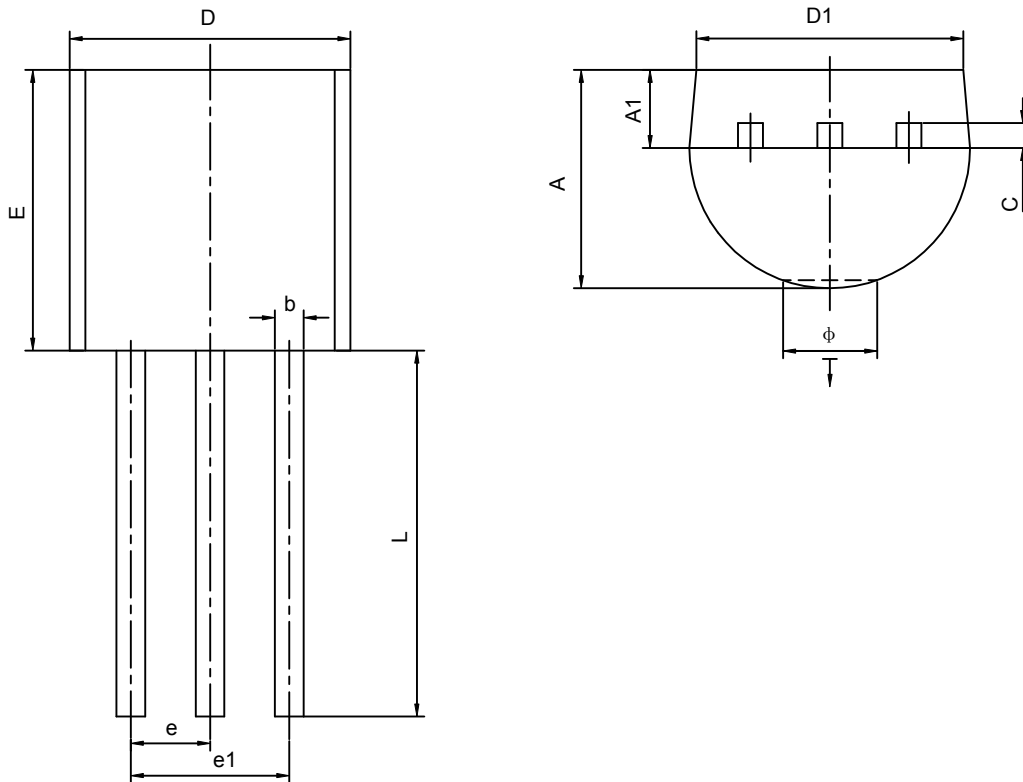
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25$	7.7	8.0	8.3	V
		10.5V V_i , 23V, $I_o=1\text{mA}-40\text{mA}$	7.6	8.0	8.4	V
		10.5V V_i , 23V, $I_o=1\text{mA}-70\text{mA}$	7.6	8.0	8.4	V (note)
Load Regulation	V_o	$T_j=25$, $I_o=1\text{mA}-100\text{mA}$		18	80	mV
		$T_j=25$, $I_o=1\text{mA}-40\text{mA}$		10	40	mV
Line regulation	V_o	10.5V V_i , 23V, $T_j=25$		42	175	mV
		11V V_i , 23V, $T_j=25$		36	125	mV
Quiescent Current	I_q	$T_j=25$		4	6	mA
Quiescent Current Change	I_q	11V V_i , 23V			1.5	mA
		1mA I_o , 40mA			0.1	mA
Output Noise Voltage	V_n	10Hz f 100KHz		54		μV
Ripple Rejection	RR	13V V_i , 23V, $f=120\text{Hz}, T_j=25$	37	46		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.

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