



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

SOT-23-3L Encapsulate Three Terminal Voltage Regulator

CJ78L08 Three-terminal positive voltage regulator**FEATURE**

Maximum Output current

 I_{OM} : 0.1 A

Output voltage

 V_O : 8 V

Operating and storage junction temperature range

 T_J, T_{stg} : -55 to +150**ABSOLUTE MAXIMUM RATINGS** (Operating temperature range applies unless otherwise specified)

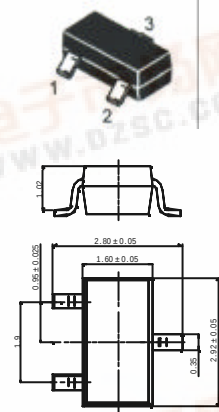
Parameter	Symbol	Value	Units
Input Voltage	V_I	30	V
Operating Junction Temperature Range	T_{OPR}	0—+125	
Storage Temperature Range	T_{STG}	-55—+150	

SOT-23-3L

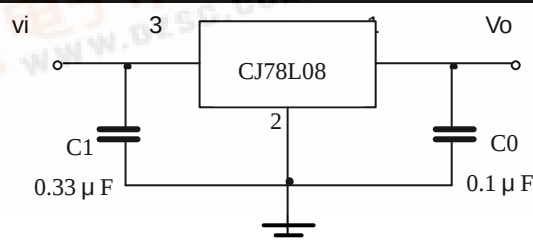
1. OUT

2. IN

3. GND

**ELECTRICAL CHARACTERISTICS** ($V_I=14V, I_O=40mA, 0 < T_J < 125^\circ C, C_1=0.33 \mu F, C_O=0.1 \mu F$, unless otherwise specified)

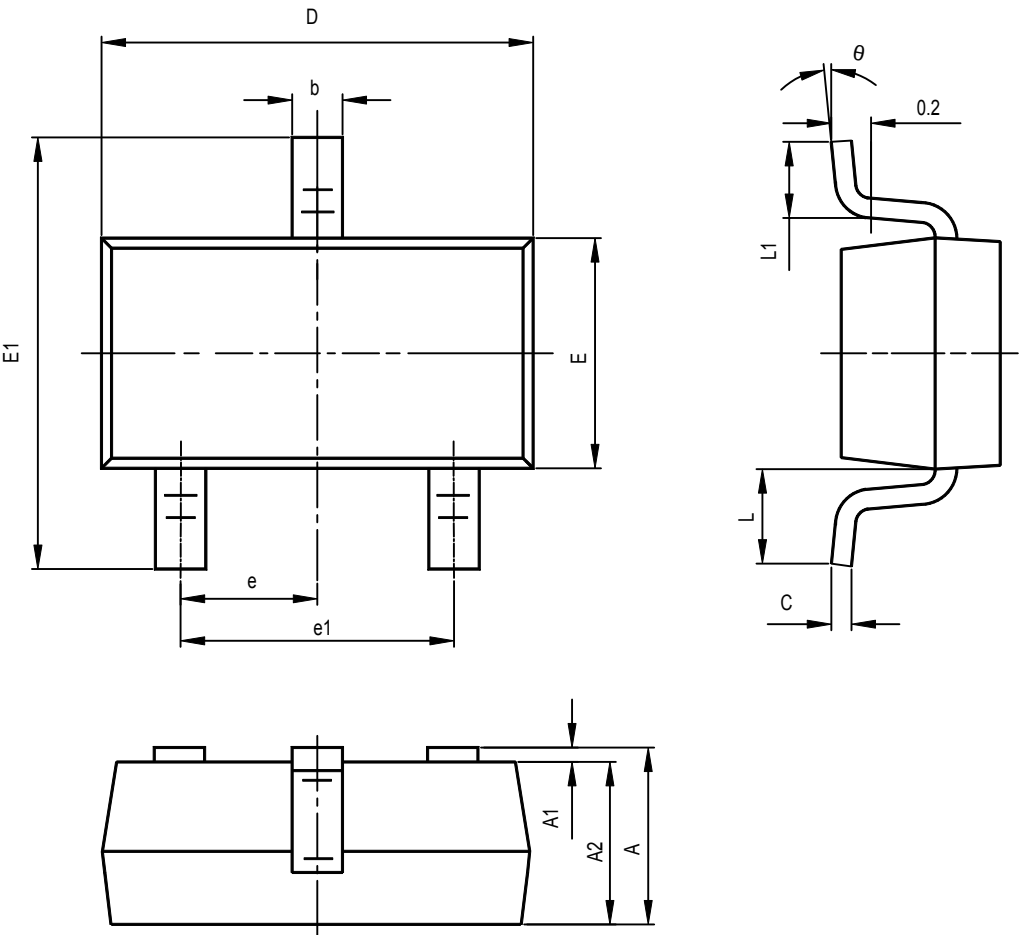
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_O	$T_J=25^\circ C$	7.7	8.0	8.3	V
		$10.5V \leq V_I \leq 23V, I_O=1mA-40mA$	7.6	8.0	8.4	V
		$10.5V \leq V_I \leq V_{MAX}, I_O=1mA-70mA$	7.6	8.0	8.4	V (note)
Load Regulation	V_O	$T_J=25^\circ C, I_O=1mA-100mA$		18	80	mV
		$T_J=25^\circ C, I_O=1mA-70mA$		10	40	mV
Line regulation	V_O	$10.5V \leq V_I \leq 23V, T_J=25^\circ C$		42	175	mV
		$11V \leq V_I \leq 23V, T_J=25^\circ C$		36	125	mV
Quiescent Current	I_q	25		4	6	mA
Quiescent Current Change	I_q	$11V \leq V_I \leq 23V$			1.5	mA
	I_q	$1mA \leq V_I \leq 40mA$			0.1	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$		54		μV
Ripple Rejection	RR	$13V \leq V_I \leq 23V, f=120Hz, T_J=25^\circ C$	39	70		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-23-3L PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.400	0.012	0.016
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950TPY		0.037TPY	
e1	1.800	2.000	0.071	0.079
L	0.700REF		0.028REF	
L1	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°