



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

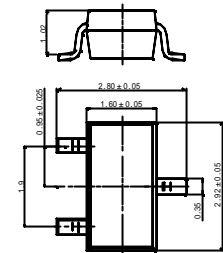
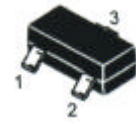
$T_J, T_{stg}$ : -55 to +150

SOT-23-3L

1. OUT

2. IN

3. GND



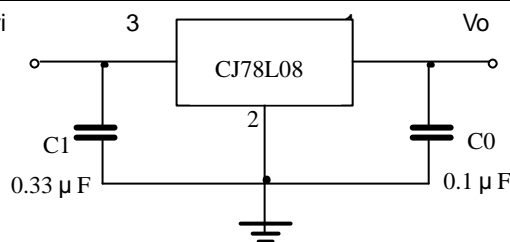
**ABSOLUTE MAXIMUM RATINGS** ( Operating temperature range applies unless otherwise specified )

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	

**ELECTRICAL CHARACTERISTICS**( $V_I=14V, I_o=40mA, 0 < T_J < 125$  , $C_1=0.33 \mu F, C_o=0.1 \mu F$ , unless otherwise specified )

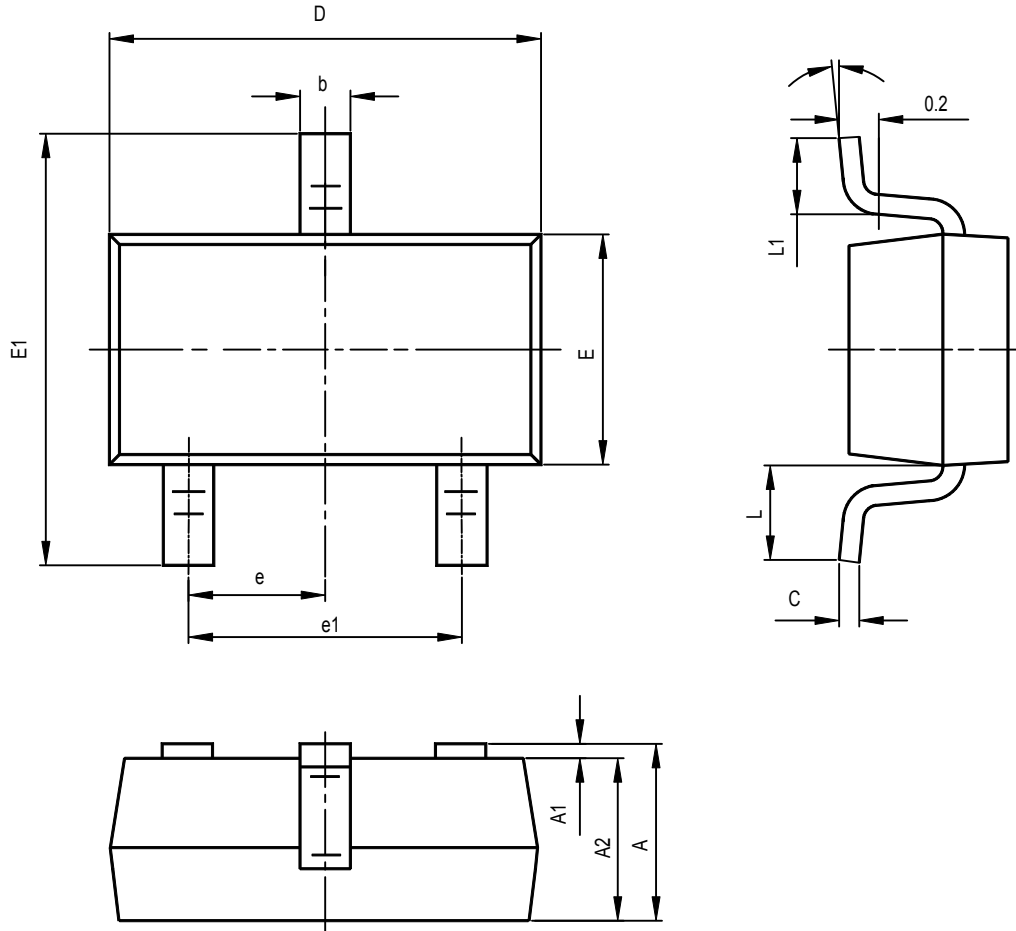
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_j=25$	7.7	8.0	8.3	V
		10.5V $V_I$ 23V, $I_o=1mA-40mA$	7.6	8.0	8.4	V
		10.5V $V_I$ $V_{MAX}$ , $I_o=1mA-70mA$	7.6	8.0	8.4	V (note)
Load Regulation	$V_o$	$T_j=25$ , $I_o=1mA-100mA$		18	80	mV
		$T_j=25$ , $I_o=1mA-70mA$		10	40	mV
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	$I_q$	25		4	6	mA
Quiescent Current Change	$I_q$	11V $V_I$ 23V			1.5	mA
	$I_q$	1mA $V_I$ 40mA			0.1	mA
Output Noise Voltage	$V_N$	10Hz f 100KHz		54		$\mu V$
Ripple Rejection	RR	13V $V_I$ 23V, $f=120Hz, T_j=25$	39	70		dB
Dropout Voltage	$V_d$	$T_j=25$		1.7		V

**TYPICAL APPLICATION**



Note 1: 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°