

## SOT-89 Encapsulate Three Terminal Voltage Regulator

### CJ78L05 Three-terminal positive voltage regulator

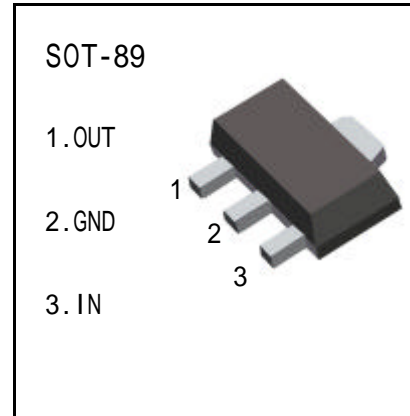
#### FEATURES

Maximum Output current

$I_{OM}$ : 0.1 A

Output voltage

$V_o$ : 5 V



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

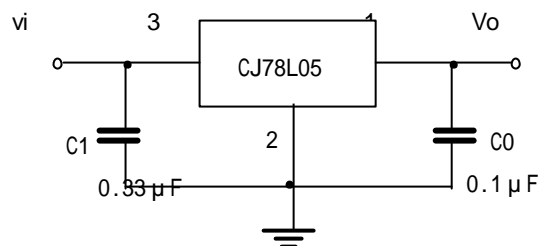
Parameter	Symbol	Value	Units
Input Voltage	$V_i$	30	V
Operating Junction Temperature Range	$T_{OPR}$	0—+125	
Storage Temperature Range	$T_{STG}$	-55—+150	

#### ELECTRICAL CHARACTERISTICS

( $V_i=10V, I_o=40mA, 0 < T_j < 125$ ,  $C_1=0.33 \mu F, C_o=0.1 \mu F$ , unless otherwise specified )

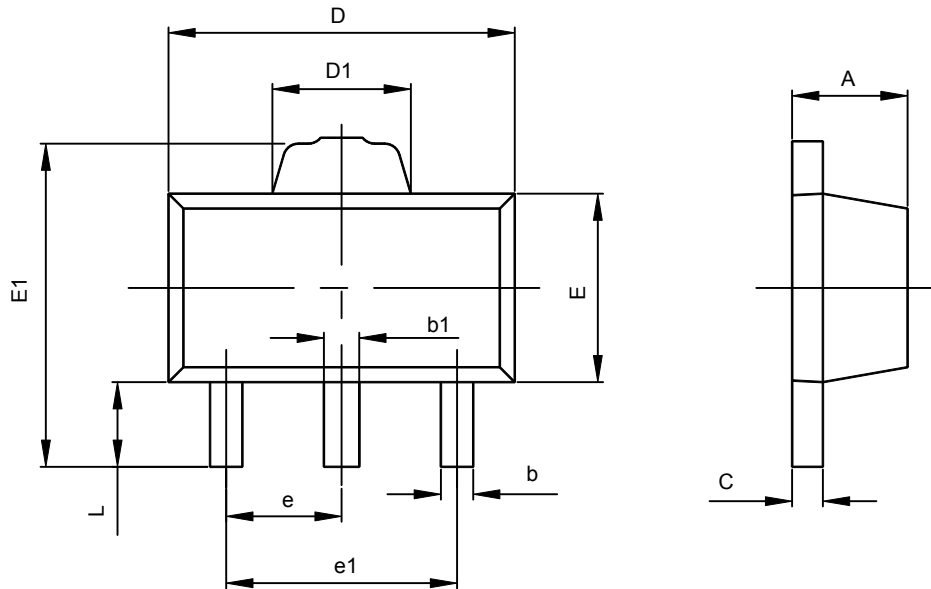
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_j=25$	4.8	5.0	5.2	V
		$7V \ V_i \ 20V, I_o=1mA-40mA$	4.75	5.0	5.25	V
		$7V \ V_i \ V_{MAX}, I_o=1mA-70mA$	4.75	5.0	5.25	V (note)
Load Regulation	$V_o$	$T_j=25$ , $I_o=1mA-100mA$		11	60	mV
		$T_j=25$ , $I_o=1mA-40mA$		5.0	30	mV
Line regulation	$V_o$	$7V \ V_i \ 20V, T_j=25$		32	150	mV
		$8V \ V_i \ 20V, T_j=25$		26	100	mV
Quiescent Current	$I_q$	25		3.8	6	mA
Quiescent Current Change	$I_q$	$8V \ V_i \ 20V$			1.5	mA
		$1mA \ I_o \ 40mA$			0.1	mA
Output Noise Voltage	$V_n$	$10Hz \ f \ 100KHz$		42		$\mu V$
Ripple Rejection	RR	$8V \ V_i \ 18V, f=120Hz, T_j=25$	41	80		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