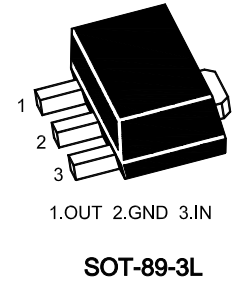




78L10U Three-Terminal Positive Voltage Regulator

Marking : 78L10



Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

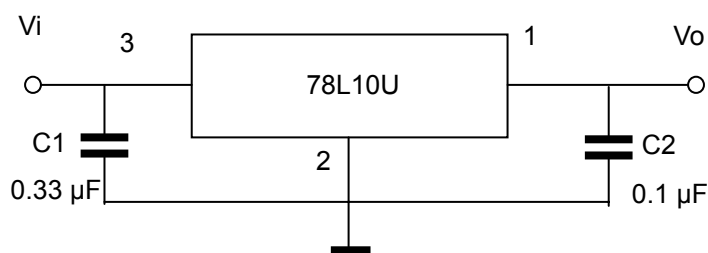
Parameter	Symbol	Rating	Unit
Input Voltage	V_I	35	V
Power Dissipation	P_{tot}	800 ¹⁾	mW
Operating Temperature	T_{opr}	- 20 to + 120	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to +150	$^\circ\text{C}$

¹⁾ 15 mm X 25 mm X 0.7 mm alumina ceramic board, $T_a \leq 25\text{ }^\circ\text{C}$

Electrical Characteristics 78L10U

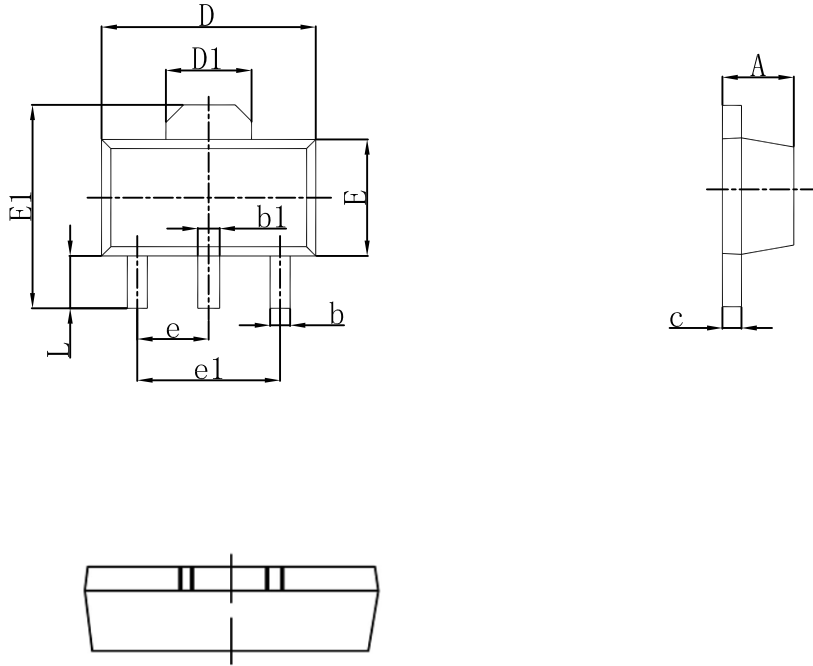
Electrical characteristics at specified virtual junction temperature, $V_I = 17\text{V}$, $I_o = 40\text{mA}$ (unless otherwise noted)

Parameter	Test Conditions*		78L10A			Units
			Min	Typ	Max	
Output voltage**		25 $^\circ\text{C}$	9.6	10	10.4	V
	$I_o = 1\text{mA to } 40\text{mA}$, $V_I = 13\text{V to } 25\text{V}$	0 $^\circ\text{C to } 125\text{ }^\circ\text{C}$	9.5	10	10.5	
	$I_o = 1\text{mA to } 70\text{mA}$,		9.5	10	10.5	
Input regulation	$V_I = 13\text{V to } 25\text{V}$	25 $^\circ\text{C}$		51	175	mV
	$V_I = 14\text{V to } 25\text{V}$			42	125	
Ripple rejection	$V_I = 15\text{V to } 25\text{V}$, $f = 120\text{Hz}$	0 $^\circ\text{C to } 125\text{ }^\circ\text{C}$	37	44		dB
Output regulation	$I_o = 1\text{mA to } 100\text{mA}$	25 $^\circ\text{C}$		20	90	mV
	$I_o = 1\text{mA to } 40\text{mA}$			11	40	
Output noise voltage	$f = 10\text{Hz to } 100\text{KHz}$	25 $^\circ\text{C}$		62		μV
Dropout voltage		25 $^\circ\text{C}$		1.7		V
Bias current		25 $^\circ\text{C}$		4.2	6	mA
		125 $^\circ\text{C}$			5.5	
Bias current change	$V_I = 14\text{V to } 25\text{V}$	0 $^\circ\text{C to } 125\text{ }^\circ\text{C}$			1.5	
	$I_o = 1\text{mA to } 40\text{mA}$				0.1	





SOT-89-3L Outlines 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	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047