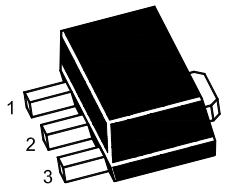
迈拓电子
MAITUO ELECTRONIC

78L15U Three-Terminal Positive Voltage Regulator



1.OUT 2.GND 3.IN

SOT-89-3L

Features

Maximum Output current I_O: 0.1A

Output Voltage V_O: 6V

Continuous Total Dissipation P_D: 0.5W (T_a = 25℃)

Mraking:78L15

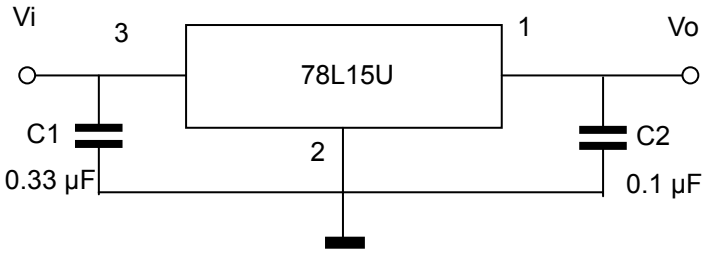
Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Input Voltage	V_{IN}	35	V
Power Dissipation	P_{tot}	800 [1)]	mW
Operating Temperature	T_{opr}	- 30 to + 75	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

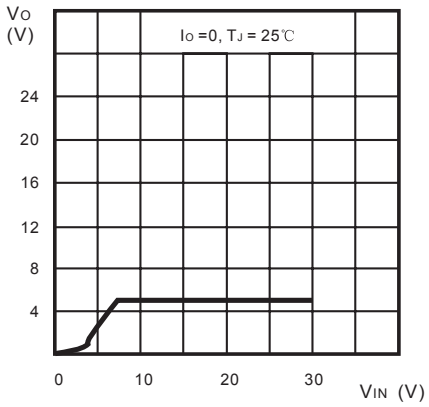
[1)] 15 mm X 25 mm X 0.7 mm alumina ceramic board, $T_a \le 25$ °C

Electrical Characteristics (Unless otherwise specified, V_{IN} = 23 V, I_{OUT} = 40 mA, C_{IN} = 0.33 µF, C_{OUT} = 0.1 µF, T_j = 25 °C)

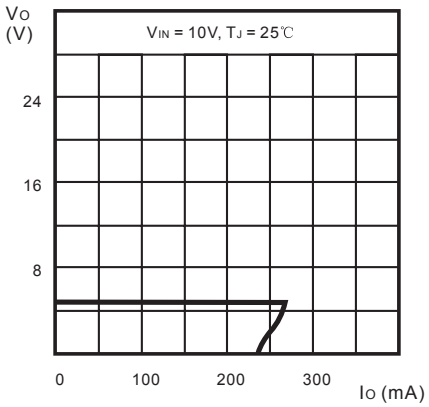
Parameter	Symbol	Min.	Typ.	Max.	Unit
Output Voltage	V_{OUT}	14.4	15	15.6	V
Output Voltage 17.5 V ≤ V_{IN} ≤ 30 V, 1 mA ≤ I_{OUT} ≤ 40 mA	V_{OUT}	14.25	-	15.75	V
Output Voltage V_{IN} = 23 V, 1 mA ≤ I_{OUT} ≤ 70 mA	V_{OUT}	14.25	-	15.75	V
Input Regulation 17.5 V ≤ V_{IN} ≤ 30 V 19 V ≤ V_{IN} ≤ 30 V	Reg. line	- -	- -	300 250	mV
Load Regulation 1 mA ≤ I_{OUT} ≤ 100 mA 1 mA ≤ I_{OUT} ≤ 40 mA	Reg. load	- -	- -	150 75	mV
Quiescent Current	I_Q	-	-	6.5	mA
Quiescent Current Change 19 V ≤ V_{IN} ≤ 30 V With line 1 mA ≤ I_{OUT} ≤ 40 mA With load	ΔI_Q	- -	- -	1.5 0.1	mA
Output Noise Voltage at T_a = 25 °C, 10 Hz ≤ f ≤ 100 KHz	V_{NO}	-	90	-	µV
Ripple Rejection at f = 120 Hz, 18.5 V ≤ V_{IN} ≤ 28.5 V, T_j = 25 °C	RR	34	-	-	dB
Dropout Voltage at T_j = 25 °C	$\lvert V_{IN}-V_{OUT} \rvert$	-	1.7	-	V



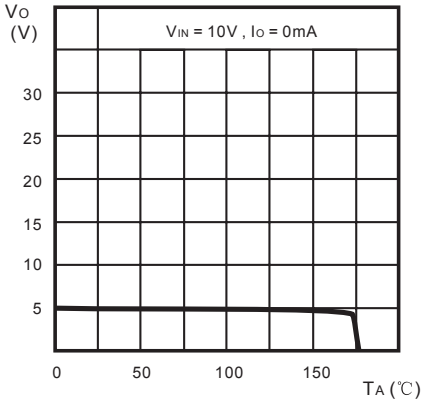
Typical Characteristics



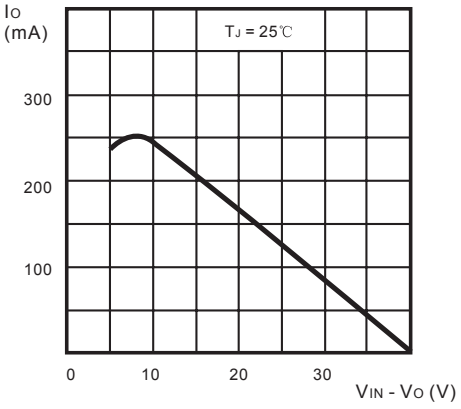
Output Characteristics



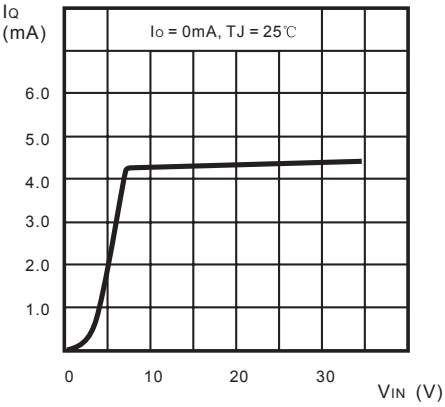
Load Characteristics



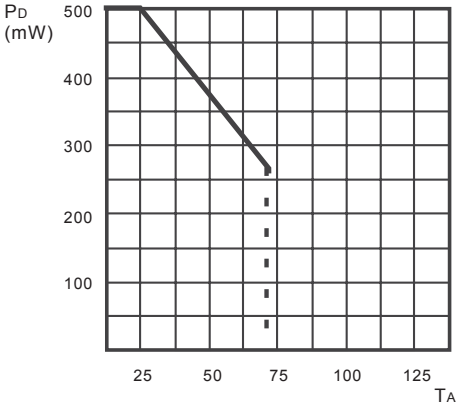
Thermal Shutdown



Short Circuit Output Current



Quiescent Current vs Input Voltage



Power Dissipation vs. Ambient Temperature

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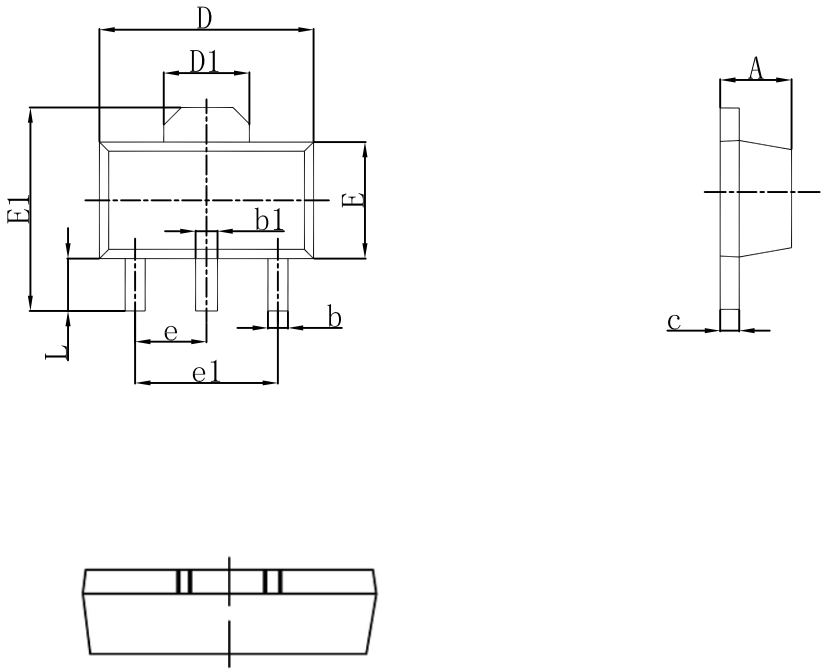
SOT-89-3L Outlines Dimensions



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