

TO-252/TO-251 Plastic-Encapsulate Voltage Regulators

**L7815** Three-terminal positive voltage regulator

**FEATURES:**

※ Maximum output current

**IOM: 1.5A**

※ Output voltage

**VO: 15V**

※ Continuous total dissipation

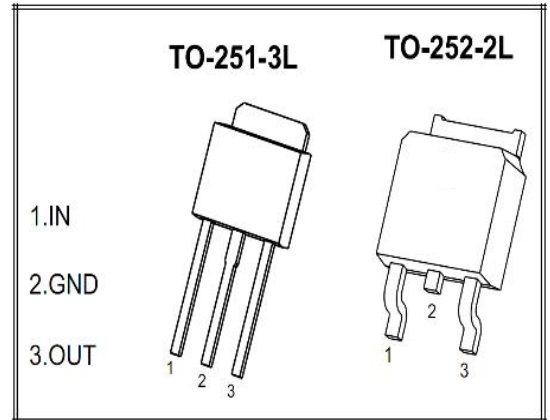
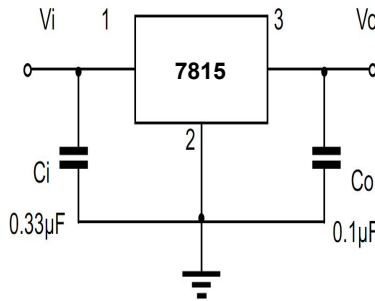
**PD: 1.25W**

**MARKING:**

**7815 D / U \*\*\*\***

logo (D→252) / (U→251) \*\*\*\*→Date

TYPICAL APPLICATION:



**Absolute Maximum ratings (Operating temperature range applies unless otherwise specified)**

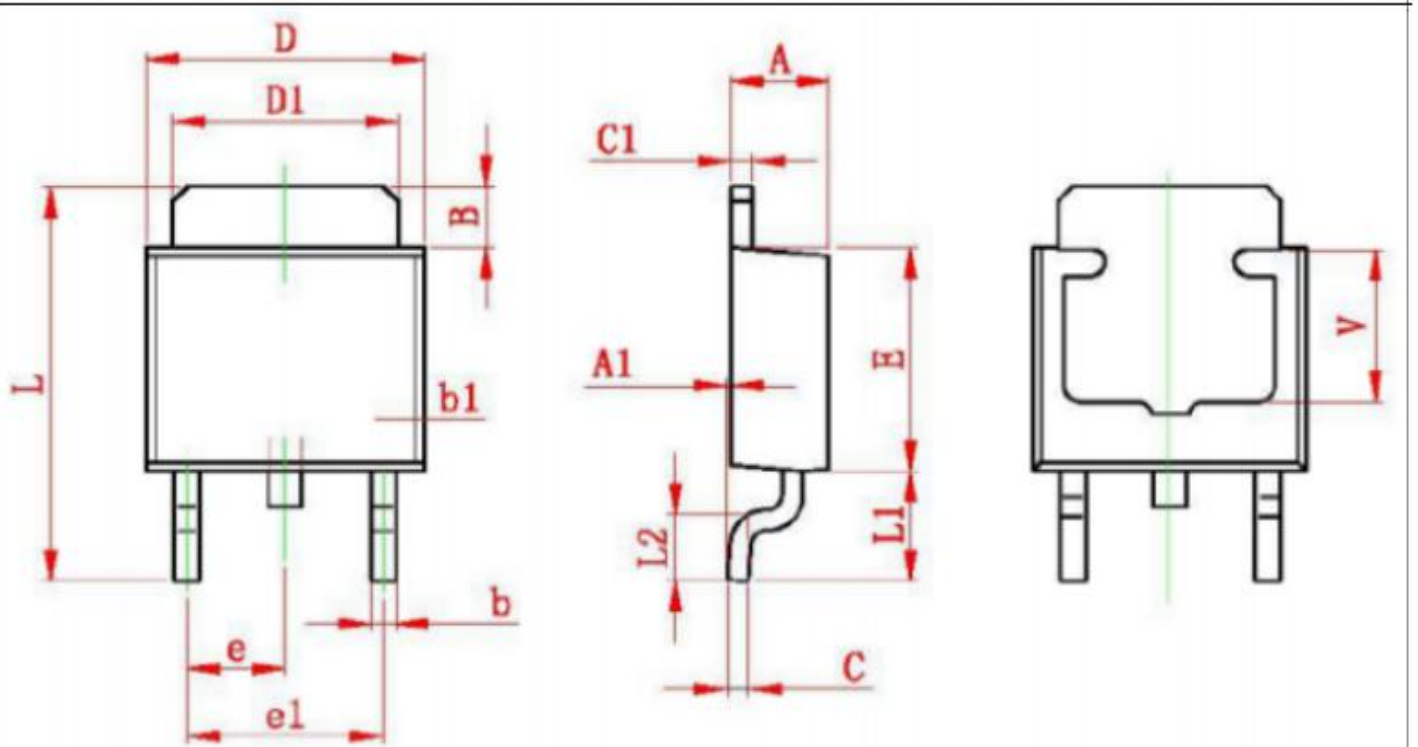
Parameter	Symbol	Value	Unit
Input Voltage	Vi	35	V
Thermal Resistance From Junction to air	RθJA	80	°C/W
Operating Junction Temperature Range	TOPR	-25~+125	°C
Storage Temperature Range	TSTG	-55~+150	°C

**Electrical Characteristics At Specified Virtual Junction Temperature (Vi=23V, Io=500mA, Ci=0.33µF, Co=0.1µF. Unless Otherwise Specified)**

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Output voltage	VO	25°C	14.4	15	15.6	V
		17.5V≤Vi≤30V, Io=5mA-1A -25~+125	14.25	15	15.75	V
Load Regulation	ΔVO	Io=5mA-1.5A, Vi=23V 25°C		12	300	mV
		Io=250mA-750mA, Vi=23V 25°C		4	150	mV
Line Regulation	ΔVO	17.5V≤Vi≤30V, Io=250mA 25°C		12	300	mV
		20V≤Vi≤30V, Io=250mA 25°C		5	150	mV
Quiescent Current	Iq	25°C		4.8	8	mA
Quiescent Current Change	ΔIq	17.5V≤Vi≤30V, Io=250mA -25~+125			1	mA
		5mA≤Io≤1A, Vi=23V -25~+125			0.5	mA
Output Noise Voltage	VN	10Hz≤f≤100KHz 25°C		90	200	µV/Vo
Output voltage drift	ΔVo/ΔT	Io=5mA -25-125°C		-1		mV/°C
Ripple Rejection	Rr	18.5V≤Vi≤28.5V, f=120Hz, Io=300mA -25~+125	55	80		dB
Dropout Voltage	Vd	Io=1A 25°C		2	2.5	V
Output resistance	RO	f=1KHz 25°C		19		mΩ
Short Circuit Current	Isc	Vi=23V 25°C		250		mA
Peak Current	IPK	25°C		2.2		A

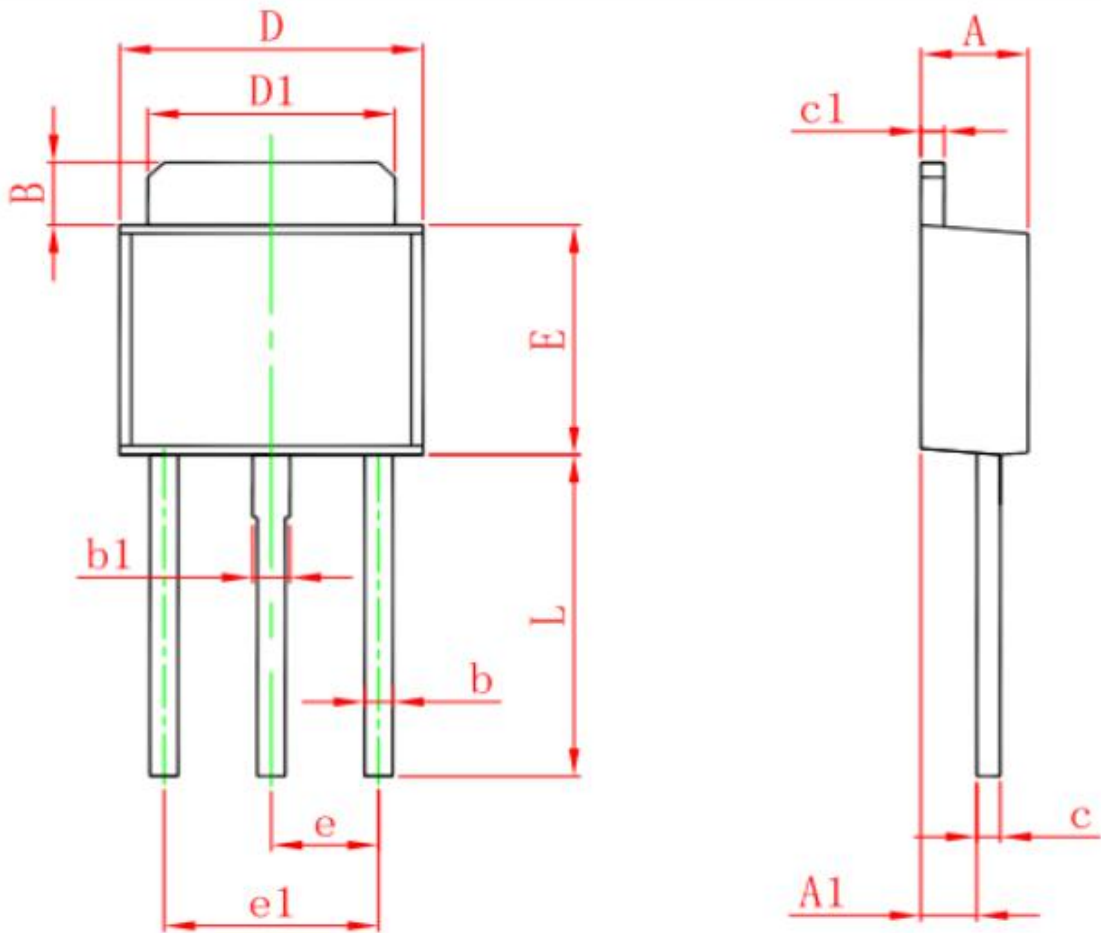
Note : Bypass Capacitors are Recommended For Optimum Stability and Transient Response and Should be located as Close as Possible to the Regulators

### Package Dimensions:



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300 TYP		0.091 TYP	
e1	4.500	4.700	0.177	0.185
L	9.500	9.900	0.374	0.390
L1	2.550	2.900	0.100	0.114
L2	1.400	1.780	0.055	0.070
V	3.80 REF		0.150 REF	

### Package Dimensions:



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	1.050	1.350	0.042	0.054
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300 TYP.		0.091 TYP.	
e1	4.500	4.700	0.177	0.185
L	7.500	7.900	0.295	0.311