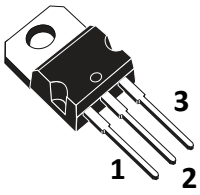
L7815CV-DG
Three-terminal Voltage Regulator

Features

- Maximum output current I_{OM}: 1 A
- Output voltage V_O: 15V
- Continuous total dissipation P_D: 1.5 W (T_a= 25°C)

1.IN
2.GND
3.OUT



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Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Air	$R_{\theta JA}$	66.7	℃/W
Operating Junction Temperature Range	T_{OPR}	-25~+125	℃
Storage Temperature Range	T_{STG}	-65~+150	℃

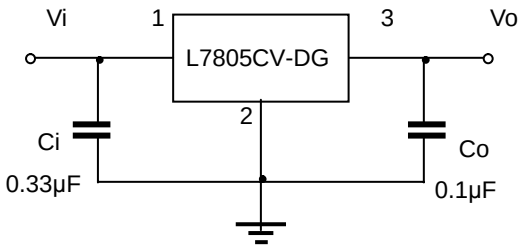
Electrical Characteristics (Ta=25℃unless otherwise specified)

(V_i=-23V, Io=500mA, C_i=0.33μF,Co=1μF, unless otherwise specified)

Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output voltage	Vo		25℃	14.4	15	15.6	V
		17.5V≤V_i≤30V, Io=5mA-1A	-25~125℃	14.25	15	15.75	V
Load Regulation	ΔVo	Io=5mA-1A	25℃		12	300	mV
		Io=250mA-750mA	25℃		4	150	mV
Line regulation	ΔVo	17.5V≤V_i≤30V	25℃		12	300	mV
		20V≤V_i≤26V	25℃		3	150	mV
Quiescent Current	Iq		25℃		4.3	8	mA
Quiescent Current Change	ΔIq	17.5V≤V_i≤30V	-25~125℃			1	mA
	ΔIq	5mA≤I_O≤1A				0.5	mA
Output voltage drift	△Vo/△T	I_O=5mA	-25~125℃		-1		mV/℃
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		90		μV/Vo
Ripple Rejection	RR	18.5V≤V_i≤28.5V,f=120Hz	-25~125℃	54	70		dB
Dropout Voltage	Vd	Io=1A	25℃		2		V
Output resistance	R_O	f=1KH_Z	25℃		19		mΩ
Short Circuit Current	Isc		25℃		230		mA
Peak Current	Ipk		25℃		2.1		A

* Pulse test.

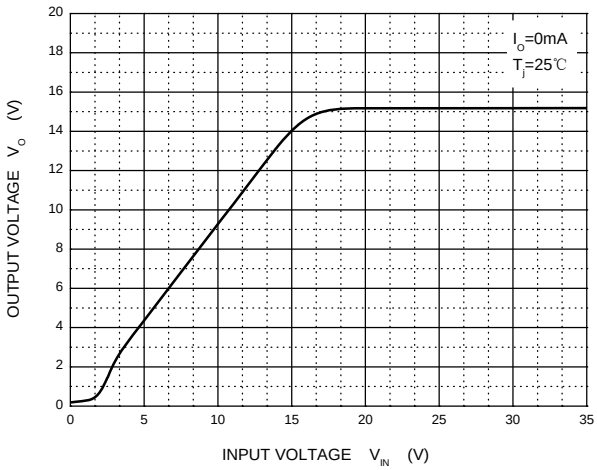
Typical Application



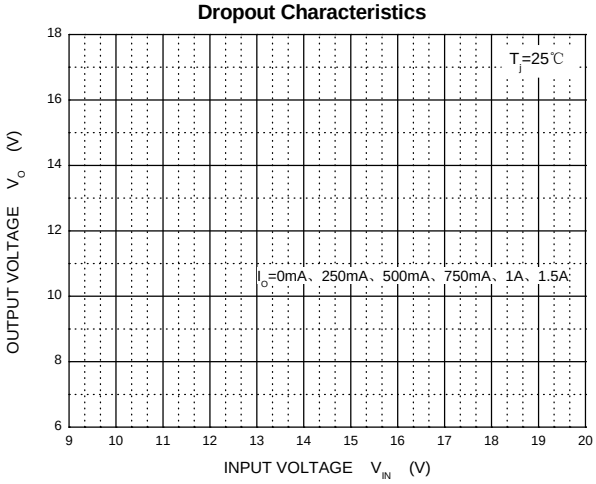
Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics

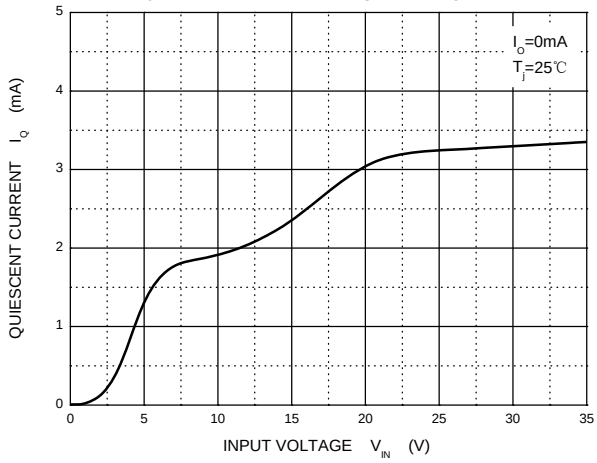
Output Characteristics



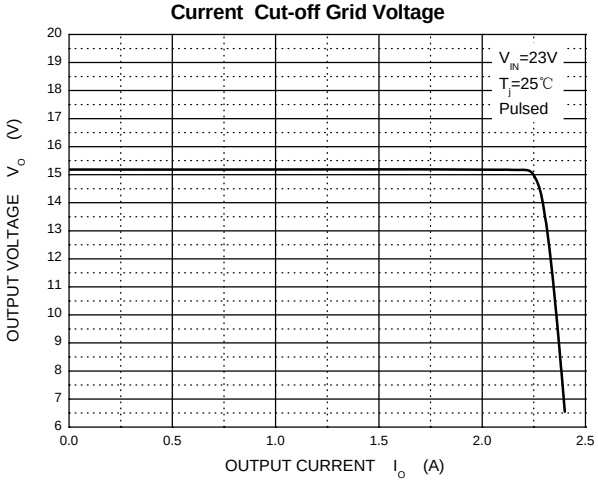
Dropout Characteristics



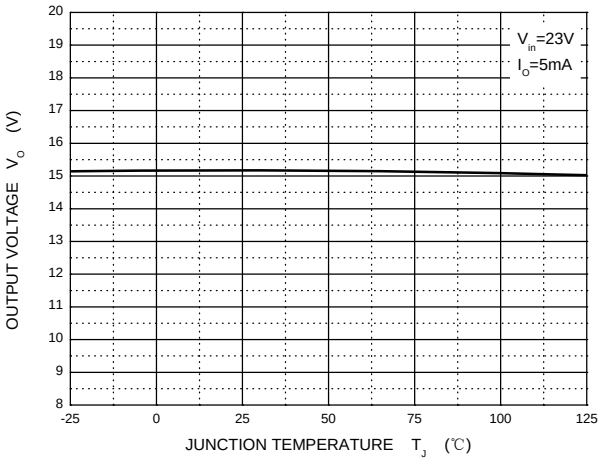
Quiescent Current vs Input Voltage



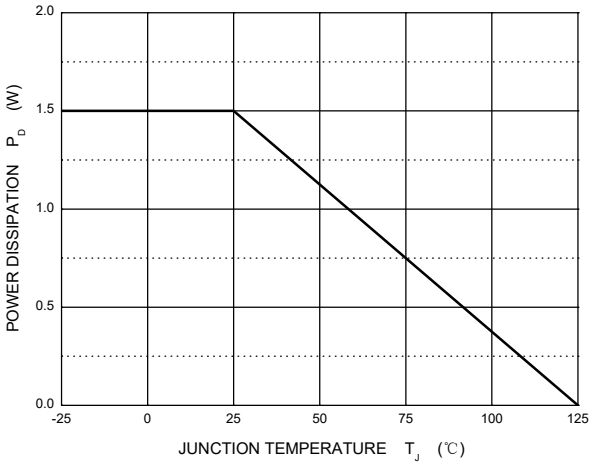
Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve



Package Information
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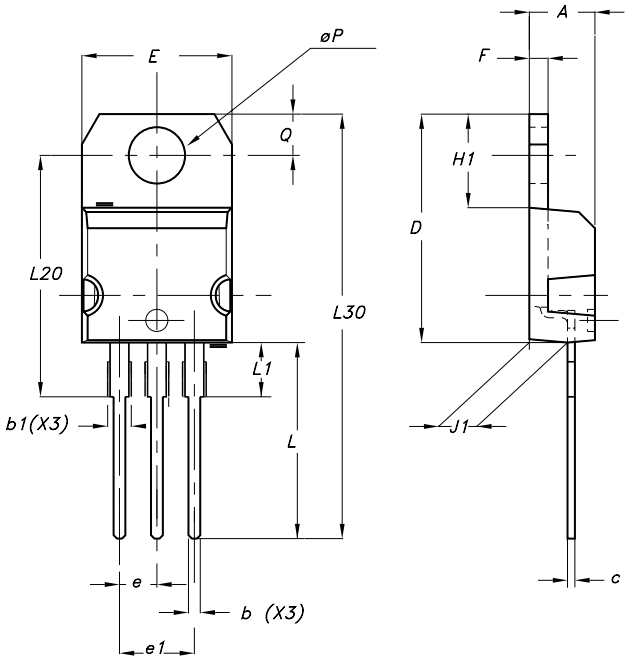

DIM.	mm.			inch		
	MIN.	TYP	MAX.	MIN.	TYP.	MAX.
A	4.40		4.60	0.173		0.181
b	0.61		0.88	0.024		0.034
b1	1.15		1.70	0.045		0.066
c	0.49		0.70	0.019		0.027
D	15.25		15.75	0.60		0.620
E	10		10.40	0.393		0.409
e	2.40		2.70	0.094		0.106
e1	4.95		5.15	0.194		0.202
F	1.23		1.32	0.048		0.052
H1	6.20		6.60	0.244		0.256
J1	2.40		2.72	0.094		0.107
L	13		14	0.511		0.551
L1	3.50		3.93	0.137		0.154
L20		16.40			0.645	
L30		28.90			1.137	
øP	3.75		3.85	0.147		0.151
Q	2.65		2.95	0.104		0.116

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