

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

## L7815CV(MS)

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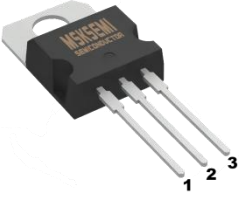

Product specification

**Three-terminal positive voltage regulator**

**FEATURES**

- Maximum Output current I<sub>OM</sub> : 1.5 A
- Output voltage V<sub>o</sub>:15V
- Continuous total dissipation  
P<sub>D</sub>: 1.5 W (T<sub>a</sub> = 25 °C)  
15 W(T<sub>c</sub> = 25 °C)

**Reference News**

PACKAGE OUTLINE	Marking
 <p>1.IN 2.GND 3.OUT</p>	

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

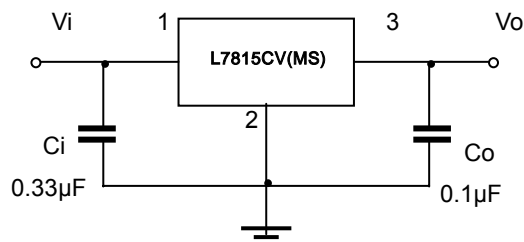
Parameter	Symbol	Value	Unit
Input Voltage	V <sub>i</sub>	35	V
Thermal resistance junction-air	R <sub>θJA</sub>	83.3	°C/W
Thermal resistance junction-cases	R <sub>θJC</sub>	8.33	°C/W
Operating Junction Temperature Range	T <sub>OPR</sub>	0~+150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~+150	°C

**ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE**

(V<sub>i</sub>=23V, I<sub>o</sub>=500mA, C<sub>i</sub>=0.33μF, C<sub>o</sub>=0.1μF, unless otherwise specified )

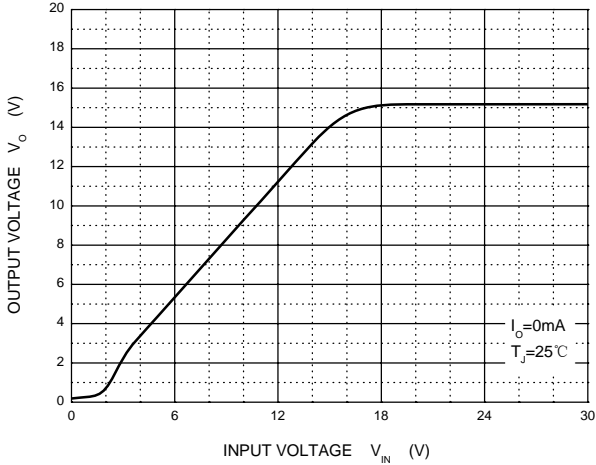
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V <sub>o</sub>	25°C	14.4	15	15.6	V
		17.5V≤V <sub>i</sub> ≤30V, I <sub>o</sub> =5mA-1A P≤15W	0-125°C	14.25	15	15.75
Load Regulation	ΔV <sub>o</sub>	I <sub>o</sub> =5mA-1.5A	25°C	12	300	mV
		I <sub>o</sub> =250mA-750mA	25°C	4	150	mV
Line regulation	ΔV <sub>o</sub>	17.5V≤V <sub>i</sub> ≤30V	25°C	12	300	mV
		20V≤V <sub>i</sub> ≤26V	25°C	3	150	mV
Quiescent Current	I <sub>q</sub>	25°C		4.3	8	mA
Quiescent Current Change	ΔI <sub>q</sub>	17.5V≤V <sub>i</sub> ≤30V	0-125°C		1	mA
	ΔI <sub>q</sub>	5mA≤I <sub>o</sub> ≤1A			0.5	mA
Output voltage drift	ΔV <sub>o</sub> /ΔT	I <sub>o</sub> =5mA	0-125°C	-1		mV/°C
Output Noise Voltage	V <sub>N</sub>	10Hz≤f≤100KHz	25°C	90		μV
Ripple Rejection	RR	18.5V≤V <sub>i</sub> ≤28.5V, f=120Hz	0-125°C	54	70	dB
Dropout Voltage	V <sub>d</sub>	I <sub>o</sub> =1A	25°C	2		V
Output resistance	R <sub>o</sub>	f=1KHz	25°C	19		mΩ
Short Circuit Current	I <sub>sc</sub>	25°C		230		mA
Peak Current	I <sub>pk</sub>	25°C		2.0		A

**TYPICAL APPLICATION**

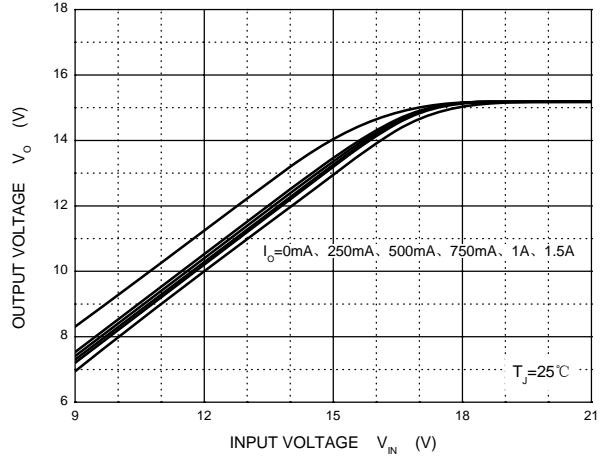


Typical Characteristics

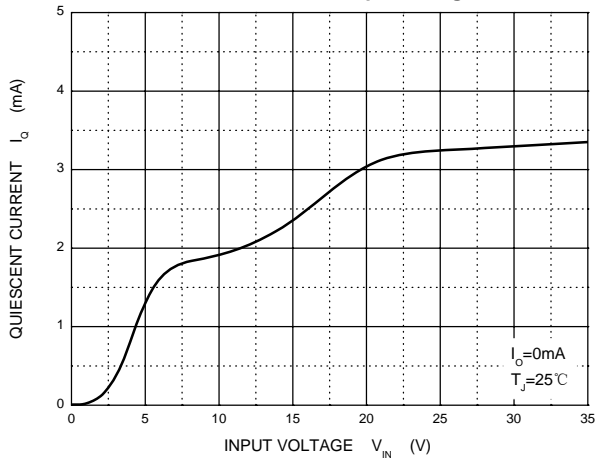
Output Characteristics



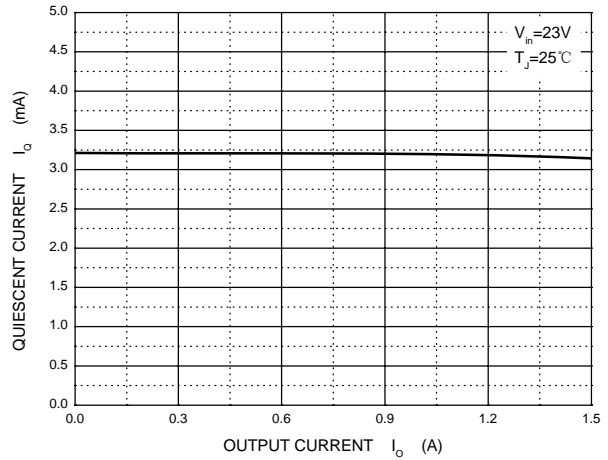
Dropout Characteristics



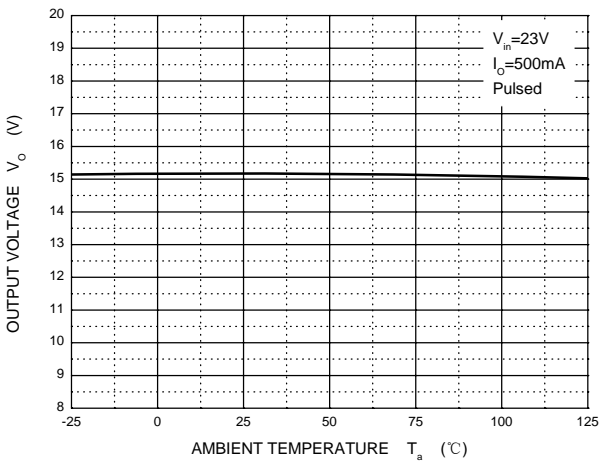
Quiescent Current vs Input Voltage



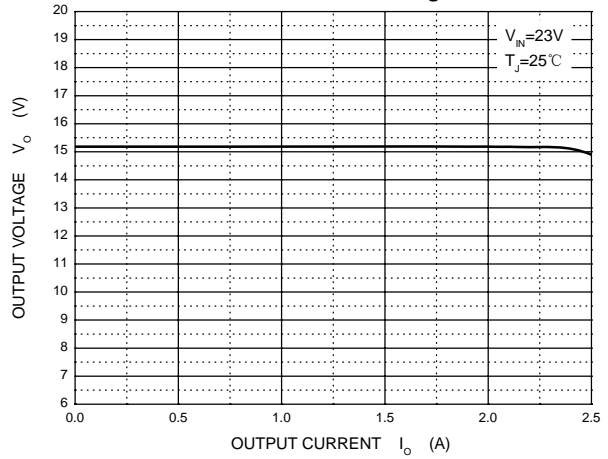
Quiescent Current vs Output Current



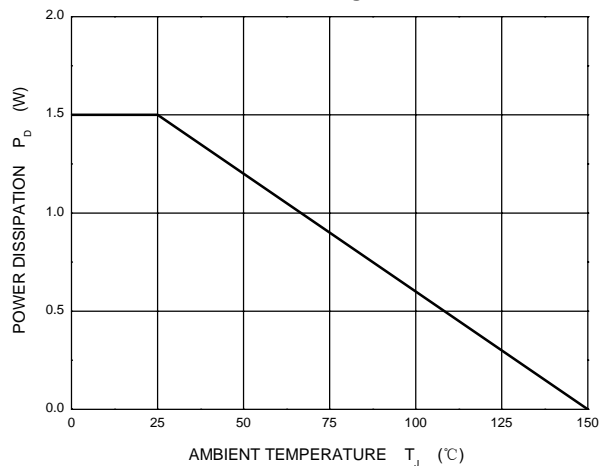
Output Voltage vs Ambient Temperature



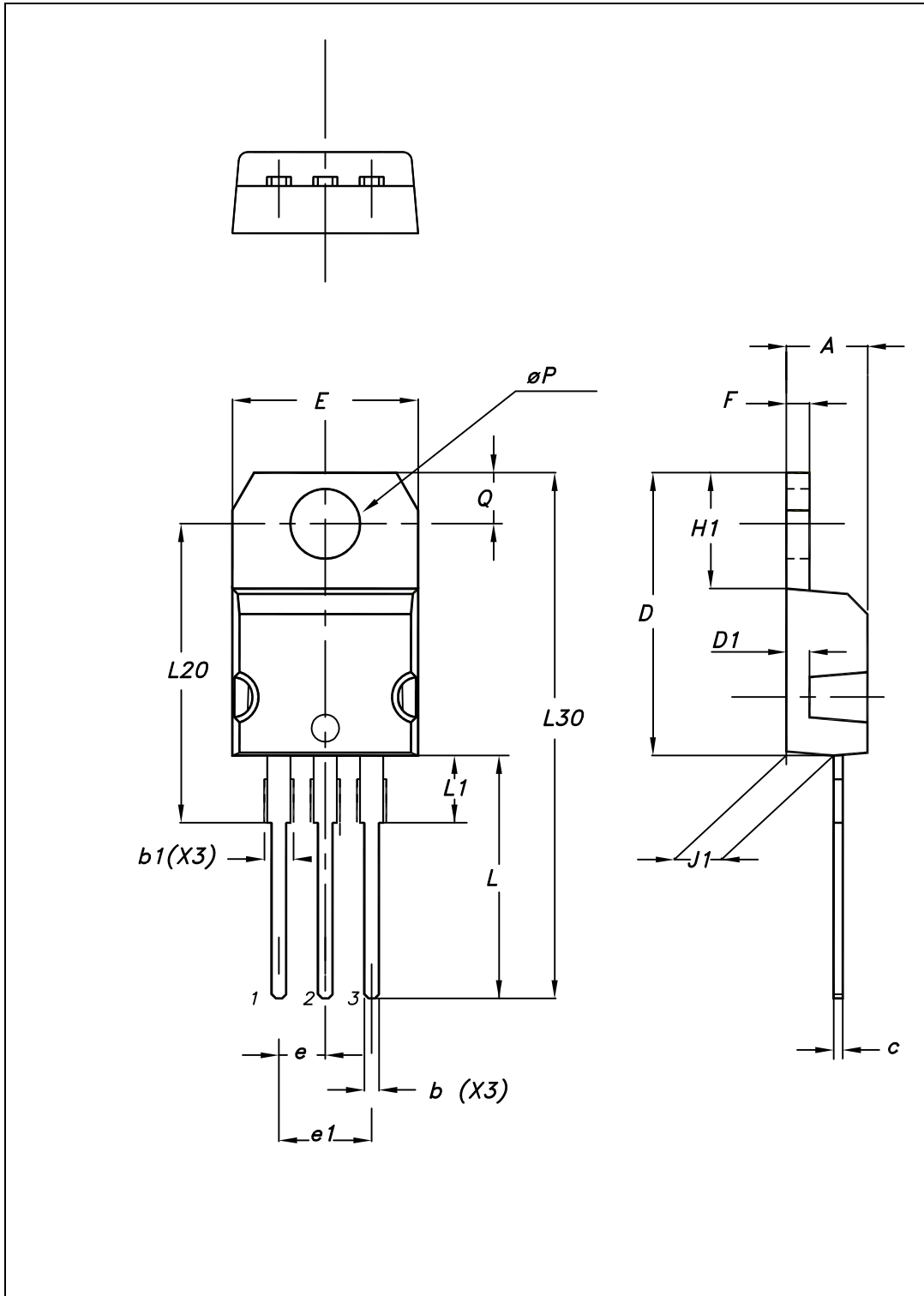
Current Cut-off Grid Voltage



Power Derating Curve



Package mechanical data



**Package mechanical data**

Dim.	mm		
	Min.	Typ.	Max.
A	4.40		4.60
b	0.61		0.88
b1	1.14		1.70
c	0.48		0.70
D	15.25		15.75
D1		1.27	
E	10		10.40
e	2.40		2.70
e1	4.95		5.15
F	1.23		1.32
H1	6.20		6.60
J1	2.40		2.72
L	13		14
L1	3.50		3.93
L20		16.40	
L30		28.90	
ØP	3.75		3.85
Q	2.65		2.95

**REEL SPECIFICATION**

P/N	PKG	QTY
L7815CV(MS)	TO-220	50/One tube 1000/a box of

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