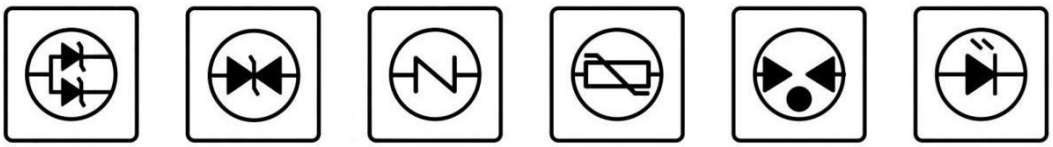
MSKSEMI 美森科
SEMICONDUCTOR



L7809CV(MS)

Product specification

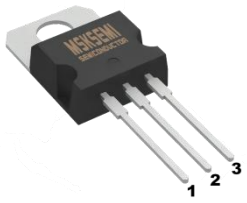
L7809CV(MS)

Three-terminal positive voltage regulator

FEATURES

- Maximum Output current I_{OM} : 1.5A
- Output voltage Vo: 9V
- Continuous total dissipation
  P_D: 1.5 W (T_a = 25 ℃)
  15 W(T_c = 25 ℃)

Reference News

PACKAGE OUTLINE	Marking
 1.IN 2.GND 3.OUT	MSKSEMI L7809CV CHN MS**

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

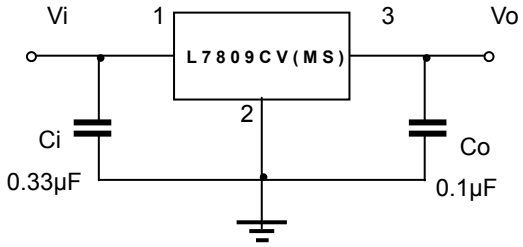
Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	83.3	℃/W
Thermal Resistance from Junction to Case	$R_{\theta JC}$	8.3	℃/W
Operating Junction Temperature Range	T_{OPR}	0~+150	℃
Storage Temperature Range	T_{STG}	-55~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE

(Vi=16V, Io=500mA,Ci=0.33μF,Co=0.1μF, unless otherwise specified)

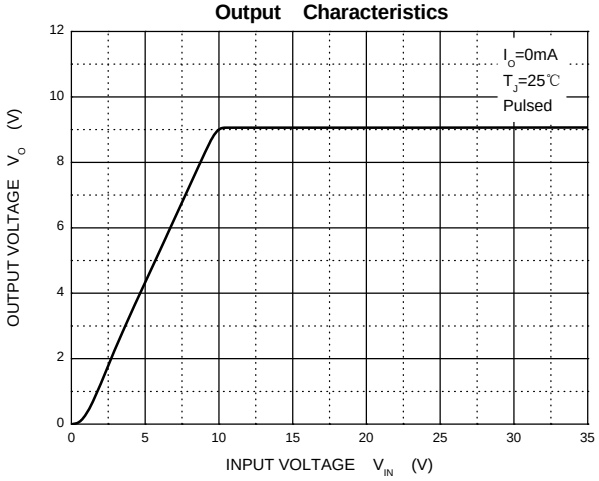
Parameter	Symbol	Test conditions		MIN	TYP	MAX	UNIT
Output voltage	Vo		25℃	8.65	9	9.35	V
		11.5V≤V_i≤24V, Io= 5mA-1A, P≤15W	0-125℃	8.55	9	9.45	V
Load Regulation	ΔVo	Io=5mA-1.5A	25℃		12	180	mV
		Io=250mA-750mA	25℃		4	90	mV
Line regulation	ΔVo	11.5V≤V_i≤27V	25℃		7	180	mV
		13V≤V_i≤19V	25℃		2	90	mV
Quiescent Current	Iq		25℃		4.3	8	mA
Quiescent Current Change	ΔIq	11.5V≤V_i≤27V	0-125℃			1	mA
		5mA≤I_O≤1A	0-125℃			0.5	mA
Output voltage drift	△Vo/△T	I_O=5mA	0-125℃		-1		mV/℃
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		60		uV
Ripple Rejection	RR	12V≤V_i≤22V,f=120Hz	0-125℃	55	70		dB
Dropout Voltage	Vd	Io=1A	25℃		2		V
Output resistance	R_O	f=1KH_Z	25℃		18		mΩ
Short Circuit Current	Isc		25℃		400		mA
Peak Current	Ipk		25℃		2.0		A

TYPICAL APPLICATION

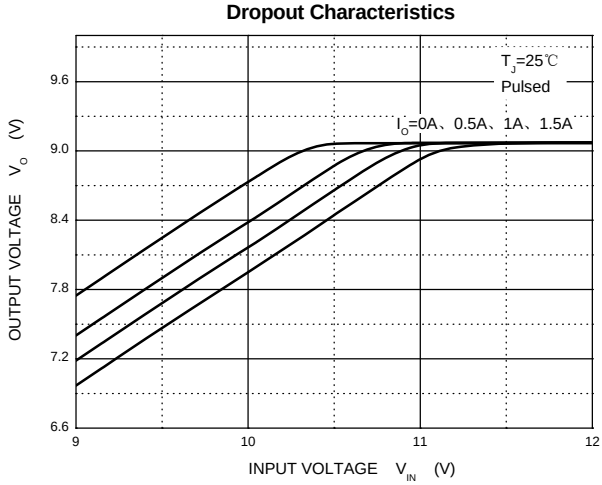


Typical Characterisitics

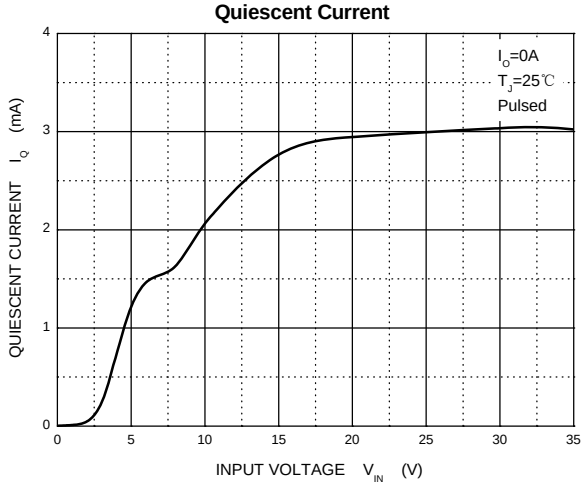
Output Characteristics



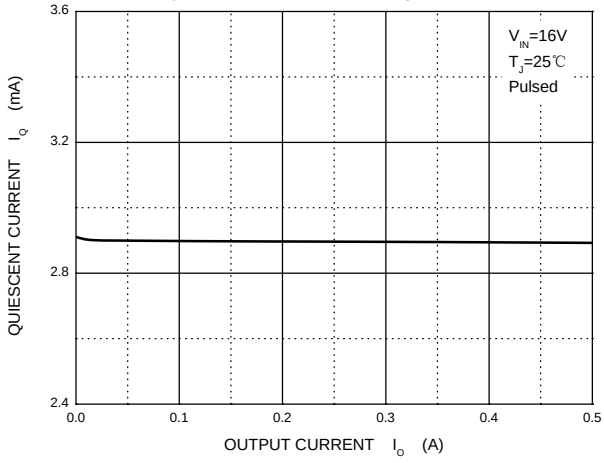
Dropout Characteristics



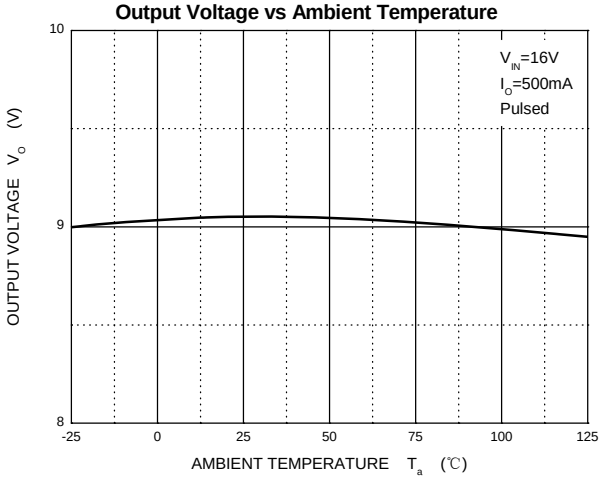
Quiescent Current



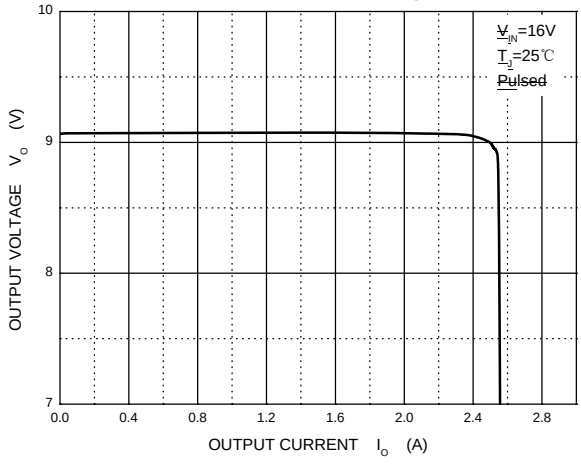
Quiescent Current vs Output Current



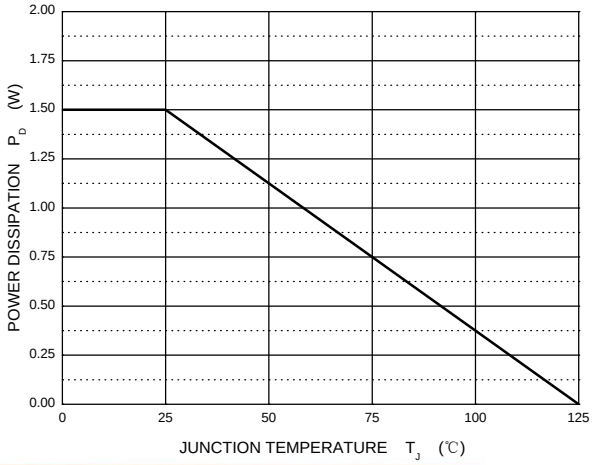
Output Voltage vs Ambient Temperature



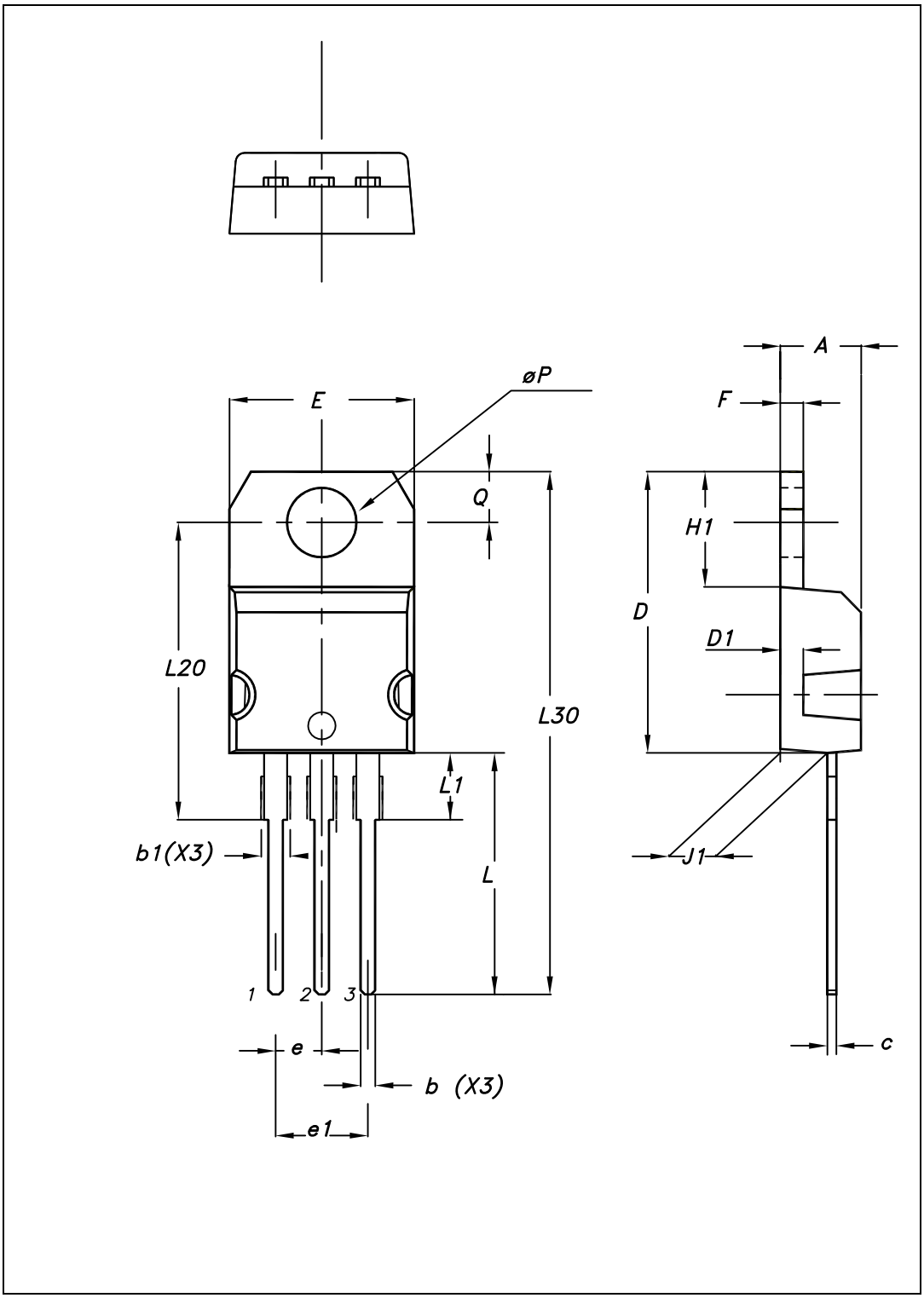
Current Cut-off Grid Voltage



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	
∅P	3.75		3.85
Q	2.65		2.95

REEL SPECIFICATION

P/N	PKG	QTY
L7809CV(MS)	TO-220	50/One tube 1000/a box of

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