

Adjustable Voltage Regulator

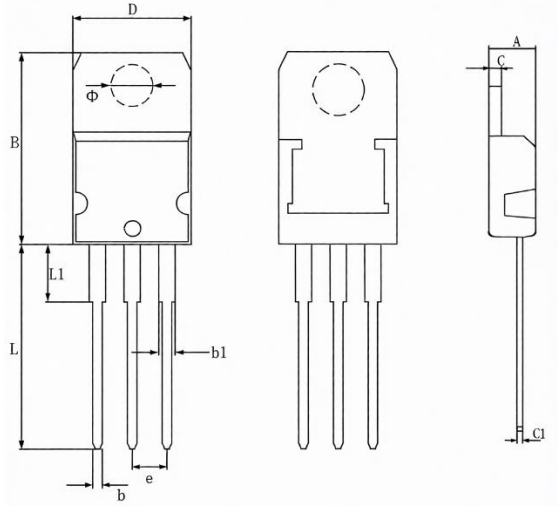
Primary characteristics		
Parameter	Value	Unit
Output voltage	4.75~5.25	V
Output current	1.5	A

Features

- Pb-free and RoHS compliant
- Short circuit protection
- Thermal overload protection
- Output transition SOA protection

Application

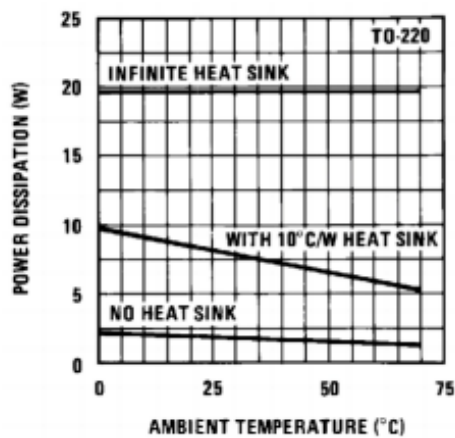
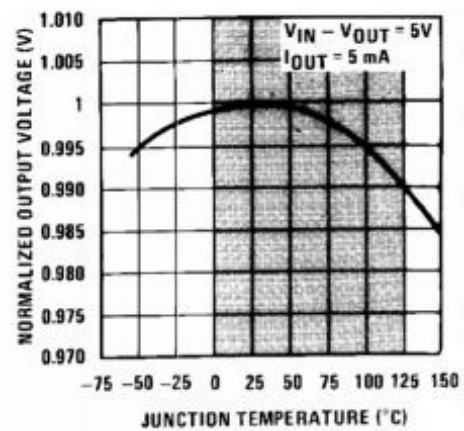
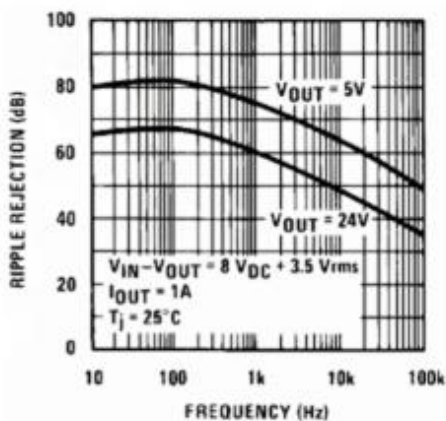
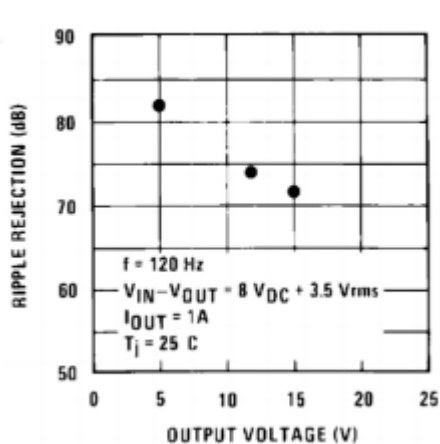
- Industrial power supplies
- SMPS post regulation
- HVAC systems
- AC invertors
- Test measurement equipment
- Brushed and brushless DC motor drivers
- Solar energy string invertors

Case dimensions											
											
TO-220											
Unit mm	A	C	C1	D	E	θ	e	b	b1	L	L1
MIN	4.15	0.985	0.365	10.03	15.02	3.7	2.54	0.77	1.23	13.0	3.5
MAX	4.25	1.015	0.395	10.10	15.75	3.9	TYP	0.83	1.29	14.0	3.9

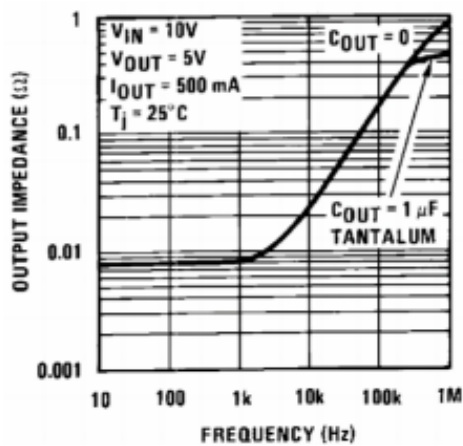
Absolute maximum ratings			
Parameter	Symbol	Rating	Unit
Input voltage	V_{IN}	40	V
Output current	I_{OUT}	1.5	A
Power dissipation ($T_C=25^{\circ}C$)	P_O	4	W
Operating junction temperature	T_J	-20 ~ +125	$^{\circ}C$
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}C$

Electrical characteristics
 $0 < T_J < +125^{\circ}\text{C}$, $I_{OUT}=350\text{mA}$, $C_i=0.33\mu\text{F}$, $C_o=1\mu\text{F}$, $V_{IN}=10.0\text{V}$ unless otherwise specified

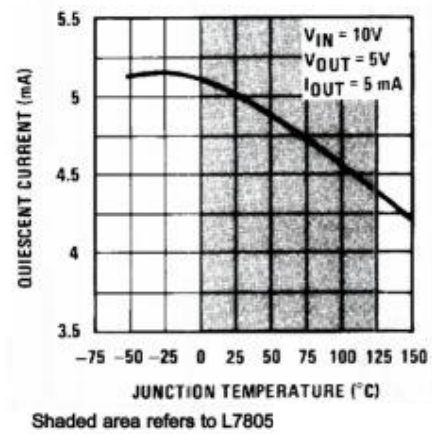
Parameter	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Output voltage	V_O	$I_O=5\text{mA}\sim 1\text{A}$, $P_D\leq 15\text{W}$, $V_{IN}=7\sim 20\text{V}$	4.75	5	5.25	V
Line regulation	ΔV_O	$I_O=500\text{mA}$, $V_{IN}=7\sim 20\text{V}$	-	-	50	mV
		$I_O=1\text{A}$, $V_{IN}=8\sim 20\text{V}$	-	-	100	
Load regulation	ΔV_{OUT}	$I_O=5\text{mA}\sim 1.5\text{A}$, $T_J = 25^{\circ}\text{C}$	-	-	100	mV
		$I_O=250\text{mA}\sim 750\text{mA}$, $T_J = 25^{\circ}\text{C}$	-	-	50	
Quiescent current	I_Q	$T_J = 25^{\circ}\text{C}$	-	-	6.0	mA
Quiescent current change	ΔI_Q	$I_O=5\text{mA}\sim 1\text{A}$	-	-	0.5	mA
		$I_O=200\text{mA}$, $V_{IN}=8\sim 25\text{V}$	-	-	0.8	
Output noise voltage	V_N	$f=10\text{Hz}\sim 100\text{kHz}$	-	40	-	μV
Ripple rejection	RR	$F=120\text{Hz}$, $V_{IN}=8\sim 18\text{V}$	-	80	-	dB
Dropout voltage	V_D	$T_J = 25^{\circ}\text{C}$, $I_O=500\text{mA}$	-	2	-	V
Short Circuit Current	$I_{O(MIN)}$	$T_J = 25^{\circ}\text{C}$, $V_{IN}=35\text{V}$	-	0.3	-	A
Peak current	I_{PK}	$T_J = 25^{\circ}\text{C}$	-	0.18	-	A

Typical characteristics
Maximum average power dissipation

Output voltage (normalized to 1V at $T_J=25^{\circ}\text{C}$)

Ripple rejection vs. Ripple rejection

Ripple rejection vs. Output voltage


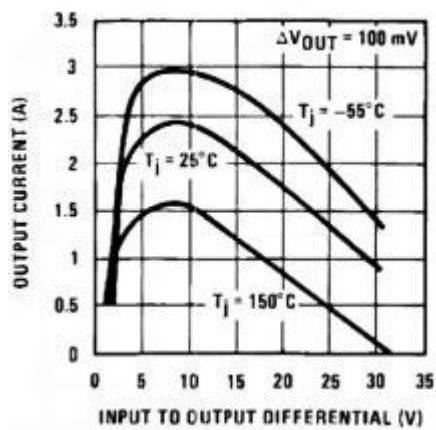
Output impedance vs. Frequency



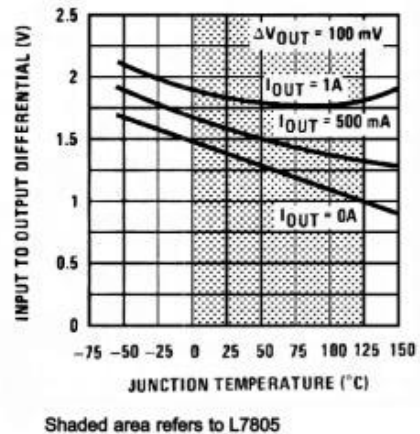
Quiescent current vs. Junction temperature



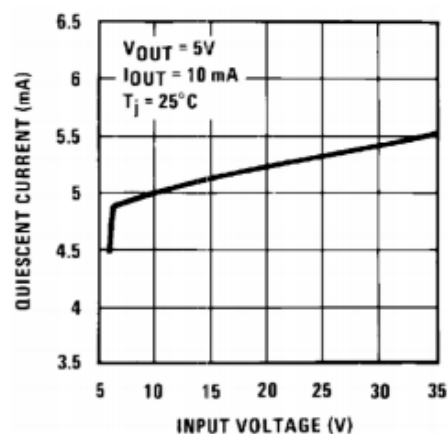
Peak output current

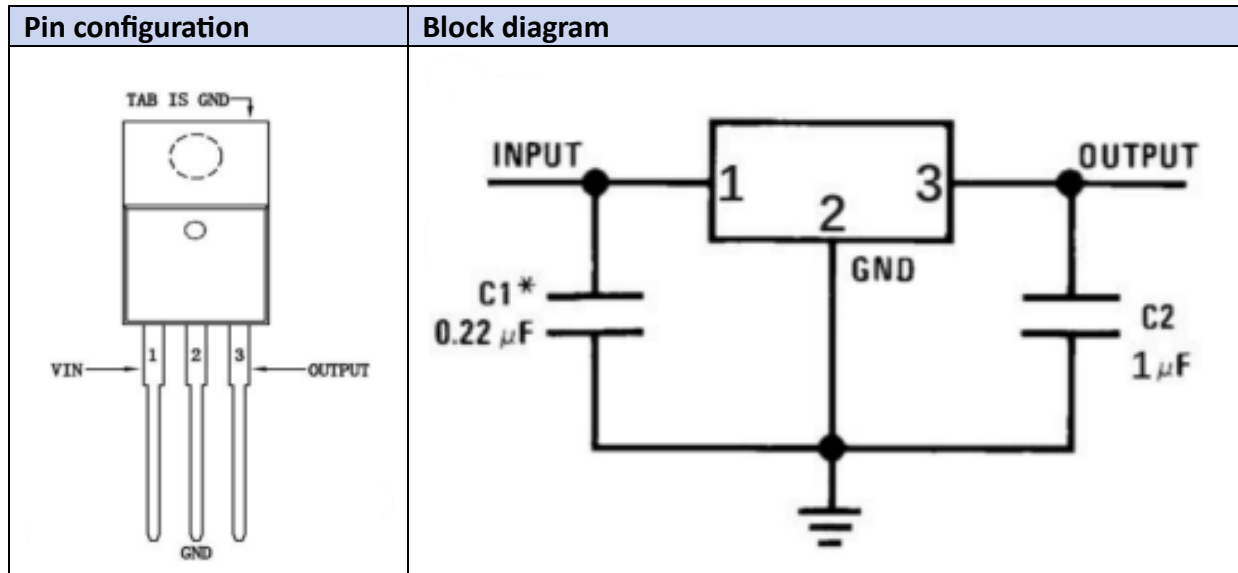


Dropout voltage



Quiescent current vs. Input voltage





Ordering information			
Part Number	Package	Shipping Quantity	Dimensions
L7805CV	TO-220	1000pcs/box	---

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