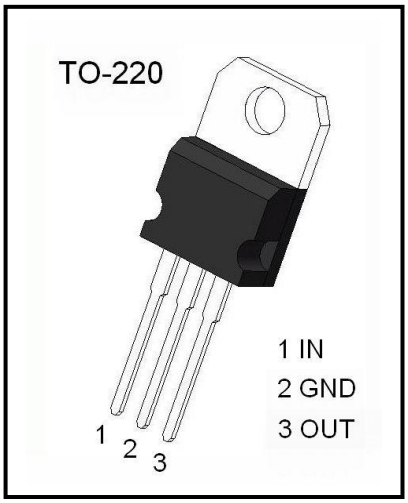
Features

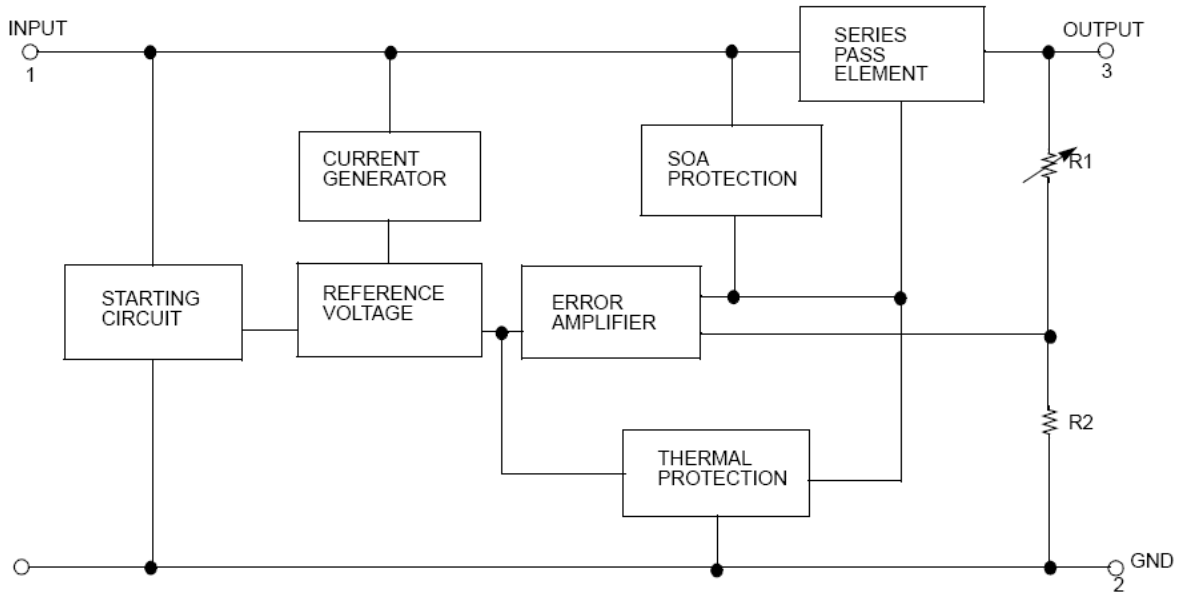
Output Current up to 1.5A
Output Voltages of 5V
Thermal Overload Protection
Short Circuit Protection
Output Transistor Safe Operating area (SOA)Protection



Description

The L7805 three-terminal positive regulators are available in the TO-220 package with several fixed output voltages making it useful in a wide range of applications.

Internal Block Digram



Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	V_{IN}	35	V
Out put Voltage	V_O	5	V
Operating Temperature Range	T_{OPR}	0 ~ + 125	℃
Storage Temperature Range	T_{STG}	-55 ~ + 150	℃

Electrical Characteristics

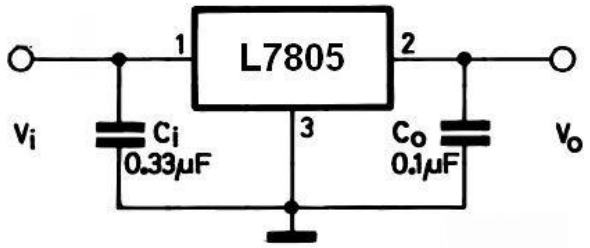
(Refer to test circuit , I_O = 500mA, V_I = 10V, C_I= 0.33μF, C_O= 0.1μF, unless otherwise specified)

Parameter	Symbol	Conditions		Value			Unit
				Min	Typ	Max	
Output Voltage	V_O	V_I = 7 ~ 20V , I_O=5mA ~ 1.5A		4.8	5	5.2	V
Line Regulation	ΔV_O	Tj = 25℃	V_I = 7V ~ 25V			100	mV
			V_I = 8V ~ 12V			50	
Load Regulation	ΔV_O	Tj = 25℃	I_O=5 mA ~ 1.5A			100	mV
			I_O=250mA ~ 750mA			50	
Quiesce`nt Current	I_Q	Tj = 25℃				8	mA
Quiescent Current Change	ΔI_Q	I_O=5mA ~ 1.5A				0.5	mA
		V_I = 7 ~ 25V				1.3	
Output Voltage Drift	$\Delta V / \Delta T$	I_O = 5mA			-0.8		mV/℃
Output Noise Voltage	V_N	$10H_Z \leq f \leq 100KH_Z$			42		μV
Ripple Rejection	RR	f = 120Hz, V_I = 8 to 18V		62			dB
Dropout Voltage	V_d				2		V
Short Circuit Current	I_{SC}	T_J=+25 , V_I= 35V			230		mA
Peak Current	I_{PK}				2.2		A

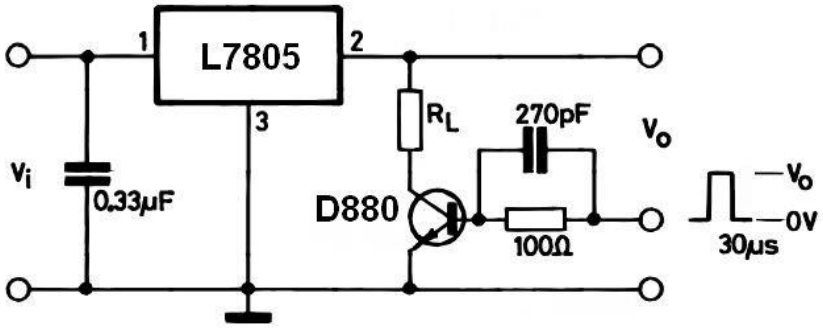
Notes:

*Load and line regulation are specified at constant junction temperature. Change in Vo due to heating effects must be taken into account separately. Pulse testing with low duty is used.

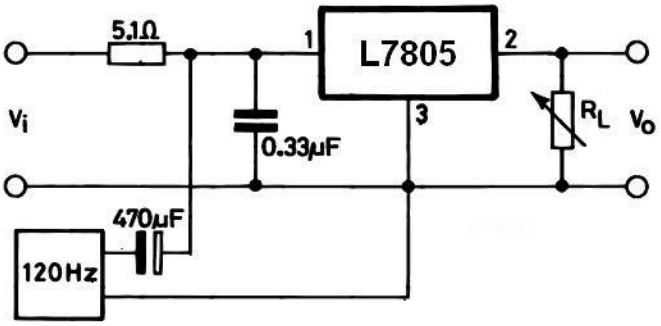
Test Circuits



DC Parameter

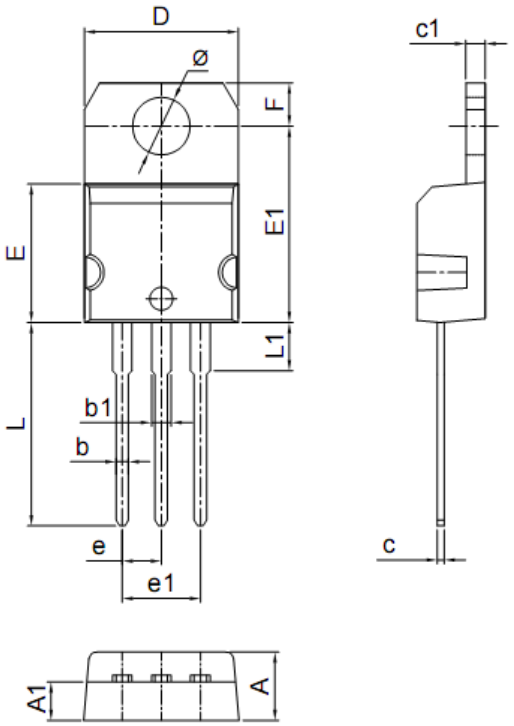


Load Regulation



Ripple Rejection

Package Dimensions



Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.30	4.70	0.171	0.184
A1	2.52	2.82	0.099	0.111
b	0.71	0.91	0.028	0.036
b1	1.17	1.37	0.046	0.054
c	0.40	0.55	0.012	0.020
c1	1.17	1.37	0.046	0.054
D	9.90	10.20	0.390	0.402
E	8.90	9.10	0.335	0.350
E1	12.50	13.00	0.472	0.492
e	2.44	2.64	0.096	0.104
e1	4.88	5.28	0.192	0.208
F	2.60	2.80	0.102	0.110
L	12.70	13.70	0.520	0.543
L1	2.90	3.30	0.150	0.165
Φ	3.75	3.95	0.142	0.156