



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





Micro Commercial Components

Micro Commercial Components
20736 Marilla Street Chatsworth
CA 91311
Phone: (818) 701-4933
Fax: (818) 701-4939

MC7809CT

Three-Terminal Positive Voltage Regulators

Features

- Output current in excess of 1.0 Ampere
- No external components required
- Internal thermal overload protection
- Internal short-circuit current limiting
- Output voltage offered in 2% tolerance
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

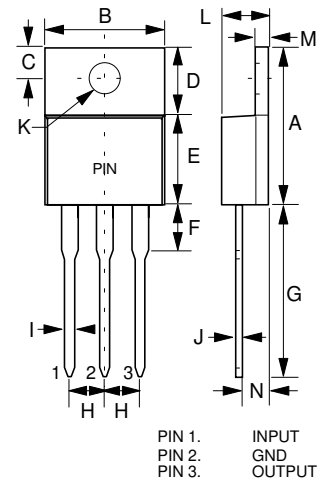
Maximum Ratings @ $T_A=25^\circ\text{C}$, Unless Otherwise Noted

Parameter	Symbol	Value	Unit
Input Voltage	V_1	30	V
Operating Ambient Temperature	P_D	15	W
Operating Junction Temperature	T_{OPR}	-20---+75	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55---+125	$^\circ\text{C}$

Electrical Characteristics ($V_i=15\text{V}$, $I_o=500\text{mA}$, $0^\circ\text{C}<T_j<125^\circ\text{C}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, Unless Otherwise Specified)

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V_o	8.82V	9.0V	9.18V	$T_j=25^\circ\text{C}$
		8.77V		9.23V	$10.5\text{V} \leq V_1 \leq 27\text{V}$, $5\text{mA} \leq I_o \leq 1.0\text{A}$, $P_D=15\text{W}$
Load Regulation	ΔV_o		12mV	160mV	$5\text{mA} \leq I_o \leq 1.5\text{A}$, $T_j=25^\circ\text{C}$,
			4.0mV	80mV	$250\text{mA} \leq I_o \leq 750\text{mA}$, $T_j=25^\circ\text{C}$
Line regulation	ΔV_o		6.0mV	160mV	$11.5\text{V} \leq V_1 \leq 30\text{V}$, $T_j=25^\circ\text{C}$
			2.0mV	80mV	$12\text{V} \leq V_1 \leq 18\text{V}$, $T_j=25^\circ\text{C}$
Quiescent Current	I_q		4.3mA	8.0mA	$T_j=25^\circ\text{C}$, $I_o=0$
Quiescent Current Change	ΔI_q			1.0mA 0.5mA	$14.5\text{V} \leq V_1 \leq 30\text{V}$ $5\text{mA} \leq I_o \leq 1.0\text{A}$
Output Noise Voltage	V_N		52 μV		$10\text{Hz} \leq f \leq 100\text{KHz}$ $T_j=25^\circ\text{C}$
Ripple Rejection	RR	55dB	72dB		$f=120\text{Hz}$
Dropout Voltage	V_d		2.0V		$I_o=1.0\text{A}$, $T_j=25^\circ\text{C}$
Output Short Circuit Current	R_o		16mohm		$f=1.0\text{KHz}$
Output Short Circuit Current	I_{os}		450mA		$T_j=25^\circ\text{C}$
Peak Output Current	I_{opeak}		2.2A		$T_j=25^\circ\text{C}$
Temperature Coefficient of Output voltage	$\frac{\Delta V_o}{\Delta T_j}$		1.8mV/ $^\circ\text{C}$		$0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$, $I_o=5\text{mA}$

TO-220

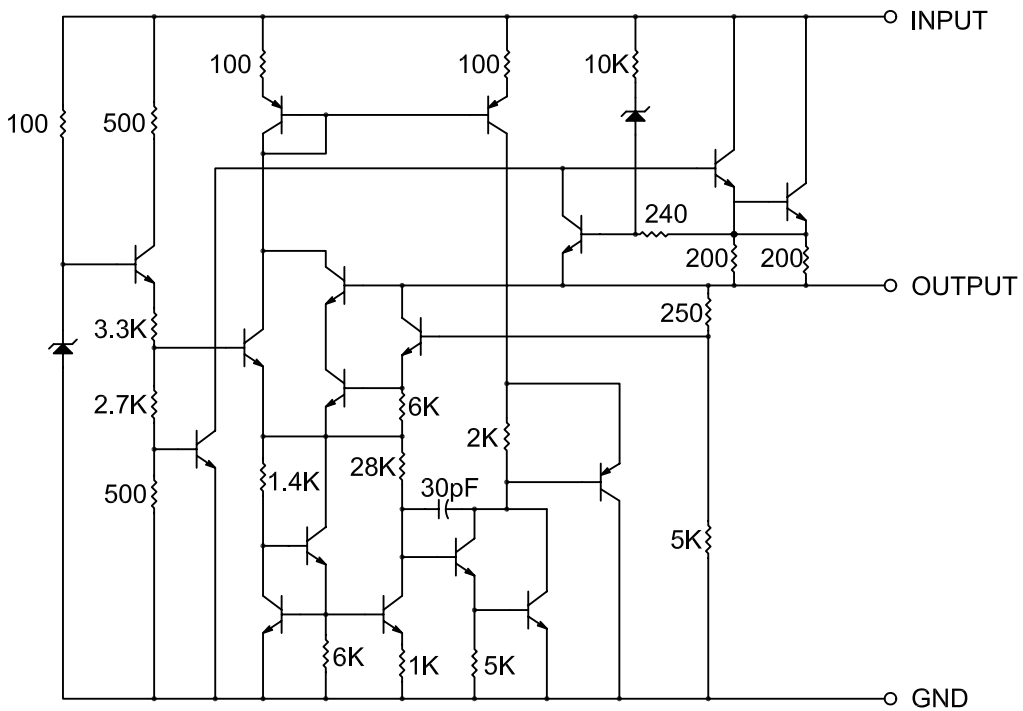


DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.560	.625	14.22	15.88	
B	.380	.420	9.65	10.67	
C	.100	.135	2.54	3.43	
D	.230	.270	5.84	6.86	
E	.380	.420	9.65	10.67	
F	-----	.250	-----	6.35	
G	.500	.580	12.70	14.73	
H	.090	.110	2.29	2.79	
I	.020	.045	0.51	1.14	
J	.012	.025	0.30	0.64	
K	.139	.161	3.53	4.09	∅
L	.140	.190	3.56	4.83	
M	.045	.055	1.14	1.40	
N	.080	.115	2.03	2.92	

MC7809CT

Representation Schematic Diagram





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