



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

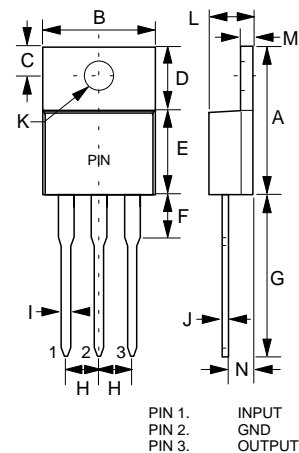
### Maximum Ratings @ $T_A=25^\circ\text{C}$ , Unless Otherwise Noted

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	$\Delta V_o$		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	$\Delta V_o$		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	$\Delta I_q$			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 $\mu\text{V}$		$10\text{Hz} \leq f \leq 100\text{KHz}$ $T_j=25^\circ\text{C}$
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/ $^\circ\text{C}$		$0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$ , $I_o=5\text{mA}$

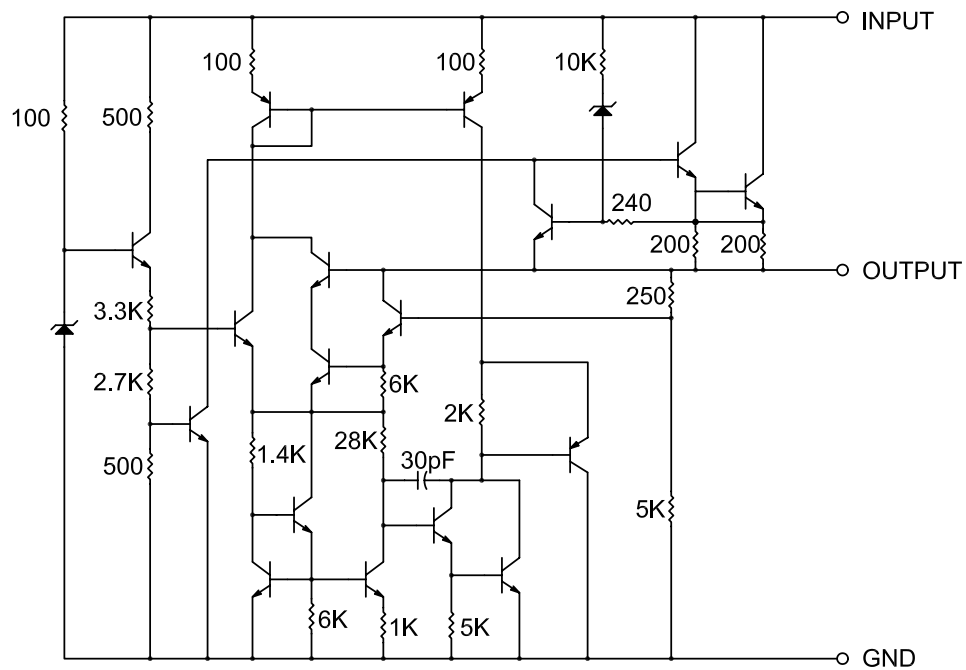
### TO-220



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





Micro Commercial Components™

**\*\*\*IMPORTANT NOTICE\*\*\***

*Micro Commercial Components Corp.* reserves the right to make changes without further notice to any product herein to make corrections, modifications, enhancements, improvements, or other changes. *Micro Commercial Components Corp.* does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold *Micro Commercial Components Corp.* and all the companies whose products are represented on our website, harmless against all damages.

**\*\*\*APPLICATIONS DISCLAIMER\*\*\***

Products offer by *Micro Commercial Components Corp.* are not intended for use in Medical, Aerospace or Military Applications.