

## Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant (Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- 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
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Mounting Torque: 5 in-lbs Maximum

**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	°C
Storage Temperature Range	$T_{STG}$	-55---+125	°C

**Electrical Characteristics ( $V_i=14\text{V}$ ,  $I_o=500\text{mA}$ ,  $0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$ ,  $C_i=0.33\mu\text{F}$ ,  $C_o=0.1\mu\text{F}$ , Unless Otherwise Specified)**

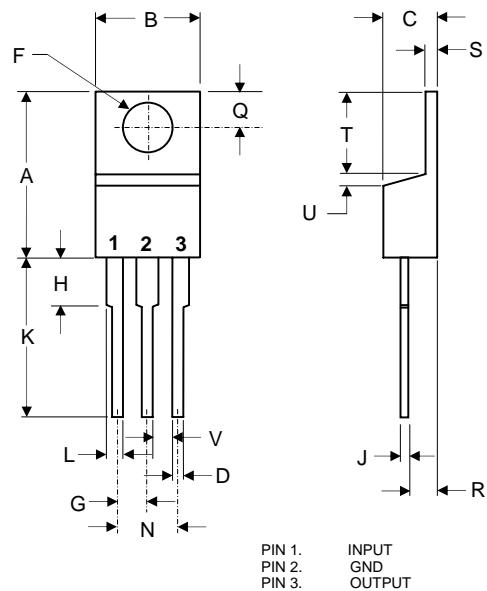
Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	$V_o$	7.84V	8.0V	8.16V	$T_j=25^\circ\text{C}$
		7.74V		8.26V	$10.5V \leq V_1 \leq 23V$ , $5\text{mA} \leq I_o \leq 1.0\text{A}$ , $P_D=15\text{W}$
Load Regulation	$\Delta V_o$		12mV	160mV	$5\text{mA} \leq I_o \leq 1.5\text{A}$ , $T_j=25^\circ\text{C}$ ,
			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	$10.5V \leq V_1 \leq 25\text{V}$ , $T_j=25^\circ\text{C}$
			2.0mV	80mV	$11V \leq V_1 \leq 17\text{V}$ , $T_j=25^\circ\text{C}$
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	$10.5V \leq V_1 \leq 25\text{V}$ $5\text{mA} \leq I_o \leq 1.0\text{A}$
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	56dB	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	$\Delta V_o/\Delta T_j$		1.8mV/°C		$0^\circ\text{C} \leq T_j \leq 125^\circ\text{C}$ , $I_o=5\text{mA}$

Notes: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7.

## MC7808CT

### Three-Terminal Positive Voltage Regulators

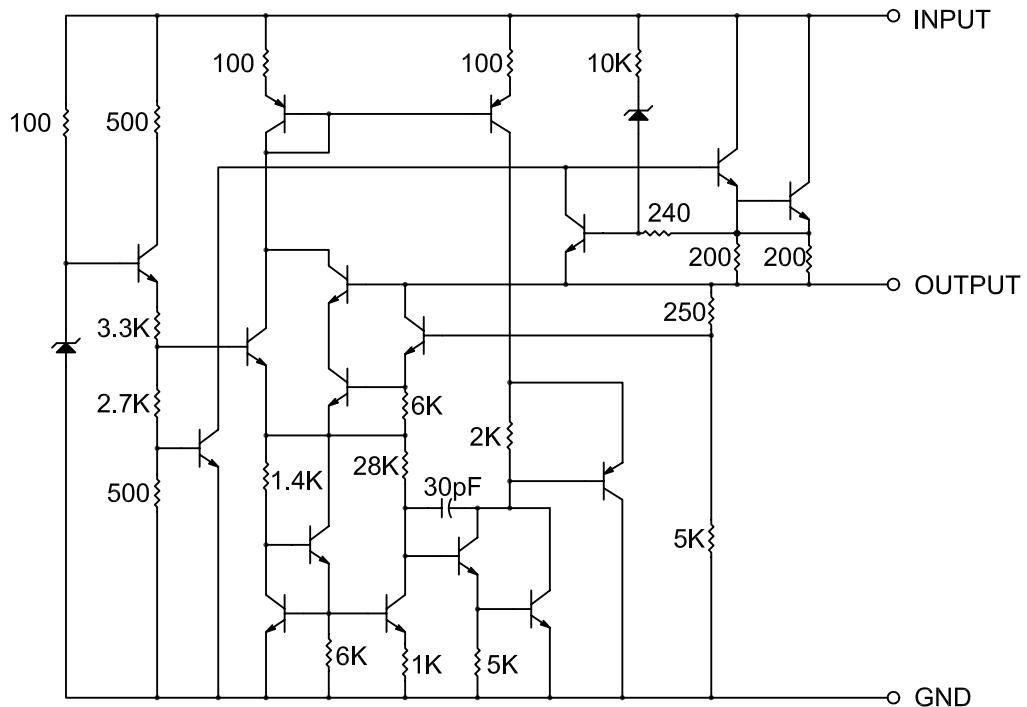
#### TO-220



PIN 1. INPUT  
PIN 2. GND  
PIN 3. OUTPUT

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.560	.625	14.22	15.88	
B	.380	.420	9.65	10.67	
C	.140	.190	3.56	4.82	
D	.020	.045	0.51	1.14	
F	.139	.161	3.53	4.09	Ø
G	.190	.110	2.29	2.79	
H	---	.250	---	6.35	
J	.012	.025	0.30	0.64	
K	.500	.580	12.70	14.73	
L	.045	.060	1.14	1.52	
N	.190	.210	4.83	5.33	
Q	.100	.135	2.54	3.43	
R	.080	.115	2.04	2.92	
S	.045	.055	1.14	1.39	
T	.230	.270	5.84	6.86	
U	-----	.050	-----	1.27	
V	.045	-----	1.15	-----	

## Representation Schematic Diagram



## Ordering Information :

Device	Packing
Part Number-BP	Bulk; 1Kpcs/Box

Note : Adding "-HF" suffix for halogen free, eg. Part Number-BP-HF

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