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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!



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# MC7808CT

## Three-Terminal Positive Voltage Regulators

### 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<sub>A</sub>=25°C, Unless Otherwise Noted**

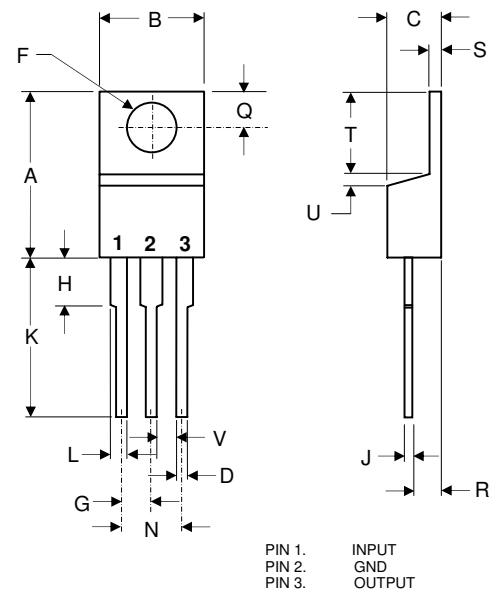
Parameter	Symbol	Value	Unit
Input Voltage	V <sub>I</sub>	30	V
Operating Ambient Temperature	P <sub>D</sub>	15	W
Operating Junction Temperature	T <sub>OPR</sub>	-20---+75	°C
Storage Temperature Range	T <sub>STG</sub>	-55---+125	°C

**Electrical Characteristics (V<sub>I</sub>=14V, I<sub>O</sub>=500mA, 0°C<T<sub>J</sub><125°C, C<sub>i</sub>=0.33uF, C<sub>o</sub>=0.1uF, Unless Otherwise Specified)**

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V <sub>O</sub>	7.84V	8.0V	8.16V	T <sub>J</sub> =25°C
		7.74V		8.26V	10.5V ≤ V <sub>I</sub> ≤ 23V, 5mA ≤ I <sub>O</sub> ≤ 1.0A, P <sub>D</sub> =15W
Load Regulation	ΔV <sub>O</sub>		12mV	160mV	5mA ≤ I <sub>O</sub> ≤ 1.5A, T <sub>J</sub> =25°C,
			4.0mV	80mV	250mA ≤ I <sub>O</sub> ≤ 750mA, T <sub>J</sub> =25°C
Line regulation	ΔV <sub>O</sub>		6.0mV	160mV	10.5V ≤ V <sub>I</sub> ≤ 25V, T <sub>J</sub> =25°C
			2.0mV	80mV	11V ≤ V <sub>I</sub> ≤ 17V, T <sub>J</sub> =25°C
Quiescent Current	I <sub>q</sub>		4.3mA	8.0mA	T <sub>J</sub> =25°C, I <sub>O</sub> =0
Quiescent Current Change	ΔI <sub>q</sub>			1.0mA 0.5mA	10.5V ≤ V <sub>I</sub> ≤ 25V 5mA ≤ I <sub>O</sub> ≤ 1.0A
Output Noise Voltage	V <sub>N</sub>		52μV		10Hz ≤ f ≤ 100KHz T <sub>J</sub> =25°C
Ripple Rejection	RR	56dB	72dB		f=120Hz
Dropout Voltage	V <sub>d</sub>		2.0V		I <sub>O</sub> =1.0A, T <sub>J</sub> =25°C
Output Short Circuit Current	R <sub>O</sub>		16mohm		f=1.0KHz
Output Short Circuit Current	I <sub>OS</sub>		450mA		T <sub>J</sub> =25°C
Peak Output Current	I <sub>opeak</sub>		2.2A		T <sub>J</sub> =25°C
Temperature Coefficient of Output voltage	ΔV <sub>O</sub> /ΔT <sub>J</sub>		1.8mV/°C		0°C ≤ T <sub>J</sub> ≤ 125°C, I <sub>O</sub> =5mA

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

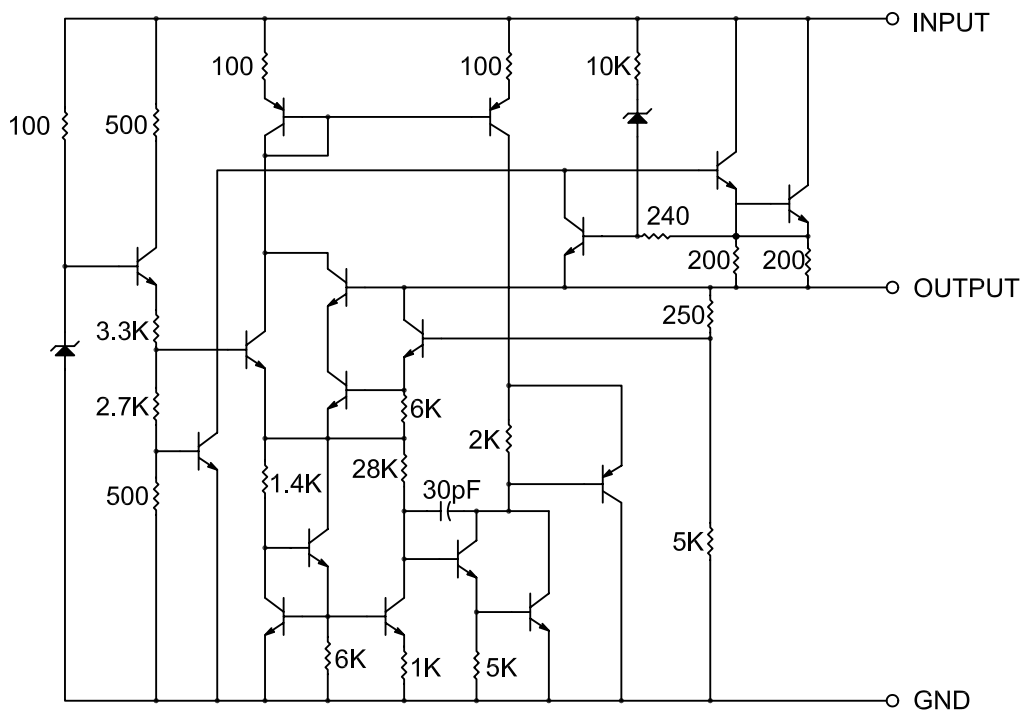
### TO-220



DIM	DIMENSIONS				NOTE
	INCHES		MM		
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	∅
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	----	

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## Representation Schematic Diagram





Micro Commercial Components

### Ordering Information :

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

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

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