



Micro Commercial Components

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MC7808CT

Three-Terminal Positive Voltage Regulators

Features

- 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
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1

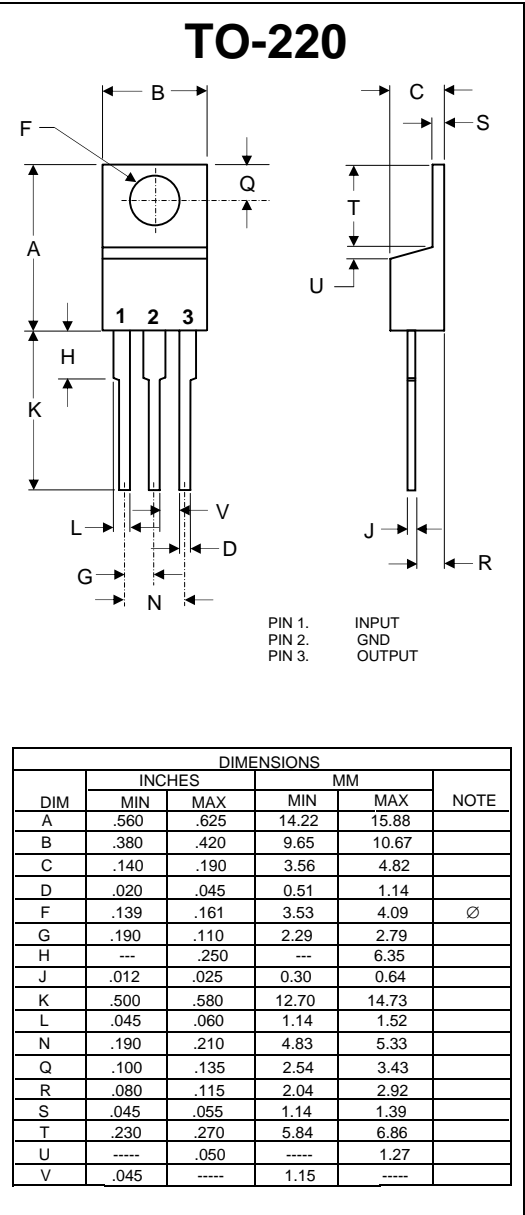
Maximum Ratings @ T_A=25°C, Unless Otherwise Noted

Parameter	Symbol	Value	Unit
Input Voltage	V _I	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=14V, I_O=500mA, 0°C<T_J<125°C, C_i=0.33uF, C_o=0.1uF, Unless Otherwise Specified)

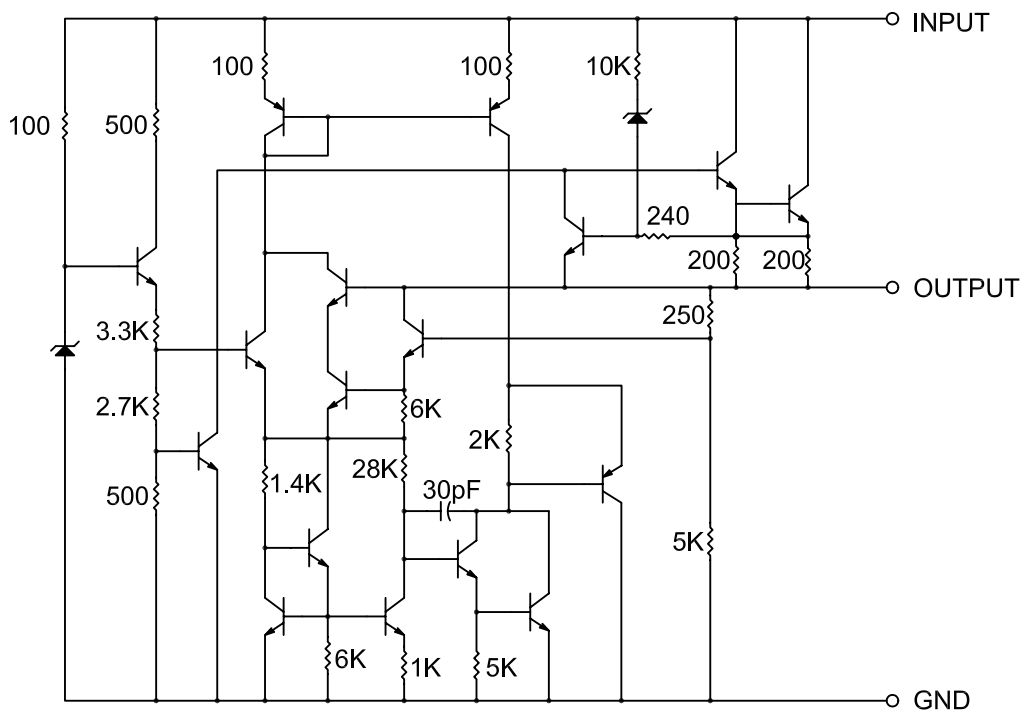
Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V _O	7.84V	8.0V	8.16V	T _J =25°C
		7.74V		8.26V	10.5V ≤ V _I ≤ 23V, 5mA ≤ I _O ≤ 1.0A, P _D =15W
Load Regulation	ΔV _O		12mV	160mV	5mA ≤ I _O ≤ 1.5A, T _J =25°C,
			4.0mV	80mV	250mA ≤ I _O ≤ 750mA, T _J =25°C
Line regulation	ΔV _O		6.0mV	160mV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

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



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Representation Schematic Diagram





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Ordering Information

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

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