



Micro Commercial Components

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MC7810CT

Features

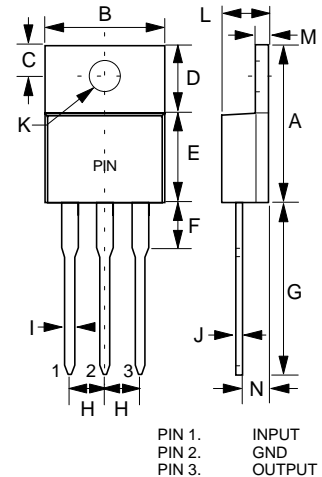
- Output current in excess of 1.0 Ampere
- No external components required
- Internal thermal overload protection
- Internal short-circuit current limiting
- Output voltage offered in 2% tolerance
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

Three-Terminal Positive Voltage Regulators

Maximum Ratings @ T_a=25°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

TO-220



Electrical Characteristics (V_i=16V, I_o=500mA, 0°C<T_j<125°C, C_i=0.33uF, C_o=0.1uF, Unless Otherwise Specified)

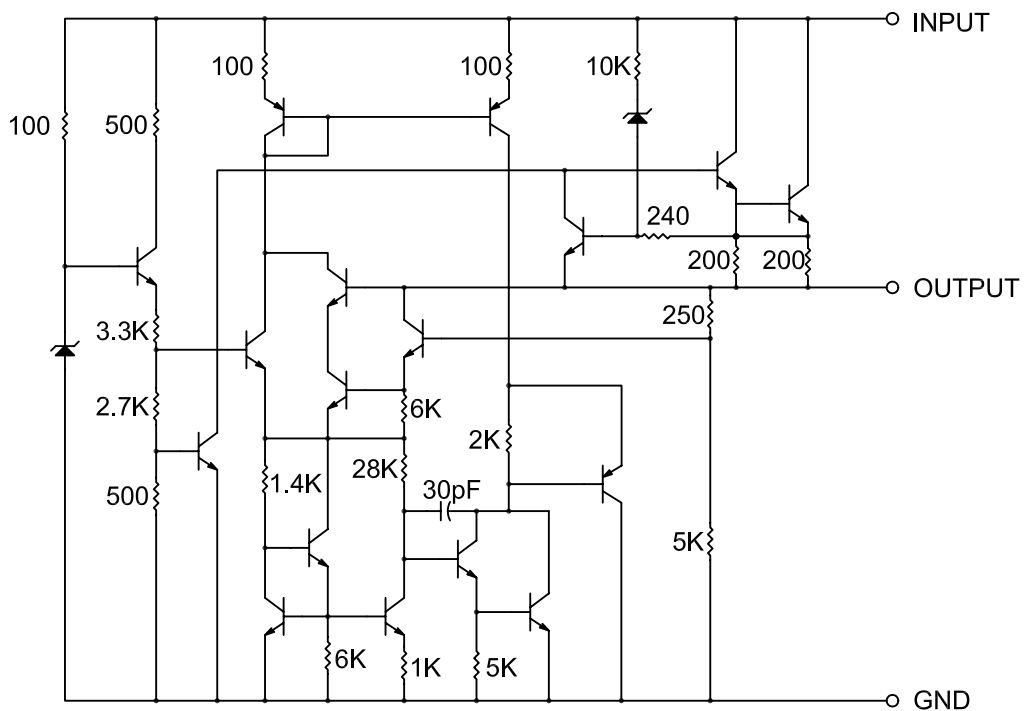
Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V _o	9.8V	10.0V	10.2V	T _j =25°C
		9.75V		12.25V	12.5V ≤ V ₁ ≤ 30V, 5mA ≤ I _o ≤ 1.0A, P _D =15W
Load Regulation	ΔV _o		12mV	240mV	5mA ≤ I _o ≤ 1.5A, T _j =25°C,
			4.0mV	120mV	250mA ≤ I _o ≤ 750mA, T _j =25°C
Line regulation	ΔV _o		10mV	240mV	10.5V ≤ V ₁ ≤ 30V, T _j =25°C
			3.0mV	120mV	13V ≤ V ₁ ≤ 19V, 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	14.5V ≤ V ₁ ≤ 30V 5mA ≤ I _o ≤ 1.0A
Output Noise Voltage	V _N		52μV		10Hz ≤ f ≤ 100KHz T _j =25°C
Ripple Rejection	RR	54dB	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

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	

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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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