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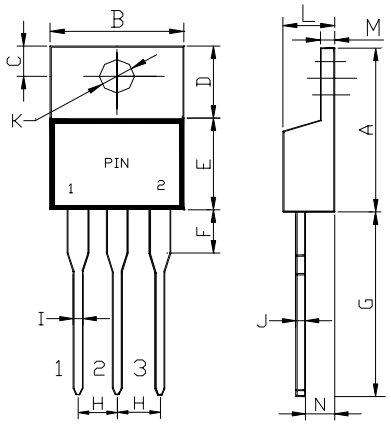
LM7808C

Three-Terminal Positive Voltage Regulators



PIN1:INPUT
PIN2:GND
PIN3:OUTPUT

TO-220

Features

* Output current at 1.0 Ampere
* No external components required
* Internal thermal overload protection
* Internal short-circuit current limiting
* Output voltage offered in 4% tolerance

Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	V1	30	V
Operating Ambient Temperature	PD	15	W
Operating Junction Temperature	TOPR	-20to+70	°C
Storage Temperature Range	TSTG	-55to+125	°C

Mechanical Data

* Case: TO-220AB Molded Plastic
* Terminals: Plated Lead Solderable per MIL-STD-202, Method 208
* Marking: Type Number
* Weight: 2.24 grams (approx)

Dimensions

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.570	0.620.	14.48	15.75	
B	0.380	0.405	9.66	10.28	
C	0.100	0.120	2.54	3.04	
D	0.235	0.255	5.97	6.48	
E	0.335	0.365	8.51	9.27	
F	0.110	0.155	2.80	3.93	
G	0.500	0.562	12.70	14.27	
H	0.095	0.105	2.42	2.66	
I	0.025	0.035	0.64	0.89	
J	0.016	0.025	0.41	0.64	
K	0.142	0.147	3.61	3.37	ϕ
L	0.160	0.190	4.06	4.82	
M	0.045	0.055	1.14	1.39	
N	0.102 typ		2.6 typ		

Electrical Characteristics

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V_O	7.68V	8.0V	8.32V	Tj=25°C
		7.74V		8.26V	10.5V ≤ V1 ≤ 23V, 5mA ≤ Io ≤ 1.0A PD=15W
Load Regulation	$\triangle V_O$		12mV	160mV	5mA≤Io≤1.5A, Tj=25°C
			4.0mV	60mV	250mA≤Io≤750mV, Tj=25°C
Line regulation	$\triangle V_O$		6.0mV 2.0mV	160mV 80mV	10.5V≤V1≤25V, Tj=25°C 11V≤V1≤17V, Tj=25°C
Quiescent Current	I_Q		4.3mA	8.0mA	Tj=25°C,Io=0
Quiescent Current Change	$\triangle I_Q$			1.0mA 0.5mA	10.5V≤V1≤25V 5mA≤Io≤1.0A
Output Noise Voltage	V_N		52μV		10Hz≤f≤100KHz, Tj=25°C
Ripple Rejection	RR	56dB	72dB		f=120Hz
Dropout Voltage	V_d		2.0V		Io=1.0A,Tj=25°C
Output Short Circuit Current	R_O		16mohm		f=1.0KHz
Output Short Circuit Current	I_{OS}		450mA		Tj=25°C
Peak Output Current	I_{opeak}		2.2A		Tj=25°C
Temperature Coefficient of Output voltage	$\triangle V_O/\triangle T_j$		1.8mV/°C		0°C≤V1≤125°C, Io=5mA