

LM7808C

Three-Terminal Positive Voltage Regulators

Features

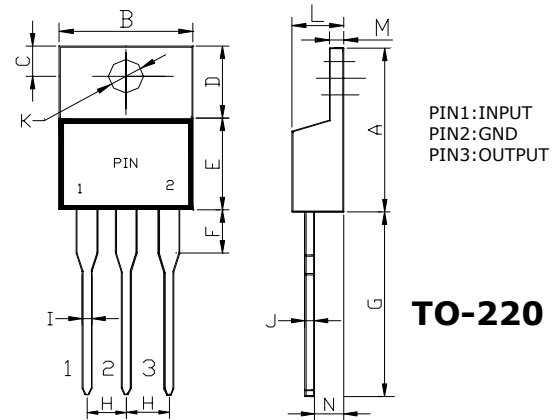
- * Output current at 1.0 Ampere
- * No external components required
- * Internal thermal overload protection
- * Internal short-circuit current limiting
- * Output voltage offered in 4% tolerance

Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	V _I	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		NO TE
	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	T _j =25°C
		7.74V		8.26V	10.5V ≤ V _I ≤ 23V, 5mA ≤ I _o ≤ 1.0A PD=15W
Load Regulation	ΔV _o		12mV	160mV	5mA ≤ I _o ≤ 1.5A, T _j =25°C
			4.0mV	60mV	250mA ≤ I _o ≤ 750mV, 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	10.5V ≤ V _I ≤ 25V
				0.5mA	5mA ≤ I _o ≤ 1.0A
Output Noise Voltage	V _N		52 μV		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 ≤ V _I ≤ 125°C, I _o =5mA