



Micro Commercial Components

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MC7809FCT

Three-Terminal Positive Voltage Regulators

Features

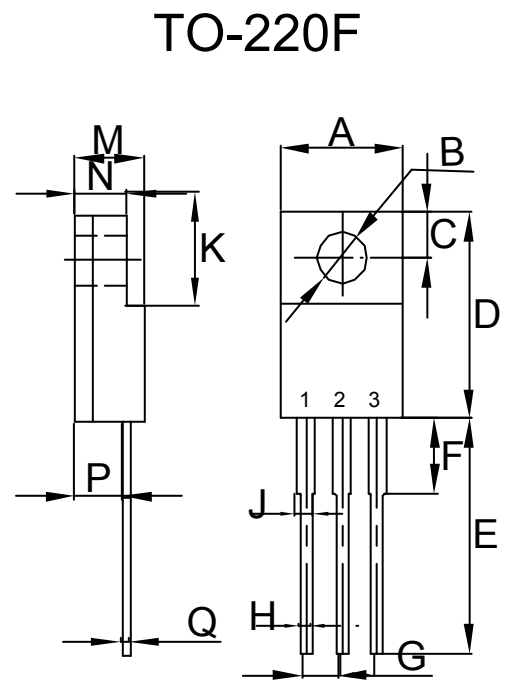
- Output current in excess of 1.5 Ampere
- Input Voltage: 35V
- Output Voltage: 9V
- Total Dissipation: 15W
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

Maximum Ratings @ $T_A=25^\circ\text{C}$, Unless Otherwise Noted

Parameter	Symbol	Value	Unit
Input Voltage	V_1	35	V
Total Dissipation	P_D	15	W
Operating Junction Temperature	T_{OPR}	0---+150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65---+150	$^\circ\text{C}$

Electrical Characteristics ($V_i=10\text{V}$, $I_o=500\text{mA}$, $0^\circ\text{C}<T_j<125^\circ\text{C}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, Unless Otherwise Specified)

Parameter	Sym	Min	Typ	Max	Test conditions
Output Voltage	V_o	8.65V	9.0V	9.35V	$T_j=25^\circ\text{C}$
		8.55V	9V	9.45V	$11.5\text{V} \leq V_1 \leq 24\text{V}$, $5\text{mA} \leq I_o \leq 1.0\text{A}$, $P_D \leq 15\text{W}$
Load Regulation	ΔV_o		12mV	180mV	$5\text{mA} \leq I_o \leq 1.5\text{A}$, $T_j=25^\circ\text{C}$,
			4.0mV	90mV	$250\text{mA} \leq I_o \leq 750\text{mA}$, $T_j=25^\circ\text{C}$
Line regulation	ΔV_o		7.0mV 2.0mV	180mV 90mV	$11.5\text{V} \leq V_1 \leq 27\text{V}$, $T_j=25^\circ\text{C}$ $13\text{V} \leq V_1 \leq 19\text{V}$, $T_j=25^\circ\text{C}$
Quiescent Current	I_q		4.3mA	8.0mA	$T_j=25^\circ\text{C}$
Quiescent Current Change	ΔI_q			1mA 0.5mA	$11.5\text{V} \leq V_1 \leq 27\text{V}$ $5\text{mA} \leq I_o \leq 1.0\text{A}$
Output Noise Voltage	V_N		60 μV		f:10Hz~100kHz
Ripple Rejection	RR	55dB	70dB		$12\text{V} \leq V_1 \leq 22\text{V}$ f=120Hz, $T_j=25^\circ\text{C}$
Dropout Voltage	V_d		2.0V		$I_o=1.0\text{A}$, $T_j=25^\circ\text{C}$
Output Short Circuit Current	I_{OS}		400mA		$T_j=25^\circ\text{C}$
Peak Output Current	I_{Opeak}		2.2A		$T_j=25^\circ\text{C}$



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	MIN 388	MAX 407	MIN 9.85	MAX 10.35	
B	MIN 128	MAX 145	MIN 3.25	MAX 3.55	
C	MIN 101	MAX 111	MIN 2.57	MAX 2.83	
D	MIN 570	MAX 610	MIN 14.9	MAX 15.5	
E	MIN 496	MAX 520	MIN 12.6	MAX 13.2	
F	MIN 148	MAX 167	MIN 3.75	MAX 4.25	
G	MIN 096	MAX 101	MIN 2.44	MAX 2.57	
H	MIN 019	MAX 029	MIN .47	MAX .73	
J	MIN 046	MAX 056	MIN 1.17	MAX 1.43	
K	MIN 266	MAX 285	MIN 6.75	MAX 7.25	
M	MIN 165	MAX 190	MIN 4.25	MAX 4.75	
N	MIN 110	MAX 130	MIN 2.81	MAX 3.31	
P	MIN 097	MAX 107	MIN 2.72	MAX 2.48	
Q	MIN 019	MAX 029	MIN .47	MAX .73	



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