

NTE1938 Integrated Circuit Positive Voltage Regulator, 15V, 2A

Features:

- 3 Pin Plastic Package TO3P
- Only Output Capacitor is Externally Required
- Precise Setting Voltage of $\pm 2\%$
- Wide Input Voltage Range
- Built-in Current Foldback Protection
- Ideal Combination of Passivated Power Transistor and High Reliability Flip-Chip Circuit

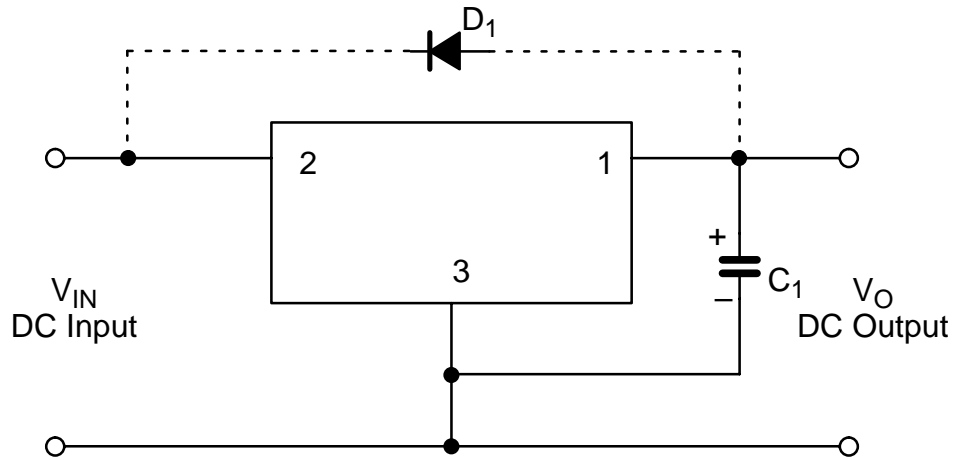
Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

DC Input Voltage, V_{IN}	45V
Power Dissipation, P_C ($T_C = +25^\circ\text{C}$)	50W
(No Fin)	2W
Thermal Resistance, Junction-to-Case, R_{thJC}	2°C/W
Junction Temperature Range, T_J	-30° to $+125^\circ\text{C}$
Operating Ambient Temperature Range, T_{op}	-20° to $+80^\circ\text{C}$
Storage Temperature Range, T_{stg}	-30° to $+125^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
DC Input Voltage	V_{IN}	$I_O = 2A$	18	–	40	V
Output Voltage	V_O	$V_{IN} = 23V, I_O = 0.5A$	14.8	15.0	15.2	V
Output Current	I_O		0	–	2	A
Line Regulation	ΔV_{LINE}	$V_{IN} = 19.5V$ to $26.5V, I_O = 0.5A$	–	10	30	mV
Load Regulation	ΔV_{LOAD}	$V_{IN} = 23V, I_O = 0$ to $2A$	–	80	200	mV
Temperature Coefficient	K_t		–	± 0.5	–	$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$f = 100\text{Hz}$ to 120Hz	–	60	–	dB
Foldback Current	I_{S1}		2.4	–	–	A
Short-Circuit Current	I_{S2}		–	–	0.6	A

External Circuit



- Note 1. Output capacitor C_1 (47 to 100 μ f) shall be connected directly to output terminal (Pin1) and GND terminal (Pin3) as shown above.
- Note 2. When wiring between the regulator and the load is long, another capacitor (47 to 100 μ f) shall be added in parallel with the load.
- Note 3. If there is a possibility of reverse biasing between input and output, a protection diode (D_1) is to be added. The recommended diode for D_1 is NTE116.

