ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE1936
Integrated Circuit
Positive Voltage Regulator, 12V, 2A

Features:

- 3 Pin Plastic Package TO3P
- Only Output Capacitor is Externally Required
- Precise Setting Voltage of ±2%
- Wide Input Voltage Range (~45V)
- Built–in Current Foldback Protection
- Ideal Combination of Passivated Power Transistor and High Reliability Flip–Chip Circuit

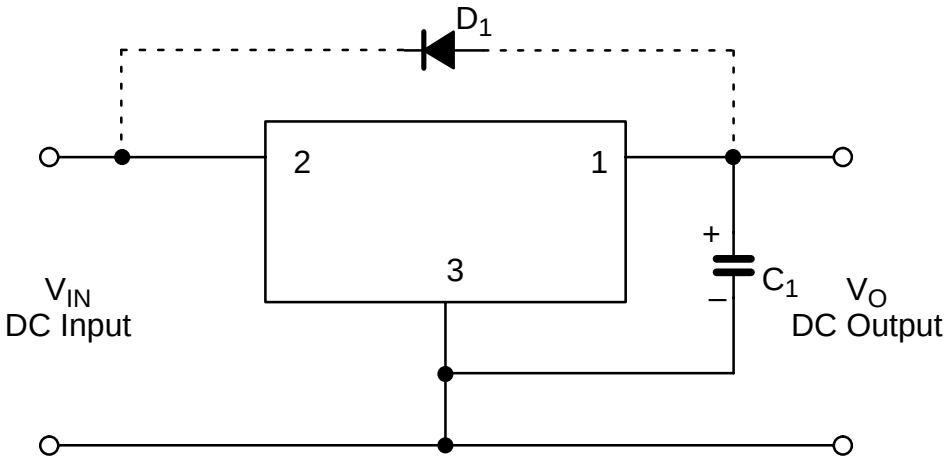
Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

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

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
DC Input Voltage	V_{IN}	I_O = 2A	15	–	35	V
Output Voltage	V_O	V_{IN} = 19V, I_O = 0.5A	11.8	12.0	12.2	V
Output Current	I_O		0	–	2	A
Line Regulation	ΔV_{LINE}	V_{IN} = 16V to 22V, I_O = 0.5A	–	10	30	mV
Load Regulation	ΔV_{LOAD}	V_{IN} = 19V, I_O = 0 to 2A	–	80	200	mV
Temperature Coefficient	K_t		–	±1.5	–	mV/°C
Ripple Rejection		100 to 120H_Z	–	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 100µf) 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 100µf) 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.

