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

NTE1902
Integrated Circuit
3 Terminal Positive Voltage Regulator
9V, 100mA

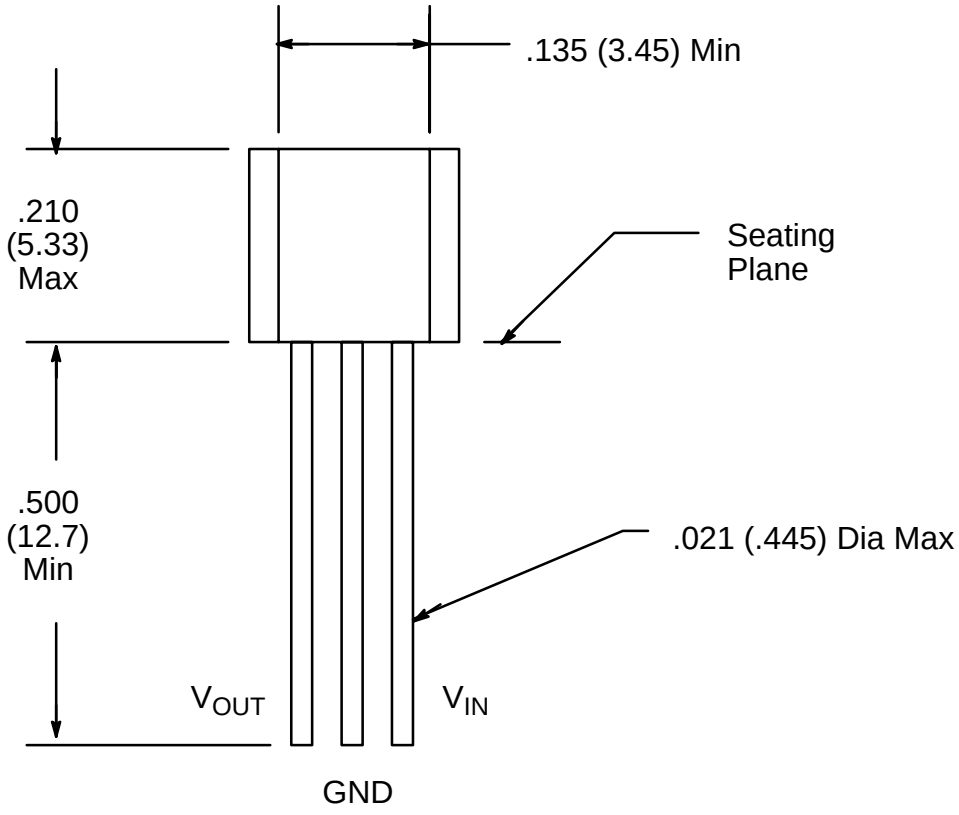
Features:
- Output Current up to 100mA
- No External Components
- Internal Thermal Overload Protection
- Internal Short–Circuit Current Limiting
- Output Voltage Tolerances of ±5% over the Temperature Range

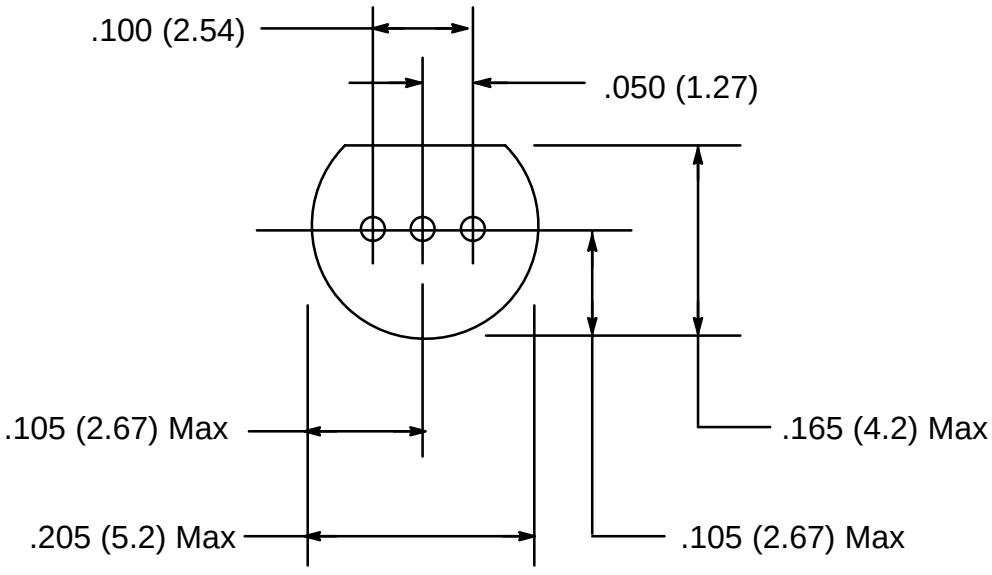
Absolute Maximum Ratings:
Input Voltage, V_{IN} 35V
Internal Power Dissipation, P_D . . . . . Internally Limited
Operating Junction Temperature Range, T_J . . . . . 0° to +125°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C
Lead Temperature (During Soldering, 10sec), T_L . . . . . +260°C

Electrical Characteristics: (V_{OUT} = 9V, V_{IN} = 15V, 0° ≤ T_J ≤ +125°C, I_O = 40mA, C_{IN} = 0.33µF, C_{OUT} = 0.1µF, Note 1 unless otherwise specified)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Output Voltage	V_O	T_J = +25°C		8.64	9.00	9.36	V
		1mA ≤ I_O ≤ 70mA, 11.5V ≤ V_{IN} ≤ 24V		8.55	9.00	9.45	V
Line Regulation	Reg_{Line}	T_J = +25°C	11.5V ≤ V_{IN} ≤ 24V	–	90	200	mV
			13V ≤ V_{IN} ≤ 24V	–	100	150	mV
Load Regulation	Reg_{Load}	T_J = +25°C	1mA ≤ I_O ≤ 100mA	–	20	90	mV
			1mA ≤ I_O ≤ 40mA	–	10	45	mV
Quiescent Current	I_B			–	2.1	5.5	mA
Quiescent Current Change	I_B	With line, 11.5V ≤ V_{IN} ≤ 24V		–	–	1.5	mA
		With load, 1mA ≤ I_O ≤ 40mA		–	–	0.1	mA
Output Noise Voltage	V_N	T_A = +25°C, f = 10Hz to 10kHz		–	70	–	µV
Temperature Coefficient of V_{OUT}		I_{OUT} = 5mA		–	–0.9	–	mV/°C
Ripple Rejection	RR	T_J = +25°C, 15V ≤ V_{IN} ≤ 25V, f = 120Hz		38	44	–	dB
Dropout Voltage	V_{DO}	T_J = +25°C		–	1.4	–	V
Peak Output/Short Circuit Current	I_{pk}/I_{OS}	T_J = +25°C		–	140	–	mA

Note 1. The maximum steady state usable output current and input voltage ar very dependent on the heat sink and/or lead length of the package. The data above represents pulse test conditions with junction temperatures as indicated at the initiation of the test.


.135 (3.45) Min
.210
(5.33)
Max
Seating
Plane
.500
(12.7)
Min
.021 (.445) Dia Max
V_{OUT}
V_{IN}
GND


.100 (2.54)
.050 (1.27)
.105 (2.67) Max
.165 (4.2) Max
.205 (5.2) Max
.105 (2.67) Max