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

NTE952
Integrated Circuit
Precision 2.5V Shunt

Description:

The NTE952 integrated circuit is a precision 2.5V shunt regulator diode. This monolithic IC voltage reference operates as a low temperature coefficient 2.5V zener with 0.2Ω dynamic impedance.

This device is rated for operation over a 0° to +70°C temperature range and is available in a TO–92 package.

Features:

- Low Temperature Coefficient
- Wide Operating Current of 300μA to 10mA
- 0.2Ω Dynamic Impedance
- ±1% Initial Tolerance Available
- Guaranteed Temperature Stability
- Easily Trimmed for Minimum Temperature Drift
- Fast Turn–On

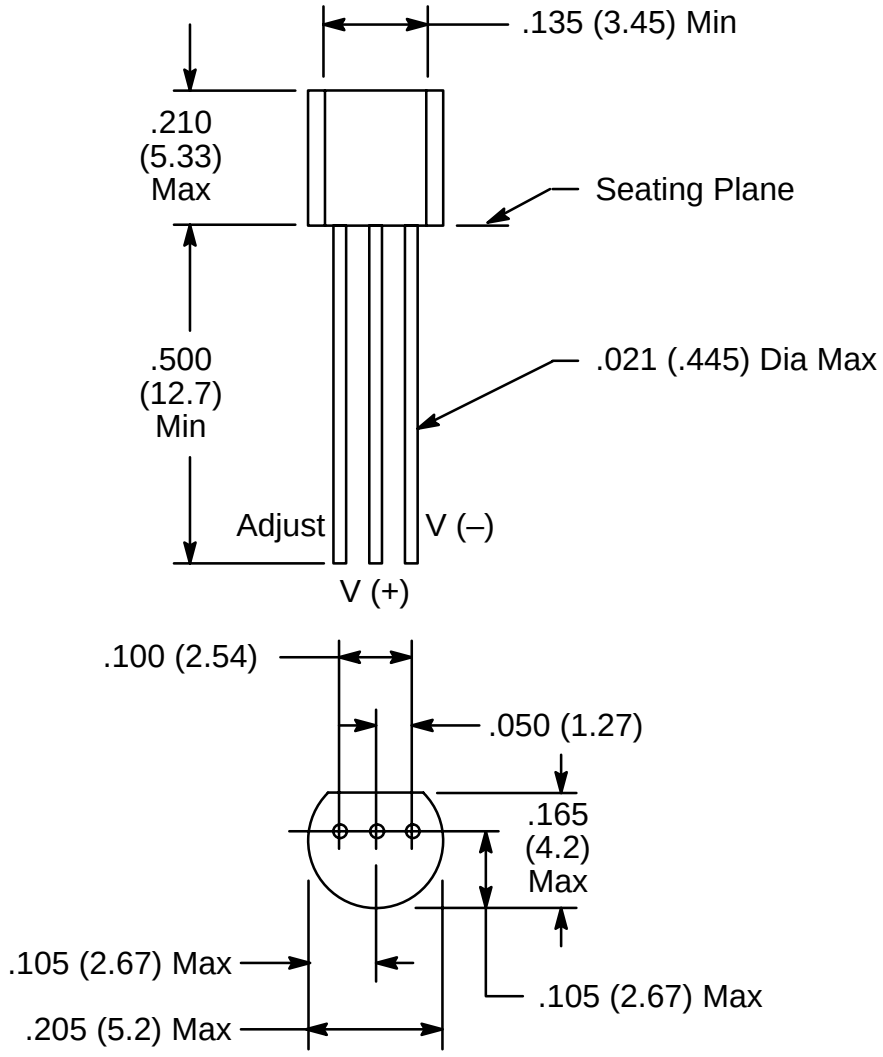
Absolute Maximum Ratings:

Reverse Current, I_R 15mA
Forward Current, I_F 10mA
Operating Temperature Range, T_{opr} . . . . . 0° to +70°C
Storage Temperature Range, T_{stg} . . . . . –60° to +150°C
Lead Temperature (During Soldering, 10sec), T_L . . . . . +300°C

Electrical Characteristics: ($0° \le T_A \le +70°C$, Note 1 unless otherwise specified)

Parameter	Test Conditions	Min	Typ	Max	Unit
Reverse Breakdown Voltage	T_A = +25°C, I_R = 1mA	2.390	2.490	2.590	V
Reverse Breakdown Change with Current	T_A = +25°C, 400μA ≤ I_R ≤ 10mA	–	2.6	10	mV
Reverse Dynamic Impedance	T_A = 25°C, I_R = 1mA	–	0.2	1	Ω
Temperature Stability	V_R Adjusted to 2.490V, I_R = 1mA	–	1.8	6	mV
Reverse Breakdown Change with Current	400μA ≤ I_R ≤ 10mA	–	3	12	mV
Reverse Dynamic Impedance	I_R = 1mA	–	0.4	1.4	Ω
Long Term Stability	T_A = +25°C ±0.1°C, I_R = 1mA	–	–	20	ppm

Note 1 Unless otherwise specified the NTE952 is specified from $0°C \le T_A \le +70°C$. The maximum junction temperature is 100°C. For elevated junction temperature the derating is based on 180°C/W junction to ambient with 0.4" leads from a PC board and 160°C/W junction to ambient with 0.125" lead length to a PC board.


.135 (3.45) Min
.210
(5.33)
Max
Seating Plane
.500
(12.7)
Min
.021 (.445) Dia Max
Adjust
V (–)
V (+)
.100 (2.54)
.050 (1.27)
.165
(4.2)
Max
.105 (2.67) Max
.105 (2.67) Max
.205 (5.2) Max