



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

NTE599 Silicon Rectifier Ultra Fast, 200V, 15A

Description:

The NTE599 is a silicon rectifier in a 2-Lead TO220 type package designed for use in switching power supplies, inverters and as free wheeling diodes.

Features:

- Ultrafast 35ns Recovery Time
- 175°C Operating Junction Temperature
- Popular TO220 Package
- Voltage Capacity to 200V
- Low Forward Voltage Drop
- Low Leakage Current Specified at $T_C = +150^\circ\text{C}$
- Current Derating Specified at Both Case and Ambient Temperature

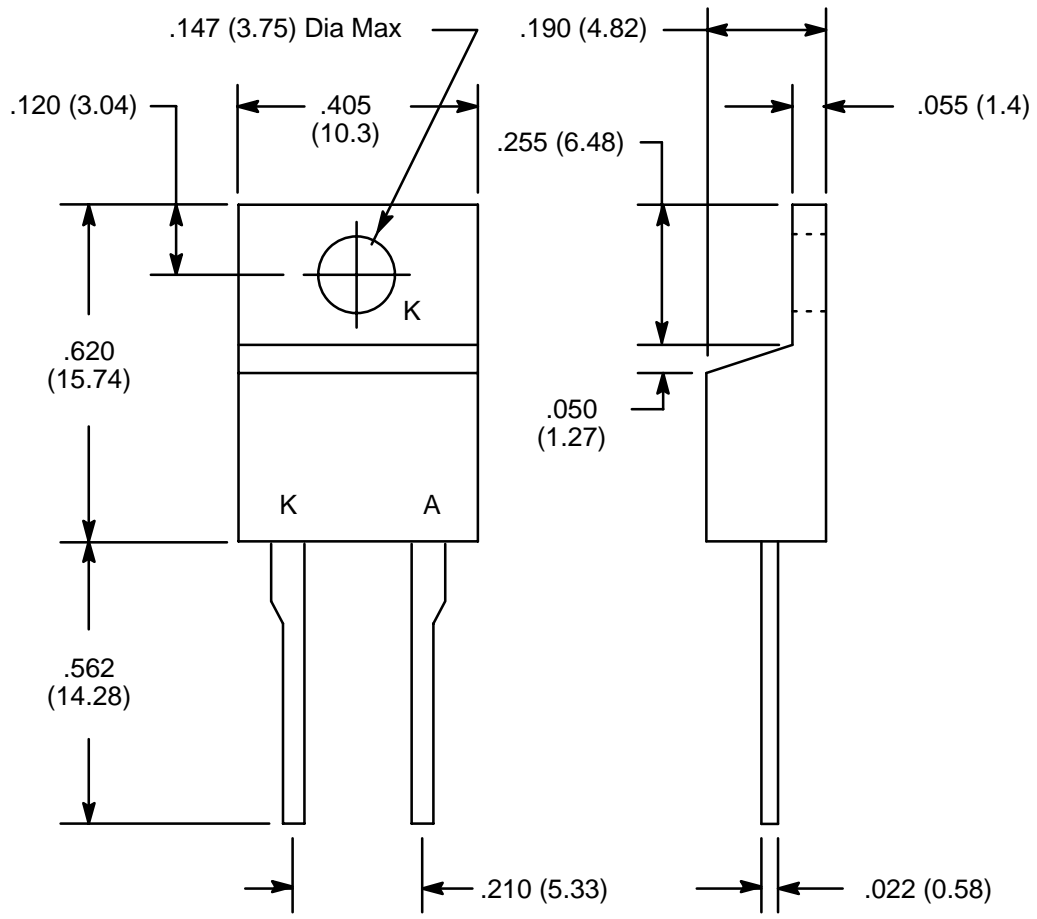
Absolute Maximum Ratings:

| | |
|---|----------------|
| Peak Repetitive Reverse Voltage, V_{RRM} | 200V |
| Working Peak Reverse Voltage, V_{RWM} | 200V |
| DC Blocking Voltage, V_R | 200V |
| Average Rectified Forward Current ($T_C = +150^\circ\text{C}$), $I_{F(AV)}$ | 15A |
| Peak Repetitive Forward Current (Square Wave, 20kHz, $T_C = +150^\circ\text{C}$), I_{FM} | 30A |
| Non-Repetitive Peak Surge Current, I_{FSM} (Surge applied at rated load conditions halfwave, single phase, 60Hz) | 200A |
| Operating Junction Temperature Range, T_J | -65° to +175°C |
| Storage Temperature Range, T_{stg} | -65° to +175°C |
| Maximum Thermal Resistance, Junction-to-Case, R_{thJC} | 1.5°C/W |

Electrical Characteristics:

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-------------------------------|----------|---|-----|-----|------|------|
| Instantaneous Forward Voltage | V_F | $i_F = 15A, T_C = +150^\circ\text{C}$, Note 1 | - | - | 0.85 | V |
| | | $i_F = 15A, T_C = +25^\circ\text{C}$, Note 1 | - | - | 1.05 | V |
| Instantaneous Reverse Current | i_R | $V_R = 200V, T_C = +150^\circ\text{C}$, Note 1 | - | - | 500 | μA |
| | | $V_R = 200V, T_C = +25^\circ\text{C}$, Note 1 | - | - | 10 | μA |
| Reverse Recovery Time | t_{rr} | $I_F = 1A, di/dt = 50A/\mu s$ | - | - | 35 | ns |

Note 1. Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2.0%



Note: All dimensions are Max.