

## NTE597 Silicon Rectifier Ultra Fast, 200V, 8A

### **Description:**

The NTE597 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 50ns Recovery Time
- 175°C Operating Junction Temperature
- Popular TO220 Package
- Epoxy meets UL94, V<sub>O</sub> @ 1/8"
- Low Forward Voltage
- Low Leakage Current
- High Temperature Glass Passivated Junction

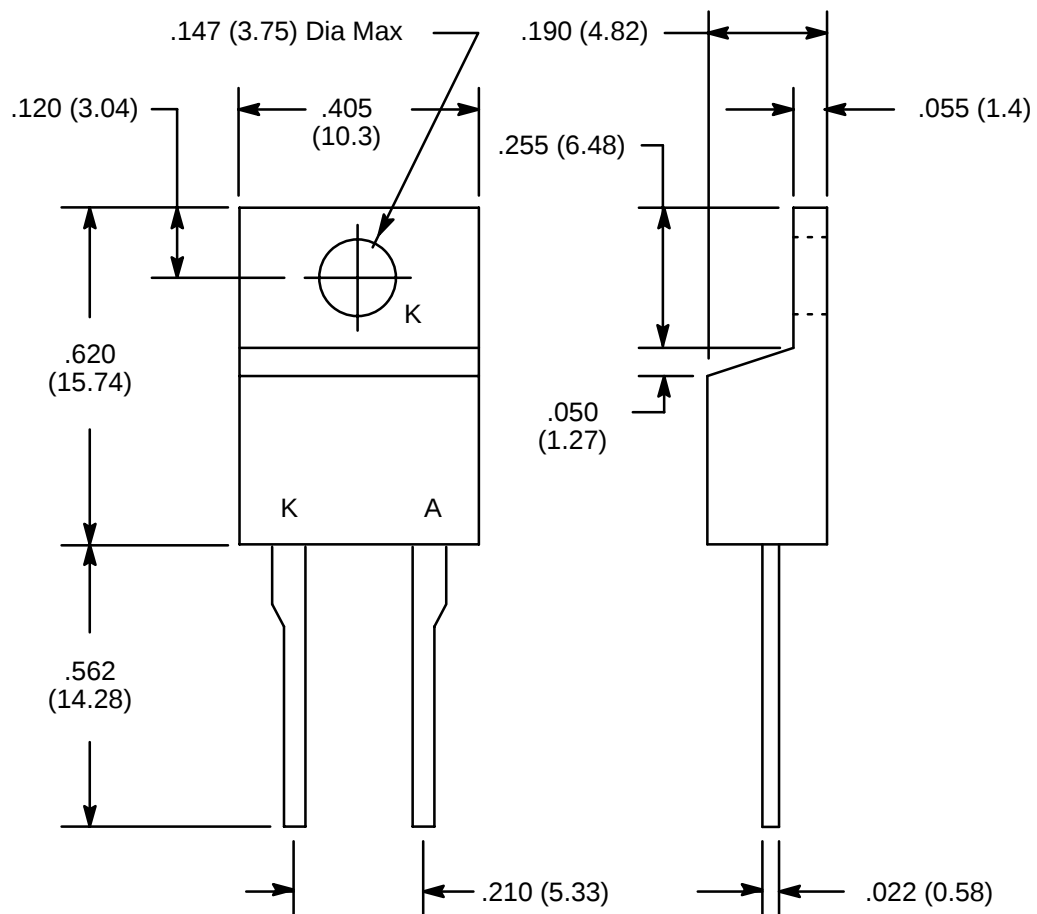
### **Absolute Maximum Ratings:**

Peak Repetitive Reverse Voltage, V<sub>RRM</sub> ..... 200V  
 Working Peak Reverse Voltage, V<sub>RWM</sub> ..... 200V  
 DC Blocking Voltage, V<sub>R</sub> ..... 200V  
 Average Rectified Forward Current (Total Device, V<sub>R</sub> = 200V, T<sub>C</sub> = +150°C), I<sub>F(AV)</sub> ..... 8A  
 Peak Repetitive Forward Current (V<sub>R</sub> = 200V, Square Wave, 20kHz, T<sub>C</sub> = +150°C), I<sub>FM</sub> ..... 16A  
 Non-Repetitive Peak Surge Current, I<sub>FSM</sub>  
     (Surge applied at rated load conditions halfwave, single phase, 60Hz) ..... 100A  
 Operating Junction Temperature Range, T<sub>J</sub> ..... -65° to +175°C  
 Storage Temperature Range, T<sub>stg</sub> ..... -65° to +175°C  
 Maximum Thermal Resistance, Junction-to-Case, R<sub>thJC</sub> ..... 2.0°C/W

### **Electrical Characteristics:**

| Parameter                     | Symbol          | Test Conditions                                                      | Min | Typ | Max | Unit |
|-------------------------------|-----------------|----------------------------------------------------------------------|-----|-----|-----|------|
| Instantaneous Forward Voltage | V <sub>F</sub>  | i <sub>F</sub> = 8A, T <sub>C</sub> = +150°C, Note 1                 | —   | —   | 1.0 | V    |
|                               |                 | i <sub>F</sub> = 8A, T <sub>C</sub> = +25°C, Note 1                  | —   | —   | 1.3 | V    |
| Instantaneous Reverse Current | i <sub>R</sub>  | V <sub>R</sub> = 200V, T <sub>C</sub> = +150°C, Note 1               | —   | —   | 500 | μA   |
|                               |                 | V <sub>R</sub> = 200V, T <sub>C</sub> = +25°C, Note 1                | —   | —   | 10  | μA   |
| Reverse Recovery Time         | t <sub>rr</sub> | I <sub>F</sub> = 1A, di/dt = 50A/μs                                  | —   | —   | 60  | ns   |
|                               |                 | I <sub>F</sub> = 0.5A, i <sub>R</sub> = 1A, I <sub>REC</sub> = 0.25A | —   | —   | 50  | ns   |

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



**Note:** All dimensions are Max.