

## NTE598 Silicon Rectifier Ultra Fast, 600V, 8A

**Description:**

The NTE598 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

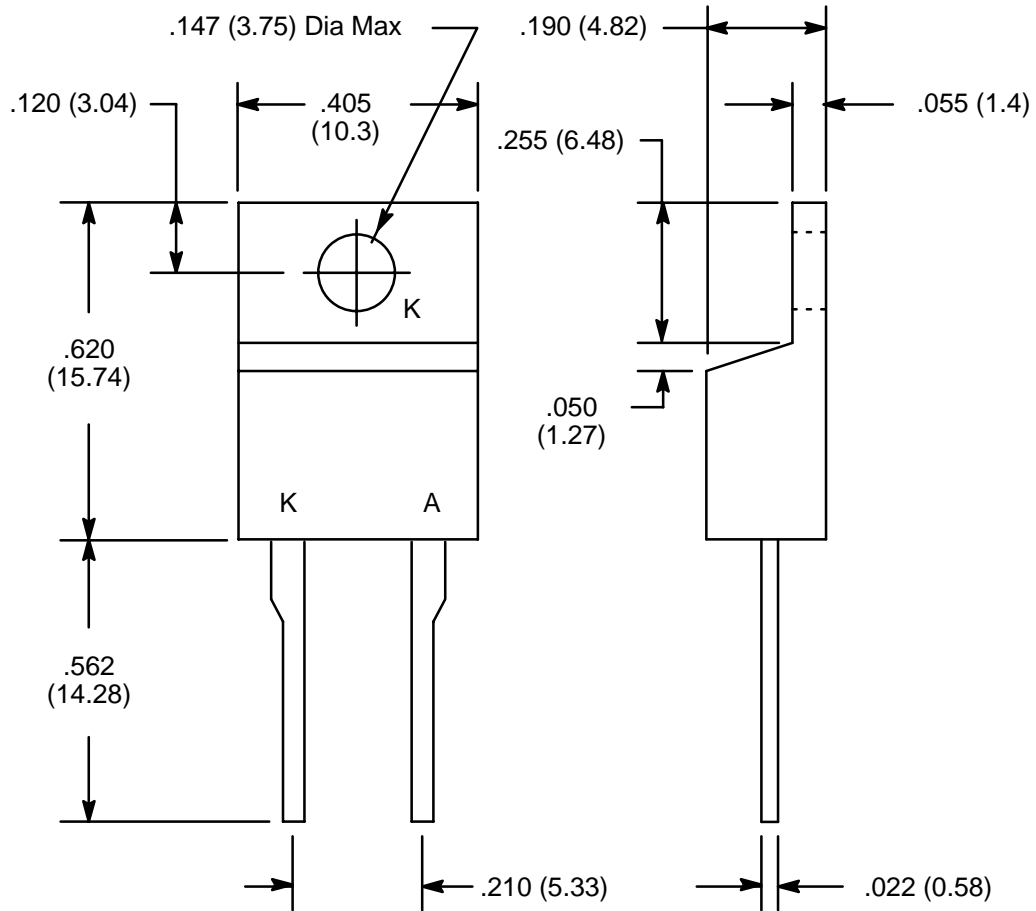
**Absolute Maximum Ratings:**

Peak Repetitive Reverse Voltage, V <sub>RRM</sub> .....	600V
Working Peak Reverse Voltage, V <sub>RWM</sub> .....	600V
DC Blocking Voltage, V <sub>R</sub> .....	600V
Average Rectified Forward Current (Total Device, V <sub>R</sub> = 600V, T <sub>C</sub> = +150°C), I <sub>F(AV)</sub> .....	8A
Peak Repetitive Forward Current (V <sub>R</sub> = 600V, 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	-	-	1.2	V
		i <sub>F</sub> = 8A, T <sub>C</sub> = +25°C, Note 1	-	-	1.5	V
Instantaneous Reverse Current	i <sub>R</sub>	V <sub>R</sub> = 600V, T <sub>C</sub> = +150°C, Note 1	-	-	500	μA
		V <sub>R</sub> = 600V, 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.