



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

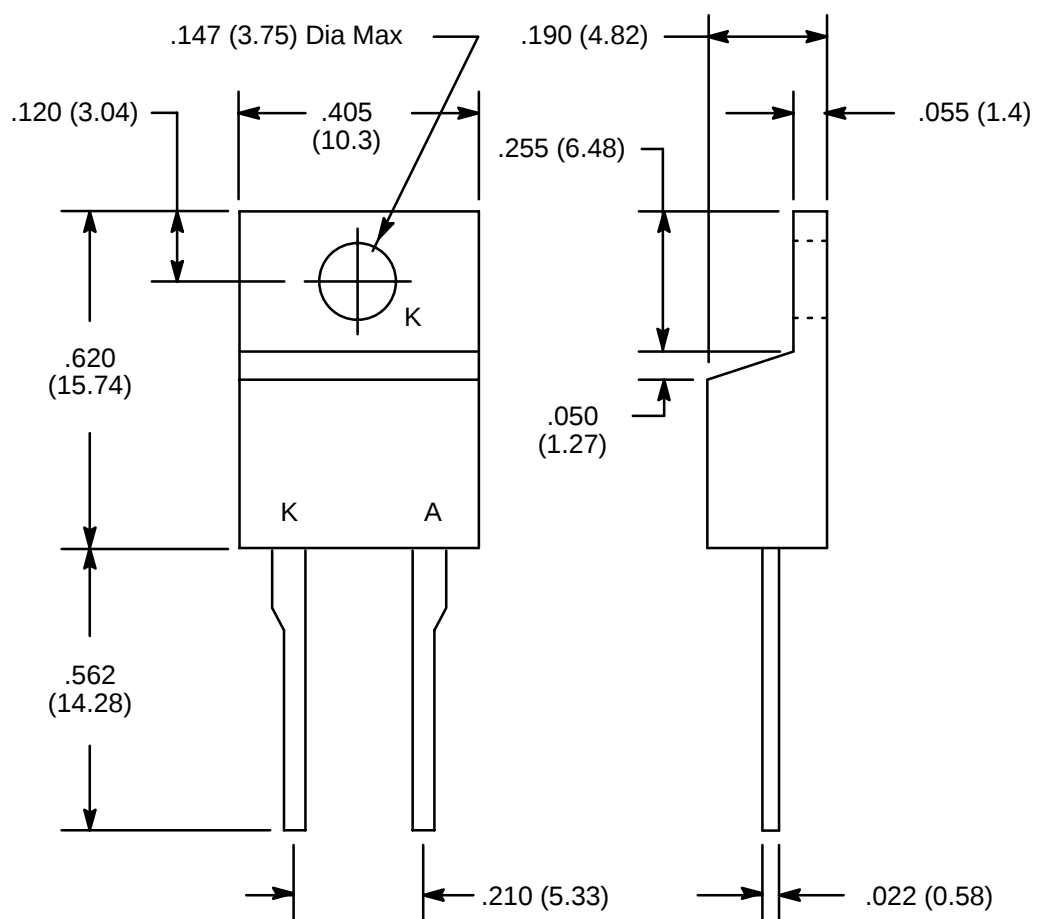
Absolute Maximum Ratings:

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 $+175^\circ\text{C}$
Storage Temperature Range, T_{stg}	-65° to $+175^\circ\text{C}$
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	$i_F = 15\text{A}$, $T_C = +150^\circ\text{C}$, Note 1	—	—	0.85	V
		$i_F = 15\text{A}$, $T_C = +25^\circ\text{C}$, Note 1	—	—	1.05	V
Instantaneous Reverse Current	i_R	$V_R = 200\text{V}$, $T_C = +150^\circ\text{C}$, Note 1	—	—	500	μA
		$V_R = 200\text{V}$, $T_C = +25^\circ\text{C}$, Note 1	—	—	10	μA
Reverse Recovery Time	t_{rr}	$I_F = 1\text{A}$, $di/dt = 50\text{A}/\mu\text{s}$	—	—	35	ns

Note 1. Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$



Note: All dimensions are Max.