



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

## NTE6090 Silicon Dual Power Rectifier

### **Description:**

The NTE6090 is a silicon dual power rectifier in a TO3P/TO218 type package designed using the Schottky Barrier principle with a platinum barrier metal.

### **Features:**

- Dual Diode Construction: Pin1 and Pin3 may be Connected for Parallel Operation at Full Range
- Guarding for Stress Protection
- Low Forward Voltage
- +150°C Operating Junction Temperature
- Guaranteed Reverse Avalanche

### **Absolute Maximum Ratings:**

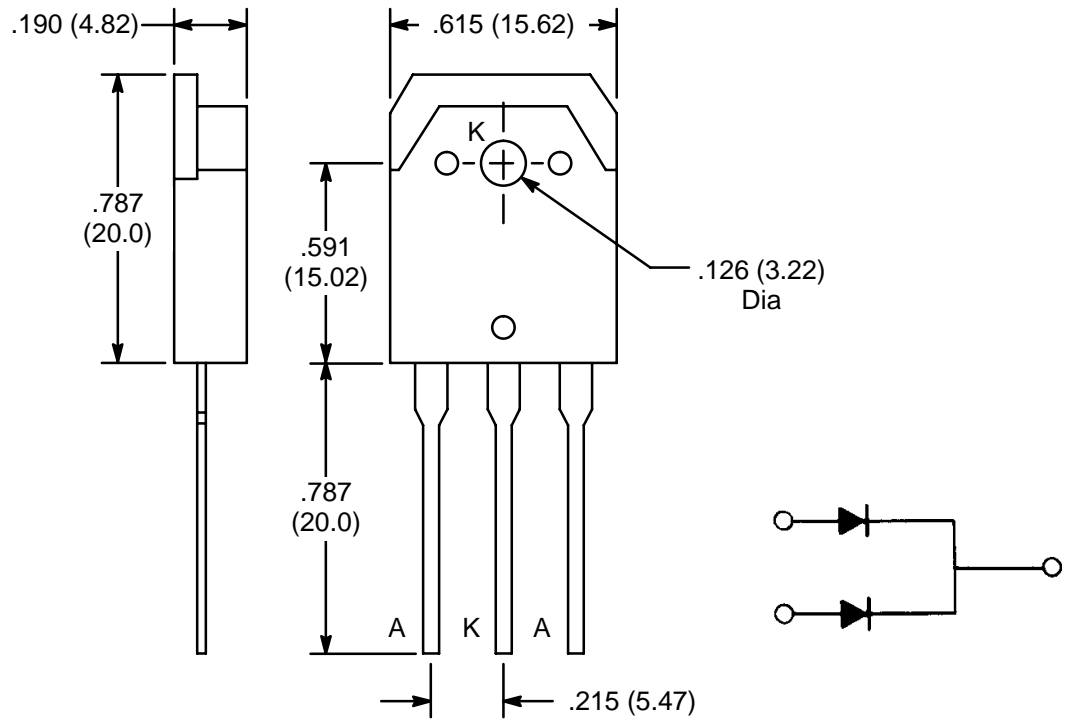
Peak Repetitive Reverse Voltage, $V_{RRM}$ .....	45V
Working Peak Reverse Voltage, $V_{RWM}$ .....	45V
DC Blocking Voltage, $V_R$ .....	45V
Average Rectified Forward Current ( $V_R = 45V, T_C = +105^\circ C$ ), $I_{F(AV)}$	
Per Device .....	30A
Per Diode .....	15A
Peak Repetitive Forward Current, Per Diode ( $V_R = 45V$ , Square Wave, 20kHz), $I_{FRM}$ .....	30A
Non-Repetitive Peak Surge Current, $I_{FSM}$	
(Surge Applied at Rated Load Conditions, Halfwave, Single Phase, 60Hz) .....	200A
Peak Repetitive Reverse Current, Per Diode (2 $\mu$ s, 1kHz), $I_{RRM}$ .....	2A
Operating Junction Temperature Range, $T_J$ .....	-65° to +150°C
Storage Temperature Range, $T_{stg}$ .....	-65° to +175°C
Peak Surge Junction Temperature (Forward Current Applied), $T_{J(pk)}$ .....	+175°C
Voltage Rate of Change ( $V_R = 45V$ ), $dv/dt$ .....	1000V/ $\mu$ s
Thermal Resistance, Junction-to-Case, $R_{thJC}$ .....	1.4°C/W
Thermal Resistance, Junction-to-Ambient, $R_{thJA}$ .....	40°C/W

### **Electrical Characteristics (Per Diode):** (Note 1)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Instantaneous Forward Voltage	$v_F$	$i_F = 20A, T_C = +125^\circ C$	-	-	0.60	V
		$i_F = 30A, T_C = +125^\circ C$	-	-	0.72	V
		$i_F = 30A, T_C = +25^\circ C$	-	-	0.76	V
Instantaneous Reverse Current	$i_R$	$V_R = 45V, T_C = +125^\circ C$	-	-	100	mA
		$V_R = 45V, T_C = +25^\circ C$	-	-	1	mA

Note 1. Pulse Test: Pulse Width = 300 $\mu$ s, Duty Cycle  $\leq$  2%.

### TO3P Type Package



### TO218 Type Package

