

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:

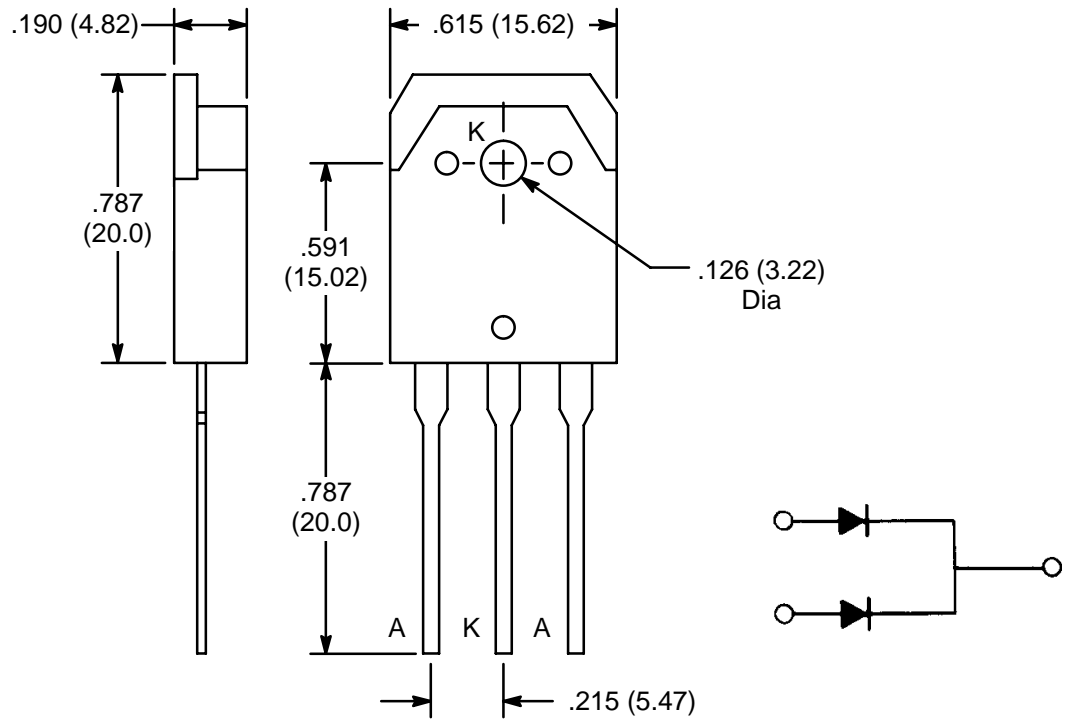
Peak Repetitive Reverse Voltage, V_{RRM}	45V
Working Peak Reverse Voltage, V_{RWM}	45V
DC Blocking Voltage, V_R	45V
Average Rectified Forward Current ($V_R = 45V$, $T_C = +105^\circ C$), $I_{F(AV)}$	
Per Device	30A
Per Diode	15A
Peak Repetitive Forward Current, Per Diode ($V_R = 45V$, Square Wave, 20kHz), 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 μ 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/ μ 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 μ s, Duty Cycle \leq 2%.

TO3P Type Package



TO218 Type Package

