



ELECTRONICS, INC.  
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## NTE6249 & NTE6250 Silicon Rectifier, Ultrafast 10 Amp, TO-220 Full Pack

### Features:

- Glass Passivated Die Construction
- Ultrafast 50nS and 100nS Recovery Time
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Current Capability
- Ideally Suited for Use in High Frequency SMPS, Inverters, and As Free Wheeling Diodes
- Epoxy Meets UL 94V-0 Classification

**Absolute Maximum Ratings:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified. Single Phase, Half Wave, 60Hz, Resistive or Inductive Load. For Capacitive Load, Derate Current by 20%)

Peak Repetitive Reverse Voltage,  $V_{RRM}$

NTE6249 .....	200V
NTE6250 .....	800V

Working Peak Reverse Voltage,  $V_{RWM}$

NTE6249 .....	200V
NTE6250 .....	800V

DC Blocking Voltage,  $V_R$

NTE6249 .....	200V
NTE6250 .....	800V

RMS Reverse Voltage  $V_{R(RMS)}$

NTE6249 .....	140V
NTE6250 .....	560V

Average Rectified Output Current ( $T_C = +100^\circ\text{C}$ ),  $I_O$

10A

Non-Repetitive Peak Forward Surge Current,  $I_{FSM}$

(8.3ms Single Half Sine-Wave Superimposed on Rated Load) 150A

RMS Isolation Voltage ( $t = 1 \text{ min}$ ),  $V_{ISO}$  1500V

Operating Junction Temperature Range,  $T_J$   $-55^\circ \text{ to } +150^\circ\text{C}$

Storage Temperature Range,  $T_{stg}$   $-55^\circ \text{ to } +150^\circ\text{C}$

Thermal Resistance, Junction-to-Ambient,  $R_{thJA}$  75°C/W

Thermal Resistance, Junction-to-Case,  $R_{thJC}$  5°C/W

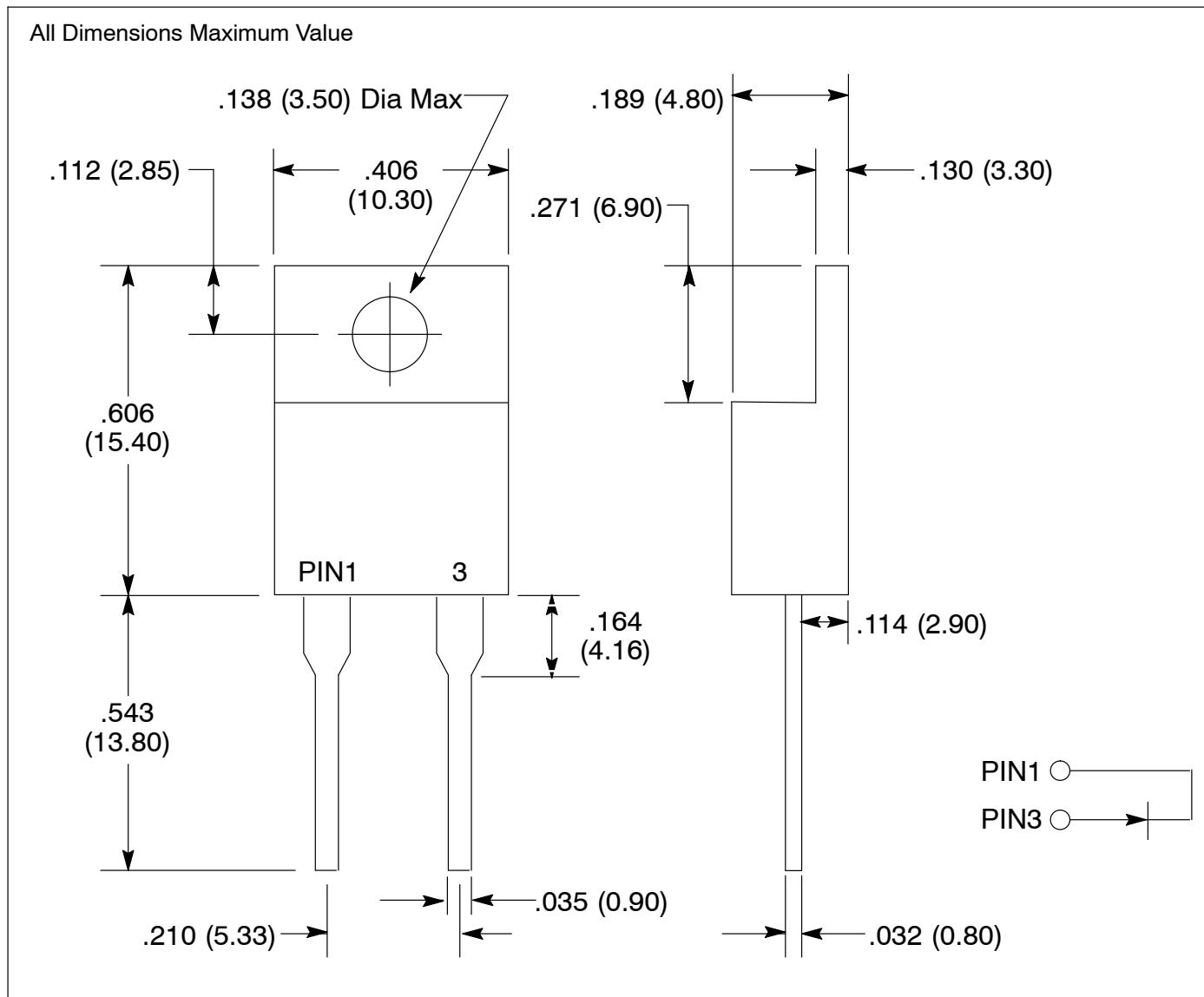
Rev. 6-17



**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified. Single Phase, Half Wave, 60Hz, Resistive or Inductive Load. For Capacitive Load, Derate Current by 20%)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage NTE6249	$V_{FM}$	$I_F = 10\text{A}$	-	1.0	-	V
NTE6250			-	1.7	-	V
Peak Reverse Current At Rated DC Blocking Voltage	$I_{RM}$	$T_A = +25^\circ\text{C}$	-	10	-	A
		$T_A = +125^\circ\text{C}$	-	500	-	A
Reverse Recovery Time NTE6249	$t_{rr}$	$I_F = 0.5\text{A}$ , $I_R = 1\text{A}$ , $I_{RR} = 0.25\text{A}$ , Note 1	-	50	-	nS
NTE6250			-	100	-	nS
Typical Junction Capacitance NTE6249	$C_J$	Note 1	-	80	-	pF
NTE6250			-	50	-	pF

Note 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



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