

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

