



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

NTE5312 thru NTE5317 Single Phase Bridge Rectifier 8 Amp

Features:

- Diffused Junction
- High Current Capability
- High Case Dielectric Strength
- High Surge Current Capability
- Ideal for Printed Circuit Board Application
- Mounting Hole Thru for #6 Screw

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

Peak Repetitive Reverse Voltage, V_{RRM}

NTE5312	100V
NTE5313	200V
NTE5314	400V
NTE5315	600V
NTE5316	800V
NTE5317	1000V

Working Peak Reverse Voltage, V_{RWM}

NTE5312	100V
NTE5313	200V
NTE5314	400V
NTE5315	600V
NTE5316	800V
NTE5317	1000V

DC Blocking Voltage, V_R

NTE5312	100V
NTE5313	200V
NTE5314	400V
NTE5315	600V
NTE5316	800V
NTE5317	1000V

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

NTE5312	70V
NTE5313	140V
NTE5314	280V
NTE5315	420V
NTE5316	560V
NTE5317	700V

Rev. 7-22



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

Average Forward Output Current, I_O	
$T_C = +50^\circ\text{C}$, Note 1	8A
$T_A = +40^\circ\text{C}$, Note 2	4A
Non-Repetitive Peak Forward Surge Current, I_{FSM}	
(8.3ms Single Sine-Wave Superimposed on Rated Load)	175A
Forward Voltage Drop (Per Bridge Element, $I_F = 4\text{A}$), V_{FM}	1.1V
Peak Reverse Current (at Rated DC Blocking Voltage), I_{RM}	
$T_A = +25^\circ\text{C}$	5 μA
$T_A = +125^\circ\text{C}$	500 μA
I^2t Rating for Fusing ($t < 8.3\text{ms}$), I^2t	166A ² s
Typical Junction Capacitance (Note 3), C_J	
NTE5312, NTE5313, NTE5314	211pF
NTE5315, NTE5316, NTE5317	94pF
RMS Isolation Voltage (Terminals to case, $t = 1\text{min}$), 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 (Note 2), R_{thJA}	22 $^\circ\text{C/W}$
Thermal Resistance, Junction-to-Case (Note 1), R_{thJC}	6.2 $^\circ\text{C/W}$

Note 1. Mounted on 150 x 150 x 3.0mm thick Al heatsink.

Note 2. Mounted on PCB with 12 x 12mm copper pads and measured at lead length 9.5mm from case.

Note 3. Measured at 1.0Mhz and applied reverse voltage of 4.0VDC.

