



ELECTRONICS, INC.
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NTE53000 thru NTE53004 Single Phase Bridge Rectifier 8 Amp

Features:

- Built-In Stress Relief Mechanism for Superior Reliability and Performance
- Surge Overload Rating: 400A (Peak)

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%)

Maximum DC Blocking Voltage, V_{RM}	
NTE53000	200V
NTE53001	400V
NTE53002	600V
NTE53003	800V
NTE53004	1000V
Working Peak Reverse Voltage, V_{RWM}	
NTE53000	200V
NTE53001	400V
NTE53002	600V
NTE53003	800V
NTE53004	1000V
Maximum Peak Recurrent Reverse Voltage, V_{RRM}	
NTE53000	200V
NTE53001	400V
NTE53002	600V
NTE53003	800V
NTE53004	1000V
RMS Reverse Voltage, $V_{R(RMS)}$	
NTE53000	140V
NTE53001	280V
NTE53002	420V
NTE53003	560V
NTE53004	700V
Thermal Energy (Rating for Fusing), I^2t	64 Amps ² /Sec
Peak Forward Surge Current, I_{FSM}	
(Single 60Hz Half-Sine Wave Superimposed on Rated Load, $T_J = 150^\circ\text{C}$)	400A
Average Forward Rectified Current, I_O	
$T_c = +50^\circ\text{C}$ (Note 1, Note 3)	10A
$T_A = +50^\circ\text{C}$ (Note 2)	8A

- Note 1. Bridge mounted on 5.1" x 4.3" x 0.11" thick (12.9cm x 10.8cm x 0.3cm) aluminum plate.
 Note 2. Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)
 Note 3. Bolt bridge on heat sink with #6 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.

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Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$
Maximum Forward Voltage (Per Diode at 5A DC), V_{FM}	0.95V (Typ 0.90V)
Maximum Reverse Current (at Rated V_{RM}), I_{RM}	
$T_A = +25^\circ\text{C}$	1 μA
$T_A = +100^\circ\text{C}$	50 μA
Operating Junction Temperature Range, T_J	-55° to $+150^\circ\text{C}$
Minimum Insulation Breakdown Voltage (Circuit to Case), V_{ISO}	2000V
Maximum Reverse Current (at Rated V_{RM}), I_{RM}	
Junction to Ambient, R_{thJA} (Note 2)	12 $^\circ\text{C/W}$
Junction to Case, R_{thJC} (Note 1)	5 $^\circ\text{C/W}$

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