



ELECTRONICS, INC.
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NTE53504 thru NTE53516 Bridge Rectifier, 3-Phase, Glass Passivated, 35A

Features:

- Low Forward Voltage Drop
- High Current Capacity
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation
- Mounting: Through Hole with #10 Screw

Maximum Ratings and Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified. Single Phase, Half Wave, 60Hz, Resistive or Inductive Load, Note 1)

Maximum Peak Repetitive Reverse Voltage, V_{RRM}

NTE53504	400V
NTE53508	800V
NTE53512	1200V
NTE53516	1600V

Working Peak Reverse Voltage, V_{RWM}

NTE53504	400V
NTE53508	800V
NTE53512	1200V
NTE53516	1600V

Maximum DC Blocking Voltage, V_R

NTE53504	400V
NTE53508	800V
NTE53512	1200V
NTE53516	1600V

Maximum Peak Non-Repetitive Reverse Voltage, V_{RSM}

NTE53504	500V
NTE53508	900V
NTE53512	1300V
NTE53516	1700V

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

NTE53504	280V
NTE53508	560V
NTE53512	840V
NTE53516	1120V

Maximum Average Forward Rectified Output Current ($T_A = +60^\circ\text{C}$), $I_{O(AV)}$ 35A

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

No Voltage Reapplied, $t = 8.3\text{ms}$ at 60Hz	500A
No Voltage Reapplied, $t = 10\text{ms}$ at 50Hz	475A
100% V_{RRM} Reapplied, $t = 8.3\text{ms}$ at 60Hz	420A
100% V_{RRM} Reapplied, $t = 10\text{ms}$ at 50Hz	400A

Note 1. For capacitive load, derate current by 20%.

Rev. 11-19



Maximum Ratings and Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$ unless otherwise specified.
Single Phase, Half Wave, 60Hz, Resistive or Inductive Load, Note 1)

I^2t Rating for Fusing, I^2t

No Voltage Reapplied, $t = 8.3\text{ms}$ at 60Hz $1030\text{A}^2\text{s}$

No Voltage Reapplied, $t = 10\text{ms}$ at 50Hz $1130\text{A}^2\text{s}$

100% V_{RRM} Reapplied, $t = 8.3\text{ms}$ at 60Hz $730\text{A}^2\text{s}$

100% V_{RRM} Reapplied, $t = 10\text{ms}$ at 50Hz $800\text{A}^2\text{s}$

Maximum Forward Voltage Drop (Per element, $T_J = +25^\circ\text{C}$, $I_{FM} = 40\text{A}_{pk}$), V_F 1.19V

Maximum Peak Reverse Current at Rated DC Blocking Voltage Per Element, I_R

$T_J = +25^\circ\text{C}$ $10\mu\text{A}$

$T_J = +125^\circ\text{C}$ 5mA

RMS Isolation Voltage, Terminals-to-Case ($t = 1\text{min}$), V_{ISO} 2500V

Thermal Resistance, Junction-to-Case (DC Operation per Bridge), R_{thJC} 1.35K/W

Thermal Resistance, Case-to-Heatsink (Note 2), R_{thCS} 0.2K/W

Operating Temperature Range, T_J -40° to $+150^\circ\text{C}$

Storage Temperature Range, T_{stg} -40° to $+150^\circ\text{C}$

Note 1. For capacitive load, derate current by 20%.

Note 2. Mounting surface, smooth, flat, and greased.

