



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)

<b>Maximum Peak Repetitive Reverse Voltage, <math>V_{RRM}</math></b>	
NTE53504 .....	400V
NTE53508 .....	800V
NTE53512 .....	1200V
NTE53516 .....	1600V
<b>Working Peak Reverse Voltage, <math>V_{RWM}</math></b>	
NTE53504 .....	400V
NTE53508 .....	800V
NTE53512 .....	1200V
NTE53516 .....	1600V
<b>Maximum DC Blocking Voltage, <math>V_R</math></b>	
NTE53504 .....	400V
NTE53508 .....	800V
NTE53512 .....	1200V
NTE53516 .....	1600V
<b>Maximum Peak Non-Repetitive Reverse Voltage, <math>V_{RSM}</math></b>	
NTE53504 .....	500V
NTE53508 .....	900V
NTE53512 .....	1300V
NTE53516 .....	1700V
<b>Maximum RMS Reverse Voltage, <math>V_{R(RMS)}</math></b>	
NTE53504 .....	280V
NTE53508 .....	560V
NTE53512 .....	840V
NTE53516 .....	1120V
<b>Maximum Average Forward Rectified Output Current (<math>T_A = +60^\circ\text{C}</math>), <math>I_{O(AV)}</math> .....</b>	
35A	
<b>Non-Repetitive Peak Forward Surge Current, <math>I_{FSM}</math></b>	
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%.

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**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 .....	1030A <sup>2</sup> s
No Voltage Reapplied, $t = 10\text{ms}$ at 50Hz .....	1130A <sup>2</sup> s
100% $V_{RRM}$ Reapplied, $t = 8.3\text{ms}$ at 60Hz .....	730A <sup>2</sup> s
100% $V_{RRM}$ Reapplied, $t = 10\text{ms}$ at 50Hz .....	800A <sup>2</sup> s

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

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

$T_J = +25^\circ\text{C}$  .....

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

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

Thermal Resistance, Junction-to-Case (DC Operation per Bridge),  $R_{thJC}$  .....

Thermal Resistance, Case-to-Heatsink (Note 2),  $R_{thCS}$  .....

Operating Temperature Range,  $T_J$  .....

Storage Temperature Range,  $T_{stg}$  .....

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

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

