ELECTRONICS, INC.
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BLOOMFIELD, NJ 07003
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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°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°C), $I_{O(AV)}$ 35A

Non–Repetitive Peak Forward Surge Current, I_{FSM}
- No Voltage Reapplied, t = 8.3ms at 60Hz 500A
- No Voltage Reapplied, t = 10ms at 50Hz 475A
- 100% V_{RRM} Reapplied, t = 8.3ms at 60Hz 420A
- 100% V_{RRM} Reapplied, t = 10ms at 50Hz 400A

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

Rev. 11–19

RoHS

Maximum Ratings and Electrical Characteristics (Cont'd): (T_A = +25°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 = 8.3ms at 60Hz . . . . . 1030A^2s
- No Voltage Reapplied, t = 10ms at 50Hz . . . . . 1130A^2s
- 100% V_{RRM} Reapplied, t = 8.3ms at 60Hz . . . . . 730A^2s
- 100% V_{RRM} Reapplied, t = 10ms at 50Hz . . . . . 800A^2s

Maximum Forward Voltage Drop (Per element, T_J = +25°C, I_{FM} = 40A_{pk}), V_F 1.19V

Maximum Peak Reverse Current at Rated DC Blocking Voltage Per Element, I_R
- T_J = +25°C 10μA
- T_J = +125°C 5mA

RMS Isolation Voltage, Terminals–to–Case (t = 1min), 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°C

Storage Temperature Range, T_{stg} . . . . . –40° to +150°C

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

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