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## NTE53016 thru NTE53020 Silicon Bridge Rectifier, 50A

**Features:**

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated, Low Profile Epoxy Case for Maximum Heat Dissipation
- 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 Recurrent Peak Reverse Voltage, $V_{RRM}$   |                   |
| NTE53016 .....  | 200V              |
| NTE53018 .....  | 600V              |
| NTE53020 .....  | 1000V             |
| Working Peak Reverse Voltage, $V_{RWM}$   |                   |
| NTE53016 .....  | 200V              |
| NTE53018 .....  | 600V              |
| NTE53020 .....  | 1000V             |
| Maximum RMS Bridge Input Voltage, $V_{RMS}$   |                   |
| NTE53016 .....  | 140V              |
| NTE53018 .....  | 420V              |
| NTE53020 .....  | 700V              |
| Maximum DC Blocking Voltage, $V_{DC}$   |                   |
| NTE53016 .....  | 200V              |
| NTE53018 .....  | 600V              |
| NTE53020 .....  | 1000V             |
| Maximum Average Forward Rectified Output Current ( $T_A = +60^\circ\text{C}$ ), $I_{O(AV)}$ ..... |                   |
| 50A   |                   |
| Peak Forward Surge Current (8.3ms single half wave superimposed on rated load), $I_{FSM}$ ...     |                   |
| 450A  |                   |
| Maximum Forward Voltage Drop (Per element at 25A), $V_F$ .....                                    |                   |
| 1.1V  |                   |
| Maximum Reverse Current at Rated DC Blocking Voltage Per Element, $I_R$                           |                   |
| $T_A = +25^\circ\text{C}$ .....   | 50 $\mu\text{A}$  |
| $T_A = +125^\circ\text{C}$ .....  | 500 $\mu\text{A}$ |
| $I^2t$ Rating for Fusing ( $t < 8.3\text{ms}$ ), $I^2t$ .....                                     |                   |
| 800A <sup>2</sup> s   |                   |
| Typical Junction Capacitance (Note 2), $C_j$ .....  |                   |
| 400pF   |                   |
| Typical Thermal Resistance, Junction-to-Case (Per element, Note 3), $R_{thJC}$ .....              |                   |
| 1.6 $^\circ\text{C}/\text{W}$   |                   |
| RMS Isolation Voltage from Case to Leads, $V_{ISO}$ .....   |                   |
| 2500V   |                   |
| Operating Temperature Range, $T_J$ .....  |                   |
| -65 $^\circ$ to +150 $^\circ\text{C}$   |                   |
| Storage Temperature Range, $T_{stg}$ .....  |                   |
| -65 $^\circ$ to +150 $^\circ\text{C}$   |                   |

- Note 1. For capacitive load, derate current by 20%.  
 Note 2. Measured at 1.0MHz and applied reverse voltage of 4.0VDC.  
 Note 3. Thermal resistance junction-to-case, mounted on a heatsink.

