



ELECTRONICS, INC.
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NTE166 thru NTE170 Bridge Rectifier, Single Phase 2.0 Amp

Features:

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Board

Maximum Ratings and Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified. Single Phase, Half Wave, 60Hz, Resistive or Inductive Load. For Capacitive Load, Derate Current by 20%)

Peak Repetitive Reverse Voltage, V_{RRM}

NTE166	100V
NTE167	200V
NTE168	400V
NTE169	600V
NTE170	1000V

Working Peak Reverse Voltage, V_{RWM}

NTE166	100V
NTE167	200V
NTE168	400V
NTE169	600V
NTE170	1000V

DC Blocking Voltage, V_R

NTE166	100V
NTE167	200V
NTE168	400V
NTE169	600V
NTE170	1000V

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

NTE166	70V
NTE167	140V
NTE168	280V
NTE169	420V
NTE170	700V

Average Rectified Output Current ($T_A = +50^\circ\text{C}$, Note 1), I_O 2A

Peak Forward Surge Current, I_{FSM}

(8.3ms Single Sine-Wave Superimposed on Rated Load) 60A

Forward Voltage Drop (Per Bridge Element, $I_F = 2A$), V_{FM} 1.1V

Note 1. Leads maintained at ambient temperature at a distance of 9.5mm from case.

Rev. 7-19

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. For Capacitive Load, Derate Current by 20%)
Maximum Reverse Current (at Rated DC Blocking Voltage), I_{RM}

$T_A = +25^\circ\text{C}$

All Devices $10\mu\text{A}$

NTE170 Only $5\mu\text{A}$

$T_A = +100^\circ\text{C}$ $500\mu\text{A}$

Rating for Fusing ($t < 8.3\text{ms}$), I^2t $15\text{A}^2\text{s}$

Typical Junction Capacitance (Per Element, Note 2), C_j 25pF

Typical Thermal Resistance, Junction-to-Ambient (Note 3), R_{thJA} 30K/W

Operating Junction Temperature Range, T_J

All Devices -55° to $+165^\circ\text{C}$

NTE170 Only -55° to $+150^\circ\text{C}$

Storage Temperature Range, T_{stg}

All Devices -55° to $+165^\circ\text{C}$

NTE170 Only -55° to $+150^\circ\text{C}$

Note 2. Measured at 1.0MHz and applied reverse voltage of 4VDC.

Note 3. Thermal resistance junction-to-ambient mounted on a PC board with 12mm^2 copper pad.

