



ELECTRONICS, INC.  
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## NTE6102 thru NTE6109 Industrial Rectifier, 550A

**Features:**

- Standard and Reverse Polarities
- Flag Lead and Stud Top Terminals
- High Surge Current Ratings
- High Rated Blocking Voltages

**Applications:**

- Welders
- Battery Chargers
- Electrochemical Refining
- Metal Reduction
- General Industrial High Current Rectification

**Electrical Characteristics:**

**Voltage** (Blocking State Maximums at Maximum  $T_J$ )

Repetitive Peak Reverse Voltage, $V_{RRM}$	
NTE6102, NTE6103*	600V
NTE6104, NTE6105*	1200V
NTE6108, NTE6109*	1600V

Non-Repetitive Transient Peak Reverse Voltage ( $t \leq 5.0ms$ ), $V_{RSM}$	
NTE6102, NTE6103*	700V
NTE6104, NTE6105*	1400V
NTE6108, NTE6109*	1700V

Reverse Leakage Current (Peak), $I_{RRM}$	50mA
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**Current** (Conducting State Maximums)

RMS Forward Current, $I_F (RMS)$	470A
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Average Forward Current, $I_F (AV)$	300A
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Surge Current, $I_{FSM}$	
1/2 Cycle	7000A
3 Cycle	5250A
10 Cycle	4200A

Forward Voltage Drop, $V_{FM}$	
( $I_{FM} = 1500A, T_J = +25^\circ C$ )	2.15V
(Rated single phase average current and case temperature)	1.45V

$I^2t$ for Fusing (for times = 8.3ms), $I^2t$	204,000A <sup>2</sup> sec
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Note 1. \* Indicates reverse (anode to case) polarity.

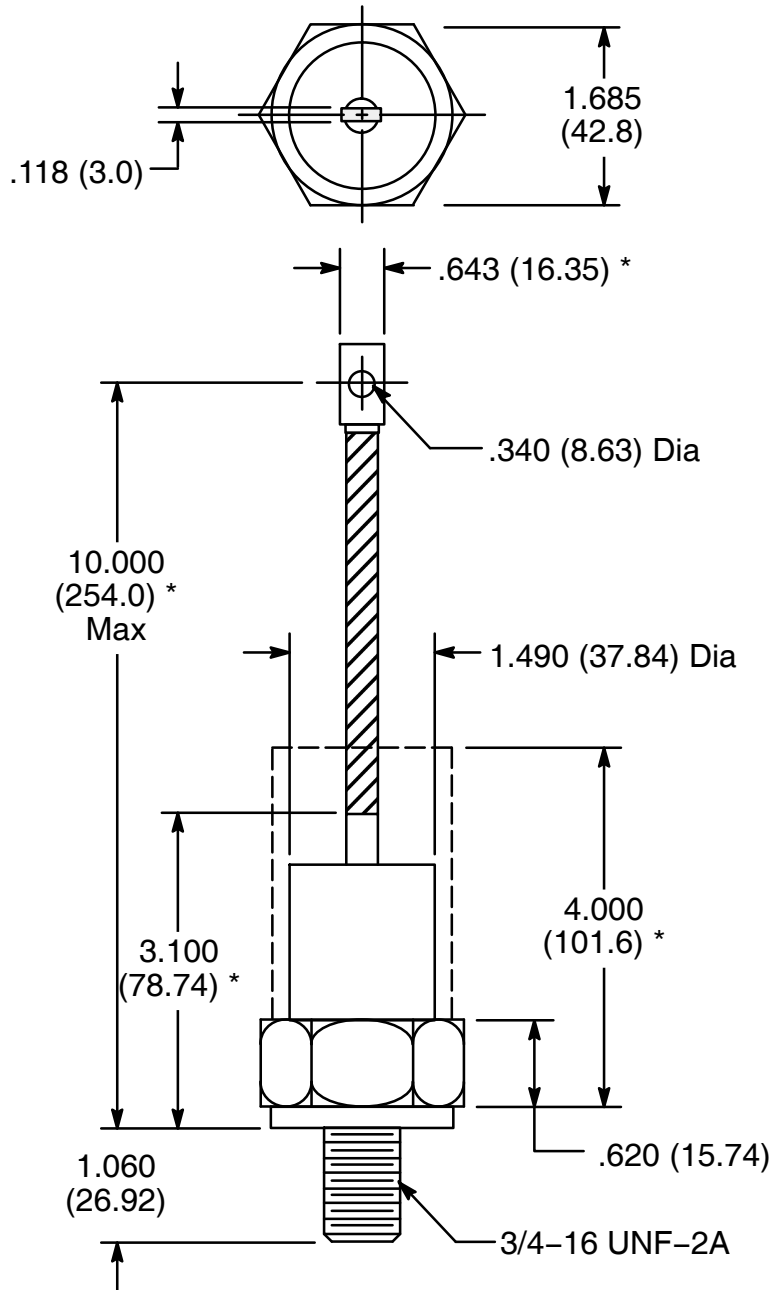
**Electrical Characteristics (Cont'd):**

**Switching**

Typical Reverse Recovery Time,  $t_{rr}$   
( $I_{FM} = 1500A$ ,  $t_p = 190\mu s$ ,  $diR/dt = 25A/\mu s$ ,  $T_C = +25^\circ C$ ) .....  $9\mu s$

**Thermal and Mechanical**

Operating Junction Temperature Range,  $T_J$  .....  $-65^\circ$  to  $+200^\circ C$   
Storage Temperature Range,  $T_{stg}$  .....  $-65^\circ$  to  $+200^\circ C$   
Thermal Resistance, Junction-to-Case,  $R_{thJC}$  .....  $0.12^\circ C/W$   
Thermal Resistance, Case-to-Sink (Lubricated),  $R_{thCS}$  .....  $0.04^\circ C/W$   
Maximum Mounting Torque ..... 360in. lb.



\* These dimensions are for reference only, please consult the factory for actual size.