



ELECTRONICS, INC.

44 FARRAND STREET
BLOOMFIELD, NJ 07003
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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 ($t \leq 5.0\text{ms}$), V_{RSM}

NTE6102, NTE6103*	700V
NTE6104, NTE6105*	1400V
NTE6108, NTE6109*	1700V

Reverse Leakage Current (Peak), I_{RRM} 50mA

Current (Conducting State Maximums)

RMS Forward Current, $I_F (RMS)$ 470A

Average Forward Current, $I_F (AV)$ 300A

Surge Current, I_{FSM}

1/2 Cycle	7000A
3 Cycle	5250A
10 Cycle	4200A

Forward Voltage Drop, V_{FM}

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

I^2t for Fusing (for times = 8.3ms), I^2t 204,000A²sec

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° to $+200^\circ C$
 Storage Temperature Range, T_{stg} -65° 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.

