



ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748-5089

NTE6110, NTE6112, & NTE6120 Industrial Rectifier, 500 Amp

Absolute Maximum Ratings: ($T_J = +190^{\circ}\text{C}$ unless otherwise specified)

Repetitive Voltage, V_{RRM}

NTE6110	600V
NTE6112	1200V
NTE6120	1600V

Non-Repetitive Voltage, V_{RSM}

NTE6110	700V
NTE6112	1300V
NTE6120	1700V

Average Forward Current, $I_{F(AV)}$ 500A

RMS Current ($+25^{\circ}\text{C}$ Heatsink Temperature, Double Side Cooled), $I_{F(RMS)}$ 1420A

DC Forward Current ($+25^{\circ}\text{C}$ Heatsink Temperature, Double Side Cooled), I_F 1240A

Peak One-Cycle Surge (Non-Repetitive) of Forward Current (8.3ms Duration), I_{FSM}

60% V_{RRM} Re-Applied	7950A
$V_R \leq 10V$	8745A

Maximum Permissible Surge Energy, I^2t

8.3ms Duration, 60% V_{RRM} Re-Applied	272570A ² s
8.3ms Duration, $V_R \leq 10V$	329800A ² s
3ms Duration, $V_R \leq 10V$	245000A ² s

Operating Temperature Range, T_{HS} -30° to $+190^{\circ}\text{C}$

Storage Temperature Range, T_{STG} -40° to $+200^{\circ}\text{C}$

Typical Thermal Resistance, Junction-to-Heatsink, $R_{th(j-hs)}$

(For a Device with a Max Forward Volt-Drop)

Single Side Cooled	0.18°C/W
Double Side Cooled	0.09°C/W

Electrical Characteristics: (Maximum Values @ $T_J = +190^{\circ}\text{C}$ unless otherwise specified)

Peak Forward Voltage Drop ($I_{FM} = 500A$), V_{FM} 1.4V

Forward Conduction Threshold Voltage, V_O 0.8V

Forward Conduction Slope Resistance, r 0.55mΩ

Peak Reverse Current (At V_{RRM}), I_{RRM} 15mA



