

NTE6116, NTE6118 & NTE6122 Industrial Rectifier, 2200 Amp

Features:

- High Voltage
- High Surge Current
- Diffused Junction

Applications:

- Converters
- Power Supplies
- High Power Drives
- Auxilliary System Supplies for Traction

Electrical Characteristics: ($T_J = +180^{\circ}\text{C}$ unless otherwise specified)

Maximum Repetitive Peak Reverse Voltage, V_{RRM}

NTE6116	600V
NTE6118	1200V
NTE6122	1600V

Maximum Non-Repetitive Peak Reverse Voltage, V_{RSM}

NTE6116	700V
NTE6118	1300V
NTE6122	1700V

Maximum Peak Reverse Current, I_{RRM} 75mA

Maximum Average Forward Current (Half Sine Wave, 180° Conduction), $I_{F(AV)}$

+55°C Heatsink Temperature (Double Side Cooled)	3000A
+85°C Heatsink Temperature (Single Side Cooled)	1550A

RMS Current (+25°C Heatsink Temperature, Double Side Cooled), $I_{F(RMS)}$ 5000A

Maximum Peak One-Cycle Surge (Non-Repetitive), Forward Current (Sinusoidal Halfwave), I_{FSM}

t = 10ms, No Voltage Re-Applied	31000A
t = 8.3ms, No Voltage Re-Applied	32460A
t = 10ms, 100% V_{RRM} Re-Applied	26050A
t = 8.3ms, 100% V_{RRM} Re-Applied	27300A

Maximum I^2t for Fusing (Sinusoidal Halfwave), I^2t

t = 10ms, No Voltage Re-Applied	4810000A ² s
t = 8.3ms, No Voltage Re-Applied	4390000A ² s
t = 10ms, 100% V_{RRM} Re-Applied	3400000A ² s
t = 8.3ms, 100% V_{RRM} Re-Applied	3100000A ² s

Low Level Value of Threshold Voltage ($16.7\% \times \pi \times I_{F(AV)} < I < \pi \times I_{F(AV)}$), $V_{F(TO)}$ 0.76V

High Level Value of Threshold Voltage ($I > \pi \times I_{F(AV)}$), $V_{F(TO)}$ 0.97V

Low Level Value of Forward Slope Resistance ($16.7\% \times \pi \times I_{F(AV)} < I < \pi \times I_{F(AV)}$), r_{11} 0.16 Ω

High Level Value of Forward Slope Resistance ($I > \pi \times I_{F(AV)}$), r_{12} 0.13 Ω

Maximum Forward Voltage Drop ($I_{pk} = 4000A$, $t_p = 10ms$, Sinusoidal Wave), V_{FM} 1.41V

Maximum Operating Junction Temperature Range, T_J -40° to $+180^{\circ}\text{C}$

Maximum Storage Temperature Range, T_{stg} -55° to $+200^{\circ}\text{C}$

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

DC Operation, Single Side Cooled	0.042°C/W
DC Operation, Double Side Cooled	0.020°C/W

Mounting Force ($\pm 10\%$), F 22250N (2250Kg)

