



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

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}	0.16Ω
High Level Value of Forward Slope Resistance ($I > \pi \times I_{F(AV)}$), r_{12}	0.13Ω
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°C
Maximum Storage Temperature Range, T_{stg}	-55° to +200°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)

