

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°C Heatsink Temperature, Double Side Cooled), $I_{F(RMS)}$	
1420A	
DC Forward Current (+25°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°C	
Storage Temperature Range, T_{stg}	
-40° to +200°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

