

NTE6113, NTE6115, & NTE6121 Industrial Rectifier, 1200 Amp

Absolute Maximum Ratings: ($T_J = +175^{\circ}\text{C}$ unless otherwise specified)

Repetitive Voltage, V_{RRM}	
NTE6113	600V
NTE6115	1200V
NTE6121	1600V
Non-Repetitive Voltage, V_{RSM}	
NTE6113	700V
NTE6115	1300V
NTE6121	1700V
Average Forward Current (Half Sine Wave), $I_{F(AV)}$	
+55°C Heatsink Temperature (Double Side Cooled)	1625A
+100°C Heatsink Temperature (Single Side Cooled)	800A
RMS Current (+25°C Heatsink Temperature, Double Side Cooled), $I_{F(RMS)}$	2950A
DC Forward Current (+25°C Heatsink Temperature, Double Side Cooled), I_F	2760A
Peak One-Cycle Surge (Non-Repetitive) of Forward Current (10ms Duration), I_{FSM}	
60% V_{RRM} Re-Applied	15400A
$V_R \leq 10V$	17700A
Maximum Permissible Surge Energy, I^2t	
10ms Duration, 60% V_{RRM} Re-Applied	1180000A ² s
10ms Duration, $V_R \leq 10V$	1560000A ² s
3ms Duration, $V_R \leq 10V$	1160000A ² s
Operating Temperature Range, T_{HS}	-30° to +175°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	0.065°C/W
Double Side Cooled	0.033°C/W

Electrical Characteristics: (Maximum Values @ $T_J = +175^{\circ}\text{C}$ unless otherwise specified)

Peak Forward Voltage Drop ($I_{FM} = 3770A$), V_{FM}	1.93V
Forward Conduction Threshold Voltage, V_O	0.87V
Forward Conduction Slope Resistance, r	0.28mΩ
Peak Reverse Current (At V_{RRM}), I_{RRM}	30mA

