



ELECTRONICS, INC.  
44 FARRAND STREET  
BLOOMFIELD, NJ 07003  
(973) 748-5089  
<http://www.nteinc.com>



## NTE6220 Powerblock Module

### Description:

NTE series powerblock modules come in an industry standard package, offering circuits that can be used singly or as power control building blocks. All models feature highly efficient thermal management for greatly extended cycle life.

### Features:

- Industry Standard Package and Circuit
- Power Control Building Blocks

### Applications:

- AC/DC Motor Drives
- Various Rectifiers
- DC Supply to PWM Inverter

### Electrical Specifications: ( $T_J = +150^{\circ}\text{C}$ unless otherwise specified)

|                                                                                                                                       |                                         |
|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| Maximum Mean Forward Current, $I_{F(AV)}$<br>( $180^{\circ}$ Half Sine Wave, 50Hz, Single Side Cooled, $T_C = +100^{\circ}\text{C}$ ) | 55A                                     |
| Maximum RMS Forward Current, $I_{F(RMS)}$                                                                                             | 86A                                     |
| Repetitive Peak Reverse Voltage ( $t_p = 10\text{ms}$ , $V_{RSM} = V_{RRM} + 200\text{V}$ ), $V_{RRM}$                                | 1200V                                   |
| Maximum Repetitive Peak Current ( $V_{RRM} = 1200\text{V}$ ), $I_{RRM}$                                                               | 8mA                                     |
| Maximum Surge Forward Current (10ms Half Sine Wave, $V_R = 0.6V_{RRM}$ ), $I_{FSM}$                                                   | 1.5KA                                   |
| Maximum $I^2t$ for Fusing (10ms Half Sine Wave, $V_R = 0.6V_{RRM}$ ), $I^2t$                                                          | $9.5\text{A}^2\text{s} * 10^3$          |
| Maximum Threshold Voltage, $V_{FO}$                                                                                                   | 0.8V                                    |
| Maximum Forward Slope Resistance, $r_F$                                                                                               | 3.47m $\Omega$                          |
| Maximum Peak Forward Voltage ( $I_{FM} = 170\text{A}$ , $T_J = +25^{\circ}\text{C}$ ), $V_{FM}$                                       | 1.45V                                   |
| Minimum Isolation Voltage (50Hz, RMS, $t = 1\text{min}$ , $I_{ISOL}: 1\text{mA (max)}$ ), $V_{ISOL}$                                  | 2500V <sub>RMS</sub>                    |
| Max. Thermal Resistance, Junction-to-Case (At $180^{\circ}$ Sine, Single Side Cooled), $R_{thJC}$                                     | 0.7 $^{\circ}\text{C/W}$                |
| Max. Thermal Resistance, Case-to-Heatsink (At $180^{\circ}$ Sine, Single Side Cooled), $R_{thCH}$                                     | 0.2 $^{\circ}\text{C/W}$                |
| Storage Temperature Range, $T_{stg}$                                                                                                  | $-40^{\circ}$ to $+125^{\circ}\text{C}$ |

