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## NTE6232 Powerblock Module

### **Description:**

The NTE6232 uses 2 power diodes in series and the semiconductors are electrically isolated from the metal base, allowing common heatsinks and compact assemblies to be built. This device is intended for general purpose applications such as battery chargers, welders and plating equipment and where high voltage and high current are required.

### **Features:**

- Isolated Mounting Base
- Pressure Contact Technology with Increased Power Cycling Capability
- Space and Weight Savings

### **Applications:**

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

### **Ratings and Characteristics:** ( $T_J = +150^\circ\text{C}$ unless otherwise specified)

Maximum Average Forward Current, $I_{F(AV)}$ ( $T_C = +100^\circ\text{C}$ , $180^\circ$ , Half Sine Wave, 50Hz, Single Side Cooled)	100A
Maximum RMS Forward Current, $I_{T(RMS)}$	173A
Maximum Repetitive Peak Reverse Voltage ( $t_p = 10\text{ms}$ ), $V_{RRM}$	1600V
Maximum Non-Repetitive Peak Reverse Voltage ( $t_p = 10\text{ms}$ ), $V_{RSM}$	2000V
Maximum Repetitive Peak Current (At $V_{RRM}$ ), $I_{RRM}$	8mA
Maximum Surge Forward Current (10ms Half Sine Wave, $V_R = 0.6V_{RRM}$ ), $I_{FSM}$	2.6KA
Maximum $I^2t$ for Fusing Coordination (10ms Half Sine Wave, $V_R = 0.6V_{RRM}$ ), $I^2t$	$34.4\text{A}^2\text{s} * 10^3$
Maximum Threshold Voltage, $V_{FO}$	0.8V
Maximum Forward Slope resistance, $r_F$	1.74m $\Omega$
Maximum Peak Forward Voltage ( $I_{FM} = 330\text{A}$ , $T_J = +25^\circ\text{C}$ ), $V_{FM}$	1.45V
RMS Isolation Voltage (50Hz, $t = 1\text{s}$ Min, $I_{ISO}: 1\text{mA}$ Max), $V_{ISO}$	2500V
Storage Temperature Range, $T_{stg}$	$-40^\circ$ to $+125^\circ\text{C}$
Thermal Resistance, Junction-to-Case (At $180^\circ$ Sine, Single Side Cooled), $R_{thJC}$	0.35 $^\circ\text{C}/\text{W}$
Thermal Resistance, Case-to-Sink (At $180^\circ$ Sine, Single Side Cooled), $R_{thCS}$	0.15 $^\circ\text{C}/\text{W}$

# Circuit Diagram

