



ELECTRONICS, INC.

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NTE5742 & NTE5743 Powerblock Modules 3 Phase Bridge Modules

Description:

The NTE5742 and NTE5743 powerblock modules are designed for three-phase full wave rectification and contain six diodes connected in a three-phase bridge configuration. The mounting base of the module is electrically isolated from the semiconductor elements for simple heatsink construction.

Applications:

- Inverters for AC Motors
- Power Supply Units for DC Motors
- DC Power Supply Units for Battery Chargers
- General Purpose DC Power Supply Units

Absolute Maximum Ratings:

Repetitive Peak Reverse Voltage, V_{RRM}

NTE5742 800V

NTE5743 1600V

Non-Repetitive Peak Reverse Voltage, V_{RSM}

NTE5742 880V

NTE5743 1760V

Average Output Current (50/60Hz, Sinewave), I_D

NTE5742 ($T_C = +101^\circ\text{C}$) 75A

NTE5743 ($T_C = +93^\circ\text{C}$) 75A

Surge Forward Current (Rated Load Conditions), I_{FSM} 1000A

Maximum I^2t for Fusing (Rated Load Conditions), I^2t 4000A²sec

Operating Junction Temperature Range, T_J -40° to $+150^\circ\text{C}$

Storage Temperature Range, T_{stg} -40° to $+125^\circ\text{C}$

Isolation Breakdown Voltage (RMS, Main Terminal to Case, 1sec), V_{ISO} 2500V

Thermal Resistance, Junction-to-Case, R_{thJC}

(50/60Hz Sinewave, Thermal Resistance for Total Loss) 0.30°C/W

Thermal Resistance (With Thermal Compound), R_{thCF} 0.06°C/W