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RoHS 2002/95/EC

NTE5741
Powerblock Module
3 Phase Bridge Module

Description:

The NTE5741 powerblock module is designed for three–phase full wave rectification and contains 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.

Features:

- Operating Junction Temperature: +150°C Max
- Isolated Mounting Base
- High Reliability

Applications:

- AC, DC Motor Drive
- AVR
- Switching for Three–Phase Rectification

Absolute Maximum Ratings: (T_J = +25°C unless otherwise specified)

Repetitive Peak Reverse Voltage, V_{RRM} 1600V
Non–Repetitive Peak Reverse Voltage, V_{RSM} 1700V
Output Current (DC, Three–Phase, Full Wave, T_C = +117°C), I_D 30A
Surge Forward Current (1 Cycle, Peak value, Non–Repetitive), I_{FSM}
    50Hz 270A
    60Hz 300A
Operating Junction Temperature Range, T_J . . . . . –40° to +150°C
Storage Temperature Range, T_{stg} . . . . . –40° to +125°C
Isolation Breakdown Voltage (RMS, Main Terminal to Case, 1min), V_{ISO} 2500V
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 0.42°C/W

Electrical Characteristics:

Parameter	Symbol	Test Conditions	Rating	Unit
Maximum Repetitive Peak Reverse Current	I_{RRM}	T_J = +150°C, V_{RRM} = 1600V	3.0	mA
Maximum Forward Voltage Drop	V_{FM}	T_J = +25°C, I_{FM} = 30A, Inst. Measurement	1.3	V

Circuit Diagram