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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:

- International Standard Package
- Low Forward Voltage Drop
- Isolation Voltage: 2500V

Applications:

- DC Power Suppliers for Apparatus Device
- Input Rectifying Power Supply for PWM Converters
- Inverter Welders

Absolute Maximum Ratings:

Repetitive Peak Reverse Voltage, V_{RRM} 1600V
Non–Repetitive Peak Reverse Voltage, V_{RSM} 1700V
Output Current (Three–Phase, Whole Wave Rectifying Current, T_C = +100°C), I_D 30A
Surge Forward Current (t = 10ms, 50Hz, sin, T_{JM} = +150°C), I_{FSM} 500A
I^2t value (V_R = 960V, T_{JM} = +150°C), I^2t . . . . . 1200A^2s
Isolation Breakdown Voltage (AC, 1min), V_{ISO} 2500V
Operating Junction Temperature Range, T_J . . . . . –40° to +125°C
Rated Junction Temperature, T_{JM} . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –40° to +125°C
Thermal Resistance, Junction–to–Case, R_{thJC}
(Single–Side Heat Dissipation, Sine Half Wave) . . . . . 0.44°C/W
Mounting Torque, M_d
Copper Plate, M6 . . . . . 4 N•m
Connection Terminal, M4 . . . . . 3 N•m

Electrical Characteristics:

Parameter	Symbol	Test Conditions	Rating	Unit
Maximum Repetitive Peak Reverse Current	I_{RRM}	T_J = +150°C, V_{RRM} = 1600V, Sine Half Wave	2.0	mA
Maximum Forward Voltage Drop	V_{FM}	T_J = +25°C, I_{FM} = 30A	1.1	V

Circuit Diagram