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NTE5745 3 Phase Bridge Rectifier Module

Description:

The NTE5745 is a powerblock module 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.

Features:

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

Applications:

- Inverter
- Inductive Heating
- Chopper

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

Maximum DC Output Current ($T_C = +100^\circ\text{C}$, Three-phase, full wave rectifying circuit), $I_O \dots$	100A
Repetitive Peak Reverse Voltage ($V_{RSM} = 1800\text{V}$, $t_p = 10\text{ms}$), $V_{RRM} \dots$	1600V
Maximum Repetitive Peak Current ($V_{RRM} = 1600\text{V}$), $I_{RRM} \dots$	8mA
Maximum Surge Forward Current ($V_R = 0.6V_{RRM}$, 10ms Half sine wave), $I_{FSM} \dots$	1200A
Maximum I^2t for Fusing ($V_R = 0.6V_{RRM}$, 10ms Half sine wave), $I^2t \dots$	$7.2\text{A}^2\text{s} * 10^3$
Maximum Threshold Voltage, $V_{FO} \dots$	0.8V
Maximum Forward Slope Resistance, $r_F \dots$	4.5m Ω
Maximum Peak Forward Voltage ($J = +25^\circ\text{C}$, $I_{FM} = 100\text{A}$), $V_{FM} \dots$	1.3V
Storage Temperature Range, $T_{stg} \dots$	-40° to $+125^\circ\text{C}$
Isolation Breakdown Voltage (50Hz, RMS, $t = 1\text{min}$, $I_{ISO} = 1\text{mA max}$), $V_{ISO} \dots$	2500V
Thermal Resistance, Junction-to-Case (Single Side Cooled), $R_{thJC} \dots$	0.2 $^\circ\text{C/W}$
Thermal Resistance, Case-to-Heatsink (Single Side Cooled), $R_{thCH} \dots$	0.07 $^\circ\text{C/W}$

Circuit Diagram

