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NTE5740 Powerblock Module 3 Phase Bridge Module

Description:

The NTE5740 powerblock module is 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

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

Maximum DC Output Current (Three-Phase, Full Wave, $T_C = +100^\circ\text{C}$), I_O	30A
Maximum Repetitive Peak Reverse Voltage ($t_p = 10\text{ms}$, $V_{RSM} = 1000\text{V}$), V_{RRM}	800V
Maximum Repetitive Peak Current ($V_{RRM} = 800\text{V}$), I_{RRM}	2mA
Maximum Surge Forward Current (10ms, Half Sine Wave, $V_R = 480\text{V}$), I_{FSM}	0.5KA
Maximum I^2t for Fusing Coordination (10ms, Half Sine Wave, $V_R = 480\text{V}$), I^2t	$1.2\text{A}^2\text{s} * 10^3$
Maximum Threshold Voltage, V_{FO}	800mV
Maximum Forward Slope Resistance, r_F	9m Ω
Maximum Peak Forward Voltage ($I_{FM} = 30\text{A}$, $T_J = +25^\circ\text{C}$), V_{FM}	1.1V
RMS Isolation Voltage (50Hz, $t = 1\text{s}$ Min, $I_{ISO} = 1\text{mA}$ Max), V_{ISO}	2500V
Storage Temperature Range, T_{stg}	-40° to $+125^\circ\text{C}$
Thermal Resistance, Junction-to-Case (Single Side Cooled), R_{thJC}	0.44 $^\circ\text{C}/\text{W}$
Thermal Resistance, Case-to-Sink (Single Side Cooled), R_{thJC}	0.2 $^\circ\text{C}/\text{W}$
Typical Thermal Connection Torque, F_m	4.0N • m
Typical Mounting Torque, F_m	6.0N • m

Circuit Diagram

