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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°C unless otherwise specified)

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

Circuit Diagram