

NTE5740 & NTE5741 Powerblock Modules 3 Phase Bridge Modules

Description:

The NTE5740 and NTE5741 powerblock modules are 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:

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

Applications:

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

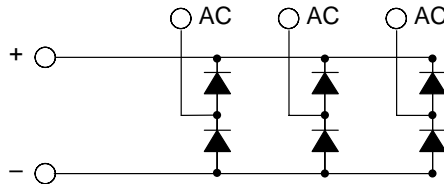
Absolute Maximum Ratings: ($T_J = +25^\circ\text{C}$ unless otherwise specified)

Repetitive Peak Reverse Voltage, V_{RRM}	
NTE5740	800V
NTE5741	1600V
Non-Repetitive Peak Reverse Voltage, V_{RSM}	
NTE5740	900V
NTE5741	1700V
Output Current (DC, Three-Phase, Full Wave), I_D	
NTE5740 ($T_C = +83^\circ\text{C}$)	30A
NTE5741 ($T_C = +117^\circ\text{C}$)	30A
Surge Forward Current (1 Cycle, Peak value, Non-Repetitive), I_{FSM}	
NTE5740	
50Hz	365A
60Hz	400A
NTE5741	
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}	
NTE5740	1.0°C/W
NTE5741	0.42°C/W

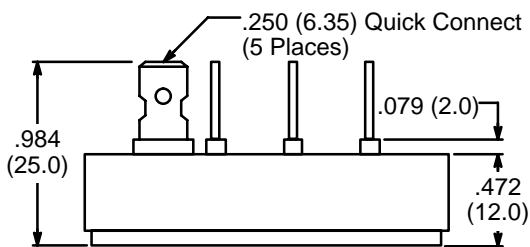
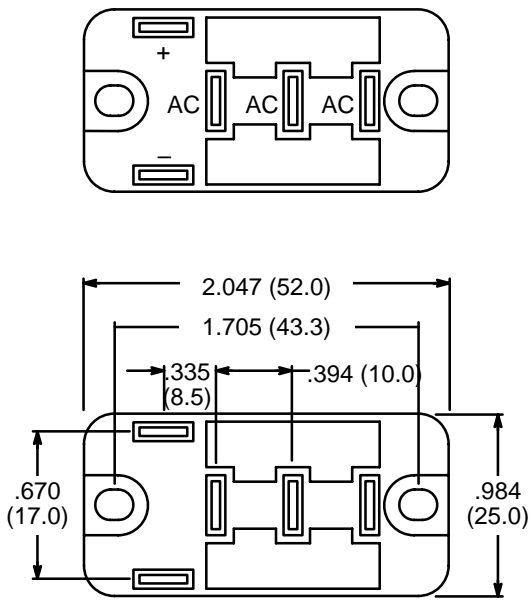
Electrical Characteristics:

Parameter	Symbol	Test Conditions	Rating	Unit
Maximum Repetitive Peak Reverse Current NTE5740	I_{RRM}	$T_J = +150^{\circ}\text{C}, V_{RRM} = 800\text{V}$	1.5	mA
NTE5741		$T_J = +150^{\circ}\text{C}, V_{RRM} = 1600\text{V}$	3.0	mA
Maximum Forward Voltage Drop NTE5740	V_{FM}	$T_J = +25^{\circ}\text{C}, I_{FM} = 30\text{A},$ Inst. Measurement	1.1	V
NTE5741			1.3	V

Circuit Diagram



NTE5740



NTE5741

