

## 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

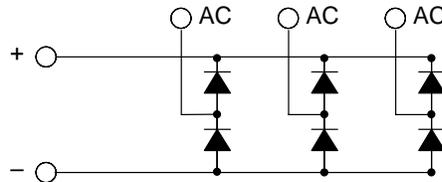
**Absolute Maximum Ratings:** ( $T_J = +25^\circ\text{C}$  unless otherwise specified)

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

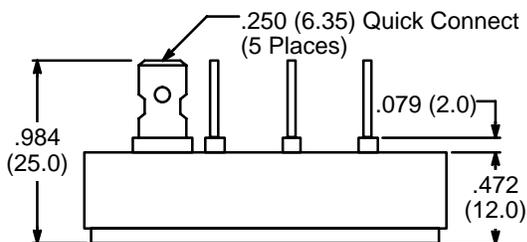
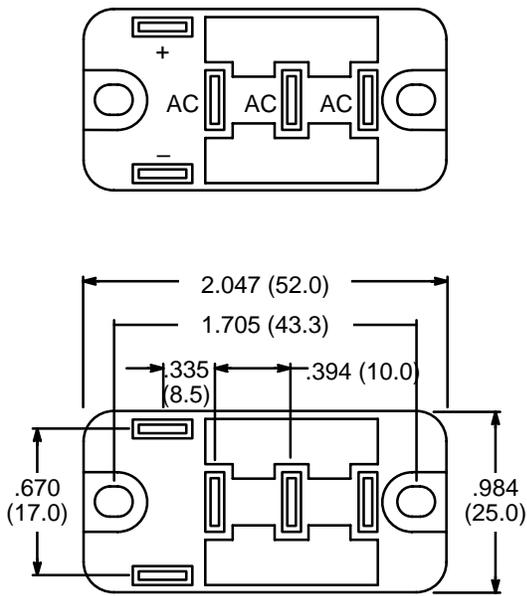
**Electrical Characteristics:**

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**

