

## NTE5744 & NTE5745 Powerblock Modules 3 Phase Bridge Modules

### Description:

The NTE5744 and NTE5745 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.

### Applications:

- Inverters for AC Motors
- Power Supply Units for DC Motors
- DC Power Supply Units for Battery Chargers
- General Purpose DC Power Supply Units

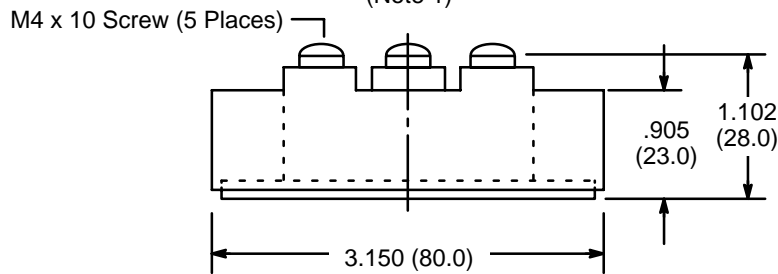
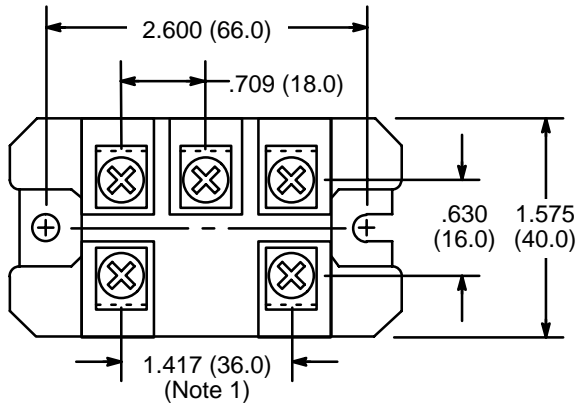
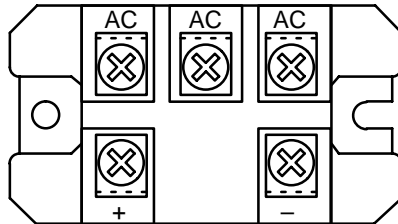
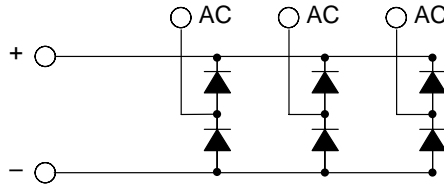
### Absolute Maximum Ratings:

Repetitive Peak Reverse Voltage, $V_{RRM}$	
<b>NTE5744</b> .....	800V
<b>NTE5745</b> .....	1600V
Non-Repetitive Peak Reverse Voltage, $V_{RSM}$	
<b>NTE5744</b> .....	880V
<b>NTE5745</b> .....	1760V
Average Output Current (50/60Hz, Sinewave), $I_D$	
<b>NTE5744</b> ( $T_C = +103^\circ\text{C}$ ) .....	100A
<b>NTE5745</b> ( $T_C = +97^\circ\text{C}$ ) .....	100A
Surge Forward Current (Rated Load Conditions), $I_{FSM}$ .....	1200A
Maximum $I^2t$ for Fusing (Rated Load Conditions), $I^2t$ .....	6000A <sup>2</sup> sec
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, 1sec), $V_{ISO}$ .....	2500V
Thermal Resistance, Junction-to-Case, $R_{thJC}$	
(50/60Hz Sinewave, Thermal Resistance for Total Loss) .....	0.22°C/W
Thermal Resistance (With Thermal Compound), $R_{thCF}$ .....	0.06°C/W

**Electrical Characteristics:**

Parameter	Symbol	Test Conditions	Rating	Unit
Maximum Repetitive Peak Reverse Current NTE5744	$I_{RRM}$	$T_J = +150^{\circ}\text{C}, V_{RRM} = 800\text{V}$	10	mA
NTE5745		$T_J = +150^{\circ}\text{C}, V_{RRM} = 1600\text{V}$	20	mA
Maximum Forward Voltage Drop NTE5744	$V_{FM}$	$T_J = +25^{\circ}\text{C}, I_{FM} = 100\text{A}$	1.15	V
NTE5745			1.25	V

**Circuit Diagram**



**Note 1.** Screws may be closer together at: 1.190 (30.0)