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NTE5742 & NTE5743 3 Phase Bridge Rectifier Modules

Description:

The NTE5742 and NTE5743 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}

NTE5742	800V
NTE5743	1600V

Non-Repetitive Peak Reverse Voltage, V_{RSM}

NTE5742	880V
NTE5743	1760V

Average Output Current (50/60Hz, Sinewave), I_D

NTE5742 ($T_C = +101^\circ\text{C}$)	75A
NTE5743 ($T_C = +93^\circ\text{C}$)	75A

Surge Forward Current (Rated Load Conditions), I_{FSM}

Maximum I^2t for Fusing (Rated Load Conditions), I^2t

Operating Junction Temperature Range, T_J

Storage Temperature Range, T_{stg}

Isolation Breakdown Voltage (RMS, Main Terminal to Case, 1sec), V_{ISO}

Thermal Resistance, Junction-to-Case, R_{thJC}

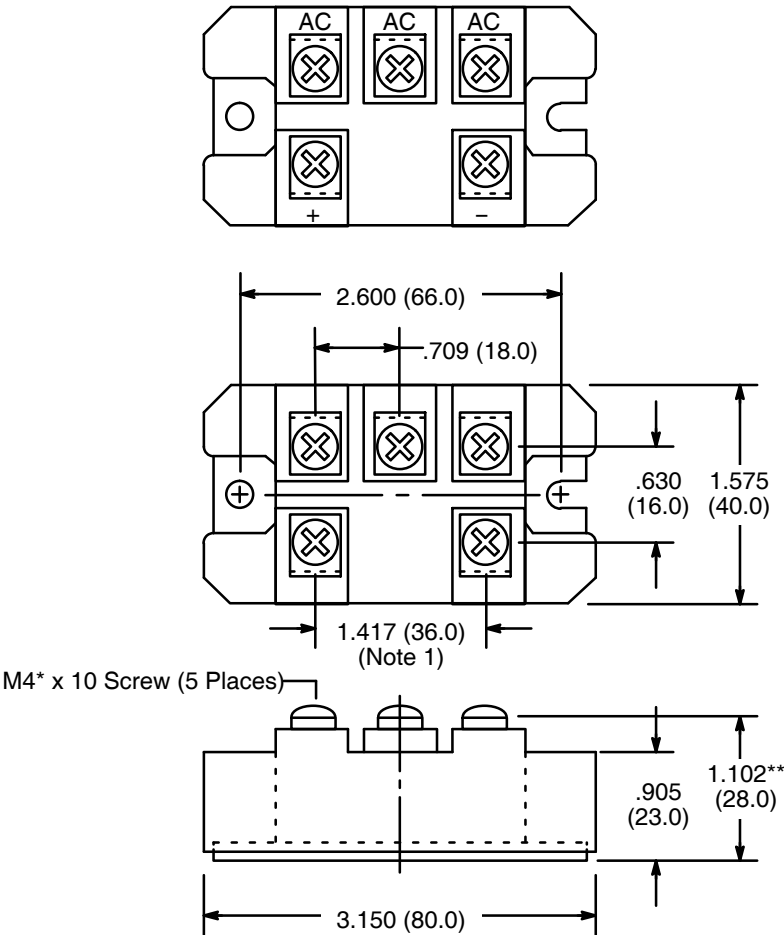
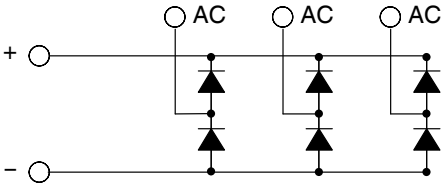
(50/60Hz Sinewave, Thermal Resistance for Total Loss)

Thermal Resistance (With Thermal Compound), R_{thCF}

Electrical Characteristics:

Parameter	Symbol	Test Conditions	Rating	Unit
Maximum Repetitive Peak Reverse Current NTE5742	I_{RRM}	$T_J = +150^{\circ}\text{C}, V_{RRM} = 800\text{V}$	10	mA
NTE5743		$T_J = +150^{\circ}\text{C}, V_{RRM} = 1600\text{V}$	8	mA
Maximum Forward Voltage Drop NTE5742	V_{FM}	$T_J = +25^{\circ}\text{C}, I_{FM} = 100\text{A}$	1.15	V
NTE5743		$T_J = +25^{\circ}\text{C}, I_{FM} = 75\text{A}$	1.30	V

Circuit Diagram



*NTE5743 = M5 not M4 **NTE5743 = 1.299 (33)

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