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## NTE5744 3 Phase Bridge Rectifier Module

### **Description:**

The NTE5744 is a powerblock module 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

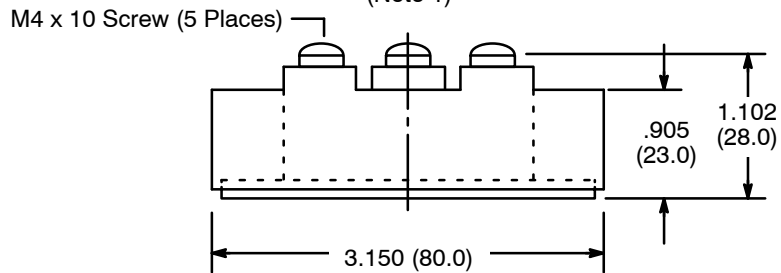
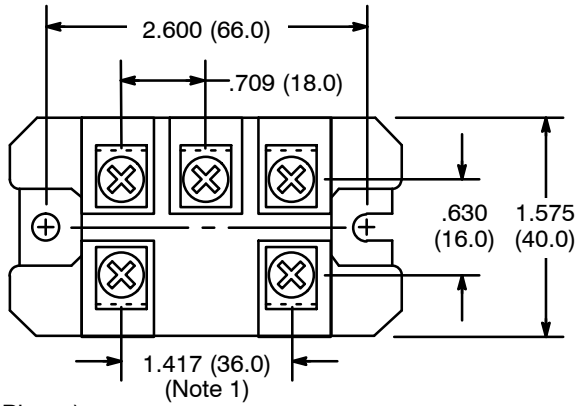
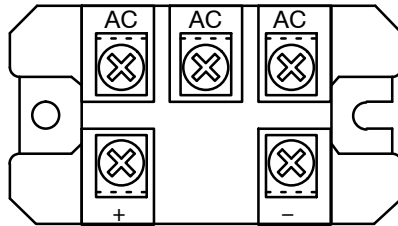
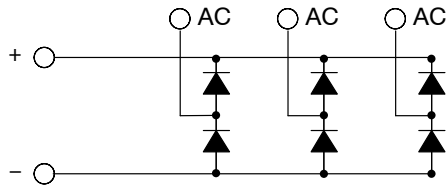
### **Absolute Maximum Ratings:**

|   |                        |
|---|------------------------|
| Repetitive Peak Reverse Voltage, $V_{RRM}$ .....  | 800V                   |
| Non-Repetitive Peak Reverse Voltage, $V_{RSM}$ .....  | 880V                   |
| Average Output Current (50/60Hz, Sinewave, $T_C = +103^{\circ}C$ ), $I_D$ .....                                 | 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, $R_{thJC}$<br>(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 | $I_{RRM}$ | $T_J = +150^{\circ}C, V_{RRM} = 800V$ | 10     | mA   |
| Maximum Forward Voltage Drop            | $V_{FM}$  | $T_J = +25^{\circ}C, I_{FM} = 100A$   | 1.15   | V    |

### Circuit Diagram



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