

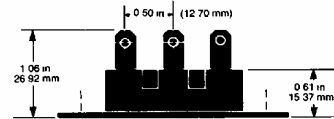
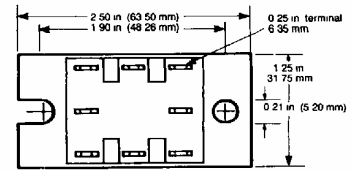
### SERIES B-2T

#### 25A-42.5A SCR/DIODE CIRCUITS

##### Part Number Identification

| 1st Digit Series Type      | 2nd Digit Current           | 3rd Digit Circuit Type       | 4th Digit AC Line Voltage                                | Options  | Type Of Terminal |
|----------------------------|-----------------------------|------------------------------|--|--|------------------|
| B-Casestyle (Ceramic Base) | 5-25 amps.<br>6-42.5 amps.* | 1-9 (see schematic diagrams) | 1-120 volts<br>2-240 volts<br>3-280 volts<br>4-440 volts | F-Free Wheeling Diode Option<br>S-Suppressor Option<br>E-External Mounting of Suppressor | 2T- 250          |

\* 42.5 AMP Rating only available in circuits 1, 2, 3, & 5



##### Electrical Specifications

|            |   | PACKAGE TYPE  |             |
|------------|---|---|-------------|
|            |   | B5  | B6          |
| $I_d$      | maximum dc output current @ 85° C = Tc full bridge (circuits 1-4) (A) | 25  | 42.5        |
| $I_T(RMS)$ | maximum output current @ 85°C ceramic plate CKT5(A)                   | 27  | 46          |
| $V_{TM}$   | maximum peak on-state voltage   | 1.8V @ 25A  | 1.6V @ 40A  |
| $I_H$      | maximum holding current   | 200mA   | 200mA       |
| $T_J$      | operating junction temperature range                                  | - 25°C to 125°C   |             |
| $di/dt$    | critical rate of rise of on-state current @ $T_J = 125°C$ (A/μS)      | 100   | 100         |
| $dv/dt$    | ①critical rate of rise of off-state voltage @ $T_J = 125°C$ (V/μS)    | 200   | 200         |
| $V_{RMS}$  | AC line input voltage (PIV)   | --- 120 (400PIV) ---<br>--- 240 (600PIV) ---<br>--- 280 (800PIV) ---<br>--- 440 (1200PIV) --- |             |
| $I_{TSM}$  | maximum non-repetitive surge current (A)<br>60Hz—125°C<br>50Hz—25°C   | 300<br>325  | 600<br>650  |
| $I^2t$     | maximum $I^2t$ for fusing t = 8.3 MSEC (A² sec)                       | 370   | 1500        |
| $I_{GT}$   | maximum required gate current to trigger, 25°C (mA)                   | 110   | 150         |
| $I_{GT}$   | typical gate current to trigger                                       | ---20mA to 100mA---   |             |
| $I_{GM}$   | maximum peak gate current   | 3.0A  | 3.0A        |
| $V_{GT}$   | maximum required gate voltage to trigger, 25°C (V)                    | 2.5   | 3.0         |
| $V_{GT}$   | typical gate voltage to trigger                                       | 0.9V  | 0.9V        |
| $V_{GD}$   | maximum non-triggering gate voltage at $T_J = 125°C$                  | 0.2V  | 0.2V        |
| $P_{GM}$   | maximum peak gate power, tp = 10μSec.                                 | 5W  | 5W          |
| $P_G(AV)$  | average gate power  | 0.5W  | 0.5W        |
| $V_{GM}$   | maximum peak gate voltage (forward)                                   | 10V   | 10V         |
| $V_{GM}$   | maximum peak gate voltage (reverse)                                   | 5.0V  | 5.0V        |
| $R_{θcs}$  | ①maximum thermal resistance case to sink (°C/W)                       | 0.10  | 0.10        |
| $V_{FM}$   | maximum peak forward voltage  | 1.65V @ 25A   | 1.50V @ 40A |
| $Rθ_{JC}$  | typical thermal resistance junction to ceramic base per device        | 0.6 C/W   | 0.5°C/W     |
| $V_{ISOL}$ | isolation voltage from terminals to base                              | ---2500 volts <sub>RMS</sub> min.---  |             |

##### Circuit Configurations for Series B-2T

