

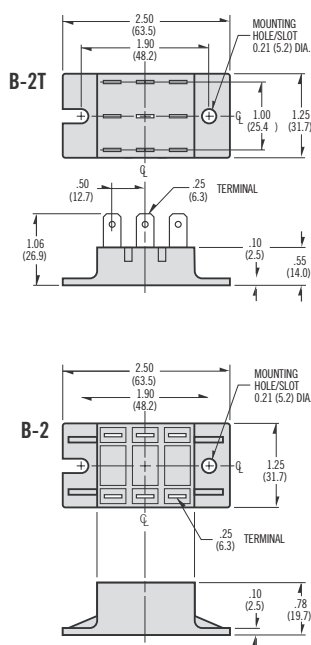


Modules come in eight standard circuits and are designed to control AC or DC variable voltage output up to 15KW. The package comes with standard .250 quick-connect terminals. All models have 2500 Vrms isolation and are UL recognized E72445. Optional isolation barriers are available.

- **Eight Standard Circuits**
- **AC or DC Variable Voltage Output to 15KW**

### Mechanical Dimensions

All dimensions are in inches (millimeters)



### Electrical Specifications

|                                                                                                   | B5                                                            | B6           |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------|
| $I_D$ Maximum DC Output Current @ $T_c = 85^\circ\text{C}$ (A)                                    | 25                                                            | 42.5         |
| $V_F$ Maximum Voltage Drop @ Amps Peak                                                            | 1.65V @ 25A                                                   | 1.6V @ 42.5A |
| $T_J$ Operating Junction Temperature Range                                                        | $-40^\circ\text{C}$ to $+125^\circ\text{C}$                   |              |
| $di/dt$ Critical Rate of Rise of On-State Current @ $T_J = 125^\circ\text{C}$ (A/ $\mu\text{s}$ ) | 100                                                           |              |
| $dv/dt$ Critical Rate of Rise of Off-State Voltage                                                | 500                                                           |              |
| $V_{RMS}$ Repetitive Peak Reverse Voltage (AC Line Input Voltage)                                 | 400 (120Vac)<br>600 (240Vac)<br>800 (280Vac)<br>1200 (480Vac) |              |
| $I_{TSM}$ Maximum Non-Repetitive Surge Current (A) [ $1/2$ Cycle, 60Hz ]                          | 250                                                           | 600          |
| $I^2T$ Maximum $I^2T$ for Fusing ( $A^2\text{-sec}$ ) [ $t = 8.3\text{ms}$ ]                      | 260                                                           | 1500         |
| $I_{GT}$ Maximum Required Gate Current to Trigger @ $25^\circ\text{C}$ (mA)                       | 60                                                            | 80           |
| $V_{GT}$ Maximum Required Gate Voltage to Trigger @ $25^\circ\text{C}$ (V)                        | 2.5                                                           | 3.0          |
| $P_{G(AV)}$ Average Gate Power                                                                    | 0.5W                                                          |              |
| $V_{GM}$ Maximum Peak Gate Voltage (Reverse)                                                      | 5.0V                                                          |              |
| $R_{\theta JC}$ Maximum Thermal Resistance Junction to Ceramic Base per Chip                      | 0.9°C/W                                                       | 0.7°C/W      |
| $V_{ISOL}$ Isolation Voltage                                                                      | 2500 $V_{RMS}$                                                |              |

### Mechanical Specifications

|                  |                 |
|------------------|-----------------|
| Weight (Typical) | 1.5 oz. (42.5g) |
|------------------|-----------------|

ISO9001 CERTIFIED

Competitive part number cross-reference available at: [www.cynergy3.com](http://www.cynergy3.com)

### Approvals

UL - E72445

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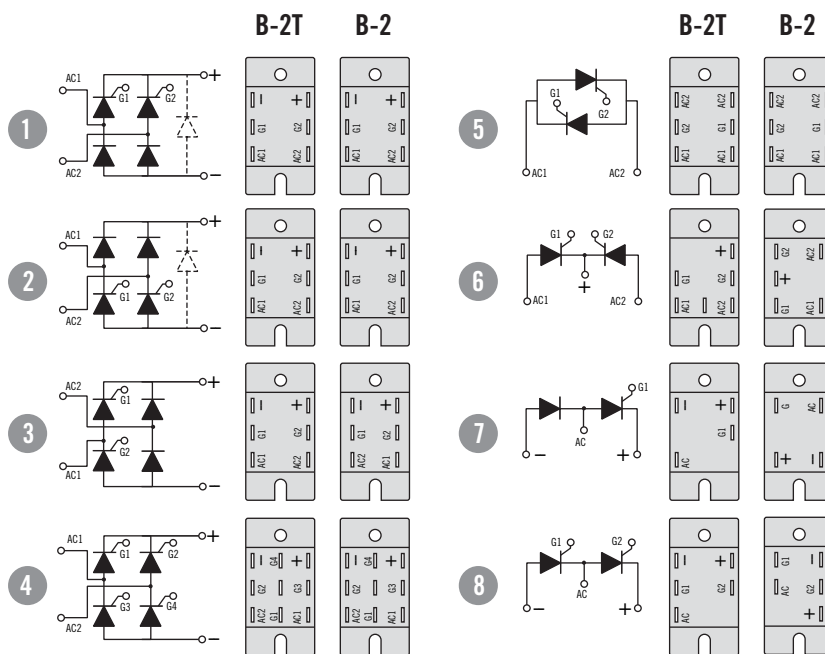
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**Part Number Identification**

| Series | Current       | Circuit Type             | AC Line Voltage | Options*       | Case Style |
|--------|---------------|--------------------------|-----------------|----------------|------------|
| B      | 5 - 25 Amps   | 1 - 8                    | 1 - 120 Vac     | F - Free       | -2T (Std)  |
|        | 6 - 42.5 Amps | (see schematic diagrams) | 2 - 240 Vac     | Wheeling Diode | -2 with    |
|        |               |                          | 3 - 280 Vac     | SE - External  | Isolation  |
|        |               |                          | 4 - 480 Vac     | Suppressor     | Barriers   |

Example: B512FSE-2T



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