



# Series B-2T, B-2

25-42.5 Amp • SCR/DIODE Modules

- **Eight Standard Circuits**
- **For AC or DC Variable Voltage Output Up To 15KW**

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 (file no. E72445). Optional isolation barriers are available.

Manufactured in Crydom's ISO 9002 Certified facility for optimum product performance and reliability.

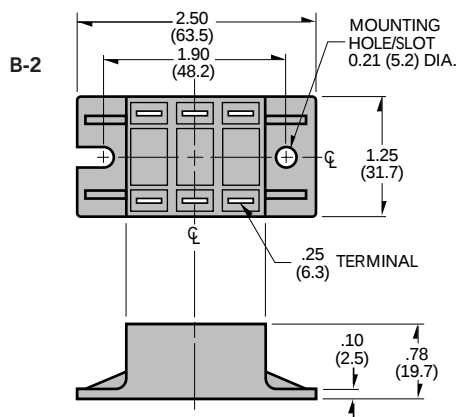
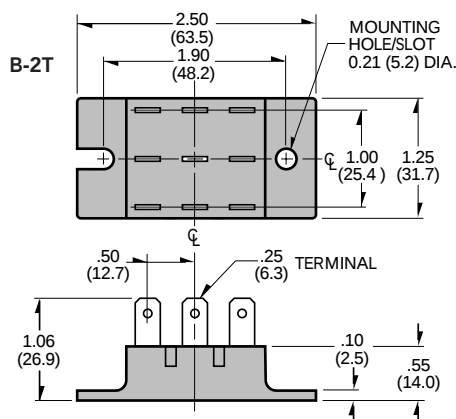
## PART NUMBER IDENTIFICATION

| Series Type                    | Current                      | Circuit Type                      | AC Line Voltage                                          | Options                                                                                                       | Case Style                                   |
|--------------------------------|------------------------------|-----------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| B-Case style<br>(Ceramic Base) | 5 - 25 Amps<br>6 - 42.5 Amps | 1 - 8<br>(see schematic diagrams) | 1 - 120 Vac<br>2 - 240 Vac<br>3 - 280 Vac<br>4 - 480 Vac | F - Free Wheeling Diode<br>(Circuits 1 & 2 Only)<br>SE - External Suppressor<br>(-2T Only, Circuits 1-6 Only) | -2T (Standard)<br>-2 With Isolation Barriers |

**Example: B512FSE-2T**

## MECHANICAL DIMENSIONS

All dimensions are in inches (millimeters)



| ELECTRICAL SPECIFICATIONS |                                                                           | MODEL NO. | B5                                                                                            | B6             |
|---------------------------|---------------------------------------------------------------------------|-----------|-----------------------------------------------------------------------------------------------|----------------|
| SYMBOL                    | SPECIFICATION                                                             |           | RATINGS                                                                                       |                |
| $I_D$                     | Maximum DC Output Current ( $T_c = 85^\circ\text{C}$ )                    |           | 25A                                                                                           | 42.5A          |
| $V_F$                     | Maximum Voltage Drop @ Amps Peak                                          |           | 1.65V @ 25A                                                                                   | 1.6V @ 42.5A   |
| $T_J$                     | Operating Junction Temperature Range                                      |           | -40°C to +125°C                                                                               |                |
| di/dt                     | Critical Rate of Rise of On-State Current @ $T_J=125^\circ\text{C}$       |           | 100A/μs                                                                                       | 100A/μs        |
| dv/dt                     | Critical Rate of Rise of Off-State Voltage [V/μs]                         |           | 500V/μs                                                                                       | 500V/μs        |
| $V_{RMS}$                 | AC Line Input Voltage<br>(Repetitive Peak Reverse Voltage)                |           | 120 (400 $V_{RRM}$ )<br>240 (600 $V_{RRM}$ )<br>280 (800 $V_{RRM}$ )<br>480 (1200 $V_{RRM}$ ) |                |
| $I_{TSM}$                 | Maximum Non-Repetitive Surge Current<br>( $1/2$ Cycle, 60Hz)              |           | 250A                                                                                          | 600A           |
| $I^2T$                    | Maximum $I^2T$ for Fusing ( $t=8.3\text{ms}$ ) [ $\text{A}^2\text{sec}$ ] |           | 260                                                                                           | 1500           |
| $I_{GT}$                  | Maximum Required Gate Current to Trigger @ 25°C                           |           | 60mA                                                                                          | 80mA           |
| $V_{GT}$                  | Maximum Required Gate Voltage to Trigger @ 25°C                           |           | 2.5V                                                                                          | 3.0V           |
| $P_{G(AV)}$               | Average Gate Power                                                        |           | 0.5W                                                                                          | 0.5W           |
| $V_{GM}$                  | Maximum Peak Gate Voltage (Reverse)                                       |           | 5.0V                                                                                          | 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 $V_{RMS}$                                                                                | 2500 $V_{RMS}$ |

## MECHANICAL SPECIFICATIONS

Weight: (typical)

1.5 oz. (42.5g)

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For recommended applications and more information contact:

USA: (800) 8 CRYDOM • (800) 827-9366 • (619) 715-7200 • fax (619) 715-7280

Crydom Corp, 9525 Chesapeake Drive, San Diego, CA 92123 • e-mail: sales@crydom.com

WEB SITE: <http://www.crydom.com> FASTFAX Product Information: (888) 267-9191

UK: (44)1202 812300 • fax (44)1202 812340 Crydom International Ltd., 85, Condor Close, Woolbridge Industrial Estate, Three-Legged Cross, Wimborne, Dorset, England BH21 6SU

GERMANY: (49) (0)6874 182580 • fax (49)(0)6874 182585 Crydom GmbH,

Gewerbegebiet Im Schachen, D-66687 Nunkirchen, Germany • e-mail: vertrieb@crydom.com





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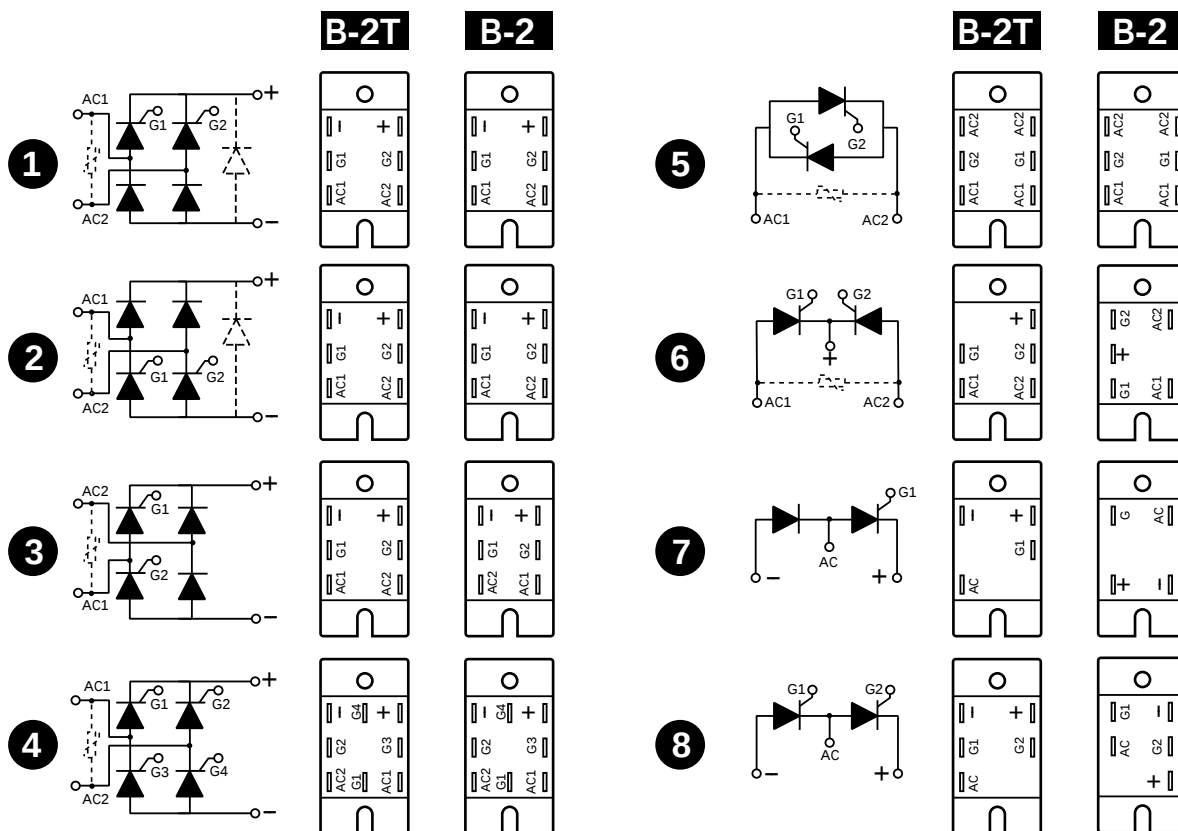
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## SERIES B-2T, B-2 CIRCUITS



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