

# **B-2T / B-2 SERIES**

POWER MODULES



## Features

- 5 Circuits to choose from
- For AC or DC variable voltage output up to 15 kW
- UL Recognized E72445



## **SPECIFICATIONS**

## Electrical

Description	Symbol	B5	В6
Maximum DC Output Current (Tc = 85°C)	I <sub>D</sub>	25 A	42.5 A
Maximum Voltage Drop @ Amps Peak	V <sub>F</sub>	1.65 V @ 25 A	
Operating Junction Temperature Range	T	-40 - 125° C	
Critical Rate of Rise of On-State Current @ TJ=125°C	di/dt	100 A/μs	
Critical Rate of Rise of Off-State Voltage [V/s]	dv/dt	500 V/μs	
AC Line Input Voltage (Repetitive Peak Reverse Voltage)	V <sub>RMS</sub>	120 (400 V <sub>RMS</sub> )	
		240 (600 V <sub>RMS</sub> )	
		280 (800 V <sub>RMS</sub> )	
		480(1200 V <sub>RMS</sub> )	
Maximum Non-Repetitive Surge Current (1/2 Cycle, 60 Hz)	I <sub>TSM</sub>	250 A	600 A
Maximum I <sup>2</sup> t for Fusing (t=8.3ms) [A <sup>2</sup> sec]	l²t	260	1500
Minimum Required Gate Current to Trigger @ 25°C	I <sub>GT</sub>	60 mA	80 mA
Minimum Required Gate Voltage to Trigger @ 25°C	V <sub>GT</sub>	2.5 V	3.0 V
Average Gate Power	P <sub>G(AV)</sub>	0.5W	0.5 W
Maximum Peak Reverse Gate Voltage	V <sub>GM</sub>	5.0 V	5.0 V
Maximum Thermal Resistance, Junction to Ceramic Base per Chip	R <sub>JC</sub>	0.9° C/W	0.7° C/W
Isolation Voltage	V <sub>ISOL</sub>	2500 Vrms	

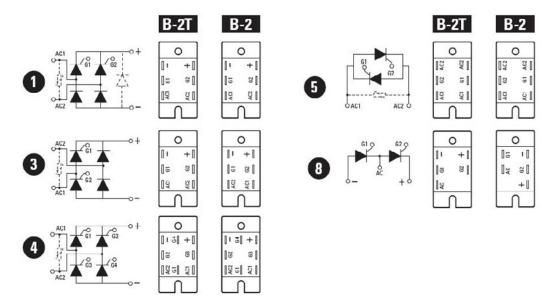
## General

Description	Parameters
Weight (typical)	1.5 oz (42.5g)

Page 1

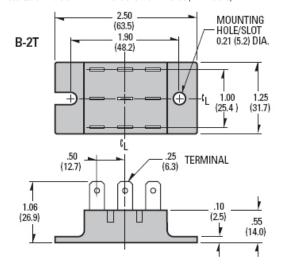


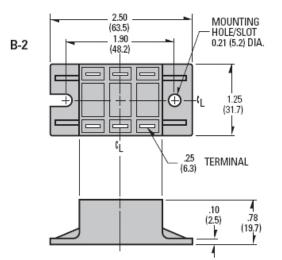
## CIRCUIT DIAGRAMS

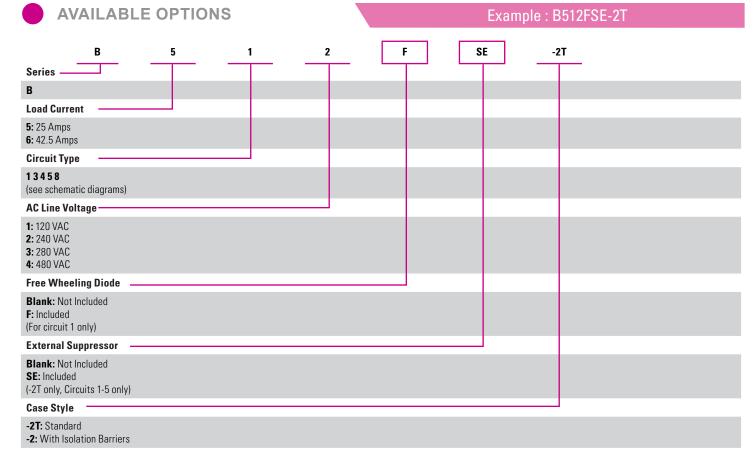


## MECHANICAL SPECIFICATIONS

\*Tolerances:  $\pm 0.02$  in / 0.5 mm All dimensions are in: inches [millimeters]







NOTE: Not all combinations are available.

Consult factory for information on the availability of a specific part number.

## AGENCY APPROVALS & CERTIFICATIONS









### **WARNINGS**



#### RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

Failure to follow these instructions can result in serious injury, or equipment damage.



### HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
- · Verify all connections and replace all covers before turning on power

Failure to follow these instructions will result in death or serious injury.

Page 4

Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at <a href="https://www.sensata.com">www.sensata.com</a> SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

### **CONTACT US**

### Americas

+1 (877) 502 5500 sales.crydom@sensata.com **Europe, Middle East & Africa** 

+44 (1202) 416170 ssr-info.eu@sensata.com

### **Asia Pacific**

sales.isasia@list.sensata.com China +86 (21) 2306 1500 Japan +81 (45) 277 7117 Korea +82 (31) 601 2004 India +91 (80) 67920890 Rest of Asia +886 (2) 27602006 ext 2808