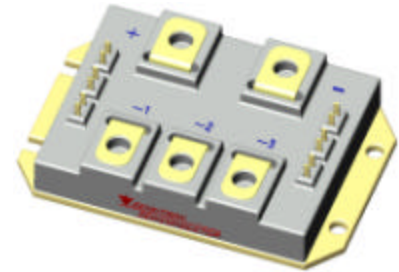


TECHNICAL DATA
PART NUMBER: SCP-5144, ENG. -

3-Phase Bridge -- IGBT Module 600V, 100A

Features:

- Multiple Layer, Moisture and Contamination Resistant Construction
- Increased Creepage and Clearance Distances for High Altitude Operation
- Operation at Temperature Extremes
- Internal Layout with Minimized Stray Inductances
- High Frequency Switching



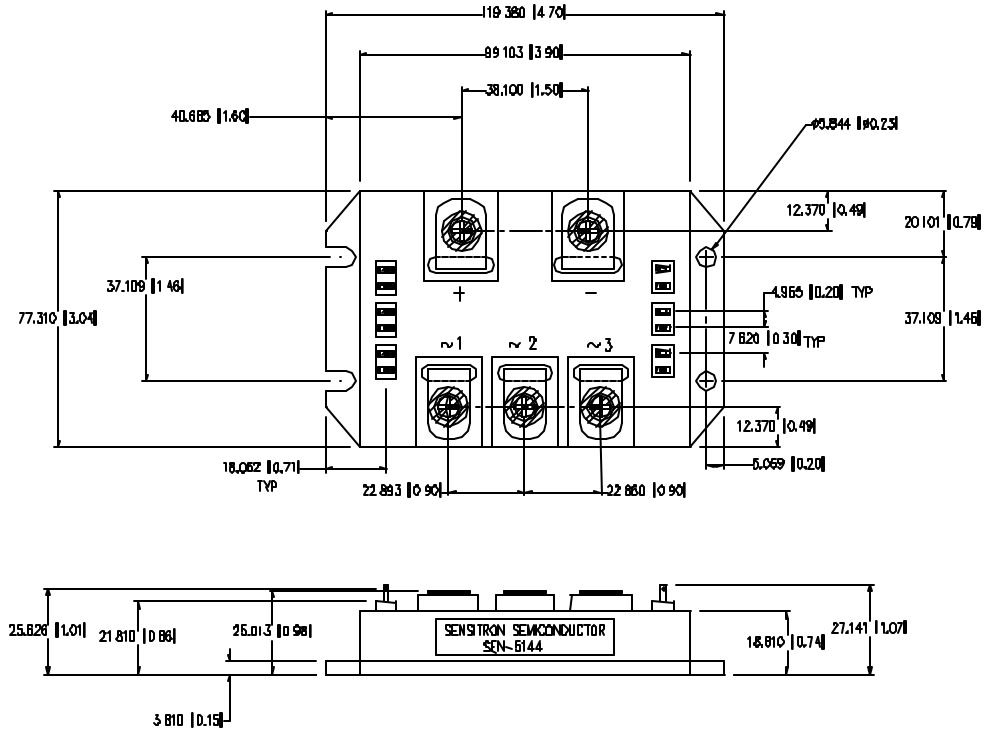
Maximum Ratings All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

Symbol	Test Conditions	Value	Units
V_{ces}	$T_j = 150\text{C}$	600	V
I_c	$T_c = 25\text{C} / 80\text{C}$	100 / 70	A
I_{cpulse}	$T_c = 25\text{C} / 80\text{C}$ $F = 10\text{kHz}, D = .05, V_{ce} = 300\text{V}$	200 / 140	A
V_{GE}		+ / - 20	V
Hipot	1500Vrms, 50Hz / 60Hz, 1 min.	10	uA
T_j		-55 to 150	°C
Diode			
I_F	$T_c = 25\text{C} / 80\text{C}$	100 / 70	A
I_{FM}	$T_c = 25\text{C} / 80\text{C}$ $F = 10\text{kHz}, D = .05$	200 / 140	A

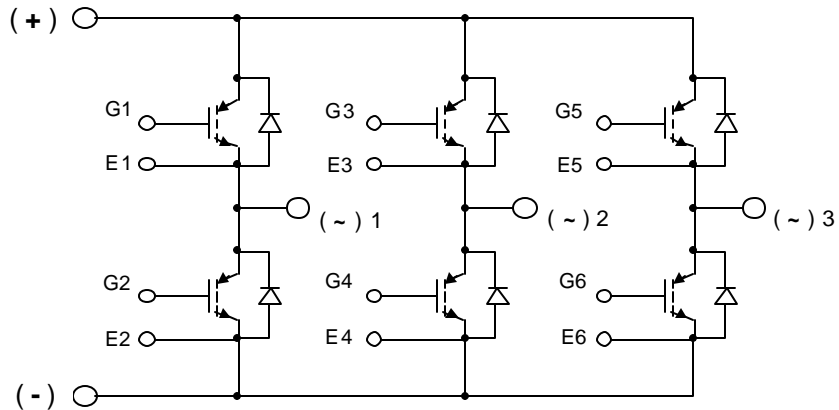
Electrical Characteristics All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

Symbol	Test Conditions	Min.	Typ.	Max.	Units
$V_{(BR)ces}$	$V_{ge} = 0\text{V}$,	600	-	-	V
$V_{CE(sat)}$	$V_{ge} = 15\text{V}, I_c = 100\text{A}$	-	2.0	-	V
$V_{GE(th)}$	$I_c = 1\text{mA}, V_{ge} = V_{ce}$	-	5.5	-	V
I_{CES}	$V_{ce} = 600\text{V}, V_{ge} = 0\text{V}$	-		-	mA
I_{GES}	$V_{ce} = 0\text{V}, V_{ge} = 20\text{V}$	-		250	nA
C_{iss}	$V_{ce} = 25\text{V}$	-	5	-	nF
C_{oss}	$V_{ge} = 0\text{V}$	-	1.5	-	nF
C_{rss}	$f = 1\text{MHz}$	-	.4	-	nF
$t_{d(on)}$	$V_c = 300\text{V}$	-	50	-	ns
t_r	$I_c = 100\text{A}$	-	20	-	ns
$t_{d(off)}$	$V_{ge} = + / - 15\text{V}$	-	150	-	ns
t_f	$R_g = 2.7\text{ Ohm}$	-	30	-	ns
Diode					
V_F	$I_F = 100\text{A}, F = 10\text{kHz}, D = .05$		1.6		V
t_{rr}	$V_r = 300\text{V}$		200		ns

MECHANICAL DIMENSIONS: In Inches / mm



SCHEMATIC



TECHNICAL DATA

DISCLAIMER:

- 1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
- 2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
- 3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
- 4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
- 5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
- 7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.