

TECHNICAL DATA

PART NUMBER: SCP-5988, Rev. A

THREE PHASE FULL WAVE BRIDGE RECTIFIER

DESCRIPTION: 1000 VOLT, 100 AMP THREE PHASE BRIDGE RECTIFIER ASSEMBLY.

Features:

- Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- Very High Surge Capacity
- Very suitable for medium frequency applications (upto 10 kHz)
- Soft Reverse Recovery at Low and High Temperature
- T_{rr} guaranteed lower than 2.5 μ sec

MAX. RATINGS / ELECTRICAL CHARACTERISTICS All ratings are at $T_A = 25^\circ\text{C}$ unless otherwise specified.

RATING	CONDITIONS	MIN	TYP	MAX	UNIT
Peak Inverse Voltage (PIV)	-	-	-	1100	V
Average DC Output Current (I_o)	$T_C = 55^\circ\text{C}$ $T_C = 100^\circ\text{C}$ $T_C = 125^\circ\text{C}$	-	-	100 70 55	A
Peak Single Cycle Surge Current (I_{FSM})	$t_p = 8.3$ ms Single Half Cycle Sine Wave	-	-	720	A (pk)
Peak Recurring Surge Current (I_{FRM})	$T_C = 25^\circ\text{C}$	-	-	300	A
Max. Forward Voltage Drop V_{F1}	80A, Pulse, $T_J = 25^\circ\text{C}$	-	1.25	1.4	V
Max. Forward Voltage Drop V_{F2}	80A, Pulse, $T_J = 125^\circ\text{C}$	-	-	1.25	V
Max. Reverse Current I_{R1}	$V_R = 1000\text{V}$, Pulse, $T_J = 25^\circ\text{C}$	-	1.5	5.0	μA
Max. Reverse Current I_{R2}	$V_R = 1000\text{V}$, Pulse, $T_J = 125^\circ\text{C}$	-	-	15	mA
Reverse Recovery Time T_{RR}	$I_F = 40\text{A}$; $di/dt = 25\text{A} / \mu\text{s}$, $V_R = 100\text{V}$, $T_J = 25^\circ\text{C}$	-	1.6	2.1	μs
Reverse Recovery Current I_{RM}	$I_F = 40\text{A}$; $di/dt = 25\text{A} / \mu\text{s}$, $V_R = 100\text{V}$, $T_J = 25^\circ\text{C}$	-	27	40	A
Max. Junction Capacitance C_T	$V_R = 30\text{V}$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$, $V_{SIG} = 100\text{mV}$	-	650	800	pF

Package Characteristics

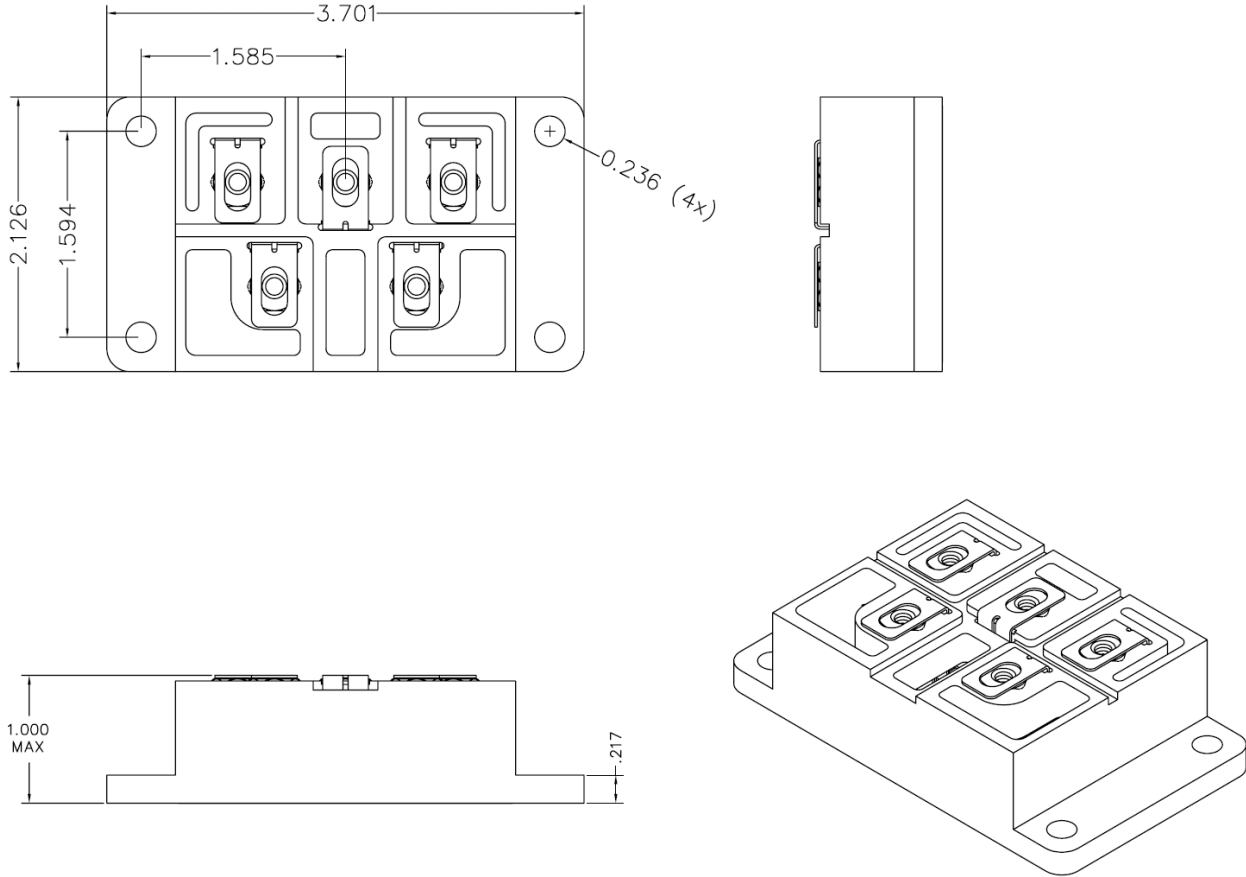
Max Module Power Loss at Rated Current $T_C = 55^\circ\text{C}$ $T_C = 100^\circ\text{C}$	P_D	- -	- -	350 185	W
Thermal Resistance Junction to Case	$R_{\theta JC}$	-	-	0.35	$^\circ\text{C/W}$
Operating & Storage Temperature Range	T_{OP} & T_{STG}	- 55	-	150	$^\circ\text{C}$
Isolation – Pins to Base Plate	V_{iso}	-	-	1500	V
Module Weight	M	-	165	-	gms

Note: Die Max Junction temperature is 190°C

TECHNICAL DATA

Part Number: SCP-5988, Rev. A

MECHANICAL OUTLINE (DIMENSIONS ARE IN INCHES)



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 in 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.