Part Number: SCP-5911, Rev. -

3 Phase Full Wave Bridge Rectifier Module

Features

- Excellent Thermal Performance
- Compact package, Low Weight
- Isolated base plate: 1500V
- High Surge Capability

Maximum Ratings **(Tj=25^{0}C UNLESS OTHERWISE SPECIFIED)**

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Peak Inverse Voltage and DC Blocking Voltage Per Diode	BV_{CES}	1100	-	-	V
Module Average Rectified Forward Current T_C = 55 ^{O}C T_C = 100 ^{O}C T_C = 125 ^{O}C	I_O	- - -	- - -	30 24 18	A A A
Peak Surge Current Per Diode t_P = 8.3ms	I_{FSM}	-	-	150	A
Operating & Storage Temperature Range	T_{OP} & T_{STG}	- 55	-	175	^{O}C

Electrical Characteristics **(Tj=25^{0}C UNLESS OTHERWISE SPECIFIED)**

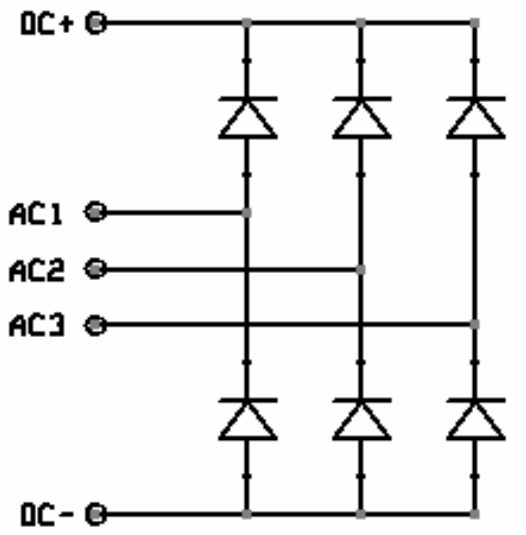
PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Instantaneous Forward Voltage I_F =9A, t_P = 300 µs Pulse T_C = 25 ^{O}C T_C = 100 ^{O}C	 V_{F1} V_{F2}	 - -	 1.40 -	 1.70 1.55	 V V
Reverse Leakage Current V_R = 1000V, t_P = 300 µs Pulse T_C = 25 ^{O}C T_C = 100 ^{O}C	 I_{R1} I_{R2}	 - -	 - -	 2.0 50	 µA µA
Breakdown Voltage I_R = 10 µA, t_P = 300 µs Pulse	B_{VR}	1100	-	-	V
Reverse Recovery Time I_F = 10A, di/dt = 10A / µs, V_R = 100V	t_{RR}	-	0.6	1	µs
Capacitance per Diode V_R = 10V, f = 1 MHz	C_T	-	80	200	pF

Package Characteristics

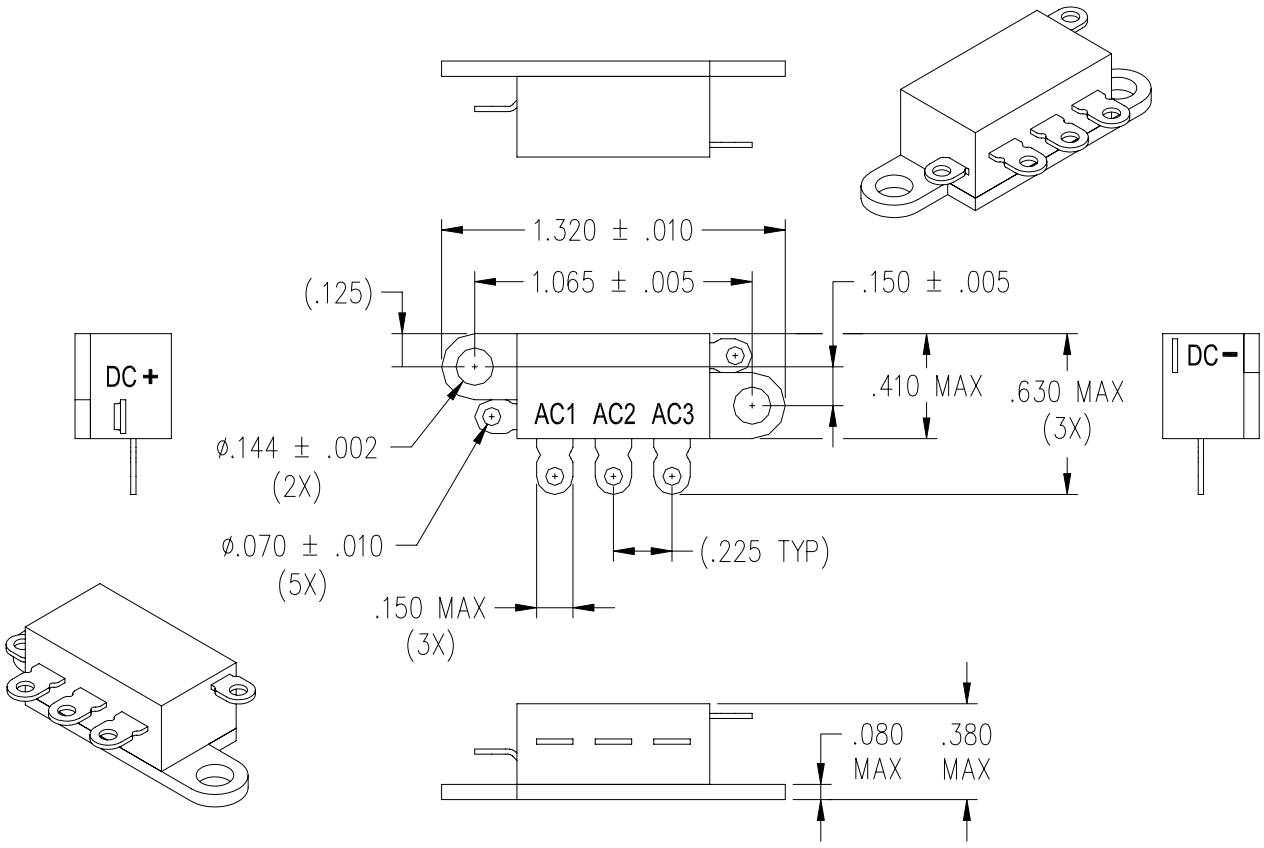
Thermal Impedance (Junction to Base) per Diode I_H = 15A, t_H = 5ms	$Z_{\theta JB}$	-	-	0.80	^{O}C/W
Module Thermal Resistance (Junction to Base)	$R_{\theta JB}$	-	-	0.67	^{O}C/W
Isolation to Base Plate	V_{iso}	-	-	1500	V
Module Weight	M	-	-	10	gms

Part Number: SCP-5911, Rev. -

Schematic Diagram:



Mechanical Outline:



Part Number: SCP-5911, Rev. -

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.