

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

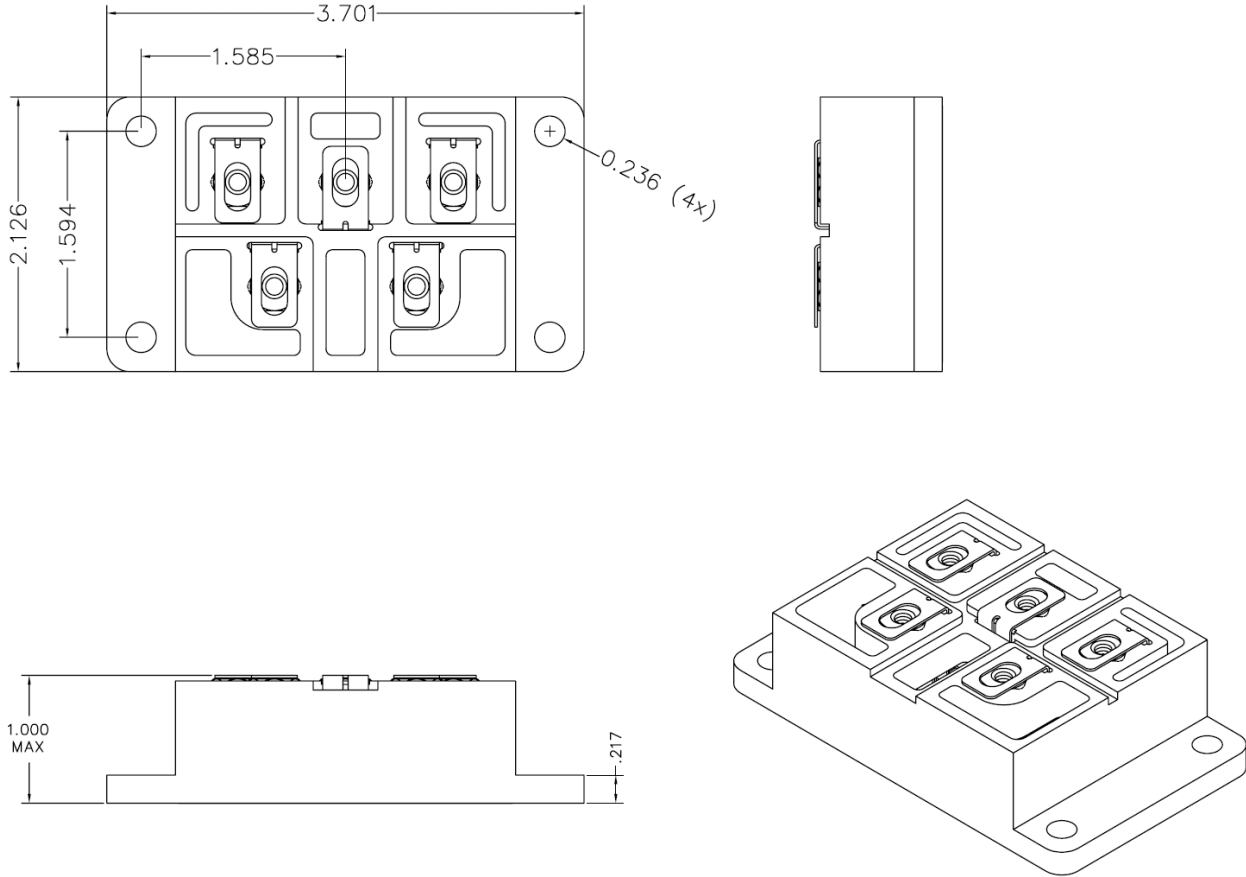
Max Module Power Loss at Rated Current $T_C = 55^\circ\text{C}$ $T_C = 100^\circ\text{C}$	P_D	- -	- -	350 185	W
Thermal Resistance Junction to Case	$R_{\theta JC}$	-	-	0.35	$^\circ\text{C/W}$
Operating & Storage Temperature Range	T_{OP} & T_{STG}	- 55	-	150	$^\circ\text{C}$
Isolation – Pins to Base Plate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

Note: Die Max Junction temperature is 190°C

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MECHANICAL OUTLINE (DIMENSIONS ARE IN INCHES)



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