SEMIPOWEREX®

SPD200(CC,CA,SC,SA,SCA,CCA)120S1

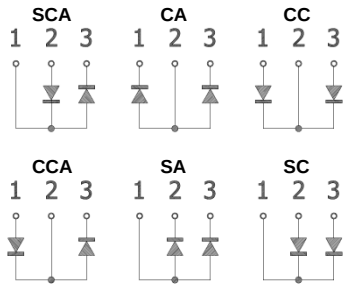
Fast Recovery Diode
200A 1200V

preliminary data

Features

- ✓ Repetitive Reverse Voltage : V_{RRM} = 1200V
- ✓ Forward Voltage : V_F(typ.)=2.0V
- ✓ Average Forward Current : $I_{F(AV)}$ =200A @T_C=80℃
- ✓ Industrial Standard Package with isolated copper base plate
- ✓ High Surge Capability

Package : S1



Application

- ✓ DC motor control and Drives
- ✓ Battery Charger
- ✓ High Speed & High Power Converters
- ✓ Various Switching Power Supply
- ✓ Welder

Absolute Maximum Ratings (T_C=25℃, unless otherwise noted.)

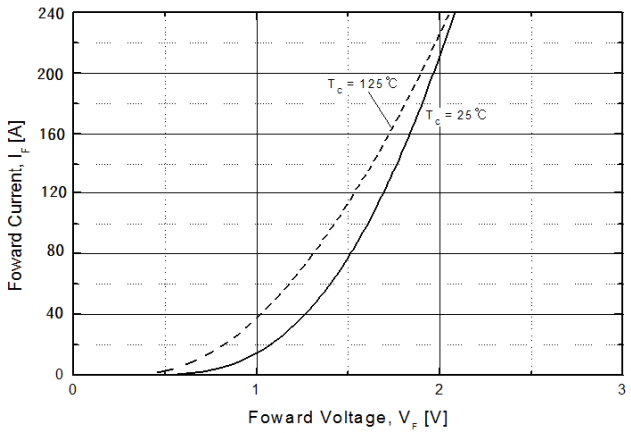
Symbol	Parameter	Conditions		Ratings	Unit
V_{RRM}	peak repetitive reverse voltage	T_j=25℃, I_R = 0.18mA		1200	V
$I_{F(AV)}$	max. average forward current	T_C=25℃		400	A
		T_C=80℃		200	
I_{FSM}	non-repetitive forw. surge current	10 ms, sin 180°	T_C=25℃	1,800	A
i^2t	max. i^2t for fusing	T_j=150℃, 10 ms, sin 180°		16,200	A^2s
P_D	total power dissipation	T_C=25℃		480	W
		T_C=80℃		265	W
T_j	operating junction temperature	-		-40 ~ 150	℃
T_{stg}	storage temperature range	-		-40 ~ 125	℃
V_{ISOL}	Isolation test voltage	RMS, f=50Hz, t=1 minutes		2,500	V
Weight	module			170	g
-	terminal mounting torque (M5)	typical		3.0	N.m

Electrical Characteristics (T_C=25℃, unless otherwise noted.)

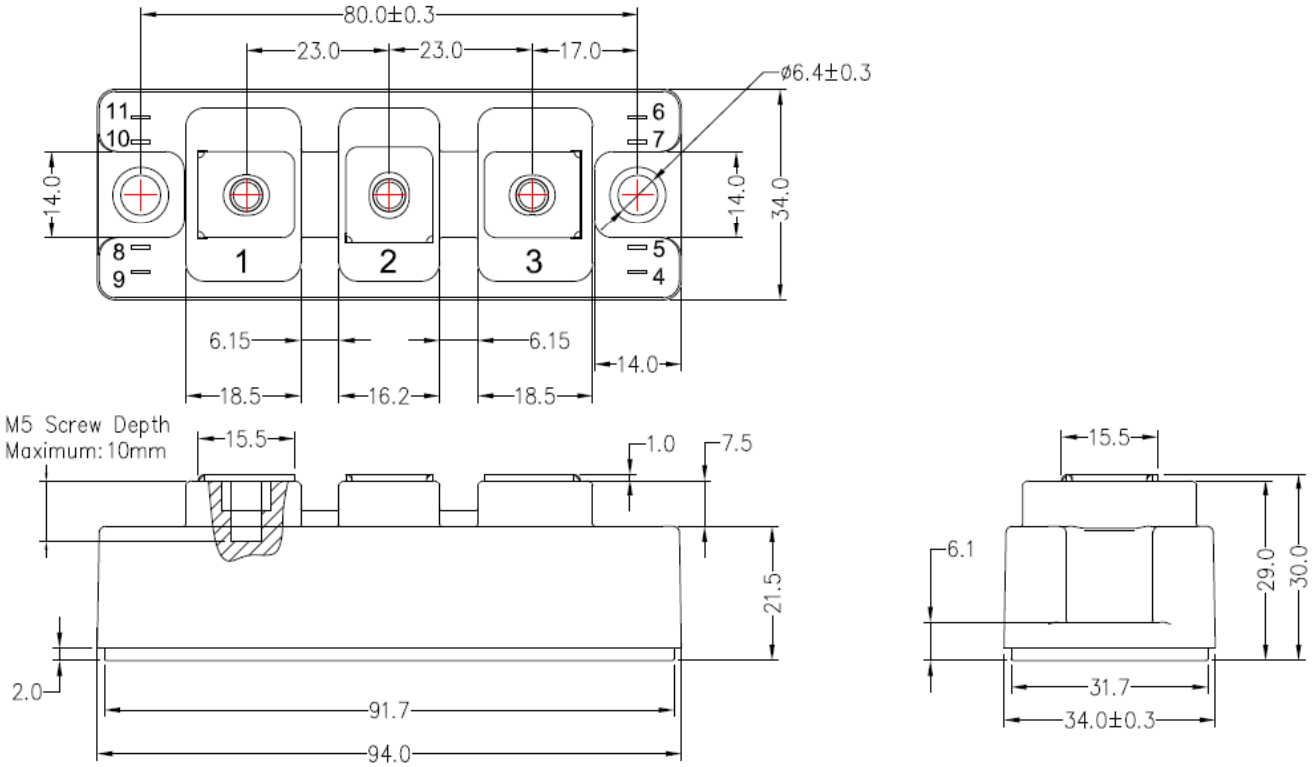
Symbol	Parameter	min.	typ.	max.	Units	Conditions
BV_R	cathode-anode breakdown voltage	1200	-	-	V	I_{RM} = 180uA
V_F	forward voltage	-	2.0	2.5	V	T_C=25℃, I_F = 200A
		-	1.9	-	V	T_C=125℃, I_F = 200A
I_{RM}	reverse leakage current	-		180	uA	T_j=25℃, V_R = 1200V
t_{rr}	reverse recovery time	-	100	150	ns	I_F = 100A, di/dt = 500/us
$R_{th(j-c)}$	junction-to-case	-	-	0.26	℃/W	
$R_{th(C-S)}$	case to heat-sink	-	0.05	-	℃/W	

Performance Curves

Fig.1 Typical Forward Voltage Drop



Package Outline (Dimension in mm)



* Technical information on this specification subject to change without any notice.