

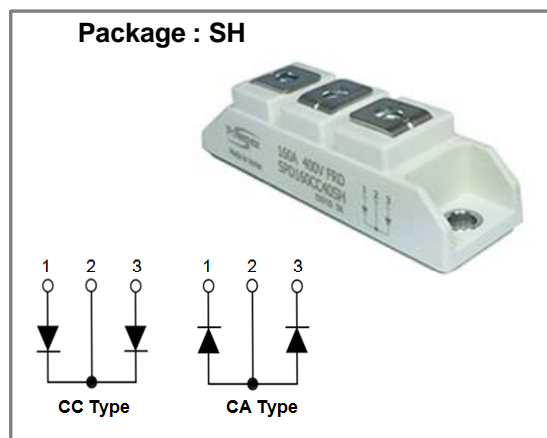
Features

- ✓ Repetitive Reverse Voltage : $V_{RRM} = 400V$
- ✓ Forward Voltage : $V_F(\text{typ.})=1.15V$
- ✓ Average Forward Current : $I_{F(AV)} = 160A @ T_C=80^\circ C$
- ✓ Industrial Standard Package with isolated copper base plate
- ✓ High Surge Capability

Application

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

preliminary data



Absolute Maximum Ratings ($T_C=25^\circ C$, unless otherwise noted.)

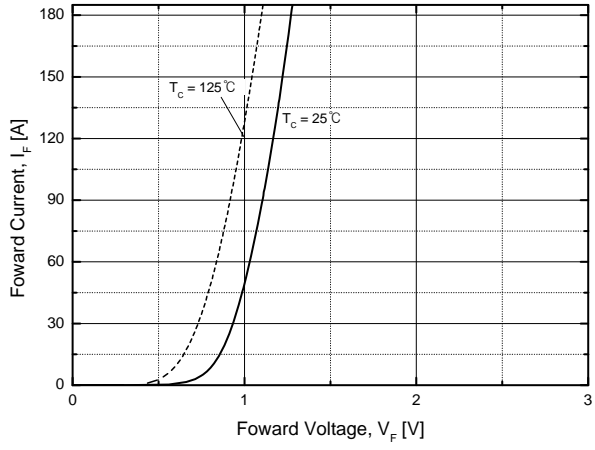
Symbol	Parameter	Conditions		Ratings	Units
V_{RRM}	peak repetitive reverse voltage	-		400	V
V_R	D.C. reverse voltage	-		320	V
$I_{F(AV)}$	max. average forward current	$T_C=25^\circ C$		320	A
		$T_C=80^\circ C$		160	
I_{FSM}	non-repetitive forw. surge current	10 ms, sin 180°	$T_C=25^\circ C$	2100	A
i^2t	max. i^2t for fusing	$T_j=25^\circ C$, 10 ms, sin 180°		18000	A ² s
P_D	total power dissipation per leg	$T_C=25^\circ C$		960	W
T_j	operating junction temperature	-		-40 ~ 150	°C
T_{stg}	storage temperature range	-		-40 ~ 125	°C
V_{ISOL}	Isolation test voltage	RMS, f=50Hz, t=1 minutes		2,500	V
Weight	module			120	g
-	terminal mounting torque (M5)	typical		3.0	N.m

Electrical Characteristics ($T_C=25^\circ\text{C}$, unless otherwise noted.)

Symbol	Parameter	min.	typ.	max.	Units	Conditions
BV_R	cathode-anode breakdown voltage	400	-	-	V	$I_{RM} = 240\mu\text{A}$
V_F	forward voltage	-	1.15	1.4	V	$T_C=25^\circ\text{C}$, $I_F = 160\text{A}$
		-	1.05	-	V	$T_C=80^\circ\text{C}$, $I_F = 160\text{A}$
I_{RM}	reverse leakage current	-		1	mA	$V_R = 400\text{V}$
t_{rr}	reverse recovery time	-	120	-	ns	$I_F = 100\text{A}$, $V=200\text{V}$, $di/dt = 500/\mu\text{s}$
$R_{th(j-c)}$	junction-to-case (both legs conduction)	-	-	0.13	$^\circ\text{C}/\text{W}$	

Performance Curves

Fig. 1 Forward voltage drop versus forward current



Package Outline (Dimension in mm)

