SEMIPOWEREX®

SPD60KA120S7

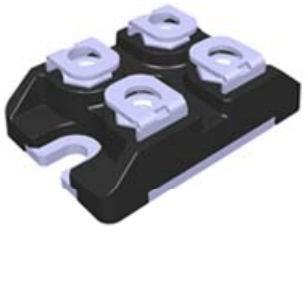
Fast Recovery Diode Dual
60A 1200V

preliminary data

Features

- ✓ Repetitive Reverse Voltage : V_{RRM} = 1200V
- ✓ Forward Voltage : V_F(Typ.)=2.2V
- ✓ Average Forward Current : $I_{F(AV.)}$ =60A @Tc=80℃
- ✓ Industrial Standard Package with isolated copper base plate
- ✓ High Surge Capability

Package : SOT-227



Application

- ✓ High Speed & High Power Converters
- ✓ Various Switching Power Supply and UPS
- ✓ Welder

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

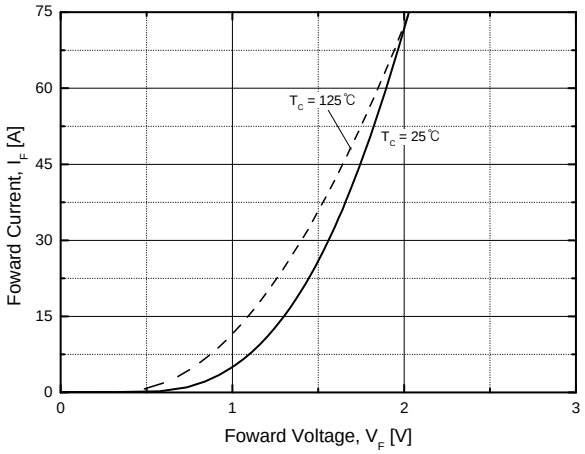
Symbol	Parameter	Conditions		Ratings	Unit
V_{RRM}	peak repetitive reverse voltage	T_j = 25 °C, I_R = 0.18mA		1200	V
$I_{F(AV)}$	max. average forward current	T_C=25℃		100	A
		T_C=80℃		60	
I_{FSM}	non-repetitive forw. surge current	10 ms, sin 180°	T_C=25℃	550	A
i^2t	max. i^2t for fusing	T_j=150℃, 10 ms, sin 180°		3,026	A^2s
P_D	total power dissipation	T_C=25℃		440	W
		T_C=80℃		250	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			29	g
-	terminal mounting torque (M4)	typical		1.45	N.m

Electrical & Dynamic Characteristics (T_C= 25 ˚C unless otherwise specified)

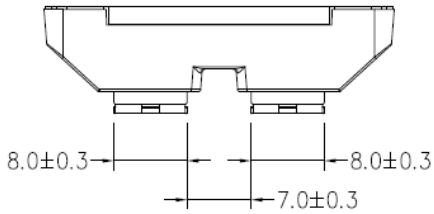
Symbol	Parameter	min.	typ.	max.	Units	Conditions
BV_R	cathode-anode breakdown voltage	1200	-	-	V	I_{RM} = 120uA
V_F	forward voltage	-	2.2	2.5	V	T_C=25℃, I_F = 100A
		-	2.1	-	V	T_C=125℃, I_F = 100A
I_{RRM}	reverse leakage current	-	-	0.18	mA	T_C=25℃, V_R = 1200V
t_{rr}	reverse recovery time	-	100	150	ns	I_F = 50A, di/dt = -500A/us
$R_{th(j-c)}$	junction-to-case	-	-	0.28	℃/W	
$R_{th(C-S)}$	case to heat-sink	-	0.05	-	℃/W	

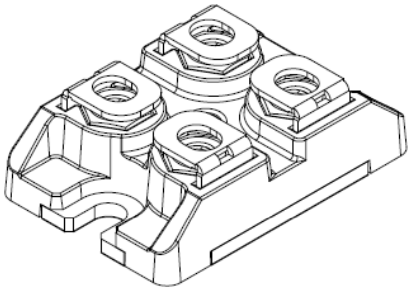
Performance Curve

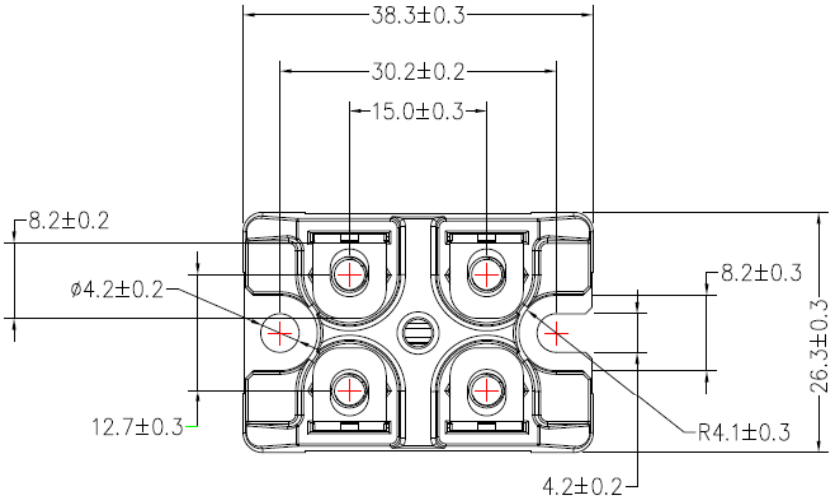
Fig. 1 Forward voltage drop versus forward current

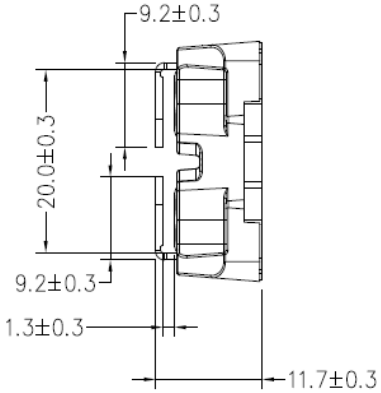


Package Dimension(Dimension in mm)









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