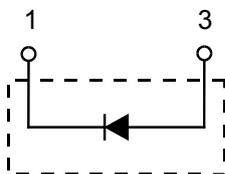
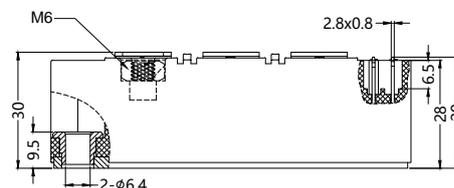


SDF200-17B

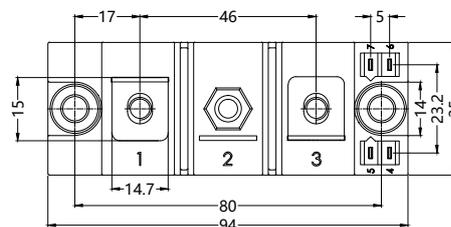
Soft Recovery Behaviour Ultra Fast Recovery Diode Modules



Dimensions in mm (1mm=0.0394")



	V_{RSM} V	V_{RRM} V
SDF200-17B	1700	1700



Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS}	$T_C=85^{\circ}C$	277	A
I_{FAVM}	$T_C=85^{\circ}C$; rectangular, $d=0.5$	200	
I_{FRM}	$t_p < 10\mu s$; rep. rating, pulse width limited by T_{VJM}	600	
I_{FSM}	$T_{VJ}=45^{\circ}C$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	A
	$T_{VJ}=150^{\circ}C$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	
I^2t	$T_{VJ}=45^{\circ}C$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	A ² s
	$T_{VJ}=150^{\circ}C$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	
T_{VJ}		-40...+150	$^{\circ}C$
T_{stg}		-40...+125	
T_{Smax}		110	
P_{tot}	$T_C=25^{\circ}C$	550	W
V_{ISOL}	50/60Hz, RMS $t=1min$	3000	V~
	$I_{ISOL} \leq 1mA$ $t=1s$	3600	
M_d	Mounting torque (M6)	2.25-2.75/20-25	Nm/lb.in.
	Terminal connection torque (M6)	4.50-5.50/40-48	
d_s	Creeping distance on surface	12.7	mm
d_A	Strike distance through air	9.6	mm
a	Maximum allowable acceleration	50	m/s^2
Weight		170	g



SDF200-17B

Soft Recovery Behaviour Ultra Fast Recovery Diode Modules

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I _R	T _{VJ} =25°C; V _R =V _{RRM}		15	mA
	T _{VJ} =25°C; V _R =0.8·V _{RRM}		6	
	T _{VJ} =125°C; V _R =0.8·V _{RRM}		80	
V _F	I _F =200A; T _{VJ} =125°C	1.90	2.20	V
	T _{VJ} =25°C	1.80	2.10	
V _{TO}	For power-loss calculations only		1.26	V
r _T			1.65	mΩ
R _{thJH}	DC current		0.228	K/W
R _{thJC}	DC current		0.160	
t _{rr}	I _F =200A; T _{VJ} =100°C	550	650	ns
	I _F =1A; T _{VJ} =100°C	90	120	
I _{RM}	V _R =900V; T _{VJ} =25°C		110	A
	-di/dt=400A/us; T _{VJ} =100°C		165	A

FEATURES

- * International standard package
- * Copper base plate
- * Glass passivated chips
- * Short recovery time
- * Low switching losses
- * Soft recovery behaviour
- * Isolation voltage 3600 V~
- * UL File NO.E310749
- * RoHS compliant

APPLICATIONS

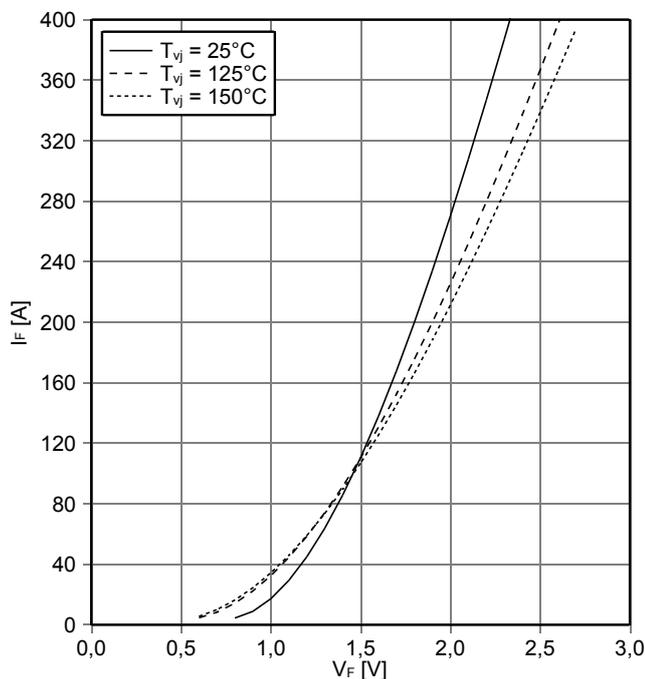
- * Antiparallel diode for high frequency switching devices
- * Free wheeling diode in converters and motor control circuits
- * Inductive heating and melting
- * Uninterruptible power supplies (UPS)
- * Ultrasonic cleaners and welders

ADVANTAGES

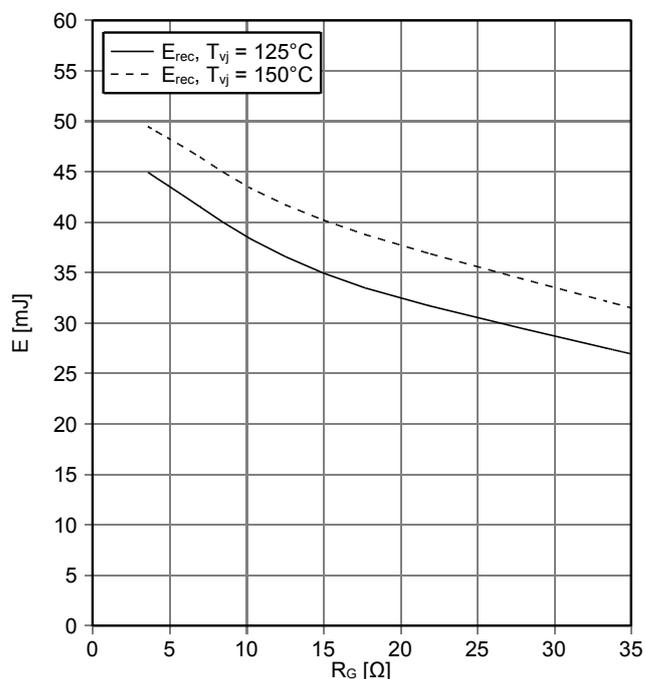
- * High reliability circuit operation
- * Low voltage peaks for reduced protection circuits
- * Low noise switching
- * Low losses

SDF200-17B

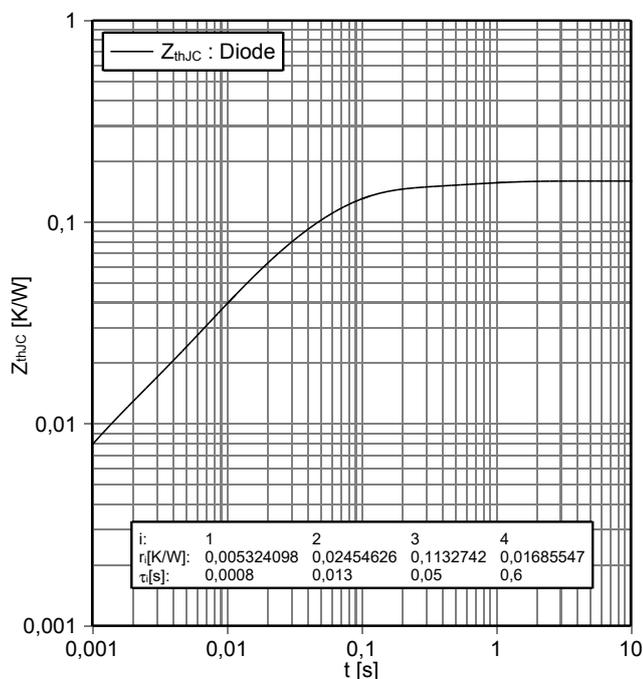
Soft Recovery Behaviour Ultra Fast Recovery Diode Modules



1, 正向电流电压特性 forward characteristic



2, 开关损耗特性
switching losses (typical) $E_{rec} = f(R_G)$
 $I_F = 200\text{ A}$, $V_{CE} = 900\text{ V}$



3, 瞬态热阻抗
transient thermal impedance Diode, Inverter $Z_{thJC} = f(t)$