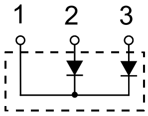
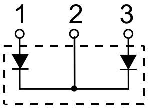
SDKF/SDAF/SDEF/SDFF2x200-06B1(B2)

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules



SDKF2X200-06B1
Side Common



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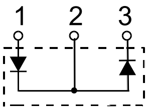
Center Common



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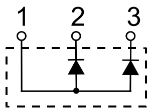
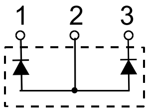
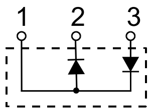


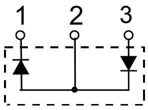
SDAF2X200-06B1
Side Common



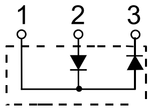
SDAF2X200-06B2
Center Common



SDEF2X200-06B1
Side Common

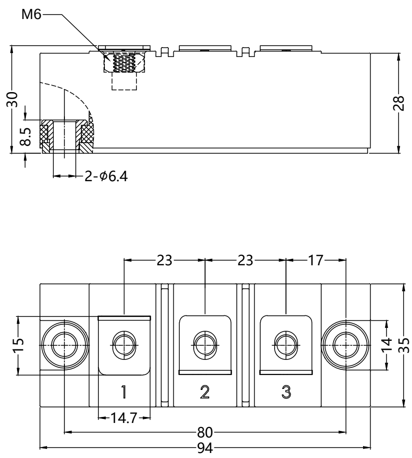


SDEF2X200-06B2
Center Common



SDFF2X200-06B
1 Side Common

Dimensions in mm (1mm=0.0394")



	VRSM V	VRRM V
SDKF2x200-06B1	600	600
SDKF2x200-06B2	600	600

	VRSM V	VRRM V
SDEF2x200-06B1	600	600
SDEF2x200-06B2	600	600

	VRSM V	VRRM V
SDAF2x200-06B1	600	600
SDAF2x200-06B2	600	600

	VRSM V	VRRM V
SDFF2x200-06B1	600	600
SDFF2x200-06B2	600	600

FEATURES

* International standard package
* Copper Base Plate
* Planar passivatd chips
* Short recovery time
* Low switching losses
* Soft recovery behaviour
* Isolation voltage 4800 V~
* 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

RoHS Compliant

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SDKF/SDAF/SDEF/SDFF2x200-06B1(B2)

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

Symbol	Test Conditions		Maximum Ratings	Unit
I_{FRMS} I_{FAVM} I_{FRM}	T_C=75°C T_C=75°C; rectangular, d=0.5 t_p<10us; rep. rating, pulse width limited by T_{VJM}		284 2 x 200 1600	A
I_{FSM}	T_{VJ}=45°C	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	3040 3300	A
	T_{VJ}=150°C	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	2700 2960	
I^2t	T_{VJ}=45°C	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	45500 45000	A^2s
	T_{VJ}=150°C	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	38800 39200	
T_{VJ} T_{stg} T_{Hmax}			-40...+150 -40...+125 110	°C
P_{tot}	T_{case}=25°C		690	W
V_{ISOL}	50/60Hz, RMS I_{ISOL}≤1mA	t=1min t=1s	4000 4800	V~
M_d	Mounting torque (M6) Terminal connection torque (M6)		2.50-4/22-35 2.50-4/22-35	Nm/lb.in.
d_S d_A a	Creeping distance on surface Strike distance through air Maximum allowable acceleration		12.7 9.6 50	mm mm m/s^2
Weight			170	g

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	T_{VJ}=25°C; V_R=V_{RRM} T_{VJ}=25°C; V_R=0.8·V_{RRM} T_{VJ}=125°C; V_R=0.8·V_{RRM}		0.5 0.2 1	mA
V_F	I_F=200A; T_{VJ}=125°C T_{VJ}=25°C I_F=400A; T_{VJ}=125°C T_{VJ}=25°C	1.35 1.65	1.40 2.00 1.80 2.30	V
V_{FO}	For power-loss calculations only		0.99	V
r_F	T_{VJ}=125°C		2.90	mΩ
R_{thJH} R_{thJC}	DC current DC current		0.290 0.140	K/W
t_{rr}	I_F=1A ; T_{VJ}=25°C di/dt=200A/us I_F=200A; T_{VJ}=100°C di/dt=200A/us	40 100	50 130	ns
I_{RM}	V_R=300V; T_{VJ}=25°C -di/dt=200A/us; T_{VJ}=100°C		75 102	A A

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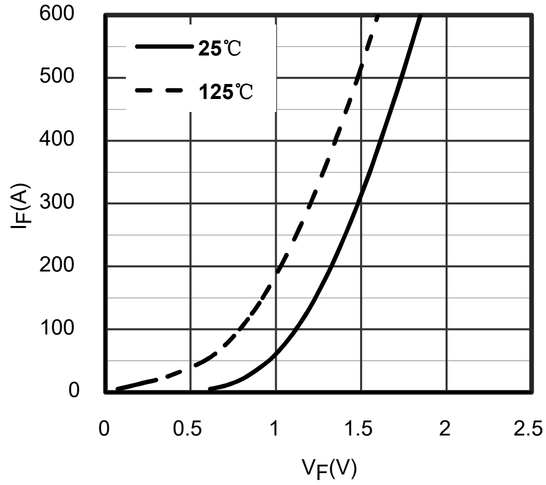

Fig 1. Forward Voltage Drop vs Forward Current

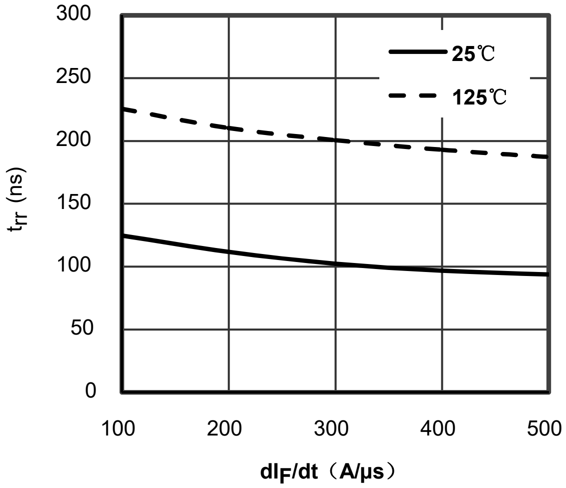

Fig 2. Reverse Recovery Time vs dI_F/dt

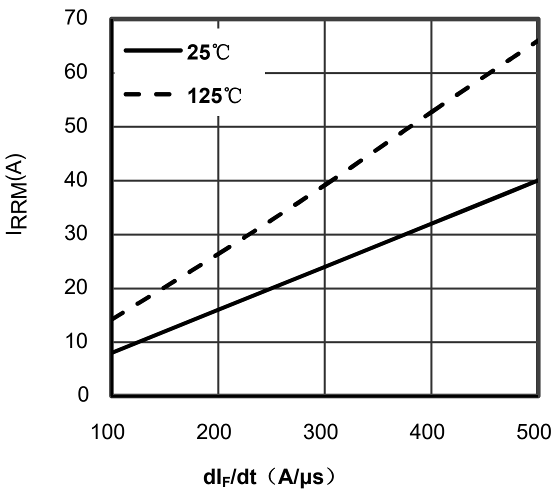

Fig 3. Reverse Recovery Current vs dI_F/dt

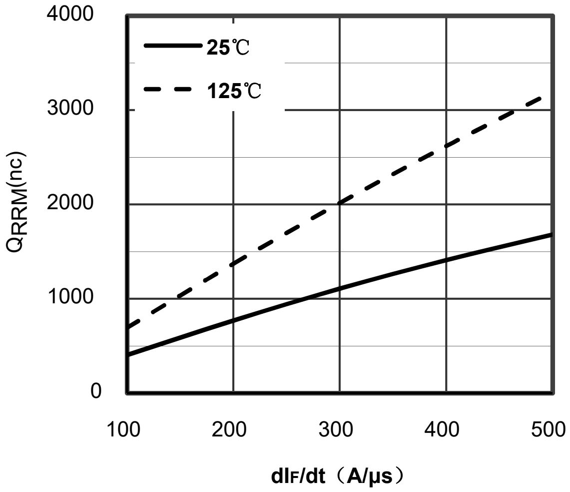

Fig 4. Reverse Recovery Charge vs dI_F/dt

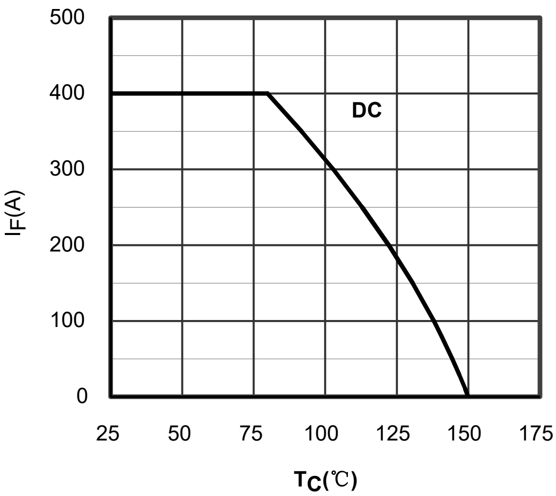

Fig 5.Forward current vs Case temperature

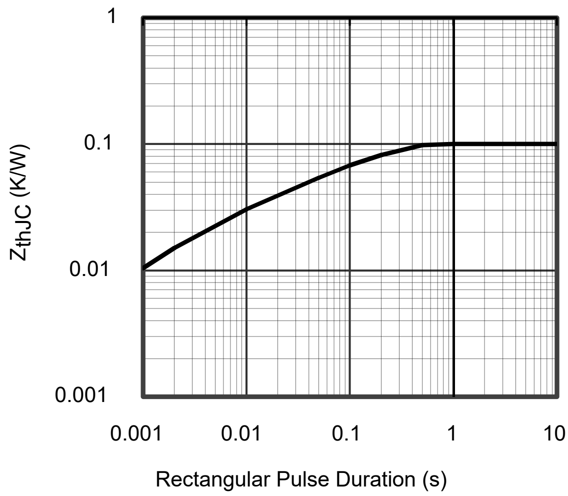

Fig 6. Transient Thermal Impedance

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