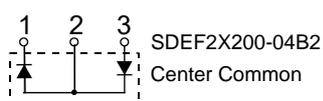
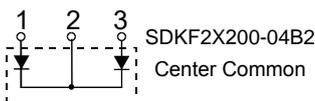
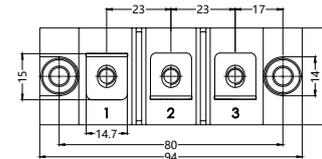
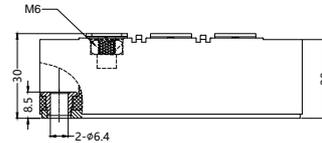


SDKF(SDAF/SDEF)2x200-04(06)B1(2)

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules



Dimensions in mm (1mm=0.0394")



	VRSM V	VRRM V
SDKF2x200-04B1	400	400
SDKF2x200-06B1	600	600
SDKF2x200-04B2	400	400
SDKF2x200-06B2	600	600

	VRSM V	VRRM V
SDAF2x200-04B1	400	400
SDAF2x200-06B1	600	600
SDAF2x200-04B2	400	400
SDAF2x200-06B2	600	600

	VRSM V	VRRM V
SDEF2x200-04B1	400	400
SDEF2x200-06B1	600	600
SDEF2x200-04B2	400	400
SDEF2x200-06B2	600	600

Symbol	Test Conditions	Maximum Ratings	Unit	
I _{FRMS}	T _C =75°C	284	A	
I _{FAVM}	T _C =75°C; rectangular, d=0.5	2 x 200		
I _{FRM}	t _p <10us; rep. rating, pulse width limited by T _{VJM}	TBD		
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 ² _t	T _{VJ} =45°C	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	45500 45000	A ² s
	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 t=1min I _{ISOL} ≤1mA t=1s	2500 3000	V~	
M _d	Mounting torque (M6) Terminal connection torque (M6)	2.50-4/22-35 2.50-4/22-35	Nm/lb.in.	
ds	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		108	g	



SDKF(SDAF/SDEF)2x200-04(06)B1(2)

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I _R	T _{VJ} =25°C; V _R =V _{R_{RRM}}		0.5	mA
	T _{VJ} =25°C; V _R =0.8·V _{R_{RRM}}		0.2	
	T _{VJ} =125°C; V _R =0.8·V _{R_{RRM}}		1	
V _F	I _F =200A; T _{VJ} =125°C		1.40	V
	T _{VJ} =25°C		2.00	
	I _F =400A; T _{VJ} =125°C		1.80	
	T _{VJ} =25°C		2.30	
V _{TO}	For power-loss calculations only		0.99	V
r _T	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	40	50	ns
	I _F =200A; T _{VJ} =100°C -di/dt=200A/us	100	130	
I _{RM}	V _R =300V; T _{VJ} =25°C		55	A
	-di/dt=200A/us; T _{VJ} =100°C		83	A

FEATURES

- * International standard package with Copper baseplate
- * Planar 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



SDKF(SDAF/SDEF)2x200-04(06)B1(2)

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

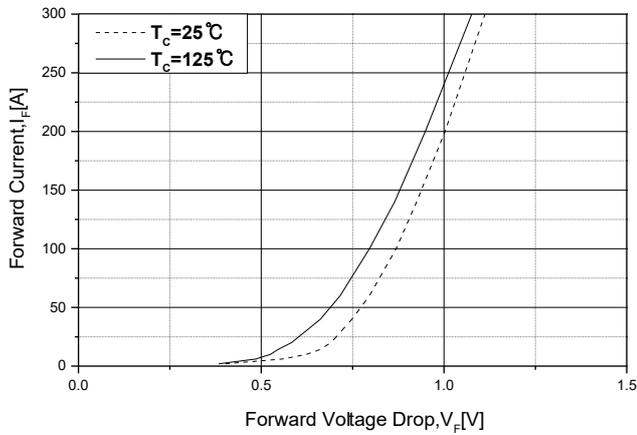


Fig.1 Typical Forward Voltage Drop vs. Instantaneous Forward Current

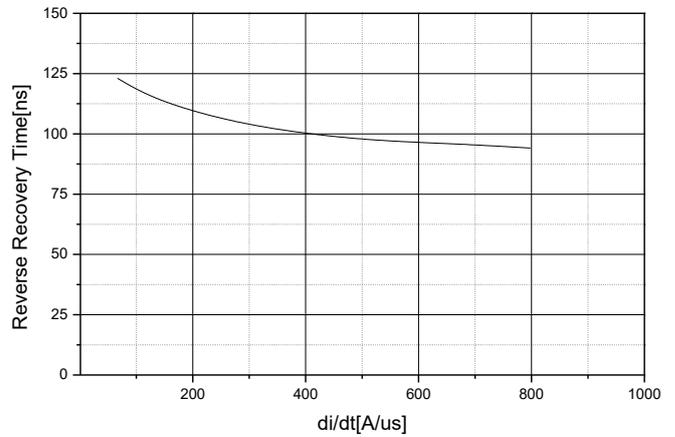


Fig.2 Typical Reverse Recovery Time Vs. $-di/dt$

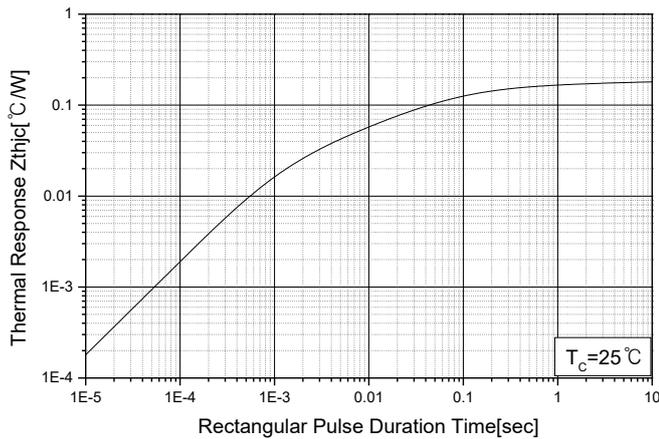


Fig.3 Transient Thermal Impedance (Z_{thjc}) Characteristics

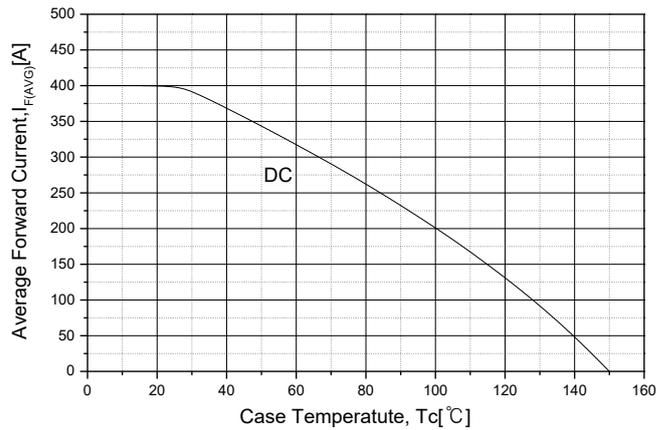


Fig.4 Forward Current Derating Curve