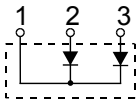
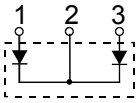
SDKF(SDAF/SDEF)2x100-04(06)B1(2)

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules



SDKF2X100-04B1
Side Common



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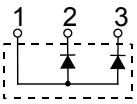

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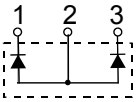

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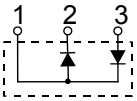

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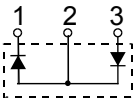
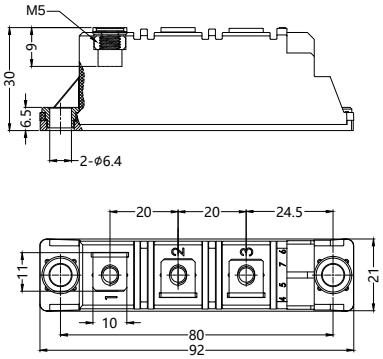


SDEF2X100-04B2
Center Common

Dimensions in mm (1mm=0.0394")



	VRSM V	VRRM V
SDKF2x100-04B1	400	400
SDKF2x100-06B1	600	600
SDKF2x100-04B2	400	400
SDKF2x100-06B2	600	600

	VRSM V	VRRM V
SDAF2x100-04B1	400	400
SDAF2x100-06B1	600	600
SDAF2x100-04B2	400	400
SDAF2x100-06B2	600	600

	VRSM V	VRRM V
SDEF2x100-04B1	400	400
SDEF2x100-06B1	600	600
SDEF2x100-04B2	400	400
SDEF2x100-06B2	600	600

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}		142 2 x 100 TBD	A
I_{FSM}	T_{VJ}=45°C	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	2000 2170	A
	T_{VJ}=150°C	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	1800 1950	
I^2t	T_{VJ}=45°C	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	167000 165000	A^2s
	T_{VJ}=150°C	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	134700 133000	
T_{VJ} T_{stg} T_{Hmax}			-40...+150 -40...+125 110	°C
P_{tot}	T_{case}=25°C		390	W
V_{ISOL}	50/60Hz, RMS I_{ISOL}≤1mA	t=1min t=1s	2500 3000	V~
M_d	Mounting torque (M5) Terminal connection torque (M5)		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			108	g

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SDKF(SDAF/SDEF)2x100-04(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_{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=100A; T_{VJ}=125°C T_{VJ}=25°C I_F=300A; T_{VJ}=125°C T_{VJ}=25°C		1.26 1.30 1.85 1.90	V
V_{TO}	For power-loss calculations only		1.01	V
r_T	T_{VJ}=125°C		2.85	mΩ
R_{thJH} R_{thJC}	DC current DC current		0.550 0.450	K/W
t_{rr}	I_F=1A; T_{VJ}=25°C -di/dt=200A/us I_F=100A; T_{VJ}=100°C -di/dt=200A/us	35 90	50 120	ns
I_{RM}	V_R=300V; T_{VJ}=25°C -di/dt=200A/us; T_{VJ}=100°C		14 21	A A

FEATURES

* International standard package with Copper baseplate
* Glass passivatd 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

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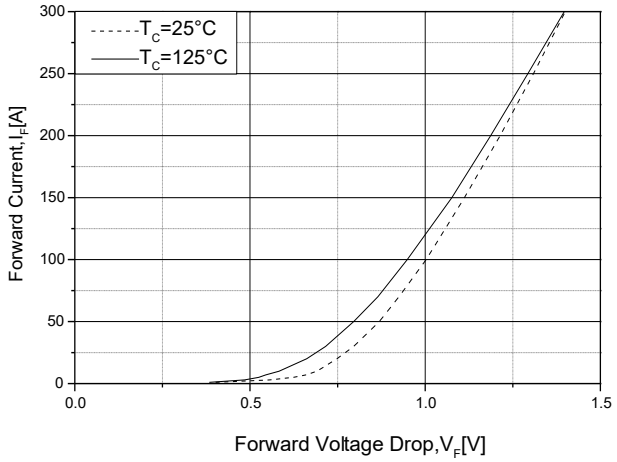

Fig.1 Typical Forward Voltage Drop vs. Instantaneous Forward Current

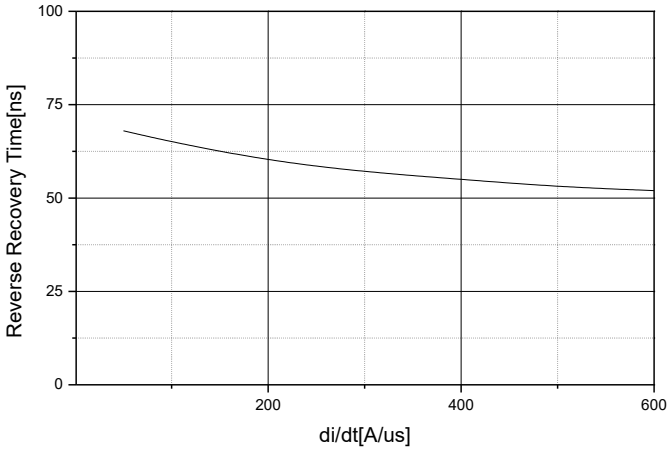

Fig.2 Typical Reverse Recovery Time Vs. –di/dt

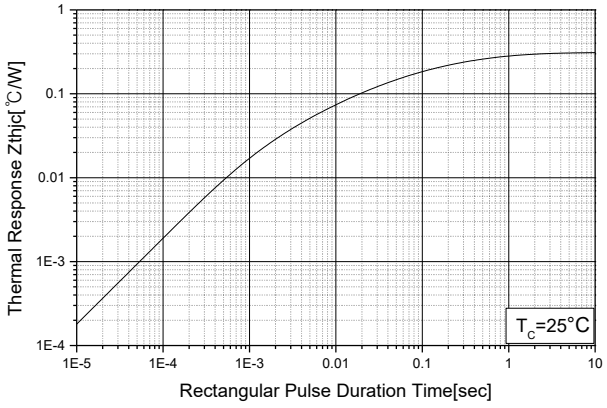

Fig.3Transient Thermal Impedance(Zthjc) Characteristics

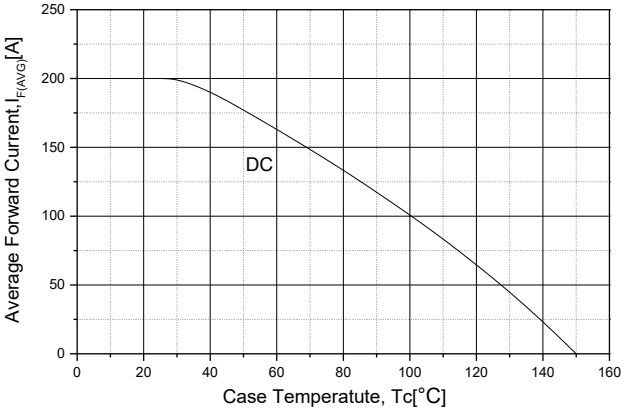

Fig.4Forward Current Derating Curve

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