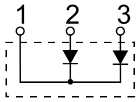
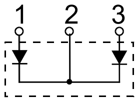
SDKF(SDAF/SDEF)2x150-04(06)B1(2)

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules



SDKF2X150-04B1
Side Common



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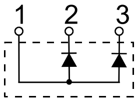
Center Common



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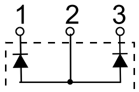

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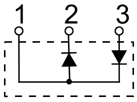
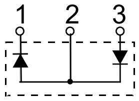
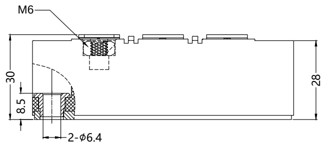


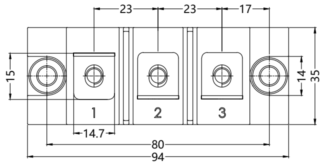
SDEF2X150-04B1
Side Common



SDEF2X150-04B2
Center Common

Dimensions in mm (1mm=0.0394")





	VRSM V	VRRM V
SDKF2x150-04B1	**400**	**400**
SDKF2x150-06B1	**600**	**600**
SDKF2x150-04B2	**400**	**400**
SDKF2x150-06B2	**600**	**600**

	VRSM V	VRRM V
SDAF2x150-04B1	**400**	**400**
SDAF2x150-06B1	**600**	**600**
SDAF2x150-04B2	**400**	**400**
SDAF2x150-06B2	**600**	**600**

	VRSM V	VRRM V
SDEF2x150-04B1	**400**	**400**
SDEF2x150-06B1	**600**	**600**
SDEF2x150-04B2	**400**	**400**
SDEF2x150-06B2	**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}		213 2 x 150 TBD	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	31600 31300	A^2s
	T_{VJ}=150°C	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	26900 27200	
T_{VJ} T_{stg} T_{Hmax}			-40...+150 -40...+125 110	°C
P_{tot}	T_{case}=25°C		500	W
V_{ISOL}	50/60Hz, RMS I_{ISOL}≤1mA	t=1min 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.
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

SDKF(SDAF/SDEF)2x150-04(06)B1(2)

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	$T_{VJ}=25^\circ C$; $V_R=V_{RRM}$ $T_{VJ}=25^\circ C$; $V_R=0.8 \cdot V_{RRM}$ $T_{VJ}=125^\circ C$; $V_R=0.8 \cdot V_{RRM}$		0.4 0.2 1	mA
V_F	$I_F=150A$; $T_{VJ}=125^\circ C$ $T_{VJ}=25^\circ C$ $I_F=300A$; $T_{VJ}=125^\circ C$ $T_{VJ}=25^\circ C$		1.25 1.55 1.95 2.09	V
V_{TO}	For power-loss calculations only		1.01	V
r_T	$T_{VJ}=125^\circ C$		2.85	mΩ
R_{thJH} R_{thJC}	DC current DC current		0.330 0.300	K/W
t_{rr}	$I_F=1A$; $T_{VJ}=25^\circ C$ -di/dt=200A/us $I_F=150A$ $T_{VJ}=100^\circ C$ -di/dt=200A/us	35 80	50 110	ns
I_{RM}	$V_R=300V$; $T_{VJ}=25^\circ C$ -di/dt=200A/us; $T_{VJ}=100^\circ C$		14 21	A A

FEATURES

- * International standard package with Copper baseplate
- * Planar 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

SDKF(SDAF/SDEF)2x150-04(06)B1(2)

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

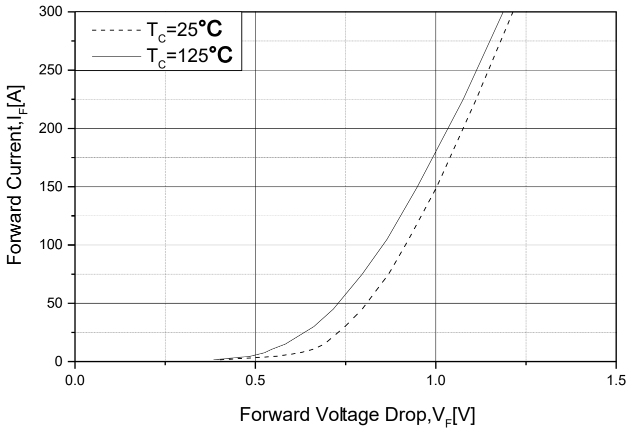


Fig.1 Typical Forward Voltage Drop vs. Instantaneous Forward Current

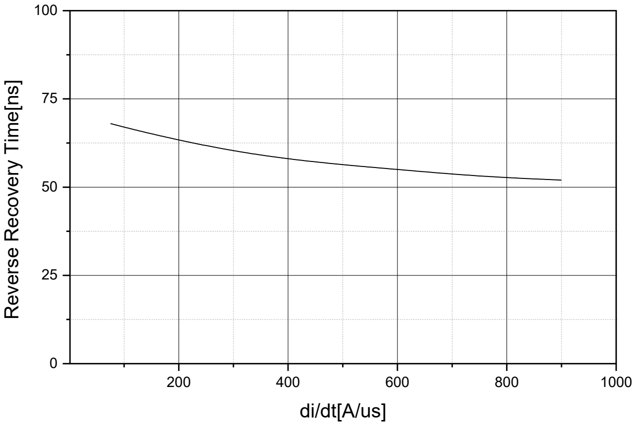


Fig.2 Typical Reverse Recovery Time Vs. –di/dt

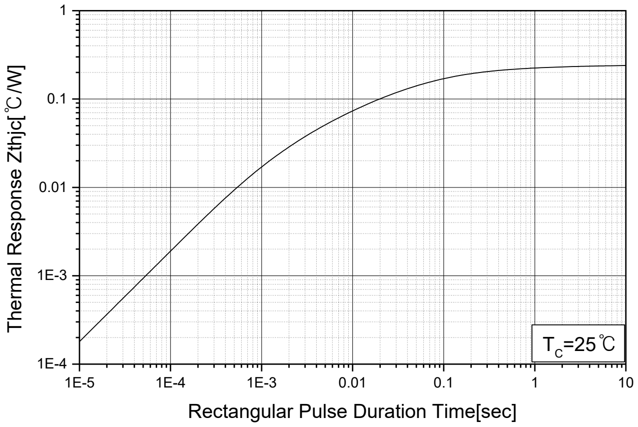


Fig.3Transient Thermal Impedance(Z_{thjc}) Characteristics

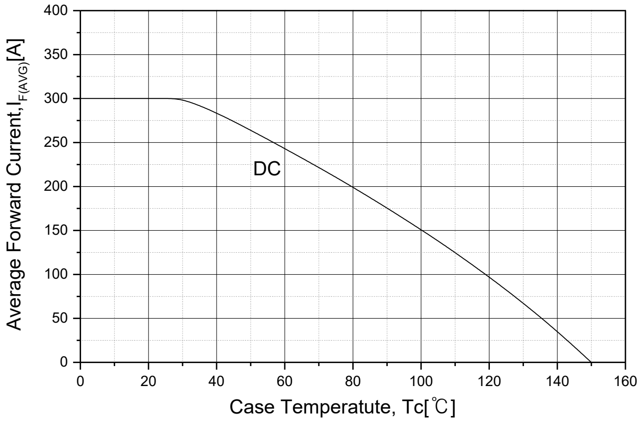


Fig.4Forward Current Derating Curve