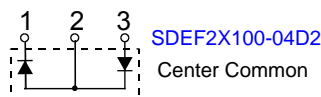
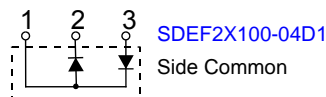
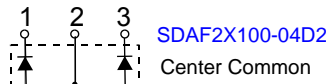
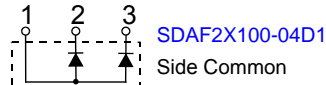
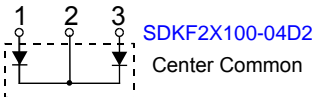
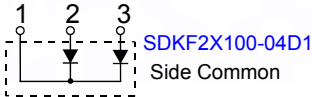
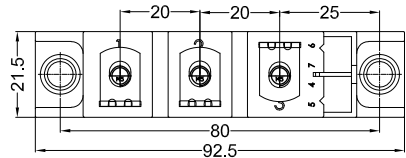
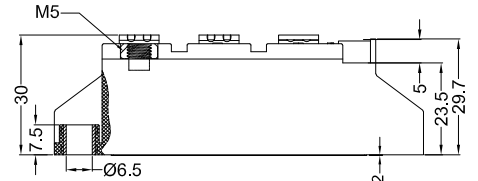


SDKF2x100-04D

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules



Dimensions in mm (1mm=0.0394")



	VRSM V	VRRM V
SDKF2x100-04D1	400	400
SDKF2x100-06D1	600	600
SDKF2x100-04D2	400	400
SDKF2x100-06D2	600	600

	VRSM V	VRRM V
SDAF2x100-04D1	400	400
SDAF2x100-06D1	600	600
SDAF2x100-04D2	400	400
SDAF2x100-06D2	600	600

	VRSM V	VRRM V
SDEF2x100-04D1	400	400
SDEF2x100-06D1	600	600
SDEF2x100-04D2	400	400
SDEF2x100-06D2	600	600

Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS}	T _C =75°C	142	A
I_{FAVM}	T _C =75°C; rectangular, d=0.5	2 x 100	
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	A
	T _{VJ} =150°C	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	
I²t	T _{VJ} =45°C	t=10ms (50Hz), sine t=8.3ms (60Hz), sine	A ² s
	T _{VJ} =150°C	t=10ms(50Hz), sine t=8.3ms(60Hz), sine	
T_{VJ}		-40...+150	°C
T_{stg}		-40...+125	
T_{Hmax}		110	
P_{tot}	T _{case} =25°C	390	W
V_{ISOL}	50/60Hz, RMS	t=1min	V~
	I _{ISOL} ≤1mA	t=1s	
M_d	Mounting torque (M5)	2.50-4/22-35	Nm/lb.in.
	Terminal connection torque (M5)	2.50-4/22-35	
ds	Creeping distance on surface	12.7	mm
da	Strike distance through air	9.6	mm
a	Maximum allowable acceleration	50	m/s ²
Weight		108	g



SDKF2x100-04D

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	$T_{VJ}=25^{\circ}\text{C}; V_R=V_{RRM}$		0.5	mA
	$T_{VJ}=25^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$		0.2	
	$T_{VJ}=125^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$		1	
V_F	$I_F=100\text{A}; T_{VJ}=125^{\circ}\text{C}$		1.26	V
	$T_{VJ}=25^{\circ}\text{C}$		1.30	
	$I_F=300\text{A}; T_{VJ}=125^{\circ}\text{C}$		1.85	
	$T_{VJ}=25^{\circ}\text{C}$		1.90	
V_{TO}	For power-loss calculations only		1.01	V
r_T	$T_{VJ}=125^{\circ}\text{C}$		2.85	mΩ
R_{thJH} R_{thJC}	DC current		0.550	K/W
	DC current		0.450	
t_{rr}	$I_F=1\text{A}; T_{VJ}=25^{\circ}\text{C}$ -di/dt=200A/us	35	50	ns
	$I_F=100\text{A}; T_{VJ}=100^{\circ}\text{C}$ -di/dt=200A/us	90	120	
I_{RM}	$V_R=300\text{V}; T_{VJ}=25^{\circ}\text{C}$		14	A
	-di/dt=200A/us; $T_{VJ}=100^{\circ}\text{C}$		21	A

FEATURES

- * International standard package with DBC 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



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SDKF2x100-04D

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

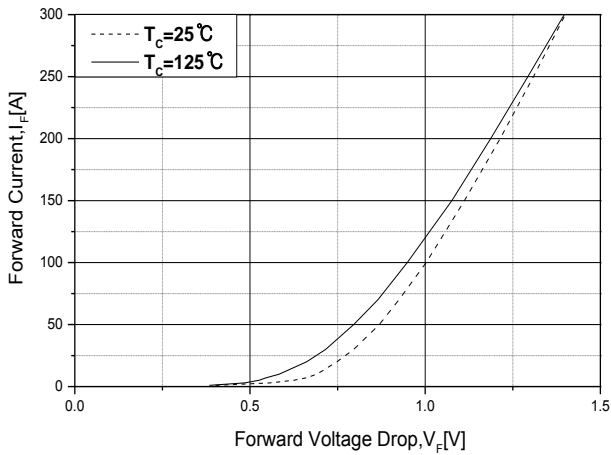


Fig.1 Typical Forward Voltage Drop vs. Instantaneous Forward Current

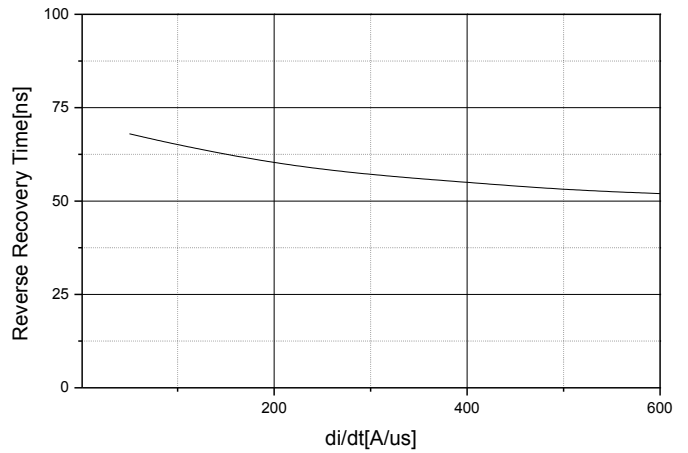


Fig.2 Typical Reverse Recovery Time Vs. $-di/dt$

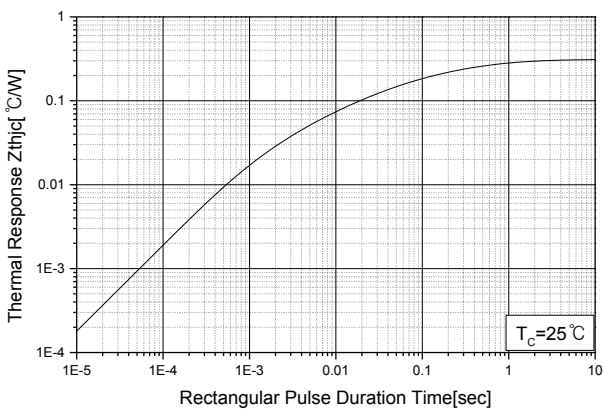


Fig.3 Transient Thermal Impedance (Z_{thjc}) Characteristics

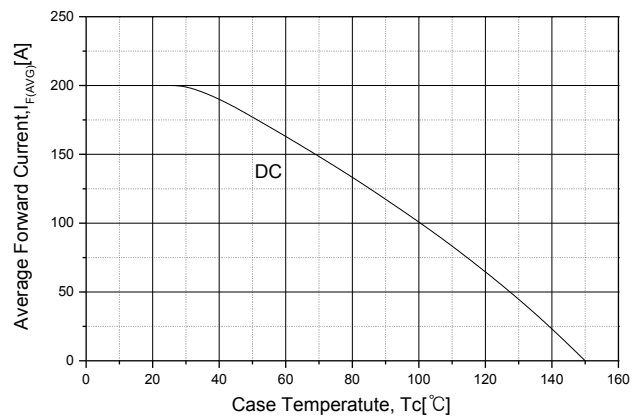


Fig.4 Forward Current Derating Curve



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[T483C](#) [T484C](#) [T485F](#) [T485H](#) [T512F-YEB](#) [T513F](#) [T514F](#) [T554](#) [T612FSE](#) [25.161.3453.0](#) [25.179.2253.0](#) [25.194.3253.0](#) [25.325.1253.1](#)
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