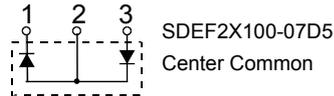
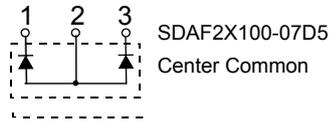
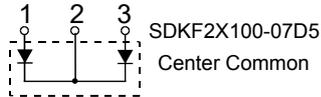
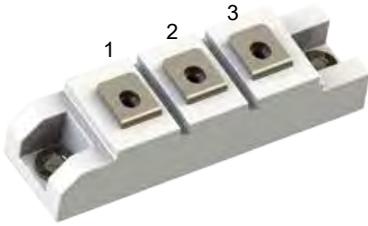
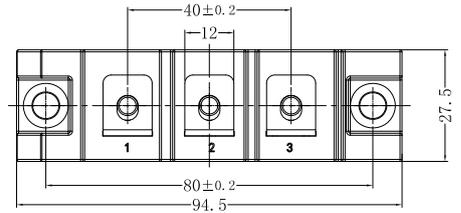
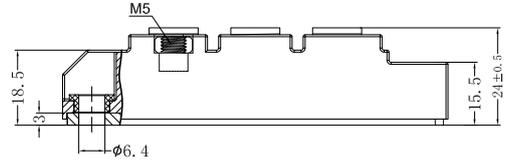


SDKF(SDAF,SDEF)2X100-07D5

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules



Dimensions in mm (1mm=0.0394")



	VRSM V	VRRM V
SDKF2x100-07D5	700	700
SDAF2x100-07D5	700	700
SDEF2x100-07D5	700	700



Symbol	Test Conditions		Value	Unit
VRRM	Maximum Reverse Repetitive Voltage		700	V
IF(AV)	Average Forward Current	Tc = 90 °C , per diode	100	A
		Tc = 90 °C , per module	200	
IF(RMS)	RMS Forward Current	Tc = 90 °C , per diode	141	
IFSM	Non Repetitive Surge Forward Current	TJ = 45 °C , t = 10ms, sine	1200	
		TJ = 45 °C , t = 8.3ms, sine	1320	
I²t	For Fusing	TJ = 45 °C , t = 10ms, sine	7200	A²S
		TJ = 45 °C , t = 8.3ms, sine	7230	
PD	Power Dissipation		370	W
TJ	Junction Temperature		-40 ~ +150	°C
TSTG	Storage Temperature Range		-40 ~ +125	°C
VISO	Isolation Voltage	AC, t = 1 minute	3000	V
Mounting Torque	Module to heatsink	Recommended (M5)	2.5 - 4	Nm
	Module Electrodes	Recommended (M5)	2.5 - 4	Nm
RthJC	Junction to Case Thermal Resistance (Per Diode)		0.34	°C /W
Weight			100	g

SDKF(SDAF,SDEF)2X100-07D5

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

Symbol	Test Conditions		Min	Typ.	Max	Unit
I_{RM}	Maximum Reverse Leadkage Current	$V_R = 700V$			0.5	mA
		$V_R = 700V, T_J = 125^\circ C$			5	
V_F	Forward Voltage	$I_F = 100A$		1.2	1.6	V
		$I_F = 100A, T_J = 125^\circ C$		1.1		
t_{rr}	Reverse Recovery Time ($I_F = 1A, dI_F/dt = -200A/\mu s, V_R = 30V$)			50		ns
t_{rr}	Reverse Recovery Time			140		ns
I_{RRM}	Maximum Reverse Recovery Current	$I_F = 100A, V_R = 350V, dI_F/dt = -200A/\mu s, T_J = 25^\circ C$		14.5		A
t_{rr}	Reverse Recovery Time	$I_F=100A, V_R=350V, dI_F/dt=-200A/us$		275		ns
I_{RRM}	Maximum Reverse Recovery Current	$T_J = 125^\circ C$		28		A

FEATURES

- * International standard package
- * Copper base plate
- * Planar passivated chips
- * Short recovery time
- * Low switching losses
- * RoHS compliant

APPLICATIONS

- * Plasma Inverter Cutting Machines
- * Inverter Welding Machines

ADVANTAGES

- * High reliability circuit operation
- * Low voltage peaks for reduced protection circuits
- * Low noise switching
- * Low losses

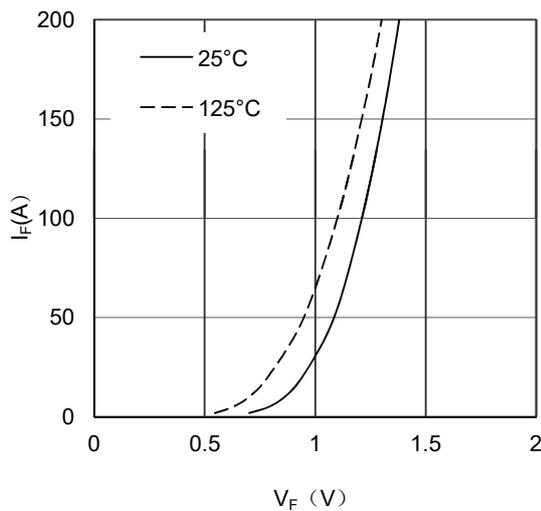


Figure 1. Forward Voltage Drop vs Forward Current

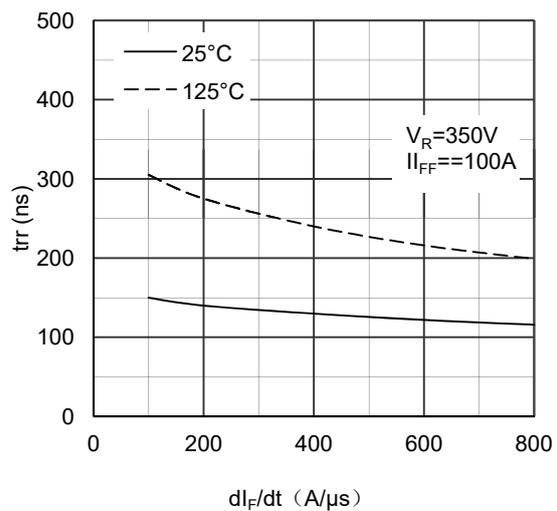


Figure 2. Reverse Recovery Time vs dI_F/dt

SDKF(SDAF,SDEF)2X100-07D5

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

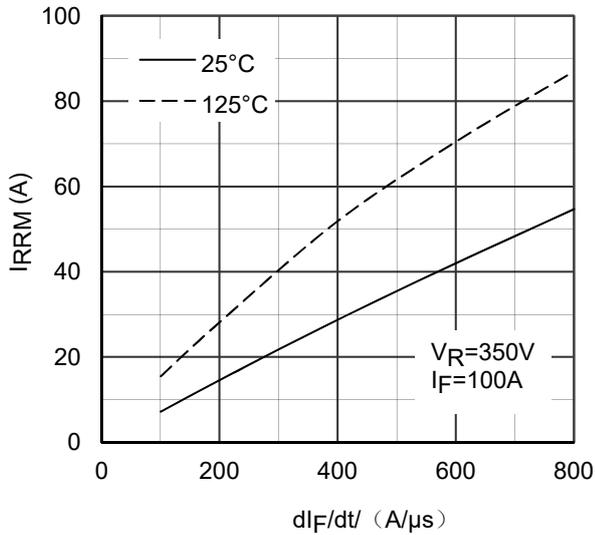


Figure 3. Reverse Recovery Current vs dI/dt

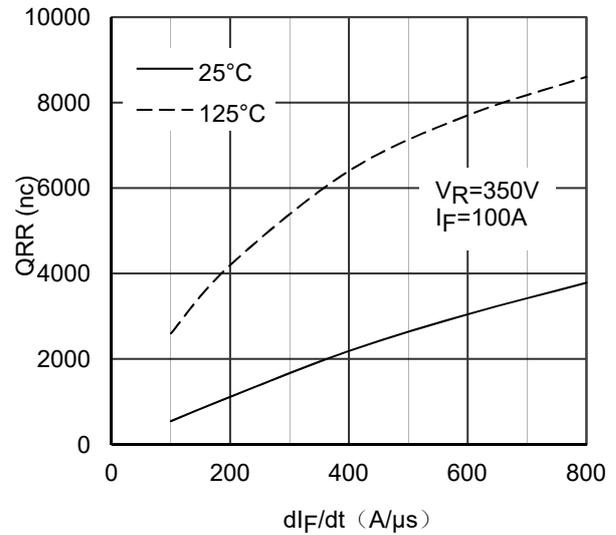


Figure 4. Reverse Recovery Charge vs dI/dt

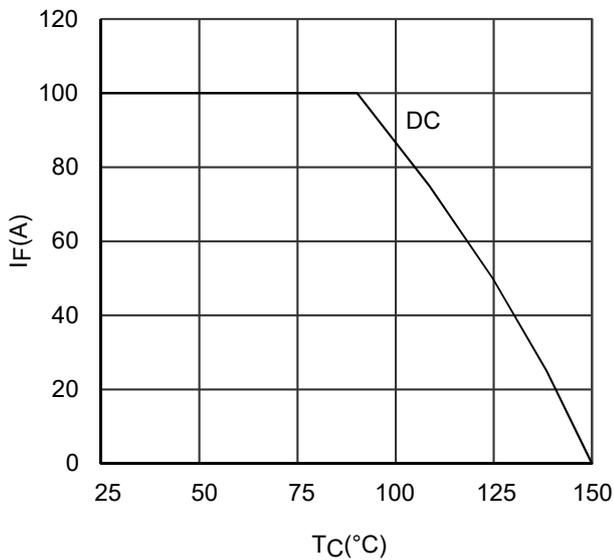


Figure 5. Forward current vs Case temperature

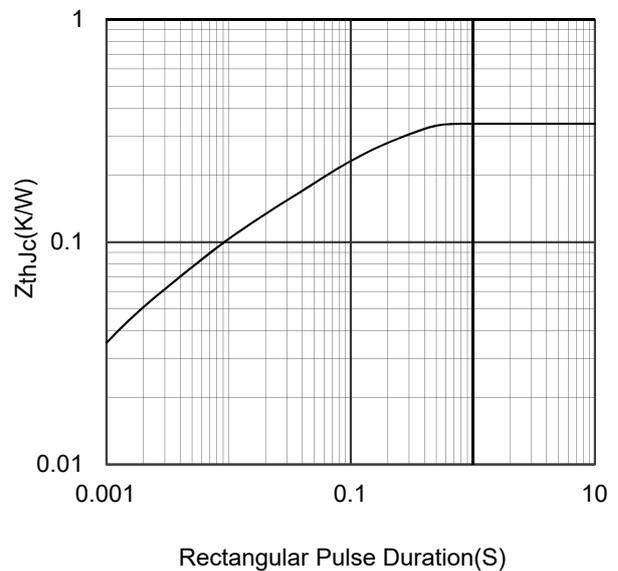


Figure 6. Transient Thermal Impedance