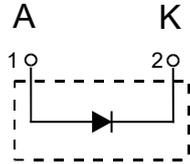
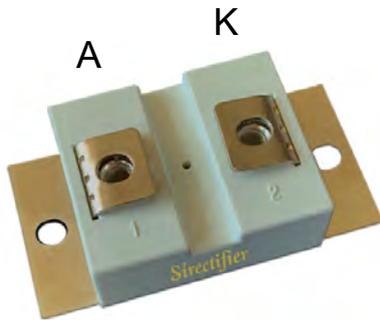
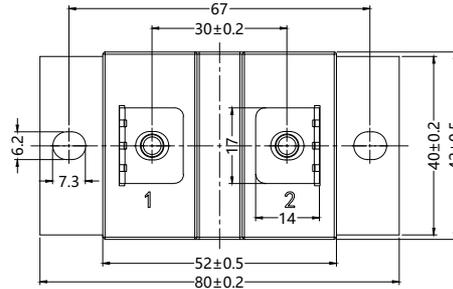
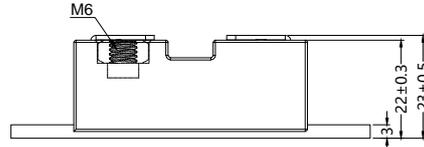


SDF300-070D4

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules



Dimensions in mm



	V_{RSM} V	V_{RRM} V
SDF300-070D4	700	700

Symbol	Test Conditions	Maximum Ratings	Unit
I_{FRMS}	$T_C=115^{\circ}C$	424	A
I_{FAVM}	$T_C=115^{\circ}C$; rectangular, $d=0.5$ $t_p < 10\mu s$;	300	
I_{FRM}	rep. rating, pulse width limited by T_{VJM}	1560	
I_{FSM}	$T_{VJ}=45^{\circ}C$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	A
	$T_{VJ}=150^{\circ}C$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	
I^2t	$T_{VJ}=45^{\circ}C$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	A^2s
	$T_{VJ}=150^{\circ}C$	$t=10ms$ (50Hz), sine $t=8.3ms$ (60Hz), sine	
T_{VJ} T_{stg}		-40...+150 -40...+125	$^{\circ}C$
V_{ISOL}	50/60Hz, RMS $t=1min$ $I_{ISOL} \leq 1mA$ $t=1s$	2500 3000	V~
M_d	Mounting torque (M6) Terminal connection torque (M6)	2.25-2.75/20-25 4.50-5.50/40-48	Nm/lb.in.
d_s	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		165	g



SDF300-070D4

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	$T_{VJ}=25^{\circ}\text{C}; V_R=V_{RRM}$ $T_{VJ}=25^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$ $T_{VJ}=125^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$		0.5 0.5 30	mA
V_F	$I_F=300\text{A}; T_{VJ}=125^{\circ}\text{C}$ $T_{VJ}=25^{\circ}\text{C}$	1.45 1.50	1.55 1.60	V
V_{TO}	For power-loss calculations only		0.85	V
r_T			1.09	m Ω
R_{thJH} R_{thJC}	DC current DC current		0.195 0.162	K/W
t_{rr}	$I_F=1\text{A}; V_R=250\text{V}; -di/dt=200\text{A}/\mu\text{s}; T_{VJ}=25^{\circ}\text{C}$	75		ns
t_{rr}	$I_F=300\text{A}; V_R=250\text{V}; -di/dt=200\text{A}/\mu\text{s}; T_{VJ}=125^{\circ}\text{C}$	430		ns
I_{RM}	$I_F=300\text{A}; V_R=250\text{V}; -di/dt=200\text{A}/\mu\text{s}; T_{VJ}=125^{\circ}\text{C}$	35		A

FEATURES

- * International standard package
- * Copper base plate
- * Planar passivated chips
- * Low V_F losses
- * Soft recovery behaviour
- * Isolation voltage 3000 V~
- * 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
- * Inverter Welding Application

ADVANTAGES

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

SDF300-070D4

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

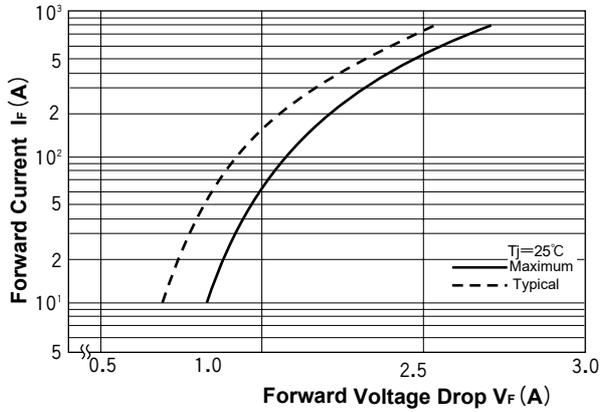


Fig.1 Forward Characteristics

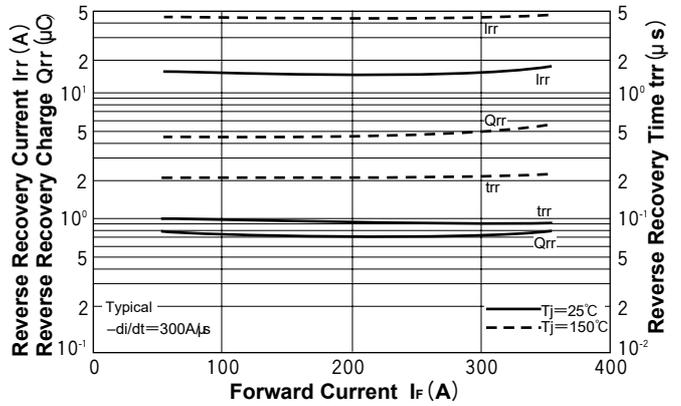


Fig.2 Reverse Recovery Characteristics

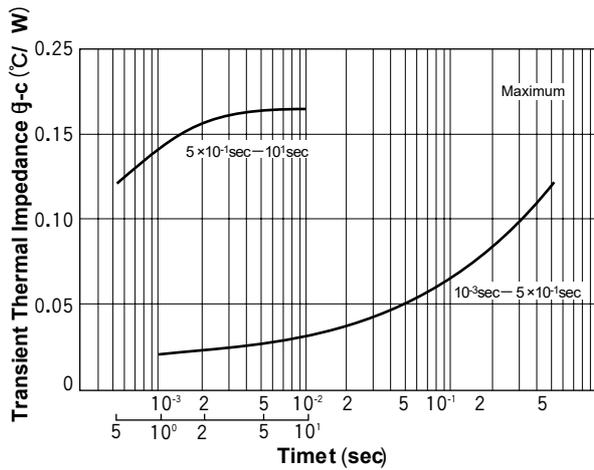


Fig.3 Transient Thermal Impedance

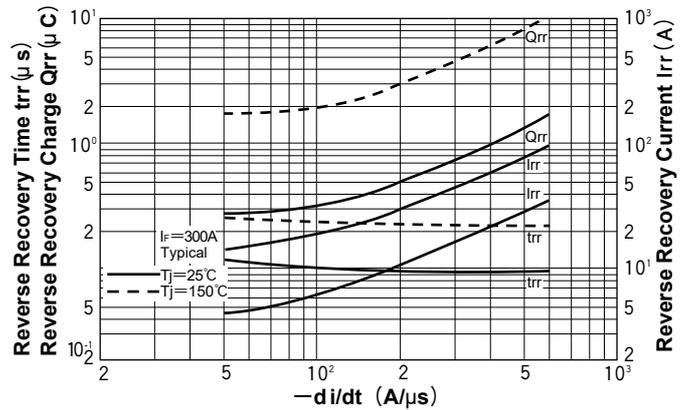


Fig.4 Reverse Recovery Characteristics