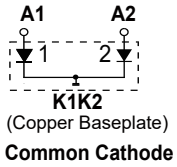
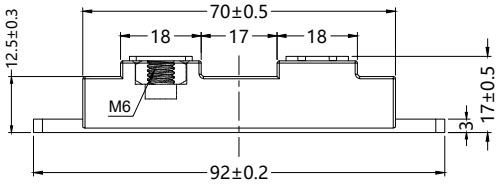
SRUD40040CTD3

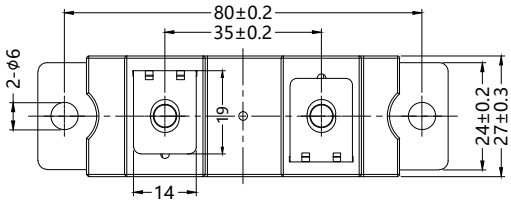
Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules



Dimensions in mm (1mm=0.0394")



	V_{RSM} V	V_{RRM} V
SRUD40040CTD3	600	600



Symbol	Test Conditions		Maximum Ratings	Unit
I_{FAVM} I_{FRMS}	TC=115°C； rectangular,d=0.5,per module TC=115°C； rectangular,d=0.5,per chip t_p＜10us;rep.rating,pulse width limited by T_{VJM}		400 200 313	A
I_{FSM}	T_{VJ}=45°C per chip	t=10ms(50HZ),sine t=8.3ms(60HZ),sine	2833 3133	A
	T_{VJ}=150°C per chip	t=10ms(50HZ),sine t=8.3ms(60HZ),sine	2403 2663	
I^2t	T_{VJ}=45°C per chip	t=10ms(50HZ),sine t=8.3ms(60HZ),sine	35033 38100	A^2S
	T_{VJ}=150°C per chip	t=10ms(50HZ),sine t=8.3ms(60HZ),sine	28733 31600	
T_{VJ} T_{stg} T_{Hmax}			-40...+150 -40...+125 110	°C
P_{tot}			1520	W
M_d	Mounting torque(M6) Terminal connection torque(M6)		3.0-4.7/26-41 3.0-4.7/26-41	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			93	g

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Symbol	Test Conditions	Characteristic Values typ.	Characteristic Values max.	Unit
I_R	T_{VJ}=25°C; V_R=V_{RRM} T_{VJ}=25°C; V_R=0.8·V_{RRM} (per chip) T_{VJ}=25°C; V_R=0.8·V_{RRM}		0.5 0.5 5	mA
V_F	I_F=200A;T_{VJ}=125°C T_{VJ}=25°C (per chip) I_F=400A;T_{VJ}=125°C T_{VJ}=25°C	1.02 1.15 1.50 1.55	1.25 1.45 1.75 1.85	V
V_{FO}	For power-loss calculations only (per chip)		1.08	V
r_F	T_{VJ}=125°C (per chip)		2.76	mΩ
R_{thJC} R_{thJC}	Per Diode Per Module		0.062 0.131	K/W
t_{rr}	I_F=1.0A;VR=30V;-di/dt=200A/us;T_{VJ}=25°C I_F=200A;VR=300V;-di/dt=200A/us;T_{VJ}=25°C (per chip)	35 80	80 130	ns
I_{RM}	I_F=200A;VR=300V;-di/dt=200A/us;T_{VJ}=25°C T_{VJ}=125°C (per chip)	10 18		A A

FEATURES

* International standrd package
* Copper base plate
* Planar passivatd chips
* Short recovery time
* Low switching losses
* 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 machine

ADVANTAGES

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

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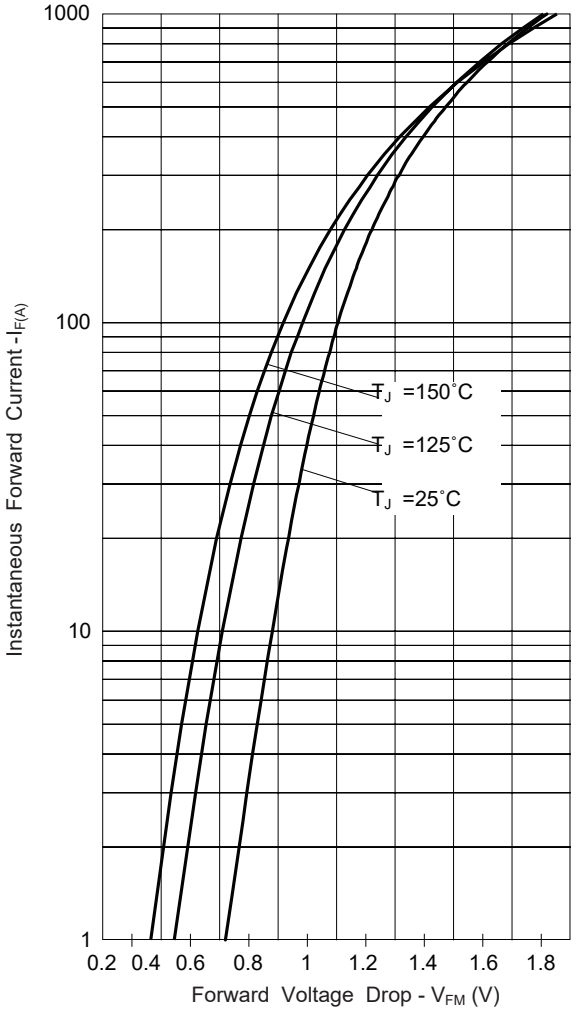

Fig. 1 - Typical Forward Voltage Drop Characteristics

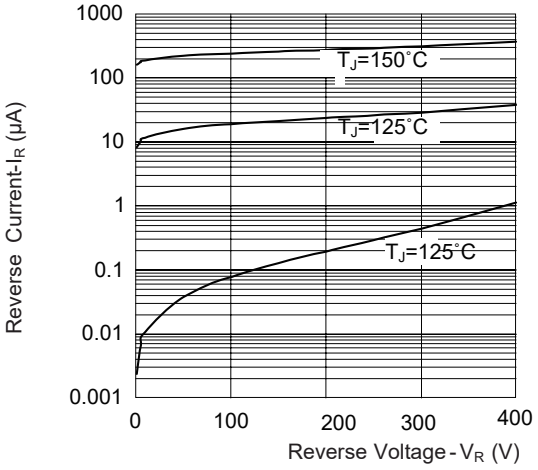

Fig. 2 - Typical Values Of Reverse Current Vs. Reverse Voltage

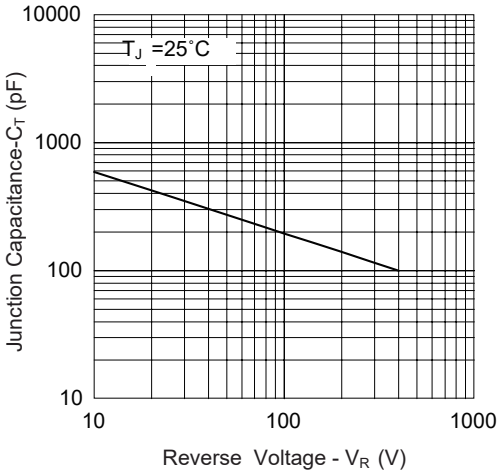

Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

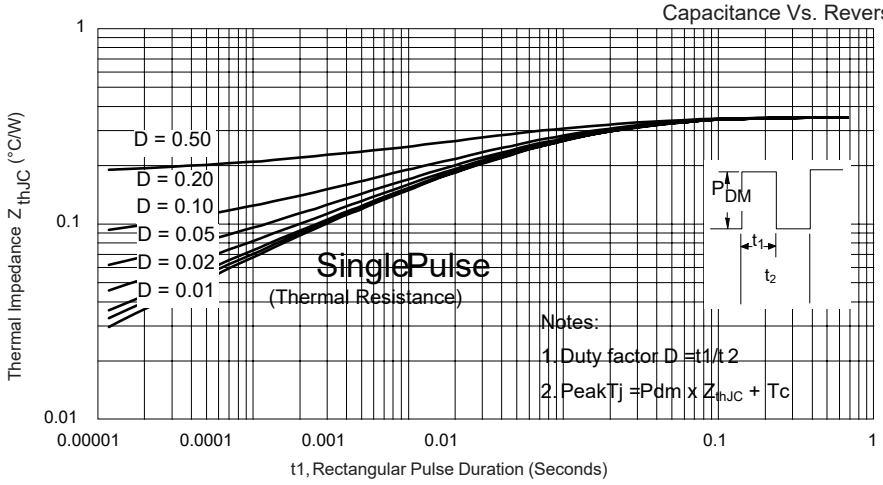

Fig.4 - Max. Thermal Impedance Z.6>-Characteristics

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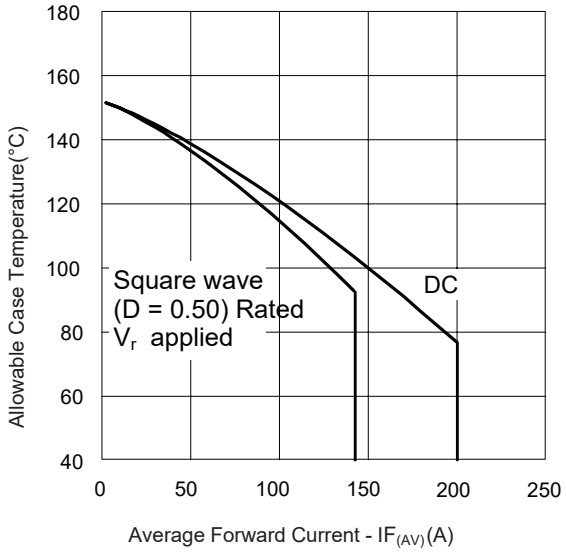

Fig. 5 - Max. Allowable Case Temperature Vs. Average Forward Current

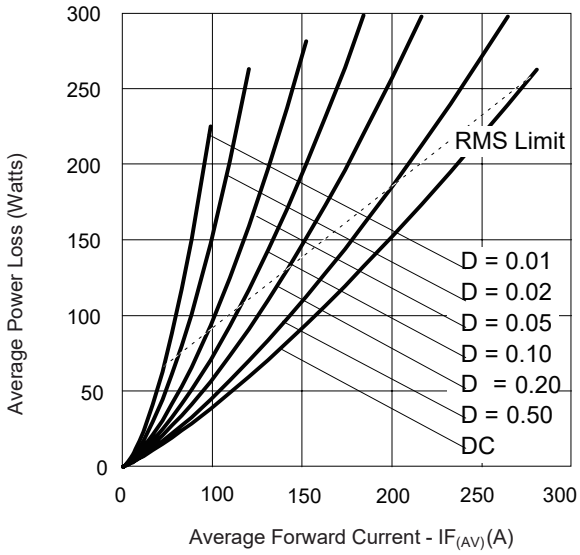

Fig. 6 - Forward Power Loss Characteristics

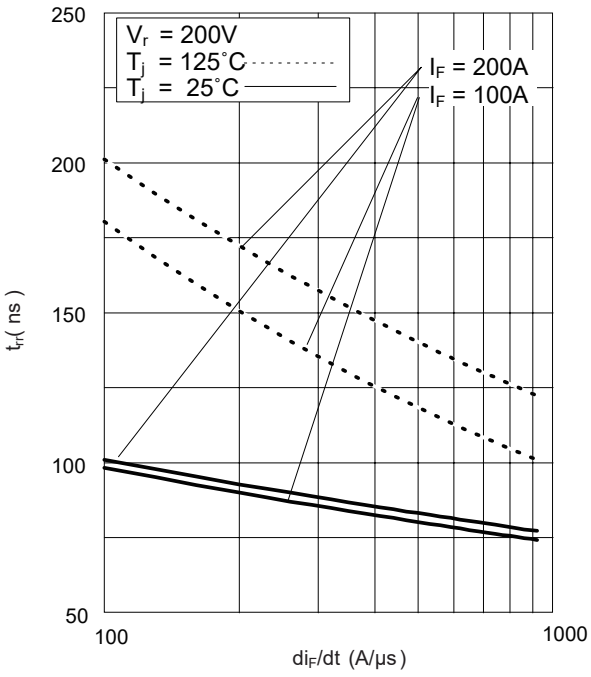

Fig. 7 - Typical Reverse Recovery time vs. di_F/dt

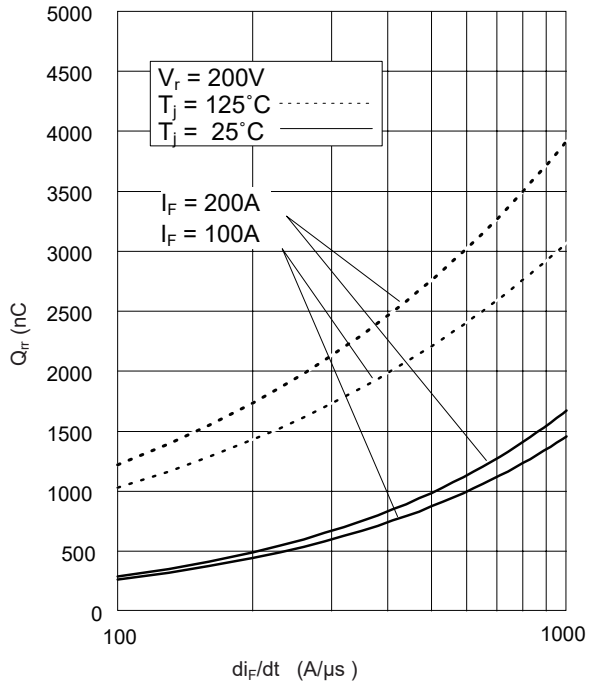

Fig. 8 - Typical Stored Charge vs. di_F/dt

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