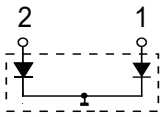
SRUD30040CTD3

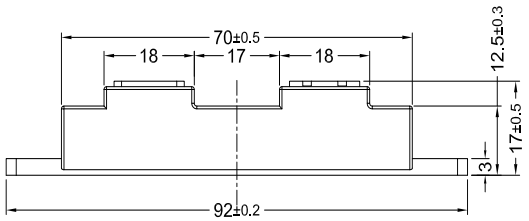
Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules



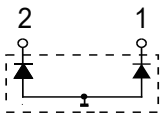
Common Cathode

SRUD30040CTD3

Dimensions in mm

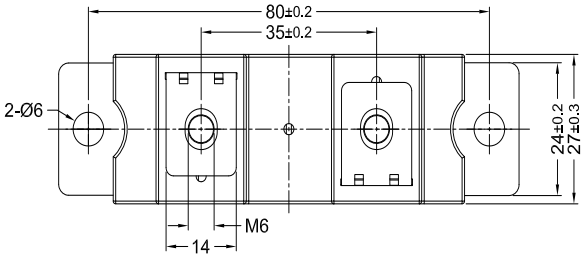


	VRSM	VRRM
	V	V
SRUD30040CTD3	400	400
SRUD30040ATD3	400	400



Common Anode

SRUD30040ATD3



Symbol	Test Conditions		Maximum Ratings	Unit
I_{FAVM} I_{FRMS}	T_C=125°C; rectangular,d=0.5,per module T_C=125°C; rectangular,d=0.5,per chip t_p＜10us;rep.rating,pulse width limited by T_{VJM}		235 150 TBD	A
I_{FSM}	T_{VJ}=45°C per chip	t=10ms(50HZ),sine t=8.3ms(60HZ),sine	2750 3100	A
	T_{VJ}=150°C per chip	t=10ms(50HZ),sine t=8.3ms(60HZ),sine	2470 2790	
I^2t	T_{VJ}=45°C per chip	t=10ms(50HZ),sine t=8.3ms(60HZ),sine	36500 37000	A^2S
	T_{VJ}=150°C per chip	t=10ms(50HZ),sine t=8.3ms(60HZ),sine	29500 29970	
T_{VJ} T_{stg} T_{Hmax}			-40...+150 -40...+125 110	°C
P_{tot}			1300	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}=125°C; V_R=0.8·V_{RRM}		0.5 0.5 2	mA
V_F	I_F=150A;T_{VJ}=125°C T_{VJ}=25°C (per chip) I_F=300A;T_{VJ}=125°C T_{VJ}=25°C	1.05 1.15 1.35 1.45	1.25 1.30 1.55 1.70	V
V_{FO}	For power-loss calculations only (per chip)		1.01	V
r_F	T_{VJ}=125°C (per chip)		2.85	mΩ
R_{thJC} R_{thJC}	Per Diode Per Module		0.150 0.100	K/W
t_{rr}	I_F=1.0A;T_{VJ}=25°C I_F=150A;T_{VJ}=25°C	35 85	40 110	ns
I_{RM}	I_F=200A;VR=300V;-di/dt=200A/us;T_{VJ}=25°C (per chip) T_{VJ}=125°C	10 18		A A

FEATURES

* International standard package
* Copperbase 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

ADVANTAGES

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

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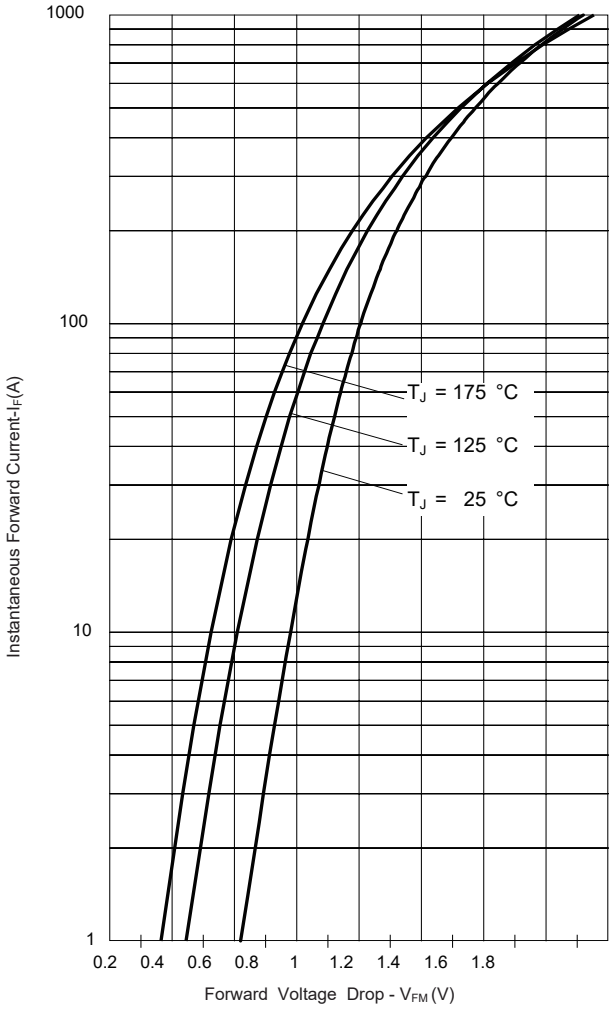

Fig. 1 Typical Forward Voltage Drop Characteristics

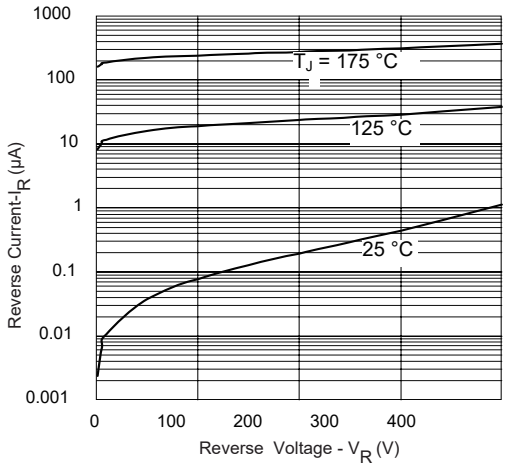

Fig. 2 Typical Values Of Reverse Current Vs. Reverse Voltage

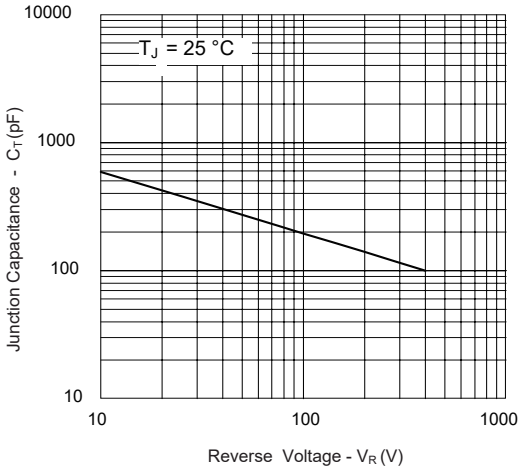

Fig. 3 Typical Junction Capacitance Vs. Reverse Voltage

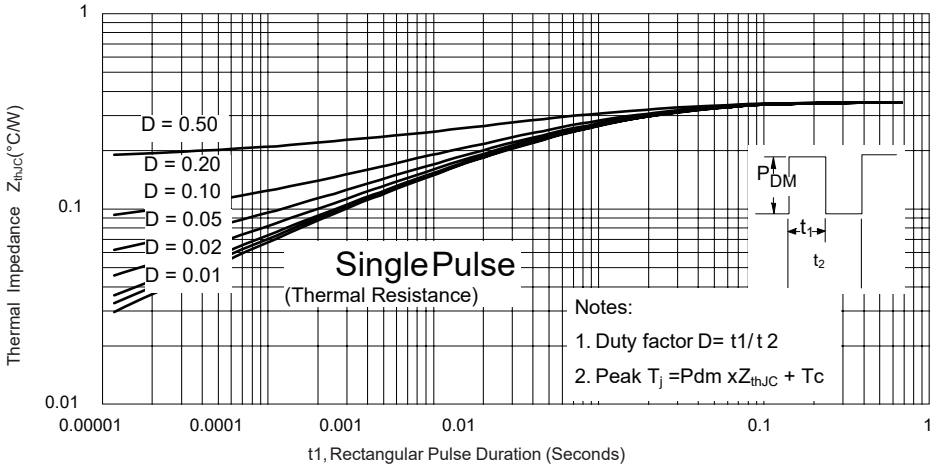

Fig. 4 Max. Thermal Impedance Z.6>- Characteristics

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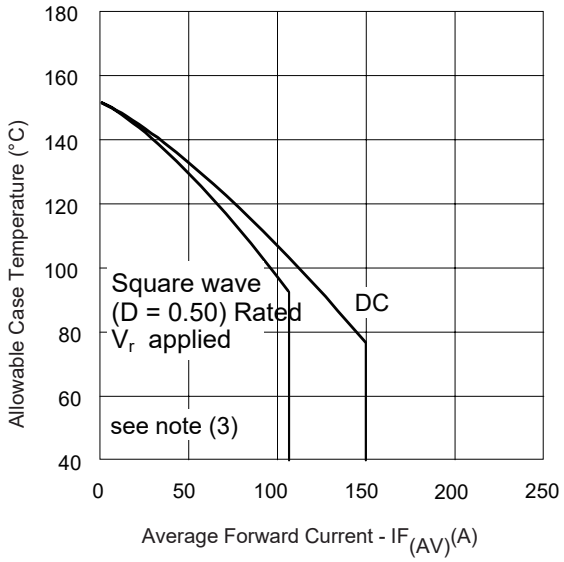

Fig.5 Max. Allowable Case Temperature Vs. Average Forward Current

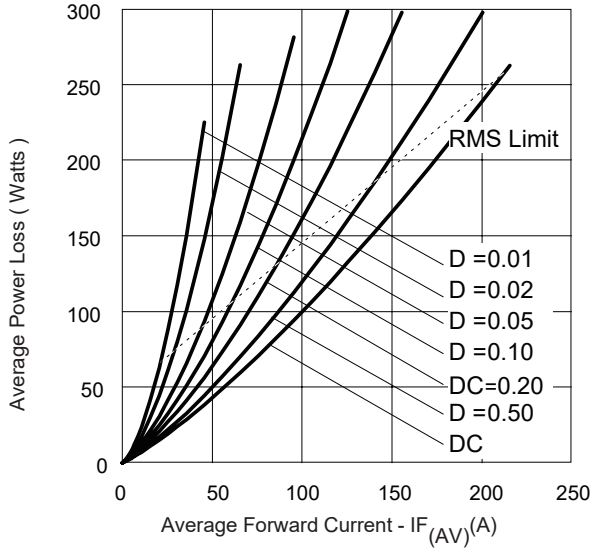

Fig.6 Forward Power Loss Characteristics

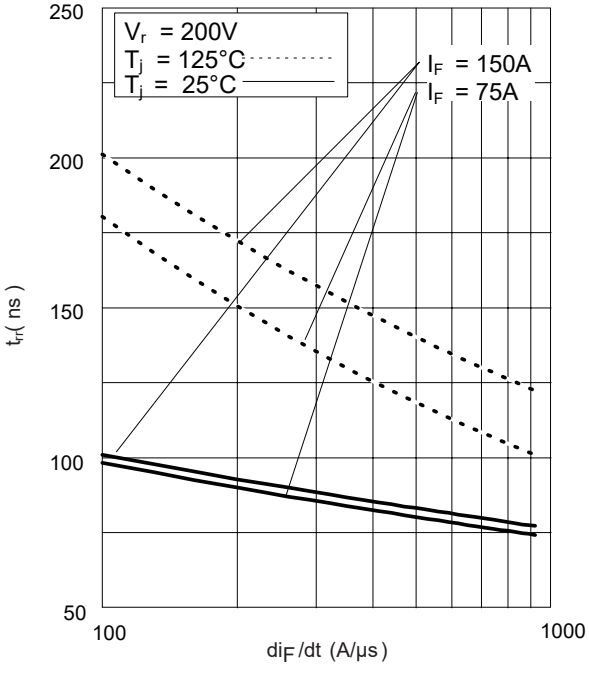

Fig.7 Typical Reverse Recovery time vs. di_F/dt

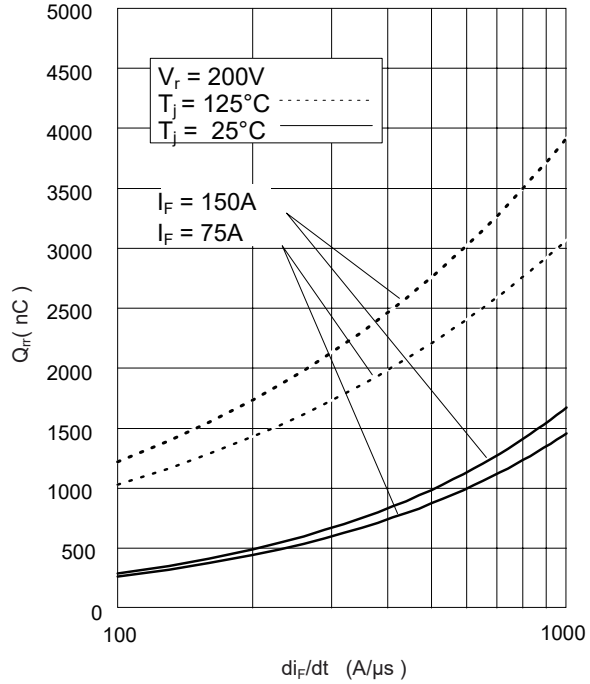

Fig. 8 Typical Stored Charge vs. di_F/dt

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