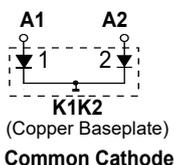
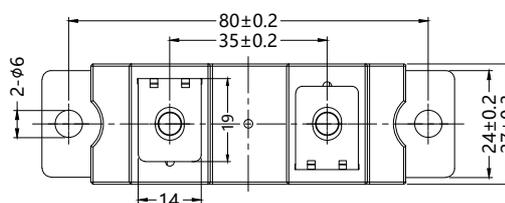
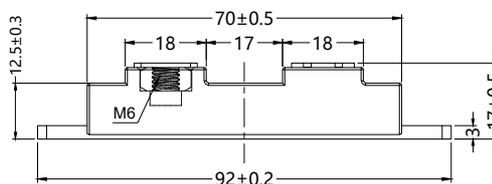


SRUD40060CTD3

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules



Dimensions in mm (1mm=0.0394")



	V _{RSM} V	V _{RRM} V
SRUD40060CTD3	600	600

Symbol	Test Conditions	Maximum Ratings	Unit
I _{FAVM} I _{FRMS}	T _C =115°C; rectangular,d=0.5,per module T _C =115°C; rectangular,d=0.5,per chip t _p < 10us;rep.rating,pulse width limited by T _{VJM}	4000 2000 3113	A
I _{FSM}	T _{VJ} =45°C per chip t=10ms(50HZ),sine t=8.3ms(60HZ),sine	2500 2800	A
	T _{VJ} =150°C per chip t=10ms(50HZ),sine t=8.3ms(60HZ),sine	2200 2400	
I ² t	T _{VJ} =45°C per chip t=10ms(50HZ),sine t=8.3ms(60HZ),sine	32000 32100	A ² S
	T _{VJ} =150°C per chip t=10ms(50HZ),sine t=8.3ms(60HZ),sine	25900 26000	
T _{VJ} T _{stg} T _{Hmax}		-40...150 -40...125 110	°C
P _{tot}		1580	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	122.7 9.6 50	mm mm m/s ²
Weight		93	g



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Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	$T_{VJ}=25^{\circ}\text{C}; V_R=V_{RRM}$ $T_{VJ}=25^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$ (per chip) $T_{VJ}=25^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$		0.5 0.5 5	mA
V_F	$I_F=200\text{A}; T_{VJ}=125^{\circ}\text{C}$ $T_{VJ}=25^{\circ}\text{C}$ (per chip) $I_F=400\text{A}; T_{VJ}=125^{\circ}\text{C}$ $T_{VJ}=25^{\circ}\text{C}$	1.05 1.20 1.55 1.65	1.30 1.50 1.85 1.95	V
V_{FO}	For power-loss calculations only (per chip)		1.11	V
r_F	$T_{VJ}=125^{\circ}\text{C}$ (per chip)		2.95	m Ω
R_{thJC} R_{thJC}	Per Diode Per Module		0.068 0.136	K/W
t_{rr}	$I_F=1.0\text{A}; V_R=30\text{V}; -di/dt=200\text{A}/\mu\text{s}; T_{VJ}=25^{\circ}\text{C}$ $I_F=200\text{A}; V_R=300\text{V}; -di/dt=200\text{A}/\mu\text{s}; T_{VJ}=25^{\circ}\text{C}$ (per chip)	50 90	90 140	ns
I_{RM}	$I_F=200\text{A}; V_R=300\text{V}; -di/dt=200\text{A}/\mu\text{s}; T_{VJ}=25^{\circ}\text{C}$ $T_{VJ}=125^{\circ}\text{C}$ (per chip)	11 20		A A

FEATURES

- * International standard package
- * Copper base plate
- * Planar passivated 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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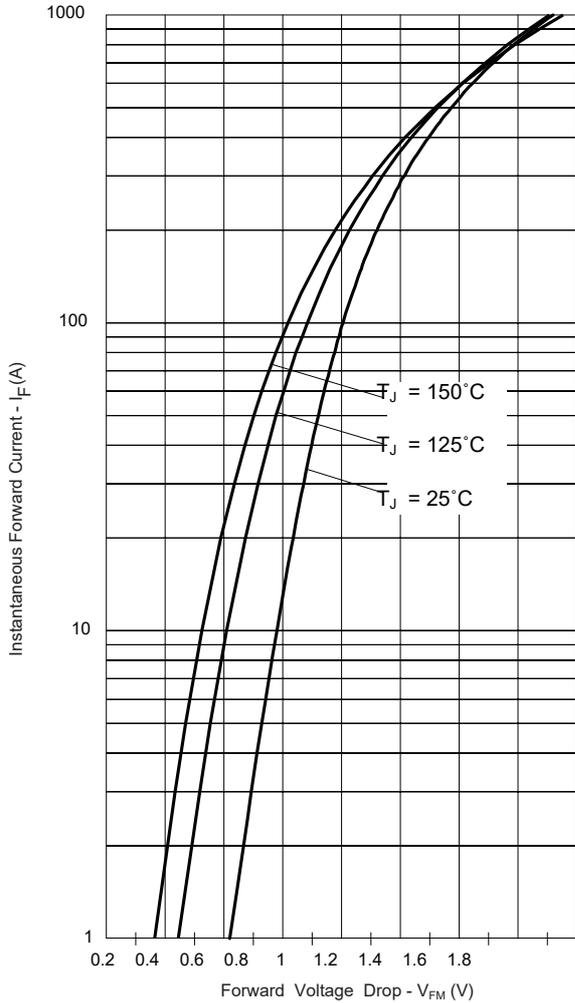


Fig. 1 - Typical Forward Voltage Drop Characteristics

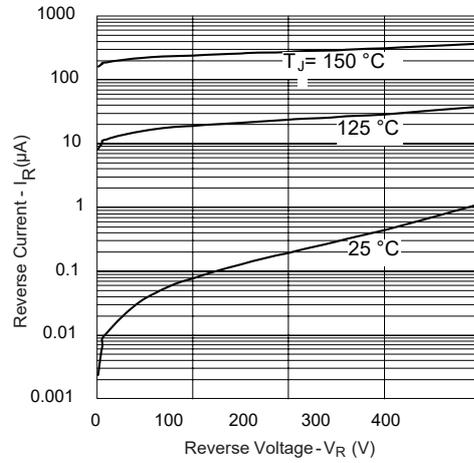


Fig. 2 - Typical Values Of Reverse Current Vs. Reverse Voltage

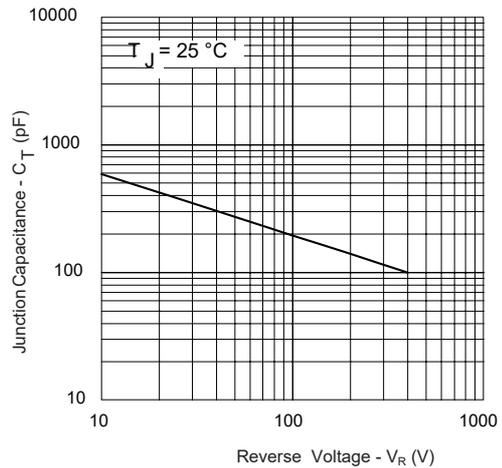


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

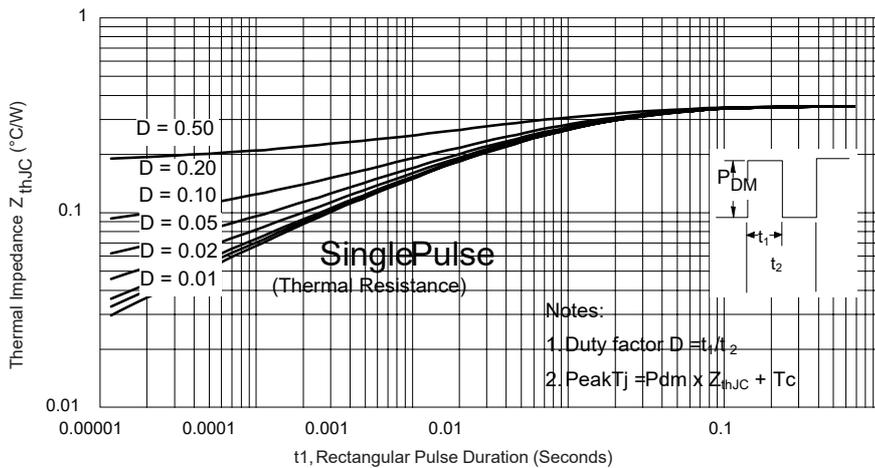


Fig. 4 - Max. Thermal Impedance Z_{thJC} Characteristics

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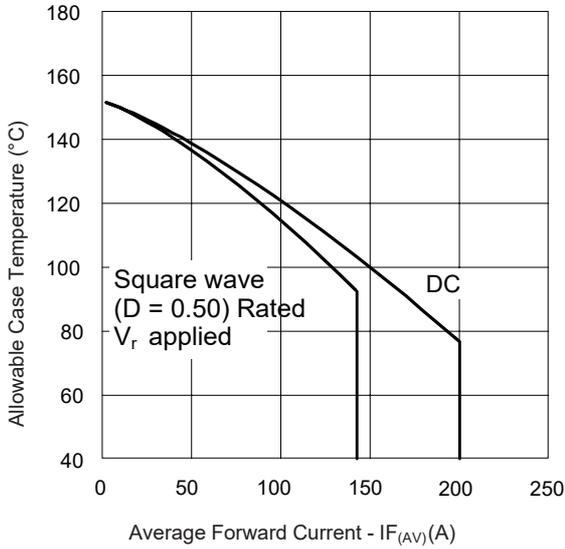


Fig. 5 - Max. Allowable Case Temperature Vs. Average Forward Current

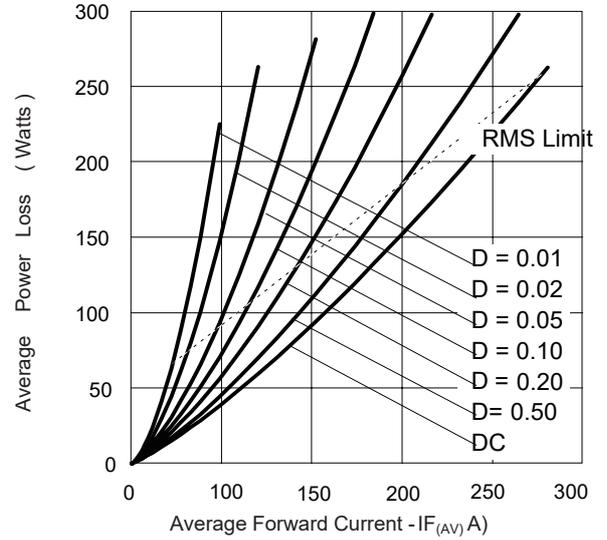


Fig. 6 - Forward Power Loss Characteristics

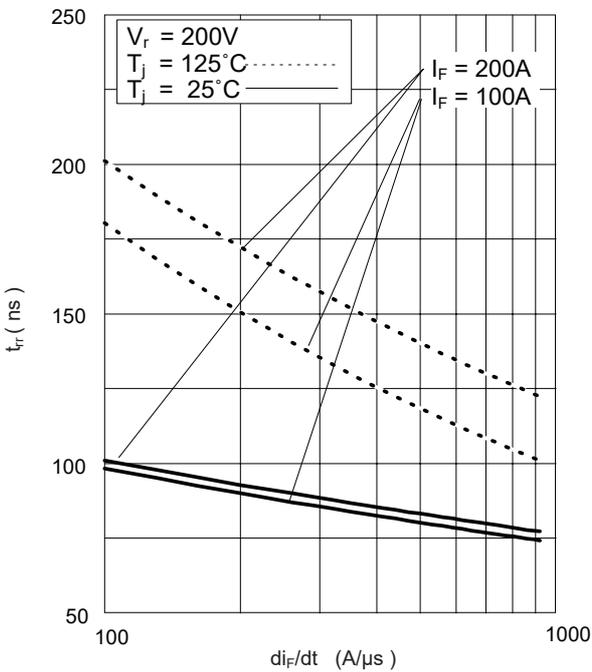


Fig. 7 - Typical Reverse Recovery time vs. di_F/dt

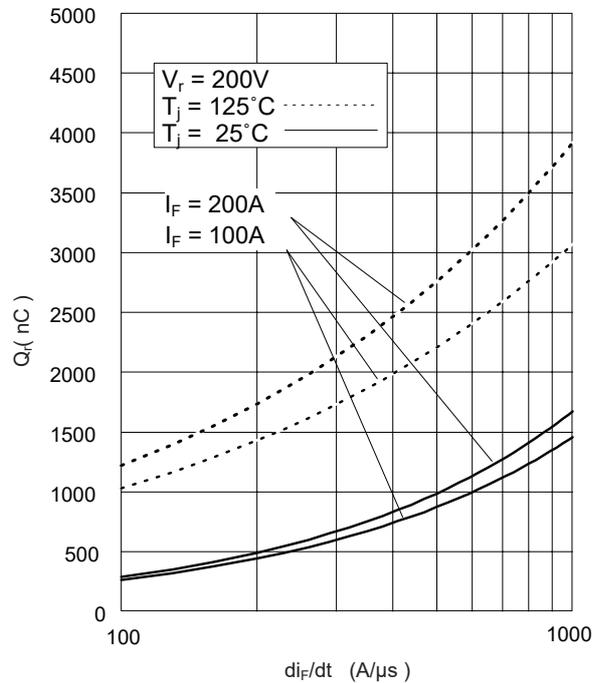


Fig. 8 - Typical Stored Charge vs. di_F/dt