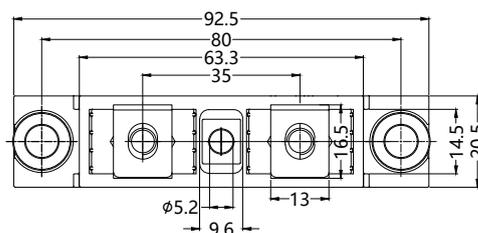
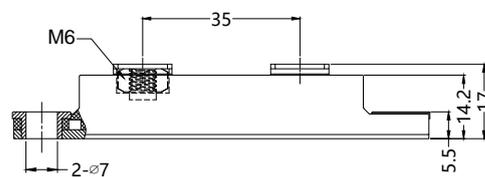
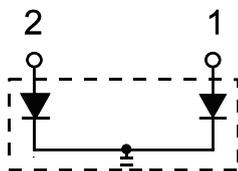


SRUD40060CT

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

Dimensions in mm (1mm=0.0394")



	V _{RSM} V	V _{RRM} V
SRUD40060CT	600	600

Symbol	Test Conditions	Maximum Ratings	Unit
I _{FRMS} I _{FAVM} I _{FRM}	T _C =85°C T _C =85°C; rectangular, d=0.5, per chip/permodule tp, 10µs; rep. rating, pulse width limited by T _{VJM}	314 200 TBD	A
I _{FSM}	T _{VJ} =45°C t=10ms(50Hz), sine t=8.3ms(60Hz), sine T _{VJ} =150°C t=10ms(50Hz), si t=8.3ms(60Hz), sine	1800 2000 1700 1850	A
I ² T	T _{VJ} =45°C t=10ms(50Hz), sine t=8.3ms(60Hz), sine T _{VJ} =150°C t=10ms(50Hz), si t=8.3ms(60Hz), sine	18200 18400 15500 15700	mJ
T _{VJ} T _{stg} T _{Hmax}		-40...+150 -40...+125 110	°C
P _{tot}	T _{case} =25°C	480	W
M _d	Mounting torque (M5) Terminal connection torque (M6)	2.50-4/22-35 3-5/30-42	Nm/lb.in.
d _s d _a	Creeping distance on surface Strike distance through air	12.7 9.6	Nm/lb.in. Nm/lb.in.
a	Maximum allowable acceleration	50	m/s ²
Weight		68	g

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Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	T _{VJ} =25°C; V _R =V _{R_{RRM}}		0.05	mA
	T _{VJ} =25°C; V _R =0.8·V _{R_{RRM}}		0.03	
	T _{VJ} =125°C; V _R =0.8·V _{R_{RRM}}		5	
V_F	I _F =200A; T _{VJ} =125°C		1.1	V
	T _{VJ} =25°C		1.3	
	I _F =400A; T _{VJ} =125°C		1.2	
	T _{VJ} =25°C		1.4	
V_{TO}	For power-loss calculations only		0.95	V
r_T	T _{VJ} =125°C		2.8	mΩ
R_{thJH} R_{thJC}	DC current		0.350	K/W
	DC current		0.300	
t_{rr}	I _F =1A; T _{VJ} =25°C	80	120	ns
I_{RM}	V _R =150V; T _{VJ} =25°C		25	A
	-di/dt=200A/us; T _{VJ} =100°C		18	A

FEATURES

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

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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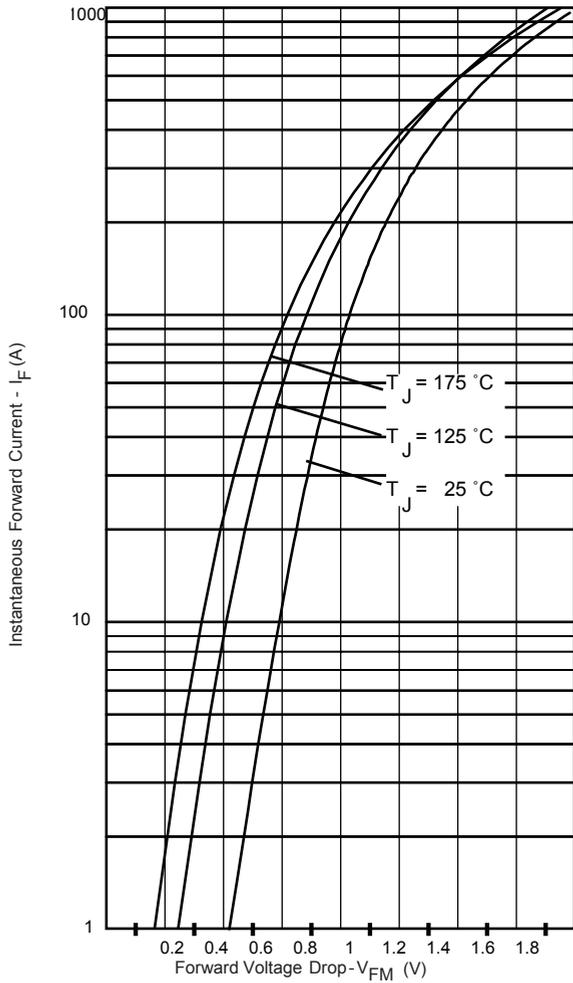


Fig. 1 - Typical Forward Voltage Drop Characteristics

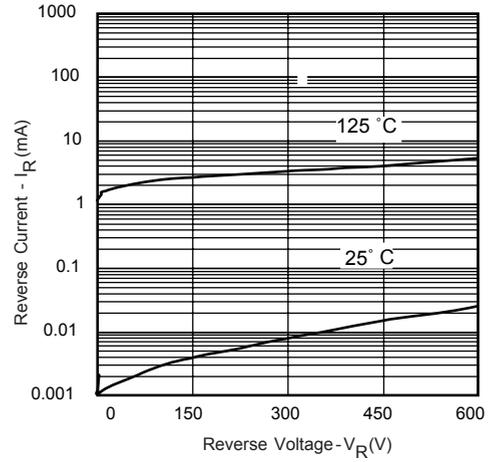


Fig. 2 - Typical Values Of Reverse Current Vs. Reverse Voltage

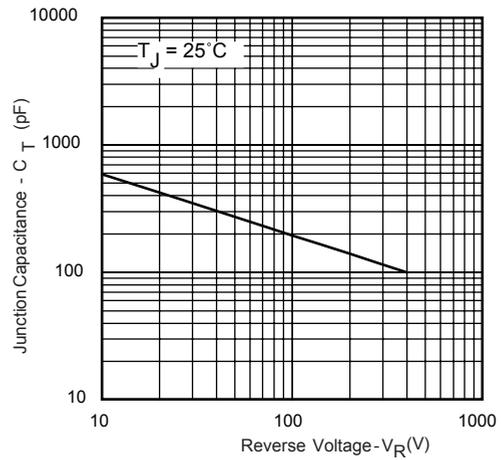


Fig. 3 - Typical Junction Capacitance Vs. Reverse Voltage

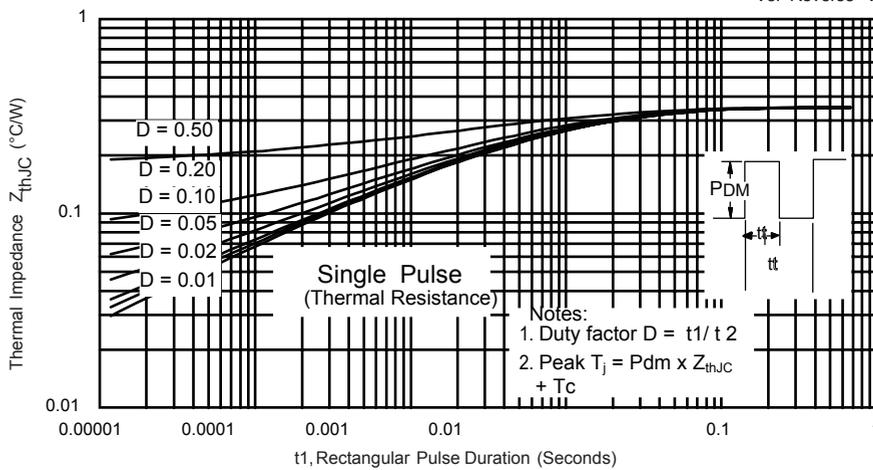


Fig. 4 - Max. Thermal Impedance Z_{thJC} Characteristics

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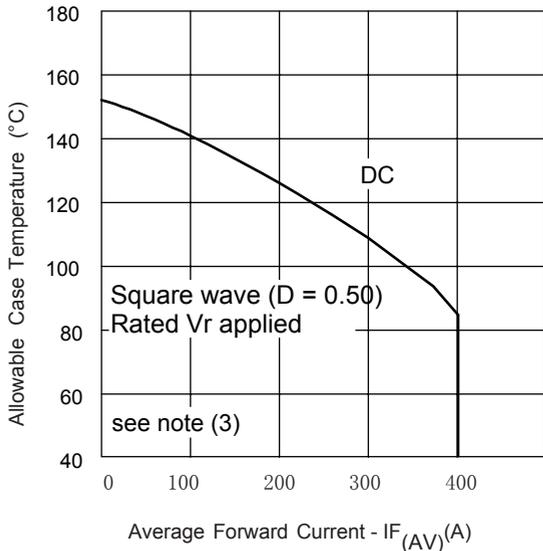


Fig. 5- Max. Allowable Case Temperature Vs. Average Forward Current

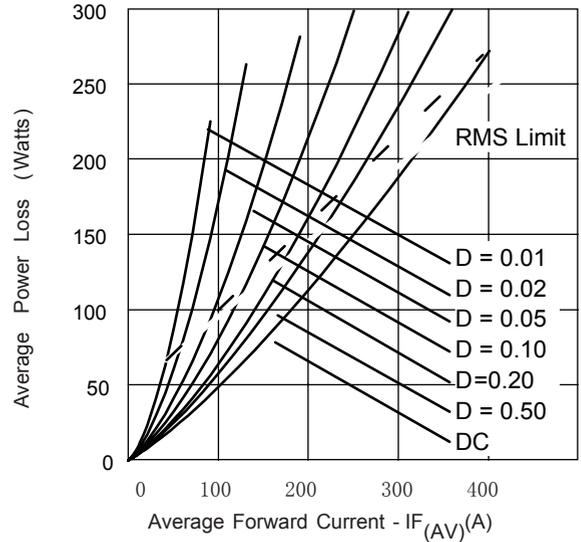


Fig. 6- Forward Power Loss Characteristics

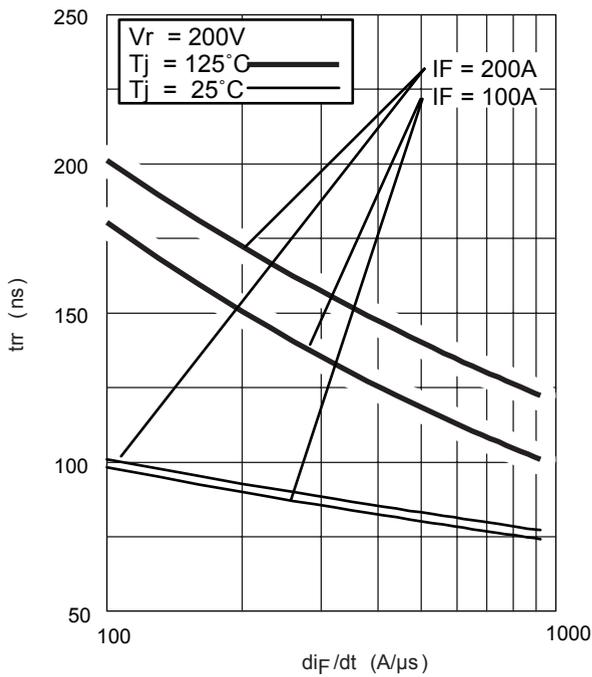


Fig. 7 - Typical Reverse Recovery time vs. di F/dt

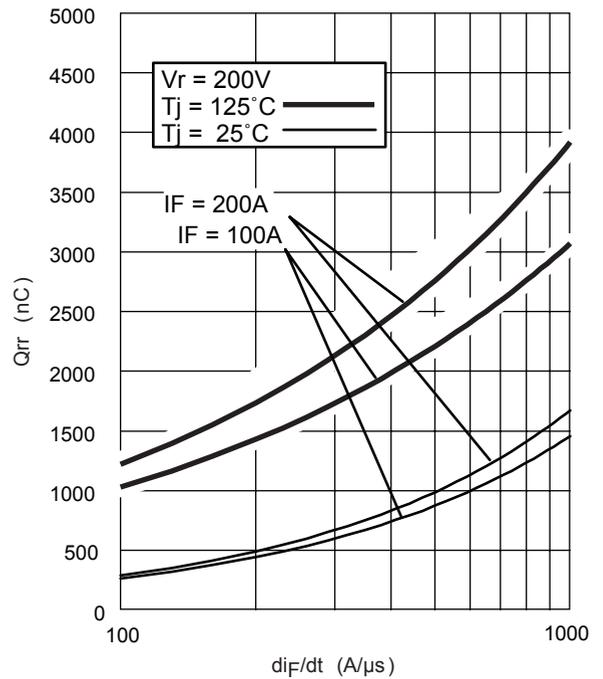


Fig. 8 - Typical Stored Charge vs. diF/dt