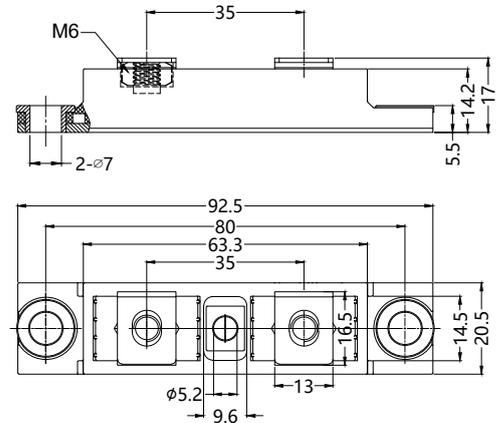
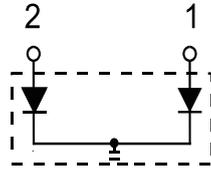


SRUD40040CT thru SRUD40060CT

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

Dimensions in mm (1mm=0.0394")



Type	V _{RSM} V	V _{RRM} V
SRUD40040CT	400	400
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, 10us; rep. rating, pulse width limited by T _{VJM}	314 200/400 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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SRUD40040CT thru SRUD40060CT

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Symbol	Test Conditions	Characteristic Values		Unit
		typ.	max.	
I_R	$T_{VJ}=25^{\circ}\text{C}; V_R=V_{RRM}$		0.5	mA
	$T_{VJ}=25^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$		0.03	
	$T_{VJ}=125^{\circ}\text{C}; V_R=0.8 \cdot V_{RRM}$		5	
V_F	$I_F=200\text{A}; T_{VJ}=125^{\circ}\text{C}$		1.40	V
	$T_{VJ}=25^{\circ}\text{C}$		2.00	
	$I_F=400\text{A}; T_{VJ}=125^{\circ}\text{C}$		1.80	
	$T_{VJ}=25^{\circ}\text{C}$		2.30	
V_{TO}	For power-loss calculations only		0.99	V
r_T	$T_{VJ}=125^{\circ}\text{C}$		2.9	mΩ
R_{thJH} R_{thJC}	DC current		0.210	K/W
	DC current		0.190	
t_{rr}	$I_F=1\text{A}; T_{VJ}=25^{\circ}\text{C}$	90	130	ns
I_{RM}	$V_R=150\text{V}; T_{VJ}=25^{\circ}\text{C}$		24	A
	$-di/dt=200\text{A/us}; T_{VJ}=100^{\circ}\text{C}$		18	A

FEATURES

- * International standard package
- * Copper base plate
- * Glass 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

ADVANTAGES

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



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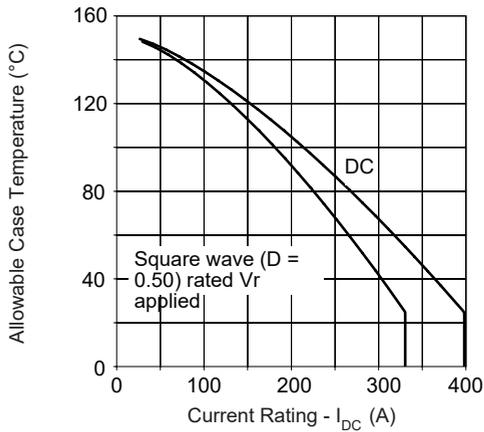


Fig. 1 - Maximum Current Rating Capability (Per Leg)

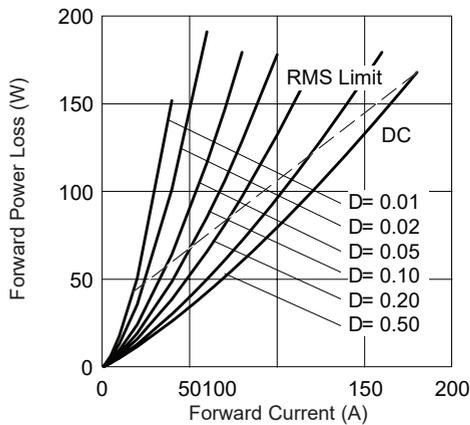


Fig. 2 - Forward Power Loss Characteristics

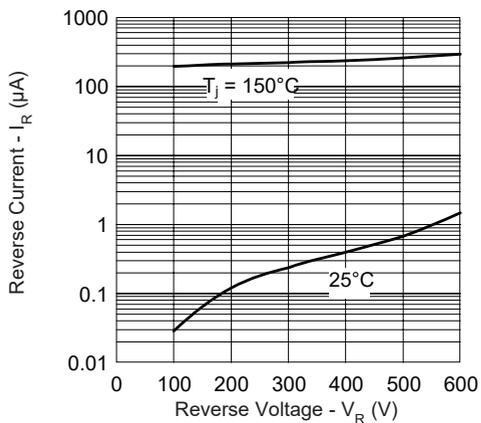


Fig. 4 - Typical Reverse Current vs. Reverse Voltage (Per Leg)

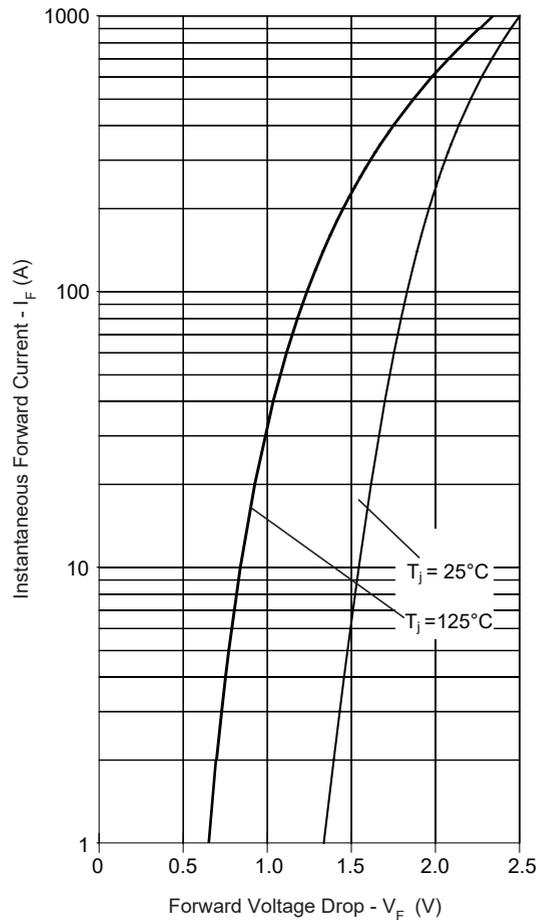


Fig. 3 - Typical Forward Voltage Drop vs. Instantaneous Forward Current (Per Leg)

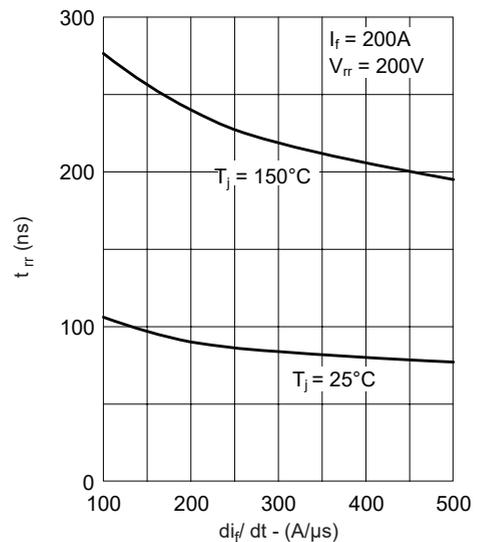


Fig. 5 - Typical Reverse Recovery Time vs. di_F/dt (Per Leg)

SRUD40040CT thru SRUD40060CT

Soft Recovery Behaviour Ultra Fast Recovery Epitaxial Diode Modules

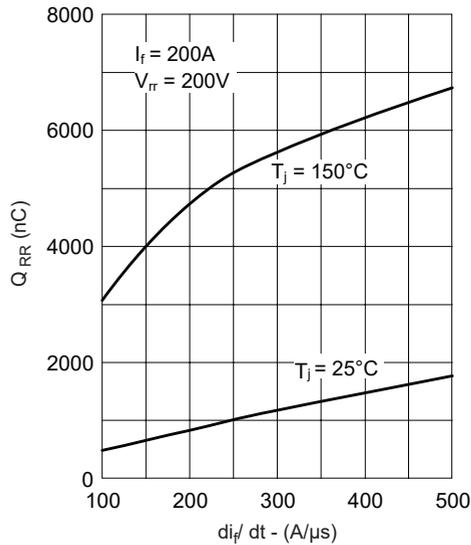


Fig. 6 - Typical Reverse Recovery Charge vs. di_F/dt (Per Leg)

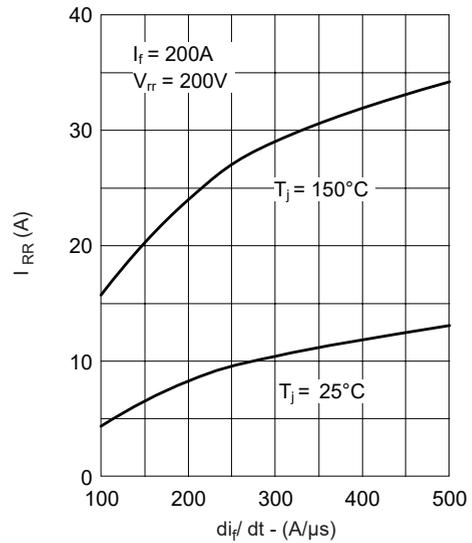


Fig. 7 - Typical Reverse Recovery Current vs. di_F/dt (Per Leg)

PART NUMBER INFORMATION TABLE

Device P/N	SR	UD	400	40	CT
	1	2	3	4	5
	1 - SiRectifier	2 - UD = FRED	3 - Current rating (400 = 400 A)	4 - Voltage rating x10 (20=200V, 30=300V, 40=400V, 60=600V)	5 - CT = Common cathode AT = Common Anode ET = Phase Leg