

CK1S/CK2S200 – 200

Power Schottky Rectifier , 2×100A

RoHS
COMPLIANT

Features

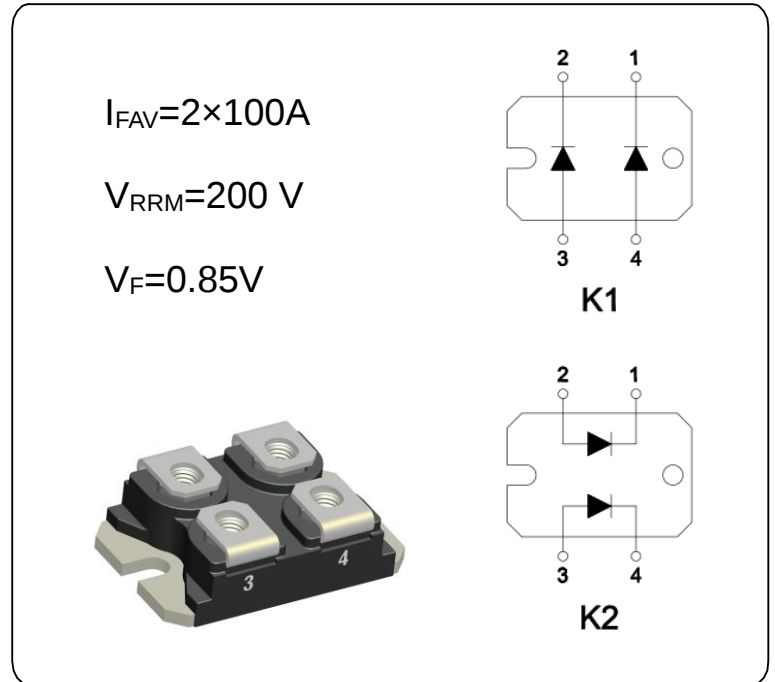
- International standard package SOT-227
- Very low V_F
- Extremely low switching losses
- Low I_{RM} -values
- Copper internally DBC isolated
- Insulated package($V_{ISO} = 2500V_{RMS}$)

Applications

- Rectifiers in switch mode power Supplies(SMPS)
- Free wheeling diode in low voltage converters

Advantages

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



Maximum Ratings				
Symbol	Test Conditions		Ratings	Units
I_{FRMS}			150	A
I_{FAVM}	$T_C = 105^\circ C$; Rectangular, $d=0.5$; per diode		100	
	$T_C = 105^\circ C$; Rectangular, $d=0.5$; per module		200	
I_{FSM}	$T_{VJ} = 45^\circ C$; $t_p = 10\ ms$ (50 Hz), sine		1400	
$(dv/dt)_{cr}$			5000	V/us
T_{VJ}			-40~+150	$^\circ C$
T_{stg}			-40~+150	
P_{tot}	$T_C=25^\circ C$		310	W
M_d	Mounting torque(M4)		1.1~1.5	Nm
	Terminal connection torque(M4)		1.1~1.5	
Weight	Typical		30	g
V_{ISOL}	50/60Hz, RMS, $I_{isol}<1mA$	1second	3000	V
		1minute	2500	

Electrical and Thermal Characteristic

Symbol	Test Conditions	Values		Units
		Typ.	Max.	
I_R	$V_R = V_{RRM}; T_{VJ} = 25^\circ\text{C}$ (Pulse Width=5ms, Duty Cycle<2.0%)		0.5	mA
	$V_R = V_{RRM}; T_{VJ} = 125^\circ\text{C}$ (Pulse Width=5ms, Duty Cycle<2.0%)		15	
V_F	$I_F = 100\text{A}; T_{VJ} = 125^\circ\text{C}$		0.85	V
	$I_F = 100\text{A}; T_{VJ} = 25^\circ\text{C}$		0.95	
	$I_F = 200\text{A}, T_{VJ} = 125^\circ\text{C}$		1.10	
R_{thJC}	Junction to case	Par leg	0.8	$^\circ\text{C/W}$
		Total	0.4	
R_{thCH}		0.1		

Performance Curves

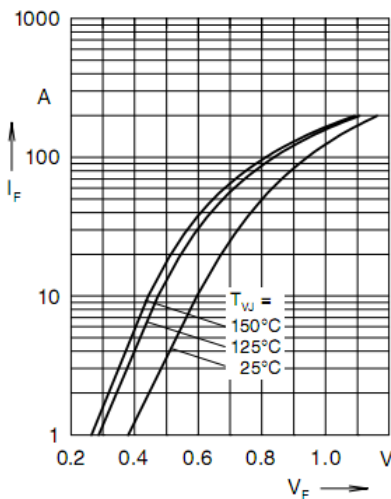


Fig. 1 Max. forward voltage drop characteristics

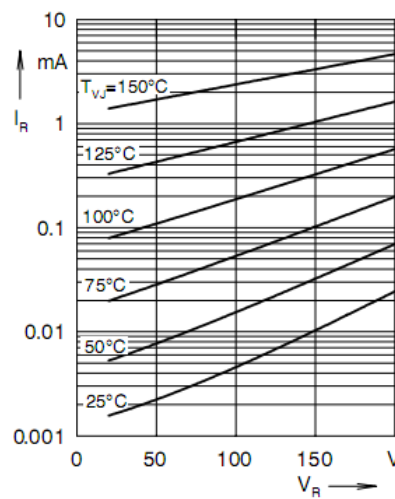


Fig. 2 Typ. reverse current I_R vs. reverse voltage V_R

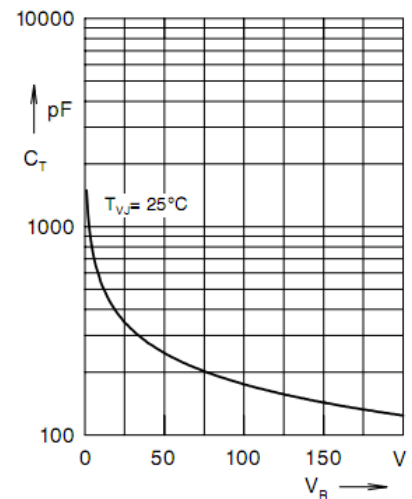


Fig. 3 Typ. junction capacitance C_T versus reverse voltage V_R

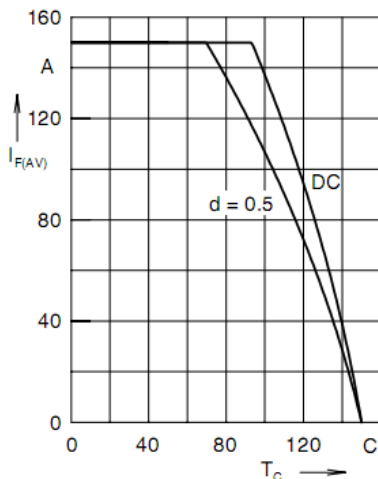


Fig. 4 Average forward current $I_{F(AV)}$ versus case temperature T_C

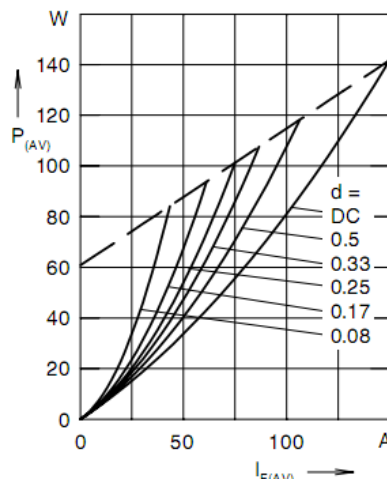


Fig. 5 Forward power loss characteristics

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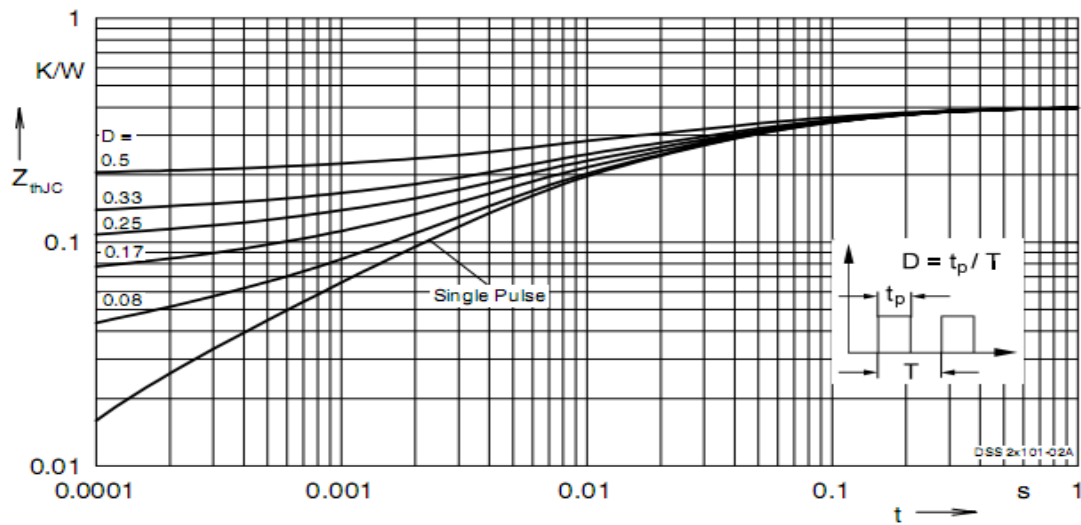


Fig. 6 Transient thermal impedance junction to case at various duty cycles

Ordering Information Tabel

ice code

C K2 S 200 - 200

power module

Circuit configuration

K1=2 separate diodes, syntropy pin-out

K2=2 separate diodes, parallel pin-out

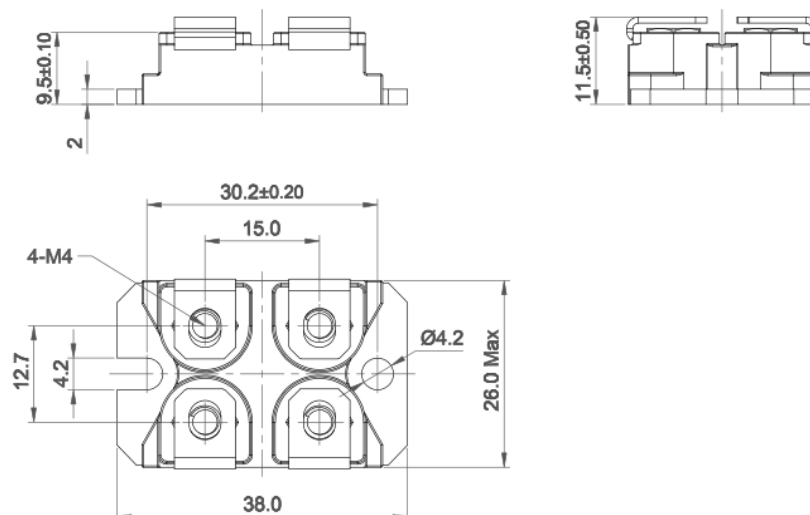
“S” for Schottky rectifier

Maximum average forward current (200A)

Voltage rating (200= 200V)

Package Outline Information

SOT-227 Package



Dimensions in mm