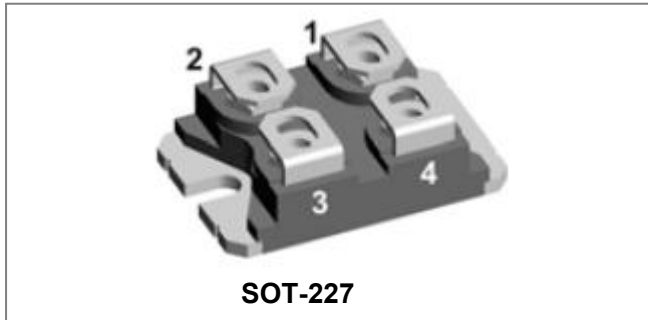


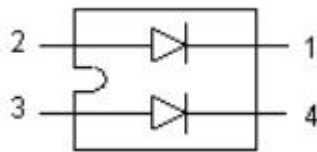
## SK2S200-170L Power Schottky Rectifier



### Features

- International standard package SOT-227
- Extremely low switching losses
- Low  $I_{RM}$  -values
- Copper internally DBC isolated
- Base plate: Nickel plated; Terminals: Nickel plated
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### 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(limiting values, $T_C = 25^\circ\text{C}$ unless otherwise specified) :

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	-	170	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 105^\circ\text{C}$ , rectangular wave form	100(Per Leg) 200(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	$I_{FSM}$	8.3 ms, half Sine pulse	700	A

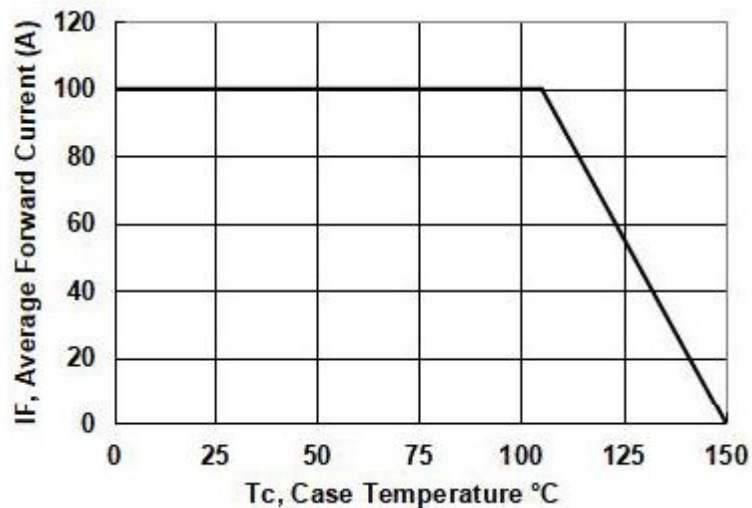
**Electrical Characteristics:**

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V <sub>F1</sub>	@ 100A, Pulse, T <sub>J</sub> = 25 °C @ 200A, Pulse, T <sub>J</sub> = 25 °C	0.81 0.93	0.85 0.975	V
	V <sub>F2</sub>	@ 100A, Pulse, T <sub>J</sub> = 150 °C @ 200A, Pulse, T <sub>J</sub> = 150 °C	0.63 0.77	0.68 0.86	V
Reverse Current(Per Leg)*	I <sub>R1</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 25 °C	17	200	uA
	I <sub>R2</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 125 °C	7	100	mA
Isolation Breakdown Voltage(R.M.S)	V <sub>isol</sub>	Ac.50Hz; R.M.S; 1min, T <sub>J</sub> = 25 °C	-	2500	V
		Ac.50Hz; R.M.S; 1sec, T <sub>J</sub> = 25 °C	-	3500	

\* Pulse width < 300 μs, duty cycle < 2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T <sub>J</sub>	-	-55 to +150	°C
Storage Temperature	T <sub>stg</sub>	-	-55 to +150	°C
Thermal Resistance Junction to Case	R <sub>θJC</sub>	DC operation	0.52(Per Leg)	°C/W
			0.31(Peg Device)	
Mounting torque(M4)	M <sub>D</sub>	-	1.1-1.5/9-13	Nm/
Terminal connection torque(M4)			1.1-1.5/9-13	lb.in.
Typical Approximate Weight	wt	-	30	g

**Ratings and Characteristics Curves**


**Forward Current VS Case temperature Diode**

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

Figure 1 Typical Forward Characteristics

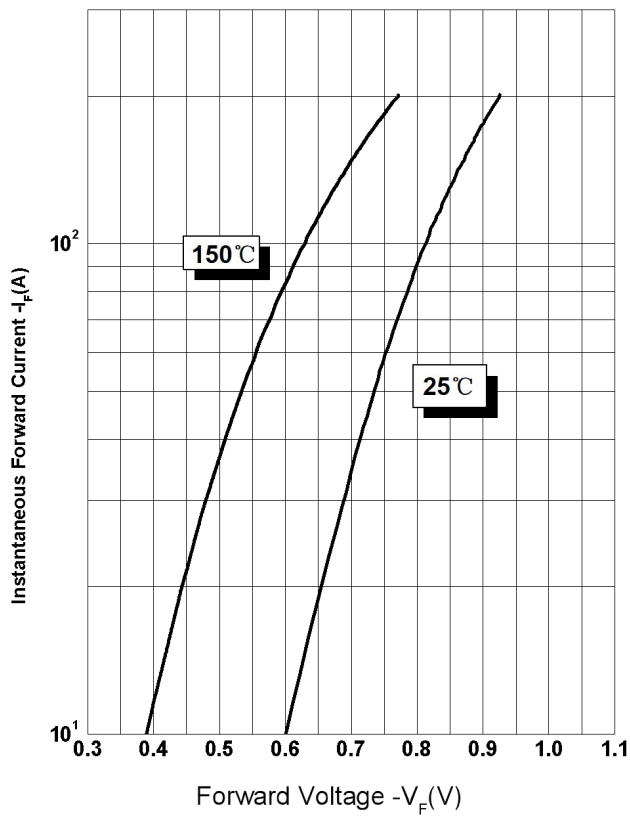


Figure 2 Typical Reverse Characteristics

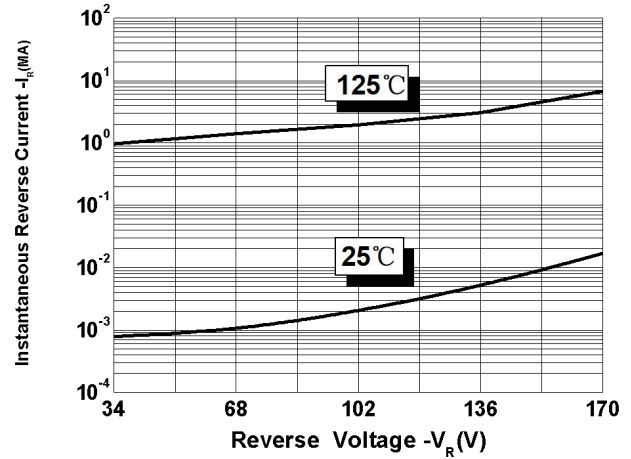
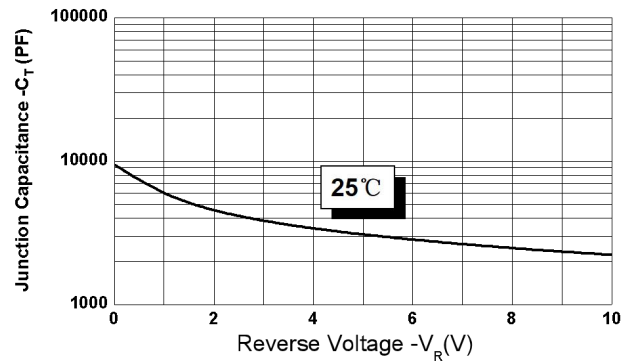


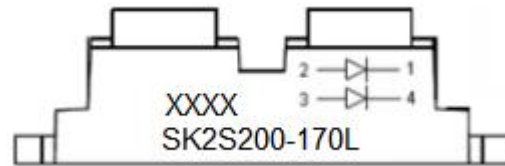
Figure 3 Typical Junction Capacitance



**Ordering Information**

Device	Package	Shipping
SK2S200-170L	SOT-227 (Pb-Free)	36pcs /BULK

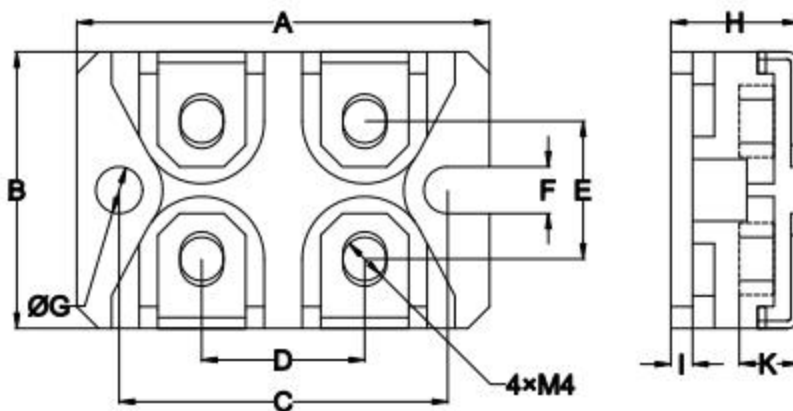
**Marking Diagram**



Where XXXX is YYWW

- S = SMC's Power Module
- K = SOT-227 Package
- 2 = Circuit Configuration
- S = Schottky Rectifier
- 200 = Forward Current (200A)
- 170 = Reverse Voltage (170V)
- L = L
- YY = Year
- WW = Week

**Mechanical Dimensions SOT-227(Millimeters)**



SYMBOL	Dimensions in millimeters	
	Min.	Max.
A	37.8	38.2
B	24.8	25.21
C	29.9	30.55
D	14.5	15.5
E	12.2	13.45
F	4.1	4.31
G	φ4.1	φ4.31
H	11	12.5
I	1.9	2.1
K	4.3	6.5

**DISCLAIMER:**

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC Diode Solutions sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.

3- In no event shall SMC Diode Solutions be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC Diode Solution assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall SMC Diode Solutions be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC Diode Solutions.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..