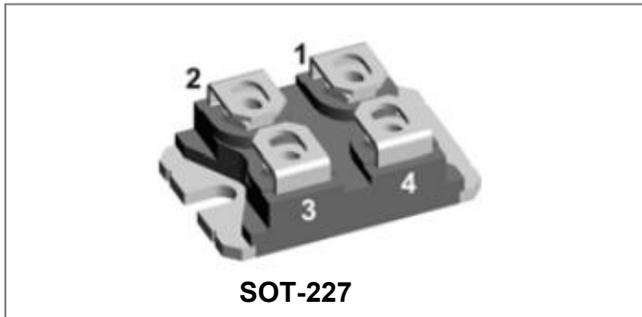


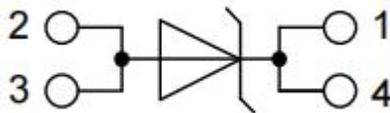
## SKIS300-100 High Voltage Power Schottky Rectifier



### Features

- International standard package SOT-227
- Epoxy meets UL 94V-0
- Extremely low switching losses
- Low  $I_{RM}$ -values
- Copper internally DBC isolated
- 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	$V_{RRM}$ $V_{RWM}$ $V_R$	-	100	V
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 95^\circ\text{C}$ , rectangular wave form	300	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	4800	A

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V <sub>F1</sub>	@ 300A, Pulse, T <sub>J</sub> = 25 °C	0.93	0.99	V
	V <sub>F2</sub>	@ 300A, Pulse, T <sub>J</sub> = 125 °C	0.82	0.88	V
Reverse Current*	I <sub>R1</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 25 °C	0.002	3	mA
	I <sub>R2</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 150°C	38	50	mA
Junction capacitance		@V <sub>R</sub> = 12V, f=1MHz, T <sub>J</sub> = 25°C	4130	-	pF

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

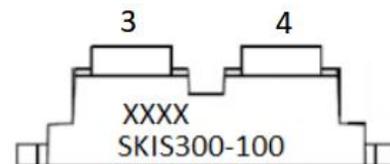
**Thermal-Mechanical Specifications:**

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	0.15	°C/W
Mounting torque(M4)	M <sub>D</sub>	-	1.1-1.5/9-13	Nm/ lb.in.
Terminal connection torque(M4)			1.1-1.5/9-13	
Typical Approximate Weight	wt	-	30	g

**Ordering Information**

Device	Package	Shipping
SKIS300-100	SOT-227 (Pb-Free)	36pcs /BULK

**Marking Diagram**



Where XXXX is YYWW

- S = SMC's Power Module
- K = SOT-227 Package
- I = Circuit Configuration
- S = Schottky Rectifier
- 300 = Forward Current (300A)
- 100 = Reverse Voltage (100V)
- YY = Year
- WW = Week

**Ratings and Characteristics Curves**

Figure 1  
Typical Forward Characteristics

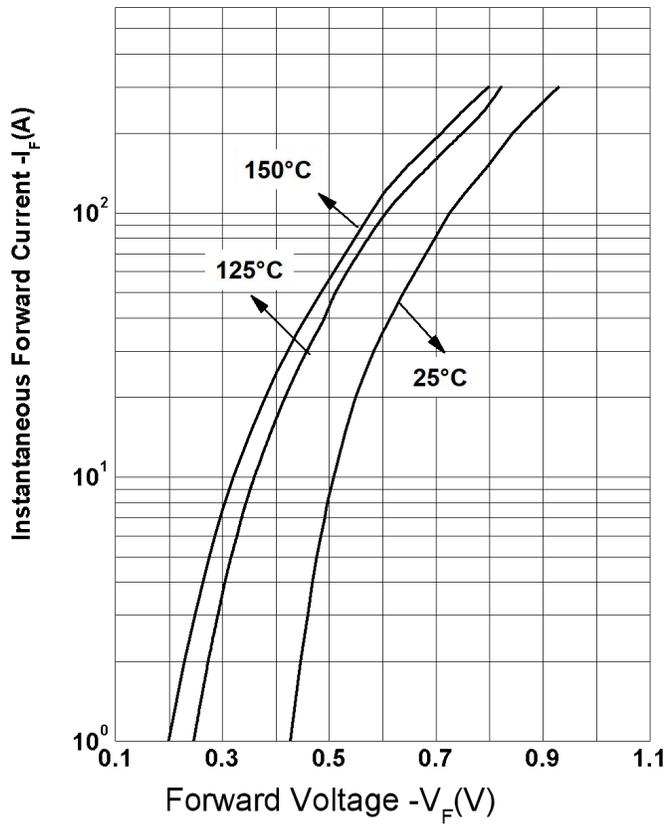


Figure 2  
Typical Reverse Characteristics

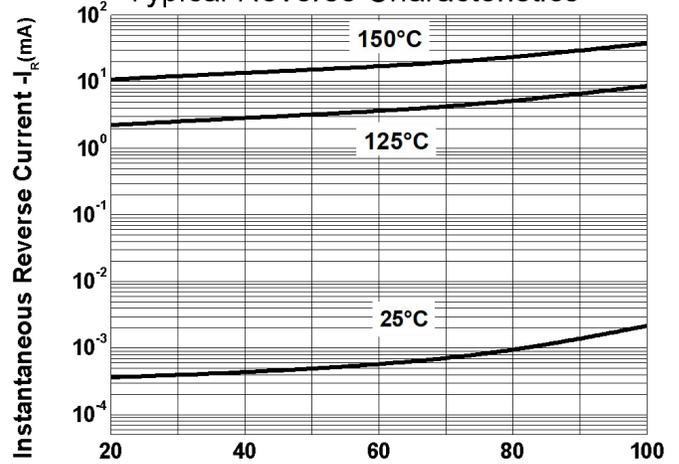
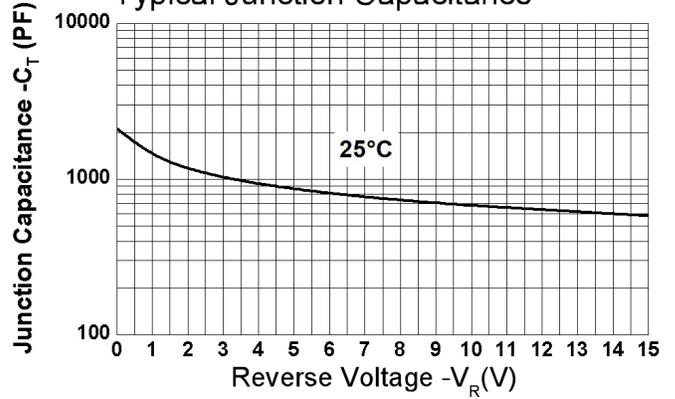
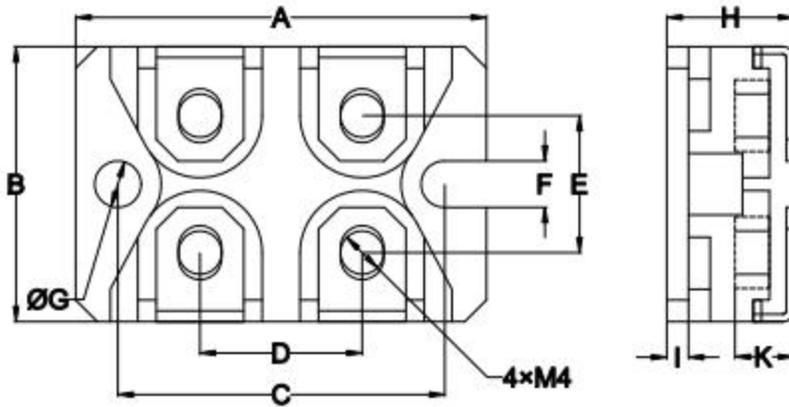


Figure 3  
Reverse Voltage -  $V_R$  (V)  
Typical Junction Capacitance



**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

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