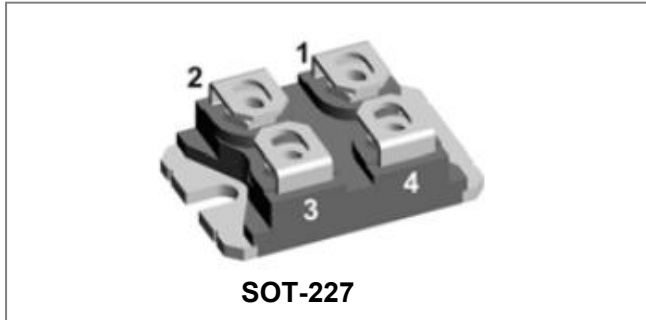


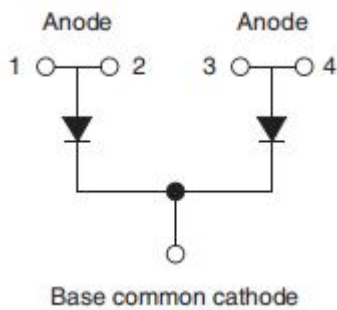
SKMS320-100 High Voltage Power Schottky Rectifier



Features

- International standard package SOT-227
- Epoxy meets UL 94V-0
- Extremely low switching losses
- Low I_{RM} -values
- 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:

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 in DC	$I_{F(AV)}$	$T_C = 103^\circ\text{C}$	160(Per Leg) 320(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	I_{FSM}	8.3 ms, half Sine pulse, $T_C = 25^\circ\text{C}$	1400	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@ 160A, Pulse, T _J = 25 °C	0.81	0.98	V
	V _{F2}	@ 160A, Pulse, T _J = 125 °C	0.66	0.81	V
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.001	4	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	7	40	mA
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C f _{SIG} = 1MHz	2850	-	pF

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

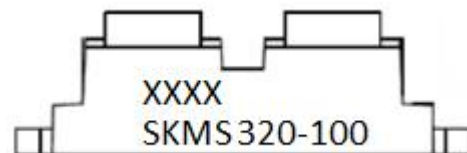
Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T _J	-	-55 to +150	°C
Storage Temperature	T _{stg}	-	-55 to +150	°C
Thermal Resistance Junction to Case(Per Leg)	R _{θJC}	DC operation	0.3	°C/W
Thermal Resistance Junction to Case(Peg Device)	R _{θJC}	DC operation	0.15	°C/W
Mounting torque(M4)	M _D	-	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
SKMS320-100	SOT-227 (Pb-Free)	36pcs /BULK

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


Where XXXX is YYWW

S = SMC's Power Module
 K = SOT-227 Package
 M = Circuit Configuration
 S = Schottky Rectifier
 320 = Forward Current (320A)
 100 = Reverse Voltage (100V)
 YY = Year
 WW = Week

Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

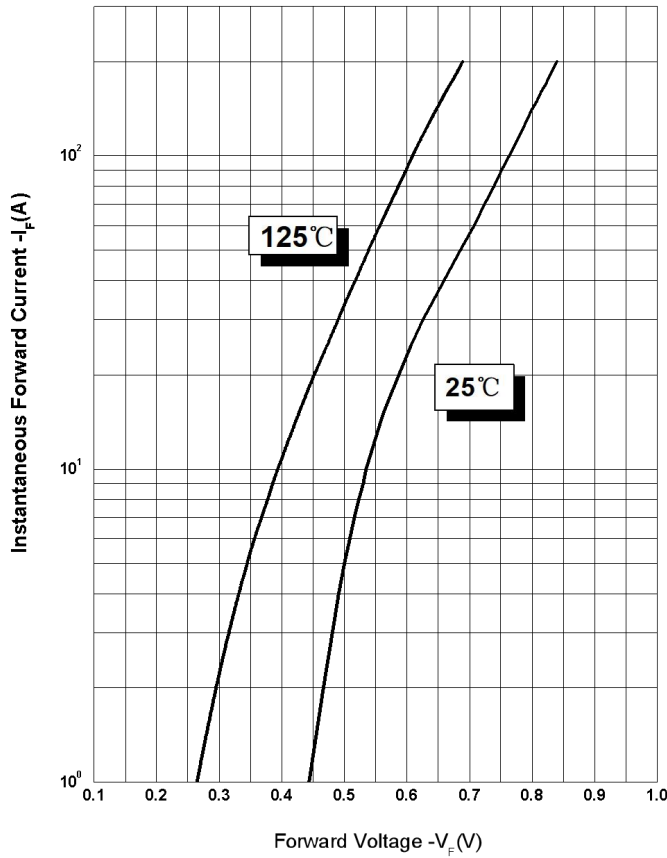


Figure 2 Typical Reverse Characteristics

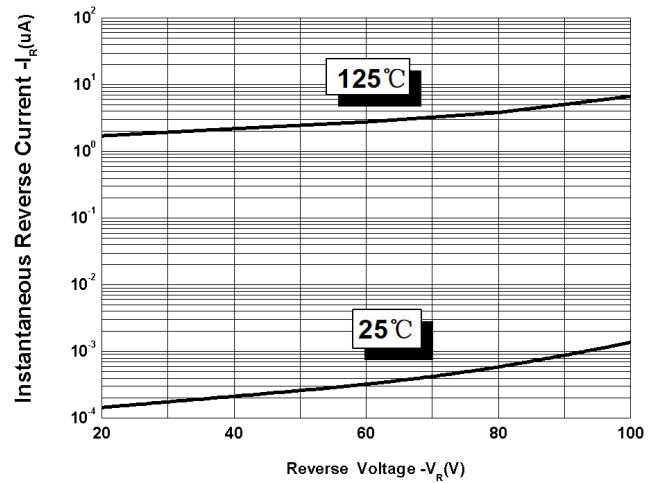
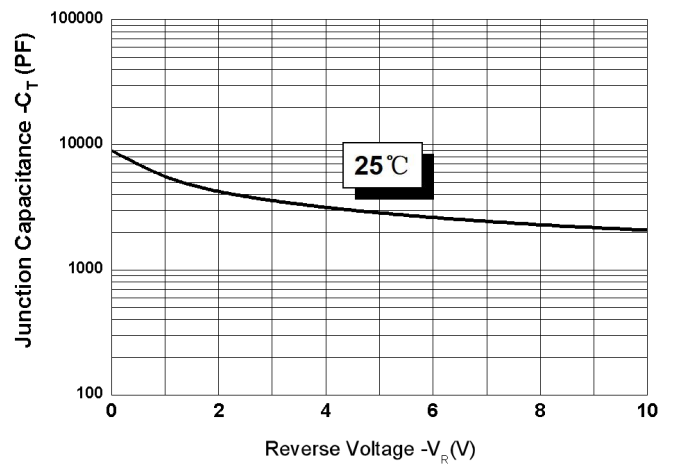
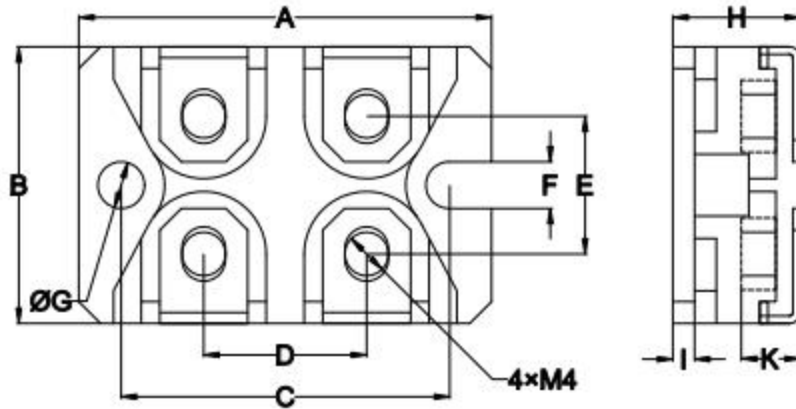


Figure 3 Typical Junction Capacitance



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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