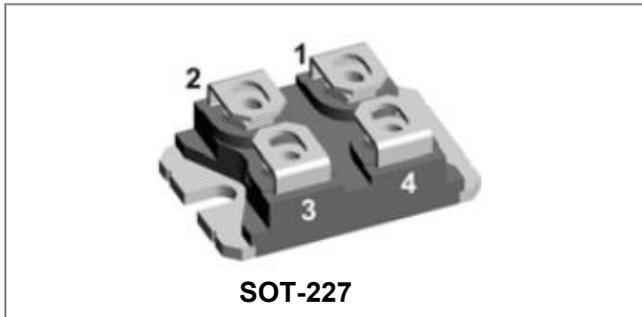


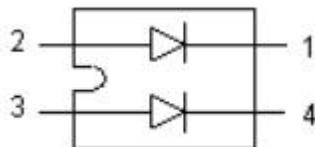
SK2S120-100 High Voltage Power Schottky Rectifier



Features

- International standard package SOT-227
- Epoxy meets UL 94V-0
- Extremely low switching losses
- Low I_{RM} -values
- Copper internally DBC isolated
- UL approved file E517293
- 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 @ $T_c = 105^\circ\text{C}$, rectangular wave form	60(Per Leg) 120(Per Device)	A
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	I_{FSM}	8.3 ms, half Sine pulse	700	A

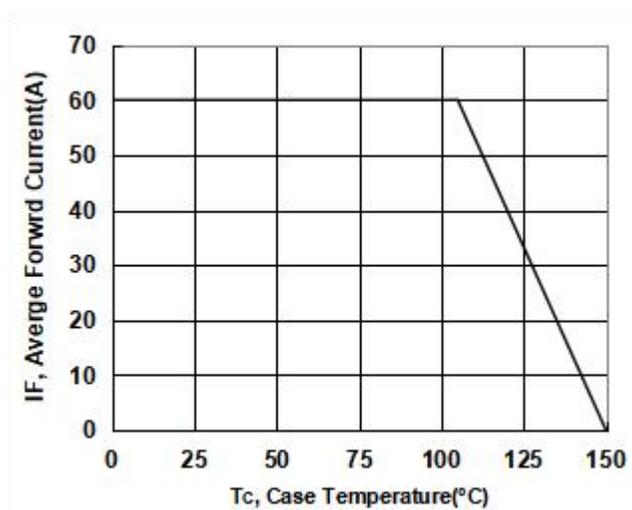
Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@ 60A, Pulse, T _J = 25 °C @ 120A, Pulse, T _J = 25 °C	0.84 -	0.91 1.10	V
	V _{F2}	@ 60A, Pulse, T _J = 125 °C @ 120A, Pulse, T _J = 125 °C	0.71 -	0.74 0.95	V
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.002	2	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	0.9	20	mA
Isolation Breakdown Voltage(R.M.S)	Visol	Ac.50Hz; R.M.S;1min, T _J = 25 °C	-	2500	V
		Ac.50Hz; R.M.S;1sec, T _J = 25 °C	-	3500	

* 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	0.9	°C/W
Thermal Resistance Junction to Case(Peg Device)	R _{θJC}	DC operation	0.5	°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

Ratings and Characteristics Curves


Forward Current VS Case temperature Diode

Figure 1
Typical Forward Characteristics

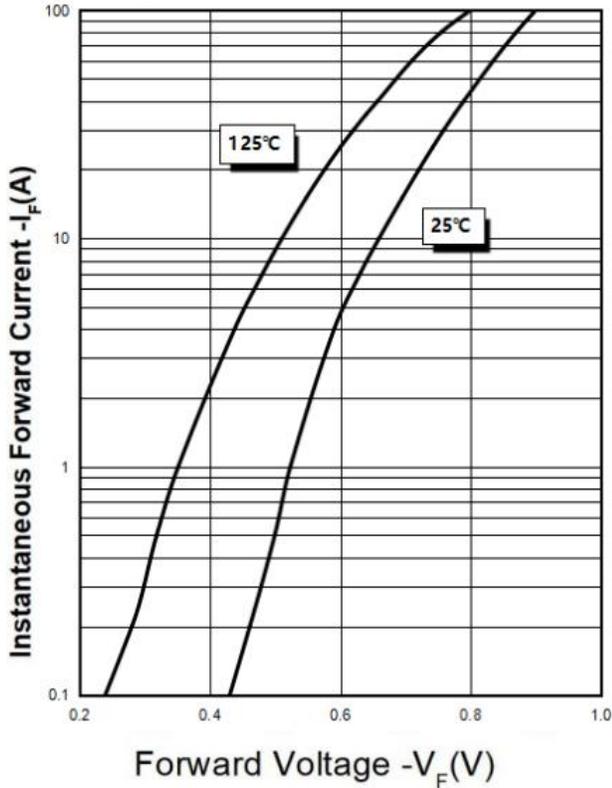


Figure 2
Typical Reverse Characteristics

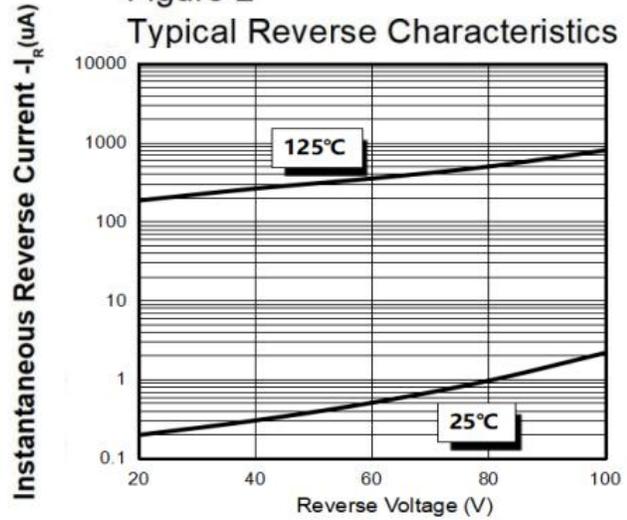
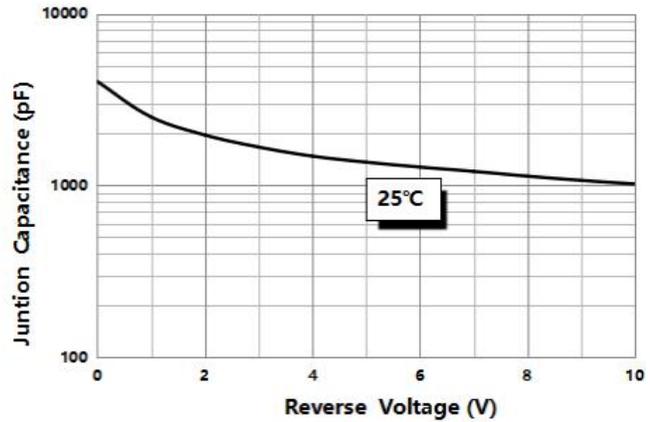


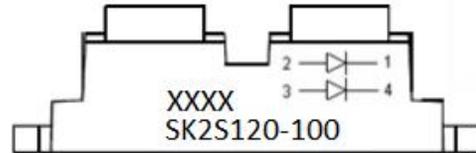
Figure 3
Typical Junction Capacitance



Ordering Information

Device	Package	Shipping
SK2S120-100	SOT-227 (Pb-Free)	36pcs /BULK

Marking Diagram

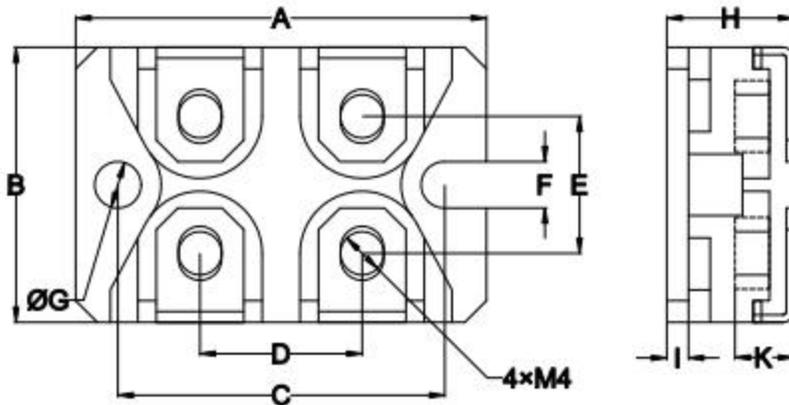


Where XXXX is YYWW

- S = SMC's Power Module
- K = SOT-227 Package
- 2 = Circuit Configuration
- S = Schottky Rectifier
- 120 = Forward Current (120A)
- 100 = Reverse Voltage (100V)
- YY = Year
- WW = Week

Remark: marking is as above from data code 2036.

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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