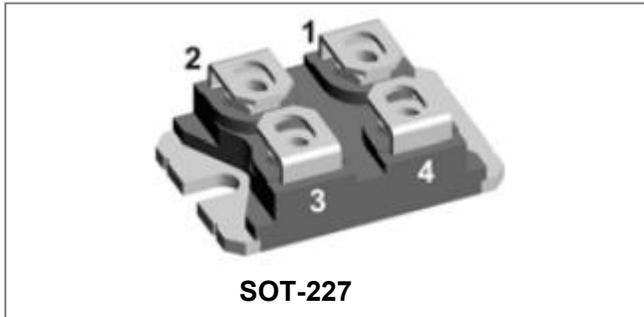


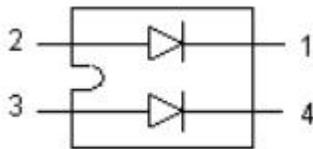
SK2S090-150 Power Schottky Rectifier



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	V_{RRM}	-	150	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Rectified Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C = 95^\circ\text{C}$, rectangular wave form	45(Per Leg)	A
			90(Per Device)	
Peak One Cycle Non-Repetitive Surge Current (Per Leg)	I_{FSM}	8.3 ms, half Sine pulse	800	A

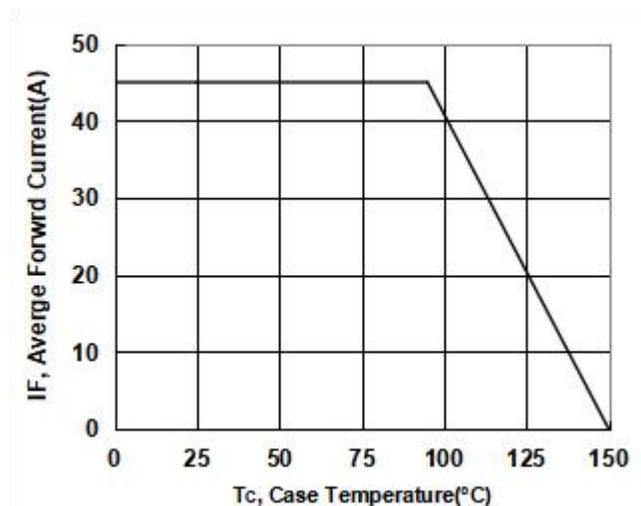
Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop(Per Leg)*	V _{F1}	@ 45A, Pulse, T _J = 25 °C @ 90A, Pulse, T _J = 25 °C	0.84 0.91	0.90 0.95	V
	V _{F2}	@ 45A, Pulse, T _J = 125 °C @ 90A, Pulse, T _J = 125 °C	0.78 0.86	0.85 0.90	V
Reverse Current(Per Leg)*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.001	2	mA
	I _{R2}	@V _R = rated V _R , T _J = 125 °C	0.002	30	mA
Junction capacitance	C _J	V _R =5V f=1MHz T _{VJ} =25°C	1000	2000	pF
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(Peg Device)	R _{θJC}	DC operation	0.4	°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

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

Figure 1
Typical Forward Characteristics

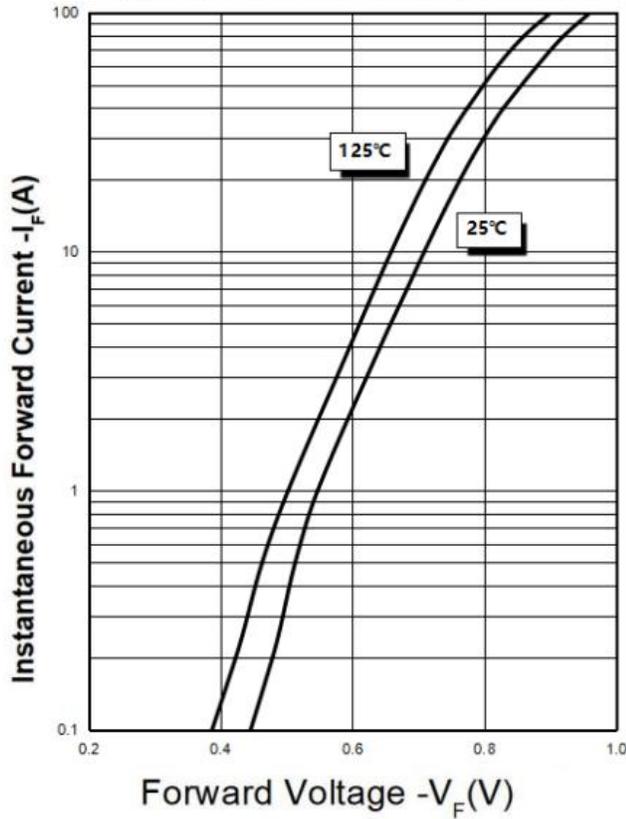
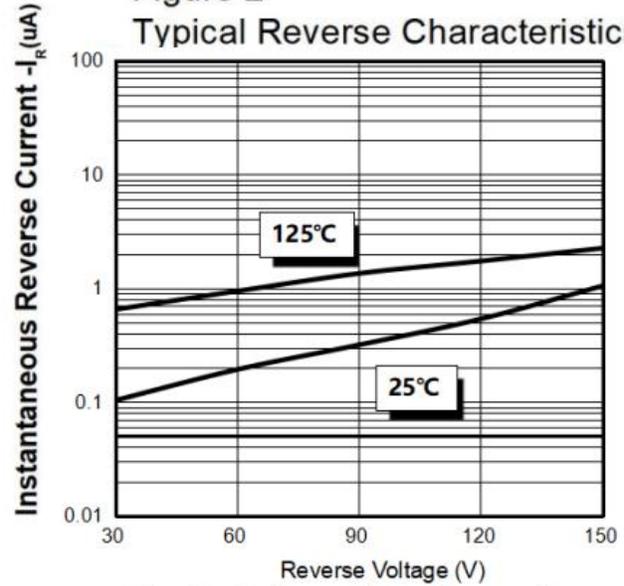
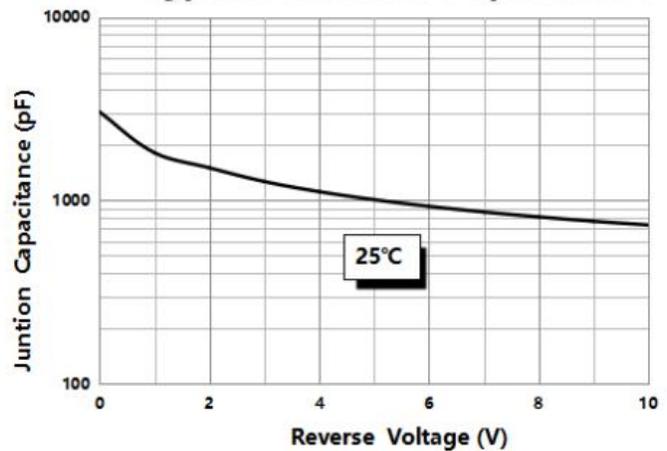


Figure 2
Typical Reverse Characteristics



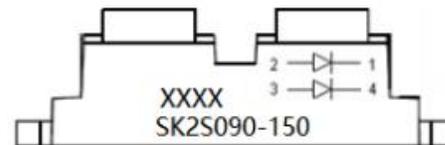
Typical Junction Capacitance



Ordering Information

Device	Package	Shipping
SK2S090-150	SOT-227 (Pb-Free)	36pcs /BULK

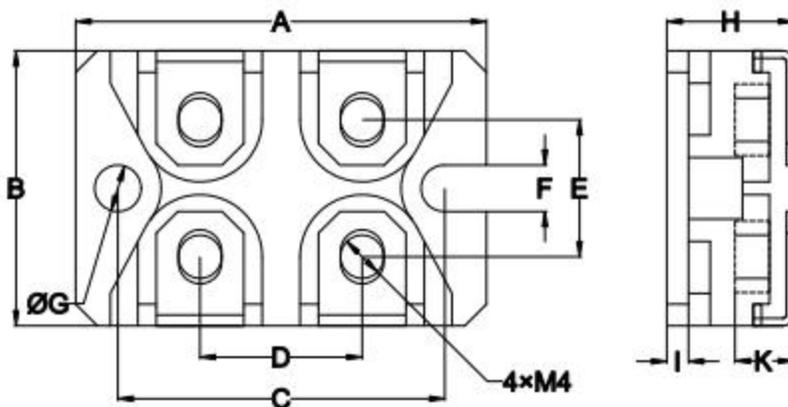
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram


Where XXXX is YYWW

- S = SMC's Power Module
- K = SOT-227 Package
- 2 = Circuit Configuration
- S = Schottky Rectifier
- 090 = Forward Current (90A)
- 150 = Reverse Voltage (150V)
- 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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