Technical Data
Data Sheet N0950, Rev. -

Green Products

SK510B SCHOTTKY RECTIFIER

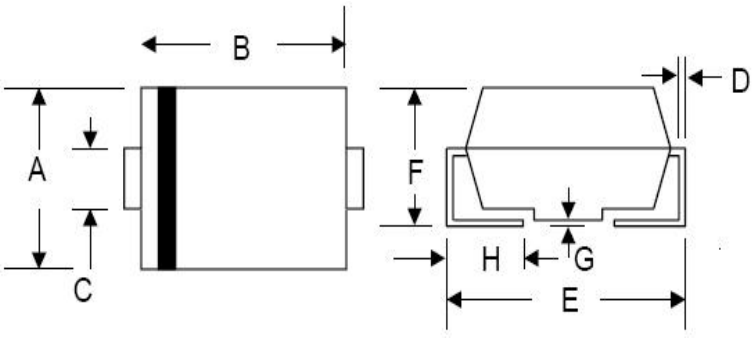
Applications:

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Disk drives
- Battery charging

Features:

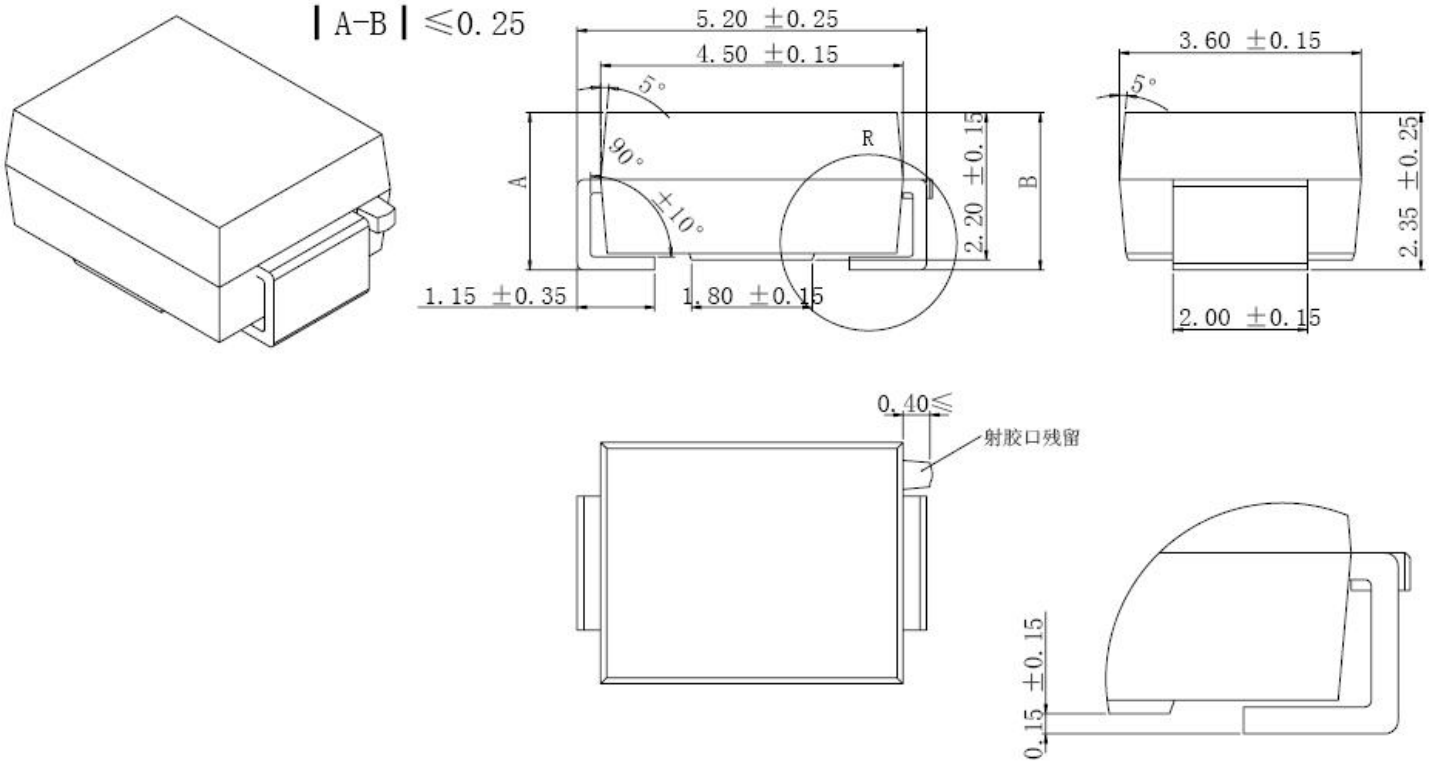
- Small foot print, surface mountable
- Very low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Green products in compliance the ROHS directive
- This is a Pb − Free device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Mechanical Dimensions: In mm



SMB/DO-214AA				
Dim	Min	Max	Min	Max
A	3.30	3.94	0.130	0.155
B	4.06	4.70	0.160	0.185
C	1.91	2.11	0.075	0.083
D	0.152	0.305	0.006	0.012
E	5.08	5.59	0.2	0.220
F	2.13	2.44	0.084	0.096
G	0.051	0.203	0.002	0.008
H	0.76	1.27	0.029	0.05
	in mm		In inch	

OPTION 1



OPTION 2(JK)

SMB

SK510B

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Marking Diagram:

Where XXXXX is YYWWL

SK	= Device Type
5	= Forward Current (5A)
10	= Reverse Voltage (100V)
B	= Package type
YY	= Year
WW	= Week
L	= Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information:

Device	Package	Shipping
SK510B	SMB (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

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	$I_{F(AV)}$	50% duty cycle @T_L=115°C, rectangular wave form	5	A
Peak one Cycle Non-repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	120	A

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Electrical Characteristics:

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop (per leg) *	V_{F1}	@ 5A, Pulse, T_J = 25 °C	0.85	V
	V_{F2}	@ 5 A, Pulse, T_J = 125 °C	0.70	V
Reverse Current (per leg) *	I_{R1}	@V_R = rated VR T_J = 25 °C	0.1	mA
	I_{R2}	@V_R = rated VR T_J = 100 °C	2.0	mA
Junction Capacitance (per leg)	C_T	@V_R = 4V, T_C = 25 °C f_{SIG} = 1MHz	200	pF
Voltage Rate of Change	dv/dt	-	10,000	V/us

* Pulse Width < 300µs, 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
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	-	17	°C/W
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	-	75	°C/W
Approximate Weight	wt	-	0.68	g
Case Style	SMB			

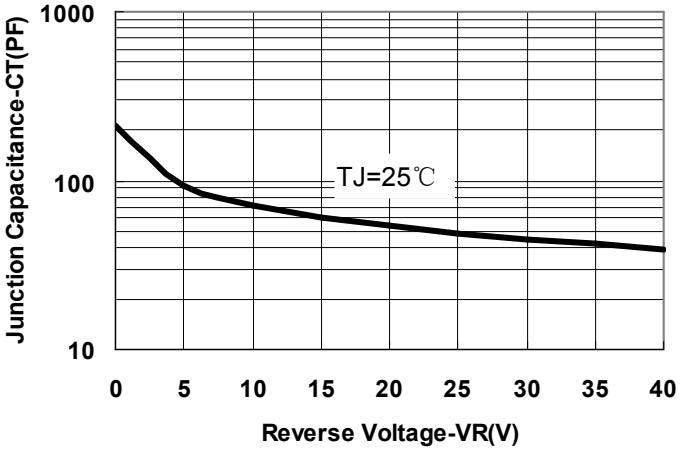

Fig.1-Typical Junction Capacitance Vs. Reverse Voltage

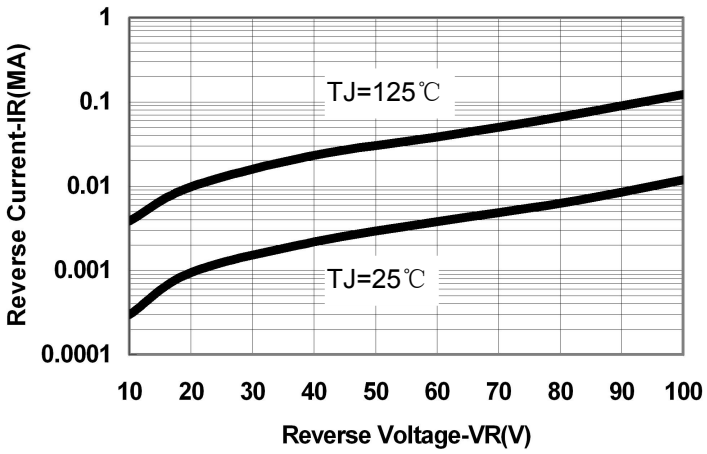

Fig.2-Typical Values Of Reverse Current Vs. Reverse Voltage

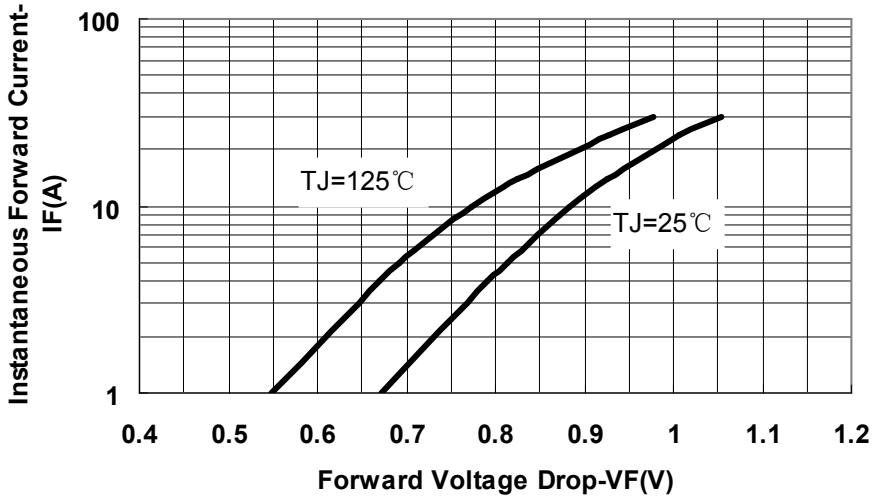

Fig.3-Typical Forward Voltage Drop Characteristics

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