

## SK54B SCHOTTKY RECTIFIER

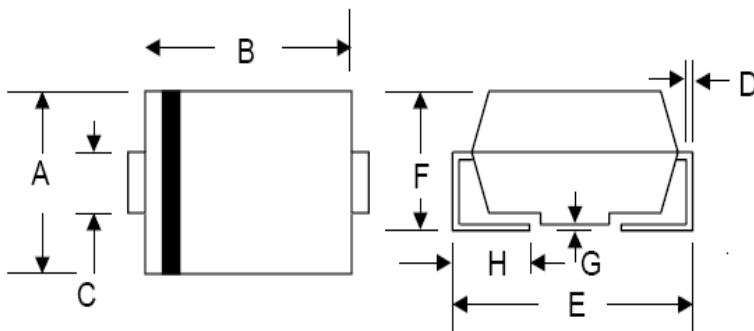
### Applications:

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

### Features:

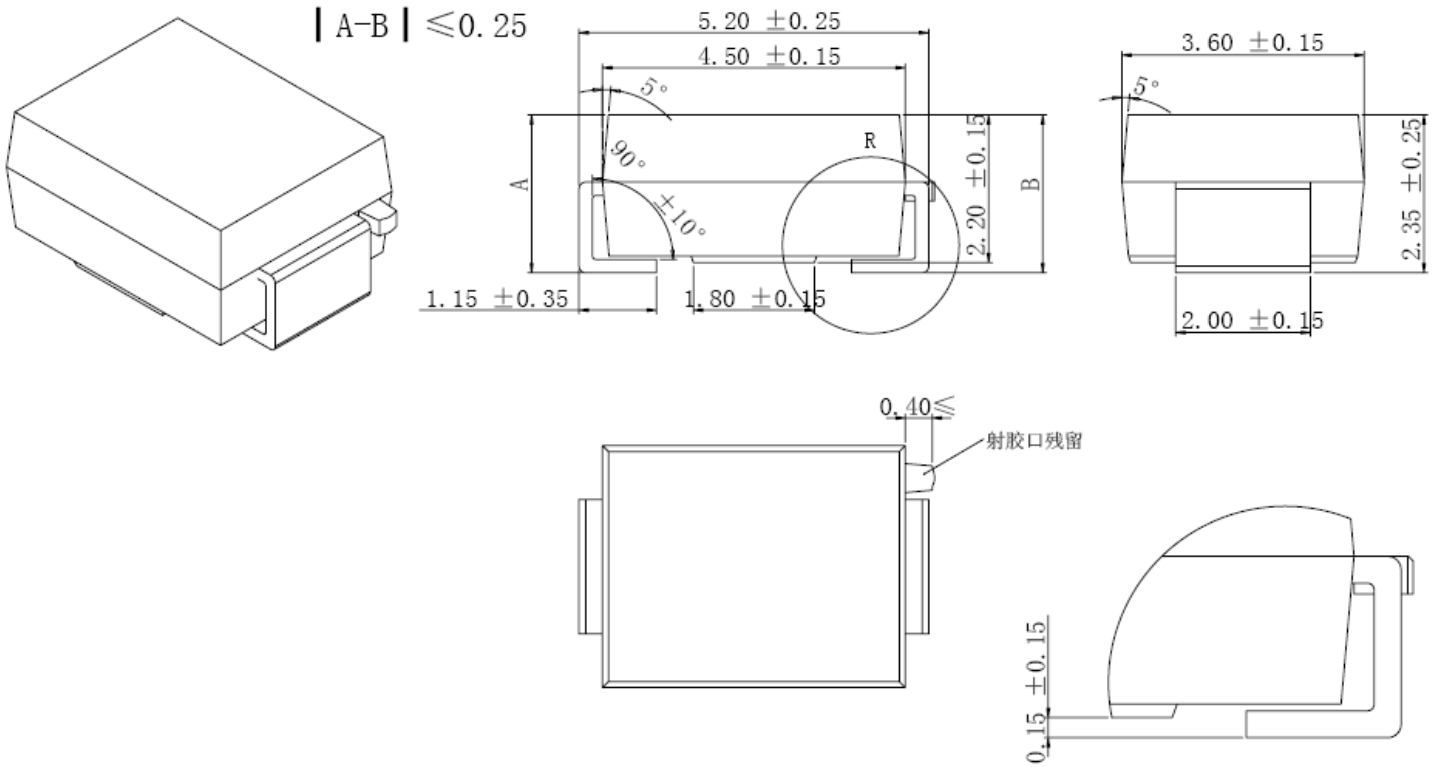
- Small foot print, surface mountable
- Very low forward Voltage Drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- Green Products in Compliance the ROHS Directive
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing 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

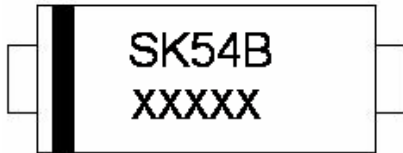


**OPTION 2(JK)**

**SMB**



**Marking Diagram:**



Where XXXXX is YYWWL

SK = Device Type  
5 = Forward Current (5A)  
4 = Reverse Voltage (40V)  
B = Package type  
YY = Year  
WW = Week  
L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
SK54B	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 Inverse Voltage	$V_{RWM}$	-	40	V
Max. Average Forward	$I_{F(AV)}$	50% duty cycle @ $T_c = 105^\circ C$ , rectangular wave form	5	A
Max. Peak Repetitive Forward Current	$I_{FRM}$	At Rated VR, Square Wave, 20KHZ, $T_c = 80^\circ C$	10	A
Max. peak one cycle Non-repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	125	A



**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop (per leg) *	$V_{F1}$	@ 5A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.65	V
	$V_{F2}$	@ 5 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.63	V
Max. Reverse Current (per leg) *	$I_{R1}$	@ $V_R = \text{rated VR}$ $T_J = 25\text{ }^\circ\text{C}$	1.0	mA
	$I_{R2}$	@ $V_R = \text{rated VR}$ $T_J = 125\text{ }^\circ\text{C}$	30	mA
Max. Junction Capacitance (per leg)	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	150	pF
Max. Voltage Rate of Change	dv/dt	-	10,000	V/us

\* Pulse Width < 300 $\mu$ s, Duty Cycle <2%

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-55 to +150	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Lead	$R_{\theta JL}$	-	17	$^\circ\text{C/W}$
Maximum Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	-	75	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.68	g
Case Style	SMB			

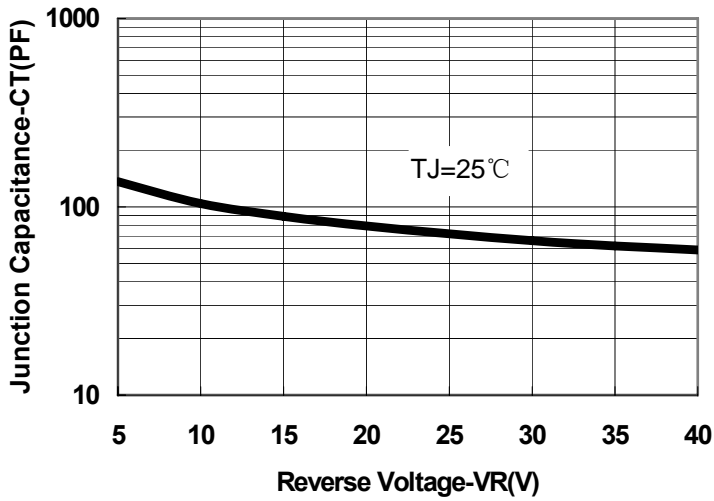


Fig.1-Typical Junction Capacitance

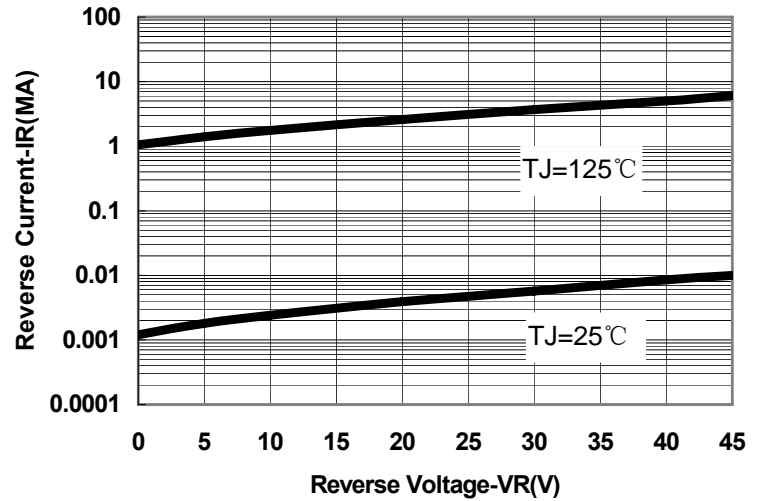


Fig.2-Typical Reverse Characteristics

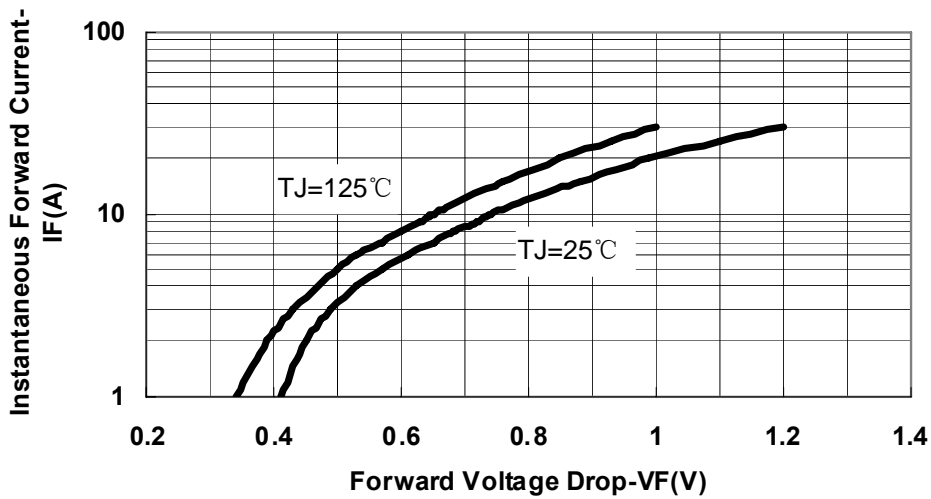


Fig.3-Typical Instantaneous Forward Voltage Characteristics



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