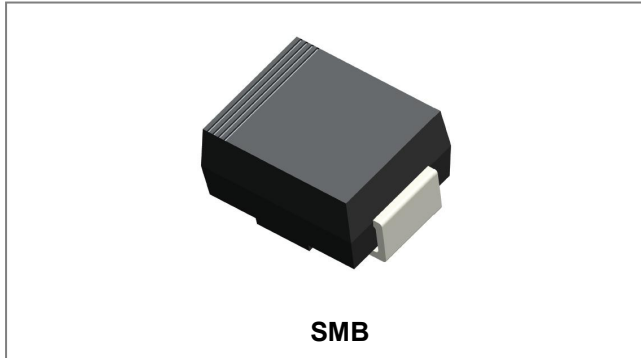




# THE DATASHEET OF SK315B



## SK315B SCHOTTKY RECTIFIER



### 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 Halogen Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Maximum Ratings:

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 @ $T_C=105^\circ\text{C}$ , rectangular wave form	3	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3ms, Half Sine pulse, $T_c = 25^\circ\text{C}$	80	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 3A, Pulse, $T_J = 25^\circ\text{C}$	0.79	0.89	V
	$V_{F2}$	@ 3A, Pulse, $T_J = 125^\circ\text{C}$	0.65	0.79	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R, T_J = 25^\circ\text{C}$	0.003	1.0	mA
	$I_{R2}$	@ $V_R = \text{rated } V_R, T_J = 125^\circ\text{C}$	0.2	7.0	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}, T_C = 25^\circ\text{C}, f_{SIG} = 1\text{MHz}$	70	100	pF
Series Inductance	$L_S$	Measured lead to lead 5 mm from package body	8.0	-	nH
Voltage Rate of Change	$dv/dt$	-	-	10,000	V/ $\mu\text{s}$

\* Pulse width < 300  $\mu\text{s}$ , 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	$R_{\theta JL}$	DC operation	17	°C/W
Typical Thermal Resistance Junction to Case	$R_{\theta JA}$	DC operation	75	°C/W
Approximate Weight	wt	-	0.09	g

**Ratings and Characteristics Curves**

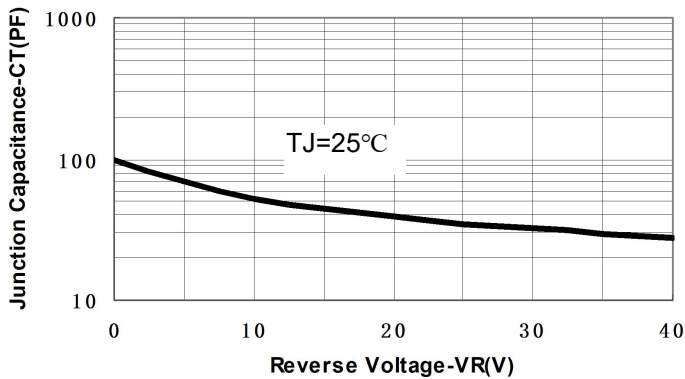


Fig.1-Typical Junction Capacitance

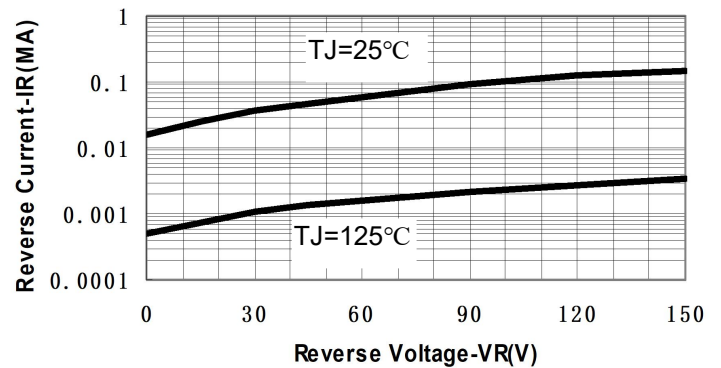


Fig.2-Typical Reverse Characteristics

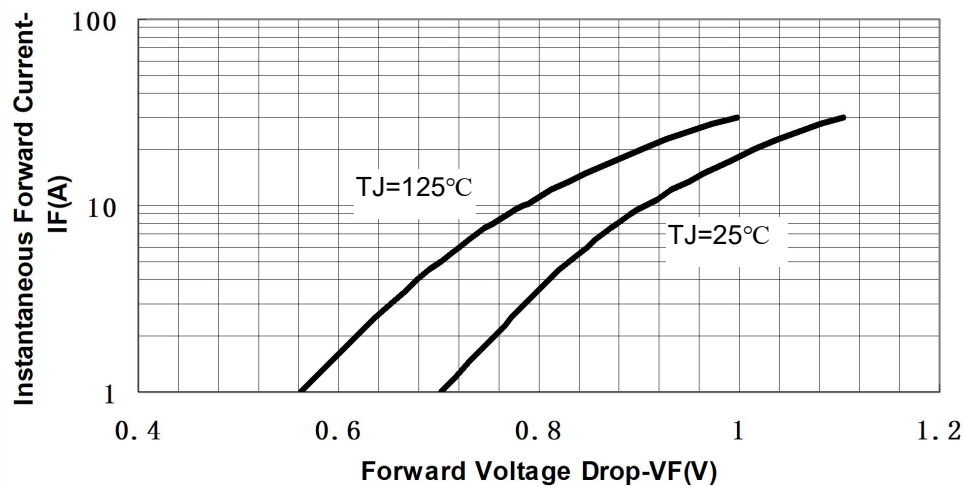
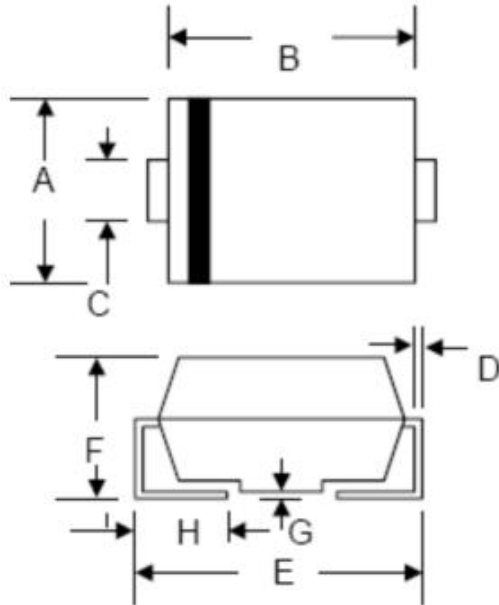


Fig.3-Typical Instantaneous Forward Voltage Characteristics

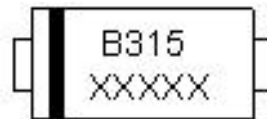
**Mechanical Dimensions SMB**


SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.06	4.70	0.160	0.185
C	1.80	2.20	0.071	0.087
D	0.152	0.305	0.006	0.012
E	4.80	5.59	0.189	0.220
F	2.10	2.60	0.083	0.102
G	0.051	0.203	0.002	0.008
H	0.76	1.52	0.030	0.060

**Ordering Information**

Device	Package	Shipping
SK315B	SMB (Pb-Free)	3000pcs / reel
SK315BTR	SMB (Pb-Free)	3000pcs / reel

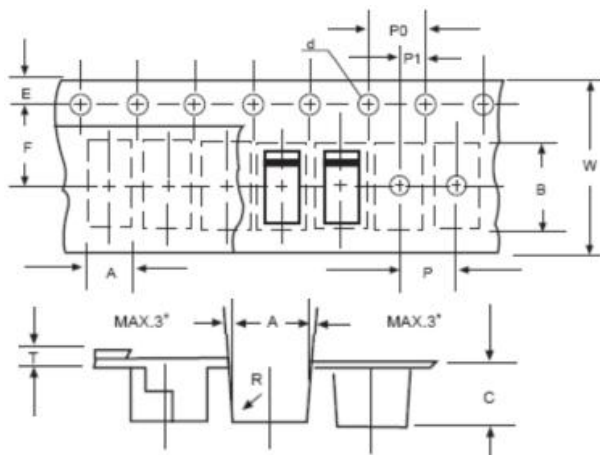
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**


Where XXXXX is YYWWL

B = Package type  
 3 = Forward Current (3A)  
 15 = Reverse Voltage (150V)  
 YY = Year  
 WW = Week  
 L = Lot Number

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

**Carrier Tape Specification SMB**


SYMBOL	Millimeters	
	Min.	Max.
A	2.97	3.17
B	5.70	5.90
C	2.32	2.52
d	1.40	1.60
E	1.40	1.60
F	5.60	5.70
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
T	0.25	0.35
W	11.80	12.20



SK315B

Technical Data  
Data Sheet N0947, Rev. A





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