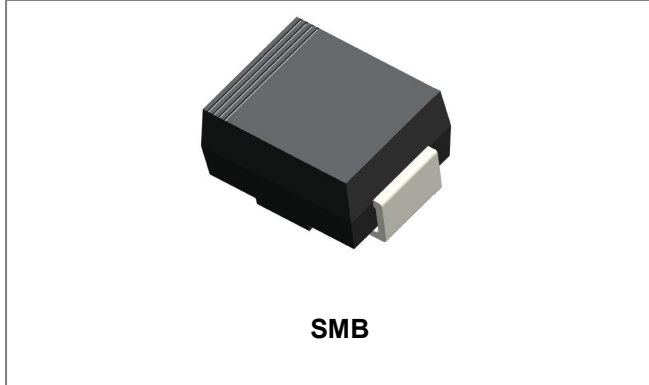


## SK12 THRU SK110 SCHOTTKY RECTIFIER



### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Terminals finish: Tin Lead-free plated
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Mechanical Data

- Case: Low Profile Molded plastic
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- Polarity: Color band or cathode Notch
- Mounting Position: Any
- Weight: 0.09grams(approx)

### Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Characteristic	Symbol	SK12	SK13	SK14	SK15	SK16	SK18	SK19	SK110	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	20	30	40	50	60	80	90	100	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	64	71	V
Average Rectified Output Current @ $T_L=75^{\circ}\text{C}$	$I_o$	1.0								A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30								A
Forward Voltage* @ $I_o=1.0\text{ A}$	$V_F$	0.55		0.70		0.85			V	
Peak Reverse Current* @ $T_A=25^{\circ}\text{C}$ At Rated DC Blocking Voltage @ $T_A=100^{\circ}\text{C}$	$I_{RM}$					0.5 20				mA
Max. junction capacitance ( Note 1)	$C_J$	80								pF
Typical Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	75								K/W
Operating Temperature Range	$T_J$	-55 to +125								$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150								$^{\circ}\text{C}$

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
2. mounted on P.C. Board with 5.0mm<sup>2</sup> copper pad areas.

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

**Ratings and Characteristics Curves**

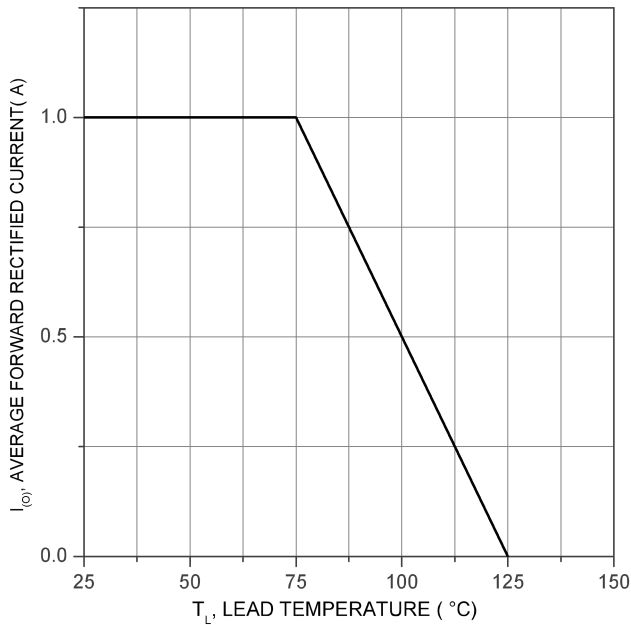


Fig.1 Forward Current Derating Curve

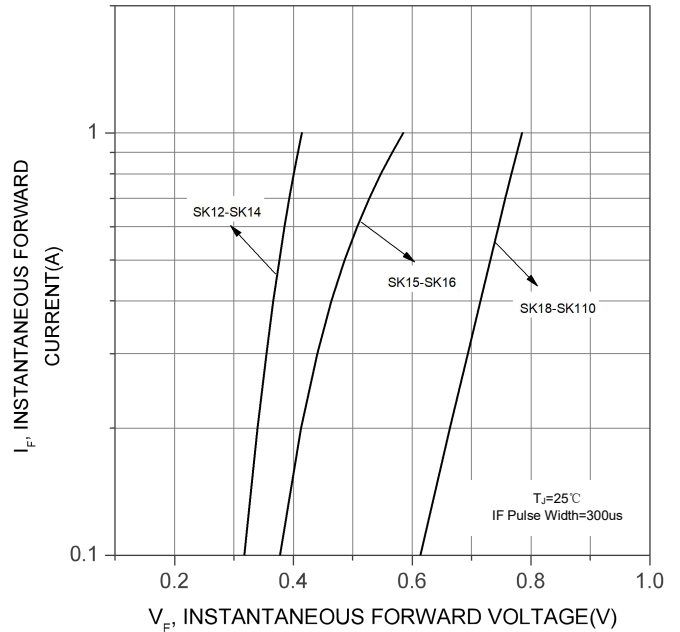


Fig.2 Typical Forward Characteristics

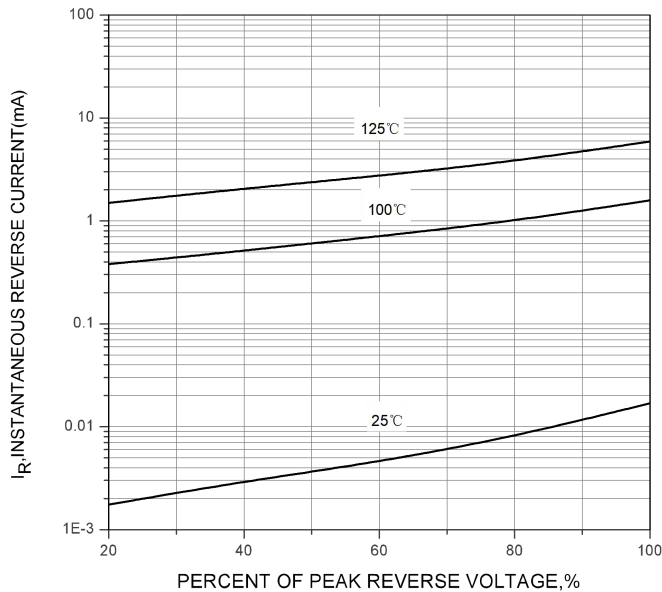


Fig.3 Typical Reverse Characteristics

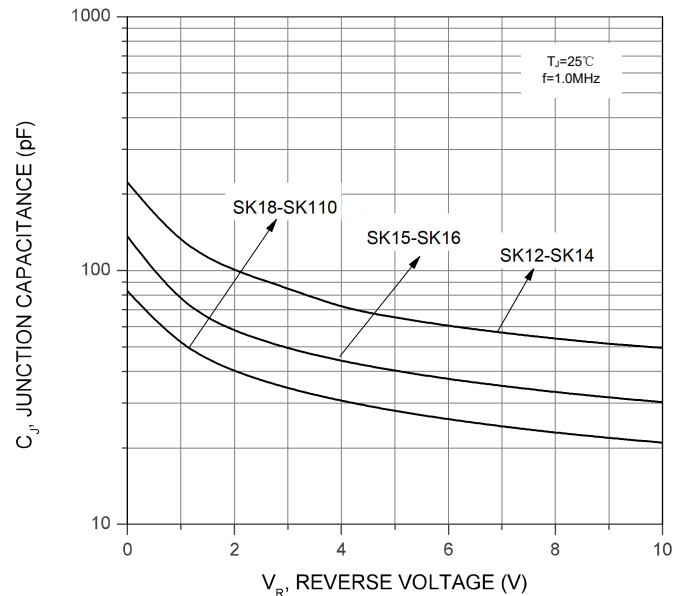
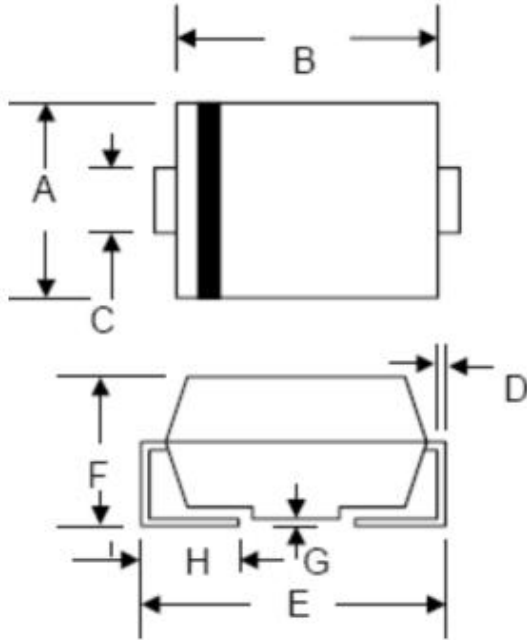


Fig.4 Typical Junction Capacitance

**Mechanical Dimensions SMB**



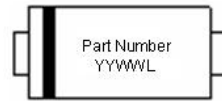
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	3.94	0.130	0.155
B	4.06	4.70	0.160	0.185
C	1.80	2.20	0.071	0.087
D	0.152	0.305	0.006	0.012
E	4.80	5.59	0.189	0.220
F	2.10	2.60	0.083	0.102
G	0.051	0.203	0.002	0.008
H	0.76	1.52	0.030	0.060

**Ordering Information**

Device	Package	Shipping
SK12 THRU SK110	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.

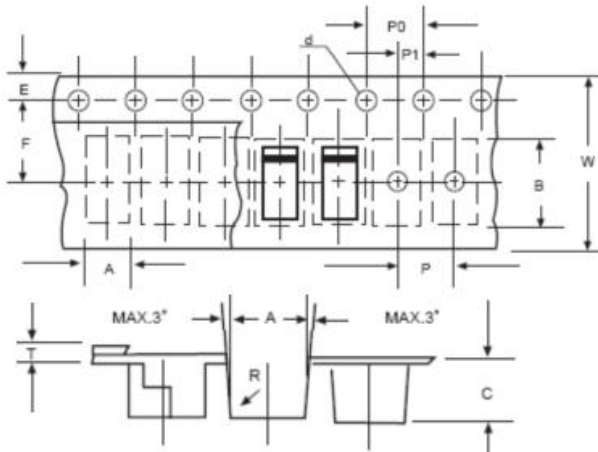
**Marking Diagram**



Where XXXXX is YYWWL

First row: Part Number (SK12, SK13, SK14, SK15, SK16, SK18, SK19, SK110)  
Second row: YYWWL  
YY is the manufacture year,  
WW is the manufacture week code,  
L is the wafer's Lot Number

**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

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