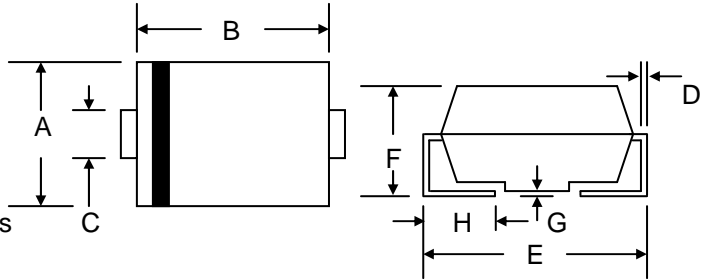


### Features

- Low Forward Voltage
- Epitaxial Construction with Oxide Passivation
- Guard Ring for Transient and ESD Protection
- Surge Overload Rating to 150A Peak
- Low Power Loss
- Fast Switching
- Ideally Suited for Use in High Frequency SMPS, Inverters and As Free Wheeling Diodes



### Mechanical Data

- Case: SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.21 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**

SMC/DO-214AB		
Dim	Min	Max
A	5.59	6.22
B	6.60	7.11
C	2.75	3.25
D	0.152	0.305
E	7.75	8.13
F	2.00	2.62
G	0.051	0.203
H	0.76	1.27
All Dimensions in mm		

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

Characteristic	Symbol	SK82	SK83	SK84	SK85	SK86	SK88	SK89	S810	Unit	
Peak Repetitive Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	90	100	V	
Working Peak Reverse Voltage	$V_{RWM}$										
DC Blocking Voltage	$V_R$										
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	56	63	70	V	
Average Rectified Output Current (Note 1)	$I_O$	8.0								A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	150								A	
Forward Voltage @ $I_F = 8.0\text{A}$	$V_{FM}$	0.55			0.75		0.85			V	
Peak Reverse Current @ $T_J = 25^{\circ}\text{C}$ At Rated DC Blocking Voltage @ $T_J = 100^{\circ}\text{C}$	$I_{RM}$					0.5					mA
						50					
Typical Junction Capacitance (Note 2)	$C_J$	450			350					pF	
Thermal Resistance, Junction to Ambient (Note 1)	$R_{JA}$	50								$^{\circ}\text{C}/\text{W}$	
Thermal Resistance, Junction to Lead (Note 1)	$R_{JC}$	14									
Operating Temperature Range	$T_J$	-55 to +125				-55 to +150					$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150									$^{\circ}\text{C}$

Note: 1. Mounted on FR-4 PCB with 14 x 14mm copper pads.  
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

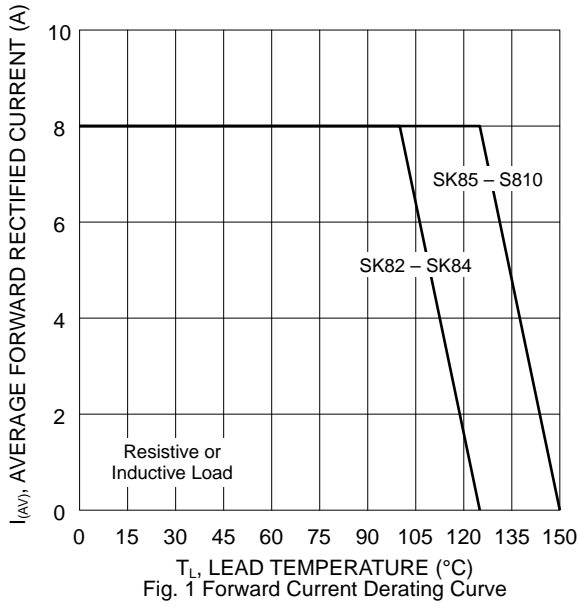


Fig. 1 Forward Current Derating Curve

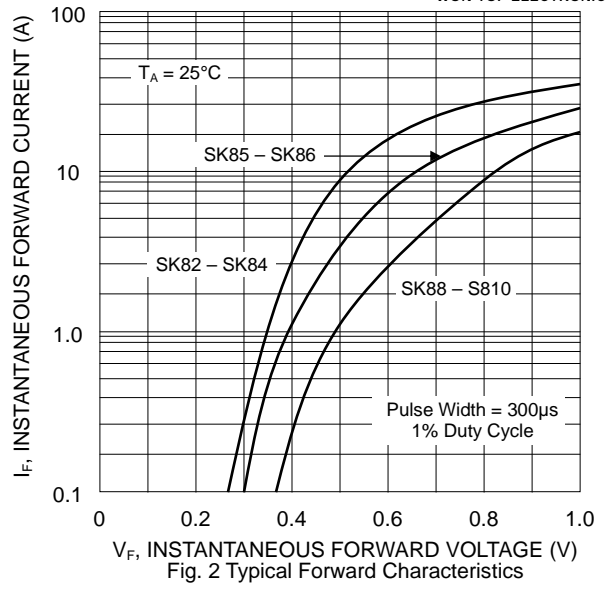


Fig. 2 Typical Forward Characteristics

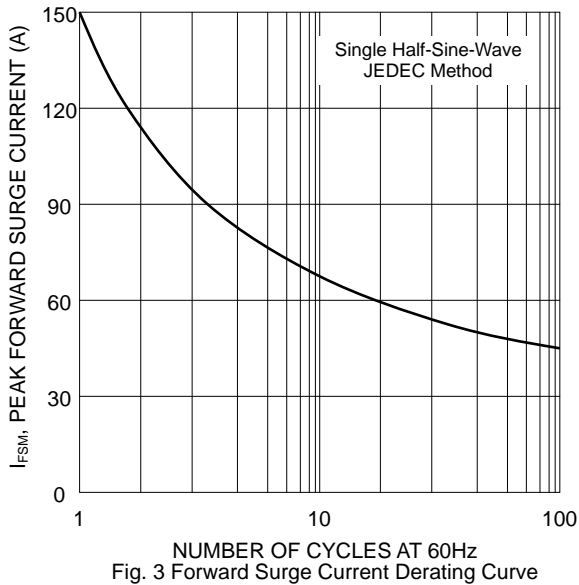


Fig. 3 Forward Surge Current Derating Curve

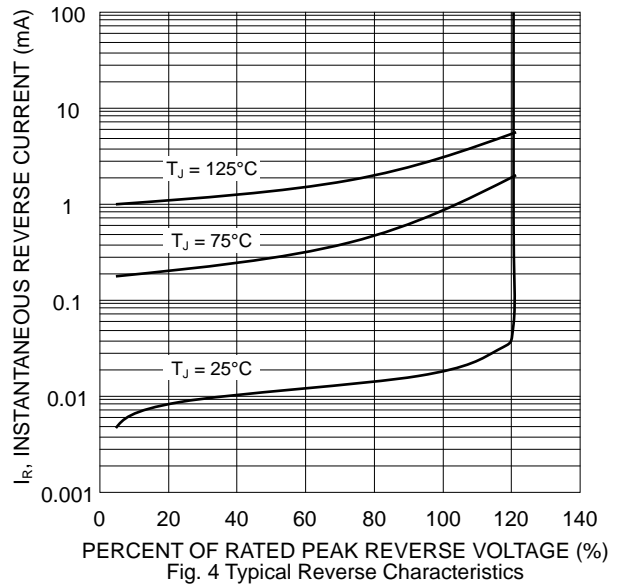


Fig. 4 Typical Reverse Characteristics

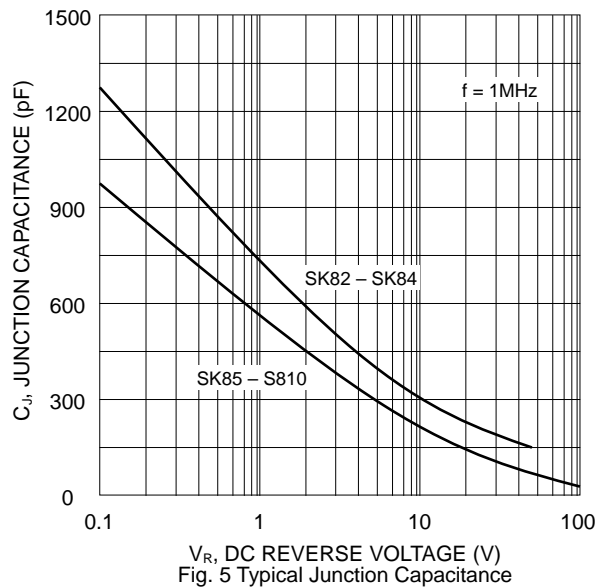
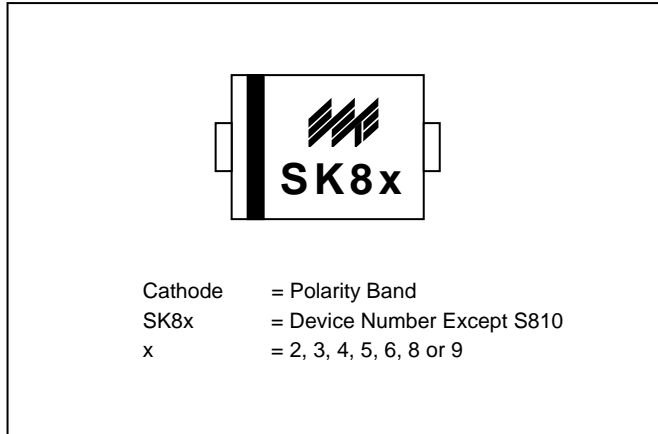
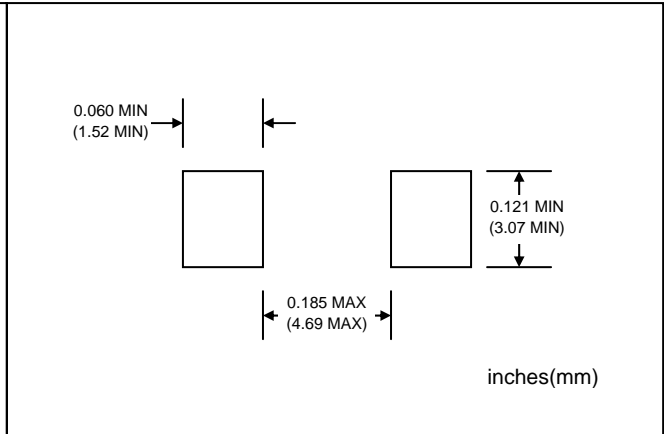


Fig. 5 Typical Junction Capacitance

## MARKING INFORMATION

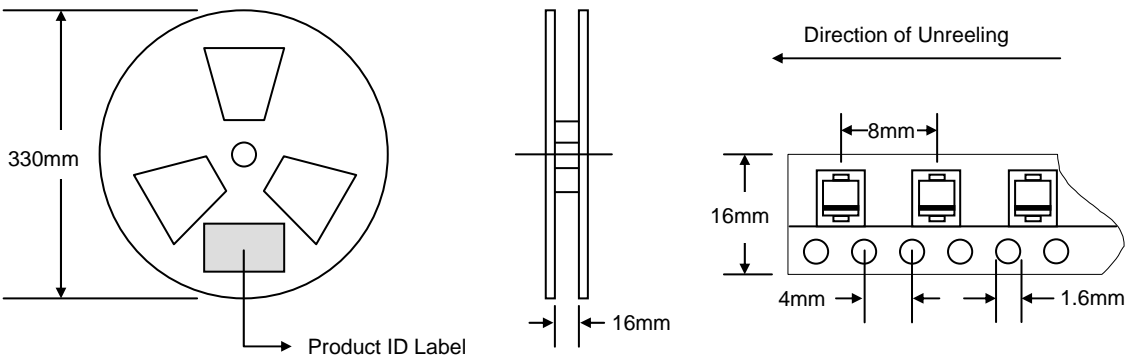


## RECOMMENDED FOOTPRINT



## PACKAGING INFORMATION

### TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
330	3,000	340 x 337 x 45	6,000	370 x 370 x 420	48,000	19.0

**Note:** 1. Paper reel, white or gray color.  
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
SK82-T3	SMC	3000/Tape & Reel
SK83-T3	SMC	3000/Tape & Reel
SK84-T3	SMC	3000/Tape & Reel
SK85-T3	SMC	3000/Tape & Reel
SK86-T3	SMC	3000/Tape & Reel
SK88-T3	SMC	3000/Tape & Reel
SK89-T3	SMC	3000/Tape & Reel
S810-T3	SMC	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, SK82-T3-LF.**

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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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