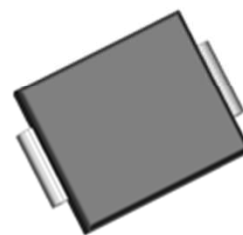


Features

- Schottky barrier diodes
- Low forward voltage drop
- High Junction Temperature
- Moisture sensitivity: level 1, per J-STD-020
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Add suffix "E" for Halogen Free
- Halogen-free according to IEC 61249-2-21 definition



DO-214AB (SMC)

Typical Applications

For use in low voltage, high frequency inverters, free wheeling, and polarity protection application

Maximum Ratings (TA = 25 °C unless otherwise noted)						
Parameter	Symbol	SK57 SK57E	SK58 SK58E	SK59 SK59E	SK5B SK5BE	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	70	80	90	100	V
Maximum RMS voltage	V_{RMS}	42	56	63	70	V
Maximum DC blocking voltage	V_{DC}	70	80	90	100	V
Maximum average forward rectified current	$I_{F(AV)}$	5.0				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	120				A
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150				°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)							
Parameter	Test Conditions	Symbol	SK57 SK57E	SK58 SK58E	SK59 SK59E	SK5B SK5BE	Unit
Maximum instantaneous forward voltage	$I_F=5A, T_A=25^{\circ}C$	V_F	0.79				V
Maximum DC reverse current at rated DC blocking voltage	$T_A=25^{\circ}C$	I_R	30				uA
	$T_A=125^{\circ}C$		2000				
Typical junction capacitance	4.0 V, 1 MHz	C_J	96				pF

Thermal Characteristics						
Parameter	Symbol	SK57 SK57E	SK58 SK58E	SK59 SK59E	SK5B SK5BE	Unit
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	62				°C/W
	$R_{\theta JC}$	22				
	$R_{\theta JI}$	15				

Note1: Thermal resistance from junction to lead, mounted on PCB with 8.0×8.0mm copper pads



SK57 thru SK5B

Surface Mount Schottky Rectifier

Reverse Voltage 70V to 100V Forward Current 5A

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

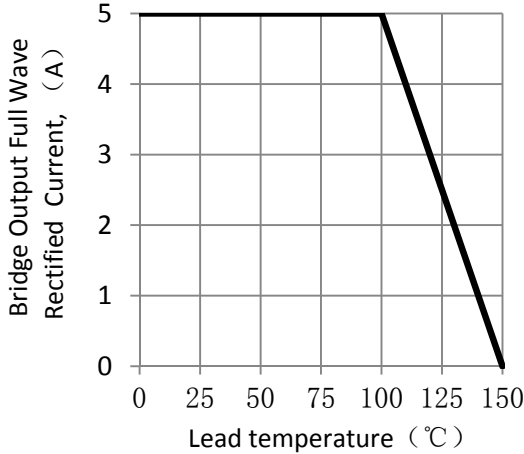


Figure 1. Forward Current Derating Curve

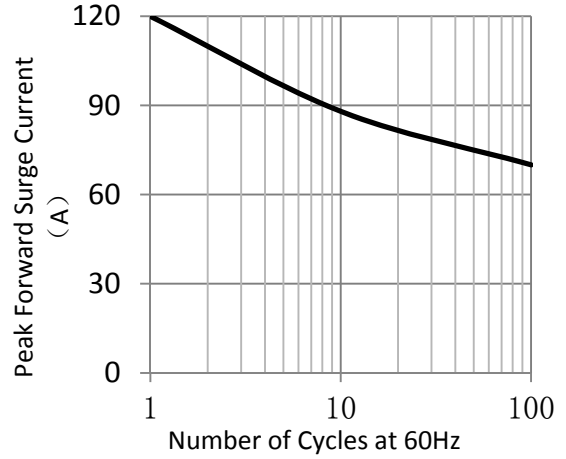


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

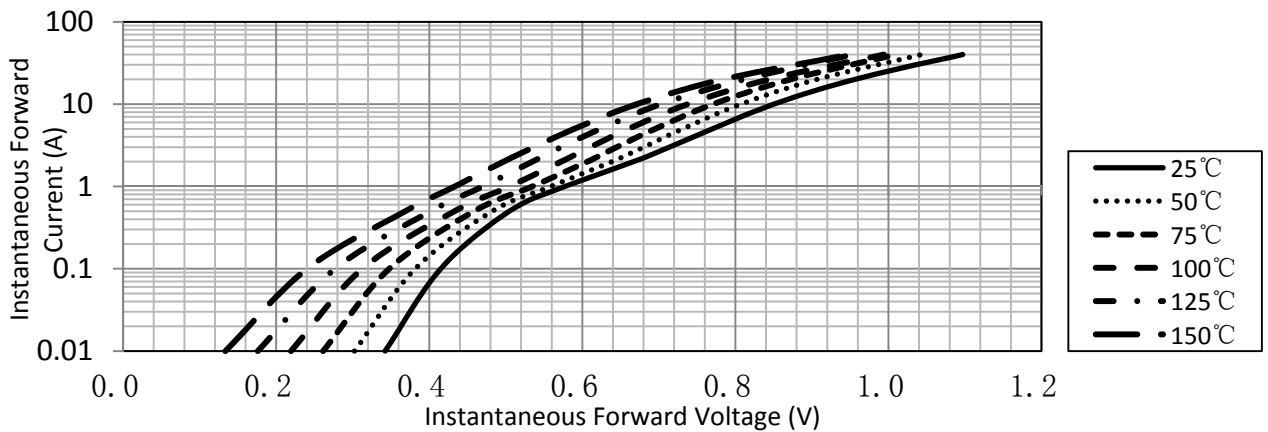


Figure 3. Typical Instantaneous Forward Characteristics

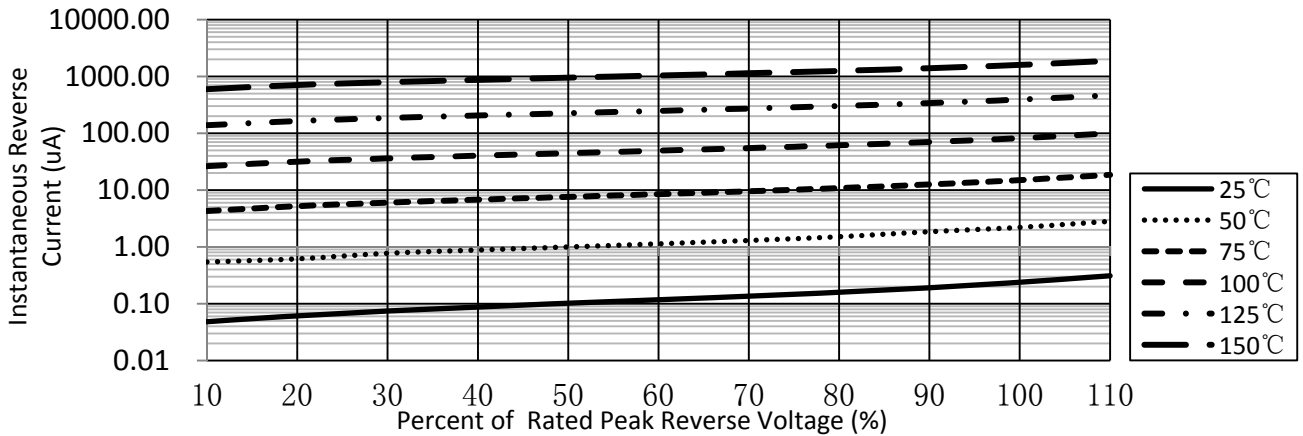
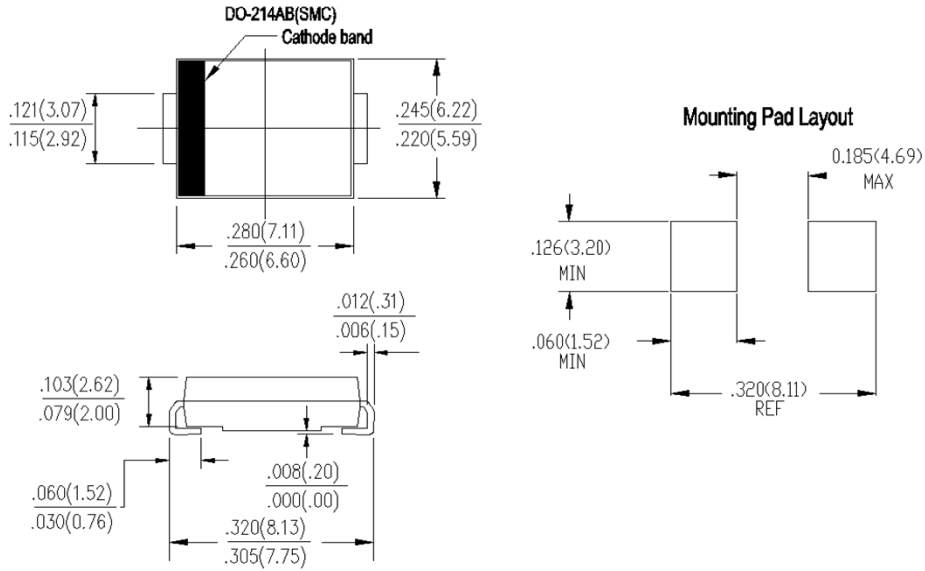


Figure 4. Typical Reverse Characteristics

Package Outline Dimensions

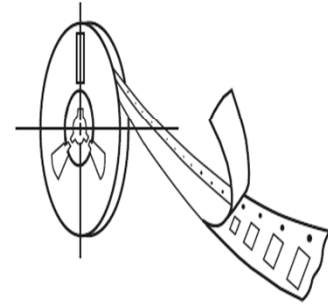
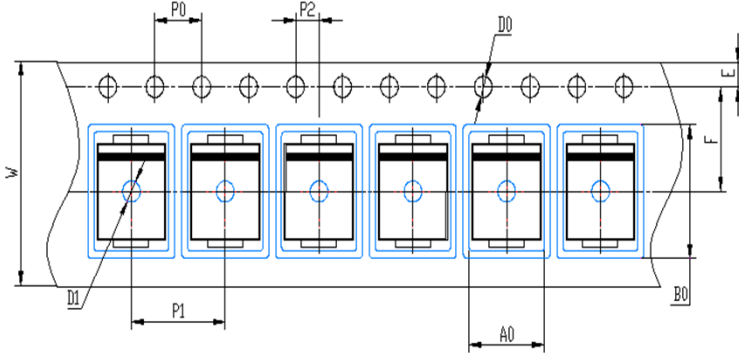
in inches (millimeters)



Packing Information

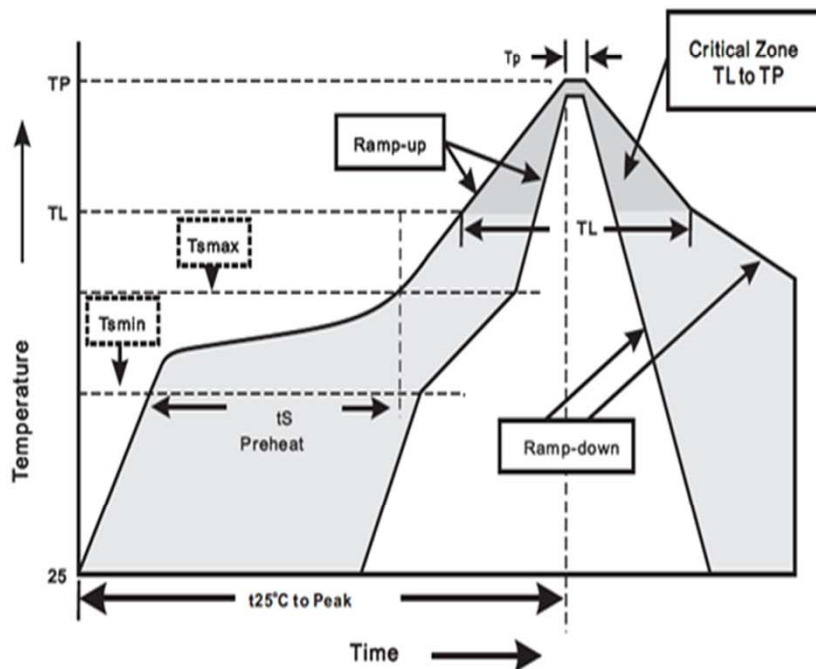
3000 pcs/Reel, 18 Reels/Box; 12mm Tape, 13" Reel

Tape & Reel Specification



Symbol	SMC (mm)
W	16 ± 0.2
E	1.75 ± 0.1
F	7.5 ± 0.05
D0	1.5 ± 0.1
D1	$1.50 +0.1/-0$
P0	4.0 ± 0.1
P1	8.0 ± 0.1
P2	2.0 ± 0.05
A0	6.22 ± 0.1
B0	8.31 ± 0.1

Soldering Parameters



Reflow Soldering		Sn-Pb Eutectic Assembly	Pb-Free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	100°C	150°C
	- Temperature Max ($T_{s(max)}$)	150°C	200°C
	- Time (min to max) (ts)	60 – 120 secs	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second max	3°C/second max
TS(max) to TL - Ramp-up Rate		3°C/second max	3°C/second max
Reflow	- Temperature (T_L) (Liquidus)	183°C	217°C
	- Time (min to max) (ts)	60 – 150 seconds	60 – 150 seconds
Peak Temperature (T_P)		240+0/-5 °C	240+0/-5°C
Time within 5°C of actual peak Temperature (tp)		10 – 30 seconds	20 – 40 seconds
Ramp-down Rate		6°C/second max	6°C/second max
Time 25°C to peak Temperature (T_P)		6 minutes Max.	8 minutes Max.
Do not exceed		260°C	260°C

Wave Soldering	
Peak Temperature :	260+0/-5°C
Dipping Time :	10 seconds
Soldering :	1 time



SK57 thru SK5B

Surface Mount Schottky Rectifier

Reverse Voltage 70V to 100V Forward Current 5A

Disclaimers

These materials are intended as a reference to assist our customers in the selection of the Suzhou Good-Ark product best suited to the customer's application; they do not convey any license under any intellectual property rights, or any other rights, belonging to Suzhou Good-Ark Electronics Co., Ltd. or a third party.

Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, or infringement of any third-party's rights, originating in the use of any product data, diagrams, charts, programs, algorithms, or circuit application examples contained in these materials.

All information contained in these materials, including product data, diagrams, charts, programs and algorithms represents information on products at the time of publication of these materials, and are subject to change by Suzhou Good-Ark Electronics Co., Ltd. without notice due to product improvements or other reasons. It is therefore recommended that customers contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized Suzhou Good-Ark Electronics Co., Ltd. for the latest product information before purchasing a product listed herein. The information described here may contain technical inaccuracies or typographical errors. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability, or other loss rising from these inaccuracies or errors. Please also pay attention to information published by Suzhou Good-Ark Electronics Co., Ltd. by various means, including our website home page. (<http://www.goodark.com>)

When using any or all of the information contained in these materials, including product data, diagrams, charts, programs, and algorithms, Please be sure to evaluate all information as a total system before making a final decision on the applicability of the information and products. Suzhou Good-Ark Electronics Co., Ltd. assumes no responsibility for any damage, liability or other loss resulting from the information contained herein.

The prior written approval of Suzhou Good-Ark Electronics Co., Ltd. is necessary to reprint or reproduce in whole or in part these materials.

Please contact Suzhou Good-Ark Electronics Co., Ltd. or an authorized distributor for further details on these materials or the products contained herein.