

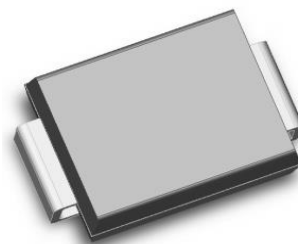
## Features

- 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
- AEC-Q101 qualified



RoHS  
COMPLIANT



DO-214AA (SMB)

## 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	SK27 SK27E	SK28 SK28E	SK29 SK29E	SK2B SK2BE	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	$I_{F(AV)}$	2.0				A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	50				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	SK27 SK27E	SK28 SK28E	SK29 SK29E	SK2B SK2BE	Unit
Maximum instantaneous forward voltage	$I_F=2A, T_A=25^\circ C$	$V_F$	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	$C_J$	200				pF

Thermal Characteristics						
Parameter	Symbol	SK27 SK27E	SK28 SK28E	SK29 SK29E	SK2B SK2BE	Unit
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$	75				°C/W
	$R_{\theta JC}$	30				
	$R_{\theta JI}$	15				

Notes:1. The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 8x8mm copper pads, 2 OZ, FR4 PCB



# SK27 thru SK2B

Surface Mount Schottky Rectifier

Reverse Voltage 70V to 100V Forward Current 2A

## Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

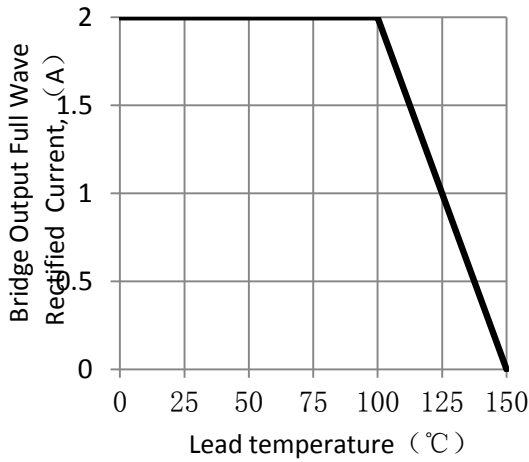


Figure 1. Forward Current Derating Curve

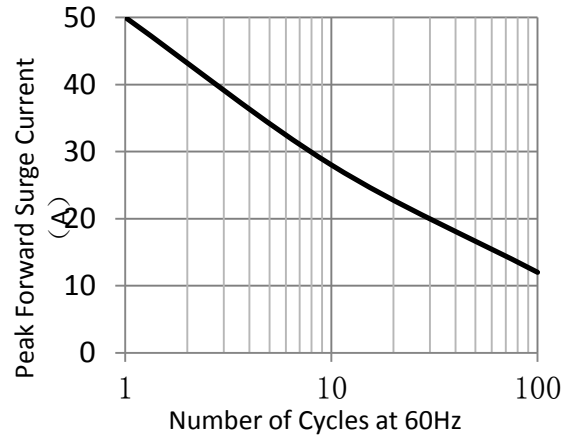


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

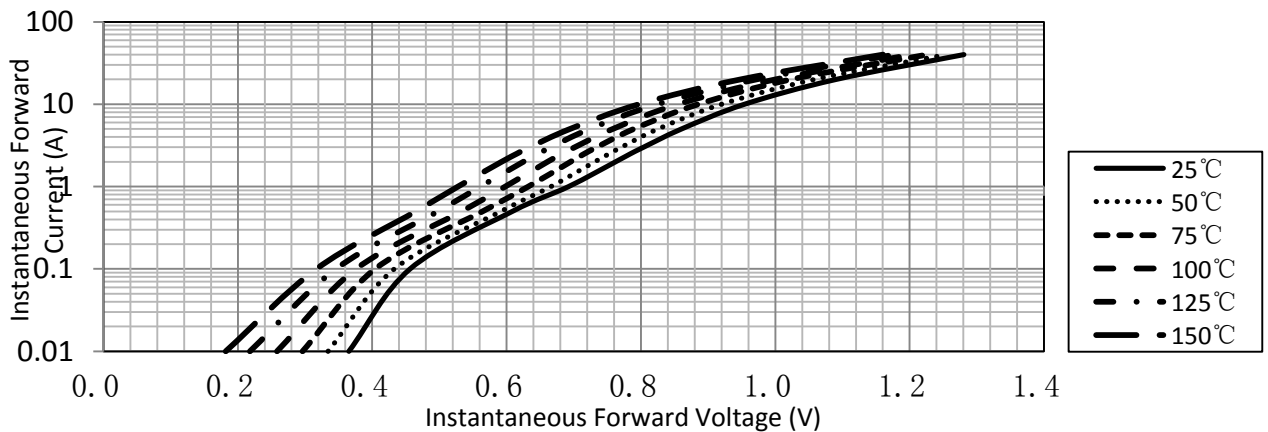


Figure 3. Typical Instantaneous Forward Characteristics

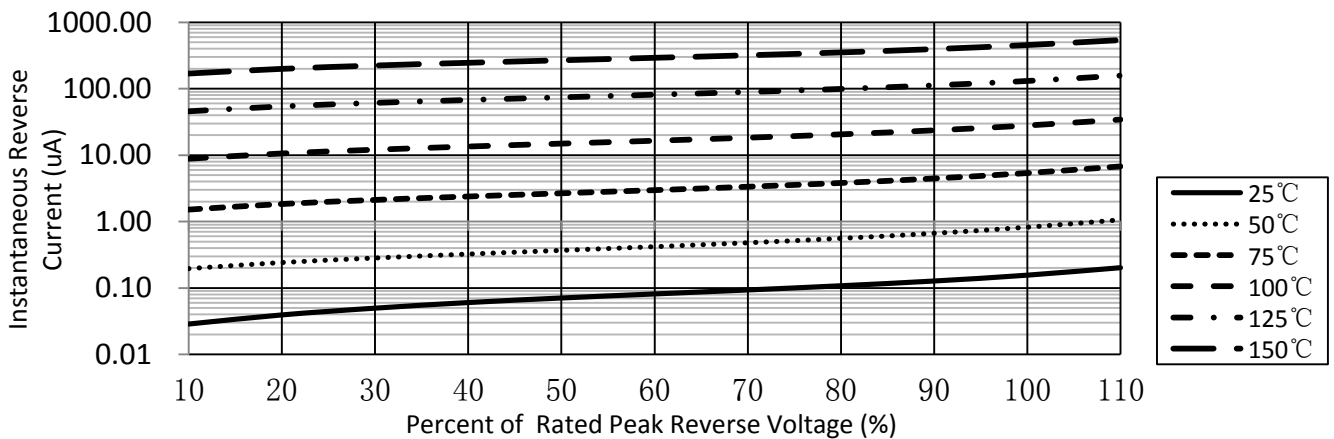
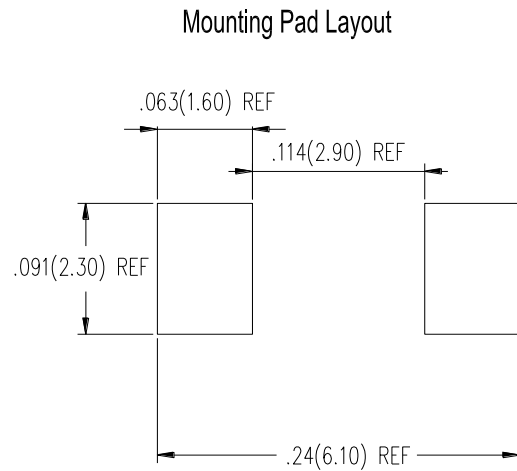
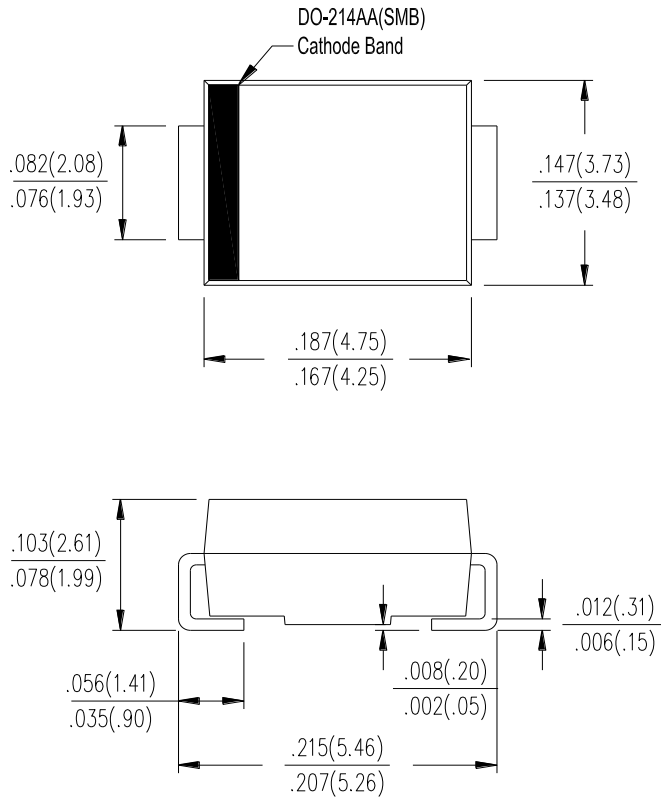


Figure 4. Typical Reverse Characteristics

## Package Outline Dimensions

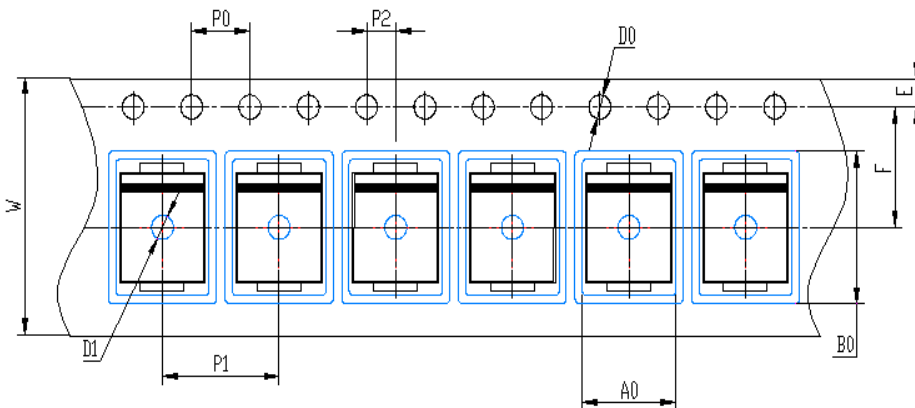
in inches (millimeters)



## Packing Information

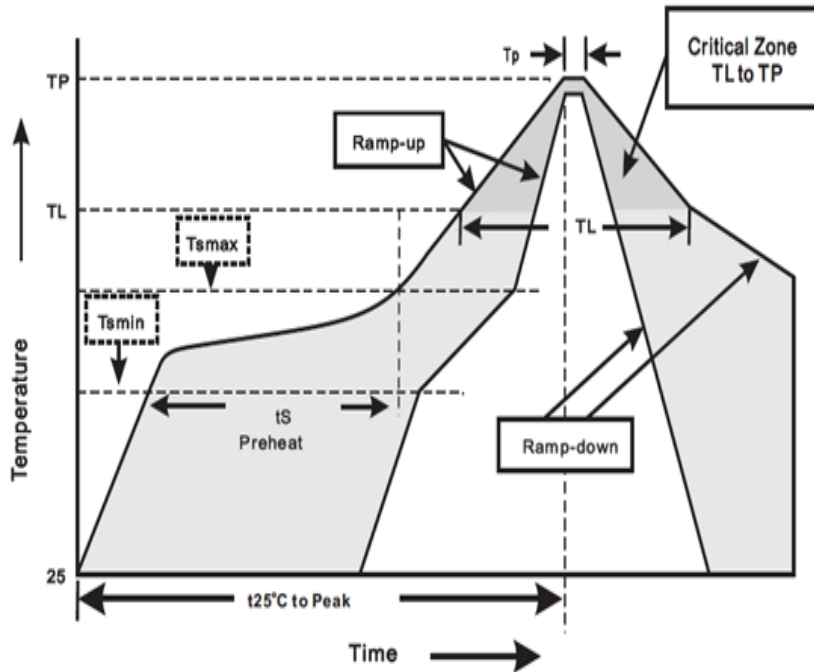
3000 pcs/Reel, 18 Reels/Box; 12mm Tape, 13" Reel

### Tape & Reel Specification



Symbols	SMB (mm)
W	$12 \pm 0.2$
E	$1.75 \pm 0.1$
F	$5.5 \pm 0.05$
D0	$1.5 \pm 0.1$
D1	$1.50 +0.1/-0$
P0	$4.0 \pm 0.1$
P1	$8.0 \pm 0.1$
P2	$2.0 \pm 0.05$
A0	$3.95 \pm 0.1$
B0	$5.74 \pm 0.1$

## Soldering Parameters



Reflow Soldering		Sn-Pb Eutectic Assembly	Pb-Free assembly
Pre Heat	- Temperature Min (Ts(min))	100 °C	150 °C
	- Temperature Max (Ts(max))	150 °C	200 °C
	- Time (min to max) (ts)	60 – 120 secs	60 – 180 secs
Average ramp up rate (Liquidus)Temp (TL) 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 (TL) (Liquidus)	183 °C	217 °C
	- Time (min to max) (ts)	60 – 150 seconds	60 – 150 seconds
Peak Temperature (TP)		240+0/-5 °C	260+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 (TP)		6 minutes Max.	8 minutes Max.
Do not exceed		240 °C	260 °C

Wave Soldering	
Peak Temperature :	265+0/-5 °C
Dipping Time :	10 seconds
Soldering :	1 time



# **SK27 thru SK2B**

Surface Mount Schottky Rectifier

Reverse Voltage 70V to 100V Forward Current 2A

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