

## SMBF Plastic-Encapsulate Diodes

### SK32BF THRU SK310BF

Schottky Rectifier Diode

#### Features

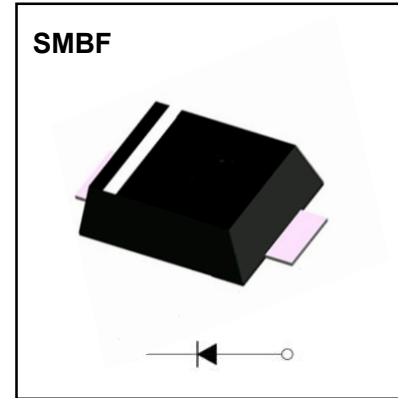
- $I_{F(AV)}$  3A
- $V_{RRM}$  20V~100V
- High surge current capability
- Polarity: Color band denotes cathode
- Low peak forward voltage

#### Applications

- Rectifier

#### Marking

- SK3XBF  
X:From 2 To 10



#### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SK3						
				2BF	3BF	4BF	5BF	6BF	8BF	10BF
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		20	30	40	50	60	80	100
Maximum RMS Voltage	$V_{RMS}$	V		14	21	28	35	42	56	70
Maximum DC Blocking Voltage	$V_{DC}$	V		20	30	40	50	60	80	100
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, $T_a$ (Fig.1)	3.0						
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	70						
Junction Temperature	$T_J$	$^\circ\text{C}$		-55 ~ +125			-55 ~ +150			
Storage Temperature	$T_{STG}$	$^\circ\text{C}$		-55 ~ +150						

#### Electrical Characteristics ( $T=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition		SK3						
					2BF	3BF	4BF	5BF	6BF	8BF	10BF
Peak Forward Voltage	$V_F$	V	$I_F=3.0\text{A}$	$T_a=25^\circ\text{C}$	0.55		0.70		0.85		
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$	1						
	$I_{RRM2}$			$T_a=100^\circ\text{C}$	50						
Typical Junction Capacitance	$C_J$	pF	Measured at 1MHz and applied reverse voltage of 4.0V D.C.		500			300			
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient		78						

#### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

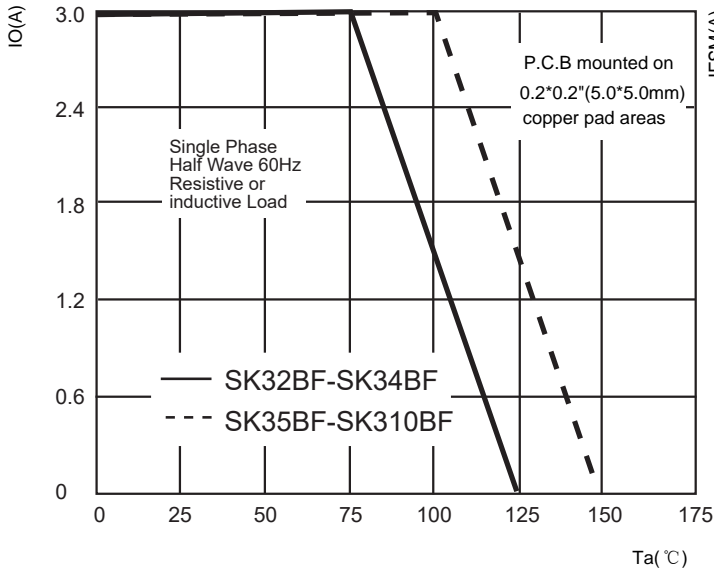


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

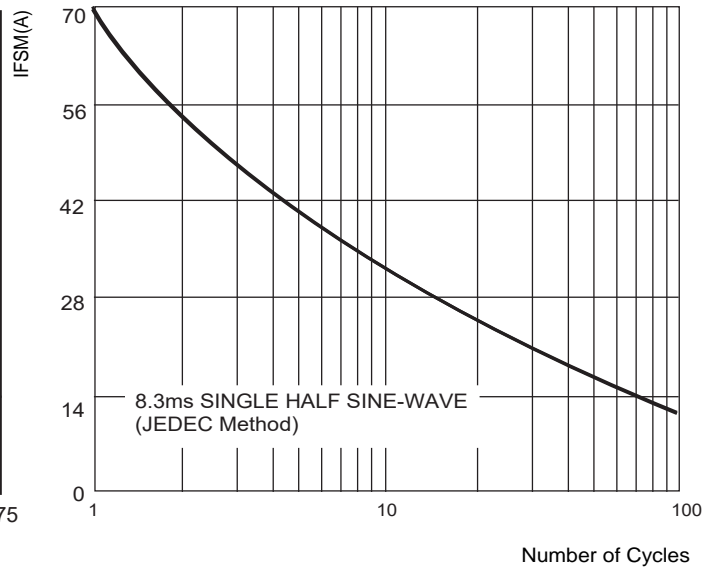


FIG.3: TYPICAL FORWARD CHARACTERISTICS

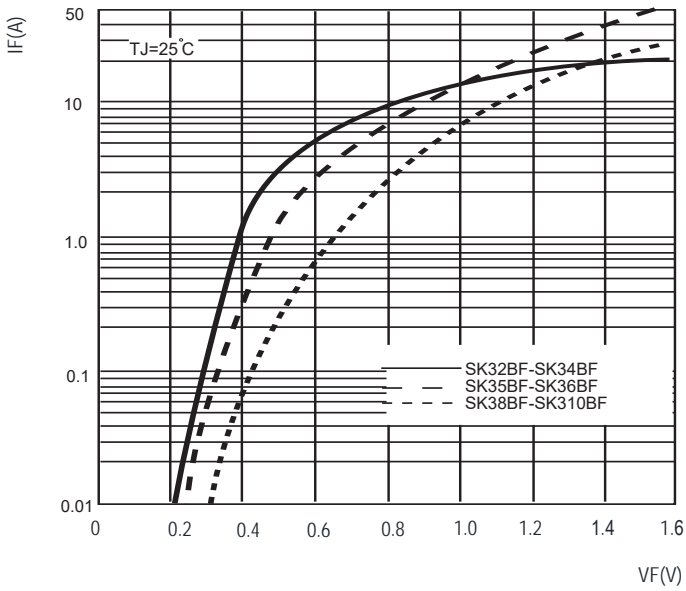


FIG.4: TYPICAL REVERSE CHARACTERISTICS

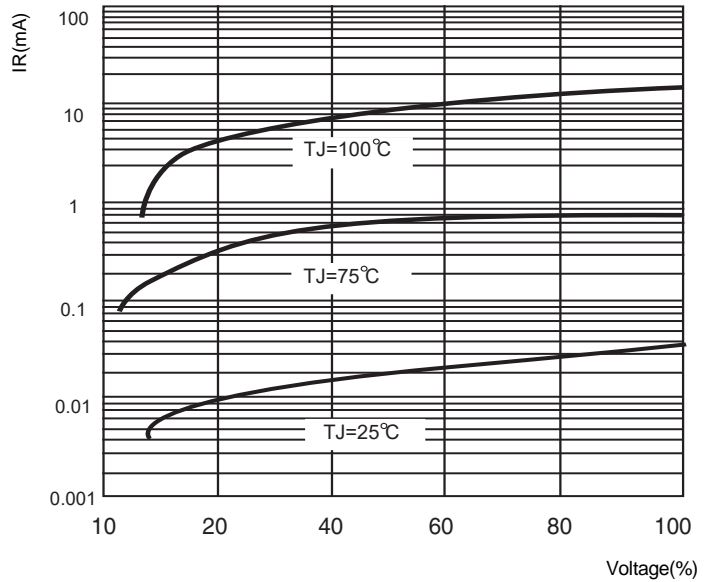
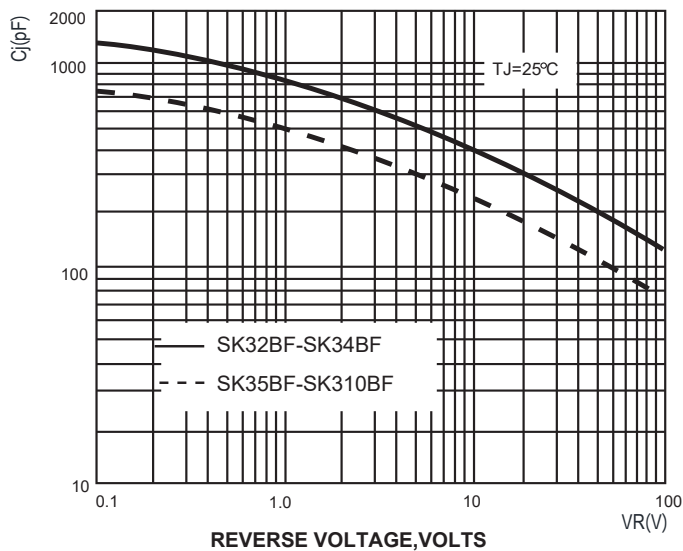
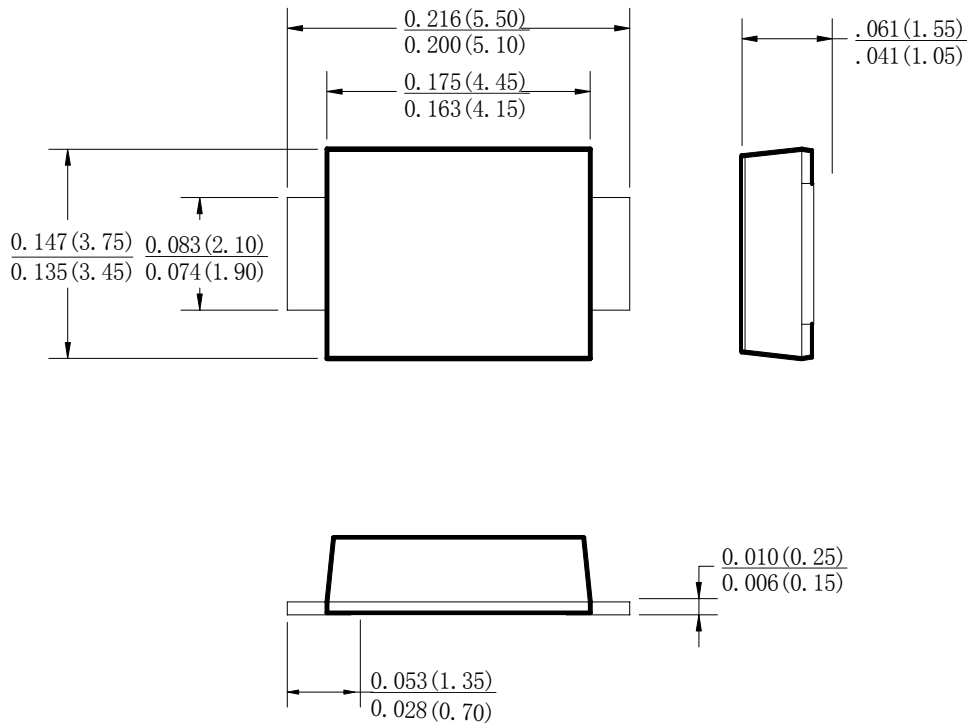


FIG.5: TYPICAL JUNCTION CAPACITANCE

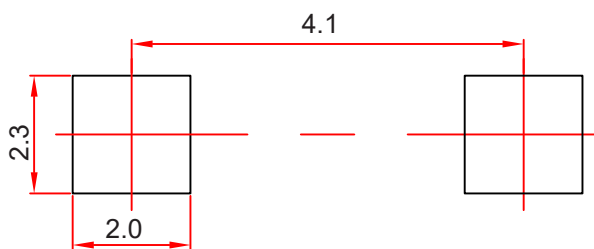


## SMBF Package Outline Dimensions



Dimensions in inches and (millimeters)

## SMBF Suggested Pad Layout



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$ mm.
3. The pad layout is for reference purposes only.

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