

## **Maximum Ratings and Thermal Characteristics** ( $T_A = 25^{\circ}C$ unless otherwise noted)

PARAMETER	SYMBOL	SB32AFC	SB33AFC	SB34AFC	SB35AFC	SB36AFC	UNIT
Maximum Recurrent Peak Reverse Voltage	Vrrm	20	30	40	50	60	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	V
Maximum DC Blocking Voltage	VR	20	30	40	50	60	V
Maximum Average Forward Rectified Current	IF(AV)	3					A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	IFSM	80					A
Instantaneous Forward Voltage at 3A	VF	0.5 0.75			75	V	
Reverse Current <sup>(Note 3)</sup>	IR	100				uA	
Typical Junction Capacitance Measured at 1 MHz And Applied $V_R = 0V$	CJ	485 385		85	pF		
Typical Thermal Resistance (Note 1) (Note 2)	Røjl Røja	20 150			°C/W		
Operating Junction Temperature Range	TJ	-55 to +150				°C	
Storage Temperature Range	T <sub>STG</sub>	-55 to +150				°C	

### NOTES:

1. Mounted on a FR4 PCB, single-sided copper, with 48cm<sup>2</sup> copper pad area

2. Mounted on a FR4 PCB, single-sided copper, standard footprint

3. Short duration pulse test used to minimize self-heating effect



#### SB32AFC ~ SB36AFC Series **TYPICAL CHARACTERISTIC CURVES** C<sub>J</sub>, Junction Capacitance (pF) 3.5 1000 I<sub>F</sub>, Forward Current (A) 3 2.5 20~40V 2 100 1.5 50~60V 1 0.5 0 10 0 25 50 75 100 125 150 0.1 10 100 T<sub>C</sub>, Case Temperature (°C) V<sub>R</sub>, Reverse Bias Voltage (V) **Fig.1 Forward Current Derating Curve Fig.2 Typical Junction Capacitance** 100 100 Reverse Current (mA) 50~60V Reverse Current (mA) 20~40V 10 10 T<sub>J</sub> = 125°C $T_J = 125^{\circ}C$ 1 1 $T_J = 150^{\circ}C$ 150°C 0.1 $T_J = 75^{\circ}C$ 0.1 T<sub>J</sub> = 75°C 0.01 0.01 $T_J = 25^{\circ}C$ $T_J = 25^{\circ}C$ \_<del>7</del> \_ہ 0.001 0.001 12 24 36 8 16 24 32 40 48 60 V<sub>R</sub>, Peak Reverse Voltage (V) V<sub>R</sub>, Peak Reverse Voltage (V) **Fig.3 Typical Reverse Characteristics** Fig.4 Typical Reverse Characteristics 10 10 20~40V I<sub>F</sub>, Forward Current (A) 50~60V I<sub>F</sub>, Forward Current (A) $T_1 = 150^{\circ}C$ $T_J = 150^{\circ}C$ 1 1 T<sub>J</sub> = 125°C T<sub>J</sub> = 125°C = 75°C T<sub>1</sub> = 75°C $T_J = 25^{\circ}C$ = 25°C $T_{\rm H}$ 0.1 0.1 0 0 0.2 0.4 0.6 0.2 0.4 0.6 0.8 V<sub>F</sub>, Forward Voltage (V) V<sub>F</sub>, Forward Voltage (V) **Fig.5 Typical Forward Characteristics Fig.6 Typical Forward Characteristics** 120 Percent of Reverse Voltage (%) 100 80 60 40 20 0 0 25 50 75 100 125 150 T<sub>J</sub>, Junction Temperature (°C) Fig.7 Operating Temperature Derating Curve

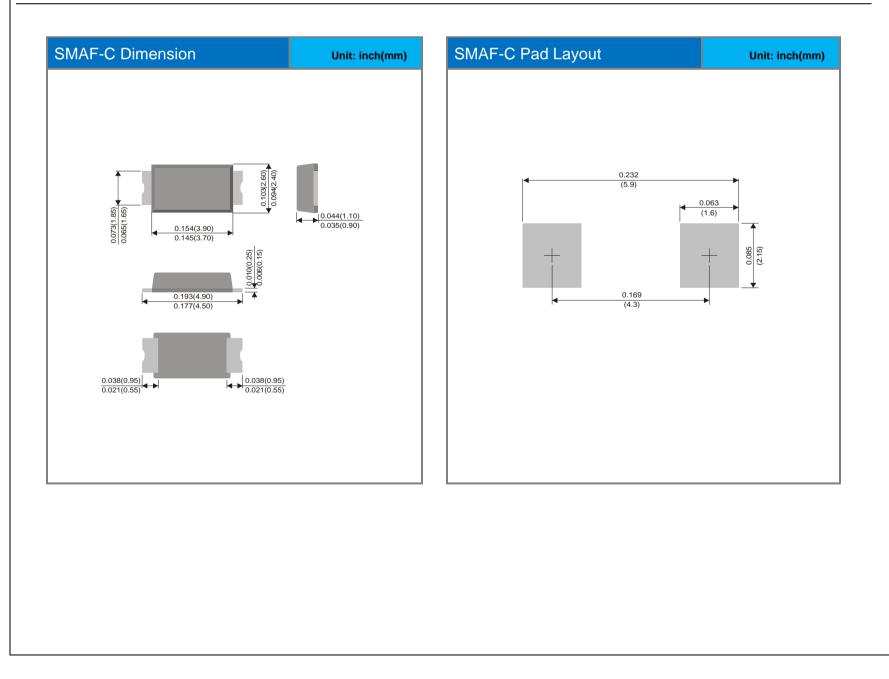


## SB32AFC ~ SB36AFC Series

## Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
SB32AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB32	Halogen free
SB33AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB33	Halogen free
SB34AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB34	Halogen free
SB35AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB35	Halogen free
SB36AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB36	Halogen free

## Packaging Information & Mounting Pad Layout





# SB32AFC ~ SB36AFC Series

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