

## SB12AFC ~ SB16AFC Series

### Surface Mount Schottky Barrier Rectifier

**Voltage**

**20~60 V**

**Current**

**1 A**

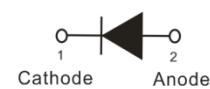
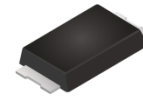
#### Features

- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### Mechanical Data

- Case : Molded plastic, SMAF-C
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0012 ounces, 0.034 grams

SMAF-C



#### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

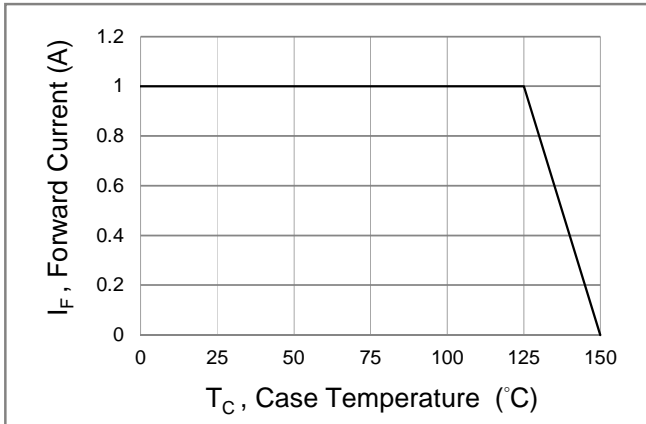
PARAMETER	SYMBOL	SB12AFC	SB13AFC	SB14AFC	SB15AFC	SB16AFC	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	V
Maximum DC Blocking Voltage	V <sub>R</sub>	20	30	40	50	60	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	1					A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I <sub>FSM</sub>	30					A
Instantaneous Forward Voltage at 1A	V <sub>F</sub>	0.5			0.7		V
Reverse Current <sup>(Note 3)</sup>	I <sub>R</sub>	0.2			0.1		mA
Typical Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 4V	C <sub>J</sub>	45					pF
Typical Thermal Resistance <sup>(Note 1)</sup>	R <sub>θJL</sub>	18					°C/W
<sup>(Note 2)</sup>	R <sub>θJA</sub>	150					
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150					°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150					°C

#### NOTES :

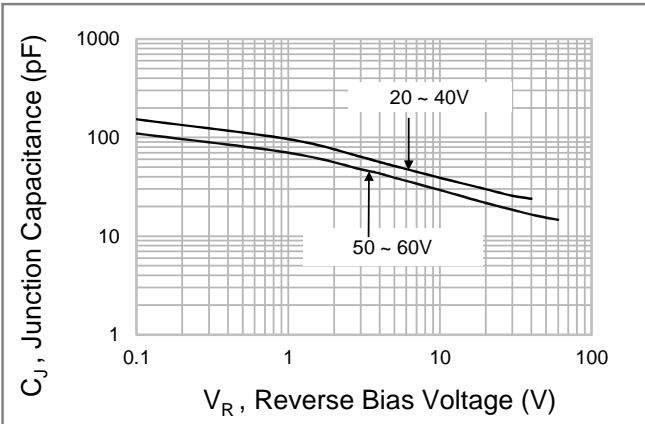
1. Mounted on a FR4 PCB, single-sided copper, with 48cm<sup>2</sup> copper pad area.
2. Mounted on a FR4 PCB, single-sided copper, standard footprint.
3. Short duration pulse test used to minimize self-heating effect.

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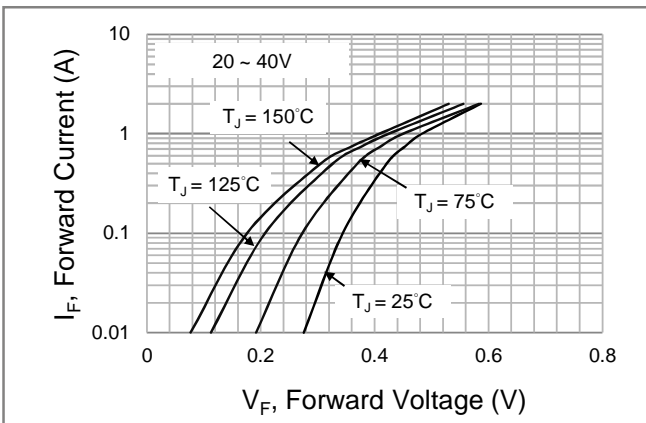
## TYPICAL CHARACTERISTIC CURVES



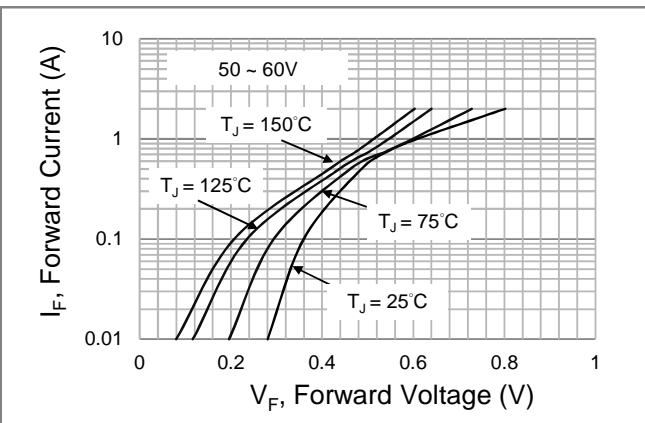
**Fig.1 Forward Current Derating Curve**



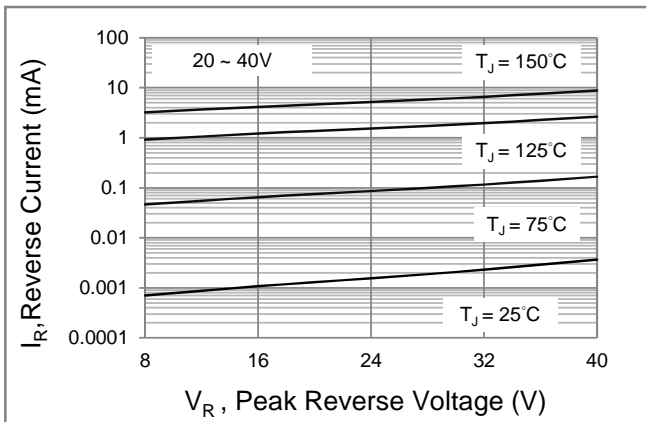
**Fig.2 Typical Junction Capacitance**



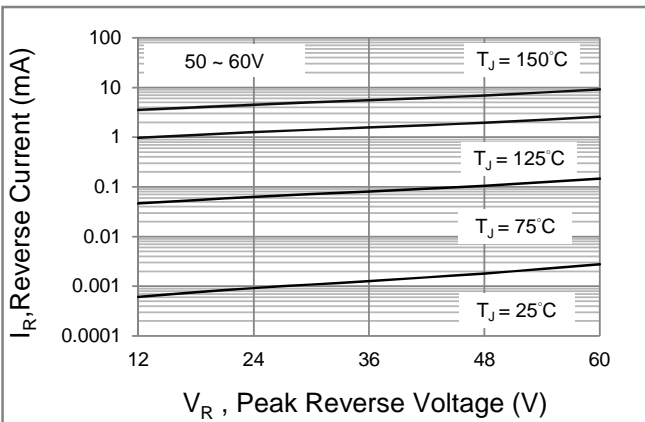
**Fig.3 Typical Forward Characteristics**



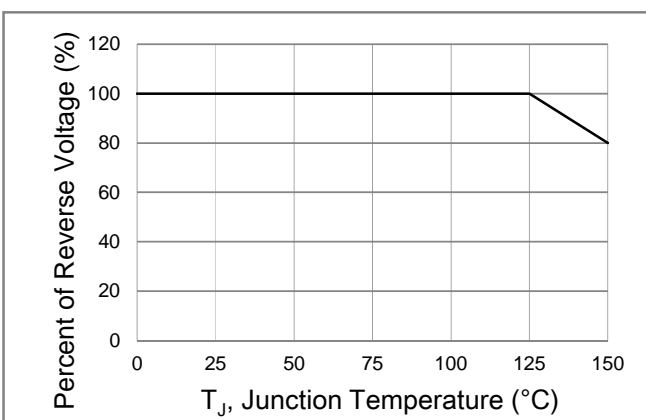
**Fig.4 Typical Forward Characteristics**



**Fig.5 Typical Reverse Characteristics**



**Fig.6 Typical Reverse Characteristics**



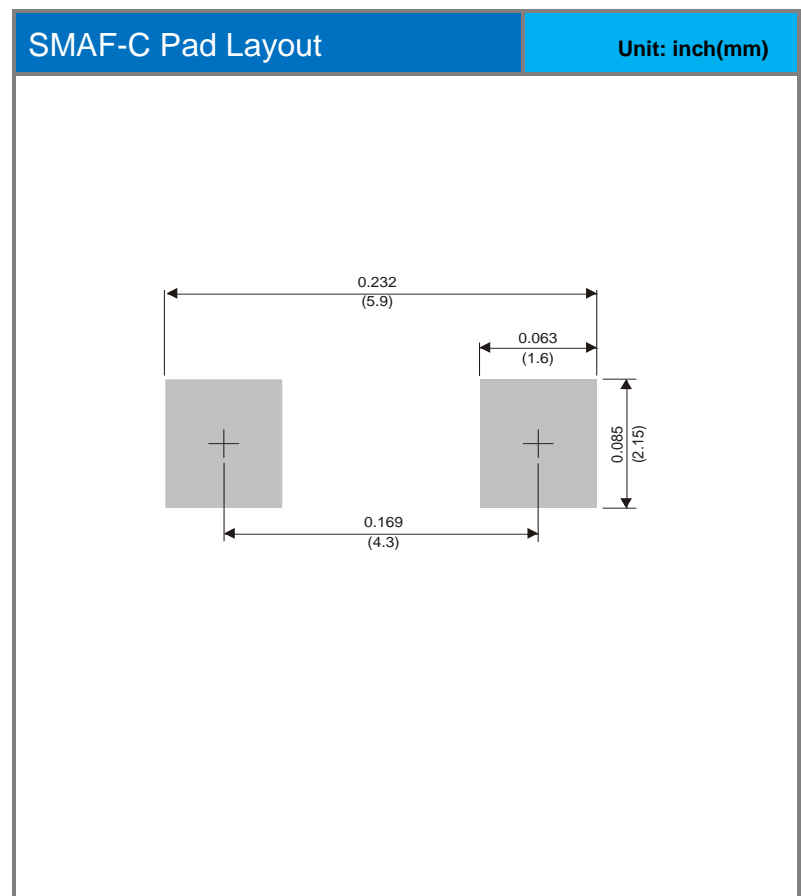
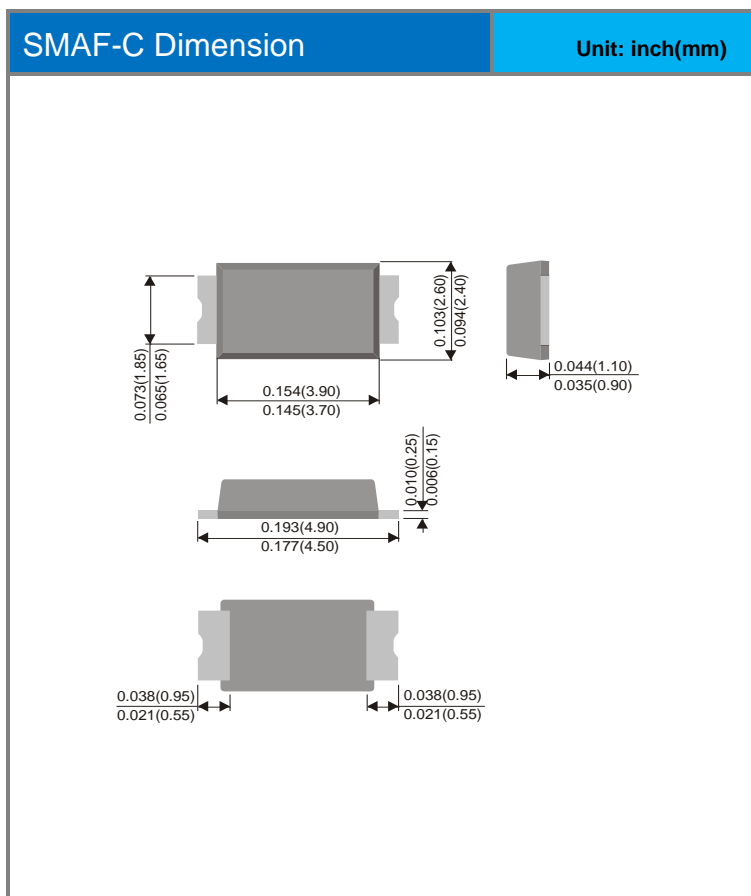
**Fig.7 Operating Temperature Derating Curve**

## SB12AFC ~ SB16AFC Series

### Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB12AFC	SMAF-C	3K pcs / 7" reel	SB12
SB13AFC	SMAF-C	3K pcs / 7" reel	SB13
SB14AFC	SMAF-C	3K pcs / 7" reel	SB14
SB15AFC	SMAF-C	3K pcs / 7" reel	SB15
SB16AFC	SMAF-C	3K pcs / 7" reel	SB16

### Packaging Information & Mounting Pad Layout



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