



SB12AFC ~ SB16AFC Series

Surface Mount Schottky Barrier Rectifier

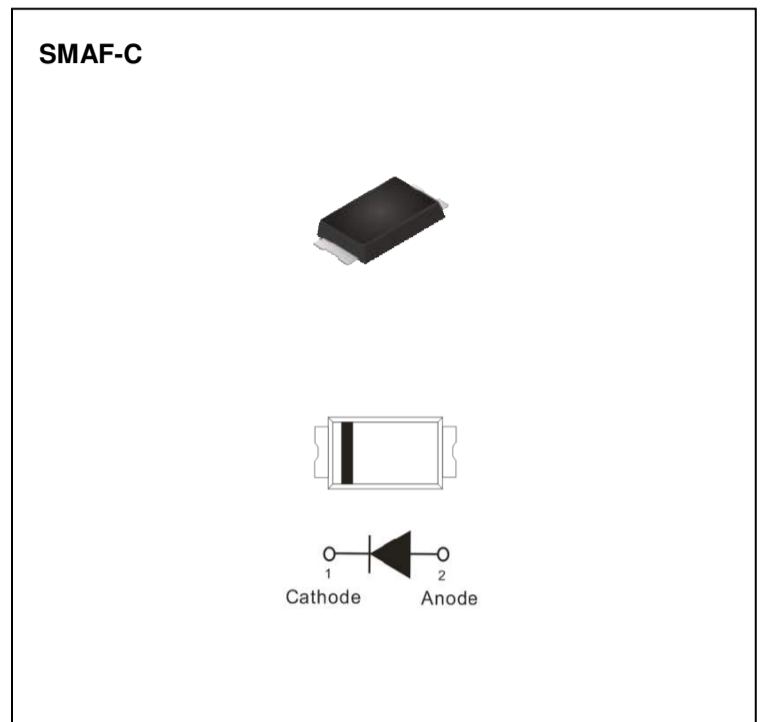
Voltage 20~60 V **Current** 1 A

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



Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

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

NOTES:

1. Mounted on a FR4 PCB, single-sided copper, with 48cm² 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

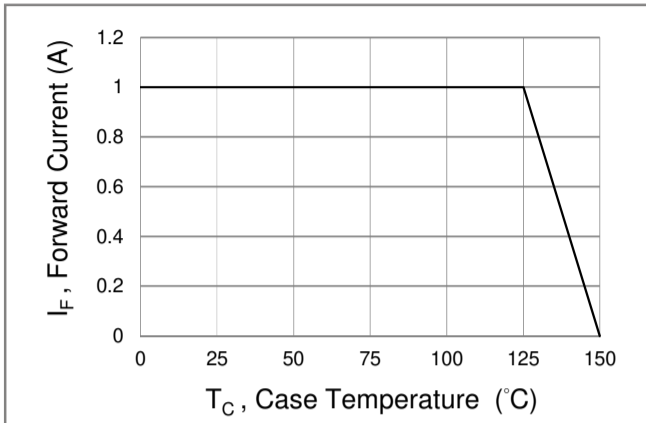


Fig.1 Forward Current Derating Curve

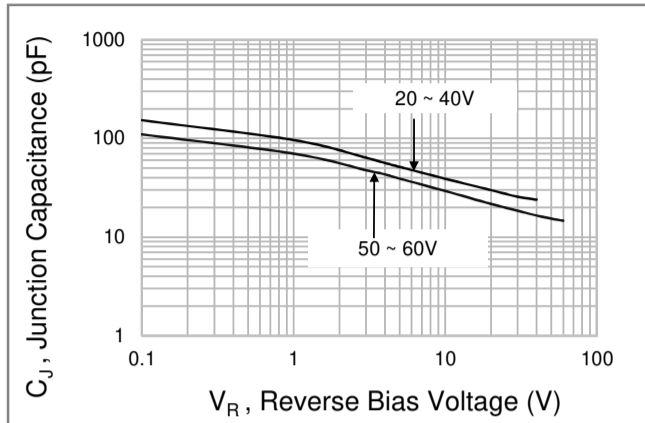


Fig.2 Typical Junction Capacitance

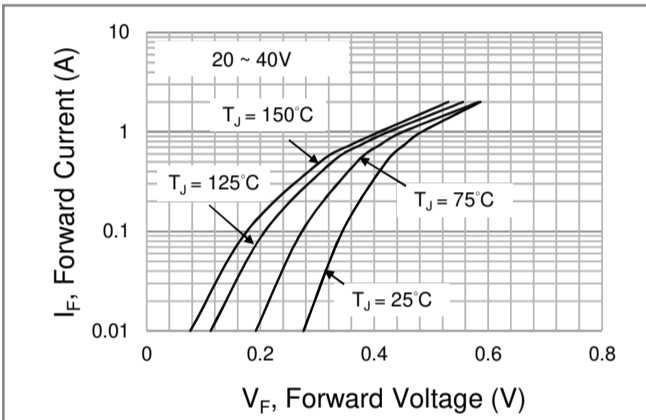


Fig.3 Typical Forward Characteristics

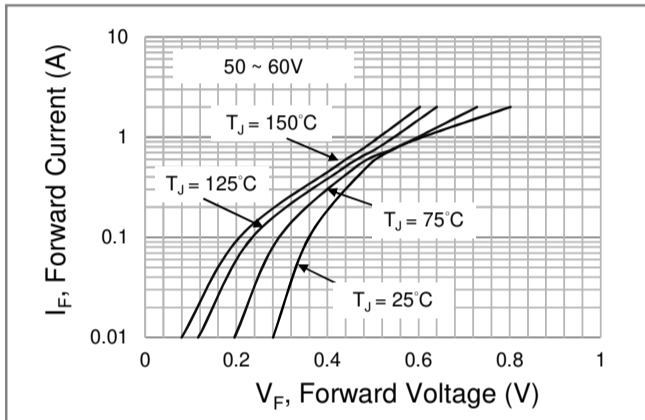


Fig.4 Typical Forward Characteristics

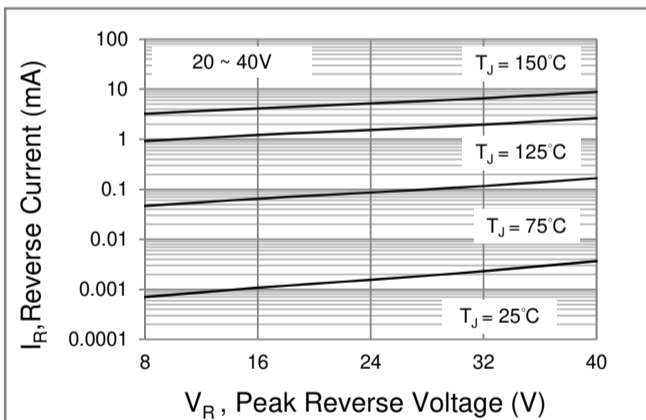


Fig.5 Typical Reverse Characteristics

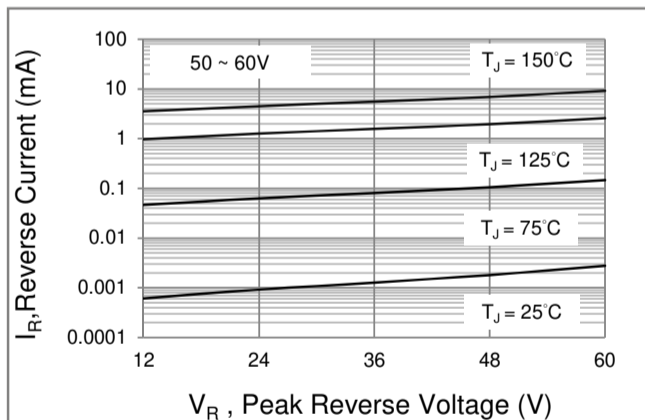


Fig.6 Typical Reverse Characteristics

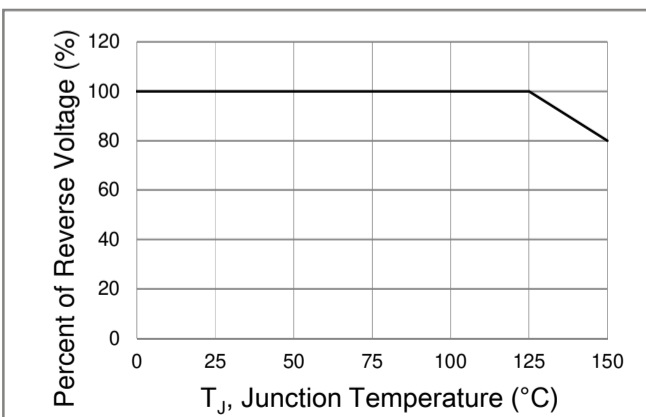


Fig.7 Operating Temperature Derating Curve

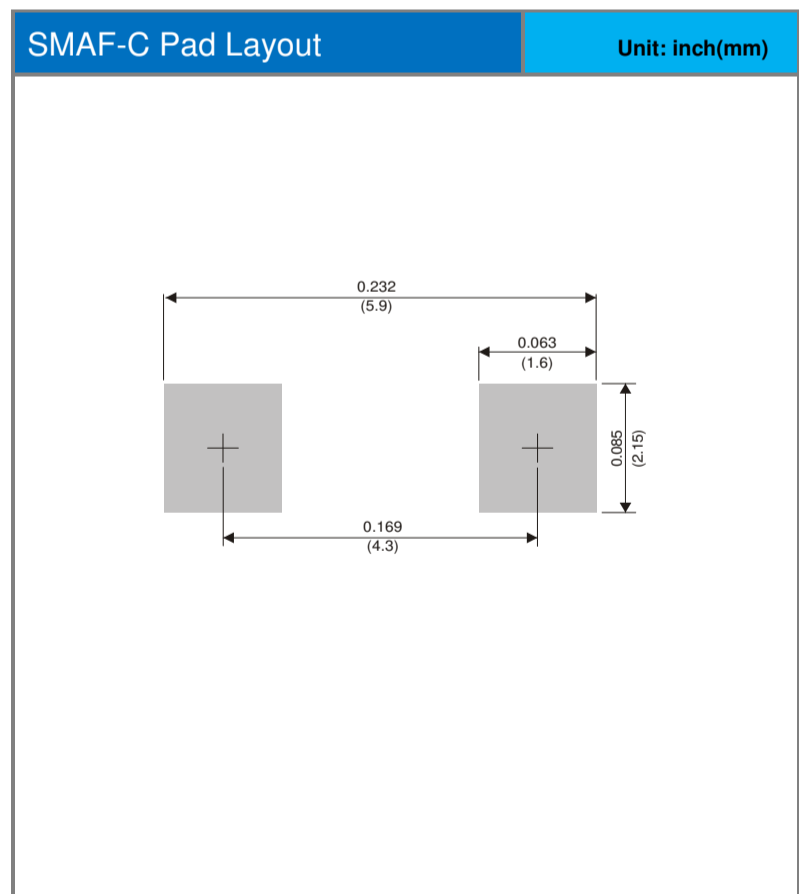
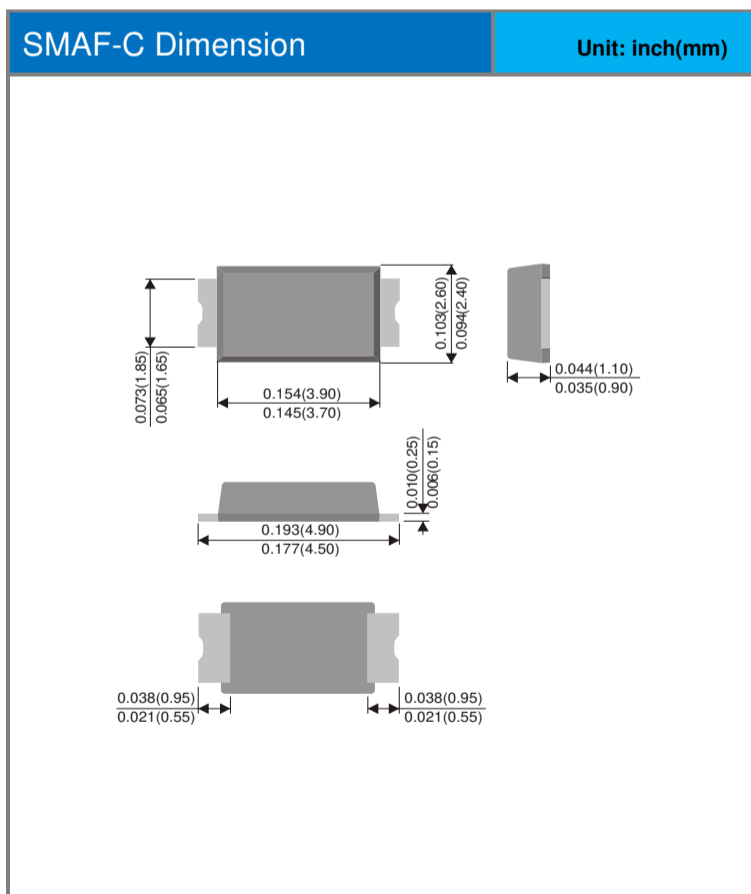


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Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
SB12AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB12	Halogen free
SB13AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB13	Halogen free
SB14AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB14	Halogen free
SB15AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB15	Halogen free
SB16AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB16	Halogen free

Packaging Information & Mounting Pad Layout





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