



SB52AFC ~ SB56AFC Series

Surface Mount Schottky Barrier Rectifier

Voltage

20~60 V

Current

5 A

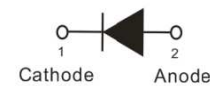
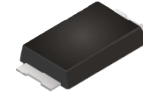
Features

- 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_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	SB52AFC	SB53AFC	SB54AFC	SB56AFC	UNIT
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	30	40	60	V
Maximum RMS Voltage	V _{RMS}	14	21	28	42	V
Maximum DC Blocking Voltage	V _R	20	30	40	60	V
Maximum Average Forward Rectified Current	I _{F(AV)}	5				A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I _{FSM}	100				A
Instantaneous Forward Voltage at 5A	V _F	0.54			0.66	V
Reverse Current ^(Note 3)	T _J = 25 °C	I _R	100			uA
Reverse Current ^(Note 3)	T _J = 100 °C	I _R	30		20	mA
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 10V	C _J	159			125	pF
Typical Thermal Resistance	(Note 1) R _{θJL}	15				°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 100cm² 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

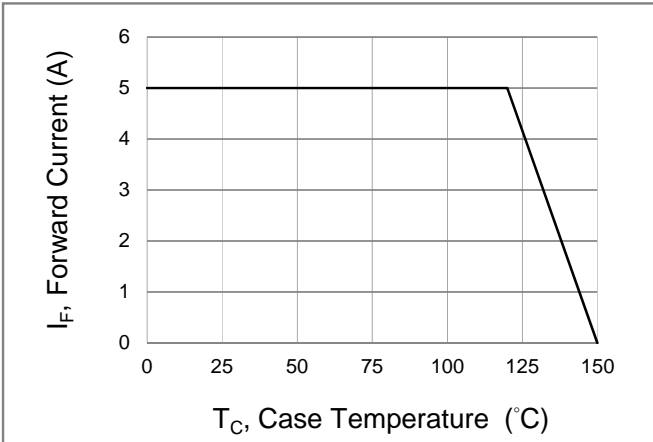


Fig.1 Forward Current Derating Curve

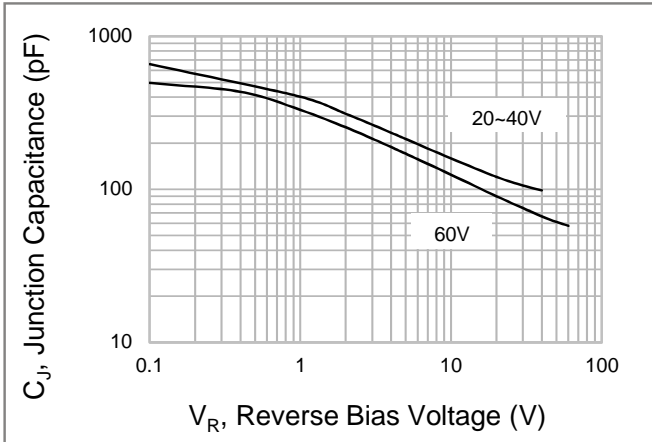


Fig.2 Typical Junction Capacitance

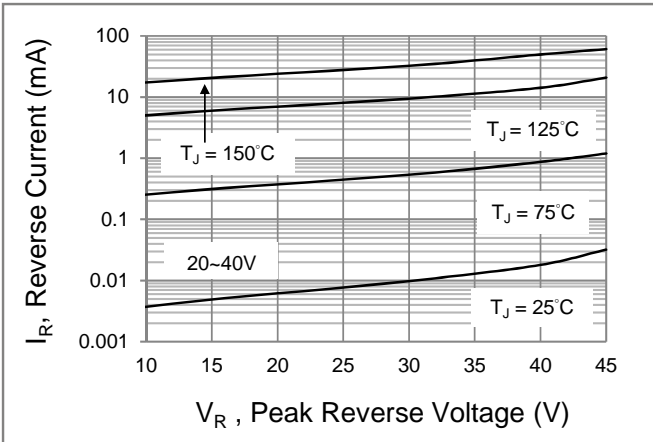


Fig.3 Typical Reverse Characteristics

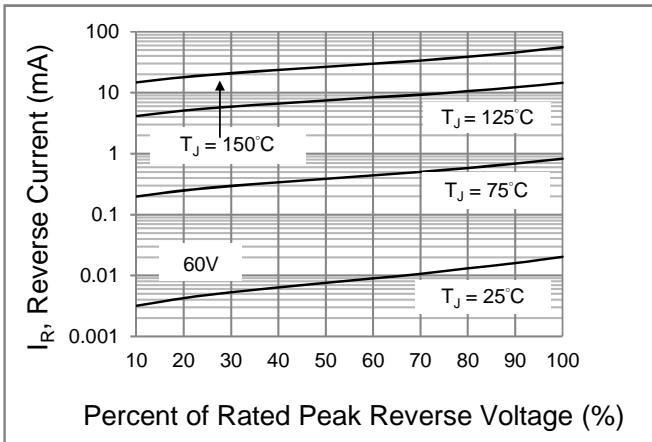


Fig.4 Typical Reverse Characteristics

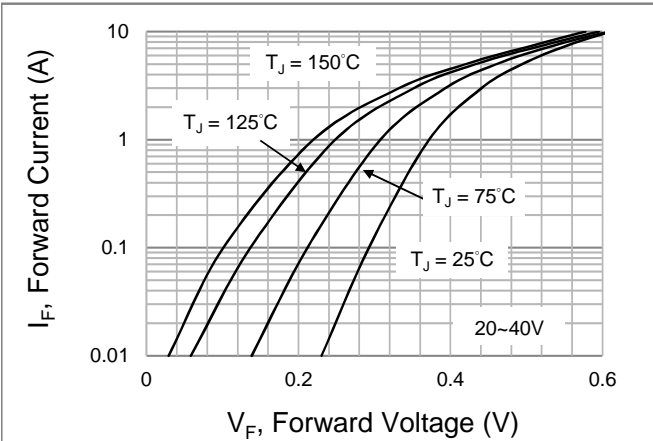


Fig.5 Typical Forward Characteristics

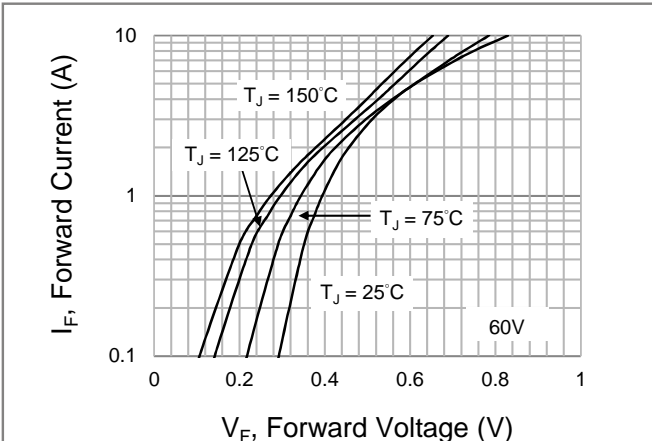


Fig.6 Typical Forward Characteristics

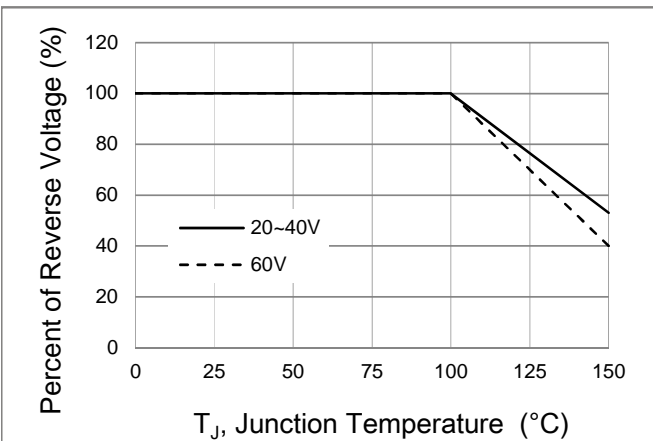


Fig.7 Operating Temperature Derating Curve

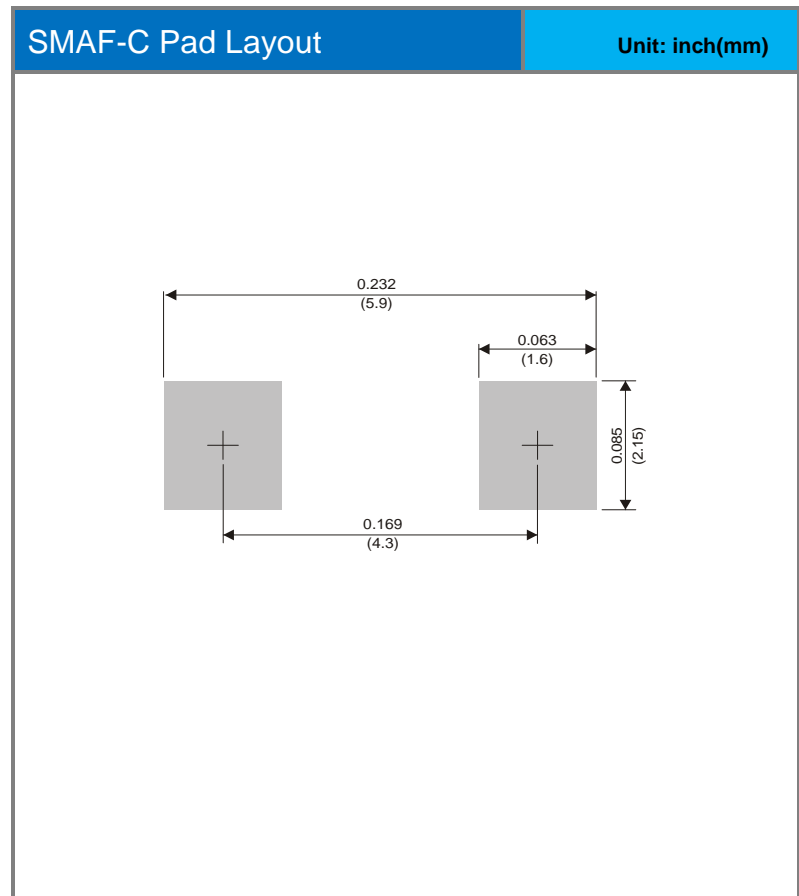
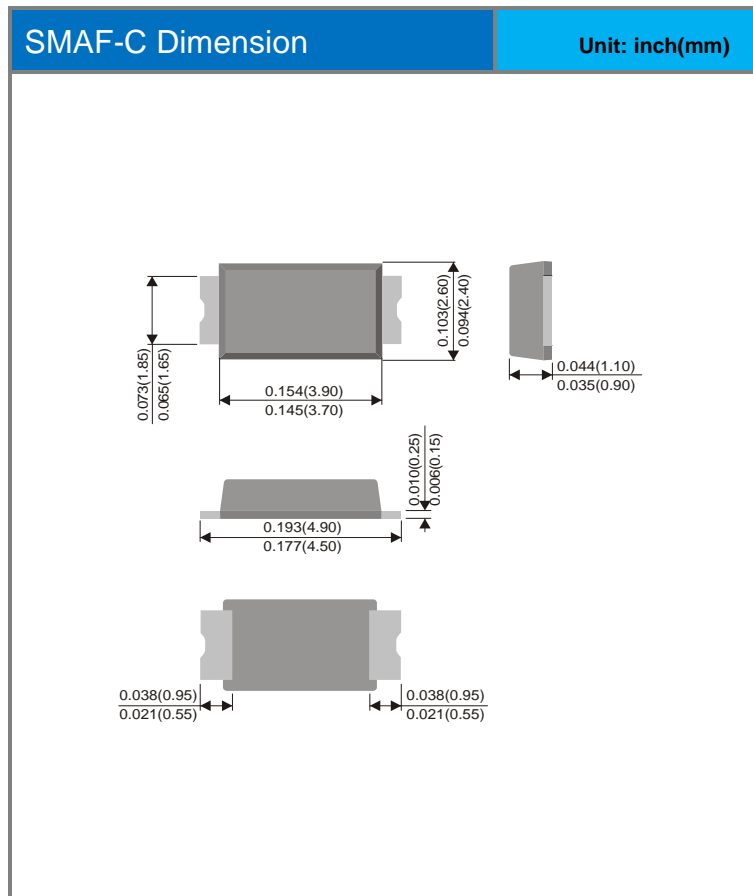


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Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
SB52AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB52	Halogen free
SB53AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB53	Halogen free
SB54AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB54	Halogen free
SB56AFC_R1_00001	SMAF-C	3K pcs / 7" reel	SB56	Halogen free

Packaging Information & Mounting Pad Layout





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