



## SB53AFC-AU ~ SB54AFC-AU Series

### Surface Mount Schottky Barrier Rectifier

**Voltage**

**30~40 V**

**Current**

**5 A**

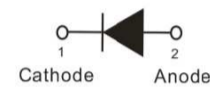
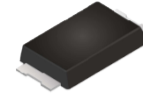
#### Features

- Low power loss, high efficiency
- High surge current capability
- AEC-Q101 qualified
- 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	SB53AFC-AU	SB54AFC-AU	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	30	40	V
Maximum RMS Voltage	V <sub>RMS</sub>	21	28	V
Maximum DC Blocking Voltage	V <sub>R</sub>	30	40	V
Maximum Average Forward Rectified Current	I <sub>F(AV)</sub>	5		A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I <sub>FSM</sub>	100		A
Forward Voltage at 5A	V <sub>F</sub>	0.54		V
Reverse Current <sup>(Note 3)</sup>	T <sub>J</sub> = 25 °C	100		uA
	T <sub>J</sub> = 100 °C	30		mA
Typical Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 10V	C <sub>J</sub>	159		pF
Typical Thermal Resistance	(Note 1) R <sub>θJL</sub>	15		°C/W
	(Note 2) 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

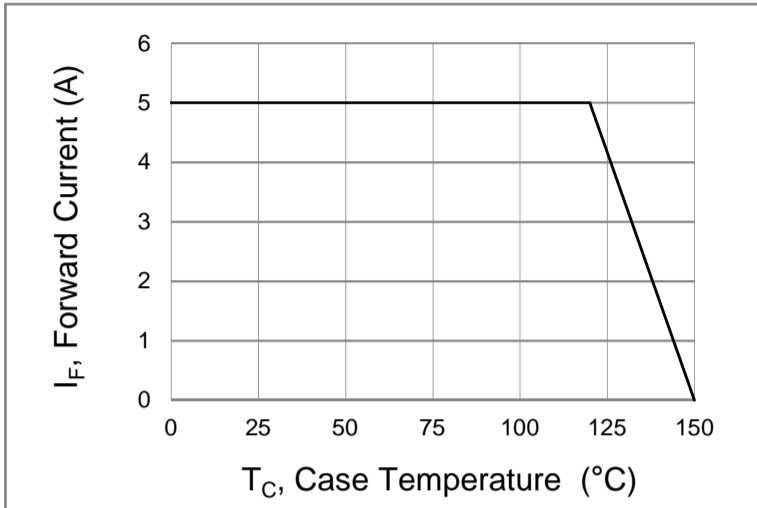
#### NOTES:

1. Mounted on a FR4 PCB, single-sided copper, with 100cm<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

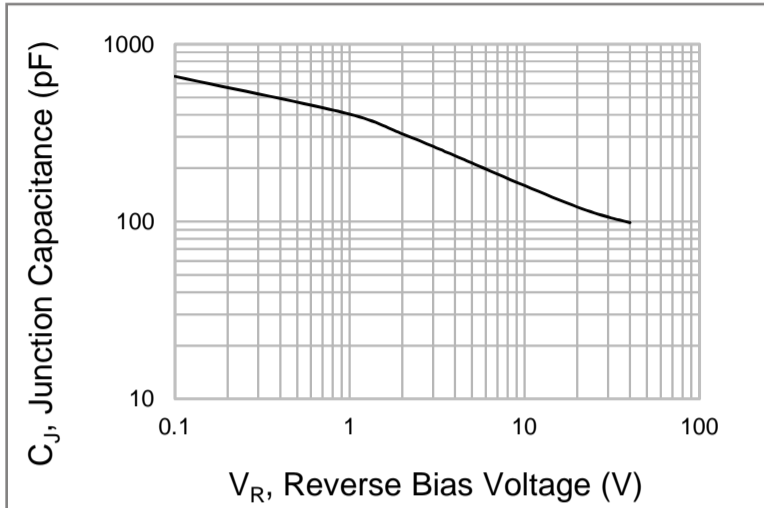


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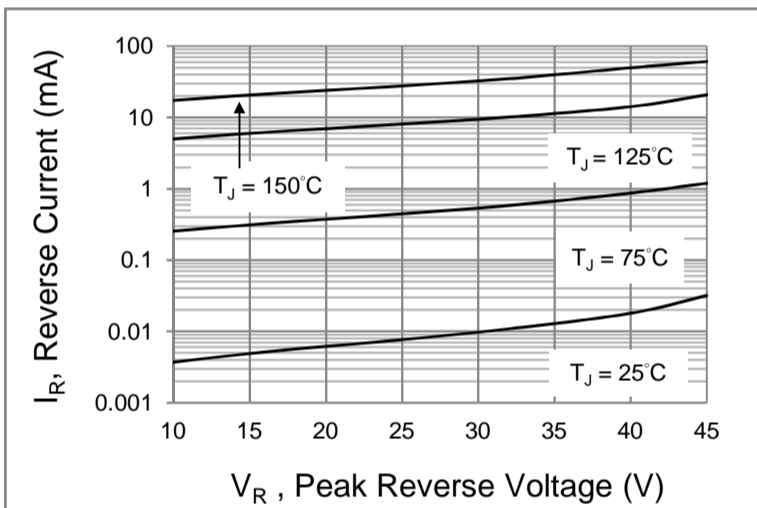
## TYPICAL CHARACTERISTIC CURVES



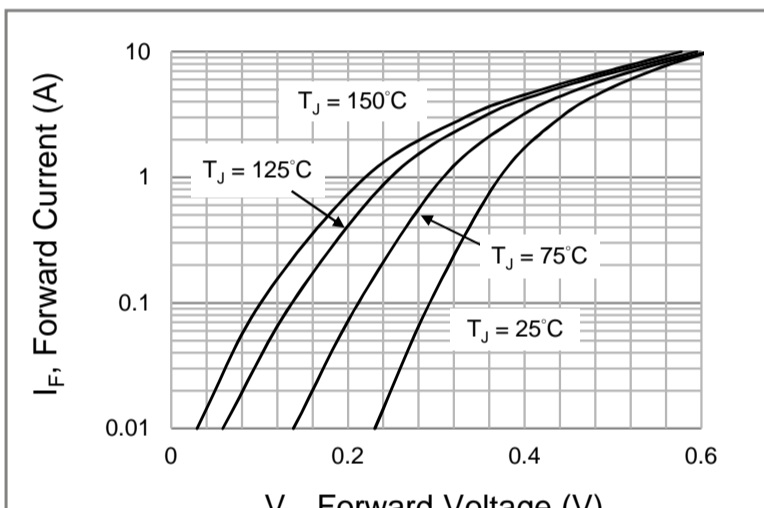
**Fig.1 Forward Current Derating Curve**



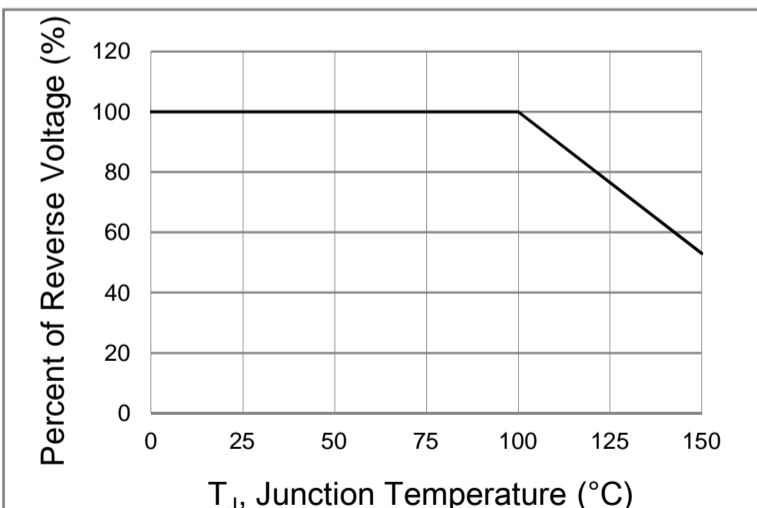
**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



**Fig.4 Typical Forward Characteristics**



**Fig.5 Operating Temperature Derating Curve**

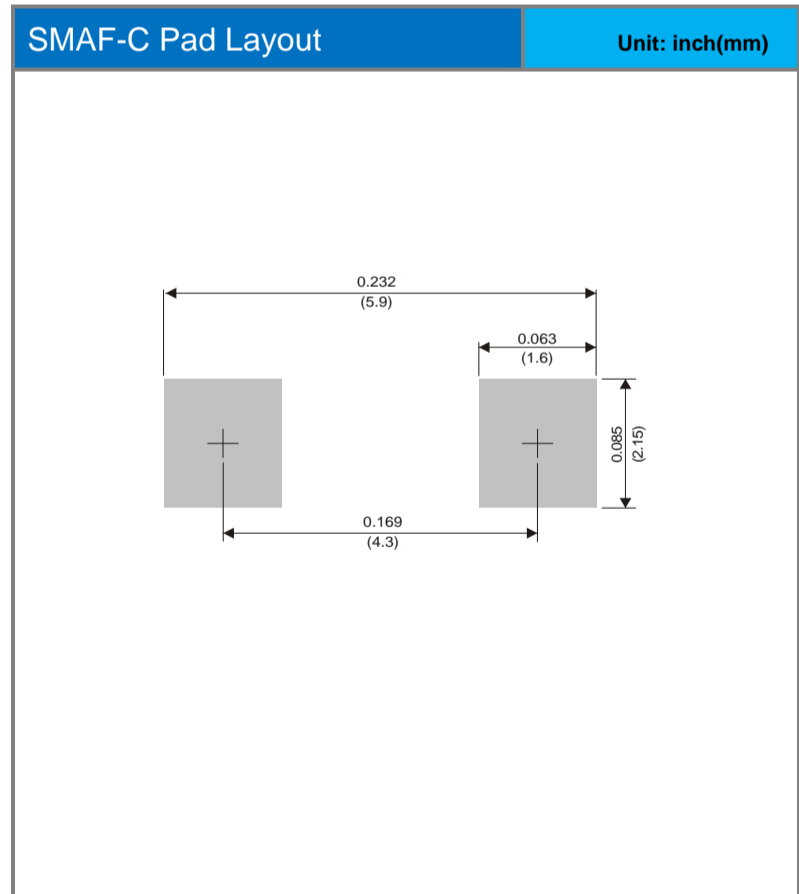
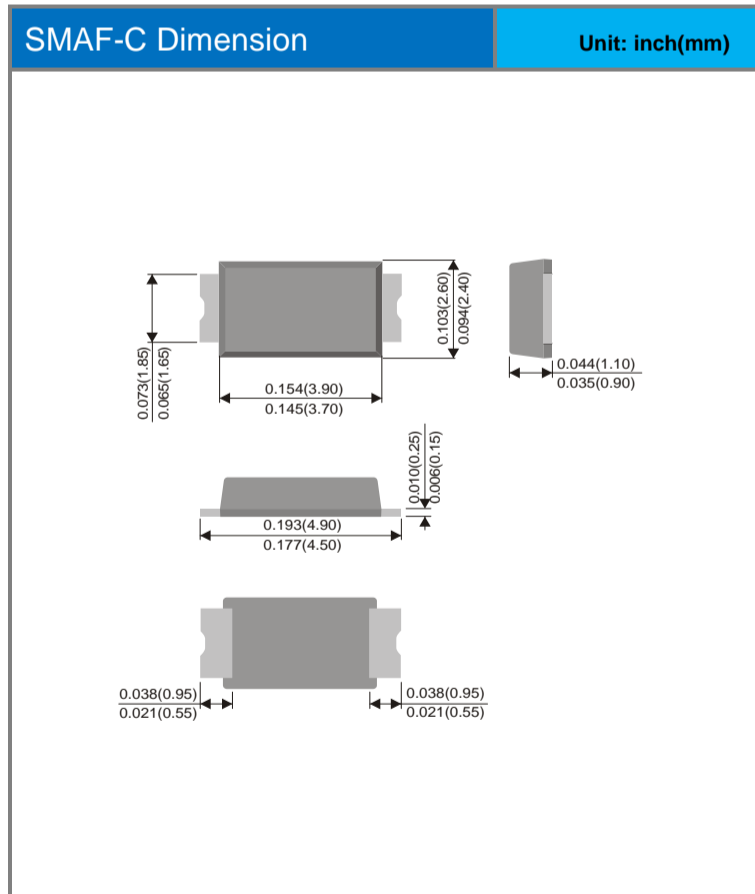


## SB53AFC-AU ~ SB54AFC-AU Series

### Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
SB53AFC-AU_R1_000A1	SMAF-C	3K pcs / 7" reel	SB53	Halogen free
SB54AFC-AU_R1_000A1	SMAF-C	3K pcs / 7" reel	SB54	Halogen free

### Packaging Information & Mounting Pad Layout





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