



# SBA540AFC-AU

## Surface Mount Extreme Low Vf Schottky Barrier Rectifier

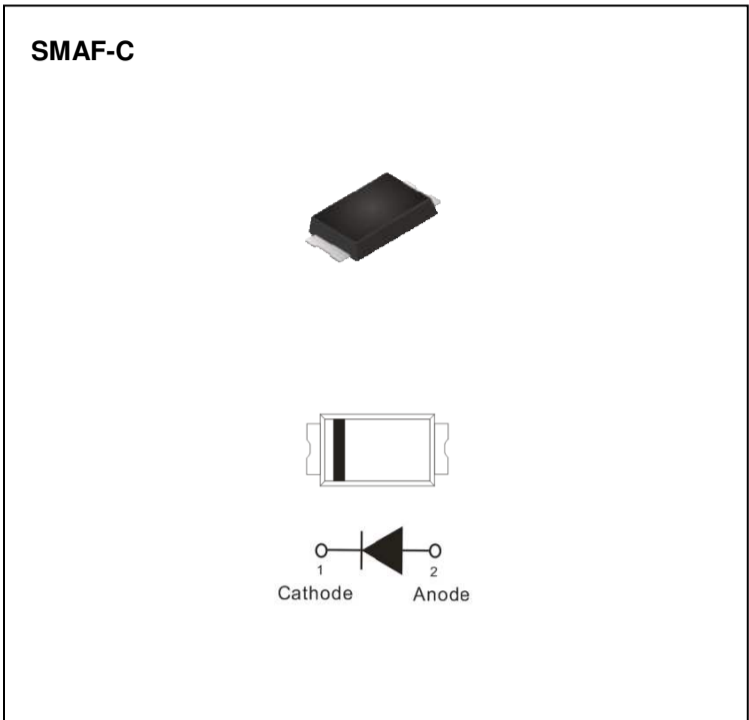
<b>Voltage</b>	<b>40 V</b>	<b>Current</b>	<b>5 A</b>
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### Features

- Extreme low forward voltage drop
- Low power loss, high efficiency
- 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



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

PARAMETER	SYMBOL	SBA540AFC-AU	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	40	V
Maximum RMS Voltage	V <sub>RMS</sub>	28	V
Maximum DC Blocking Voltage	V <sub>R</sub>	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>	80	A
Typical Thermal Resistance (Note 1)	R <sub>θJA</sub>	150	°C/W
(Note 2)	R <sub>θJC</sub>	15	
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

### Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION	SBA540AFC-AU		UNITS
			TYP.	MAX.	
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 10mA	0.17	-	V
		I <sub>F</sub> = 2A	0.36	-	
		I <sub>F</sub> = 5A	-	0.49	
		I <sub>F</sub> = 10mA	0.05	-	V
I <sub>F</sub> = 2A	0.29	-			
Reverse Current <sup>(Note 3)</sup>	I <sub>R</sub>	V <sub>R</sub> = 10V	25	-	uA
		V <sub>R</sub> = 20V	32	-	
		V <sub>R</sub> = 30V	55	-	
		V <sub>R</sub> = 40V	-	250	
		V <sub>R</sub> = 20V	8	-	mA
		V <sub>R</sub> = 30V	12	-	
V <sub>R</sub> = 40V	19	-			

- Note : 1. Mounted on a FR4 PCB, single-sided copper, standard footprint  
 2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area  
 3. Short duration pulse test used to minimize self-heating effect



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## TYPICAL CHARACTERISTIC CURVES

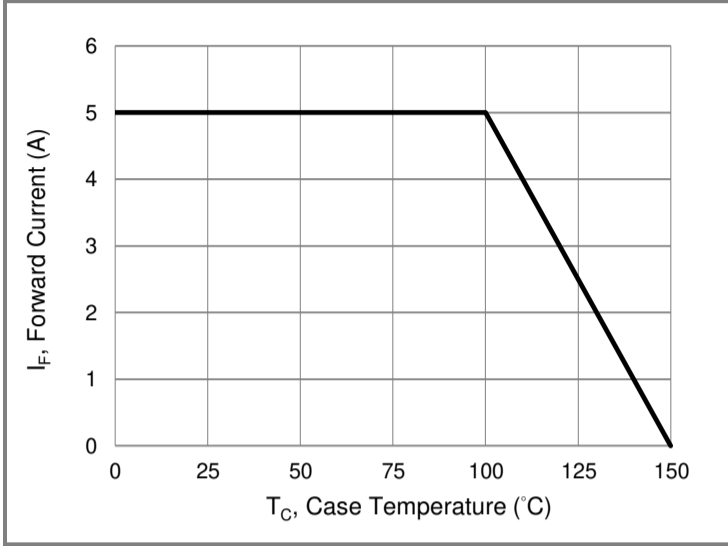


Fig.1 Forward Current Derating Curve

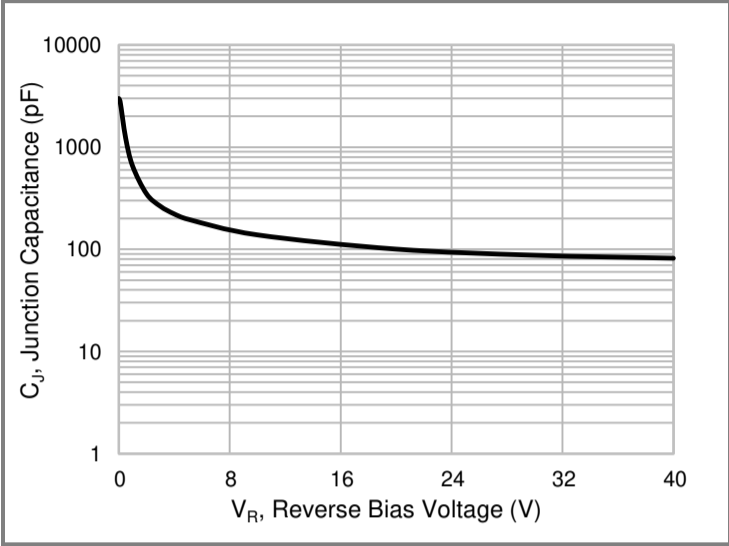


Fig. 2 Typical Junction Capacitance

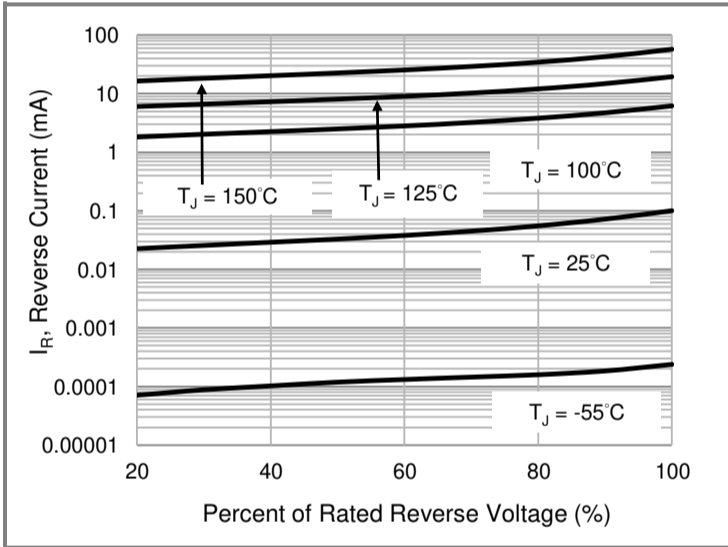


Fig.3 Typical Reverse Characteristics

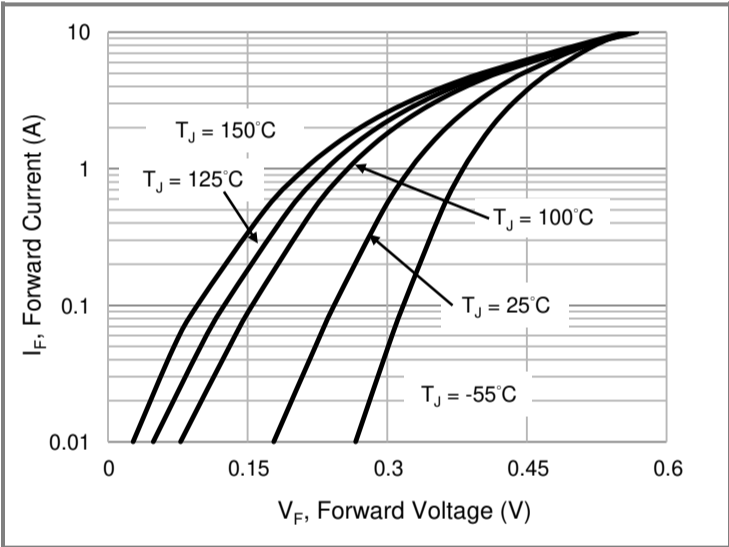


Fig.4 Typical Forward Characteristics

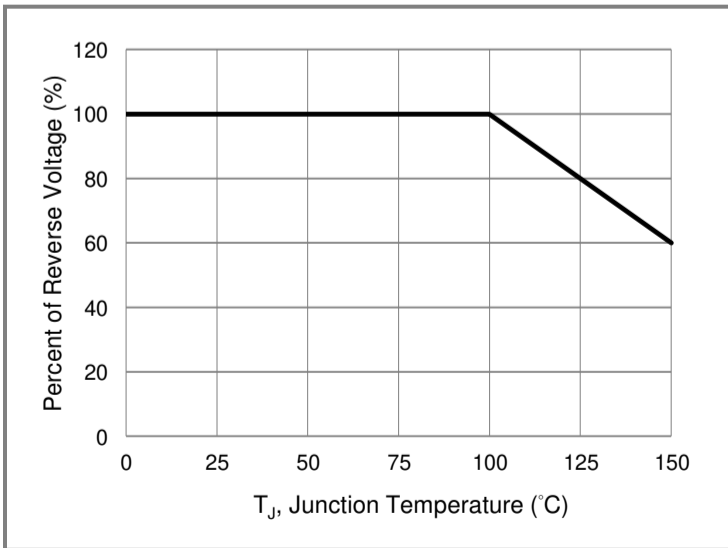


Fig.5 Operating Temperature Derating Curve

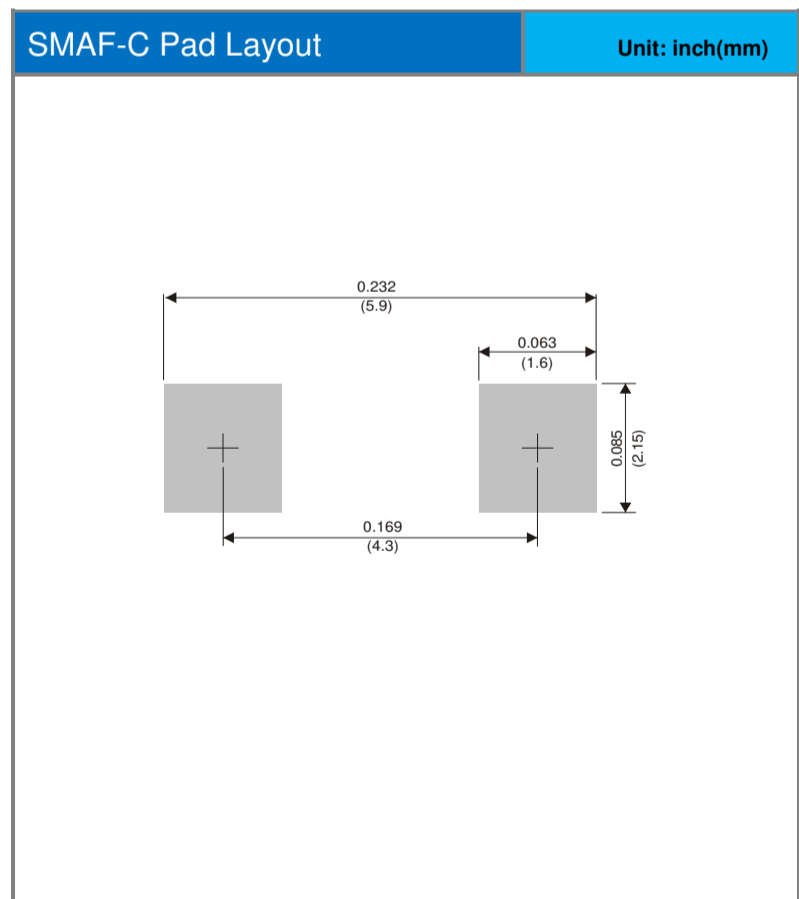
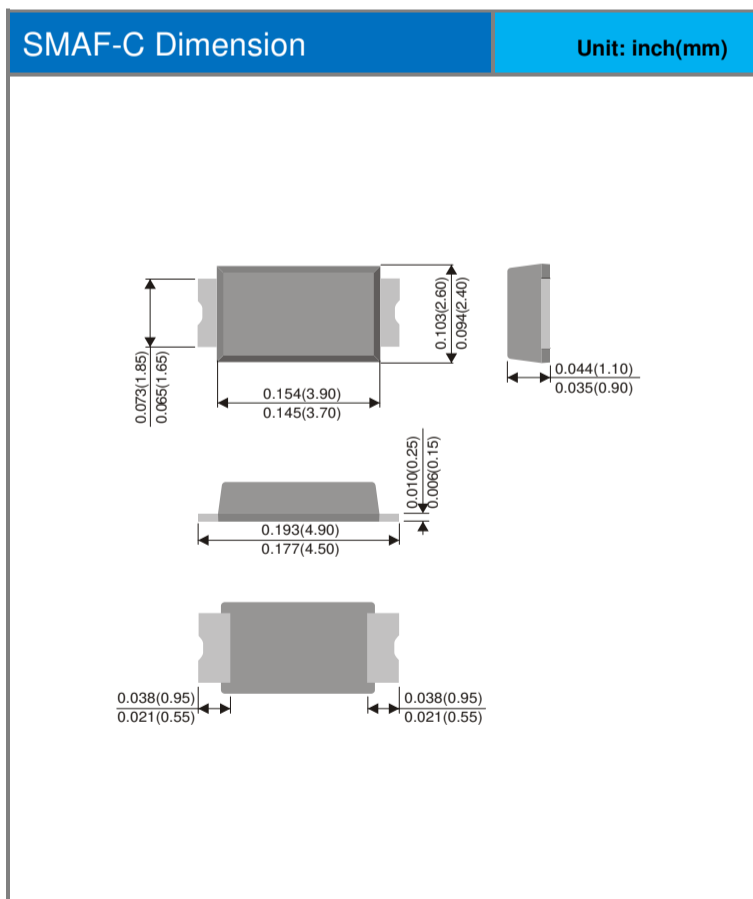


# SBA540AFC-AU

## Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
SBA540AFC-AU_R1_000A1	SMAF-C	3K pcs / 7" reel	SBA540	Halogen free

## Packaging Information & Mounting Pad Layout





## SBA540AFC-AU

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