

SBA540AFC-AU

Surface Mount Extreme Low Vf Schottky Barrier Rectifier

Voltage

40 V

Current

5 A

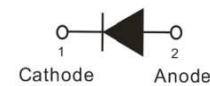
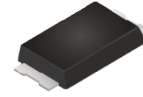
Features

- 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

SMAF-C



Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	SBA540AFC-AU	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS Voltage	V_{RMS}	28	V
Maximum DC Blocking Voltage	V_R	40	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}	80	A
Typical Thermal Resistance (Note 1) (Note 2)	$R_{\theta JA}$	150	$^\circ\text{C/W}$
	$R_{\theta JC}$	15	
Operating Junction Temperature Range	T_J	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION	SBA540AFC-AU		UNITS
			TYP.	MAX.	
Forward Voltage	V_F	$I_F = 10\text{mA}$	0.17	-	V
		$I_F = 2\text{A}$	0.36	-	
		$I_F = 5\text{A}$	-	0.49	
		$I_F = 10\text{mA}$	0.05	-	V
Reverse Current ^(Note 3)	I_R	$I_F = 2\text{A}$	0.29	-	uA
		$T_J = 25^\circ\text{C}$			
		$V_R = 10\text{V}$	25	-	
		$V_R = 20\text{V}$	32	-	
		$V_R = 30\text{V}$	55	-	mA
		$V_R = 40\text{V}$	-	250	
		$T_J = 125^\circ\text{C}$			
		$V_R = 20\text{V}$	8	-	
		$V_R = 30\text{V}$	12	-	
		$V_R = 40\text{V}$	19	-	

Note : 1. Mounted on a FR4 PCB, single-sided copper, standard footprint

2. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area

3. Short duration pulse test used to minimize self-heating effect

SBA540AFC-AU

TYPICAL CHARACTERISTIC CURVES

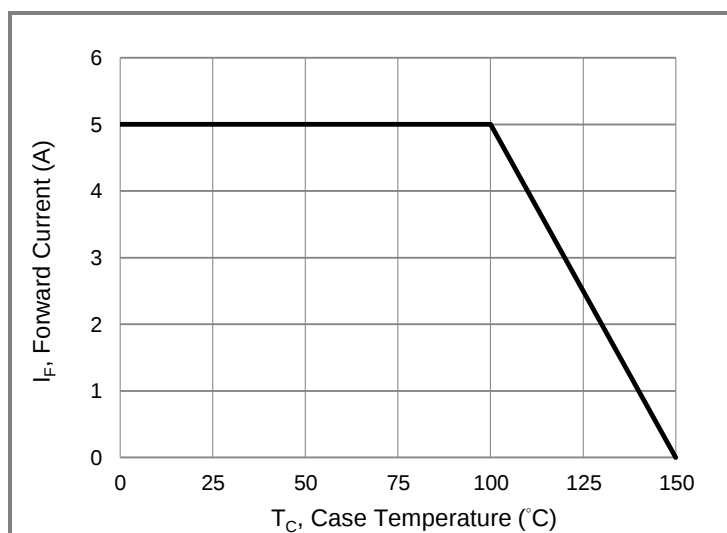


Fig.1 Forward Current Derating Curve

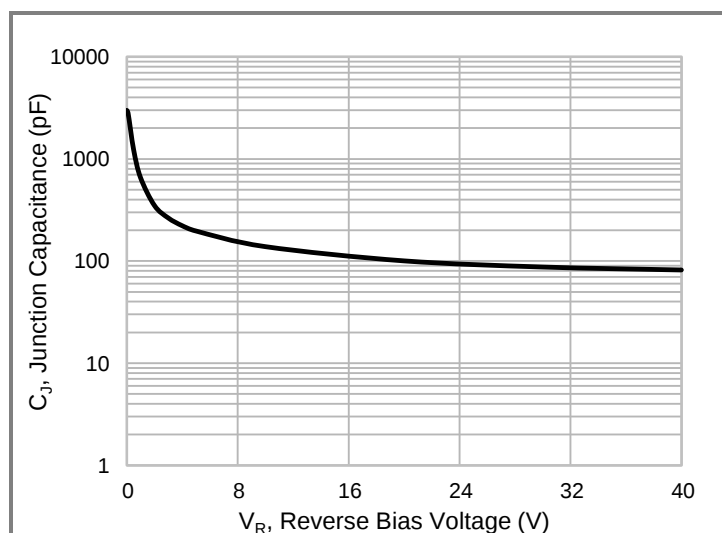


Fig. 2 Typical Junction Capacitance

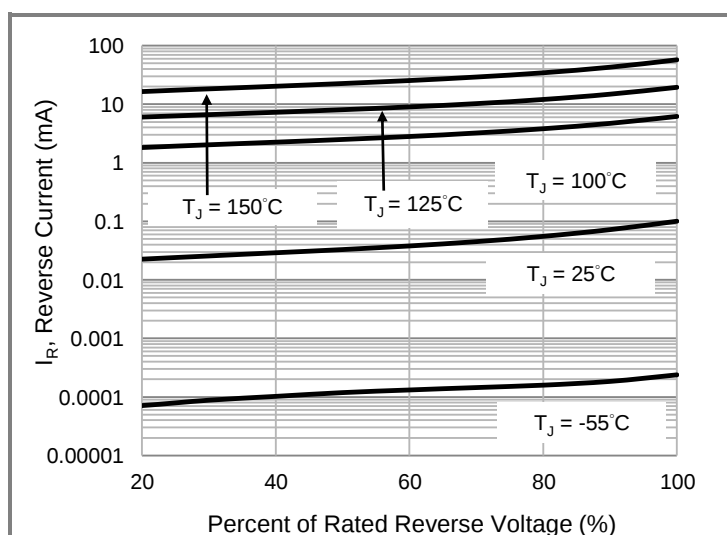


Fig.3 Typical Reverse Characteristics

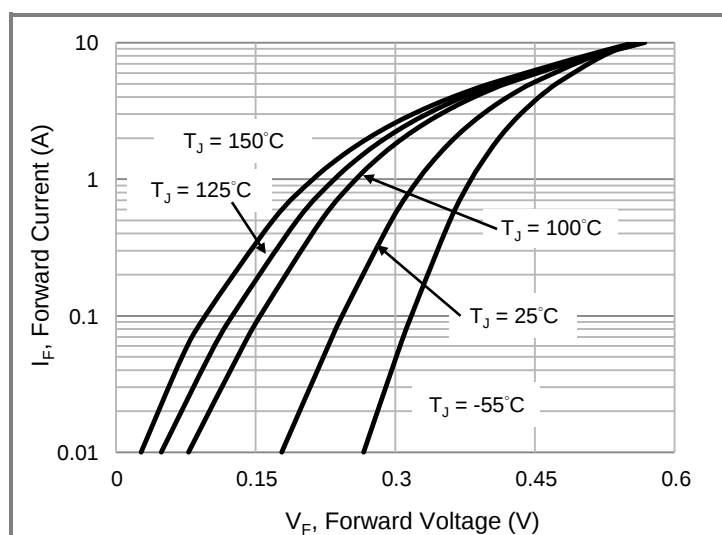


Fig.4 Typical Forward Characteristics

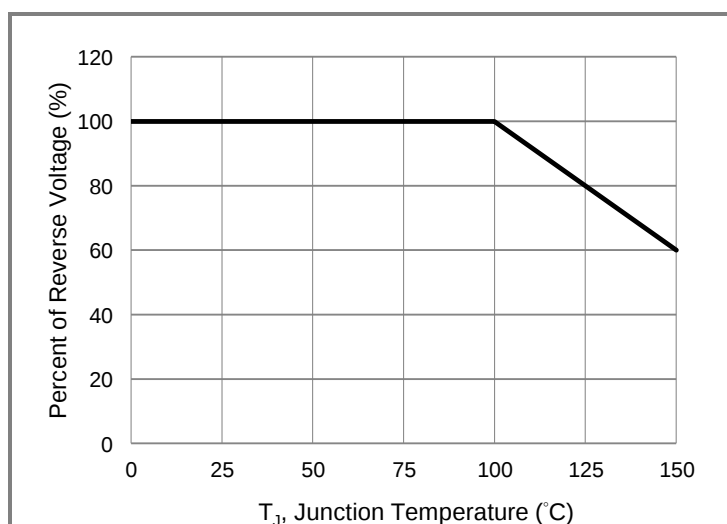


Fig.5 Operating Temperature Derating Curve

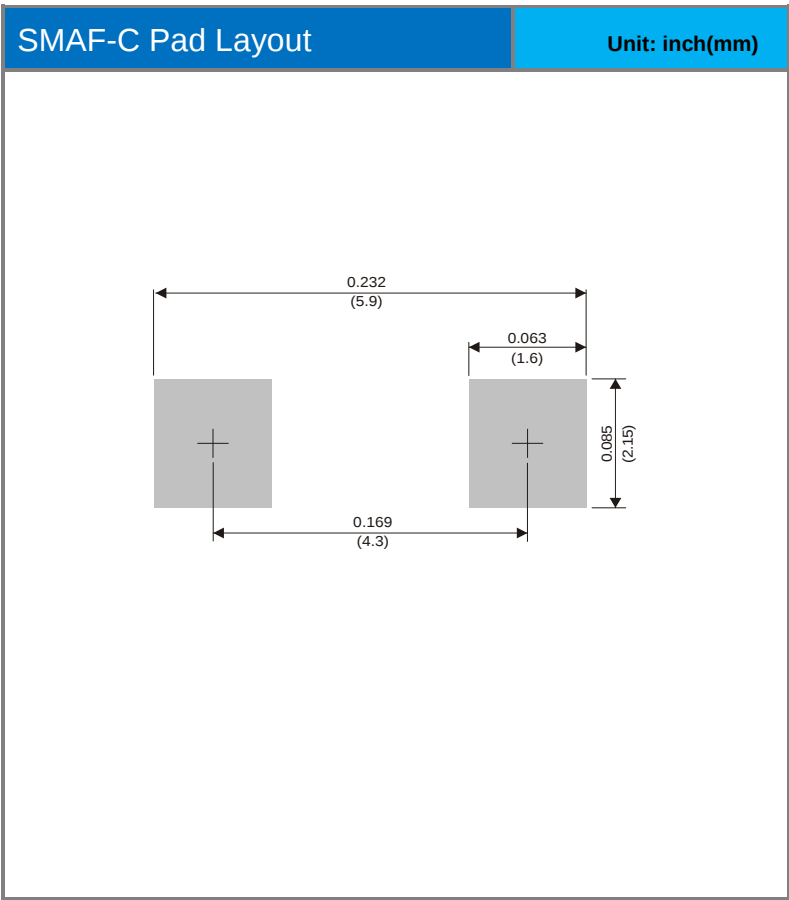
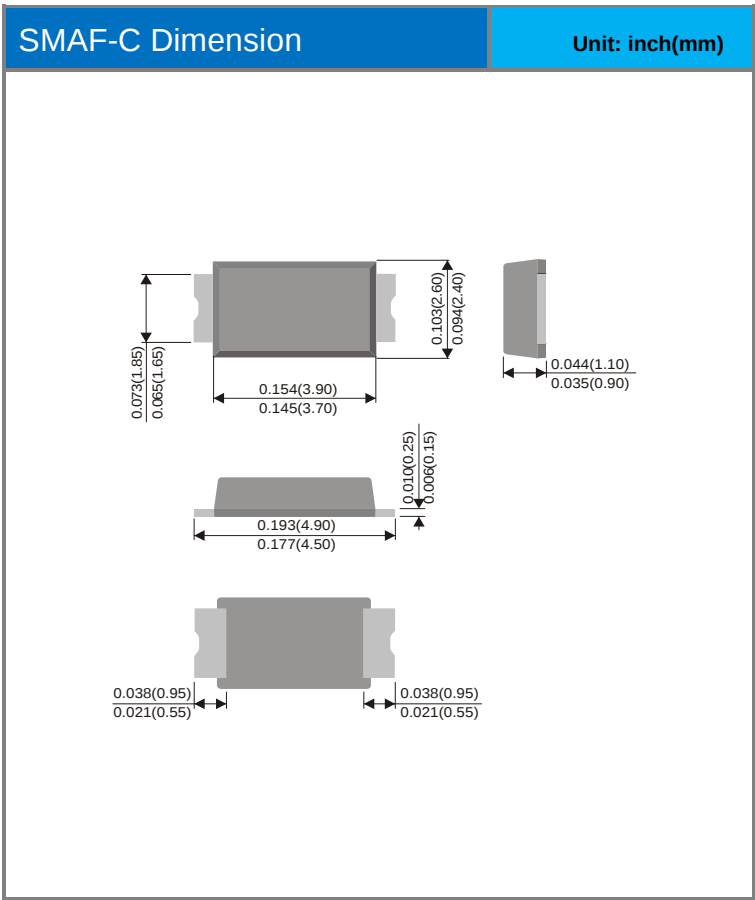


SBA540AFC-AU

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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