



Surface Mount Extreme Low Vf Schottky Barrier Rectifier

Voltage 20~40 V Current 3 A

Features

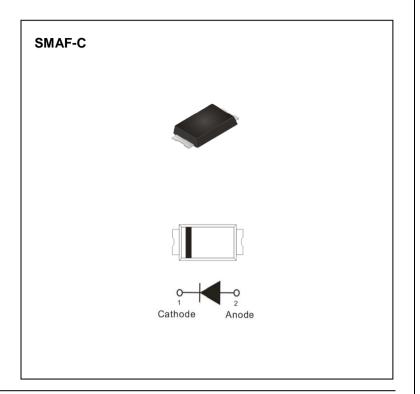
- Extreme low forward voltage drop
- Low power loss, high efficiency
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

• Case : Molded plastic, SMAF-C

• Terminals : Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 0.0012 ounces, 0.034 grams



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

PARAMETER	SYMBOL	SBA320AFC-AU	SBA330AFC-AU	SBA340AFC-AU	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	20	20 30		V
Maximum RMS Voltage	V_{RMS}	14 21		28	V
Maximum DC Blocking Voltage	V_R	20	30	40	V
Maximum Average Forward Rectified Current	I _{F(AV)}	3			А
Peak Forward Surge Current : 8.3 ms Single Half Sine- Wave Superimposed On Rated Load	IFSM	50			Α
(Note 1)	$R_{\theta JA}$	150			°C/W
Typical Thermal Resistance (Note 2)	R ₀ JC	15			
Operating Junction Temperature Range	TJ	-55 to +150			°C
Storage Temperature Range	T _{STG}	-55 to +150			°C

Electrical Characteristics

DADAMETED	SYMBOL TEST COI	NOTION	SBA320AFC-AU		SBA330AFC-AU		SBA340AFC-AU			
PARAMETER		TEST CONDITION		TYP.	MAX.	TYP.	MAX.	TYP.	MAX.	UNITS
Forward Voltage	V _F	I _F = 10mA	T _J =25 °C	0.19	-	0.19		0.21	-	V
		I _F = 1A		0.32	-	0.33	-	0.35	-	
		I _F = 3A		-	0.44	-	0.46	-	0.48	
		$I_F = 10mA$	T _J =125 °C	0.05	-	0.06	-	0.06	-	V
		I _F = 1A		0.24	-	0.26	-	0.27	-	
Reverse Current ^(Note 3)	$V_R = 20V$ $V_R = 30V$	V _R = 10V	T _J =25°C	31	-	18	-	16	-	uA
		V _R = 20V		-	200	28	-	21	-	
		$V_R = 30V$		-	-	-	200	35	-	
		$V_R = 40V$		-	-	-	-	-	150	
	$V_R = 20V$ $V_R = 30V$ $V_R = 40V$	V _R = 20V		8.6	-	5.6	-	5.1	-	
			T _J =125 °C	-	-	10.7	-	7.6	-	mA
		$V_R = 40V$		-	-	-	-	12	-	

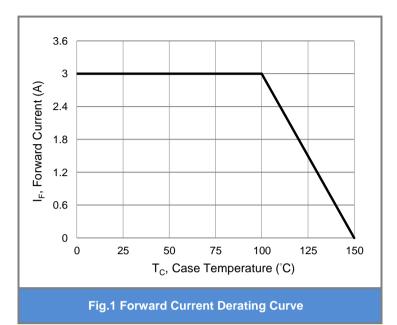
Note: 1. Mounted on a FR4 PCB, single-sided copper, standard footprint

- 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

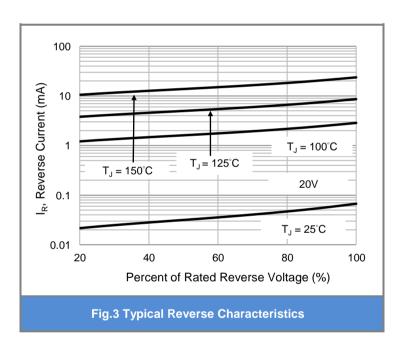


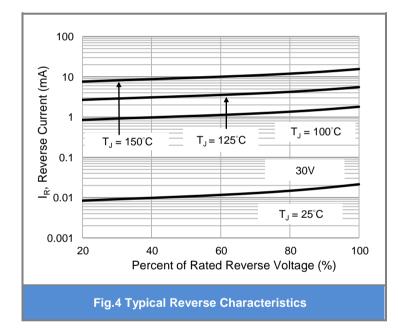


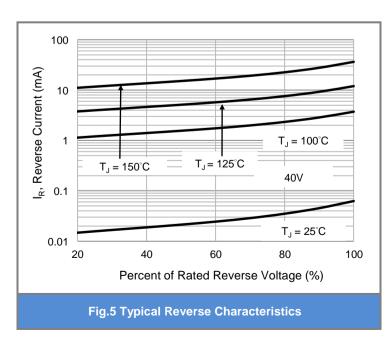
TYPICAL CHARACTERISTIC CURVES

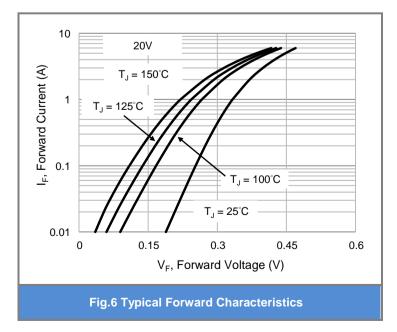


10000
(Ld)
20V
30V
40V
100
No. 20V





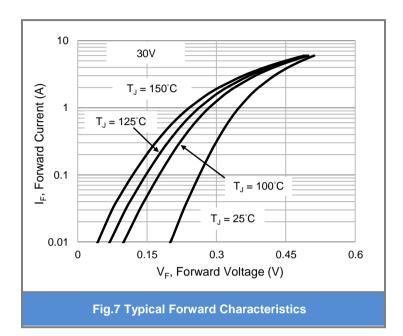


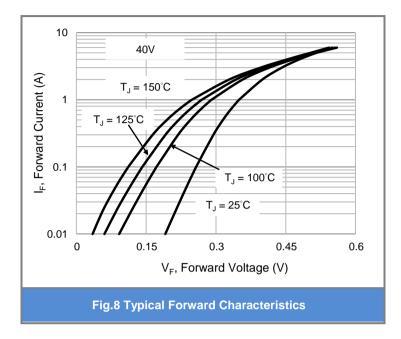






TYPICAL CHARACTERISTIC CURVES





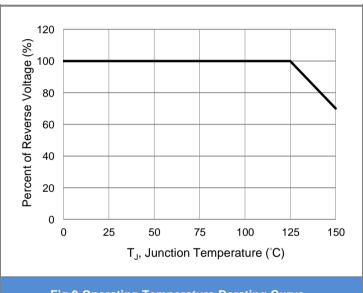


Fig.9 Operating Temperature Derating Curve

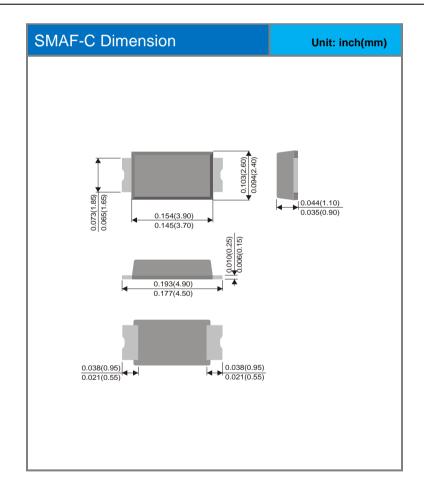


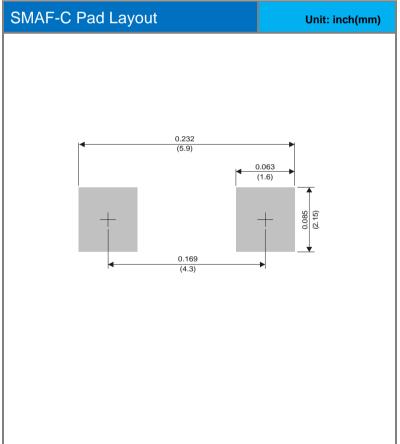


Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
SBA320AFC-AU_R1_000A1	SMAF-C	3K pcs / 7" reel	SBA320	Halogen free
SBA330AFC-AU_R1_000A1	SMAF-C	3K pcs / 7" reel	SBA330	Halogen free
SBA340AFC-AU_R1_000A1	SMAF-C	3K pcs / 7" reel	SBA340	Halogen free

Packaging Information & Mounting Pad Layout









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