



SBA320AFC-AU ~ SBA340AFC-AU Series

Surface Mount Extreme Low Vf Schottky Barrier Rectifier

Voltage

20~40 V

Current

3 A

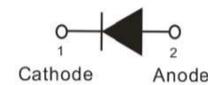
Features

- 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

SMAF-C



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	30	40	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			A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I _{FSM}	50			A
Typical Thermal Resistance <small>(Note 1)</small> <small>(Note 2)</small>	R _{θJA}	150			°C/W
	R _{θJC}	15			
Operating Junction Temperature Range	T _J	-55 to +150			°C
Storage Temperature Range	T _{STG}	-55 to +150			°C

Electrical Characteristics

PARAMETER	SYMBOL	TEST CONDITION	SBA320AFC-AU		SBA330AFC-AU		SBA340AFC-AU		UNITS	
			TYP.	MAX.	TYP.	MAX.	TYP.	MAX.		
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)	I _R	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	T _J = 125 °C	8.6	-	5.6	-	5.1	-	mA
V _R = 30V	-	-		10.7	-	7.6	-			
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



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TYPICAL CHARACTERISTIC CURVES

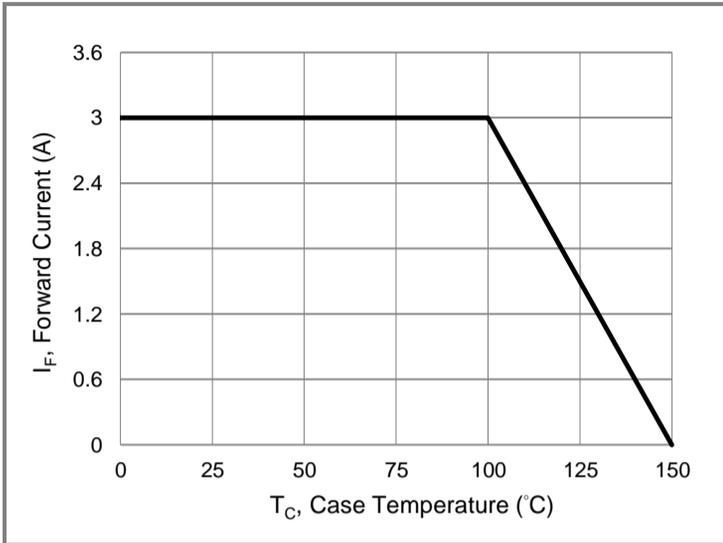


Fig.1 Forward Current Derating Curve

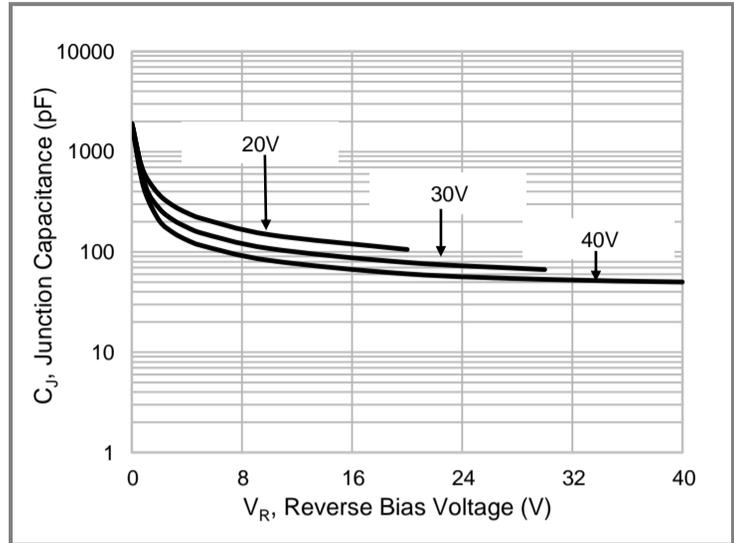


Fig. 2 Typical Junction Capacitance

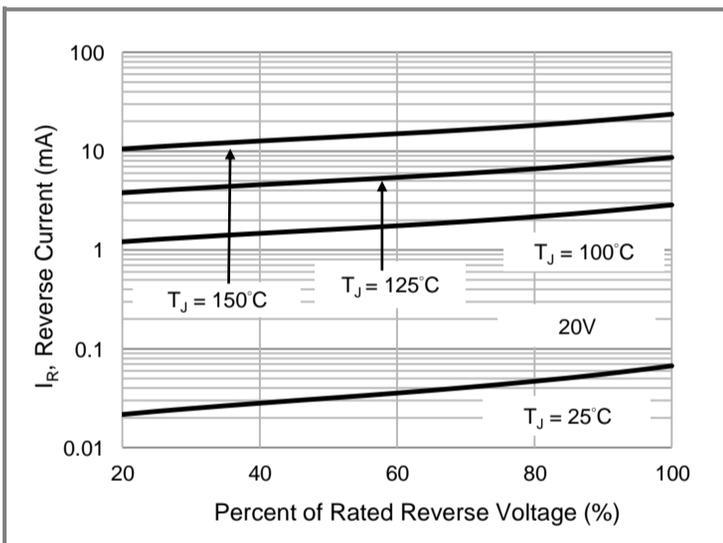


Fig.3 Typical Reverse Characteristics

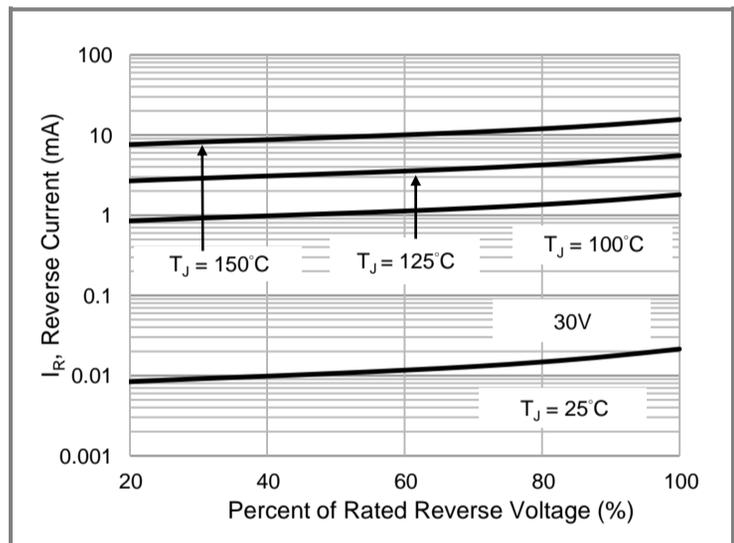


Fig.4 Typical Reverse Characteristics

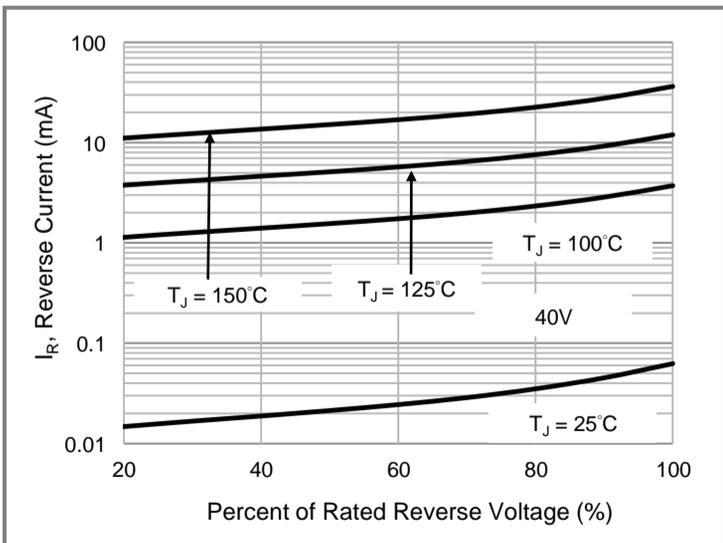


Fig.5 Typical Reverse Characteristics

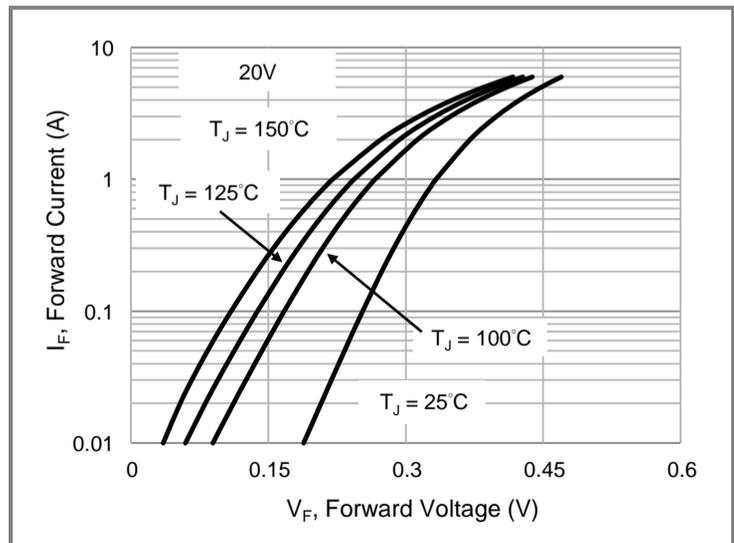


Fig.6 Typical Forward Characteristics



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TYPICAL CHARACTERISTIC CURVES

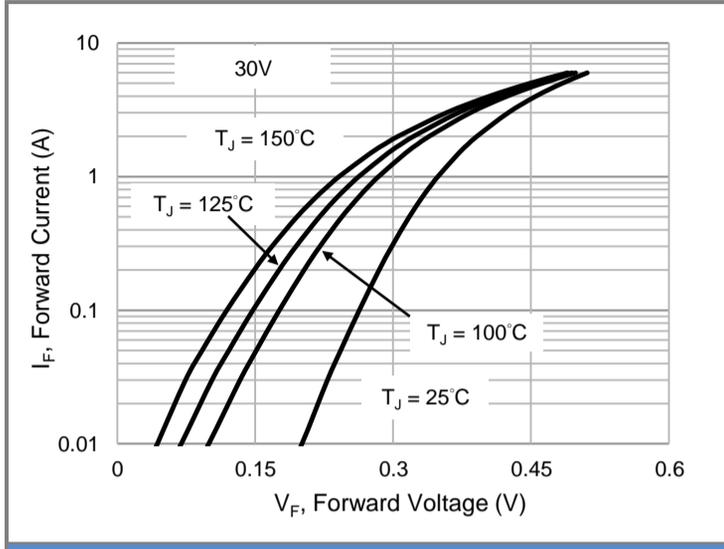


Fig.7 Typical Forward Characteristics

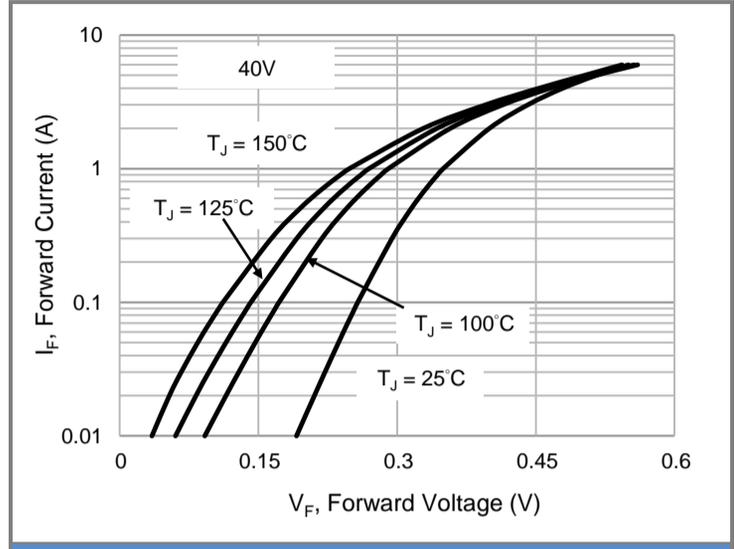


Fig.8 Typical Forward Characteristics

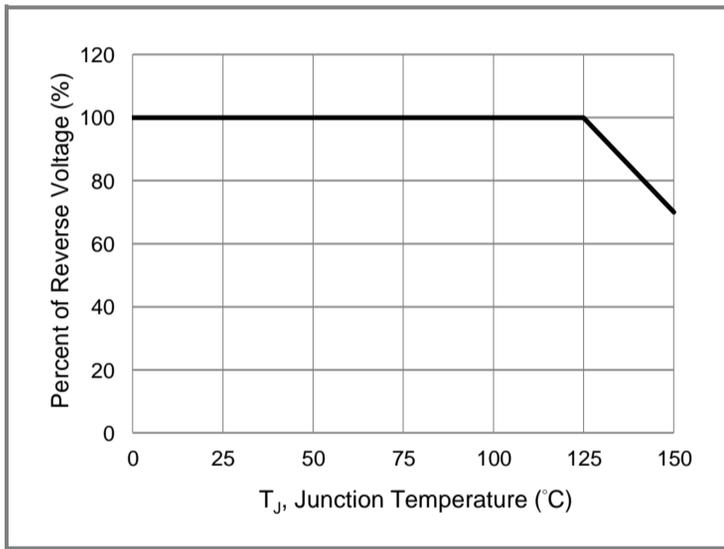


Fig.9 Operating Temperature Derating Curve

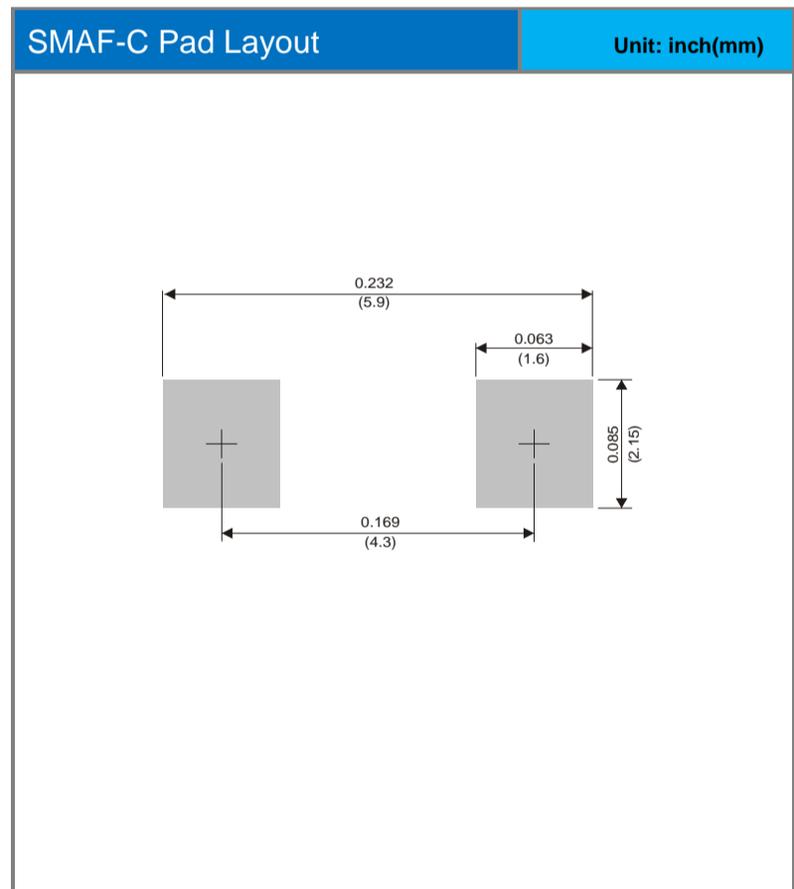
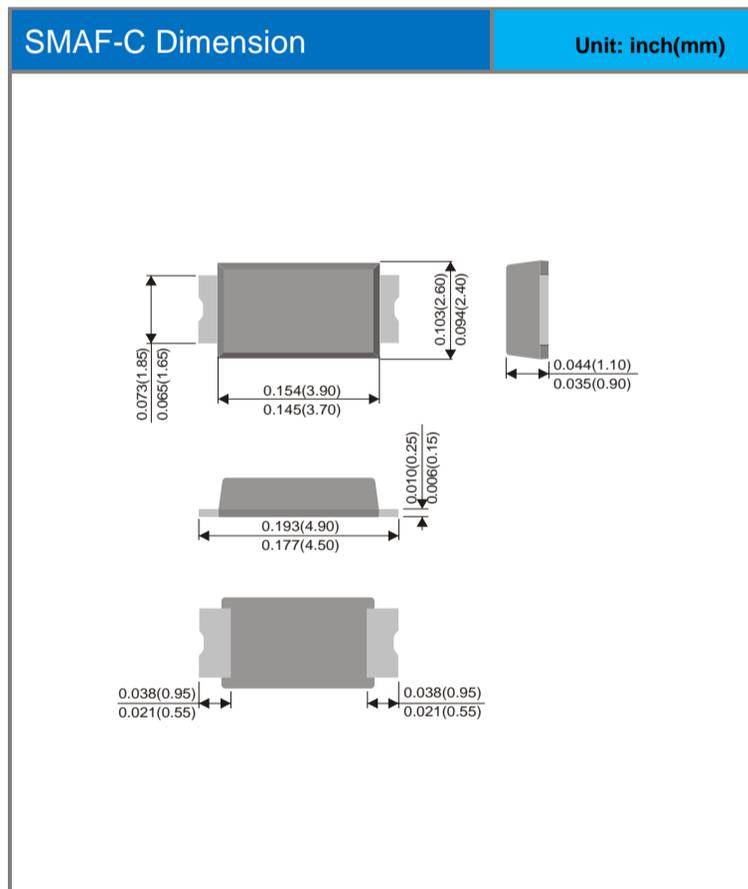


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Part No. Packing Code Version

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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