SBA520AFC-AU / SBA530AFC-AU / SBA540AFC-AU

Surface Mount Extreme Low V_F Schottky Rectifier

Voltage	20-40 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

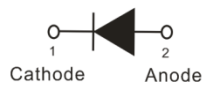
Mechanical Data

- Case : Molded plastic, SMAF-C
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.034 grams

SMAF-C







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

PARAMETER		SYMBOL	SBA520AFC-AU	SBA530AFC-AU	SBA540AFC-AU	UNIT
Maximum repetitive 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		$I_{F(AV)}$	5			A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	80			A
Typical thermal resistance	(Note 1)	$R_{\theta JA}$	150			°C/W
	(Note 2)	$R_{\theta JC}$	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		SBA520AFC-AU		SBA530AFC-AU		SBA540AFC-AU		UNIT
				TYP.	MAX.	TYP.	MAX.	TYP.	MAX.	
Forward voltage	V_F	I_F = 10mA	T_J =25 °C	0.17	-	0.17	-	0.17	-	V
		I_F = 2A		0.34	-	0.35	-	0.36	-	
		I_F = 5A		-	0.45	-	0.46	-	0.49	
		I_F = 10mA	T_J =125 °C	0.04	-	0.04	-	0.05	-	V
		I_F = 2A		0.25	-	0.27	-	0.29	-	
Reverse current	I_R	V_R = 10V	T_J=25°C	47	-	33	-	25	-	μA
		V_R = 20V		-	300	51	-	32	-	
		V_R = 30V		-	-	-	300	55	-	
		V_R = 40V		-	-	-	-	-	250	
		V_R = 20V	T_J =125 °C	21	-	11	-	8	-	mA
		V_R = 30V		-	-	19	-	12	-	
		V_R = 40V		-	-	-	-	19	-	

NOTES : 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.

SBA520AFC-AU / SBA530AFC-AU / SBA540AFC-AU

TYPICAL CHARACTERISTIC CURVES

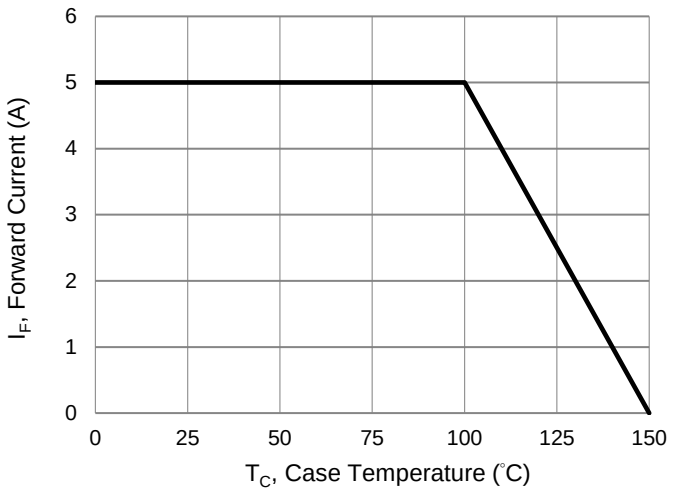


Fig.1 Forward Current Derating Curve

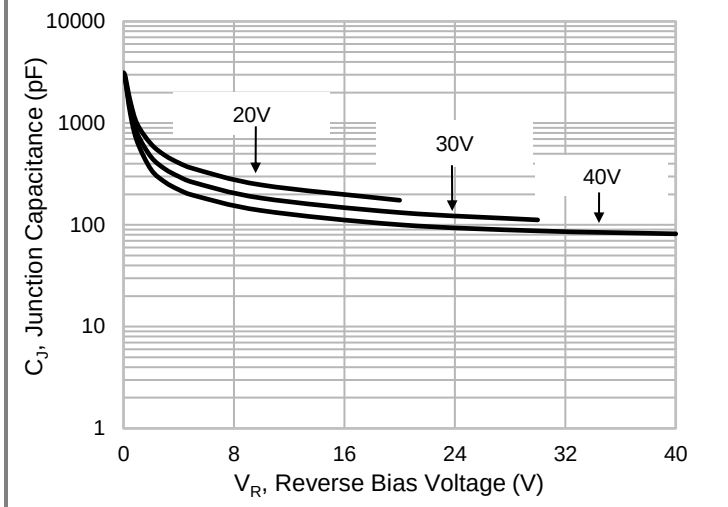


Fig. 2 Typical Junction Capacitance

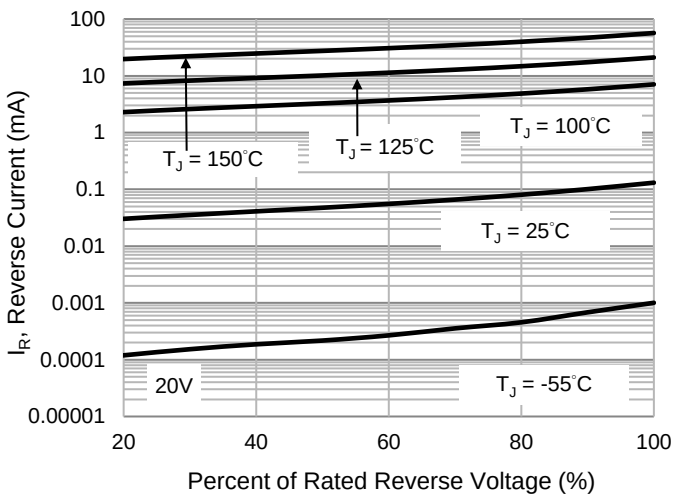


Fig.3 Typical Reverse Characteristics

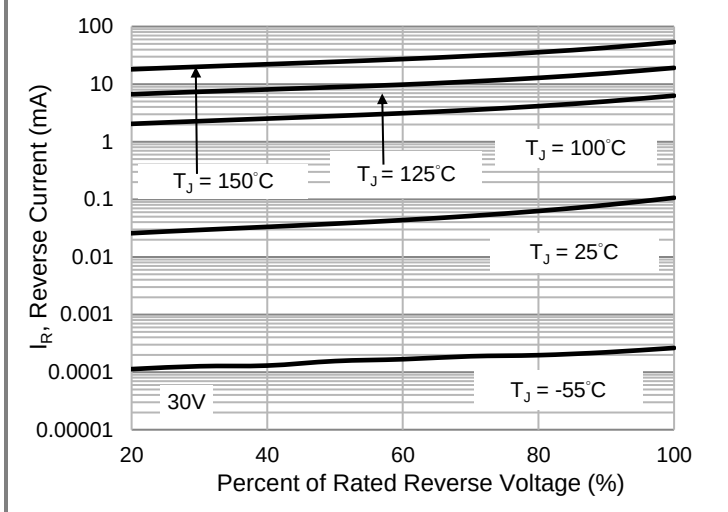


Fig.4 Typical Reverse Characteristics

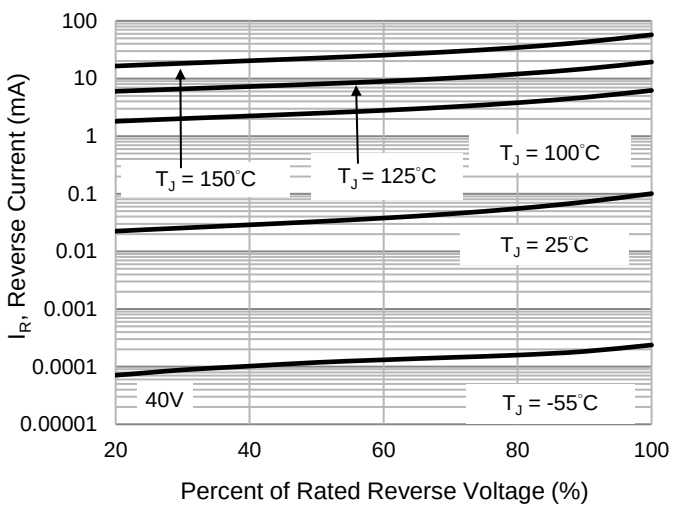


Fig.5 Typical Forward Characteristics

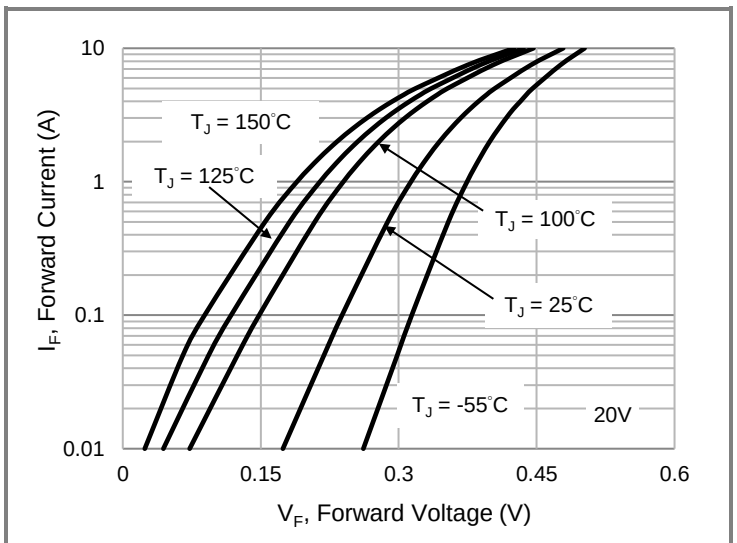


Fig.6 Typical Forward Characteristics

SBA520AFC-AU / SBA530AFC-AU / SBA540AFC-AU

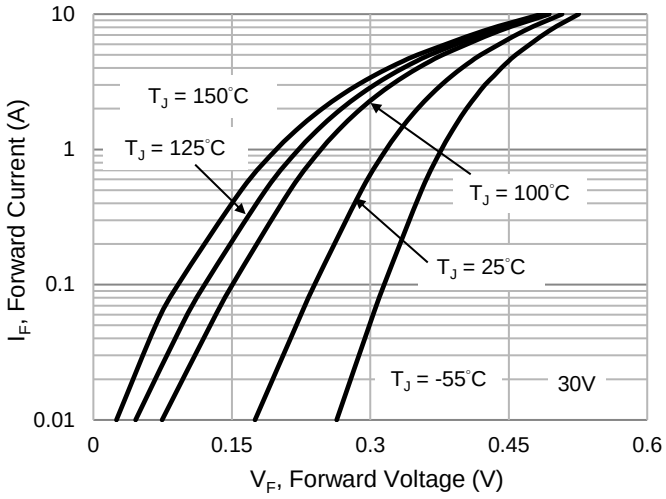


Fig.7 Typical Forward Characteristics

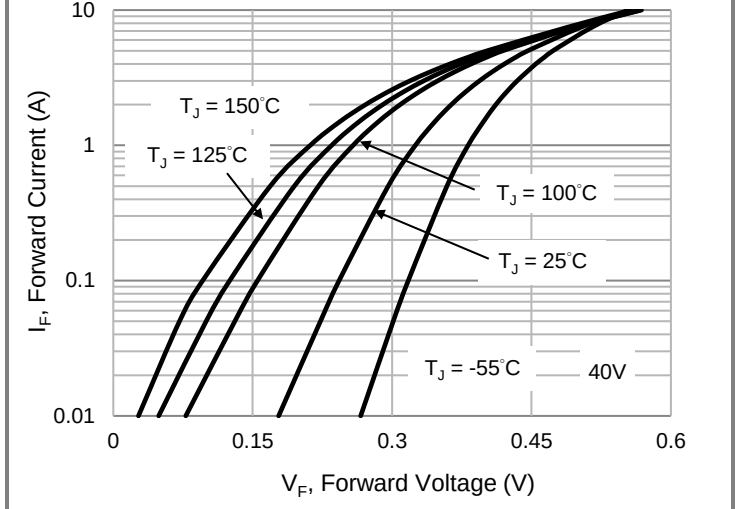


Fig.8 Typical Forward Characteristics

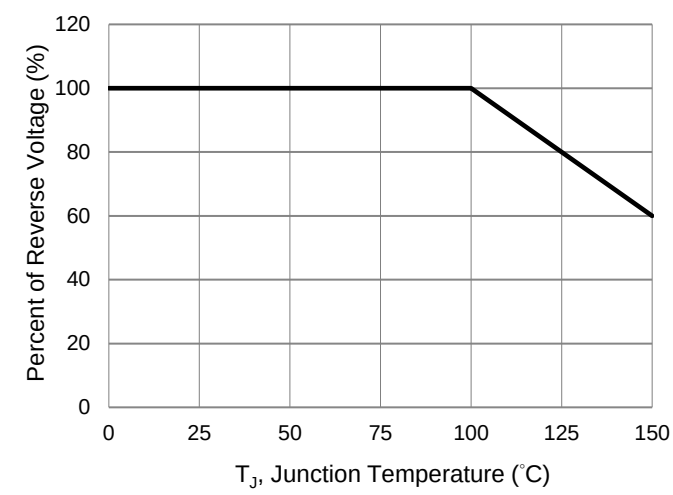


Fig.9 Operating Temperature Derating Curve

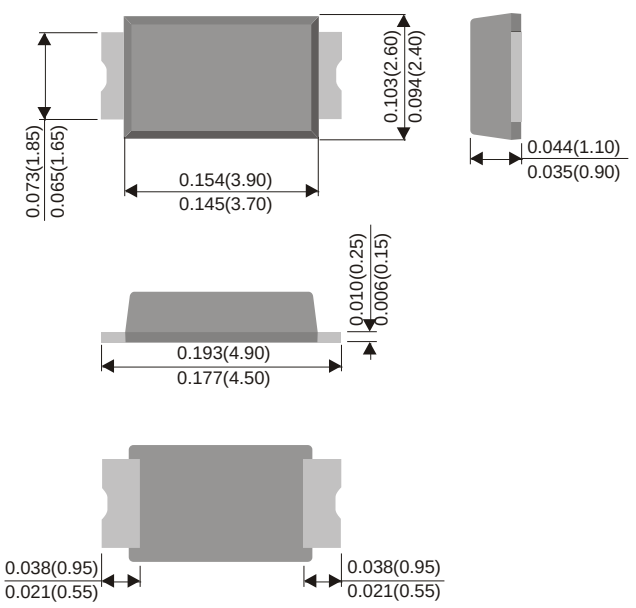
SBA520AFC-AU / SBA530AFC-AU / SBA540AFC-AU

Product and Packing Information

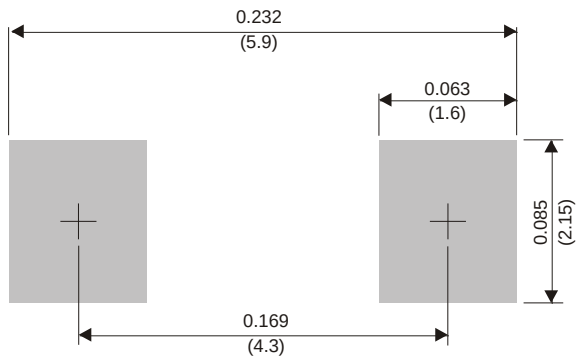
Part No.	Package Type	Packing Type	Marking
SBA520AFC-AU	SMAF-C	3K pcs / 7” reel	SBA520
SBA530AFC-AU	SMAF-C	3K pcs / 7” reel	SBA530
SBA540AFC-AU	SMAF-C	3K pcs / 7” reel	SBA540

Packaging Information & Mounting Pad Layout

SMAF-C Dimension — Unit: inch(mm)



SMAF-C Pad Layout — Unit: inch(mm)



SBA520AFC-AU / SBA530AFC-AU / SBA540AFC-AU

Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from PANJIT International Inc..
- PANJIT International Inc. reserves the rights to make changes of the content herein the document follow PCN procedure. Please refer to our website for the latest document.
- PANJIT International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- PANJIT International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. PANJIT International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed or authorized for equipment relating to human life, life-saving or life-sustaining applications, such as medical instruments and aerospace machinery, or for other applications intended to cause personal injury. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify PANJIT International Inc. for any damages resulting from such improper use or sale. For additional terms and conditions regarding the use of PANJIT products, please refer to the Terms of Use available on the PANJIT website.
- Since PANJIT uses lot number as the tracking base, please provide the lot number for tracking when complaining.