

Low VF Schottky Rectifier

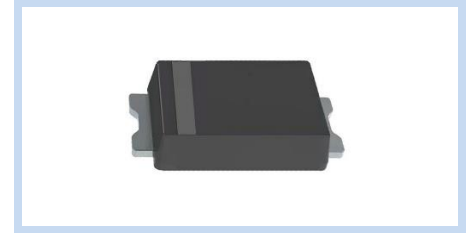
3A 20~40V SMAF

SBA3xxAFC series

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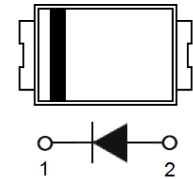
FEATURE

- Ultra Low Forward Voltage Drop
- Low Power Loss, Fast Switching Speed
- Green Molding Compound as per IEC61249 Std
- Applications: Low Voltage Rectification and Polarity Protection



MECHANICAL DATA

- Case: SMAF, Molded Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Band Marking denotes Cathode end



MAXIMUM RATINGS

Parameter	Symbol	SBA320AF	SBA330AF	SBA340AFC	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	$I_{F(AV)}$	3			A
Peak Forward Surge Current	I_{FSM}	50			A
Typical Thermal Resistance	$R_{\theta JA}$	150			$^{\circ}C/W$
Typical Thermal Resistance	$R_{\theta JC}$	15			$^{\circ}C/W$
Operating Junction and Storage Temperature	T_J, T_{STG}	-55 ~ 150			$^{\circ}C$

ELECTRICAL CHARACTERISTICS

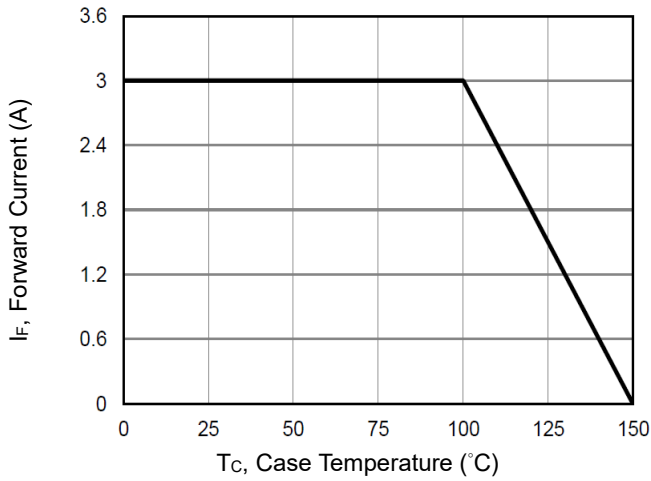
Parameter	Condition	Symbol	SBA320AFC		SBA330AFC		SBA340AFC		Unit
			Typ.	Max.	Typ.	Max.	Typ.	Max.	
Forward Voltage, $T_J=25^{\circ}C$	$I_F=10mA$	V_F	0.19	-	0.19	-	0.21	-	V
	$I_F=1A$		0.32	-	0.33	-	0.35	-	V
	$I_F=3A$		-	0.44	-	0.46	-	0.48	V
Forward Voltage, $T_J=125^{\circ}C$	$I_F=10mA$	V_F	0.05	-	0.06	-	0.06	-	V
	$I_F=1A$		0.24	-	0.26	-	0.27	-	V
Reverse Current, $T_J=25^{\circ}C$	$V_R=10V$	I_R	31	-	18	-	16	-	μA
	$V_R=20V$		-	200	28	-	21	-	μA
	$V_R=30V$		-	-	-	200	35	-	μA
	$V_R=40V$		-	-	-	-	-	150	μA
Reverse Current, $T_J=125^{\circ}C$	$V_R=20V$	I_R	8.6	-	5.6	-	5.1	-	mA
	$V_R=30V$		-	-	10.7	-	7.6	-	mA
	$V_R=40V$		-	-	-	-	12	-	mA

Notes:

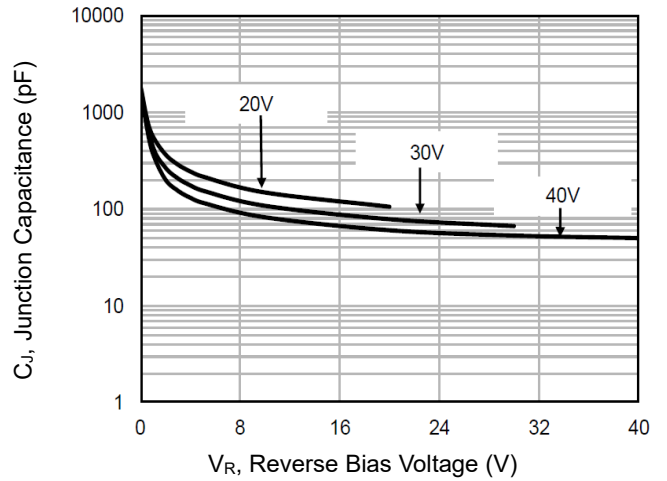
1. $T_A=25^{\circ}C$ unless otherwise noted
2. 8.3ms single half sine-wave superimposed on rated load.
3. Mounted on a FR4 PCB, single-sided copper, mini pad.
4. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area.
5. Short duration pulse test used to minimize self-heating effect.

CHARACTERISTIC CURVES

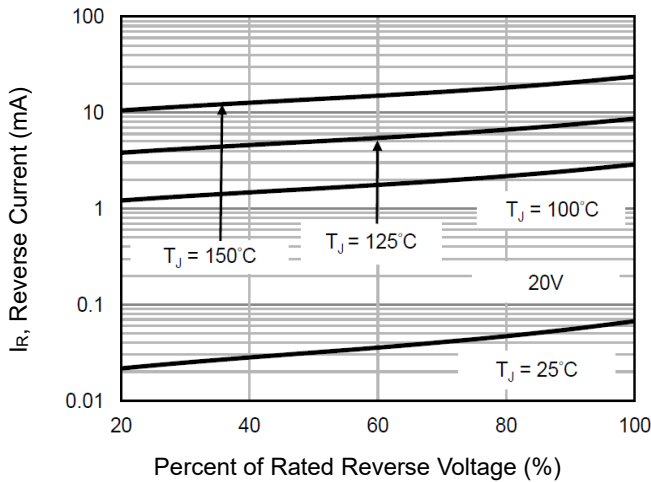
Forward Current Derating Curve



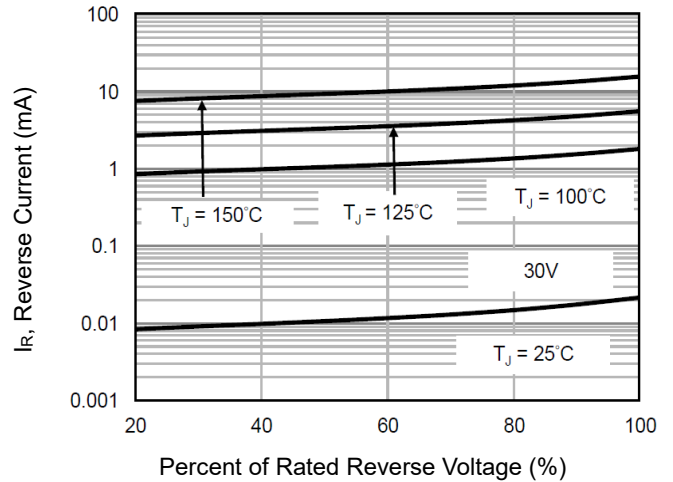
Typical Junction Capacitance



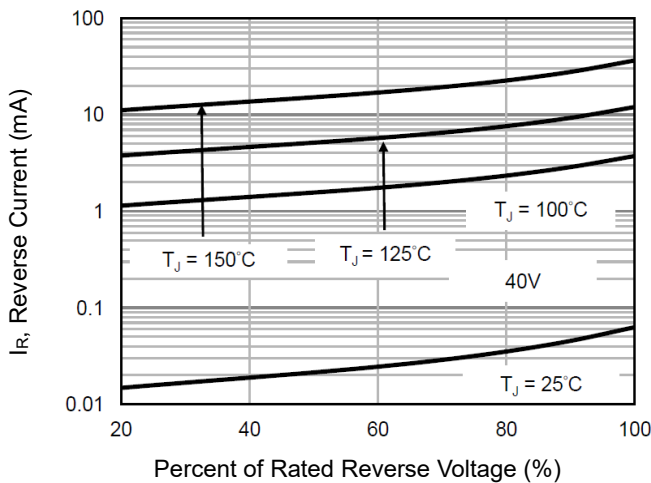
Typical Reverse Characteristics



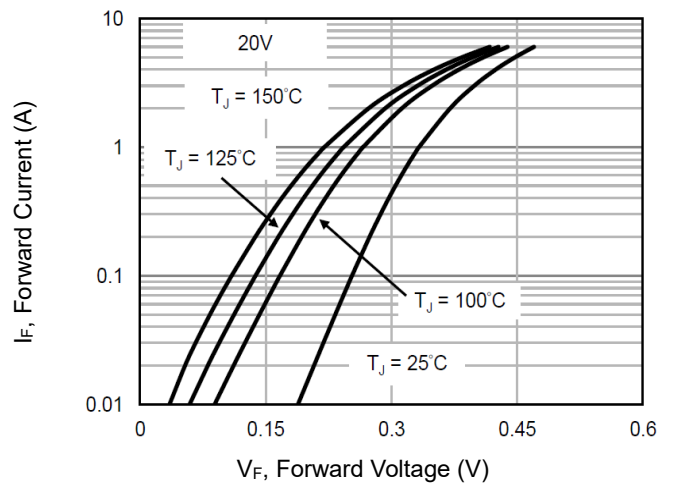
Typical Reverse Characteristics



Typical Reverse Characteristics



Typical Forward Characteristics



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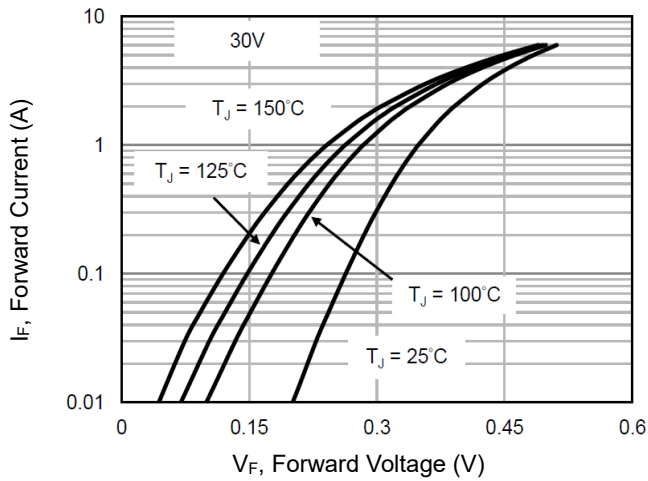
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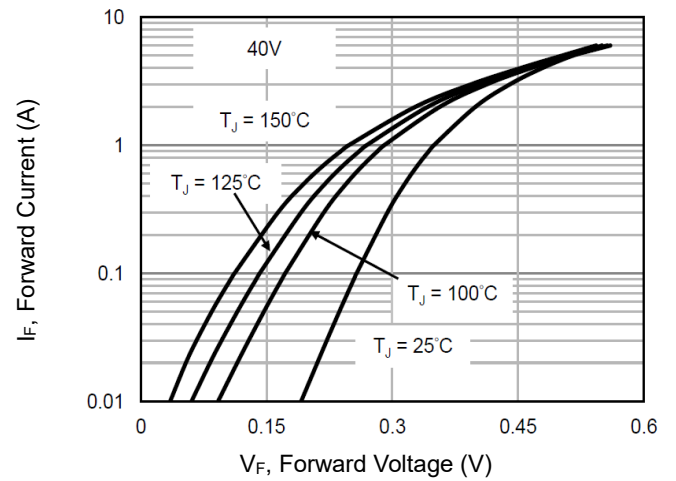
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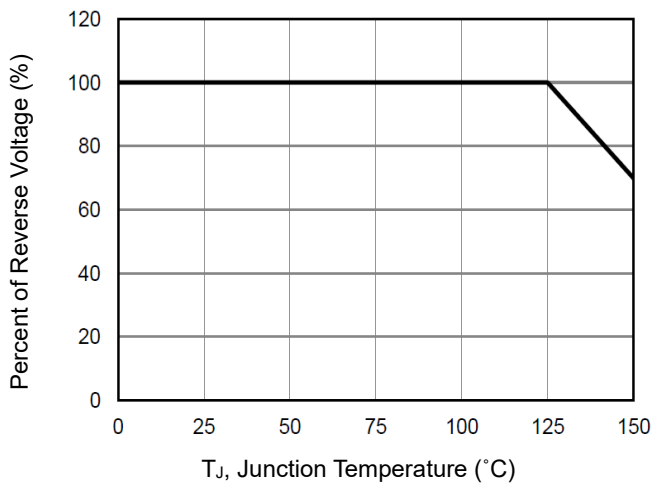
Typical Forward Characteristics



Typical Forward Characteristics



Operating Temperature Derating Curve



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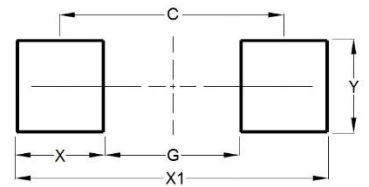
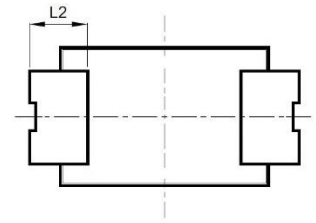
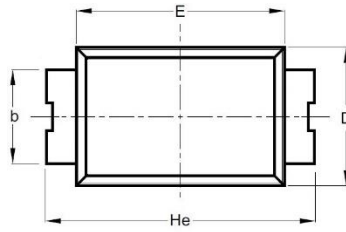
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DIMENSIONS AND RECOMMENDED LAND PATTERN

Item	Min (mm)	Max (mm)
A	0.90	1.10
b	1.65	1.85
c	0.15	0.25
D	2.40	2.60
E	3.70	3.90
He	4.50	4.90
L2	0.55	0.95
C	4.30	
G	1.60	
X	1.60	
X1	5.90	
Y	2.15	



*Specifications subject to change without notice.