

SBA120CS SERIES

EXTREME LOW VF SCHOTTKY RECTIFIER

Voltage

20~40 V

Current

1 A

Features

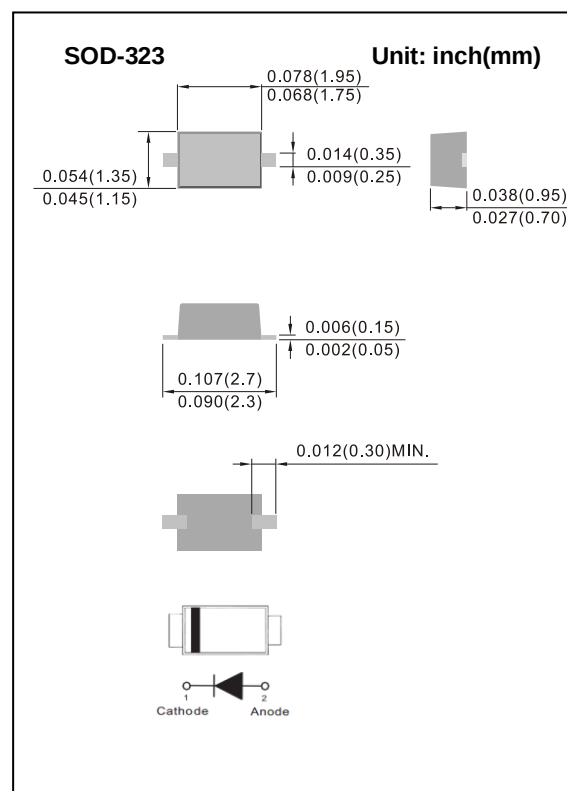
- Ultra low forward voltage , Low Power loss
- Fast switching speed
- Surface mount package
- Ultra thin profile package for space constrained utilization
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

Applications

- Low voltage rectification
- Reverse polarity protection
- Low power consumption applications

Mechanical Data

- Case: Molded plastic, SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.00014 ounces, 0.0041 grams



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

PARAMETER		SYMBOL	SBA120CS	SBA130CS	SBA140CS	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)}	1			A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load		I _{FSM}	8			A
Typical forward voltage at 10mA		V _F	0.22	0.22	0.23	V
Typical forward voltage at 0.5A		V _F	0.35	0.36	0.39	V
Maximum forward voltage at 1A		V _F	0.45	0.47	0.51	V
Maximum dc reverse current at T _J =25 °C		I _R	100			μA
Typical thermal resistance	(Note 1)	R _{θJC}	230			°C/W
	(Note 2)	R _{θJA}	650			
Operating junction temperature range		T _J	-55 to +150			°C
Storage temperature range		T _{STG}	-55 to +150			°C

Note : 1. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area.

2. Mounted on a FR4 PCB, single-sided copper, mini pad.

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TYPICAL CHARACTERISTIC CURVES

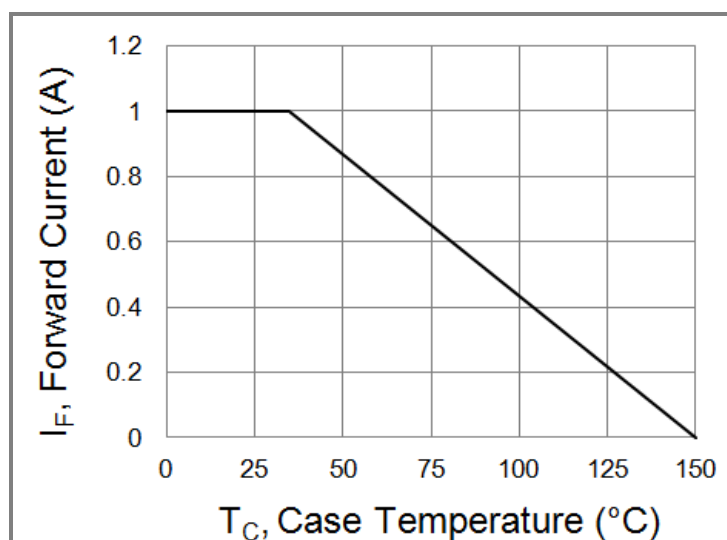


Fig.1 Forward Current Derating Curve

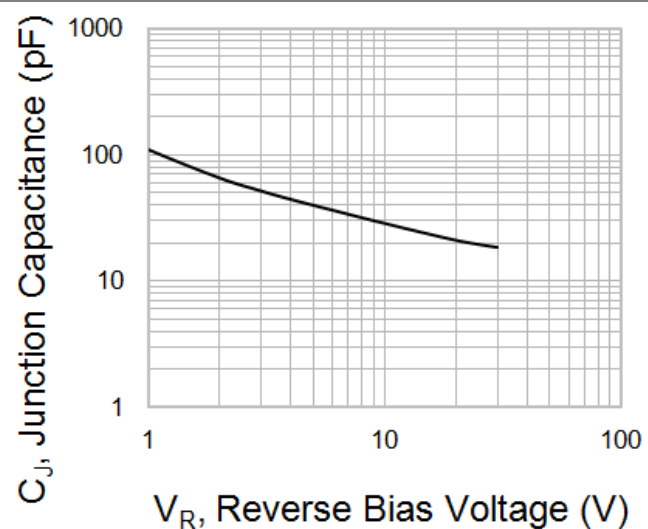


Fig. 2 Typical Junction Capacitance

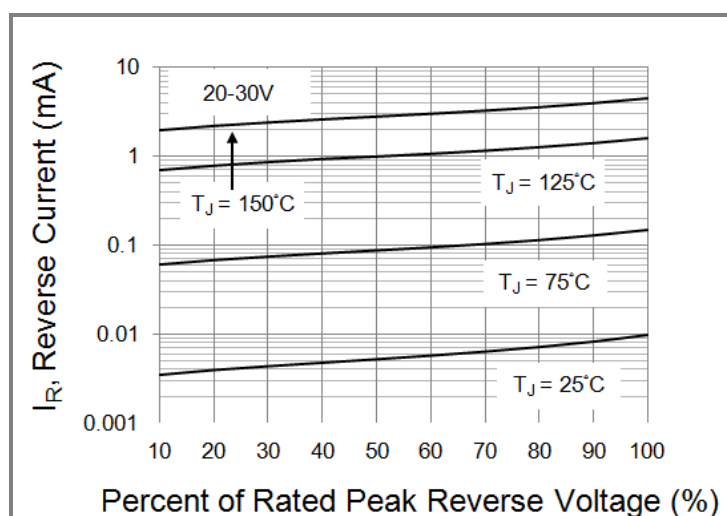


Fig.3 Typical Reverse Characteristics

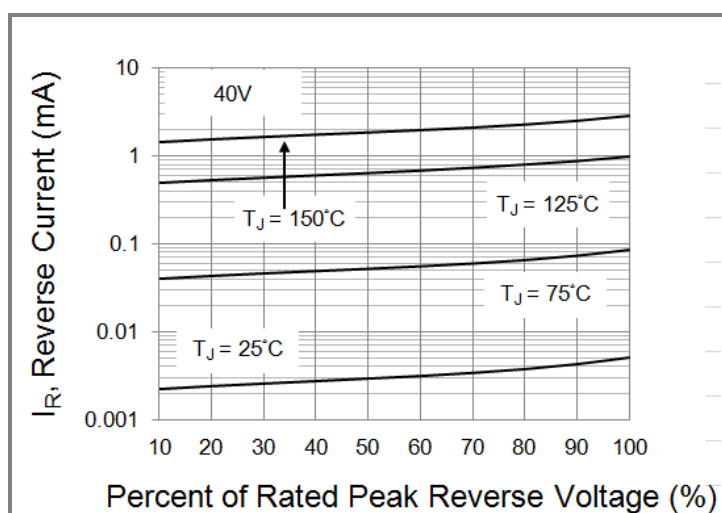


Fig.4 Typical Reverse Characteristics

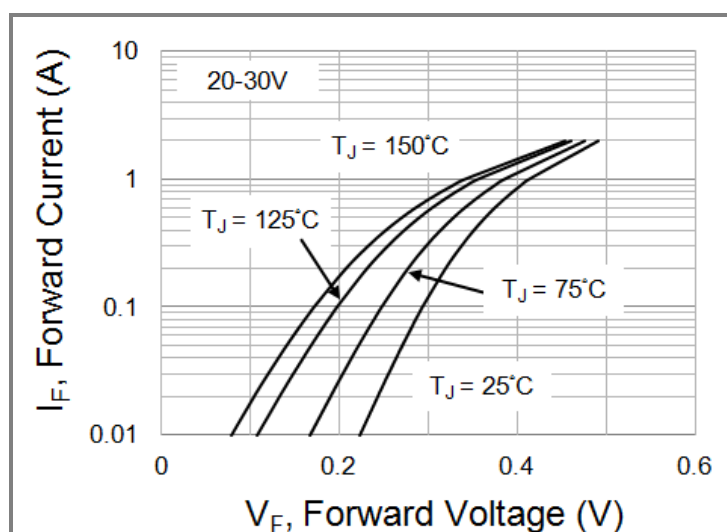


Fig.5 Typical Forward Characteristics

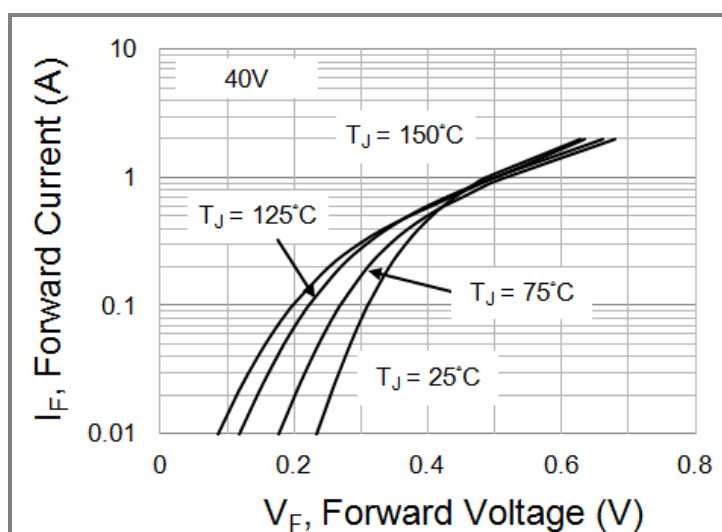
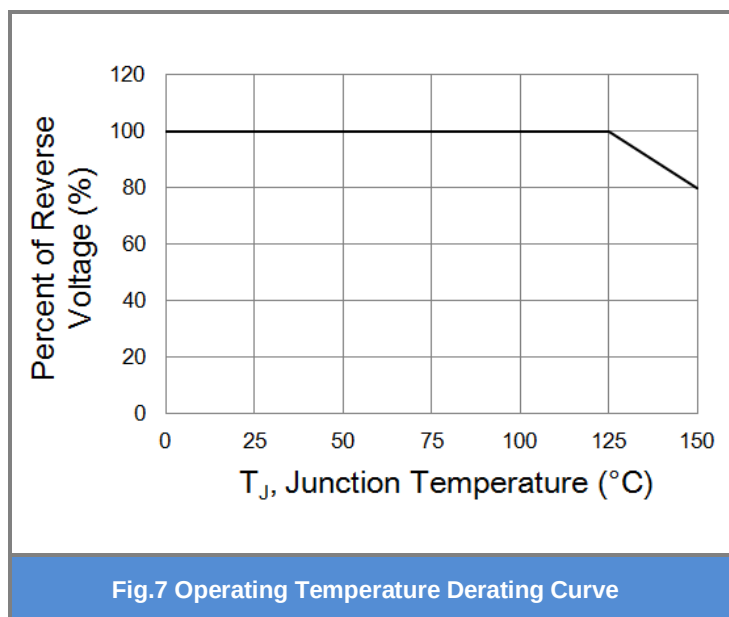


Fig.6 Typical Forward Characteristics

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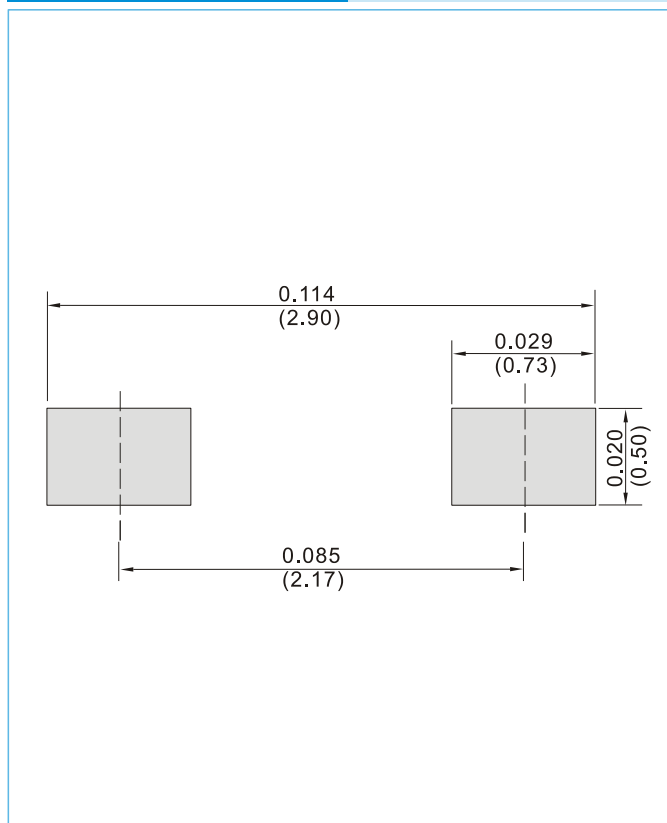
Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SBA120CS_R1_00001	SOD-323	5K pcs / 7" reel	A7	Halogen free
SBA120CS_R2_00001	SOD-323	12K pcs / 13" reel	A7	Halogen free
SBA130CS_R1_00001	SOD-323	5K pcs / 7" reel	B7	Halogen free
SBA130CS_R2_00001	SOD-323	12K pcs / 13" reel	B7	Halogen free
SBA140CS_R1_00001	SOD-323	5K pcs / 7" reel	C7	Halogen free
SBA140CS_R2_00001	SOD-323	12K pcs / 13" reel	C7	Halogen free

Mounting Pad Layout

SOD-323

Unit : inch(mm)



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