

SB140AS-AU

Very Low V_F Schottky Rectifier

Voltage

40 V

Current

1 A

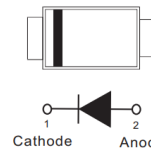
Features

- Very low forward voltage drop
- Fast switching speed
- Surface mount package ideally suited for automatic insertion
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : SOD-123 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0104 grams

SOD-123



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

PARAMETER	SYMBOL	LIMIT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS Voltage	V_{RMS}	28	V
Maximum DC Blocking Voltage	V_{DC}	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 Thermal Resistance	(Note 1) $R_{\theta JL}$	200	$^\circ\text{C/W}$
	(Note 1) $R_{\theta JC}$	100	
	(Note 2) $R_{\theta JA}$	510	
Operating Junction Temperature Range	T_J	-55~150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55~150	$^\circ\text{C}$

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Electrical Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V _F	I _F = 10 mA	-	0.29	0.34	V
		I _F = 0.5 A	-	0.45	0.50	
		I _F = 1A	-	0.53	0.54	
	V _F	I _F = 10 mA	-	0.14	-	V
		I _F = 0.5 A	-	0.37	-	
Reverse Current ^(Note 3)	I _R	V _R = 20V	-	0.8	20	uA
		V _R = 40V	-	2.7	50	
	I _R	V _R = 20 V	-	1.0	-	mA
		V _R = 40 V	-	2.1	-	

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, with 100cm² copper pad area.
2. Mounted on a FR4 PCB, single-sided copper, standard footprint.
3. Short duration pulse test used to minimize self-heating effect.

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TYPICAL CHARACTERISTIC CURVES

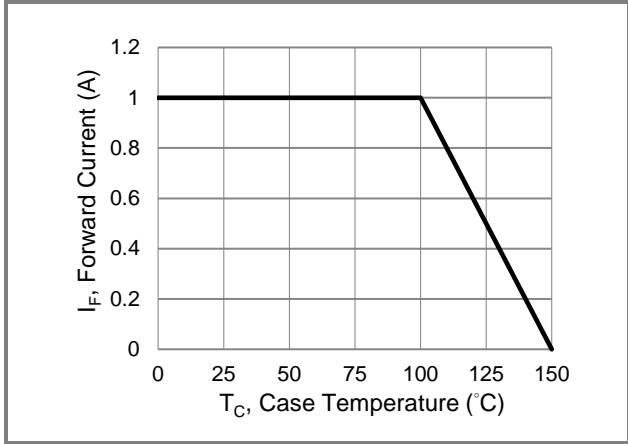


Fig.1 Forward Current Derating Curve

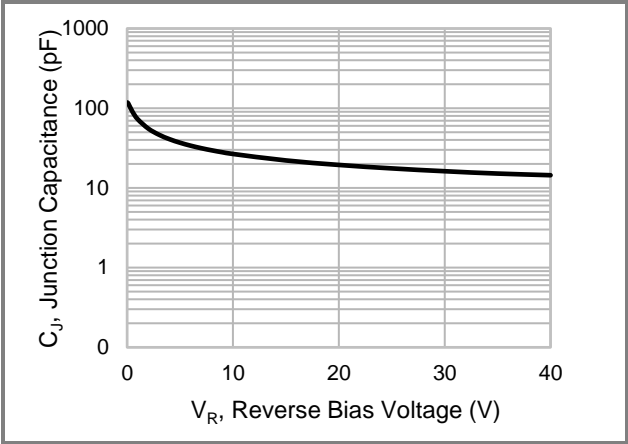


Fig.2 Typical Junction Capacitance

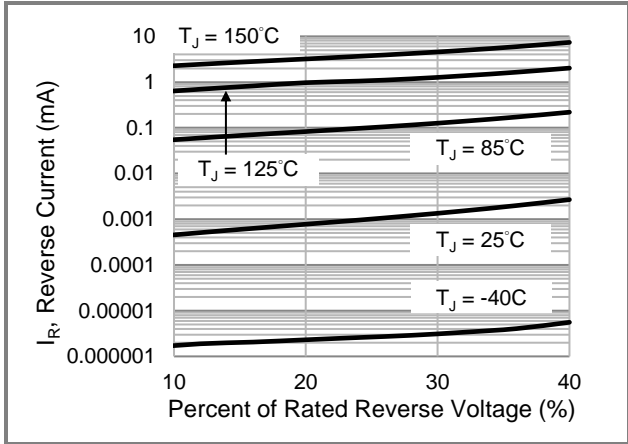


Fig.3 Typical Reverse Characteristics

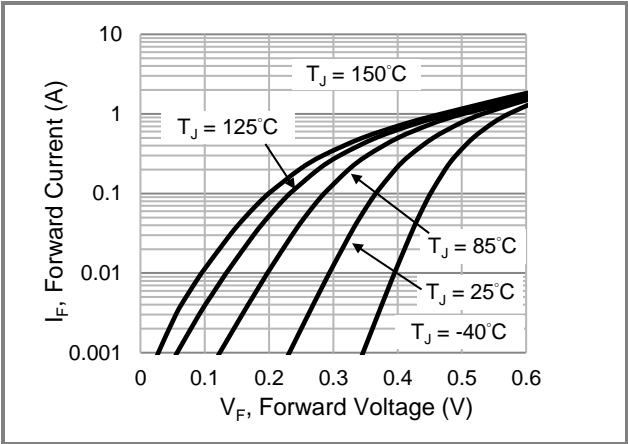


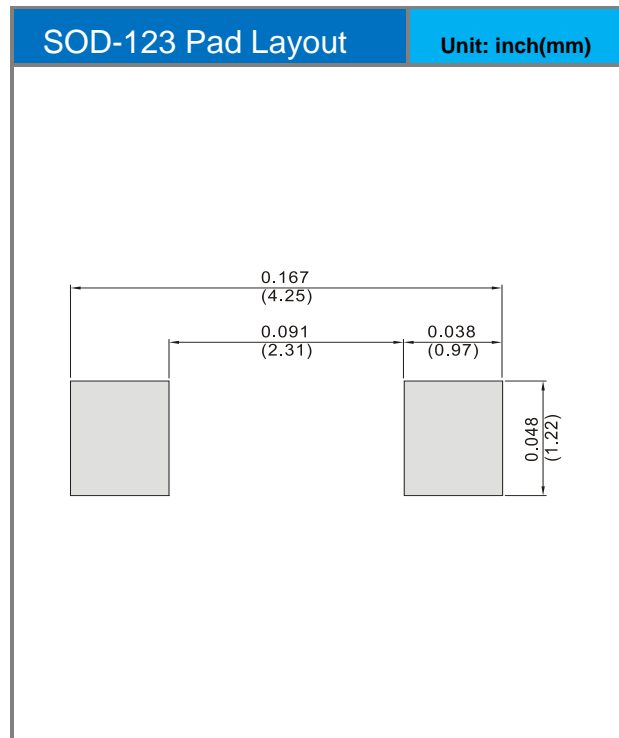
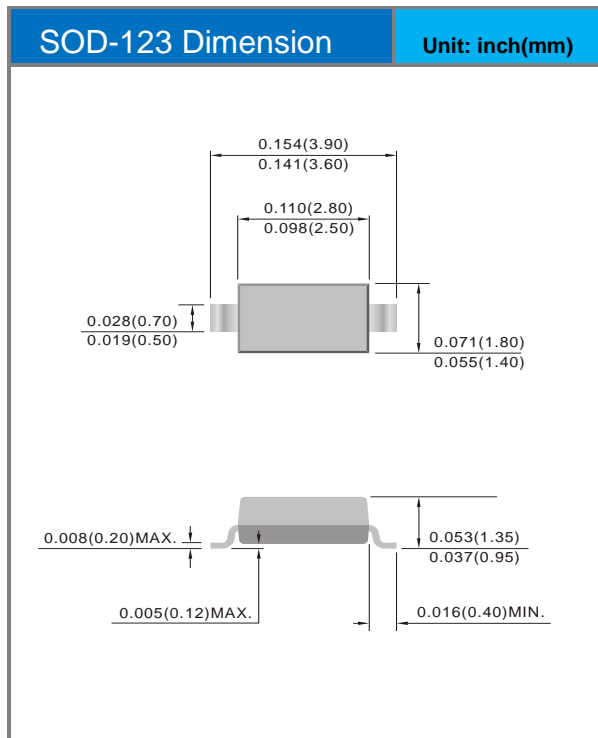
Fig.4 Typical Forward Characteristics

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB140AS-AU	SOD-123	3K pcs / 7" reel	GV

Packaging Information & Mounting Pad Layout



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