

# SB140CH-AU

## Surface Mount Very Low $V_F$ Schottky Rectifier

**Voltage**

**40 V**

**Current**

**1 A**

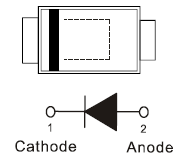
### Features

- 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-323HE Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.005 grams

### SOD-323HE



## 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) $R_{\theta JL}$	80	$^\circ\text{C/W}$
	(Note 1) $R_{\theta JC}$	60	
	(Note 2) $R_{\theta JA}$	300	
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<sub>A</sub> = 25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNIT
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 10 mA	T <sub>J</sub> = 25 °C	-	0.29	0.34	V
		I <sub>F</sub> = 0.5 A		-	0.45	0.50	
		I <sub>F</sub> = 1A		-	0.53	0.54	
	V <sub>F</sub>	I <sub>F</sub> = 10 mA	T <sub>J</sub> = 125 °C	-	0.14	-	V
		I <sub>F</sub> = 0.5 A		-	0.37	-	
Reverse Current <sup>(Note 3)</sup>	I <sub>R</sub>	V <sub>R</sub> = 20V	T <sub>J</sub> = 25 °C	-	0.8	20	uA
		V <sub>R</sub> = 40V		-	2.7	50	
	I <sub>R</sub>	V <sub>R</sub> = 20 V	T <sub>J</sub> = 125 °C	-	1.0	-	mA
		V <sub>R</sub> = 40 V		-	2.1	-	

**NOTES :**

1. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> 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

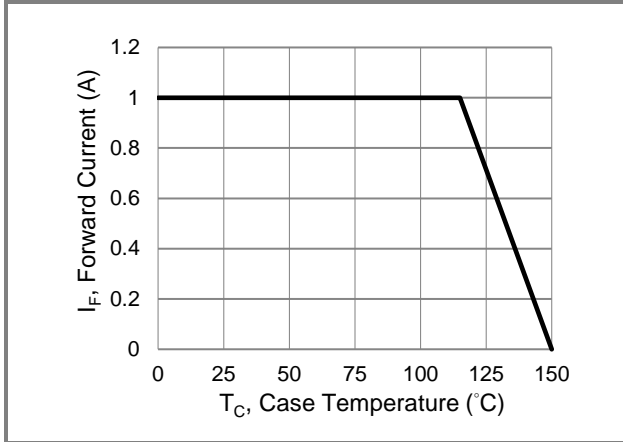


Fig.1 Forward Current Derating Curve

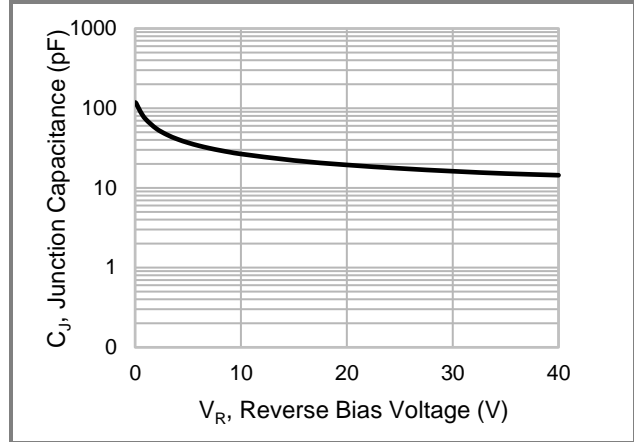


Fig.2 Typical Junction Capacitance

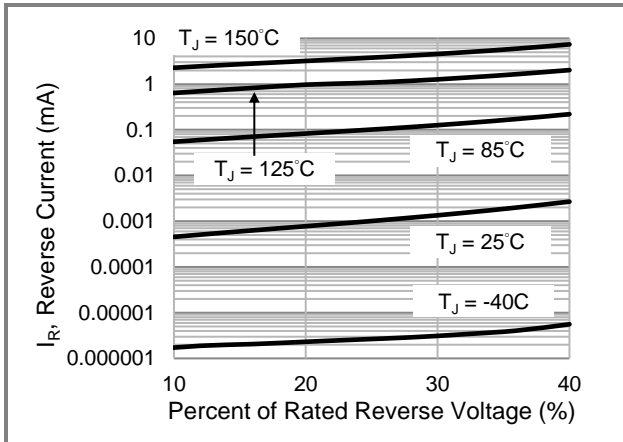


Fig.3 Typical Reverse Characteristics

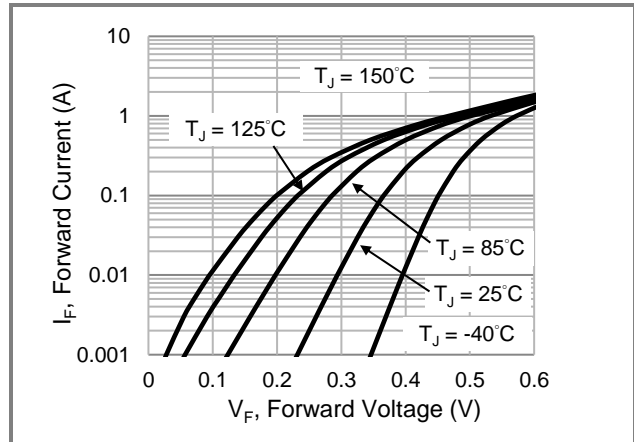


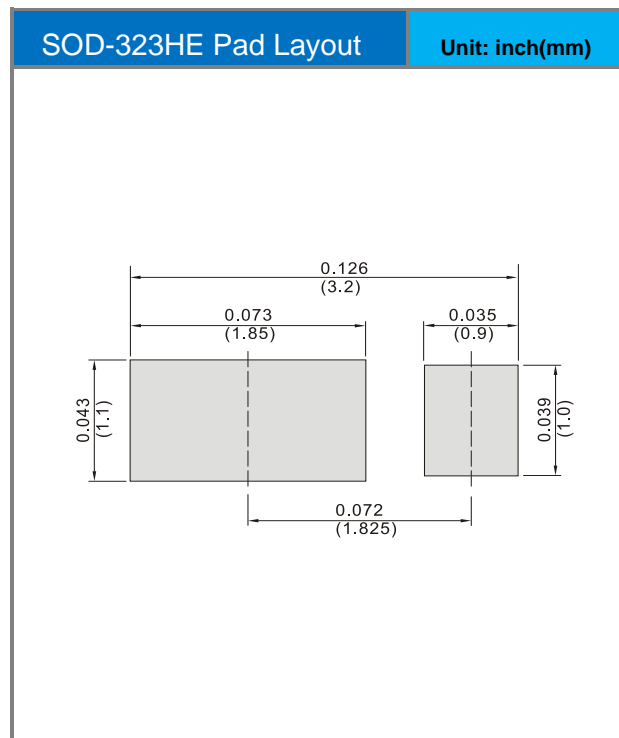
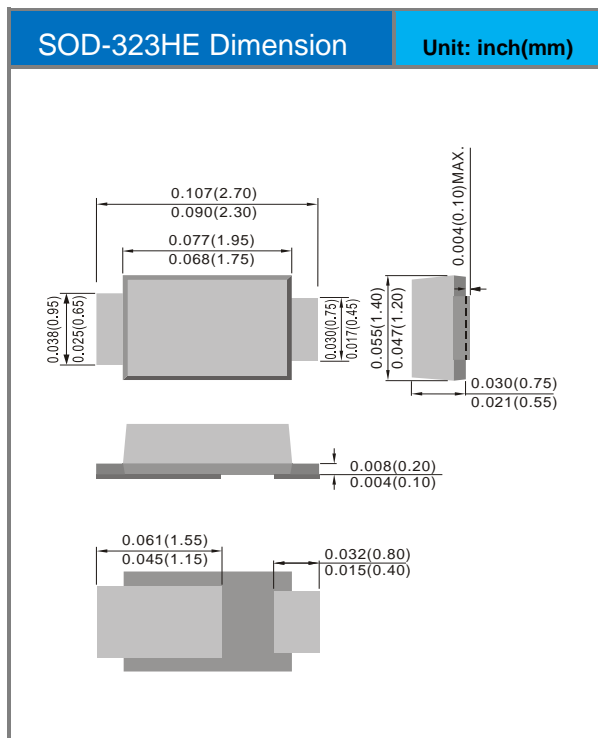
Fig.4 Typical Forward Characteristics

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## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB140CH-AU	SOD-323HE	5K pcs / 7" reel	AHC

## Packaging Information & Mounting Pad Layout



## **SB140CH-AU**

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