



# SB1A40CH

## SCHOTTKY BARRIER RECTIFIER

**Voltage**

**40 V**

**Current**

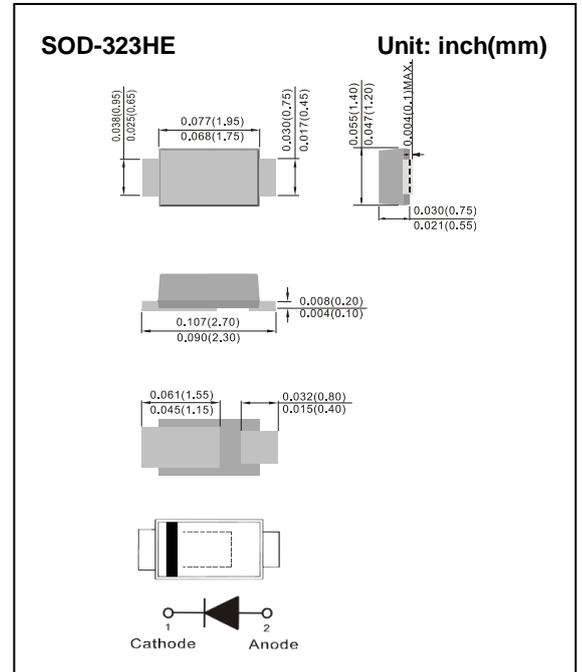
**1.5 A**

### Features

- Low forward voltage drop, low reverse current
- High Efficiency
- Low thermal resistance
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### Mechanical Data

- Case: SOD-323HE Molded Plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Weight: 0.0002 ounces, 0.005 grams



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

PARAMETER	SYMBOL	LIMIT	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	V
Maximum rms voltage	$V_{RMS}$	28	V
Maximum dc blocking voltage	$V_R$	40	V
Maximum average forward rectified current	$I_{F(AV)}$	1.5	A
Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	22	A
Typical thermal resistance	(Note 2) $R_{\theta JC}$	35	$^{\circ}\text{C/W}$
	(Note 2) $R_{\theta JL}$	30	
	(Note 1) $R_{\theta JA}$	300	
Operating junction temperature range	$T_J$	-55 to +150	$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$

Note : 1. Mounted on a FR4 PCB, single-sided copper, mini pad.

2. Mounted on a FR4 PCB, single-sided copper, with  $100\text{cm}^2$  copper pad area



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

PARAMETER	SYMBOL	TEST CONDITION		MIN.	TYP.	MAX.	UNITS
Breakdown voltage	$V_{BR}$	$I_R=0.5\text{mA}$	$T_J=25^{\circ}\text{C}$	40	-	-	V
Instantaneous forward voltage	$V_F$	$I_F=0.7\text{A}$	$T_J=25^{\circ}\text{C}$	-	0.49	-	V
		$I_F=1.5\text{A}$		-	0.56	0.62	V
		$I_F=0.7\text{A}$	$T_J=125^{\circ}\text{C}$	-	0.40	-	V
		$I_F=1.5\text{A}$		-	0.51	-	V
Reverse current	$I_R$	$V_R=32\text{V}$	$T_J=25^{\circ}\text{C}$	-	0.8	-	$\mu\text{A}$
		$V_R=40\text{V}$	$T_J=25^{\circ}\text{C}$	-	-	50	$\mu\text{A}$
			$T_J=125^{\circ}\text{C}$	-	0.8	-	$\text{mA}$



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## TYPICAL CHARACTERISTIC CURVES

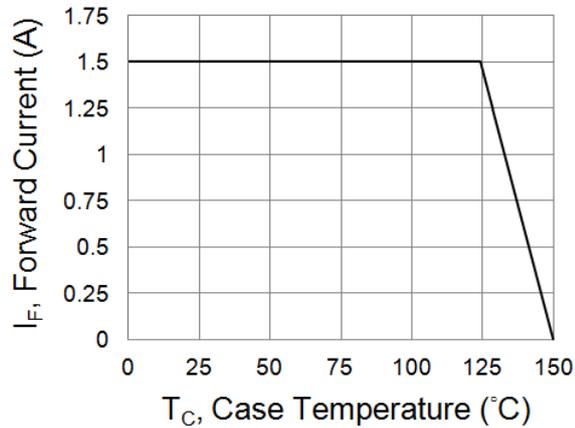


Fig.1 Forward Current Derating Curve

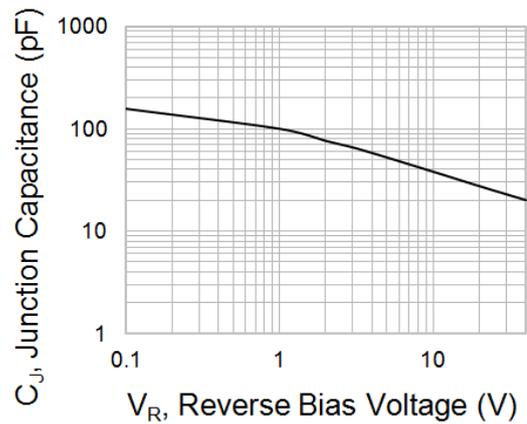


Fig.2 Typical Junction Capacitance

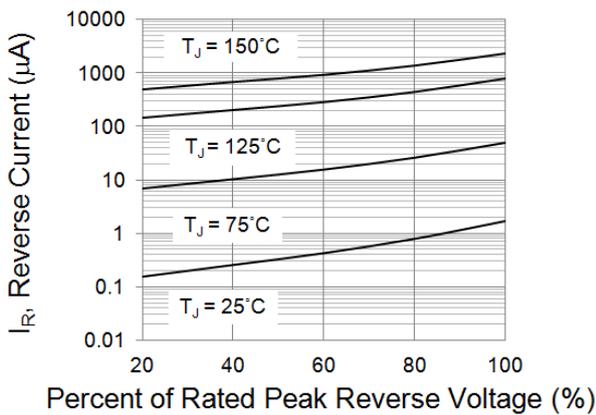


Fig.3 Typical Reverse Characteristics

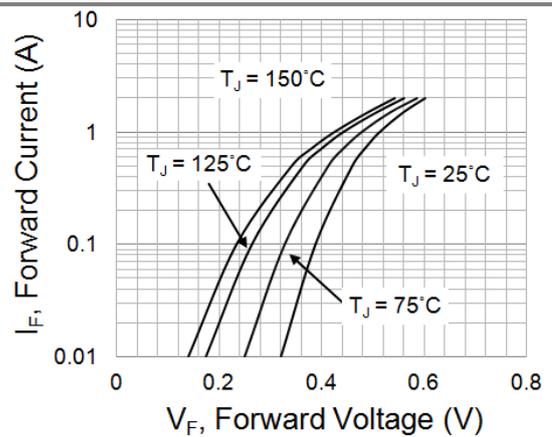


Fig.4 Typical Forward Characteristics

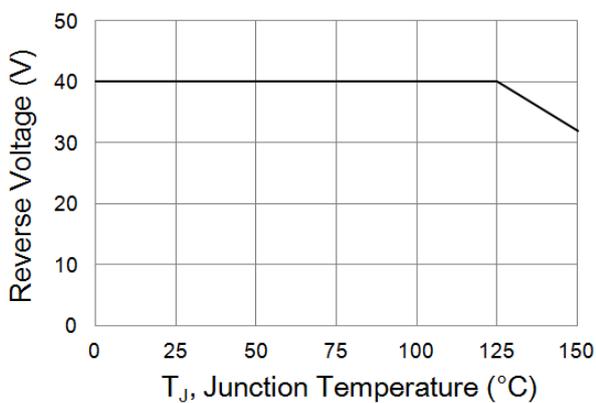


Fig.5 Operating Temperature Derating Curve



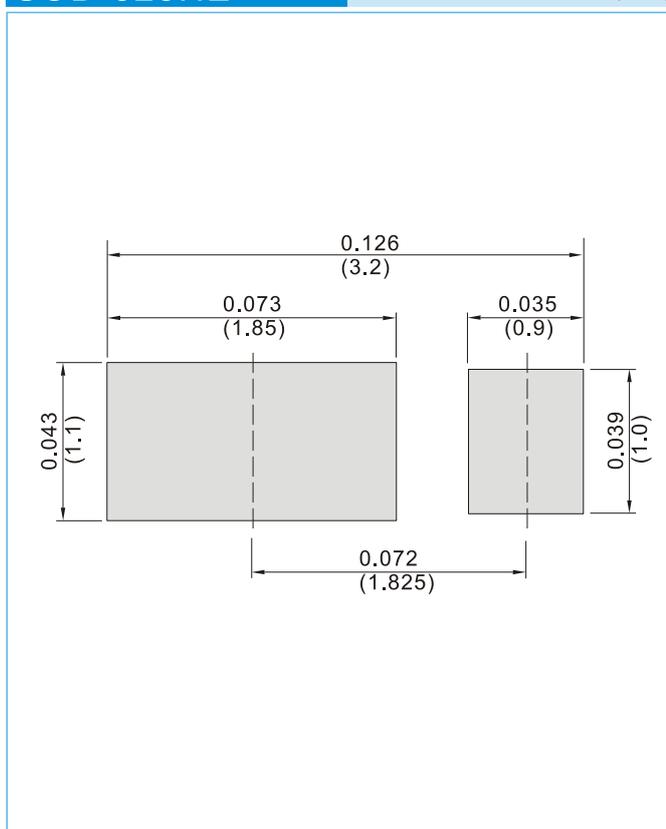
# SB1A40CH

## Part No Packing Code Version

Part No Packing Code	Package Type	Packing Type	Marking	Version
SB1A40CH_R1_00001	SOD-323HE	5K pcs / 7" reel	4HE	Halogen free
SB1A40CH_R2_00001	SOD-323HE	12K pcs / 13" reel	4HE	Halogen free

## Mounting Pad Layout

**SOD-323HE** Unit : inch(mm)





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