

# SB640CD

## Surface Mount Schottky Barrier Rectifier

<b>Voltage</b>	<b>40 V</b>	<b>Current</b>	<b>6 A</b>
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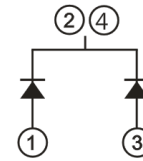
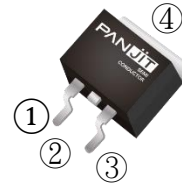
### Features

- Low power loss, high efficiency
- High surge current capability
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case : TO-252AA Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.3217 grams

### TO-252AA



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Repetitive Peak Reverse Voltage		V <sub>RRM</sub>	40	V
Maximum RMS Voltage		V <sub>RMS</sub>	28	V
Maximum DC Blocking Voltage		V <sub>DC</sub>	40	V
Maximum Average Forward Current	per device	I <sub>F(AV)</sub>	6	A
	per diode		3	
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load Per Diode		I <sub>FSM</sub>	80	A
Typical Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 4 V		C <sub>J</sub>	160	pF
Typical Thermal Resistance Per Diode	(Note 1)	R <sub>θJA</sub>	50	°C/W
	(Note 2)	R <sub>θJC</sub>	6	
	(Note 2)	R <sub>θJL</sub>	5.3	
Operating Junction Temperature Range		T <sub>J</sub>	-55~150	°C
Storage Temperature Range		T <sub>STG</sub>	-55~150	°C

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

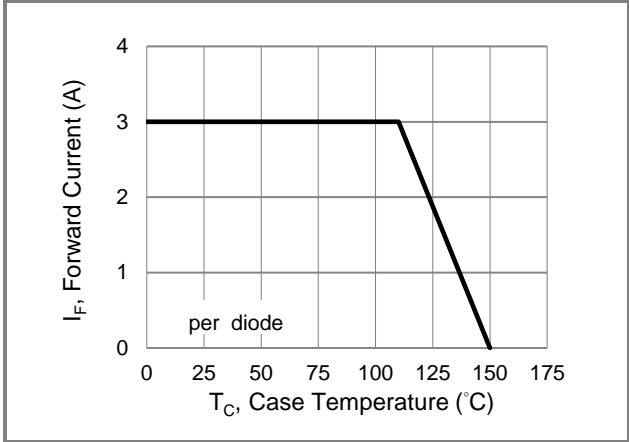
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage Per Diode	$V_F$	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.4	-	V
		$I_F = 2\text{ A}, T_J = 25^\circ\text{C}$	-	0.45	-	
		$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.49	0.54	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.3	-	
		$I_F = 2\text{ A}, T_J = 125^\circ\text{C}$	-	0.37	-	
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.43	-	
Reverse Current Per Diode	$I_R$	$V_R = 32\text{ V}, T_J = 25^\circ\text{C}$	-	5.5	-	$\mu\text{A}$
		$V_R = 40\text{ V}, T_J = 25^\circ\text{C}$	-	8.6	200	
		$V_R = 40\text{ V}, T_J = 125^\circ\text{C}$	-	6.3	-	mA

NOTES :

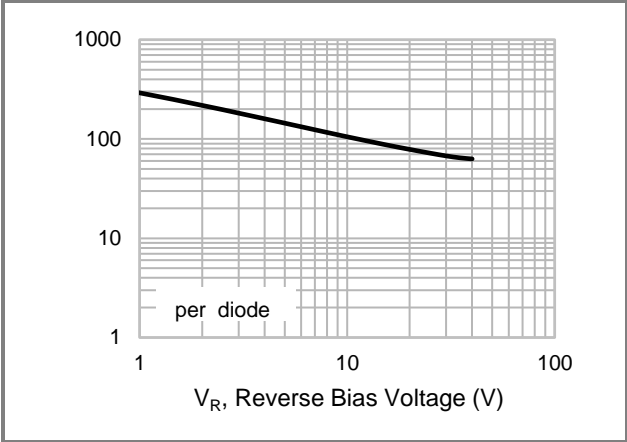
1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm<sup>2</sup> copper pad area

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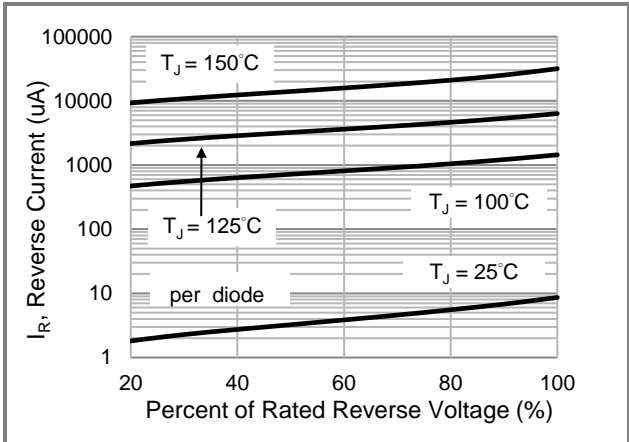
## TYPICAL CHARACTERISTIC CURVES



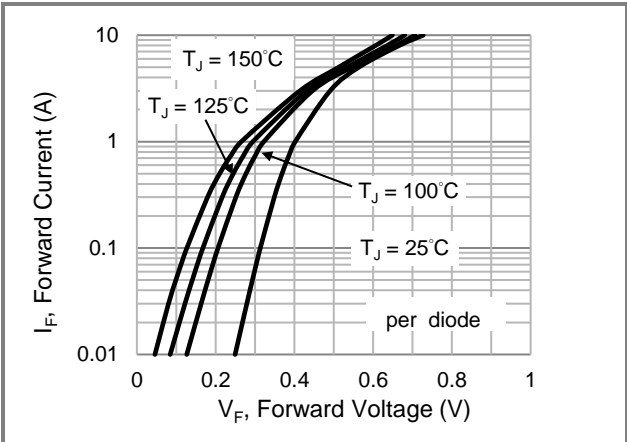
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



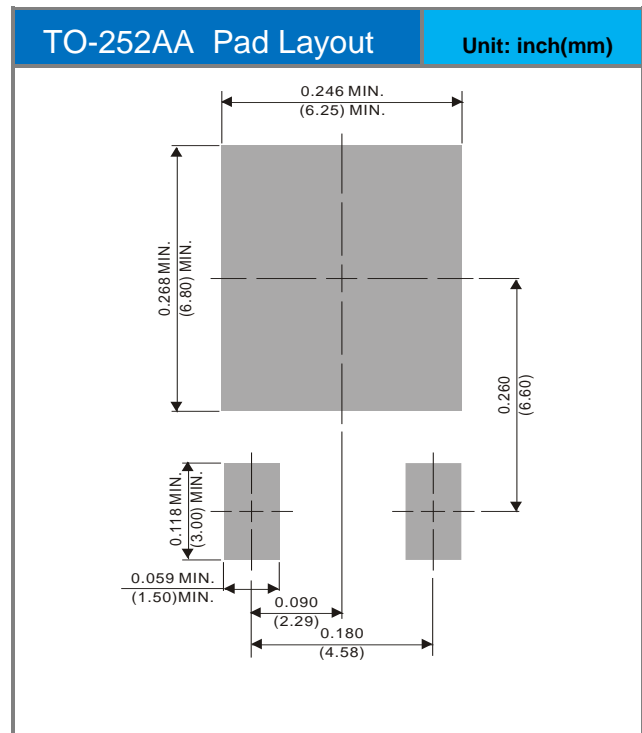
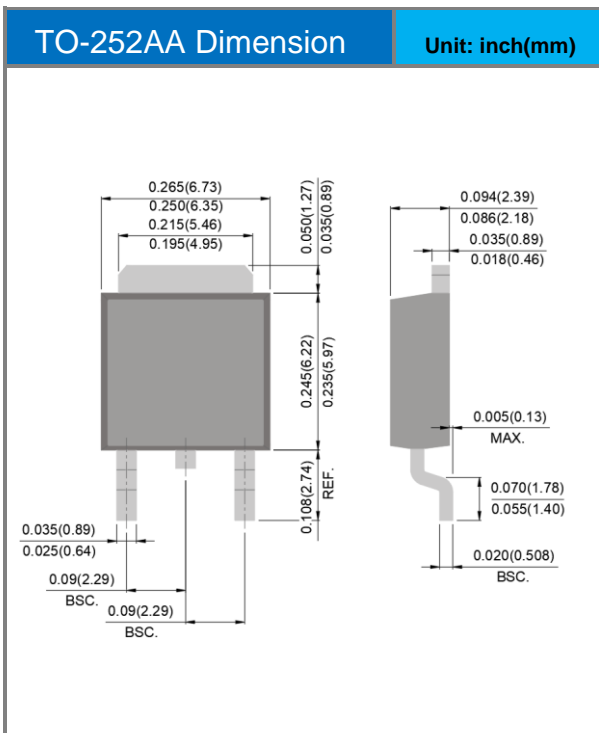
**Fig.4 Typical Forward Characteristics**

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## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB640CD	TO-252AA	3K pcs / 13" reel	SB640CD

## Packaging Information & Mounting Pad Layout



## **SB640CD**

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