

# SB540PC

## Surface Mount Schottky Barrier Rectifier

**Voltage**

**40 V**

**Current**

**5 A**

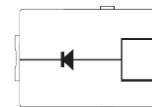
### Features

- Ideal for automated placement
- High efficiency Operation
- Low thermal resistance
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case : TO-277C package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.11 grams

TO-277C



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

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Recurrent 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 Rectified Current		I <sub>F(AV)</sub>	5	A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load		I <sub>FSM</sub>	100	A
Typical Junction Capacitance Measured at 1 MHz And Applied V <sub>R</sub> = 4 V		C <sub>J</sub>	240	pF
Typical Thermal Resistance	(Note 1)	R <sub>θJA</sub>	65	°C/W
	(Note 2)	R <sub>θJC</sub>	1.65	
	(Note 2)	R <sub>θJL</sub>	15	
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	$V_F$	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.37	0.42	V
		$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.44	0.49	
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.49	0.52	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.24	0.29	
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.33	0.38	
Reverse current <sup>(Note 3)</sup>	$I_R$	$V_R = 32\text{ V}, T_J = 25^\circ\text{C}$	-	15.16	150	uA
		$V_R = 40\text{ V}, T_J = 25^\circ\text{C}$	-	24	200	
		$V_R = 40\text{ V}, T_J = 125^\circ\text{C}$	-	16.3	100	mA

### NOTES :

1. Mounted on an 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.
3. Short duration pulse test used to minimize self-heating effect.

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## TYPICAL CHARACTERISTIC CURVES

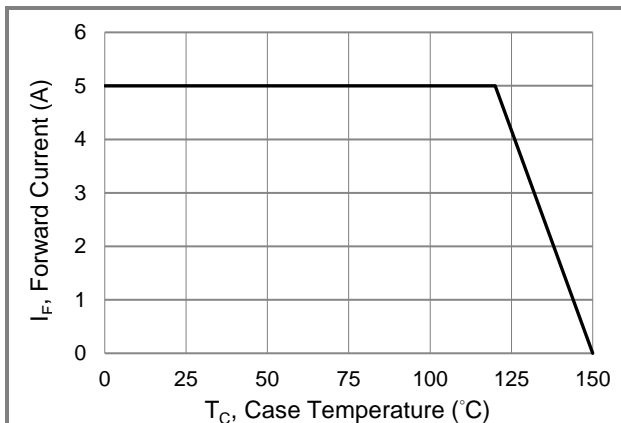


Fig.1 Forward Current Derating Curve

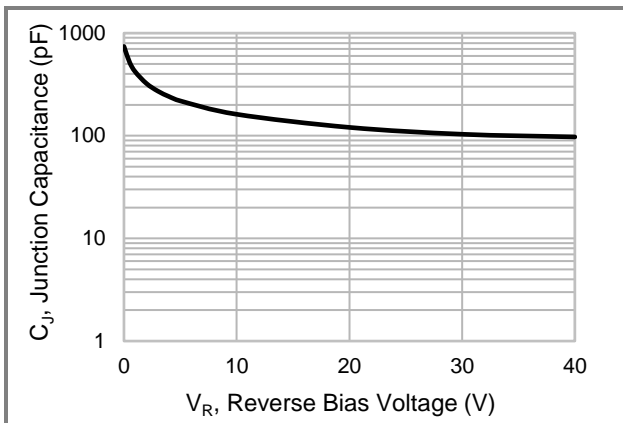


Fig.2 Typical Junction Capacitance

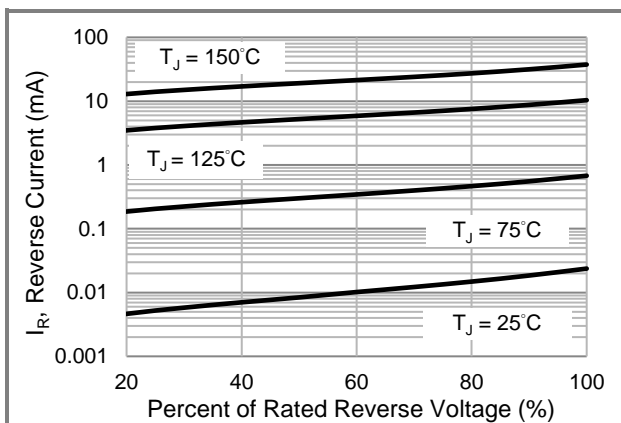


Fig.3 Typical Reverse Characteristics

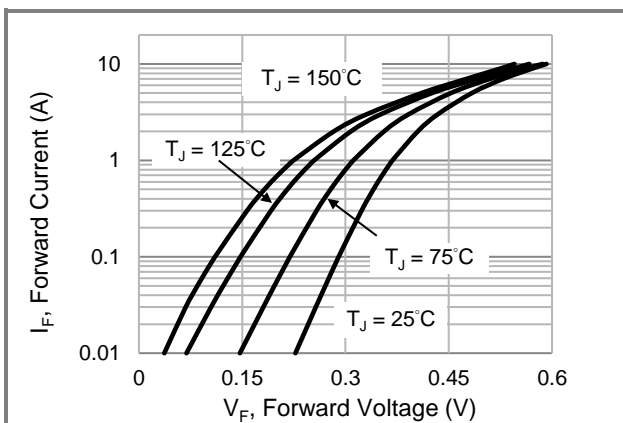


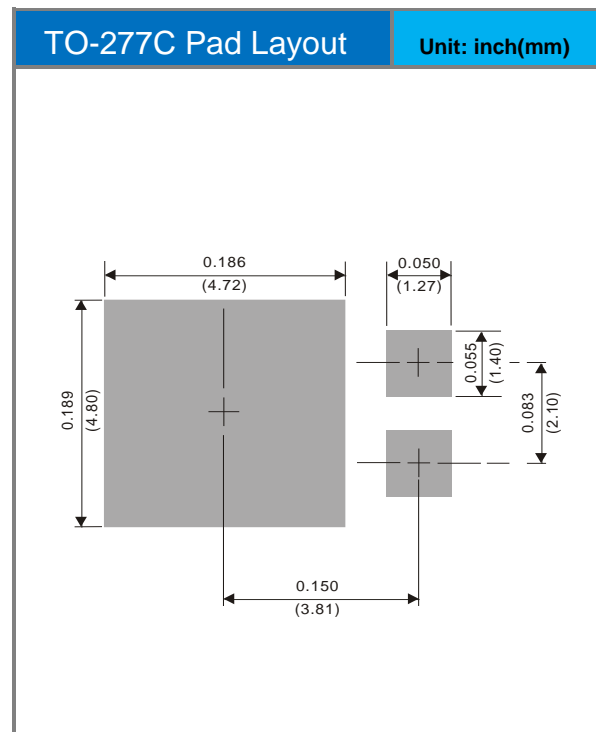
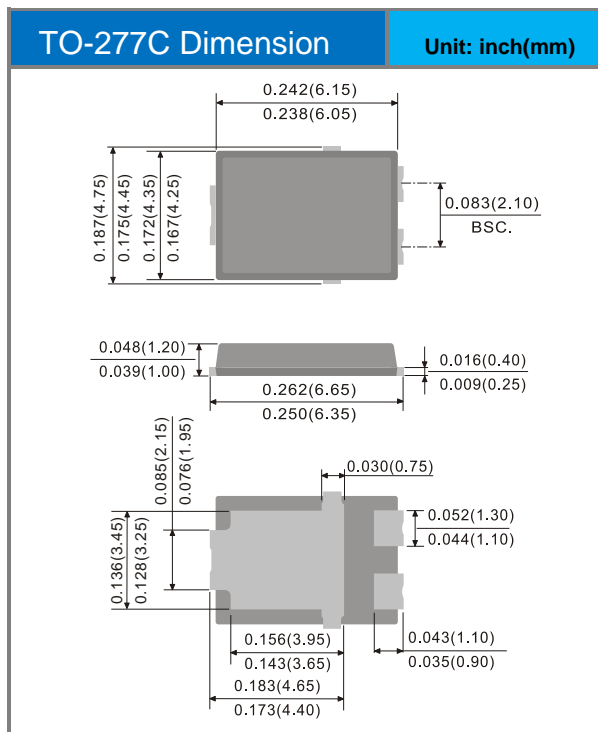
Fig.4 Typical Forward Characteristics

# SB540PC

## Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB540PC	TO-277C	5K pcs / 13" reel	SB540PC

## Packaging Information & Mounting Pad Layout



## SB540PC

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