

SB1040PC

Surface Mount Schottky Barrier Rectifier

Voltage

40 V

Current

10 A

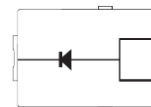
Features

- 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_A = 25 °C unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
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)}	10	A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load		I _{FSM}	300	A
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4 V		C _J	570	pF
Typical Thermal Resistance	(Note 1)	R _{θJA}	65	°C/W
	(Note 2)	R _{θJC}	0.62	
	(Note 2)	R _{θJL}	11.8	
Operating Junction Temperature Range		T _J	-55~150	°C
Storage Temperature Range		T _{STG}	-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	$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.44	0.49	V
		$I_F = 10\text{ A}, T_J = 25^\circ\text{C}$	-	0.47	0.51	
		$I_F = 5\text{ A}, T_J = 125^\circ\text{C}$	-	0.31	0.36	
		$I_F = 10\text{ A}, T_J = 125^\circ\text{C}$	-	0.4	0.45	
Reverse current ^(Note 3)	I_R	$V_R = 32\text{ V}, T_J = 25^\circ\text{C}$	-	32	300	uA
		$V_R = 40\text{ V}, T_J = 25^\circ\text{C}$	-	0.05	0.7	mA
		$V_R = 40\text{ V}, T_J = 125^\circ\text{C}$	-	32	180	

NOTES :

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

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TYPICAL CHARACTERISTIC CURVES

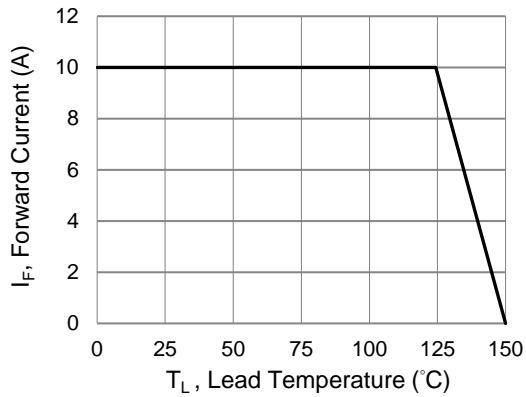


Fig.1 Forward Current Derating Curve

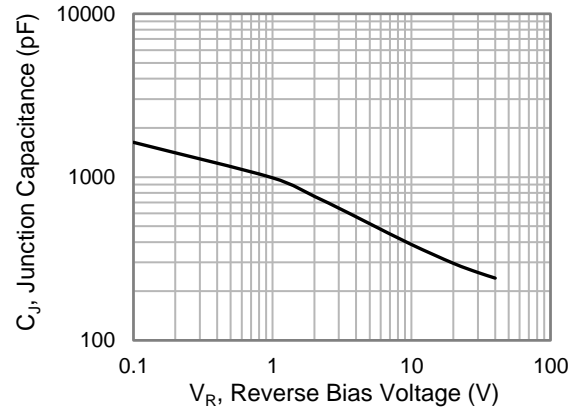


Fig.2 Typical Junction Capacitance

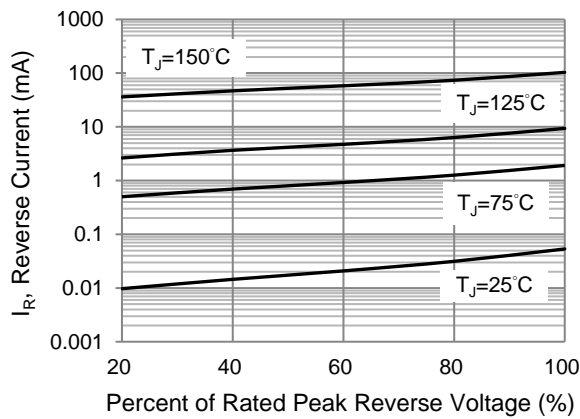


Fig.3 Typical Reverse Characteristics

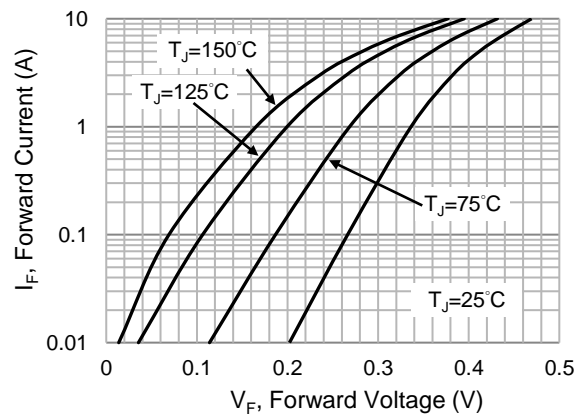


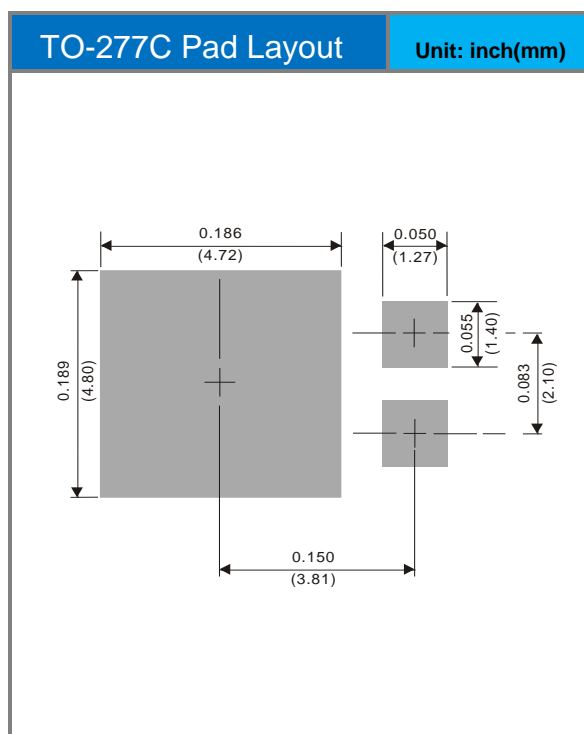
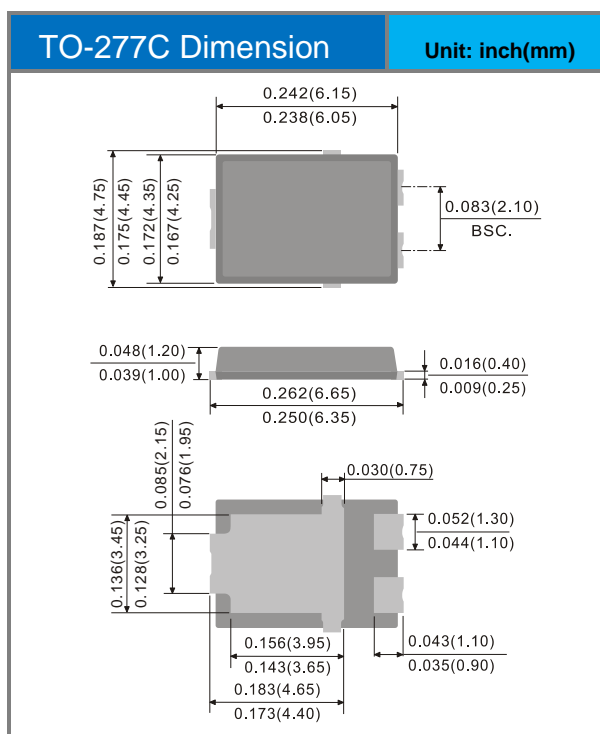
Fig.4 Typical Forward Characteristics

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB1040PC	TO-277C	5K pcs / 13" reel	SB1040PC

Packaging Information & Mounting Pad Layout



SB1040PC

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