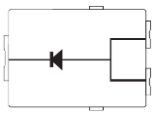
SB1045PC

Surface Mount Schottky Barrier Rectifier

Voltage	45 V	Current	10 A

TO-277C



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

Maximum Ratings and Thermal Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER		SYMBOL	LIMIT	UNITS
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	45	V
Maximum RMS Voltage		V_{RMS}	32	V
Maximum DC Blocking Voltage		V_{DC}	45	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 Thermal Resistance	(Note 1)	$R_{\theta JA}$	65	°C/W
	(Note 2)	$R_{\theta JC}$	0.53	
	(Note 2)	$R_{\theta JL}$	11.2	
Operating Junction Temperature Range		T_J	-55~150	°C
Storage Temperature Range		T_{STG}	-55~150	°C

SB1045PC

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	I_F = 3 A, T_J = 25 °C	-	0.43	0.48	V
		I_F = 5 A, T_J = 25 °C	-	0.46	0.51	
		I_F = 10 A, T_J = 25 °C	-	0.5	0.55	
		I_F = 3 A, T_J = 125 °C	-	0.3	0.35	
		I_F = 5 A, T_J = 125 °C	-	0.34	0.39	
		I_F = 10 A, T_J = 125 °C	-	0.42	0.46	
Reverse current(Note 3)	I_R	V_R = 36 V, T_J = 25 °C	-	5	50	uA
		V_R = 45 V, T_J = 25 °C	-	9	50	
		V_R = 45 V, T_J = 125 °C	-	9	50	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^2 copper pad area.
3. Short duration pulse test used to minimize self-heating effect.

SB1045PC

TYPICAL CHARACTERISTIC CURVES

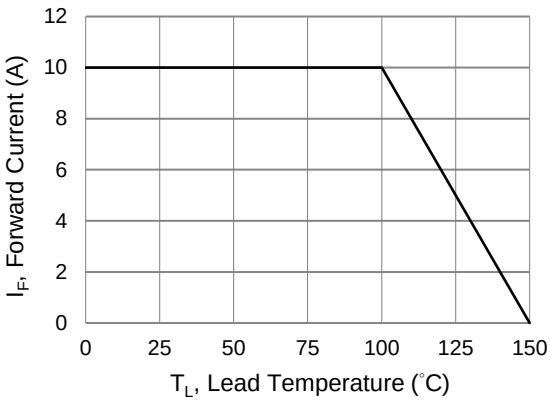


Fig.1 Forward Current Derating Curve

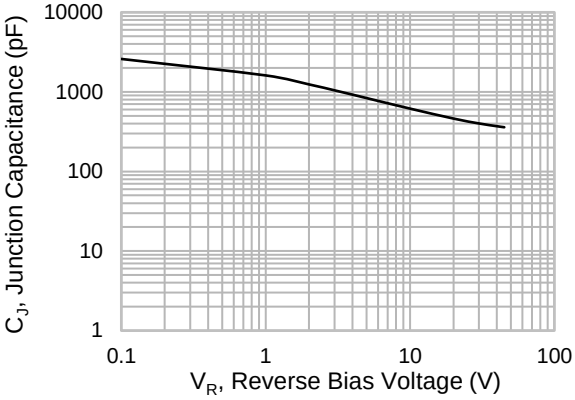


Fig.2 Typical Junction Capacitance

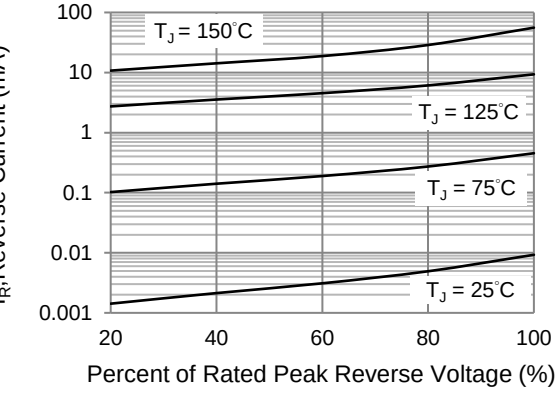


Fig.3 Typical Reverse Characteristics

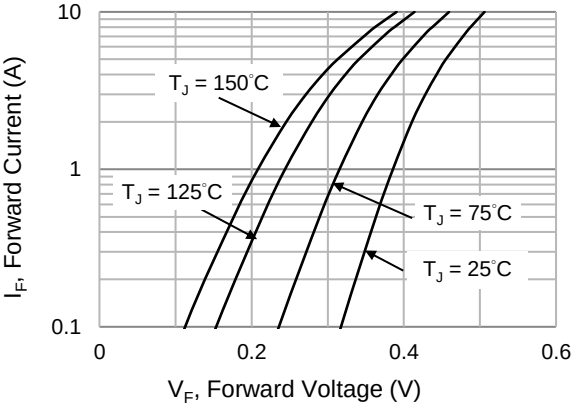


Fig.4 Typical Forward Characteristics

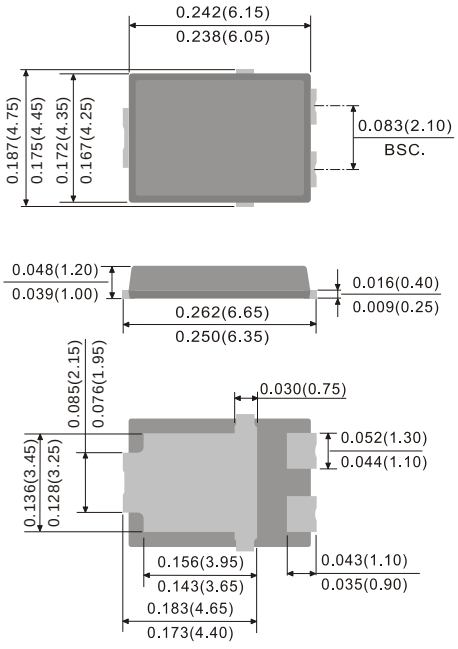
SB1045PC

Product and Packing Information

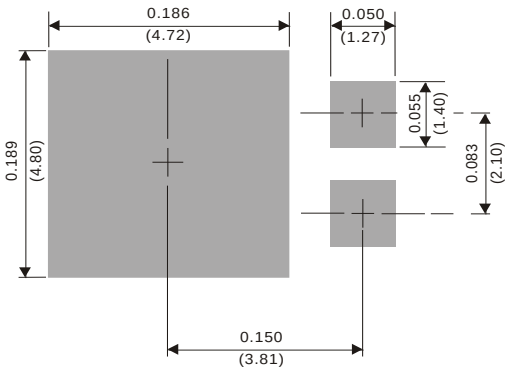
Part No.	Package Type	Packing Type	Marking
SB1045PC	TO-277C	5K pcs / 13” reel	SB1045PC

Packaging Information & Mounting Pad Layout

TO-277C Dimension — Unit: inch(mm)



TO-277C Pad Layout — Unit: inch(mm)



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