

SB5100PC-AU

Surface Mount Schottky Barrier Rectifier

Voltage

100 V

Current

5 A

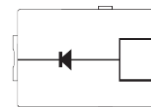
Features

- Low forward voltage drop
- Ideal for automated placement
- Low power loss, high efficiency
- High efficiency Operation
- Low thermal resistance
- AEC-Q101 qualified
- 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}	100	V
Maximum RMS Voltage		V _{RMS}	70	V
Maximum DC Blocking Voltage		V _{DC}	100	V
Maximum Average Forward Rectified Current		I _{F(AV)}	5	A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load		I _{FSM}	100	A
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4 V		C _J	180	pF
Typical Thermal Resistance	(Note 1)	R _{θJA}	65	°C/W
	(Note 2)	R _{θJC}	1.65	
	(Note 2)	R _{θJL}	15	
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	$I_F = 1\text{ A}, T_J = 25^\circ\text{C}$	-	0.57	0.62	V
		$I_F = 3\text{ A}, T_J = 25^\circ\text{C}$	-	0.71	0.76	
		$I_F = 5\text{ A}, T_J = 25^\circ\text{C}$	-	0.77	0.8	
		$I_F = 1\text{ A}, T_J = 125^\circ\text{C}$	-	0.47	0.52	
		$I_F = 3\text{ A}, T_J = 125^\circ\text{C}$	-	0.58	0.63	
Reverse Current ^(Note 3)	I_R	$V_R = 80\text{ V}, T_J = 25^\circ\text{C}$	-	0.33	3	uA
		$V_R = 100\text{ V}, T_J = 25^\circ\text{C}$	-	1	15	
		$V_R = 100\text{ V}, T_J = 125^\circ\text{C}$	-	0.6	1.8	mA

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

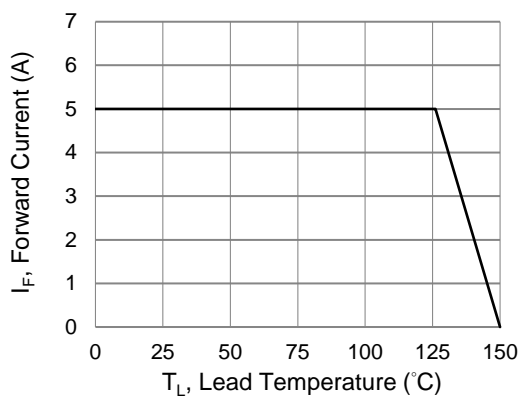


Fig.1 Forward Current Derating Curve

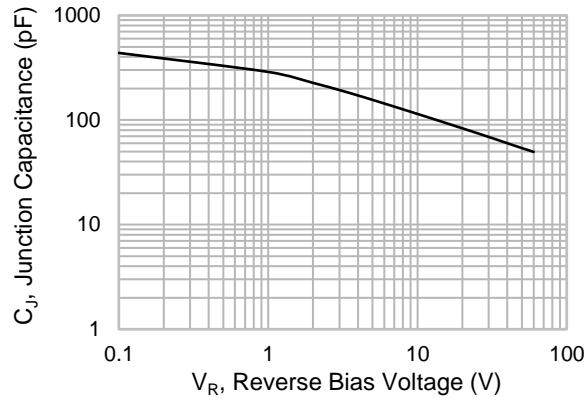


Fig.2 Typical Junction Capacitance

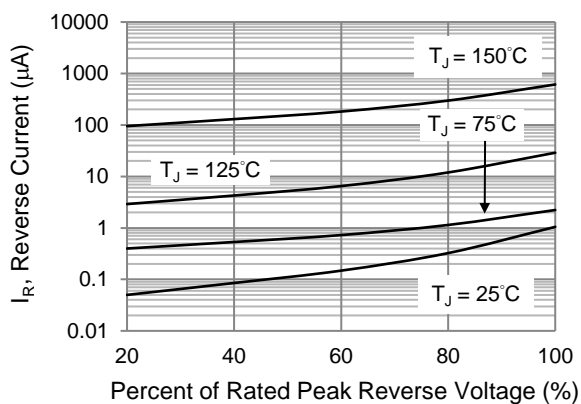


Fig.3 Typical Reverse Characteristics

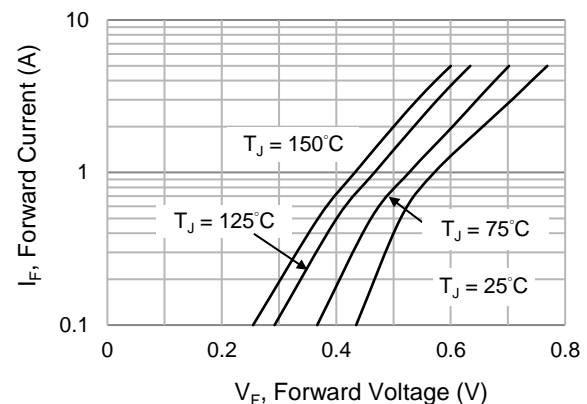


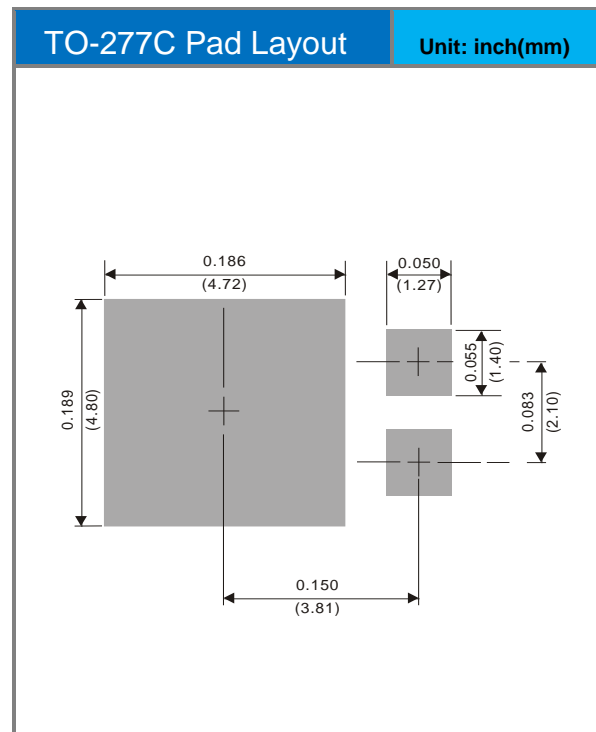
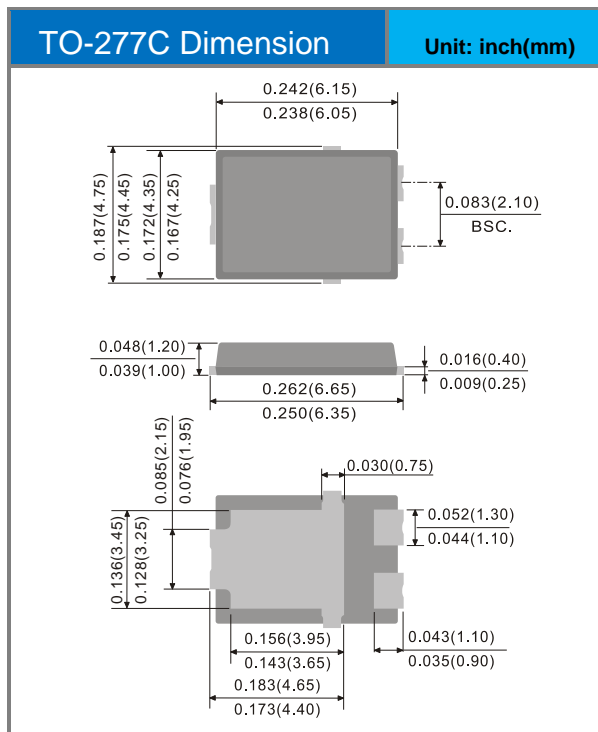
Fig.4 Typical Forward Characteristics

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
SB5100PC-AU	TO-277C	5K pcs / 13" reel	SB5100PC

Packaging Information & Mounting Pad Layout



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