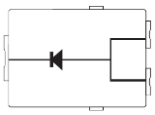
SBT10100UPC

Surface Mount Extreme Low V_F Schottky Barrier Rectifier

Voltage	100 V	Current	10 A

TO-277C



Features

- Ideal for automated placement
- Extreme low forward voltage drop, low power loss
- High efficiency operation
- Low thermal resistance
- Ultra thin profile package for space constrained utilization
- Easy pick and place package suitable for automated handling
- 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}	100	V
Maximum RMS Voltage		V_{RMS}	70	V
Maximum DC Blocking Voltage		V_{DC}	100	V
Maximum Average Forward Rectified Current		$I_{F(AV)}$	10	A
Peak Forward Surge Current : 8.3 ms single half sine-wave superimposed on rated load		I_{FSM}	150	A
Typical Junction Capacitance Measured at 1 MHz And Applied V_R = 4 V		C_J	850	pF
Typical Thermal Resistance	(Note 1)	$R_{\theta JA}$	65	°C/W
	(Note 2)	$R_{\theta JC}$	1.35	
	(Note 2)	$R_{\theta JL}$	13	
Operating Junction Temperature Range		T_J	-55~150	°C
Storage Temperature Range		T_{STG}	-55~150	°C

SBT10100UPC

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	I_F = 1 A, T_J = 25 °C	-	0.39	0.44	V
		I_F = 5 A, T_J = 25 °C	-	0.52	0.57	
		I_F = 10 A, T_J = 25 °C	-	0.63	0.67	
		I_F = 1 A, T_J = 125 °C	-	0.28	0.33	
		I_F = 5 A, T_J = 125 °C	-	0.46	0.51	
		I_F = 10 A, T_J = 125 °C	-	0.59	0.64	
Reverse current(Note 3)	I_R	V_R = 80 V, T_J = 25 °C	-	10	100	uA
		V_R = 100 V, T_J = 25 °C	-	16	60	
		V_R = 100 V, T_J = 125 °C	-	10	60	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.

SBT10100UPC

TYPICAL CHARACTERISTIC CURVES

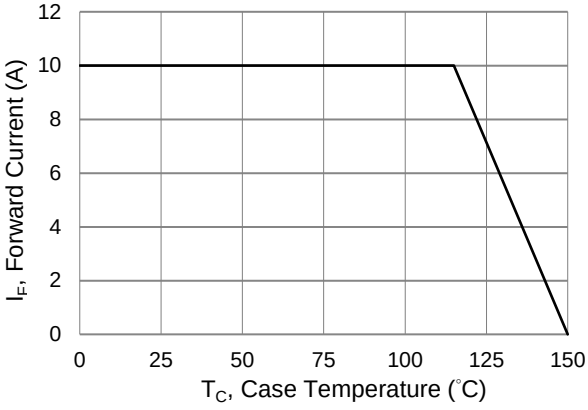


Fig.1 Forward Current Derating Curve

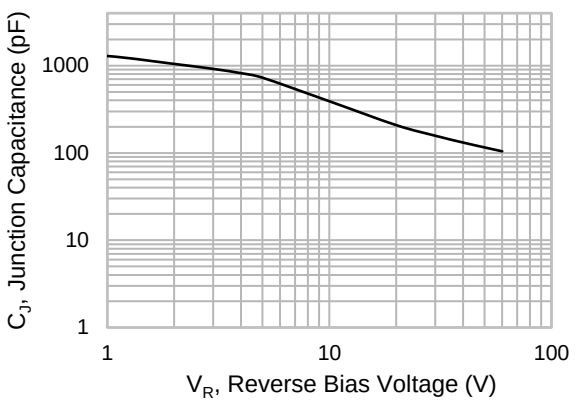


Fig.2 Typical Junction Capacitance

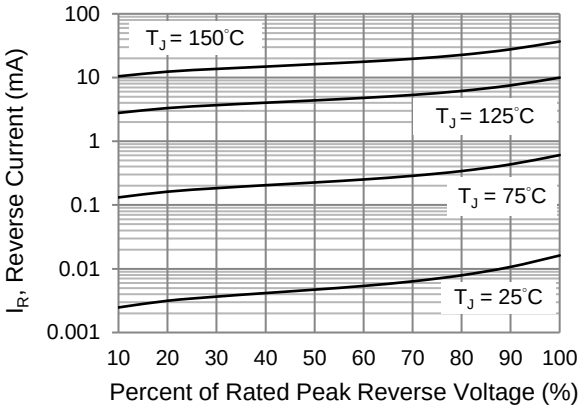


Fig.3 Typical Reverse Characteristics

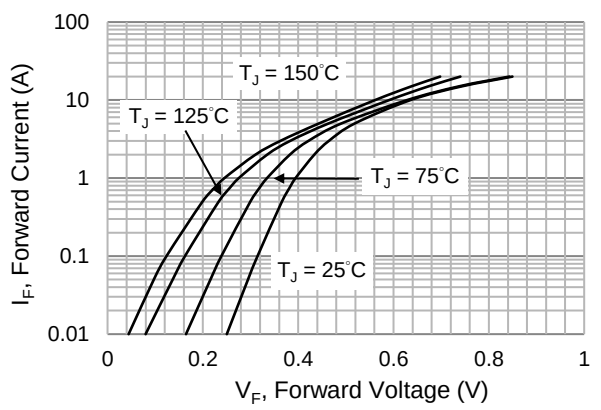


Fig.4 Typical Forward Characteristics

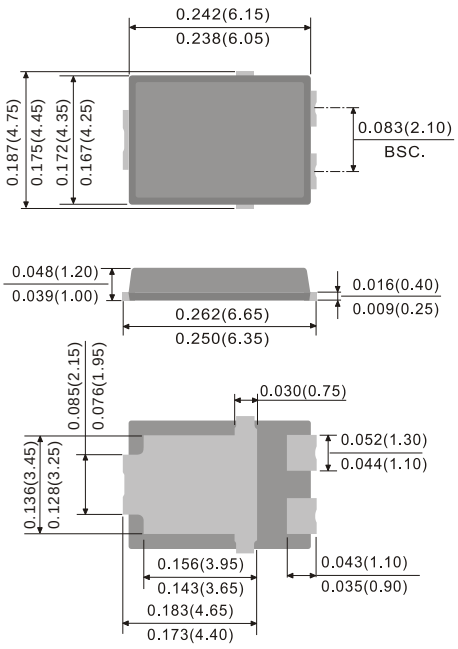
SBT10100UPC

Product and Packing Information

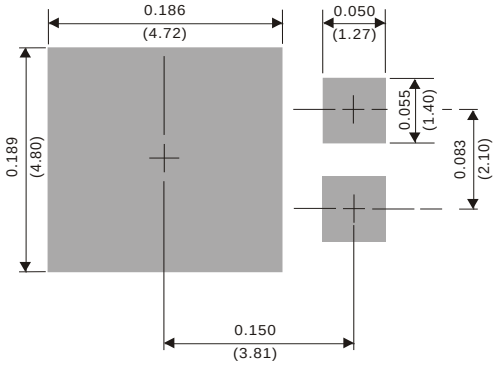
Part No.	Package Type	Packing Type	Marking
SBT10100UPC	TO-277C	5K pcs / 13” reel	SBT10100UPC

Packaging Information & Mounting Pad Layout

TO-277C Dimension — Unit: inch(mm)



TO-277C Pad Layout — Unit: inch(mm)



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