

# SB120 thru SB1100

**Schottky Barrier Rectifiers**  
**Reverse Voltage 20 to 100V Forward Current 1.0A**

## Feature & Dimensions

- Flammability Classification 94V-0
- \* Low power loss, high efficiency
- \* For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- \* Guarding for over voltage protection
- \* High temperature soldering guaranteed:  
260°C/10 seconds at terminals

## Mechanical Data

**Case:** JEDEC DO-41, molded plastic over sky die

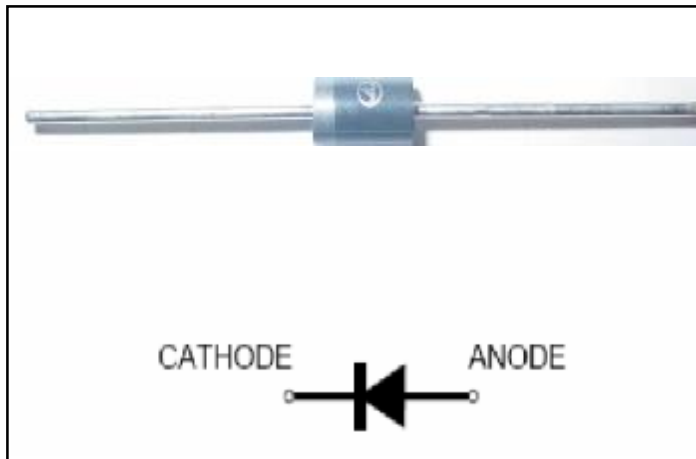
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.011 oz., 0.284 g

**Handling precaution:** None



We declare that the material of product compliance with ROHS requirements

## 1. Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SB120	SB130	SB140	SB150	SB160	SB180	SB1100	Unit
device marking code		SB120	SB130	SB140	SB150	SB160	SB180	SB1100	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	V
Maximum RSM voltage	$V_{RSM}$	14	21	28	35	42	56	70	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	V
Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1)	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
thermal resistance, junction to ambient	$R_{\theta JA}$	50							°C/W
Operating temperature range	$T_J$	-55 to +150							°C
storage temperature range	$T_{STG}$	-55 to +150							°C

## Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SB120	SB130	SB140	SB150	SB160	SB180	SB1100	Unit	
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.50			0.70		0.85		V	
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	$I_R$	0.5				10				mA
Typical junction capacitance at 4.0V, 1MHz	$C_J$	40								PF

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## 2. Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

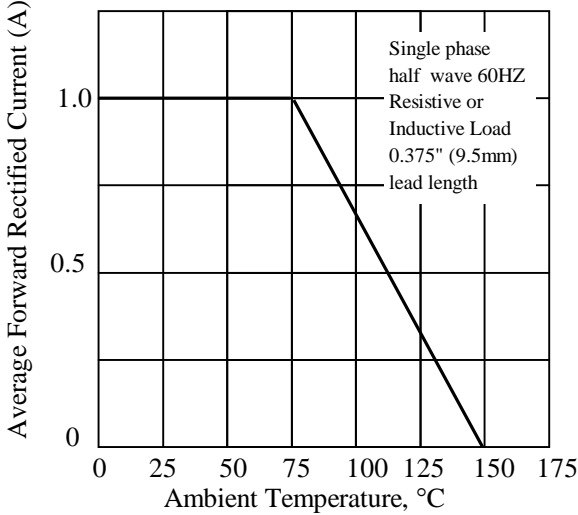


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

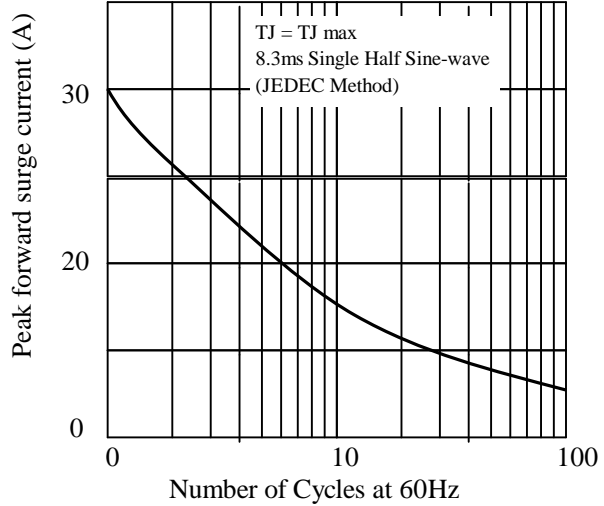


Fig 3. - Typical Instantaneous Forward Characteristics

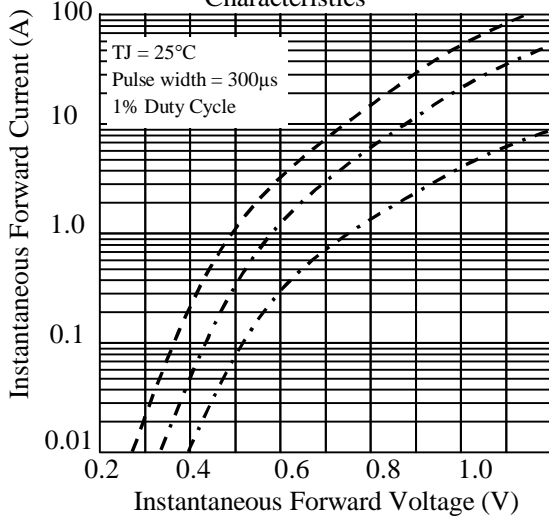


Fig 4. - Typical Reverse Characteristics

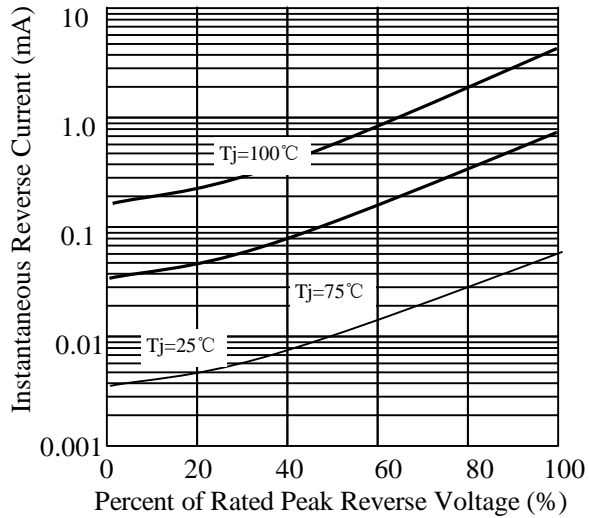


Fig 5. - typical transient thermal impedance

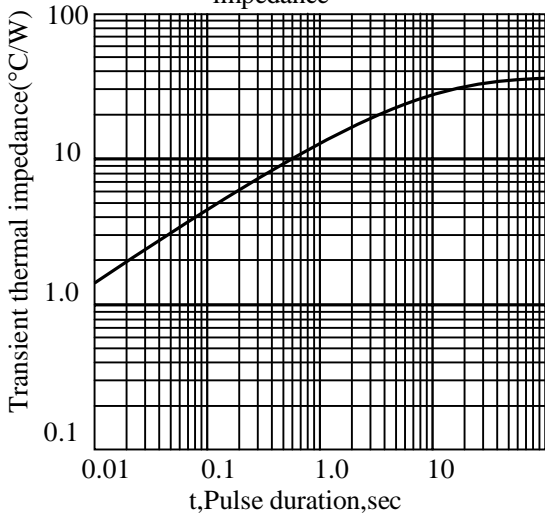
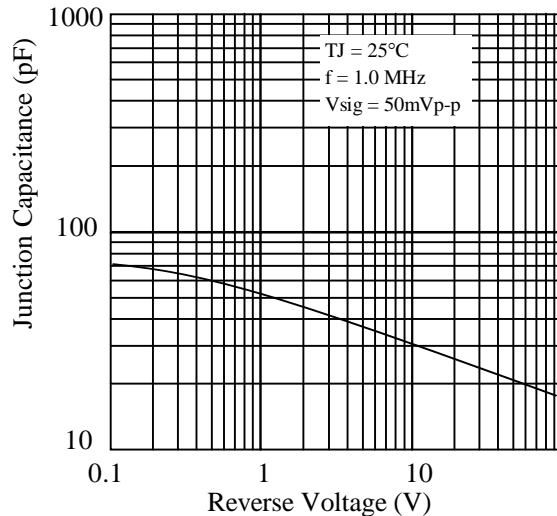
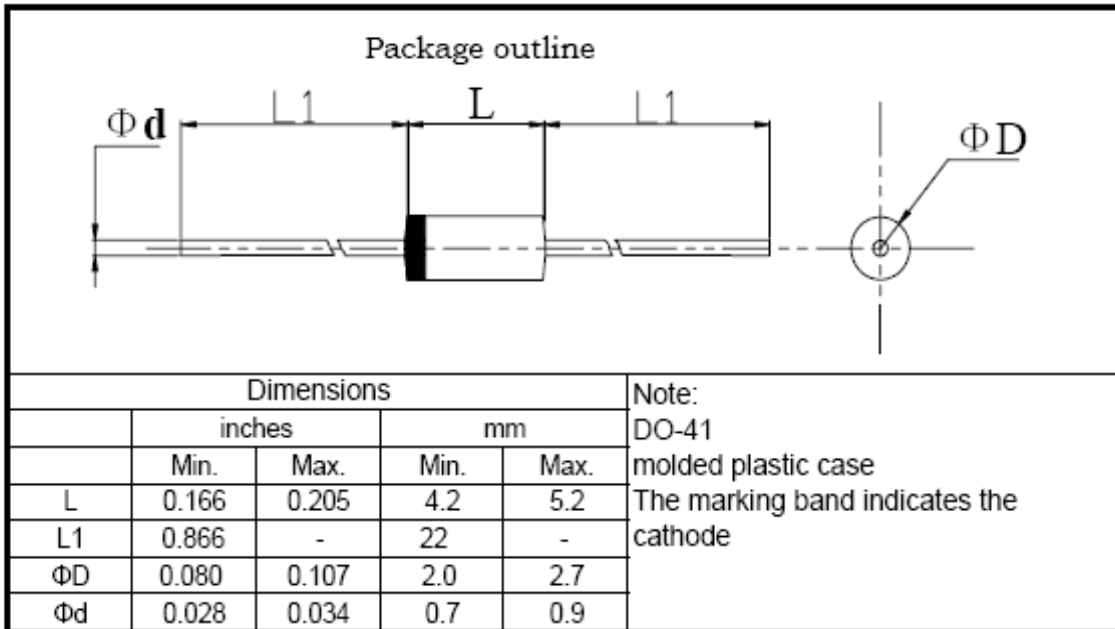


Fig 6. - Typical Junction Capacitance



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### 3. dimension:



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### 4. Update Record

版次	更新记录	更新作者	更新日期
1	第一版	余波	2010-5-27
2	增加包装规范	周杰	2011.08.10