

# SB5150&SB5200

## Schottky Barrier Rectifiers

Reverse Voltage 150V&200V Forward Current 5.0A

### Feature & Dimensions

- \* Plastic package has Underwriters Laboratory 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-201AD, molded plastic over sky die

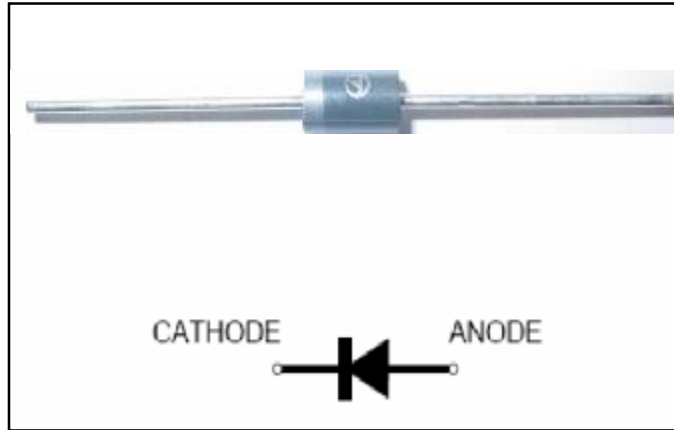
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.038 oz., 1.03 g

**Handling precaution:** None



We declare that the material of product compliance with ROHS requirements

### 1. Electrical Characteristic

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

Parameter Symbol	symbol	SB5150	SB5200	Unit
device marking code		SB5150	SB5200	
Maximum repetitive peak reverse voltage	$V_{RRM}$	150	200	V
Maximum RMS voltage	$V_{RMS}$	105	140	V
Maximum DC blocking voltage	$V_{DC}$	150	200	V
Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1)	$I_{F(AV)}$	5.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100		A
thermal resistance, junction to ambient	$R_{\theta JA}$	40		°C/W
thermal resistance, junction to case	$R_{\theta JC}$	5		°C/W
Operating temperature range	TJ	-55 to +150		°C
storage temperature range	TSTG	-55 to +150		°C

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

Parameter Symbol	symbol	SB5150	SB5200	Unit
Maximum instantaneous forward voltage at 5.0A	$V_F$	0.87		V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	IR	0.1	5	mA
Typical junction capacitance at 4.0V, 1MHz	CJ	160		PF

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

Fig. 1 - Forward Current Derating Curve

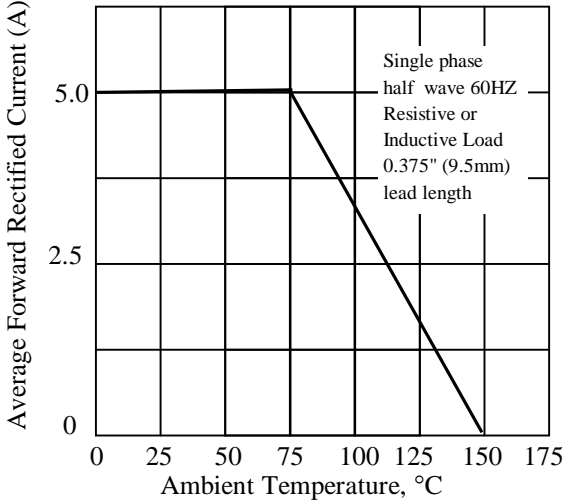


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

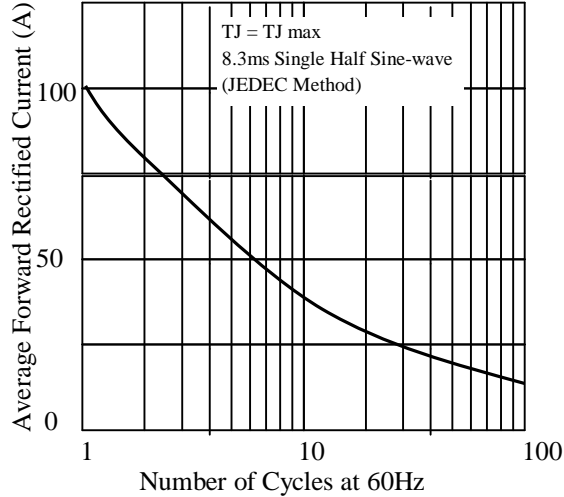


Fig 3. - Typical Instantaneous Forward Characteristics

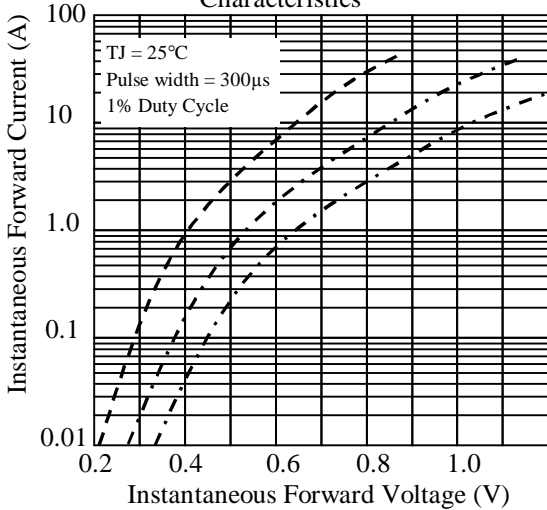


Fig 4. - Typical Reverse Characteristics

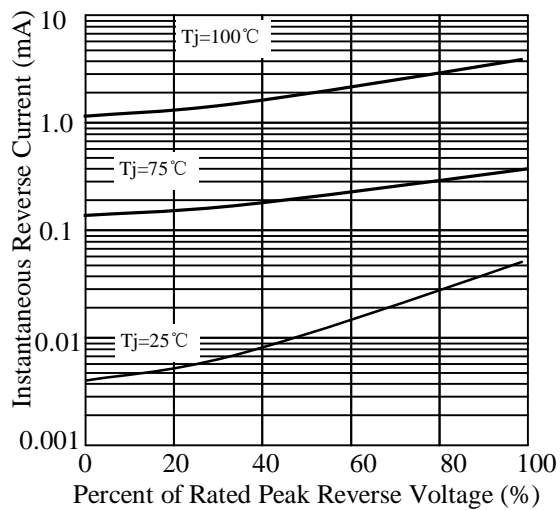


Fig 5. - typical transient thermal impedance

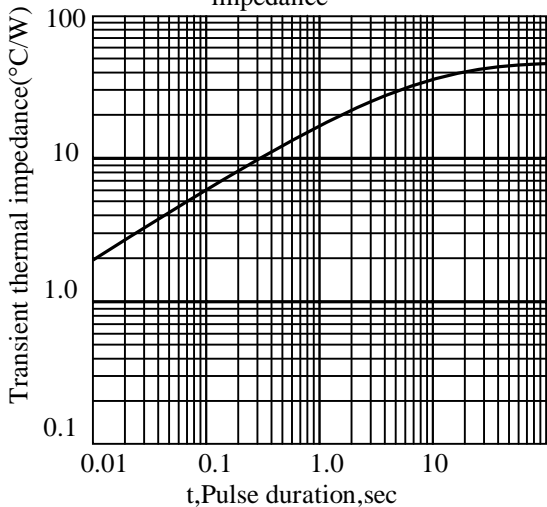
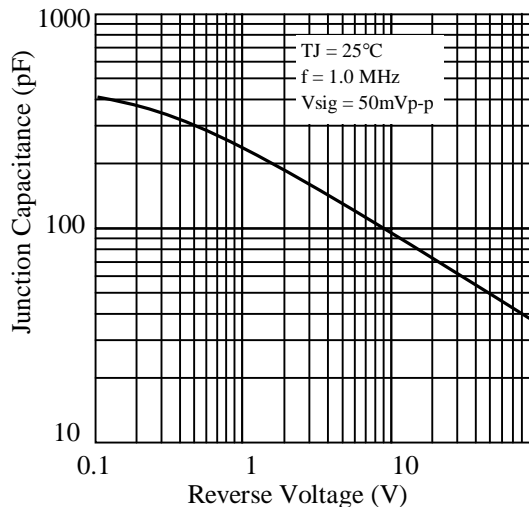
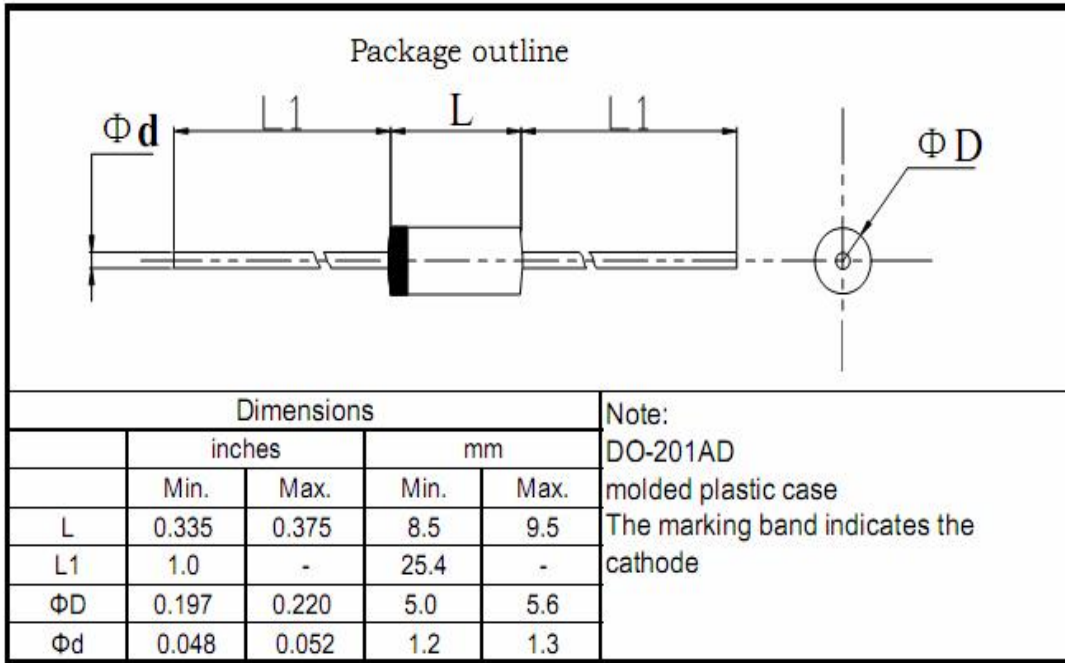


Fig 6. - Typical Junction Capacitance



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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	周杰	2011.7.19