

# SB140 / SB160

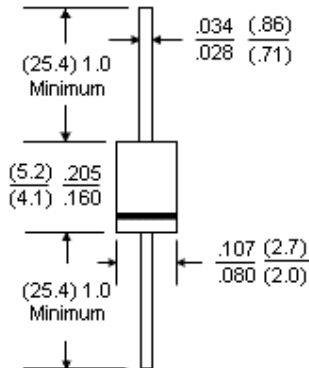
## 1A Schottky Barrier Rectifiers



### Axial



### DO-41



Dimensions : Inches (Millimetres)

### Features:

- 1 Ampere operation schottky barrier rectifiers at  $T_A = 75^\circ\text{C}$  with no thermal runaway.
- Exceeds environmental standards of MIL-S-19500/228.
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.
- DO-41 plastic package.

### Mechanical Data:

Case : Moulded plastic.  
Terminal : Axial leads, solderable per MIL-STD-202, Method 208.  
Polarity : Colour band denotes cathode.  
Mounting Position : Any.

### Maximum Ratings and Electrical Characteristics:

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

Parameters	SB140	SB160	Units
Maximum repetitive peak reverse voltage	40	60	V
Maximum RMS voltage	26	42	
Maximum DC blocking voltage	40	60	
Maximum forward voltage at 1.0A	0.5	0.7	
Maximum average forward rectified current 0.375" lead length at $T_A = 75^\circ\text{C}$	1.0		A
Peak forward surge current $I_{FM}$ (surge) 8.3m seconds single half sine-wave superimposed on rated load (JEDEC Method)	30		
Maximum full load reverse current, full cycle average at $T_A = 75^\circ\text{C}$			mA
Maximum reverse current at rated reverse voltage	$T_A = 25^\circ\text{C}$ 0.5	$T_A = 100^\circ\text{C}$ 10.0	
Typical junction capacitance (Note 1)	110		pF
Typical thermal resistance $R_{\theta JA}$ (Note 2)	80		$^\circ\text{C}/\text{W}$
Operating and Storage temperature range	-50 to +125		$^\circ\text{C}$

### Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0V dc.
2. Thermal resistance junction to ambient.



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### Rating and Characteristics Curves

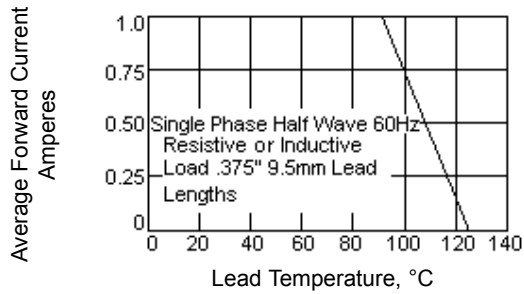


Figure 1 - Forward Current Derating Curve

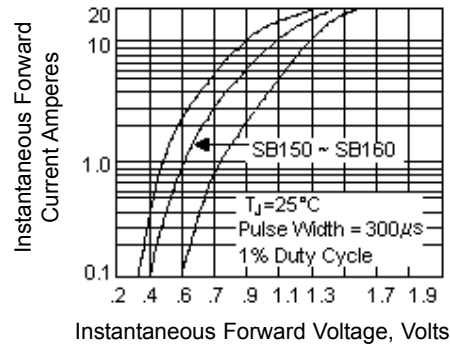


Figure 2 - Typical Instantaneous Forward Characteristics

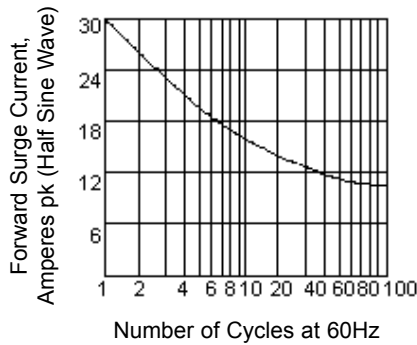


Figure 3 - Maximum Non-Repetitive Surge Current

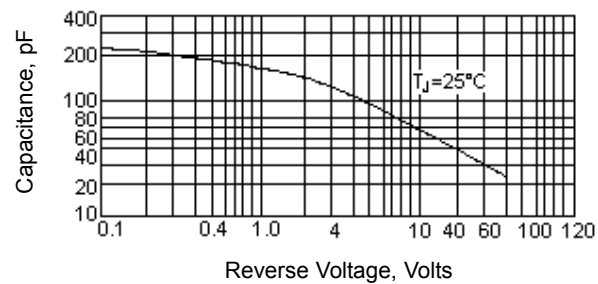


Figure 4 - Typical Junction Capacitance

### Specifications

$V_{RRM}$ maximum (V)	$I_{F(av)}$ maximum (A)	$I_{FSM}$ (A)	$V_F$ (V) at $I_F = 1A$	Length	Diameter	Part Number
40	1	30	0.5	5.2	2.7	SB140
60			0.7			SB160

Dimensions : Millimetres



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### Notes:

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