

Schottky Barrier Rectifier



Features:

- 1A 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°C ambient temperature unless otherwise specified
 Single phase, half wave, 60Hz, resistive or inductive loa

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 1A	0.5	0.7	
Maximum average forward rectified current 0.375" lead length at $T_A = 75^\circ\text{C}$	1		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 $T_A = 25^\circ\text{C}$ at rated reverse voltage $T_t = 100^\circ\text{C}$	0.5	10	
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 4V DC
2. Thermal resistance junction to ambient

Rating and Characteristics Curves

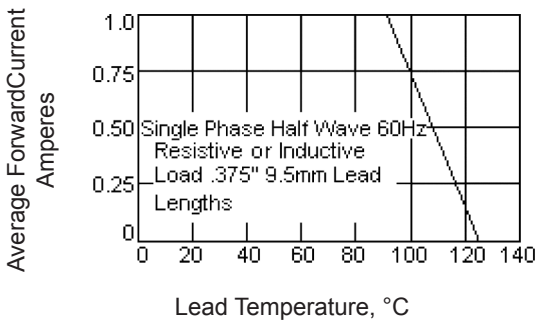


Figure 1 - Forward Current Derating Curve

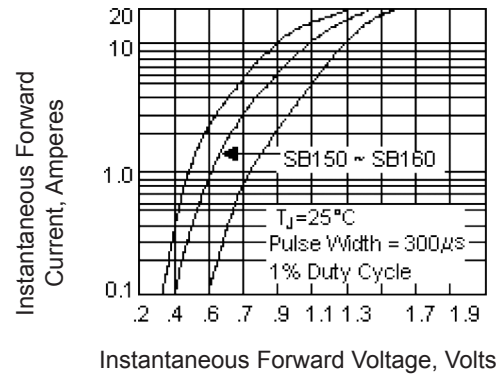


Figure 2 - Typical Instantaneous Forward Characteristics

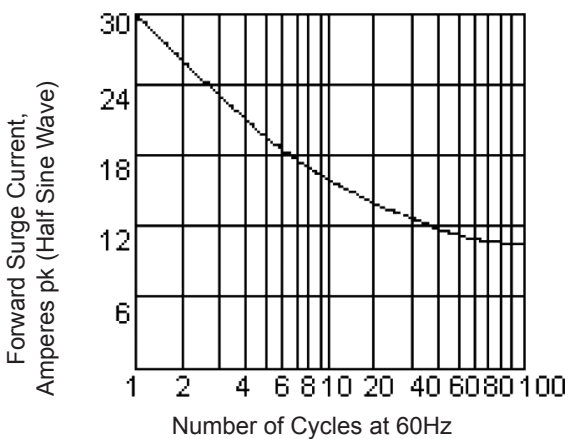


Figure 3 - Maximum Non-Repetitive Surge Current

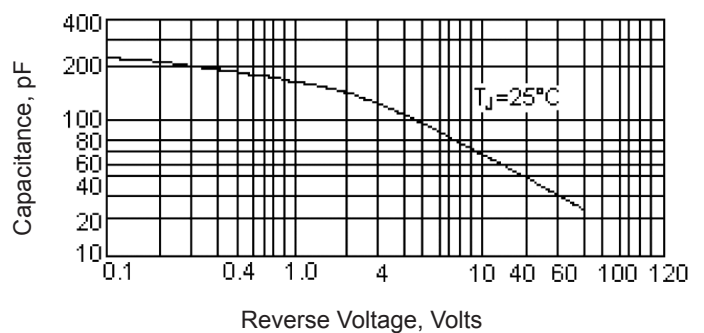
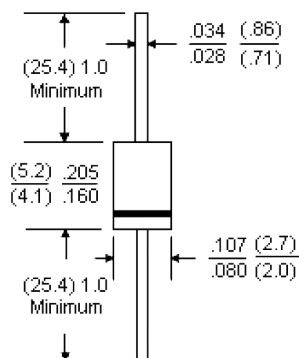


Figure 4 - Typical Junction Capacitance

Schottky Barrier Rectifier

DO-41



Dimensions: Inches (Millimetres)

Part Number Table

Description	Part Number
Diode, Schottky, 1A, 40V	SB140
Diode, Schottky, 1A, 60V	SB160

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