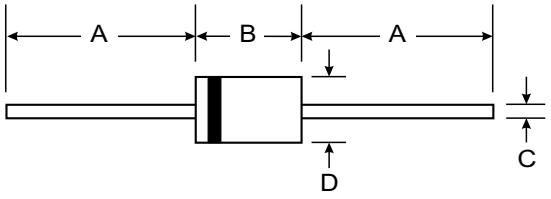
SB1H90-SB1H100

1.0A Axial Leaded High-Voltage Schottky Rectifier

Features

- High barrier technology for improved high T_J
- Guardring for overvoltage protection
- Low power losses and high efficiency
- Low forward voltage drop
- Very low leakage current
- High forward surge capability
- High frequency operation
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



DO-41		
Dim	**Min**	**Max**
A	25.40	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

Mechanical Data

- **Case:** DO-41
  Epoxy meets UL 94V-0 flammability rating
- **Terminals:** Matte tin plated leads, solderable per J-STD-002 and JESD22-B102
  E3 suffix for consumer grade, meets JESD 201 class 1A whisker test, HE3 suffix for high reliability grade (AEC Q101 qualified), meets JESD 201 class 2 whisker test
- **Polarity:** Color band denotes the cathode end

Maximum Ratings and Electrical Characteristics

@ T_A = 25°C unless otherwise specified

PARAMETER	SYMBOL	SB1H90	SB1H100	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	90	100	V
Maximum RMS voltage	V_{RMS}	63	70	V
Maximum DC blocking voltage	V_{DC}	90	100	V
Maximum average forward rectified current	$I_{F(AV)}$	1.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	50		A
Voltage rate of change (rated V_R)	dV/dt	10 000		V/µs
Peak repetitive reverse surge current at t_p = 2.0 µs, 1 kHz	I_{RRM}	1.0		A
Maximum operating junction temperature	T_J	175		°C
Storage temperature range	T_{STG}	- 55 to + 175		°C

PARAMETER	TEST CONDITIONS		SYMBOL	SB1H90	SB1H100	UNIT
Maximum instantaneous forward voltage (1)	I_F = 1.0 A I_F = 1.0 A I_F = 2.0 A I_F = 2.0 A	T_J = 25 °C T_J = 125 °C T_J = 25 °C T_J = 125 °C	V_F	0.77 0.62 0.86 0.70		V
Maximum reverse current at rated V_R (2)		T_J = 25 °C T_J = 125 °C	I_R	1.0 0.5		µA mA

Notes:

(1) Pulse test: 300 ms pulse width, 1 % duty cycle

(2) Pulse test: Pulse width ≤ 40 ms

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

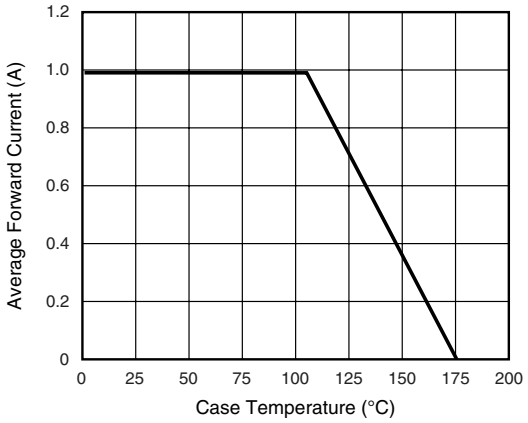


Figure 1. Forward Current Derating Curve

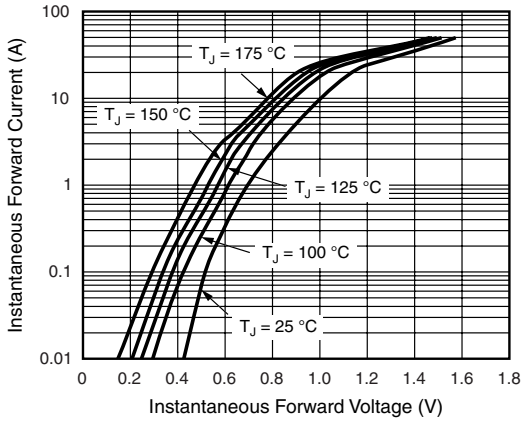


Figure 2. Typical Instantaneous Forward Characteristics

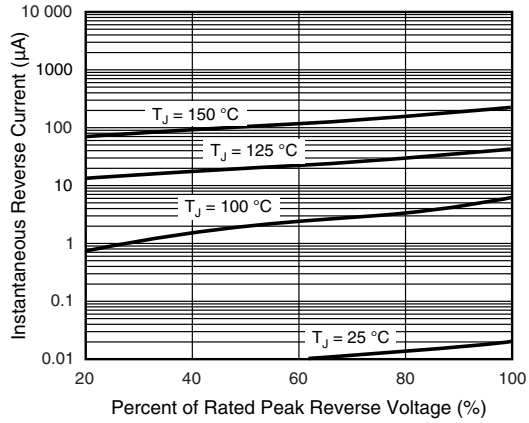


Figure 3. Typical Reverse Characteristics

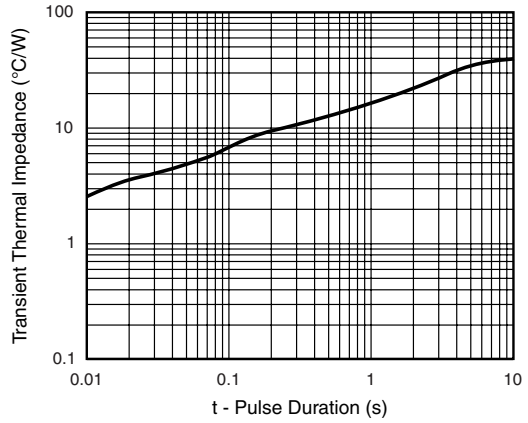


Figure 5. Typical Transient Thermal Impedance

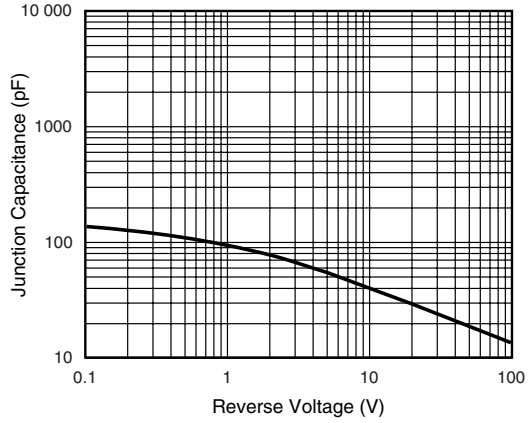


Figure 4. Typical Junction Capacitance