

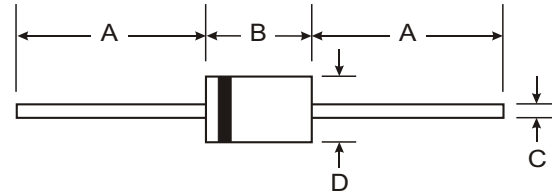
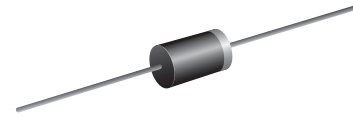
**VOLTAGE RANGE: 90 - 100V**  
**CURRENT: 1.0 A**

### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications

### Mechanical Data

- Case: DO-41, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.34 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



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		

### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	SB1H90	SB1H100	UNIT
Maximum repetitive peak reverse voltage	V <sub>R</sub> RM	90	100	V
Maximum RMS voltage	V <sub>R</sub> MS	63	70	V
Maximum DC blocking voltage	V <sub>DC</sub>	90	100	V
Maximum average forward rectified current	I <sub>F</sub> (AV)	1.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I <sub>F</sub> SM	50		A
Voltage rate of change (rated V <sub>R</sub> )	dV/dt	10 000		V/μs
Peak repetitive reverse surge current at t <sub>p</sub> = 2.0 μs, 1 kHz	I <sub>RRM</sub>	1.0		A
Maximum operating junction temperature	T <sub>J</sub>	175		°C
Storage temperature range	T <sub>STG</sub>	- 55 to + 175		°C

PARAMETER	TEST CONDITIONS	SYMBOL	SB1H90	SB1H100	UNIT
Maximum instantaneous forward voltage <sup>(1)</sup>	I <sub>F</sub> = 1.0 A	V <sub>F</sub>	0.77		V
	I <sub>F</sub> = 1.0 A		0.62		
	I <sub>F</sub> = 2.0 A		0.86		
	I <sub>F</sub> = 2.0 A		0.70		
Maximum reverse current at rated V <sub>R</sub> <sup>(2)</sup>	T <sub>J</sub> = 25 °C	I <sub>R</sub>	1.0		μA
	T <sub>J</sub> = 125 °C		0.5		

**Notes:**

- (1) Pulse test: 300 ms pulse width, 1 % duty cycle  
 (2) Pulse test: Pulse width ≤ 40 ms

**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

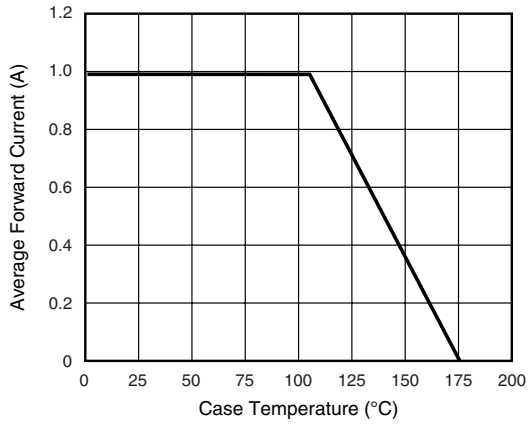


Figure 1. Forward Current Derating Curve

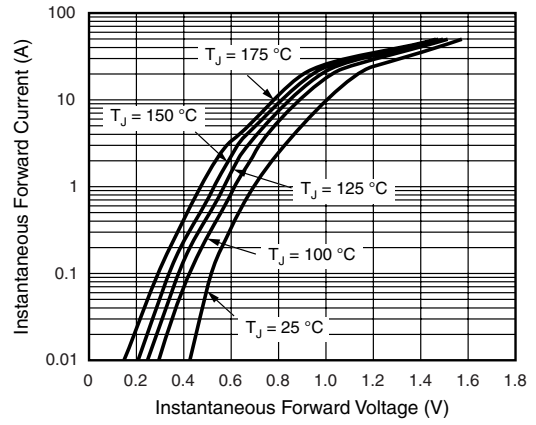


Figure 2. Typical Instantaneous Forward Characteristics

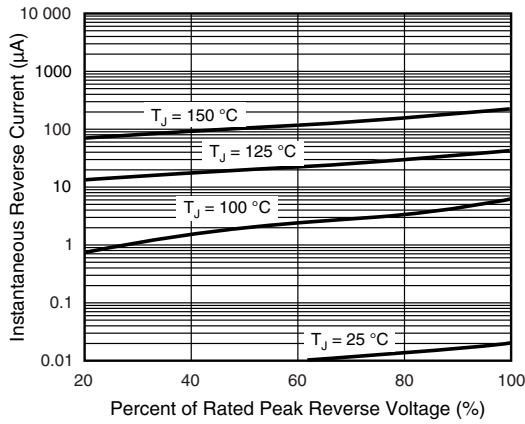


Figure 3. Typical Reverse Characteristics

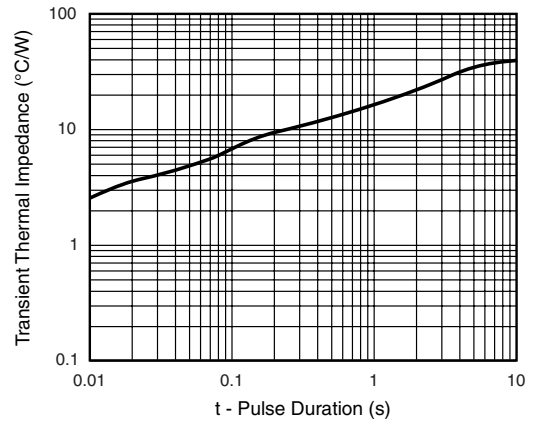


Figure 5. Typical Transient Thermal Impedance

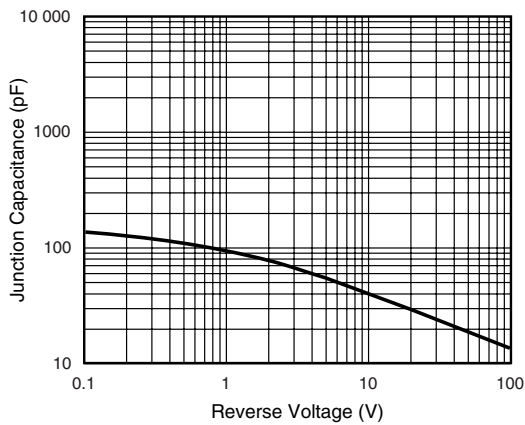


Figure 4. Typical Junction Capacitance