

VOLTAGE RANGE: 90 - 100V

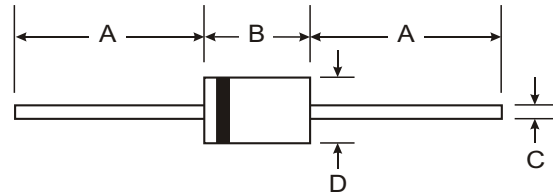
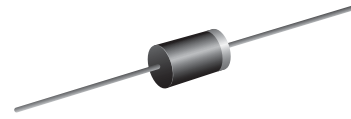
CURRENT: 1.0 A

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 $T_A = 25^\circ\text{C}$ 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_{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_F)	dV/dt	10 000		V/ μs
Peak repetitive reverse surge current at $t_p = 2.0 \mu\text{s}$, 1 kHz	I_{RRM}	1.0		A
Maximum operating junction temperature	T_J	175		$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 to + 175		$^\circ\text{C}$

PARAMETER	TEST CONDITIONS		SYMBOL	SB1H90	SB1H100	UNIT
Maximum instantaneous forward voltage ⁽¹⁾	I _F = 1.0 A	T _J = 25 °C	V _F	0.77		V
	I _F = 1.0 A	T _J = 125 °C		0.62		
	I _F = 2.0 A	T _J = 25 °C		0.86		
	I _F = 2.0 A	T _J = 125 °C		0.70		
Maximum reverse current at rated V _R ⁽²⁾		T _J = 25 °C	I _R	1.0		μA
		T _J = 125 °C		0.5		mA

Notes:

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

(2) Pulse test: Pulse width $\leq 40 \text{ ms}$

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

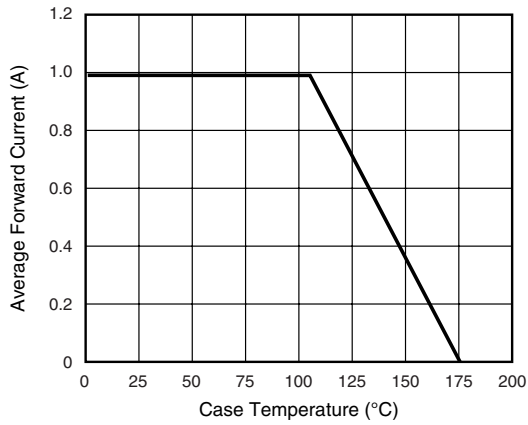


Figure 1. Forward Current Derating Curve

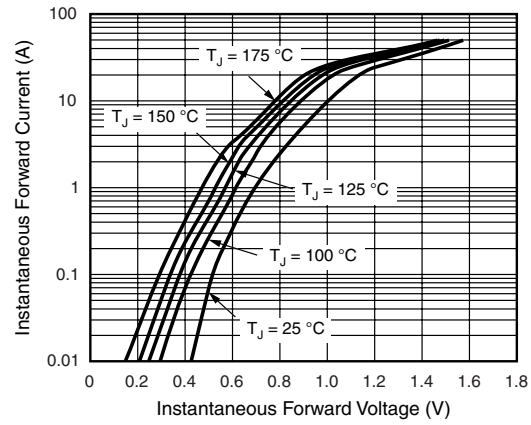


Figure 2. Typical Instantaneous Forward Characteristics

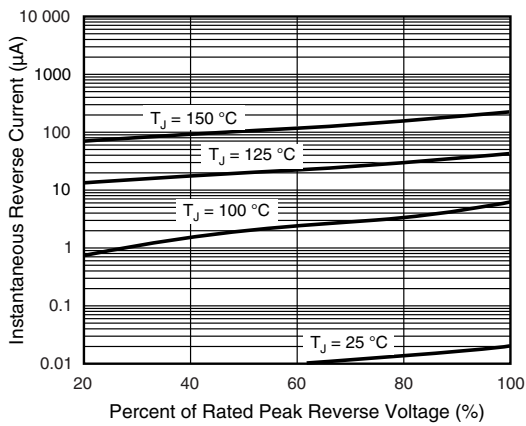


Figure 3. Typical Reverse Characteristics

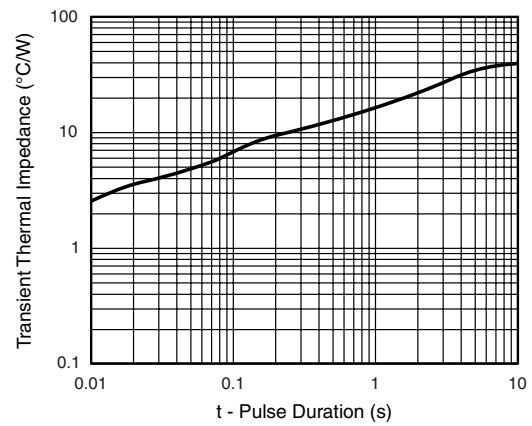


Figure 5. Typical Transient Thermal Impedance

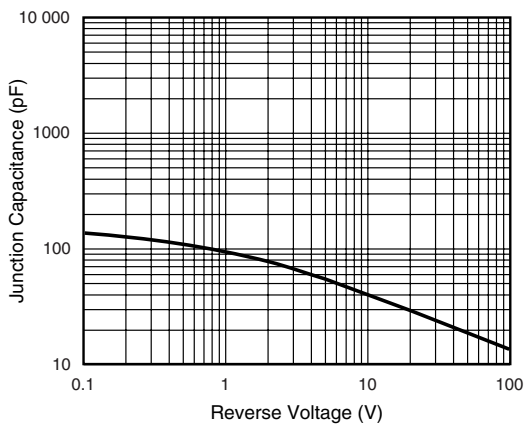


Figure 4. Typical Junction Capacitance