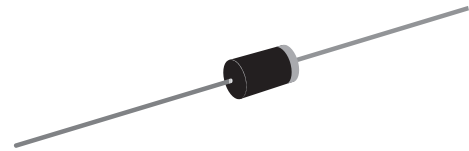


## High-Voltage Schottky Rectifier

High Barrier Technology for improved high temperature performance

### Major Ratings and Characteristics

$I_{F(AV)}$	2.0 A
$V_{RRM}$	90 V, 100 V
$I_{FSM}$	75 A
$V_F$	0.65 V
$I_R$	10 $\mu$ A
$T_j$ max.	175 °C



DO-204AC (DO-15)

### Features

- Guardring for overvoltage protection
- Low power losses and high efficiency
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High frequency operation
- Meets MSL level 1, per J-STD-020C

### Typical Applications

For use in middle voltage high frequency inverters, free wheeling, dc-to-dc converters and polarity protection applications.

### Mechanical Data

**Case:** DO-204AC (DO-15)

Epoxy meets UL 94V-0 flammability rating

**Terminals:** Matte tin plated leads, solderable per J-STD-002B and JESD22-B102D

E3 suffix for commercial grade

**Polarity:** Color band denotes the cathode end

### Maximum Ratings

$T_A = 25$  °C unless otherwise specified

Parameter	Symbol	SB2H90	SB2H100	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	90	100	V
Working Peak Reverse Voltage	$V_{RWM}$	90	100	V
Maximum DC blocking voltage	$V^{DC}$	90	100	V
Maximum average forward rectified current at $T_A = 25$ °C	$I_{F(AV)}$	2.0		A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	75		A
Peak repetitive reverse surge current at $t_p = 2.0$ $\mu$ s, 1 kHz	$I_{RRM}$	1.0		A
Critical rate of rise of reverse voltage	dv/dt	10000		V/ $\mu$ s
Storage temperature range	$T_{STG}$	- 55 to + 175		°C
Maximum operating junction temperature	$T_J$	175		°C

### Electrical Characteristics

$T_A = 25\text{ }^\circ\text{C}$  unless otherwise specified

Parameter	Test condition	Symbols	SB2H90	SB2H100	Unit
Maximum instantaneous forward voltage <sup>(1)</sup>	$I_F = 2.0\text{ A}$ , $T_J = 25\text{ }^\circ\text{C}$	$V_F$	0.79		V
	$I_F = 2.0\text{ A}$ , $T_J = 125\text{ }^\circ\text{C}$		0.65		
Maximum DC reverse current at rated DC blocking voltage <sup>(1)</sup>	$T_J = 25\text{ }^\circ\text{C}$	$I_R$	10		$\mu\text{A}$
	$T_J = 125\text{ }^\circ\text{C}$		4.0		

Notes:

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

### Thermal Characteristics

$T_A = 25\text{ }^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	SB2H90	SB2H100	Unit
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$	45		$^\circ\text{C/W}$
	$R_{\theta JL}$	14		

Notes:

(1) P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0 mm) copper pad areas

### Ratings and Characteristics Curves

$(T_A = 25\text{ }^\circ\text{C}$  unless otherwise specified)

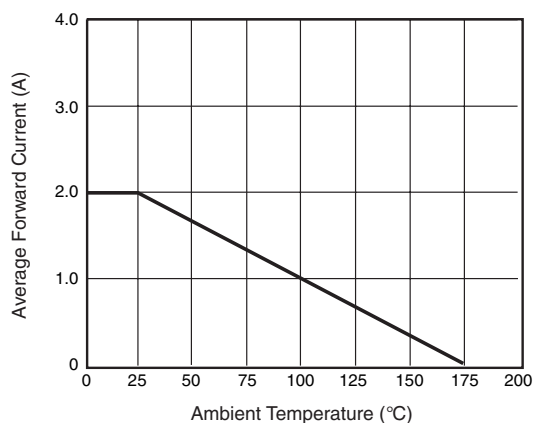


Figure 1. Forward Current Derating Curve

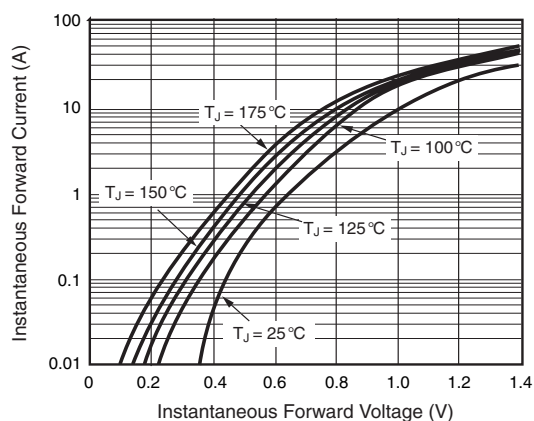


Figure 2. Typical Instantaneous Forward Characteristics

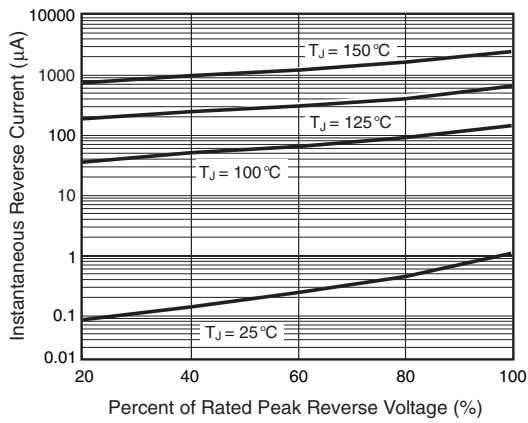


Figure 3. Typical Reverse Characteristics

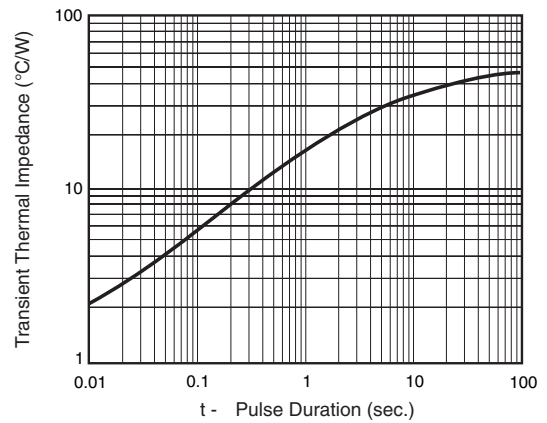


Figure 5. Typical Transient Thermal Impedance

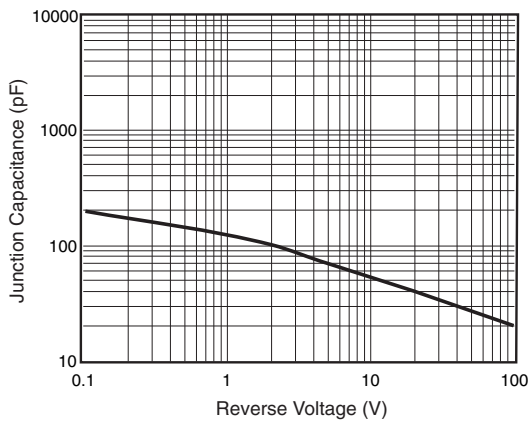
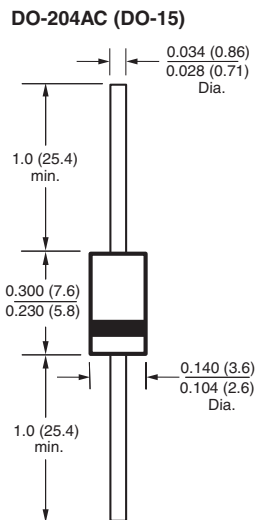


Figure 4. Typical Junction Capacitance

## Package outline dimensions in inches (millimeters)





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