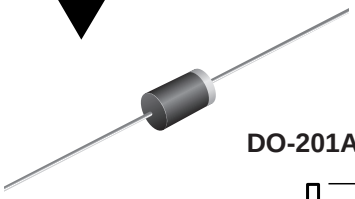
New Product

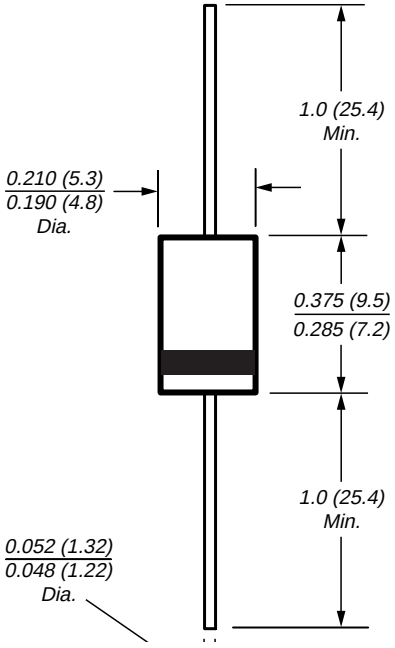
Vishay Semiconductors
formerly General Semiconductor

High Voltage Schottky Rectifier

Reverse Voltage 90 to 100V
Forward Current 3.0A



DO-201AD



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guardring for overvoltage protection
- High temperature soldering guaranteed: 250°C/10 seconds at terminals

Mechanical Data

Case: JEDEC DO-201AD molded plastic body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.04 oz., 1.12g

Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	SB3H90	SB3H100	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	90	100	V
Maximum working reverse voltage	V_{RWM}	90	90	V
Maximum DC blocking voltage	V_{DC}	90	100	V
Maximum average forward rectified current at T_L = 90°C	$I_{F(AV)}$	3.0		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100		A
Peak repetitive reverse surge current at t_p = 2.0µs, 1KHz	I_{RRM}	1.0		A
Critical rate of rise of reverse voltage	dv/dt	10,000		V/µs
Maximum thermal resistance(2)	$R_{\theta JA}$ $R_{\theta JL}$	30 10		°C/W
Storage temperature range	T_{STG}	–55 to +175		°C
Maximum operating junction temperature	T_J	+175		°C

Electrical Characteristics (T_A = 25°C unless otherwise noted)

Maximum instantaneous forward voltage at: (1)	I_F = 3.0A, T_J = 25°C I_F = 3.0A, T_J = 125°C	V_F	0.80 0.65	V
Maximum DC reverse current at rated DC blocking voltage	T_J = 25°C T_J = 125°C	I_R	20 4	µA mA

Notes:
(1) Pulse test: 300µs pulse width, 1% duty cycle
(2) P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

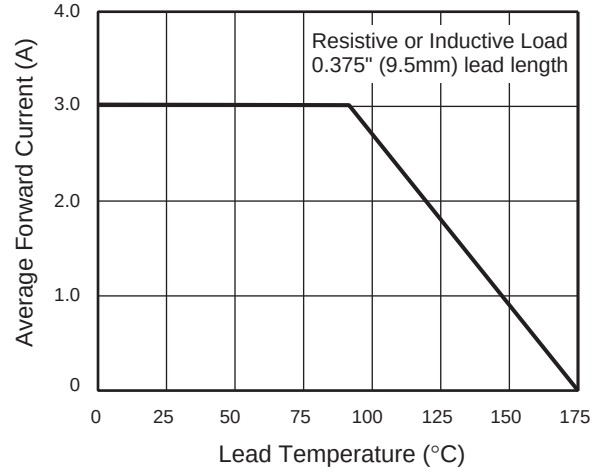


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

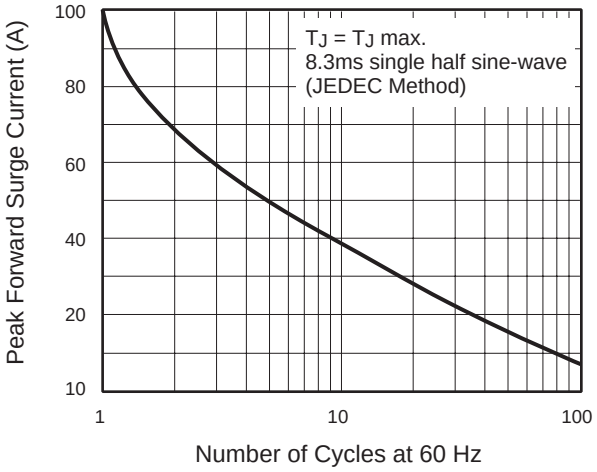


Fig. 3 – Typical Instantaneous Forward Characteristics

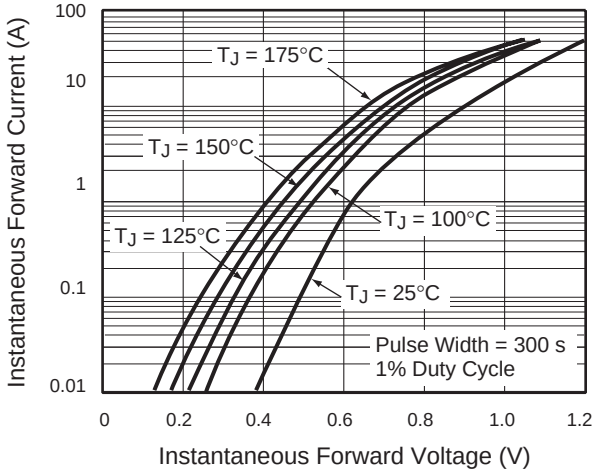


Fig. 4 – Typical Reverse Characteristics

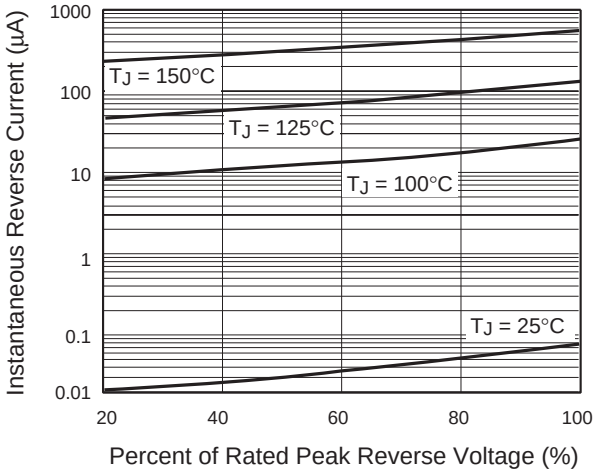


Fig. 5 – Typical Junction Capacitance

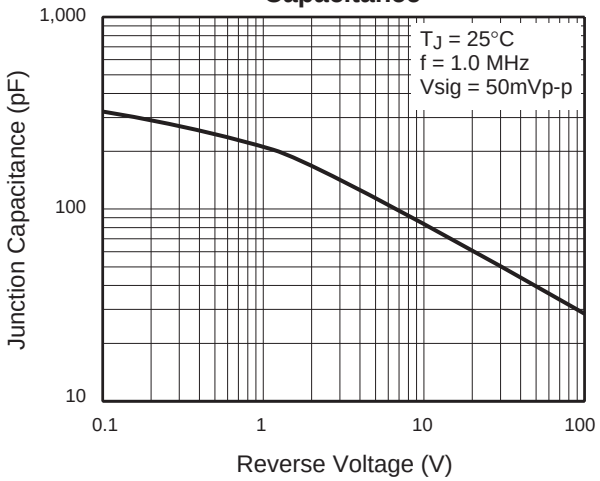


Fig. 6 - Typical Transient Thermal Impedance