

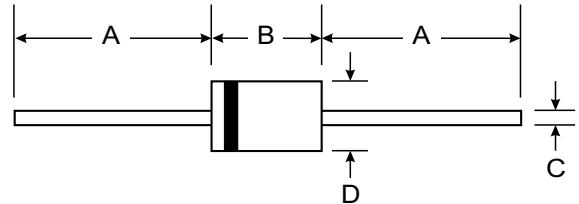
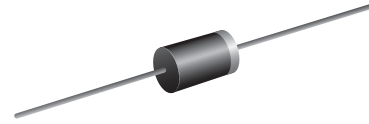
**VOLTAGE RANGE: 90 - 100V**  
**CURRENT: 5.0 A**

### 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-201AD, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



DO-201AD		
Dim	Min	Max
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
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	SB5H90	SB5H100	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	90	100	V
Working peak reverse voltage	V <sub>RWM</sub>	90	100	V
Maximum DC blocking voltage	V <sub>DC</sub>	90	100	V
Maximum average forward rectified current at T <sub>C</sub> = 80°C	I <sub>F(AV)</sub>	5.0		A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	200		A
Peak repetitive reverse surge current at t <sub>p</sub> = 2.0μs, 1KHz	I <sub>RRM</sub>	1.0		A
Maximum thermal resistance <sup>(2)</sup>	R <sub>θJA</sub> R <sub>θJL</sub>	25 8		°C/W
Storage temperature range	T <sub>STG</sub>	-55 to +175		°C
Maximum operating junction temperature	T <sub>J</sub>	175		°C

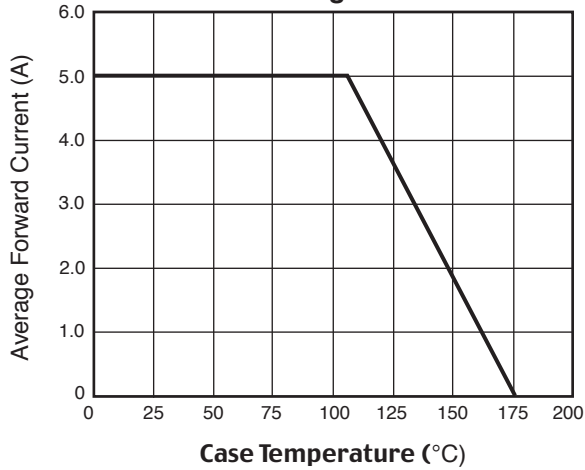
### Electrical Characteristics (T<sub>A</sub> = 25°C unless otherwise noted)

Maximum instantaneous forward voltage at: <sup>(1)</sup>	I <sub>F</sub> = 5.0A, T <sub>A</sub> = 25°C I <sub>F</sub> = 5.0A, T <sub>A</sub> = 125°C	V <sub>F</sub>	0.80 0.70	V
Maximum DC reverse current at rated DC blocking voltage <sup>(1)</sup>	T <sub>A</sub> = 25°C T <sub>A</sub> = 125°C	I <sub>R</sub>	200 10	μA mA

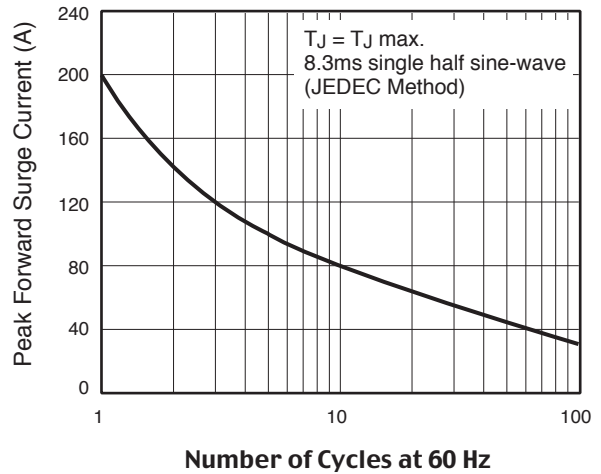
**Notes:** (1) Pulse test: 300μs pulse width, 1% duty cycle  
(2) P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

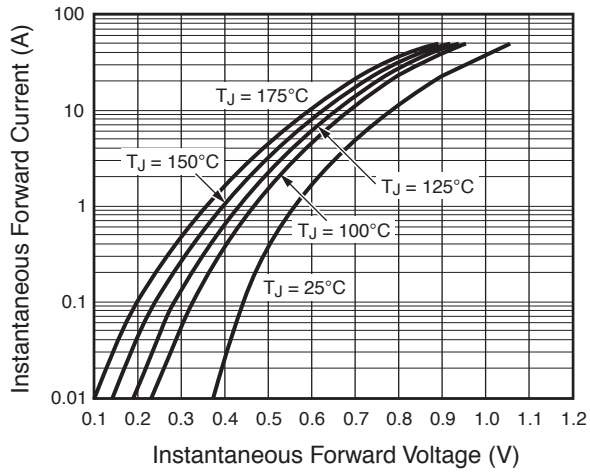
**Fig. 1 – Forward Current Derating Curve**



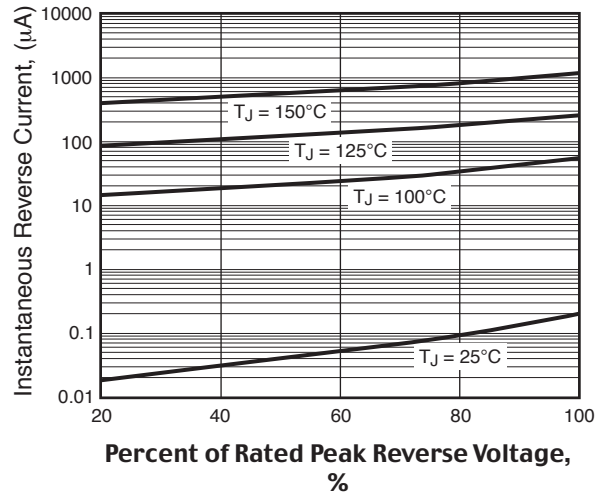
**Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current**



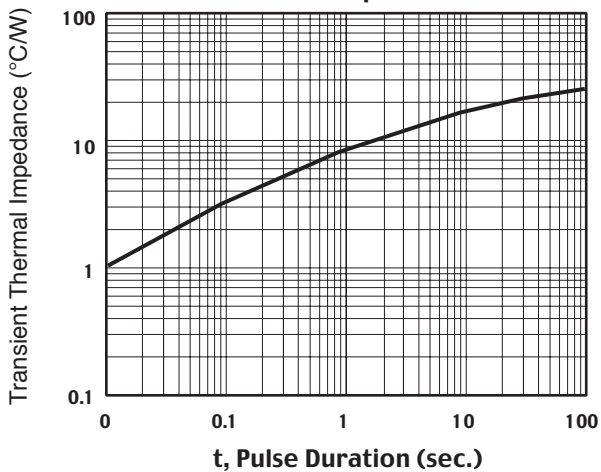
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 - Typical Transient Thermal Impedance**



**Fig. 6 – Typical Junction Capacitance**

