



**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**

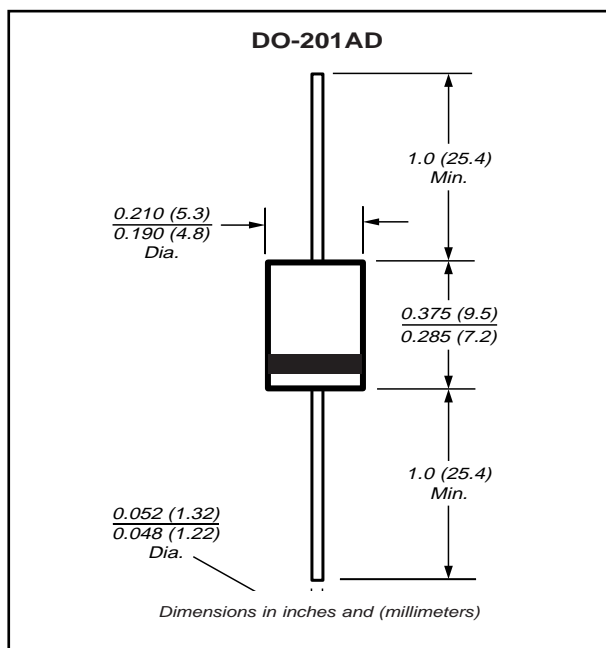
**Case:** JEDEC DO-201AD molded plastic body

**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 ELECTRICAL CHARACTERISTICS**

**Maximum Ratings and Thermal Characteristics** (T<sub>A</sub> = 25°C unless otherwise noted)

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)

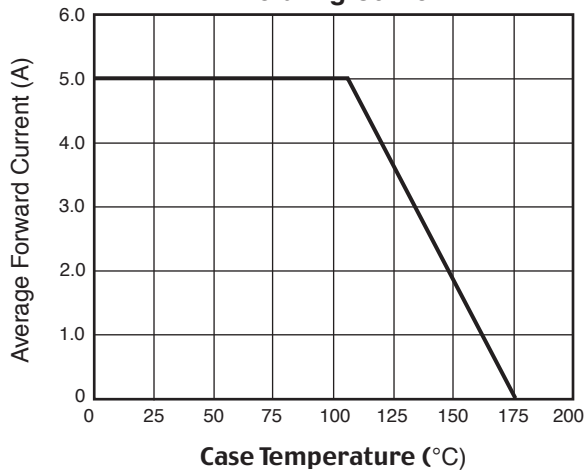
Maximum instantaneous forward voltage at: <sup>(1)</sup>	I <sub>F</sub> = 5.0A, T <sub>A</sub> = 25°C I <sub>F</sub> = 5.0A, T <sub>A</sub> = 125°C	V <sub>F</sub>	0.80 0.70	V
Maximum DC reverse current at rated DC blocking voltage <sup>(1)</sup>	T <sub>A</sub> = 25°C T <sub>A</sub> = 125°C	I <sub>R</sub>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

**Notes:** (1) Pulse test: 300μs pulse width, 1% duty cycle

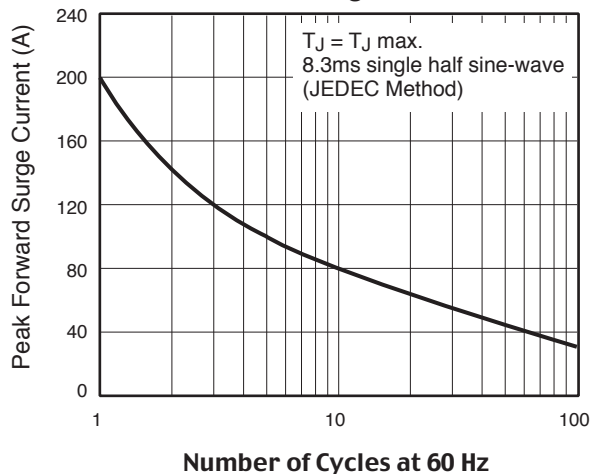
(2) P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas



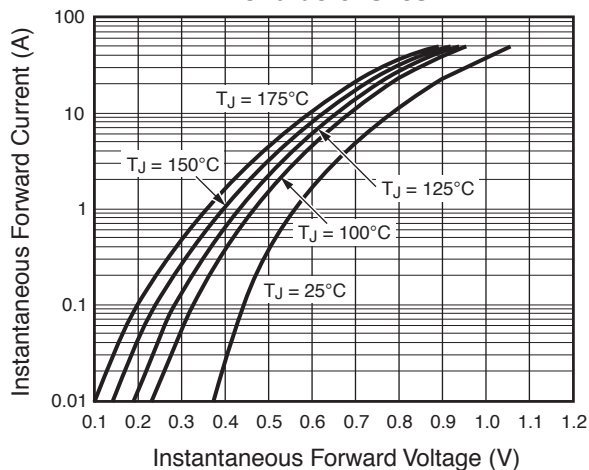
**Fig. 1 – Forward Current Derating Curve**



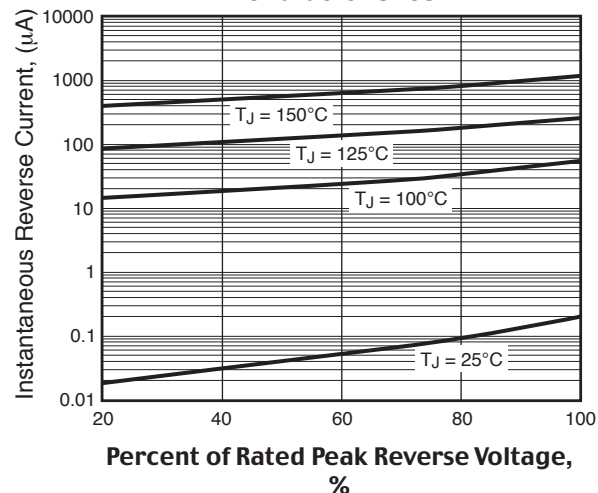
**Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current**



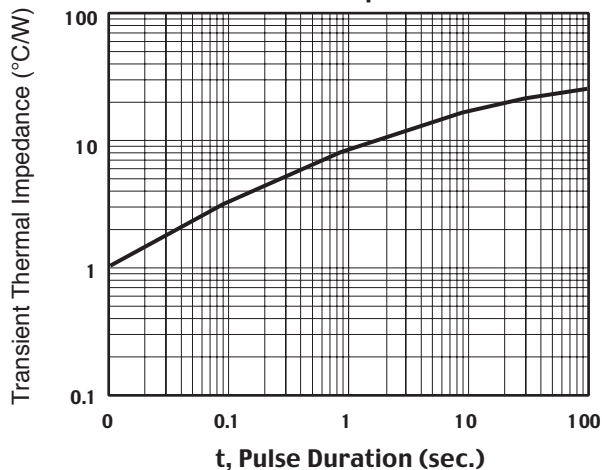
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



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



**Fig. 6 – Typical Junction Capacitance**

