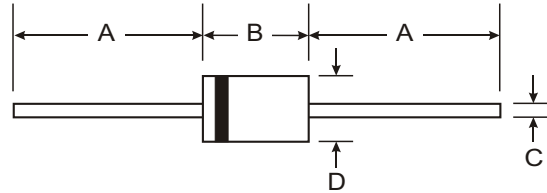


### Features

- Epitaxial Construction
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 150A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Plastic Material: UL Flammability Classification Rating 94V-0



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		

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.1 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

### 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%.

Characteristic	Symbol	SB520	SB530	SB540	SB550	SB560	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	V
Working Peak Reverse Voltage	V <sub>RWM</sub>						
DC Blocking Voltage	V <sub>R</sub>						
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	35	42	V
Average Rectified Output Current (See Figure 1) (Note 1)	I <sub>O</sub>	5.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150					A
Forward Voltage (Note 2) @ I <sub>F</sub> = 5.0A	V <sub>FM</sub>	0.55			0.67		V
Peak Reverse Current @ T <sub>A</sub> = 25°C at Rated DC Blocking Voltage (Note 2) @ T <sub>A</sub> = 100°C	I <sub>RM</sub>	0.5			25		mA
Typical Thermal Resistance Junction to Ambient (Note 1) (Note 3)	R <sub>θJA</sub>	25					°C/W
	R <sub>θJL</sub>	8					
Operating Temperature Range	T <sub>J</sub>	-65 to +125			-65 to +150		°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150					

- Notes:
1. Measured at ambient temperature at a distance of 9.5mm from case.
  2. Short duration test pulse used to minimize self-heating effect.
  3. Thermal resistance junction to lead vertical P.C.B. mounted, 0.375" (9.5mm) lead length.

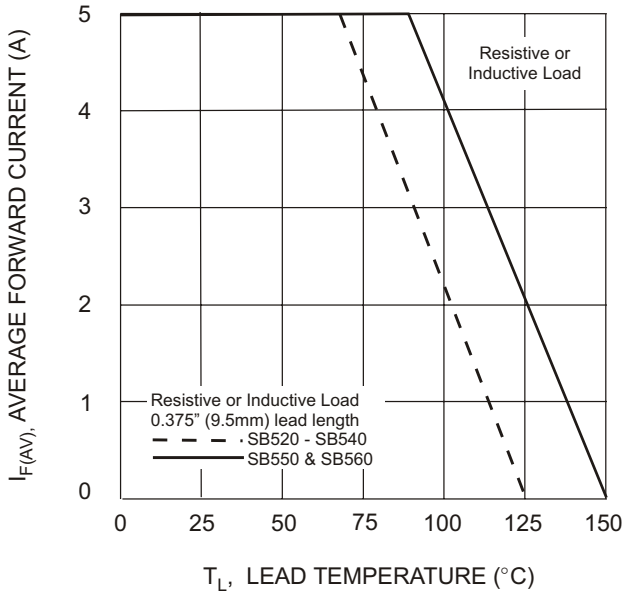


Fig. 1 Forward Current Derating Curve

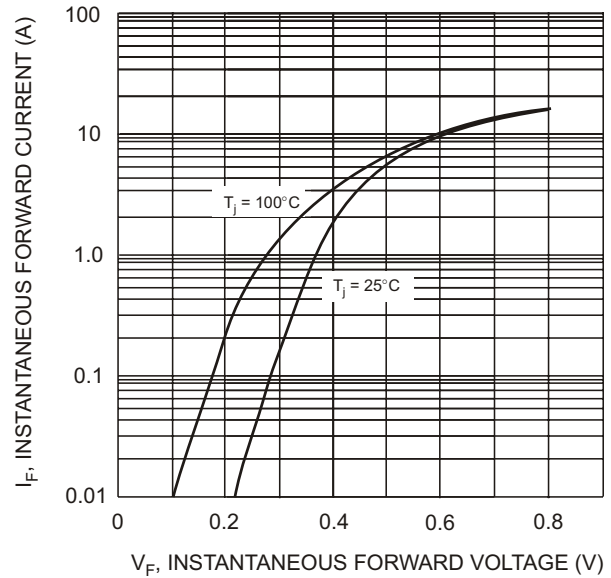


Fig. 2 Typical Forward Characteristics, SB520 - SB540

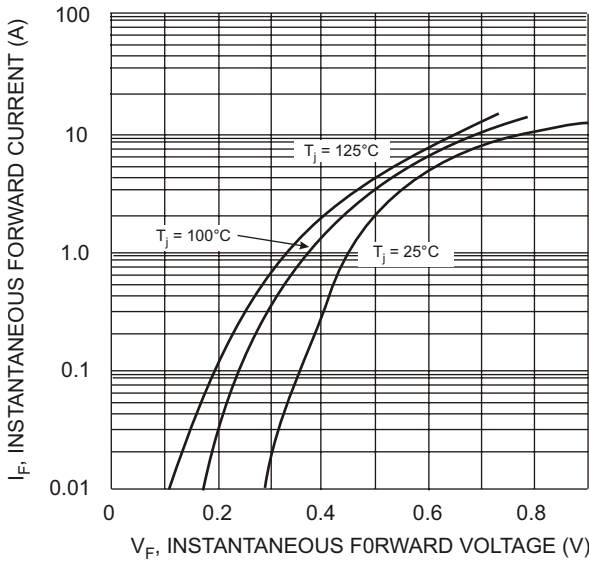


Fig. 3 Typical Forward Characteristics, SB550 & SB560

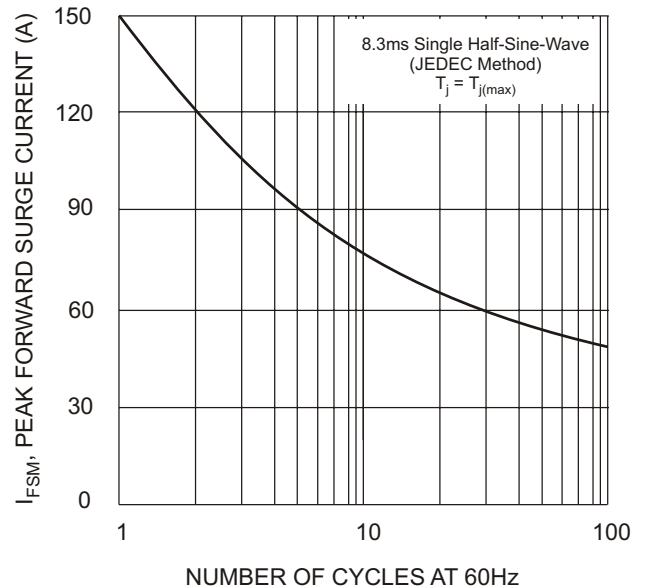


Fig. 4 Max Non-Repetitive Peak Fwd Surge Current

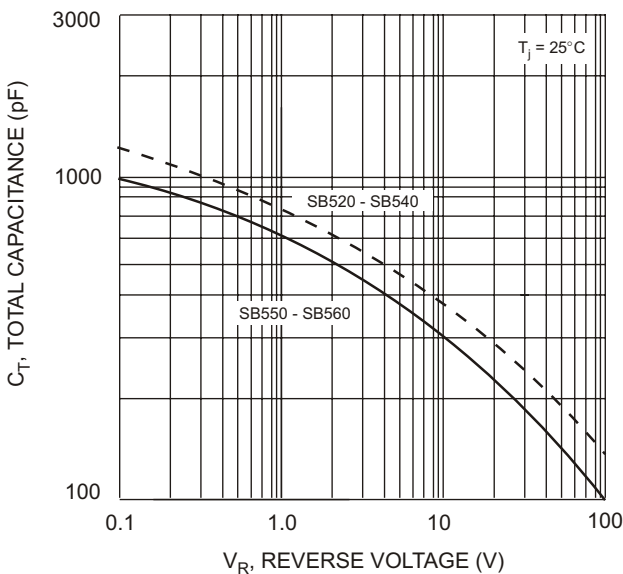


Fig. 5 Typical Total Capacitance

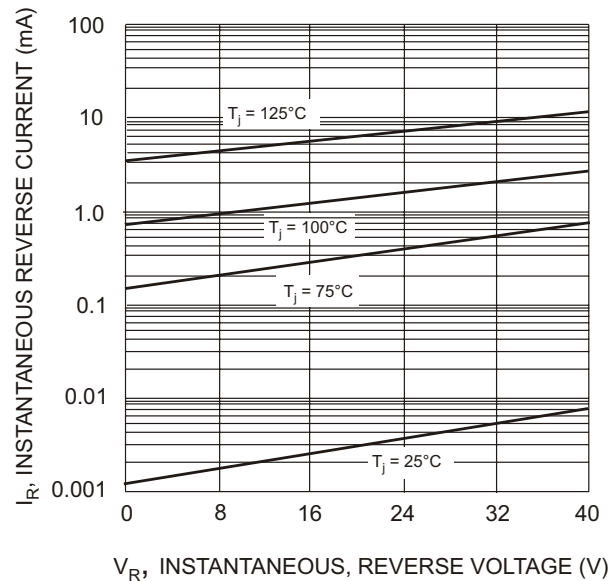
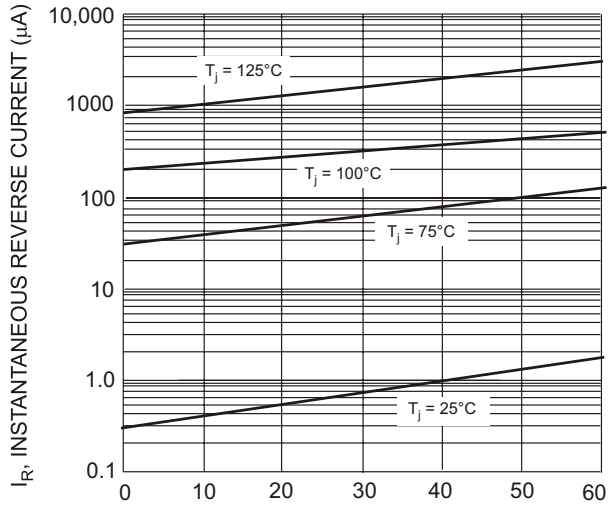


Fig. 6 Typical Reverse Characteristics, SB520 - SB540



$V_R$ , INSTANTANEOUS REVERSE VOLTAGE (V)  
Fig. 7 Typical Reverse Characteristics, SB550 & SB560