

SBL540 THRU SBL560

SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 40 to 60 V

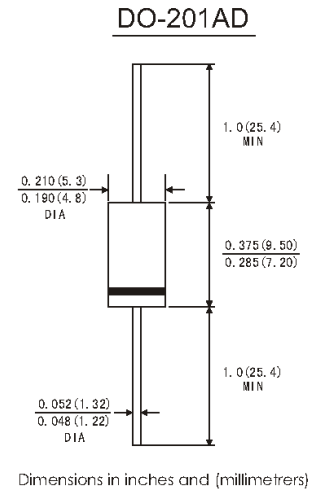
Forward Current - 5 A

Features

- Ultra Low Forward Voltage Drop
- Low Power Losses, High Efficiency Operation
- High Current Capability
- Low Thermal Resistance Package
- High Operating Junction Temperature

Mechanical Data

- **Case:** Molded plastic
- **Epoxy:** UL 94V-0 rate flame retardant
- **Lead:** Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- **Mounting Position:** Color band denotes cathode end



Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, resistive or inductive load, for capacitive load, derate by 20%

Parameter	Symbols	SBL540	SBL560	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	60	V
Maximum RMS Voltage	V_{RMS}	28	42	V
Maximum DC Blocking Voltage	V_{DC}	40	60	V
Maximum Average Forward Rectified Current	$I_{(AV)}$	5		A
Peak Forward Surge Current 8.3ms Single Half Sine-wave	I_{FSM}	150		A
Maximum Instantaneous Forward Voltage	V_F	0.45	0.5	V
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage	I_R	0.2		mA
at $T_J = 25^\circ\text{C}$		50		
at $T_J = 100^\circ\text{C}$				
Typical Thermal Resistance ¹⁾	$R_{\theta JL}$	15		°C/W
Power Dissipation	P_D	2.67		W
Operating Temperature Range	T_J	- 55 to + 150		°C
Operating and Storage Temperature Range	T_J, T_{Stg}	- 55 to + 150		°C

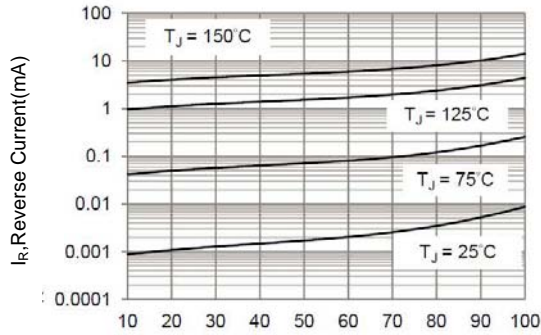
¹⁾ Pulse test: 300 μs , 1% duty cycle

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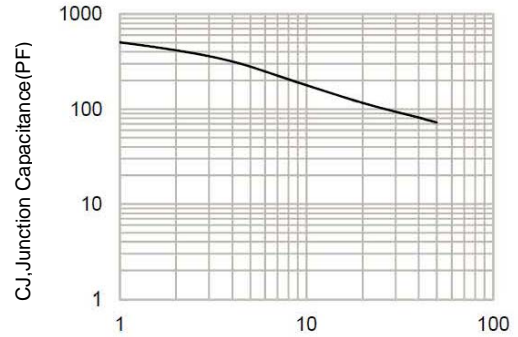


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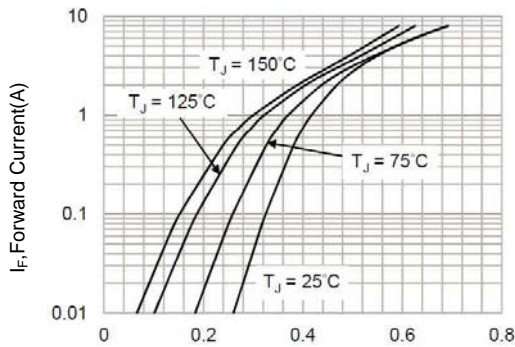
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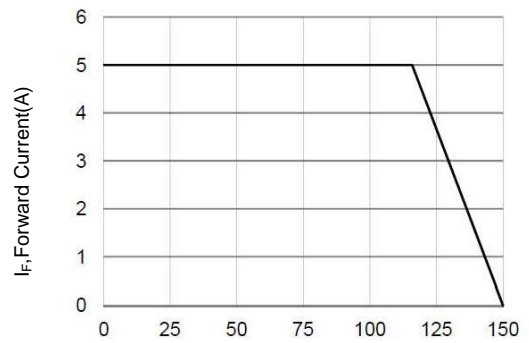
Percent of Rated Peak Reverse Voltage (%)
Figure 1. Typical Reverse Characteristics



V_R , Reverse Bias Voltage (V)
Figure 2. Typical Junction Capacitance



V_F , Forward Voltage (V)
Figure 3. Typical Forward Characteristics



T_C , Case Temperature ($^\circ\text{C}$)
Figure 4. Forward Current Derating Curve

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