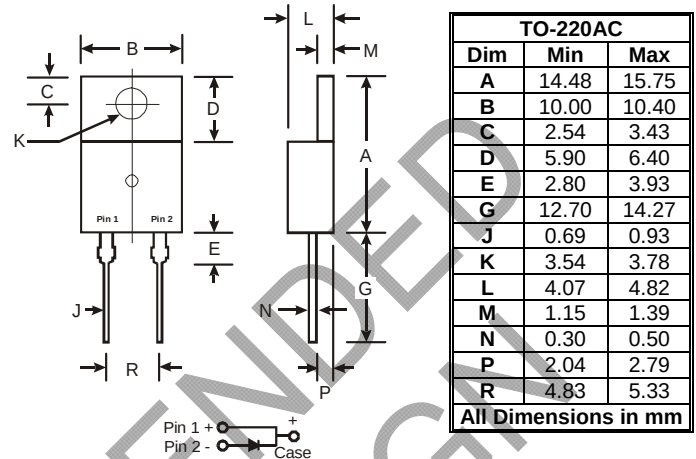


Features

- Schottky Barrier Chip
- Guard Ring for Transient Protection
- Low Power Loss, High Efficiency
- High Current Capability, Low V_F
- High Surge Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- **Lead Free Finish, RoHS Compliant (Note 3)**

Mechanical Data

- Case: TO-220AC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Polarity: See Diagram
- Terminals: Finish – Bright Tin. Solderable per MIL-STD-202, Method 208
- Marking: Type Number
- Weight: 2.3 grams (approximate)



Maximum Ratings and Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	SBL 830	SBL 835	SBL 840	SBL 845	SBL 850	SBL 860	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}								
Working Peak Reverse Voltage	V_{RWM}	30	35	40	45	50	60	V	
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	21	24.5	28	31.5	35	42	V	
Average Rectified Output Current (Note 1) @ $T_C = 95^{\circ}C$	I_O	8						A	
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	200						A	
Forward Voltage @ $I_F = 8A, T_C = 25^{\circ}C$	V_{FM}	0.55				0.70		V	
Peak Reverse Current @ $T_C = 25^{\circ}C$	I_{RM}	0.5							mA
at Rated DC Blocking Voltage @ $T_C = 100^{\circ}C$		50							
Typical Junction Capacitance (Note 2)	C_j	700							pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	6.9							$^{\circ}C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150						$^{\circ}C$	

- Notes:
1. Thermal resistance junction to case mounted on heatsink.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see EU Directive Annex Notes 5 and 7.

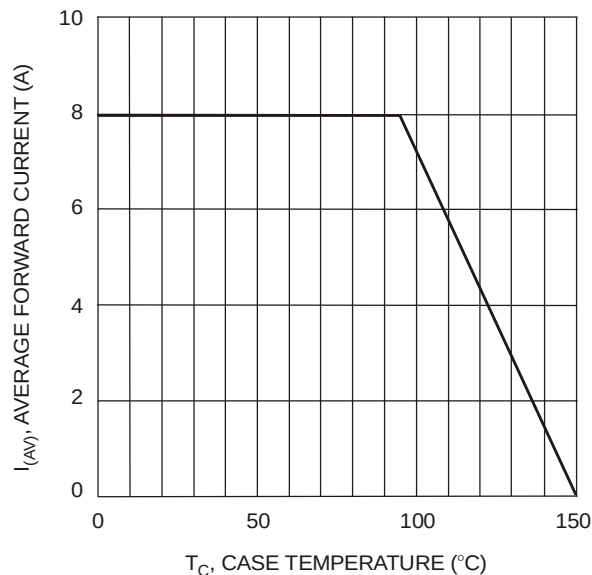


Fig. 1 Fwd Current Derating Curve

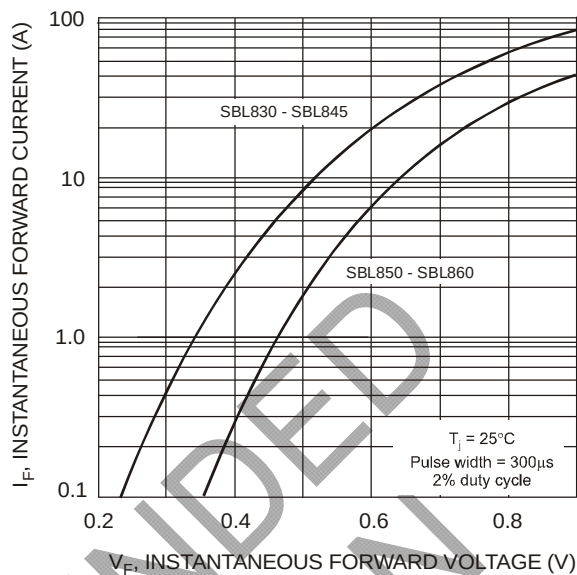


Fig. 2 Typical Forward Characteristics

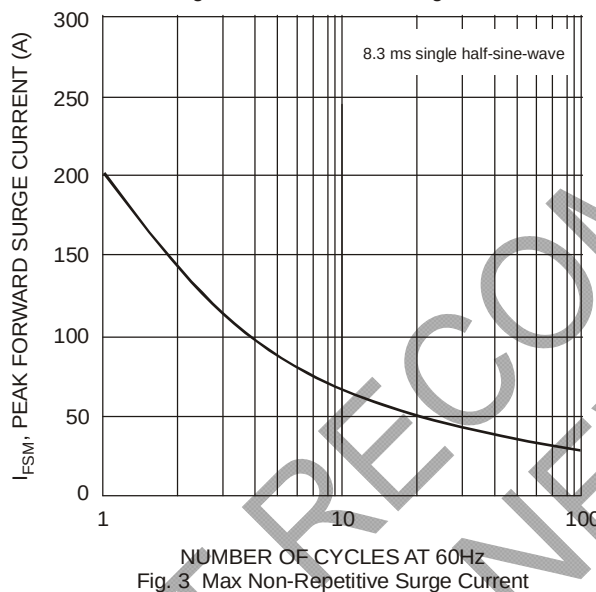


Fig. 3 Max Non-Repetitive Surge Current

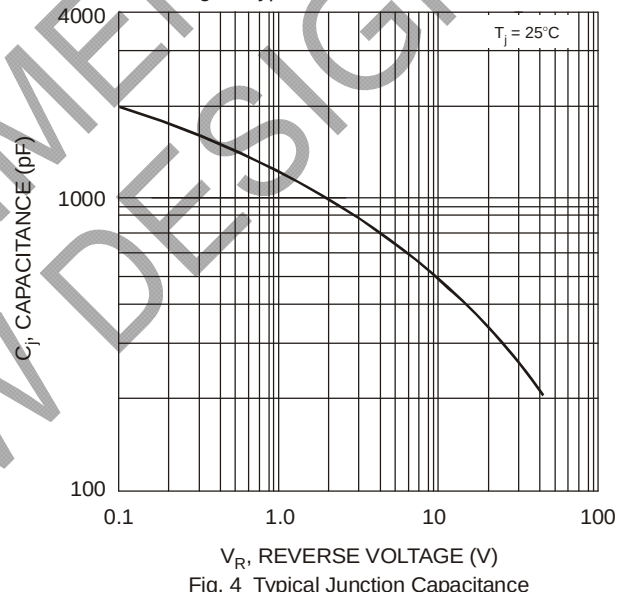


Fig. 4 Typical Junction Capacitance

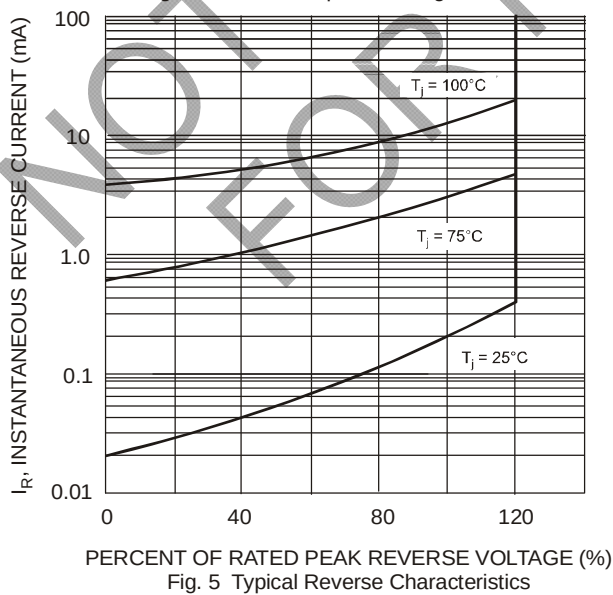


Fig. 5 Typical Reverse Characteristics

Ordering Information (Note 4)

Device	Packaging	Shipping
SBL8xx*	TO-220AC	50/Tube

* xx = Device type, e.g. SBL845

Notes: 4. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

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