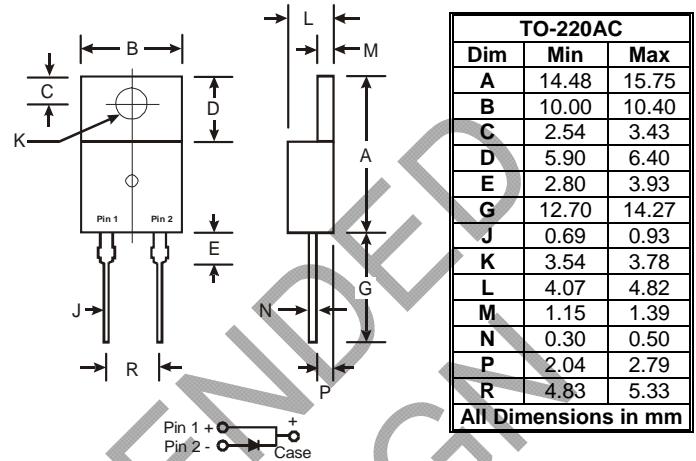


Features

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

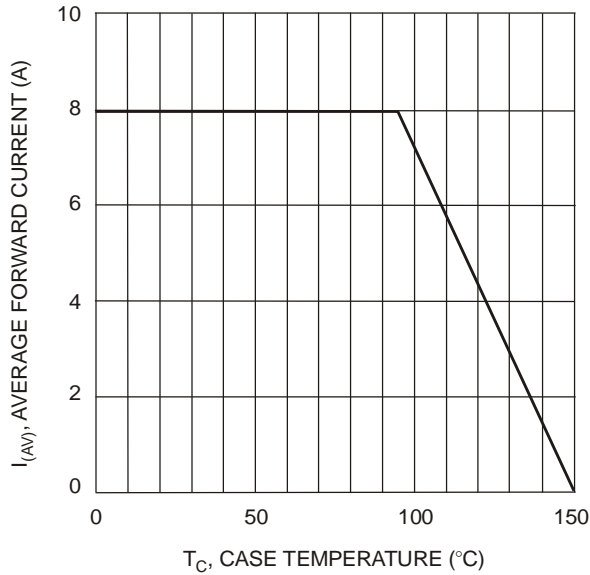


Fig. 1 Fwd Current Derating Curve

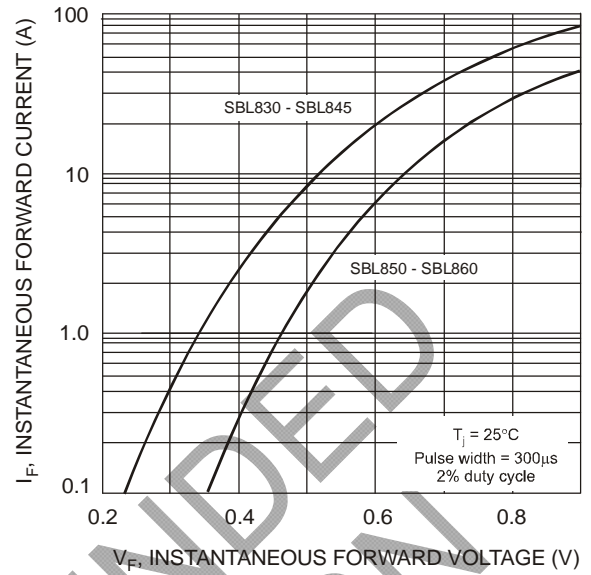


Fig. 2 Typical Forward Characteristics

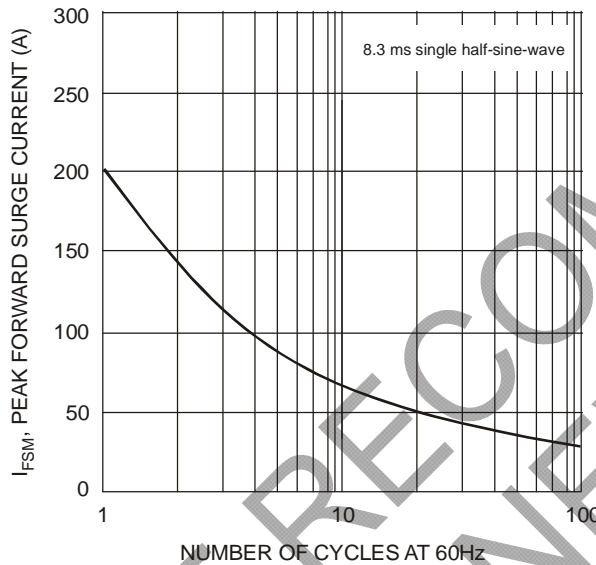


Fig. 3 Max Non-Repetitive Surge Current

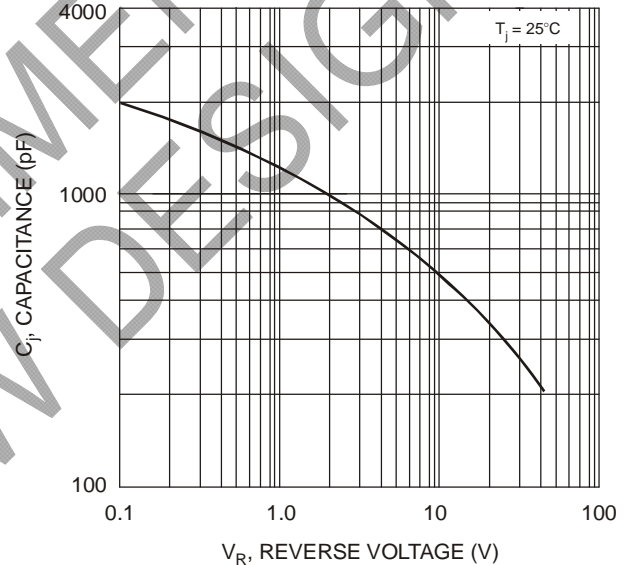


Fig. 4 Typical Junction Capacitance

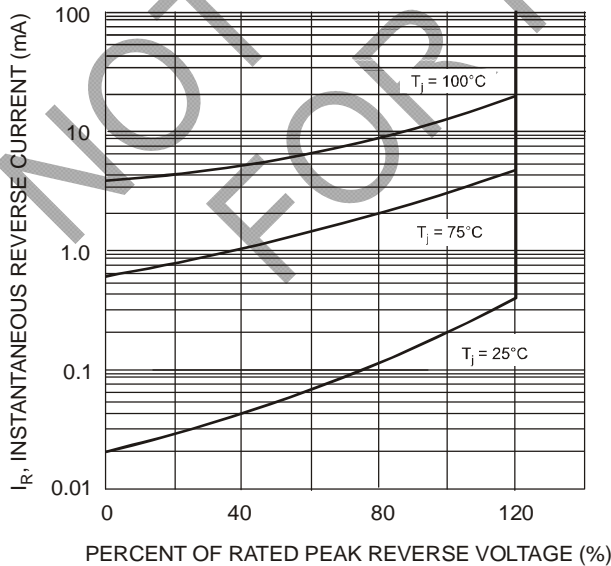


Fig. 5 Typical Reverse Characteristics

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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