



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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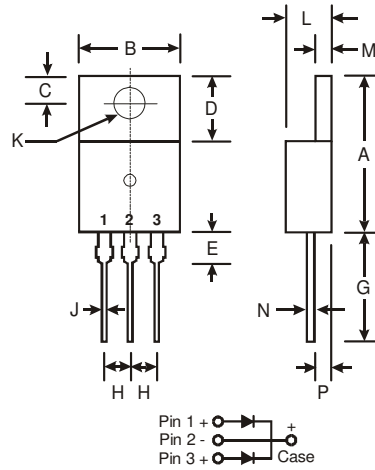


**Features**

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- 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-220AB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Polarity: As Marked on Body
- Terminals: Finish – Bright Tin. Solderable per MIL-STD-202, Method 208
- Marking: Type Number
- Weight: 2.24 grams (approximate)



TO-220AB		
Dim	Min	Max
A	14.48	15.75
B	10.00	10.40
C	2.54	3.43
D	5.90	6.40
E	2.80	3.93
G	12.70	14.27
H	2.40	2.70
J	0.69	0.93
K	3.54	3.78
L	4.07	4.82
M	1.15	1.39
N	0.30	0.50
P	2.04	2.79
All Dimensions in mm		

**Maximum Ratings and Electrical Characteristics** @T<sub>A</sub> = 25°C unless otherwise specified

Characteristic	Symbol	SBL 1030CT	SBL 1035CT	SBL 1040CT	SBL 1045CT	SBL 1050CT	SBL 1060CT	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>							V
Working Peak Reverse Voltage	V <sub>RWM</sub>	30	35	40	45	50	60	V
DC Blocking Voltage	V <sub>R</sub>							V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	24.5	28	31.5	35	42	V
Average Rectified Output Current @ T <sub>C</sub> = 95°C (Note 1)	I <sub>O</sub>	10						A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	175						A
Forward Voltage Drop @ I <sub>F</sub> = 5.0A, T <sub>C</sub> = 25°C	V <sub>FM</sub>	0.55				0.70		V
Peak Reverse Current @ T <sub>C</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>C</sub> = 125°C	I <sub>RM</sub>	0.5				50		mA
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	450						pF
Typical Thermal Resistance Junction to Case (Note 1)	R <sub>θJC</sub>	5.5						°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150						°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.

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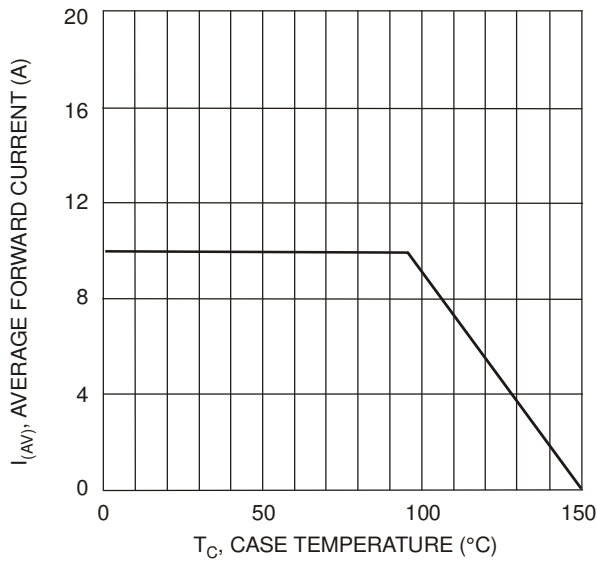


Fig. 1 Forward Current Derating Curve

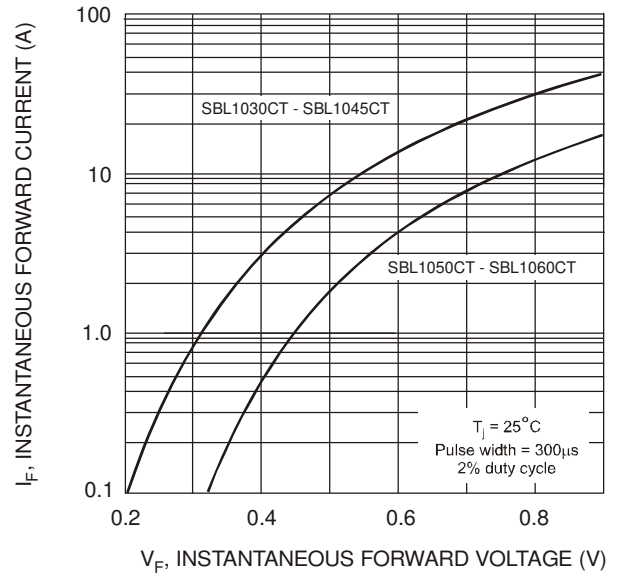


Fig. 2 Typical Forward Characteristics per Element

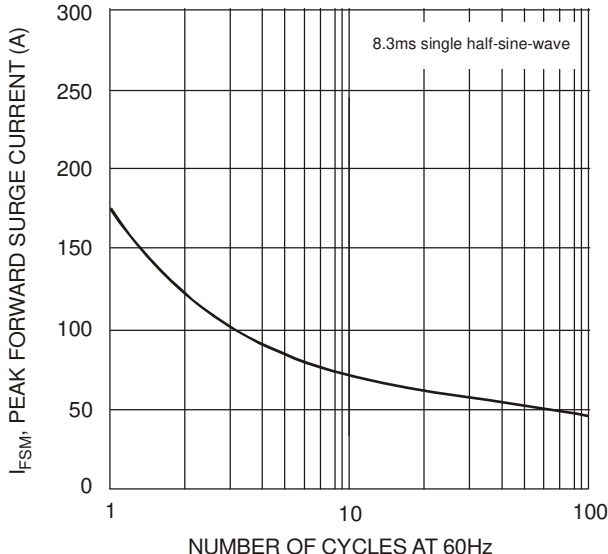


Fig. 3 Max Non-Repetitive Surge Current

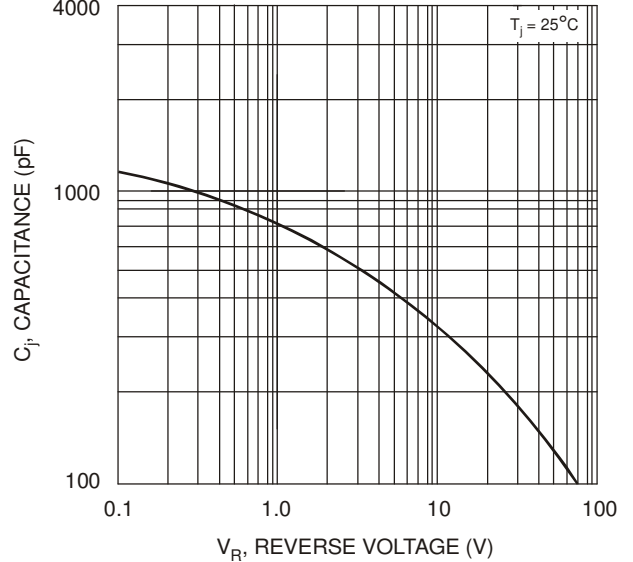


Fig. 4 Typical Junction Capacitance per Element

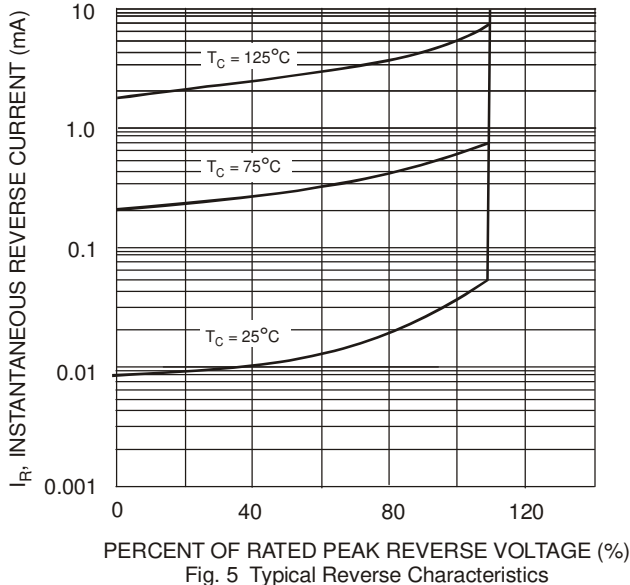


Fig. 5 Typical Reverse Characteristics

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## Ordering Information (Note 4)

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Device	Packaging	Shipping
SBL10xxCT*	TO-220AB	50/Tube

\* xx = Device type, e.g. SBL1045CT

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

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