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SBL1030CT - SBL1060CT

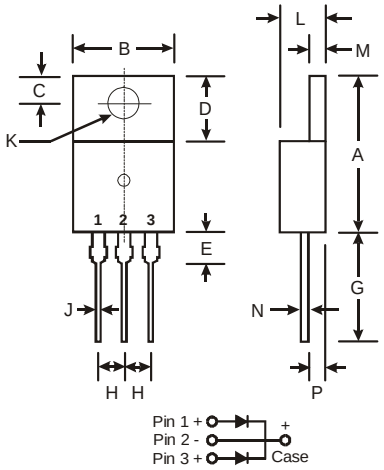
10A SCHOTTKY BARRIER RECTIFIER

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_A = 25°C unless otherwise specified

Characteristic		Symbol	SBL 1030CT	SBL 1035CT	SBL 1040CT	SBL 1045CT	SBL 1050CT	SBL 1060CT	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V_{RRM} V_{RWM} V_R	30	35	40	45	50	60	V
RMS Reverse Voltage		$V_{R(RMS)}$	21	24.5	28	31.5	35	42	V
Average Rectified Output Current	@ T_C = 95°C (Note 1)	I_O	10						A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	175						A
Forward Voltage Drop	@ I_F = 5.0A, T_C = 25°C	V_{FM}	0.55				0.70		V
Peak Reverse Current at Rated DC Blocking Voltage	@ T_C = 25°C @ T_C = 125°C	I_{RM}	0.5 50						mA
Typical Junction Capacitance	(Note 2)	C_j	450						pF
Typical Thermal Resistance Junction to Case	(Note 1)	$R_{\theta JC}$	5.5						°C/W
Operating and Storage Temperature Range		T_j, T_{STG}	-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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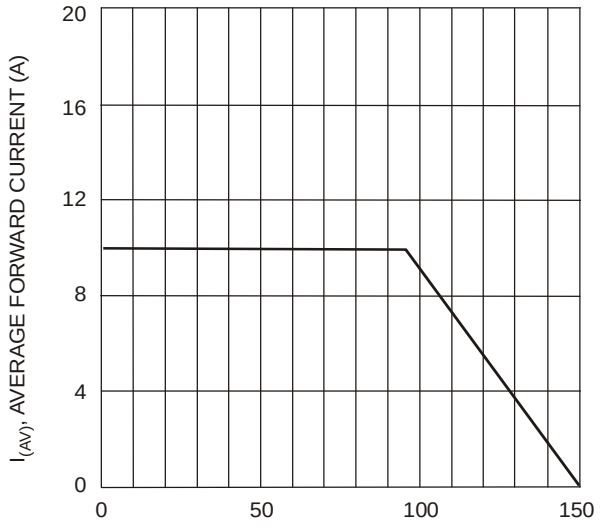

Fig. 1 Forward Current Derating Curve

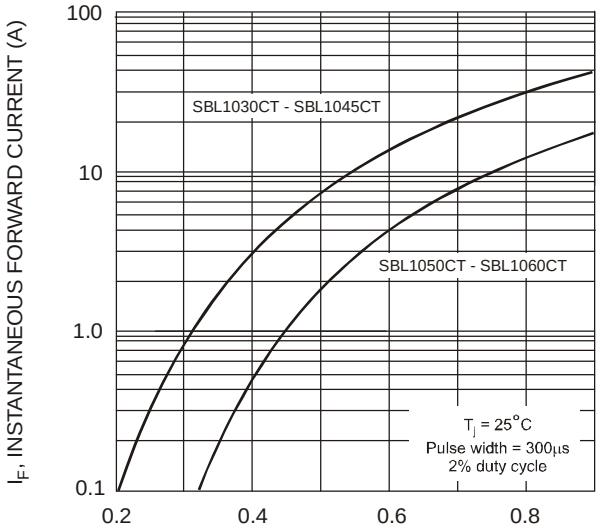

Fig. 2 Typical Forward Characteristics per Element

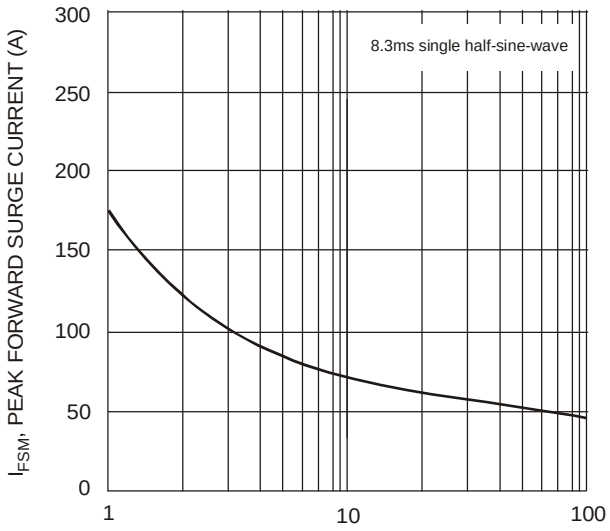

Fig. 3 Max Non-Repetitive Surge Current

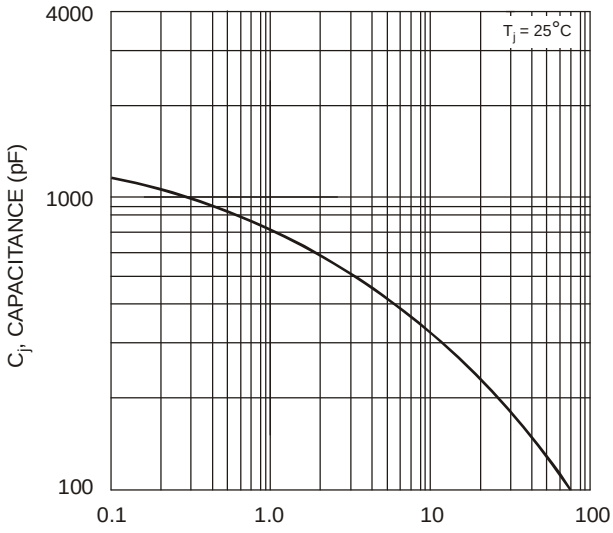

Fig. 4 Typical Junction Capacitance per Element

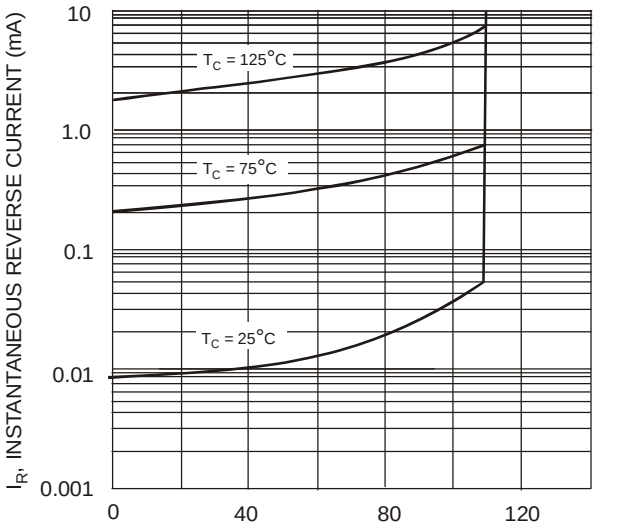

Fig. 5 Typical Reverse Characteristics

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Ordering Information (Note 4)

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.