

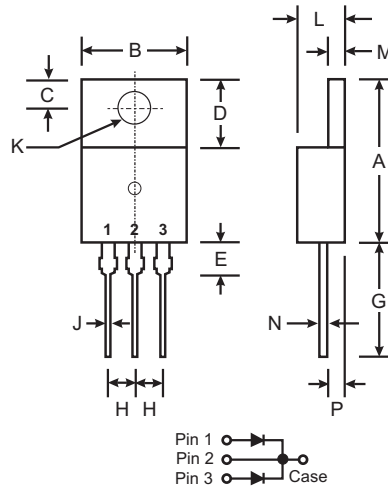
Features

- 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
- Terminals: Finish – Bright Tin. Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Marking: Type Number
- Weight: 2.24 grams (approx.)

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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 @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	45	V
RMS Reverse Voltage	$V_{R(RMS)}$	32	V
Average Rectified Output Current (Note 1) @ $T_C = 100^\circ\text{C}$	I_O	30	A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	250	A
Forward Voltage Drop @ $I_F = 15\text{A}$, $T_C = 25^\circ\text{C}$	V_{FM}	0.55	V
Peak Reverse Current @ $T_C = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_C = 100^\circ\text{C}$	I_{RM}	1.0 75	mA
Typical Total Capacitance (Note 2)	C_T	450	pF
Typical Thermal Resistance Junction to Case (Note 1)	$R_{\theta JC}$	1.5	$^\circ\text{C/W}$
Operating Temperature Range	T_j	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

- 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.

Ordering Information (Note 4)

Device	Packaging	Shipping
SBL3045CT	TO-220AB	50/Tube

- Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

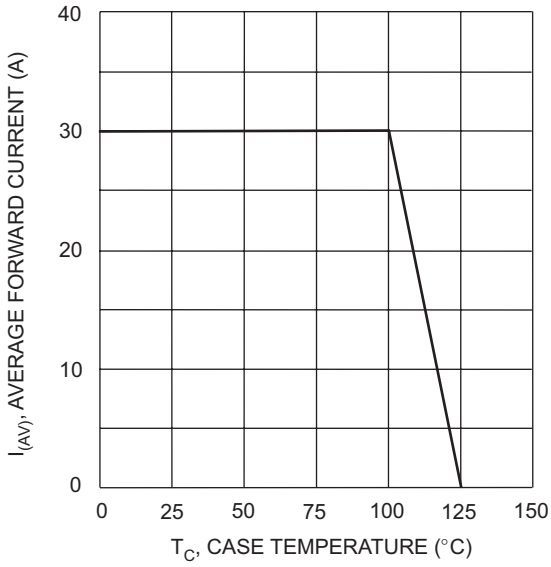


Fig. 1 Forward Current Derating Curve

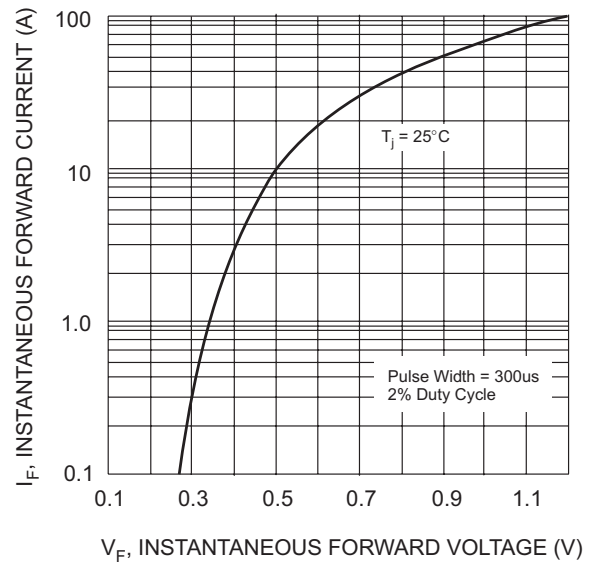


Fig. 2 Typical Forward Characteristics

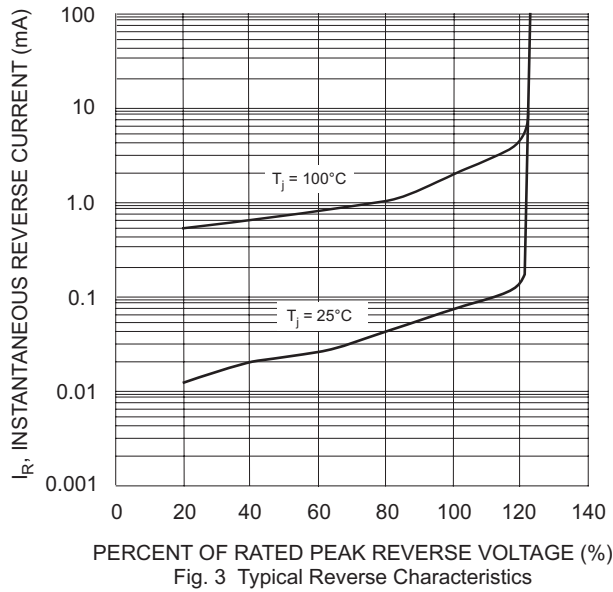


Fig. 3 Typical Reverse Characteristics

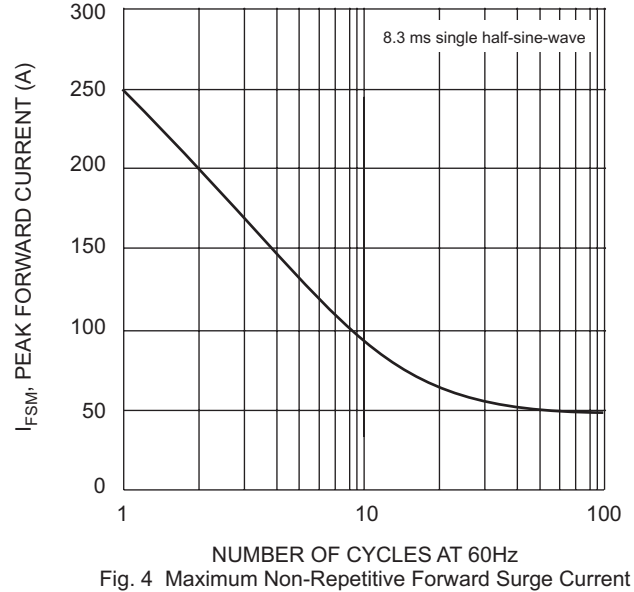


Fig. 4 Maximum Non-Repetitive Forward Surge Current

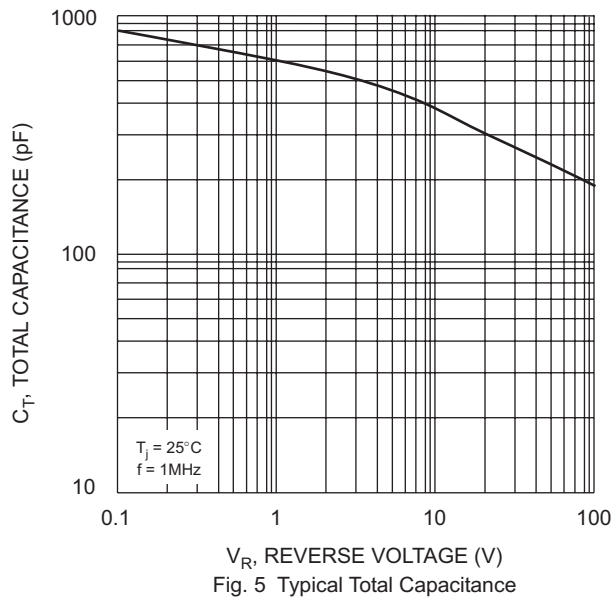


Fig. 5 Typical Total Capacitance

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