



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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**30A DUAL LOW  $V_F$  SCHOTTKY BARRIER RECTIFIER**
**Features**

- Low Power Loss, High Efficiency
- Guard Ring for Transient Protection
- High Surge Capability
- Very Low Forward Voltage Drop
- For Use in High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- **Lead Free Finish, RoHS Compliant (Note 1)**

**Mechanical Data**

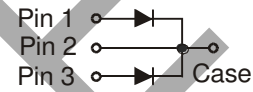
- Case: TO-220AB
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Tin Finish. Solderable per MIL-STD-202, Method 208 (B3)
- Polarity: See Diagram
- Marking: Type Number
- Ordering Information: See Page 3
- Weight: 2.24 grams (approximate)



Top View



Bottom View



Pin Configuration

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

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	30	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current @ $T_C = 140^\circ\text{C}$	$I_O$	30	A
		15	
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load Per Element	$I_{FSM}$	260	A
Peak Repetitive Reverse Current Per Element at $t_P = 2\mu\text{s}$ , 1 KHz	$I_{RRM}$	1.0	A
Voltage Rate of Change	$dV/dt$	10,000	V/ $\mu\text{s}$

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Case (Note 2)	$R_{\theta JC}$	1.5	$^\circ\text{C/W}$
		0.8	
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 3)	$V_{(BR)R}$	30	—	—	V	$I_R = 1.5\text{mA}$
Forward Voltage Per Element	$V_F$	—	—	0.48	V	$I_F = 15\text{A}, T_J = 25^\circ\text{C}$
		—	0.38	—		$I_F = 15\text{A}, T_J = 125^\circ\text{C}$
		—	0.52	0.57		$I_F = 30\text{A}, T_J = 25^\circ\text{C}$
		—	—	0.50		$I_F = 30\text{A}, T_J = 125^\circ\text{C}$
Peak Reverse Current Per Element (Note 3)	$I_R$	—	—	1.0	mA	$V_R = 30\text{V}, T_J = 25^\circ\text{C}$
		—	—	300	mA	$V_R = 30\text{V}, T_J = 125^\circ\text{C}$

- Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html).
  2. Thermal resistance junction to case: device mounted on 200x200x5mm aluminum plate.
  3. Short duration pulse test used to minimize self-heating effect.

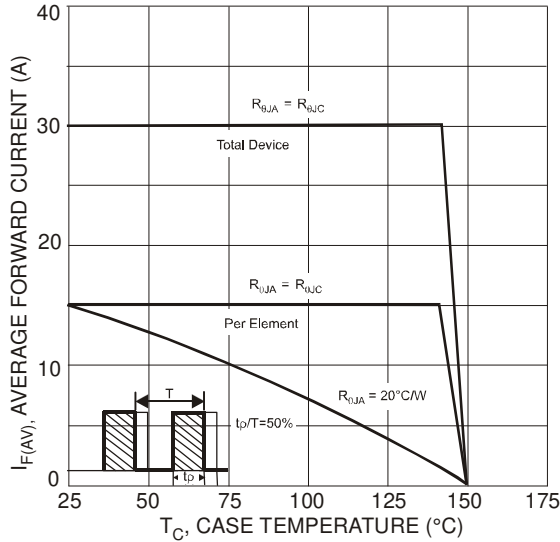


Fig. 1 Forward Current Derating Curve

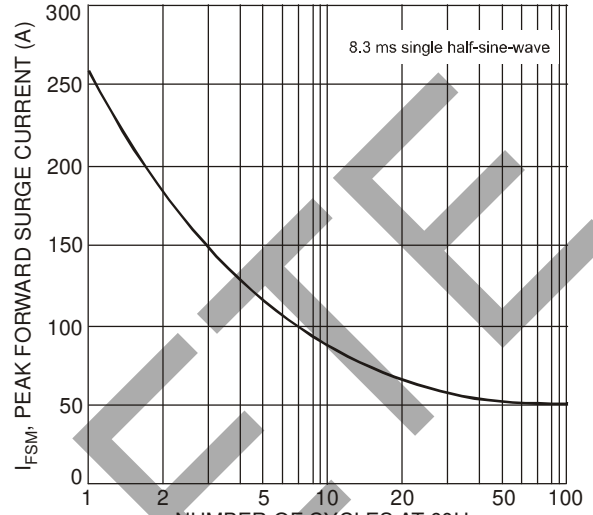


Fig. 2 Maximum Non-Repetitive Surge Current, Per Element

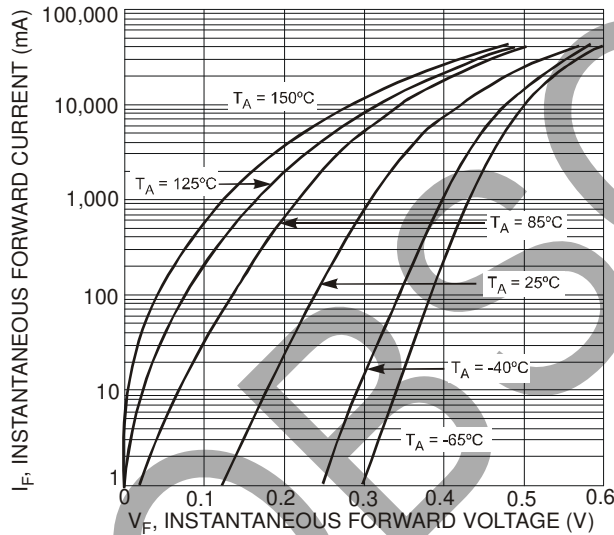


Fig. 3 Typical Forward Characteristics, Per Element

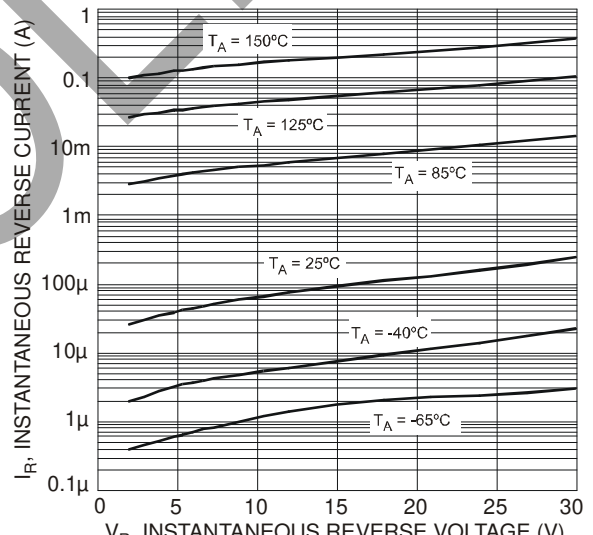


Fig. 4 Typical Reverse Characteristics, Per Element

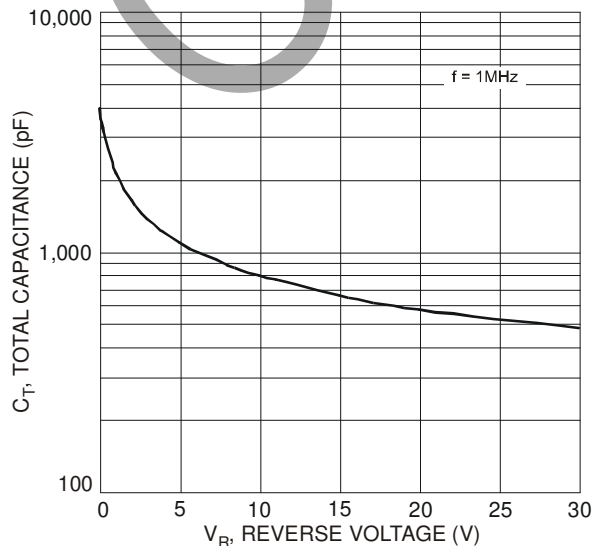


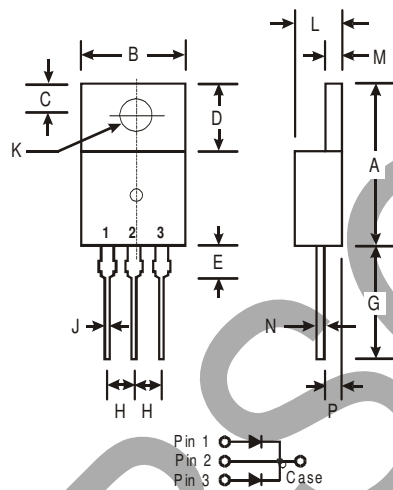
Fig. 5 Typical Total Capacitance, Per Element



**Ordering Information** (Note 4)

Part Number	Case	Packaging
SBL30L30CT	TO-220AB	50/Tube

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

**Package Outline Dimensions**


TO-220AB		
Dim	Min	Max
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.35
G	12.70	14.73
H	2.29	2.79
J	0.51	1.14
K	3.53 $\varnothing$	4.09 $\varnothing$
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
All Dimensions in mm		

OBSOLETE – PART DISCONTINUED

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