



# B130LB

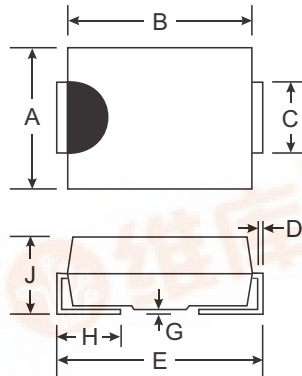
## 1.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

Guard Ring Die Construction for Transient Protection  
 Ideally Suited for Automatic Assembly  
 Low Power Loss, High Efficiency  
 Surge Overload Rating to 40A Peak  
 For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application  
 High Temperature Soldering:  
 260 C/10 Second at Terminal  
**Lead Free Finish/RoHS Compliant (Note 2)**

### Mechanical Data

Case: SMB  
 Case Material: UL Flammability Classification Rating 94V-0  
 Moisture Sensitivity: Level 1 per J-STD-020C  
 Terminals: Lead Free Plating (Matte Tin Finish).  
 Solderable per MIL-STD-202, Method 208 (e3)  
 Polarity: Cathode Band or Cathode Notch  
 Marking Information: See page 3  
 Ordering Information: See page 3  
 Weight: 0.093 grams (approximate)



SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.10	0.20
H	0.76	1.27
J	2.00	2.40
All Dimensions in mm		

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25 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 <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	30	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	21	V
Average Rectified Output Current @ T <sub>T</sub> = 120 C @ T <sub>T</sub> = 110 C	I <sub>O</sub>	1.0 2.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load	I <sub>FSM</sub>	40	A
Forward Voltage @ I <sub>F</sub> = 1.0A @ I <sub>F</sub> = 2.0A	V <sub>FM</sub>	0.395 0.445	V
Peak Reverse Current at Rated DC Blocking Voltage @ T <sub>A</sub> = 25 C @ T <sub>A</sub> = 100 C	I <sub>RM</sub>	1.0 20	mA
Typical Total Capacitance (Note 1)	C <sub>T</sub>	90	pF
Typical Thermal Resistance Junction to Terminal	R <sub>JT</sub>	12	C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +125	C

Notes:  
 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
 2. RoHS revision 13.2.2003. High Temperature Solder Exemption Applied, see EU Directive Annex Note 7.



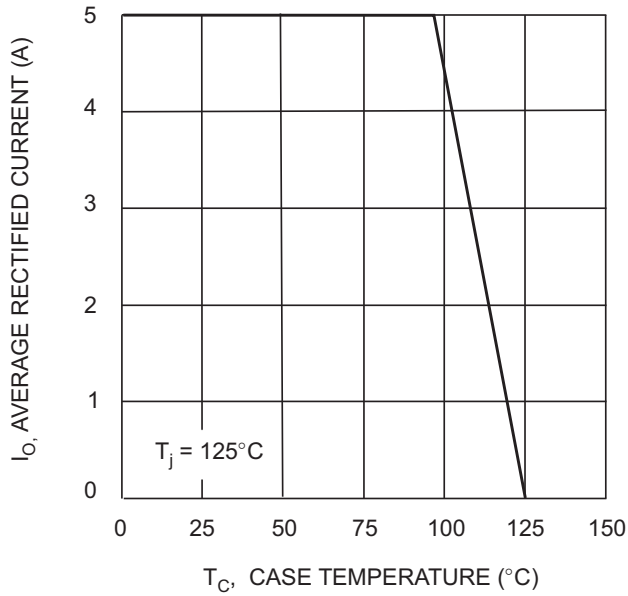


Fig. 1 Forward Current Derating Curve

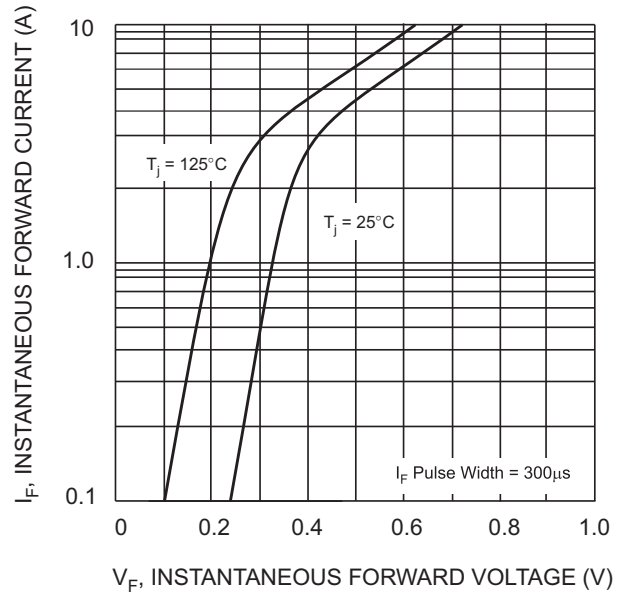


Fig. 2 Typical Forward Characteristics

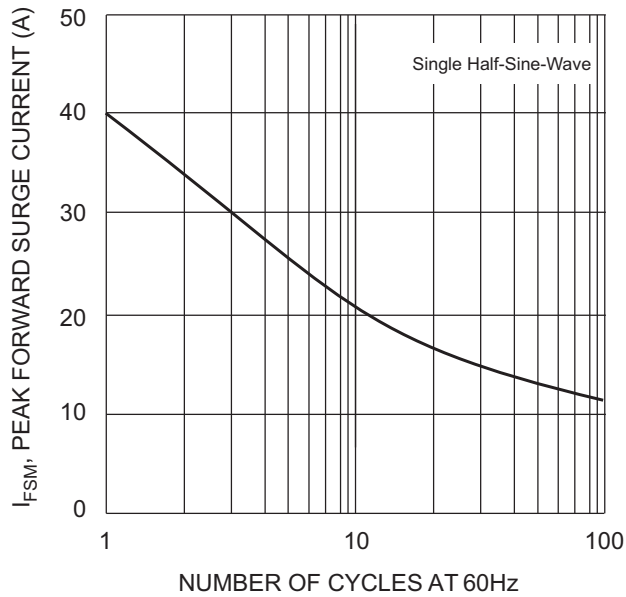


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

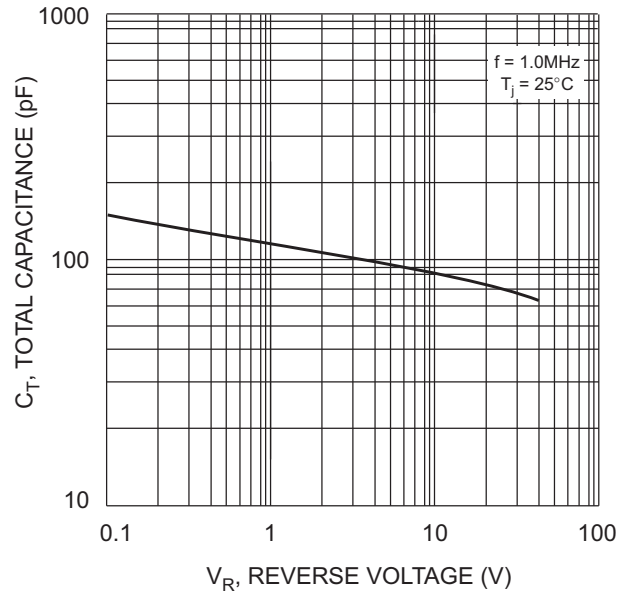


Fig. 4 Typical Total Capacitance

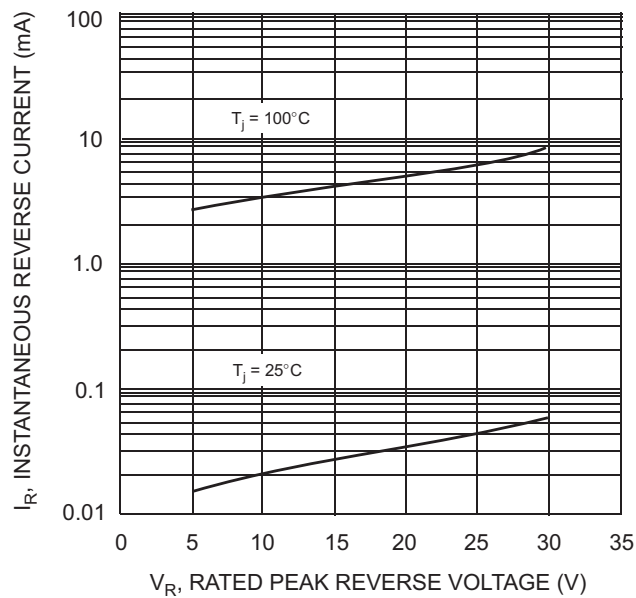


Fig. 5 Typical Reverse Characteristics

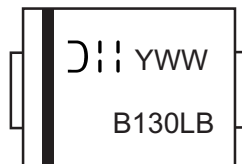


## Ordering Information (Note 3)

Device	Packaging	Shipping
B130LB-13-F	SMB	3000/Tape & Reel

Notes: 3. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

## Marking Information



B130LB = Product type marking code  
D||| = Manufacturers' code marking  
YWW = Date code marking  
Y = Last digit of year ex: 2 for 2002  
WW = Week code 01 to 52  
Band = Cathode

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