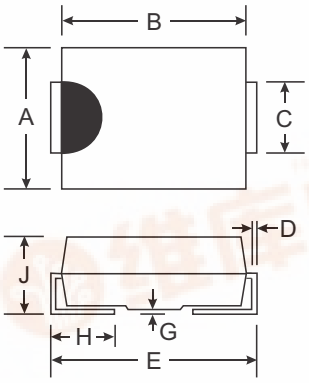
B130LB

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)**



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		

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)

Maximum Ratings and Electrical Characteristics @ T_A = 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_{RRM} V_{RWM} V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current @ T_T = 120 C @ T_T = 110 C	I_O	1.0 2.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load	I_{FSM}	40	A
Forward Voltage @ I_F = 1.0A @ I_F = 2.0A	V_{FM}	0.395 0.445	V
Peak Reverse Current @ T_A = 25 C at Rated DC Blocking Voltage @ T_A = 100 C	I_{RM}	1.0 20	mA
Typical Total Capacitance (Note 1)	C_T	90	pF
Typical Thermal Resistance Junction to Terminal	R_{JT}	12	C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-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*.

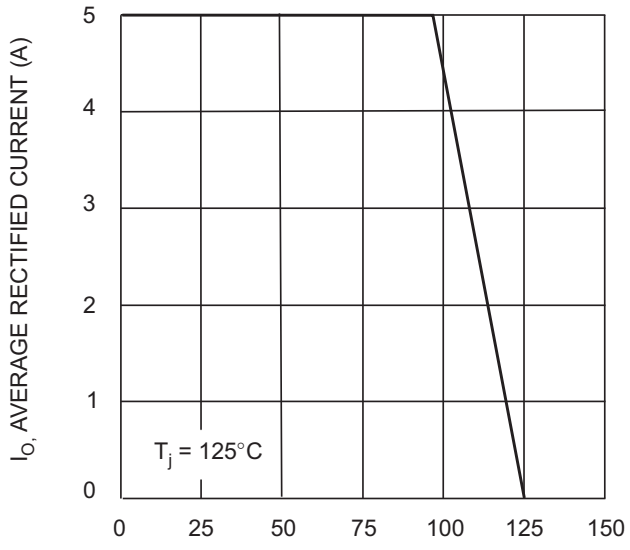


Fig. 1 Forward Current Derating Curve

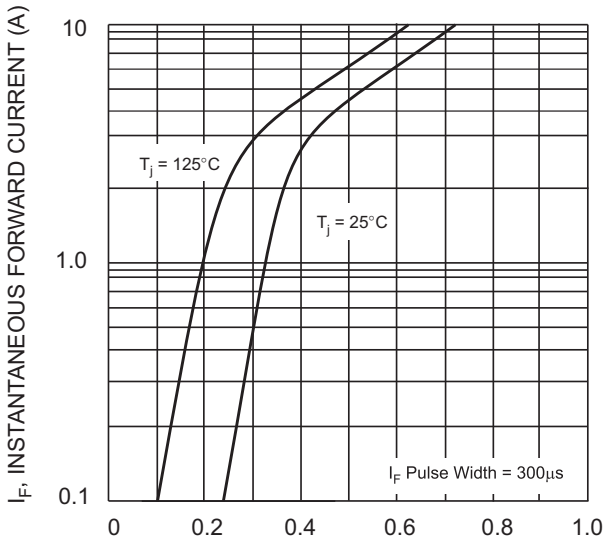


Fig. 2 Typical Forward Characteristics

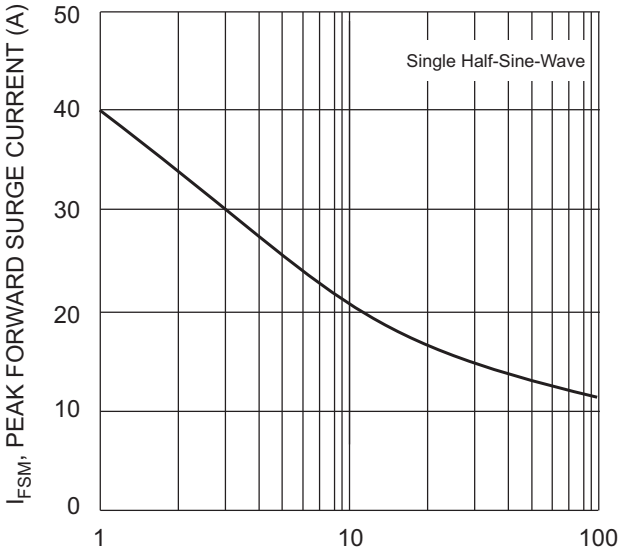


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

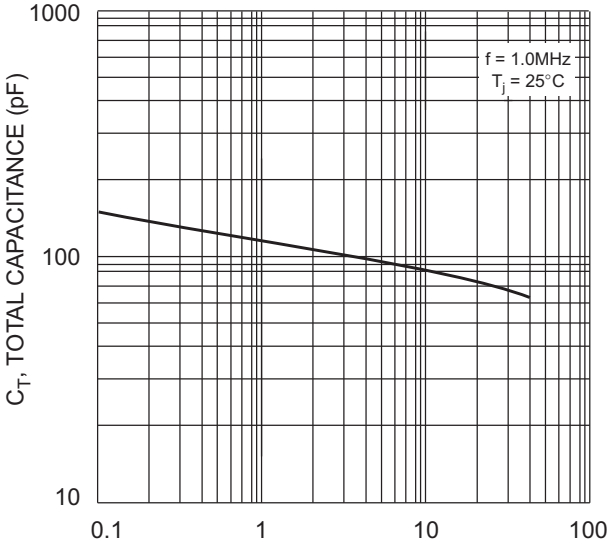


Fig. 4 Typical Total Capacitance

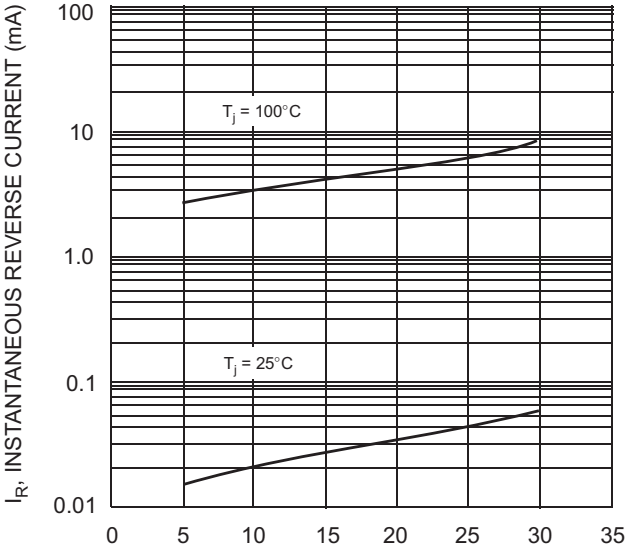


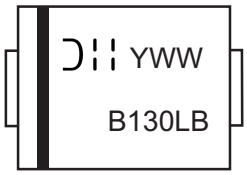
Fig. 5 Typical Reverse Characteristics

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