

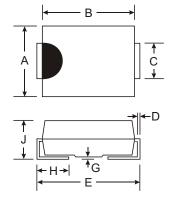
1.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

- Schottky Barrier Chip
- 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



- Case: SMB, Molded Plastic
- Plastic Material: UL Flammability Classification Rating 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solder Plated Terminal -Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please See
 Ordering Information, Note 4, on Page 3
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.093 grams (approx.)
- Marking: B13LB



| SMB | | | | | |
|----------------------|------|------|--|--|--|
| Dim | Min | Max | | | |
| Α | 3.30 | 3.94 | | | |
| В | 4.06 | 4.57 | | | |
| С | 1.96 | 2.21 | | | |
| D | 0.15 | 0.31 | | | |
| E | 5.00 | 5.59 | | | |
| G | 0.10 | 0.20 | | | |
| Н | 0.76 | 1.27 | | | |
| J | 2.00 | 2.62 | | | |
| All Dimensions in mm | | | | | |

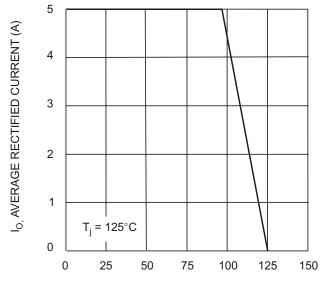
Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

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

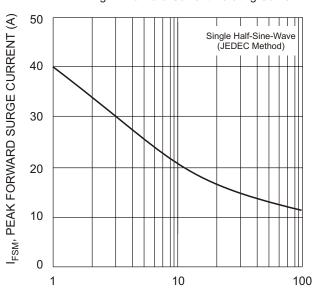
| Characteristic | Symbol | B130LB | Unit |
|----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse 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 | | 1.0 2.0 | А |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Loa (JEDEC Method) | d I _{FSM} | 40 | А |
| Forward Voltage $@$ I _F = 1.0 A $@$ I _F = 2.0 A | | 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 ₀ 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.

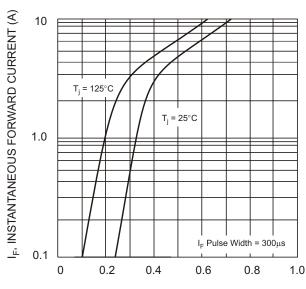




T_C, CASE TEMPERATURE (°C) Fig. 1 Forward Current Derating Curve



NUMBER OF CYCLES AT 60Hz Fig. 3 Max Non-Repetitive Peak Forward Surge Current



 $V_{\rm F}$, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics

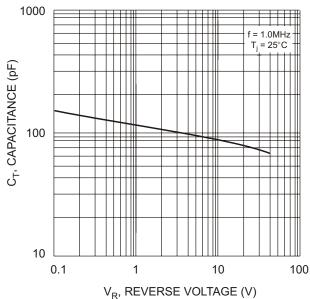


Fig. 4 Typical Total Capacitance

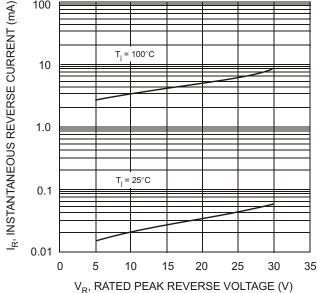


Fig. 5 Typical Reverse Characteristics



Ordering Information (Note 3 & 4)

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

Notes:

For Packaging Details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.
 For lead free terminal plating part number, please add "-F" suffix to part number above. Example: B130LB-13-F.



XXXX = Product type marking code, ex: B130LB (SMB package)

J!! = Manufacturers' code marking

YWW = Date code marking

Y = Last digit of year ex: 2 for 2002

WW = Week code 01 to 52

Band = Cathode