



# B130L

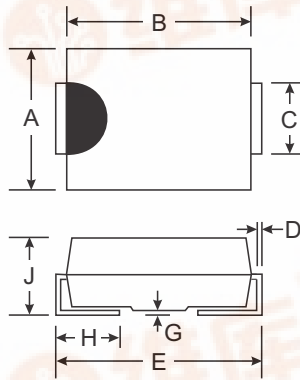
## 1.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- Low Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- **Lead Free Finish/RoHS Version (Note 3)**

### Mechanical Data

- Case: SMA
- Case Material: Molded Plastic. 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
- Polarity: Cathode Band or Cathode Notch
- Marking: B130L
- Weight: 0.064 grams (approximate)



SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.10	0.20
H	0.76	1.52
J	2.01	2.30
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	B130L	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage @ $I_R = 1\text{mA}$ Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current @ $T_J = 105^\circ\text{C}$	$I_O$	1.0	A
Peak Repetitive Forward Current (Note 2)	$I_{FRM}$	2.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	25	A
Forward Voltage @ $I_F = 1.0\text{A}$ , $T_J = 25^\circ\text{C}$ @ $I_F = 2.0\text{A}$ , $T_J = 25^\circ\text{C}$ @ $I_F = 1.0\text{A}$ , $T_J = 100^\circ\text{C}$ @ $I_F = 2.0\text{A}$ , $T_J = 100^\circ\text{C}$	$V_{FM}$	0.41 0.47 0.35 0.43	V
Peak Reverse Current @ $V_R = 15\text{V}$ , $T_A = 25^\circ\text{C}$ @ $V_R = 30\text{V}$ , $T_A = 25^\circ\text{C}$ @ $V_R = 15\text{V}$ , $T_A = 100^\circ\text{C}$ @ $V_R = 30\text{V}$ , $T_A = 100^\circ\text{C}$	$I_{RM}$	0.4 1.0 12 25	mA
Typical Junction Capacitance (Note 1)	$C_j$	110	pF
Typical Thermal Resistance Junction to Terminal	$R_{\theta JT}$	27	K/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. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
2. At Rated  $V_R$ , Square Wave, 25KHz,  $T_C = 40^\circ\text{C}$ .  
3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.



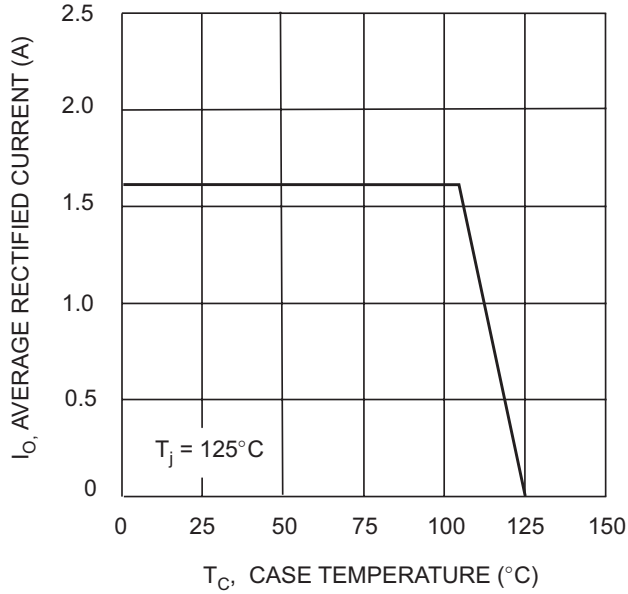


Fig. 1 Forward Current Derating Curve

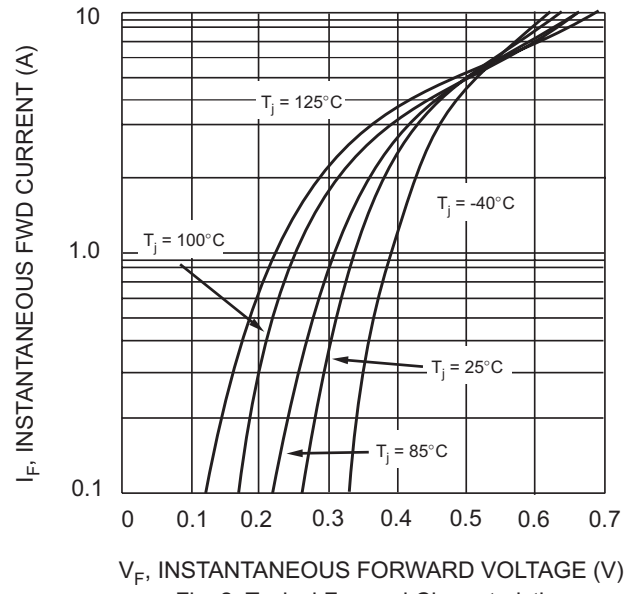


Fig. 2 Typical Forward Characteristics

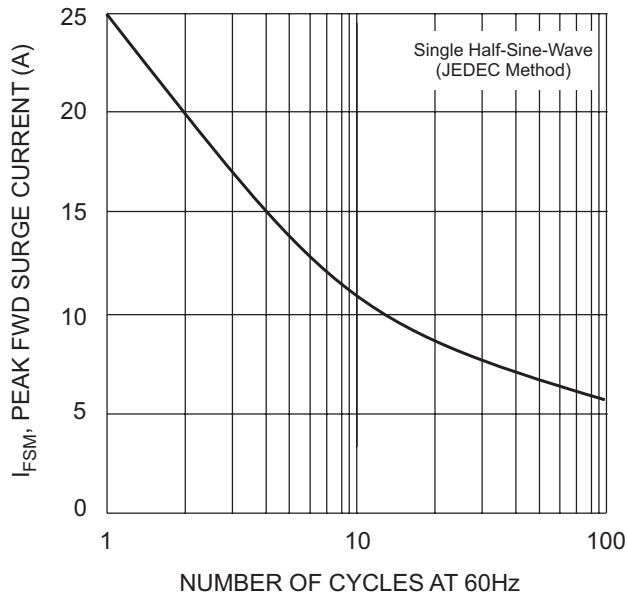


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

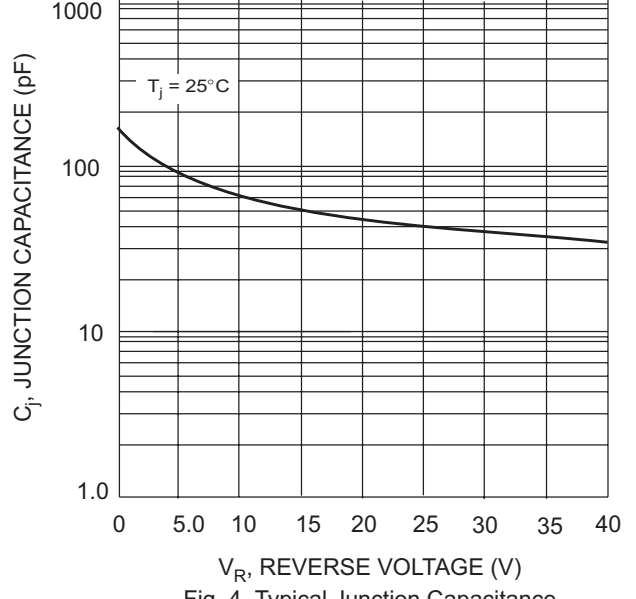


Fig. 4 Typical Junction Capacitance

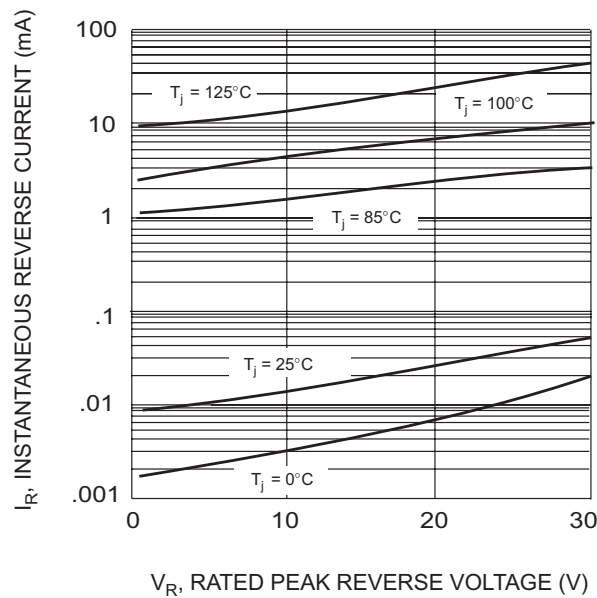


Fig. 5 Typical Reverse Characteristics



## Ordering Information (Note 4)

Device	Packaging	Shipping
B130L-13-F	SMA	5000/Tape & Reel

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

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