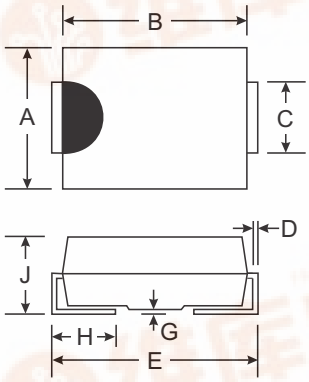
B130L

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)**



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		

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)

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	B130L	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage Blocking Voltage @ I_R = 1mA	V_{RRM} V_{RWM} V_R	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current @ T_T = 105°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 = 1.0A, T_J = 25°C @ I_F = 2.0A, T_J = 25°C @ I_F = 1.0A, T_J = 100°C @ I_F = 2.0A, T_J = 100°C	V_{FM}	0.41 0.47 0.35 0.43	V
Peak Reverse Current @ V_R = 15V, T_A = 25°C @ V_R = 30V, T_A = 25°C @ V_R = 15V, T_A = 100°C @ V_R = 30V, T_A = 100°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	°C
Storage Temperature Range	T_{STG}	-55 to +150	°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°C.
3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7.*

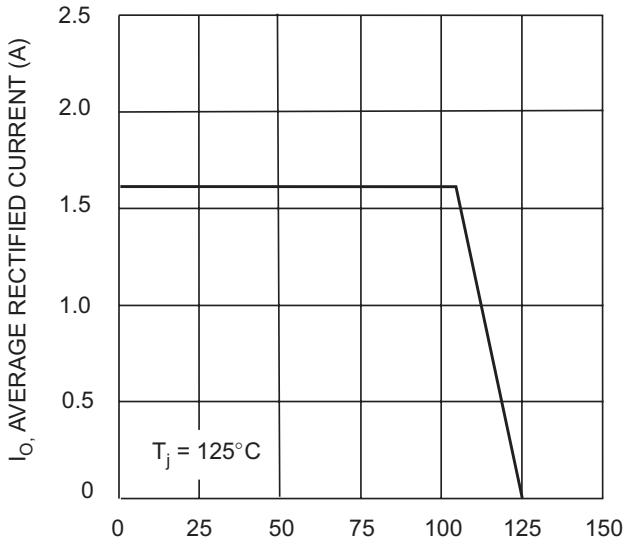


Fig. 1 Forward Current Derating Curve

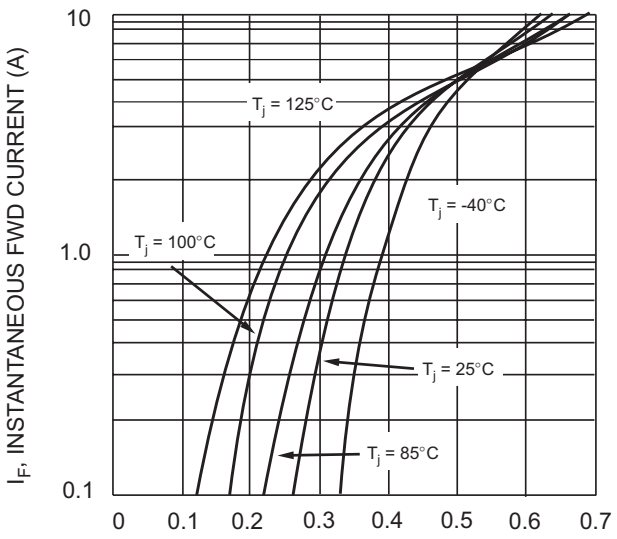


Fig. 2 Typical Forward Characteristics

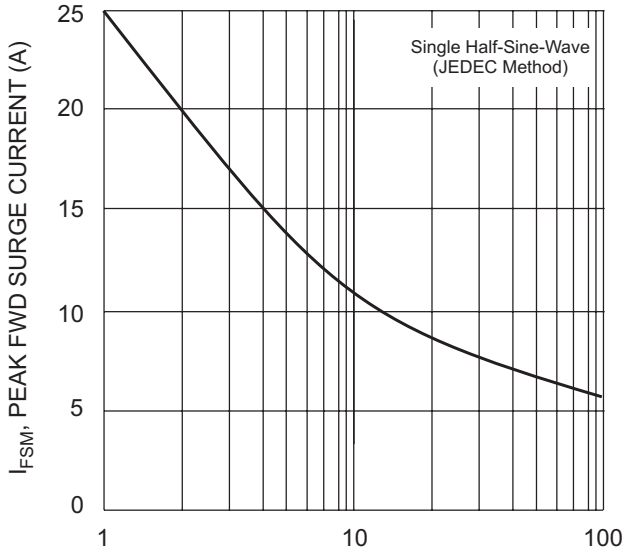


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

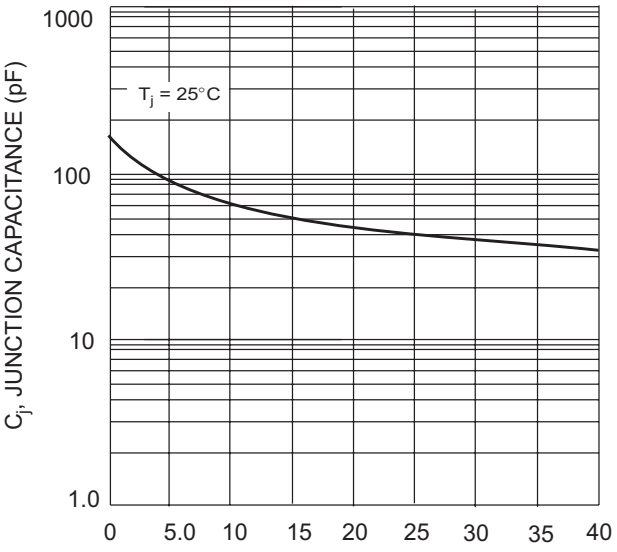


Fig. 4 Typical Junction Capacitance

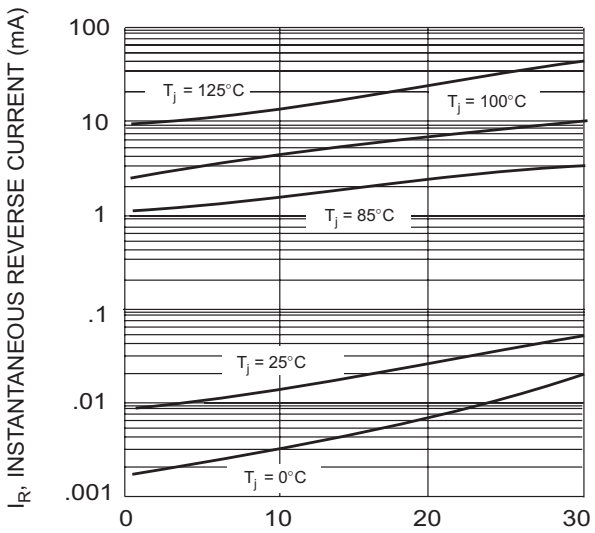


Fig. 5 Typical Reverse Characteristics

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.