B130L

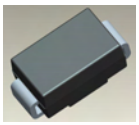
1.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

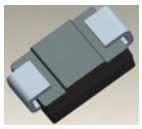
- Low Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automated Assembly
- Low Power Loss, High Efficiency
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **Green Molding Compound (No Halogen and Antimony) (Note 4)**

Mechanical Data

- Case: SMA
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- 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: 0.064 grams (approximate)



Top View



Bottom View

Maximum Ratings @T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage @ I_R = 1mA Blocking Voltage	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	I_{FSM}	25	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Junction to Terminal	$R_{\theta JT}$	27	°C/W
Operating Temperature Range	T_J	-55 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Electrical Characteristics @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V_F	- - - -	- - - -	0.41 0.35 0.47 0.43	V	I_F = 1.0A, T_J = 25°C I_F = 1.0A, T_J = 100°C I_F = 2.0A, T_J = 25°C I_F = 2.0A, T_J = 100°C
Leakage Current (Note 3)	I_R	- - - -	- - - -	0.4 12 1.0 25	mA	V_R = 15V, T_A = 25°C V_R = 15V, T_A = 100°C V_R = 30V, T_A = 25°C V_R = 30V, T_A = 100°C
Total Capacitance	C_T	-	-	110	pF	V_R = 4V, f = 1MHz

Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at http://www.diodes.com/quality/lead_free.html.
2. At Rated V_R, Square Wave, 25KHz, T_C = 40°C.
3. Short duration pulse test used to minimize self-heating effect.
4. Product manufactured with Data Code 0924 (week 24, 2009) and newer are built with Green Molding Compound.

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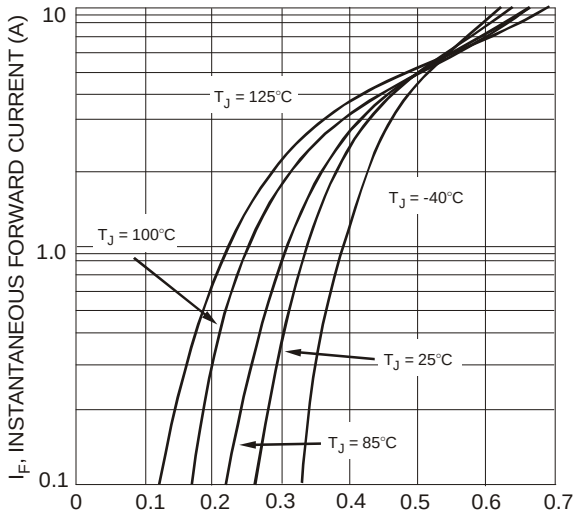

Fig. 1 Typical Forward Characteristics

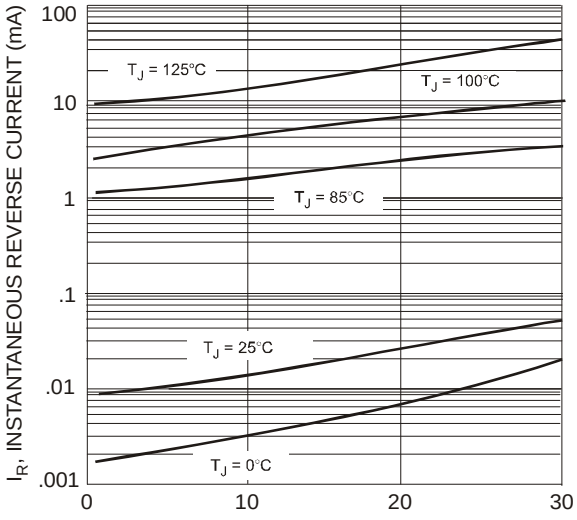

Fig. 2 Typical Reverse Characteristics

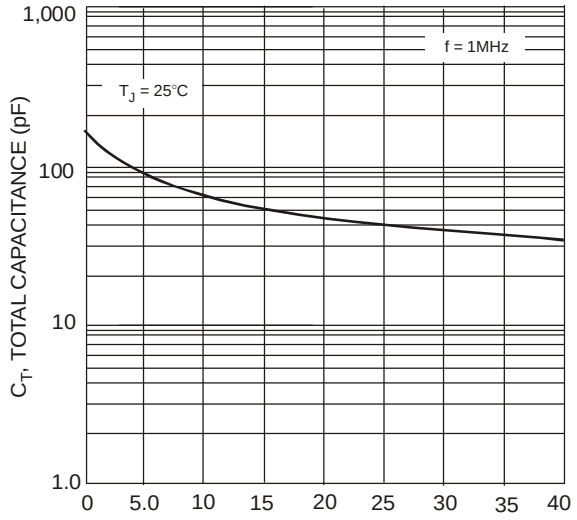

Fig. 3 Total Capacitance vs. Reverse Voltage

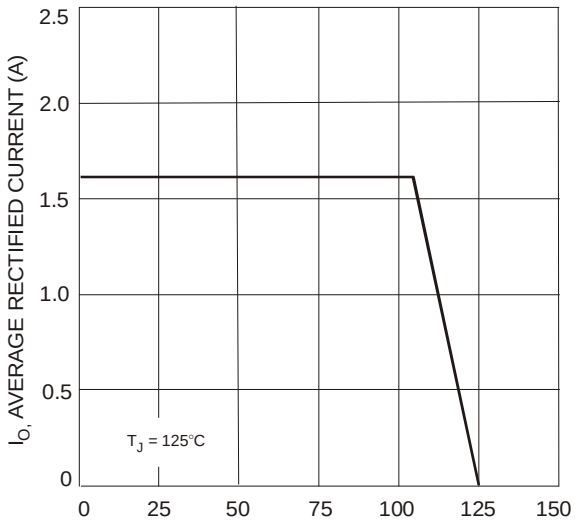

Fig. 4 Forward Current Derating Curve

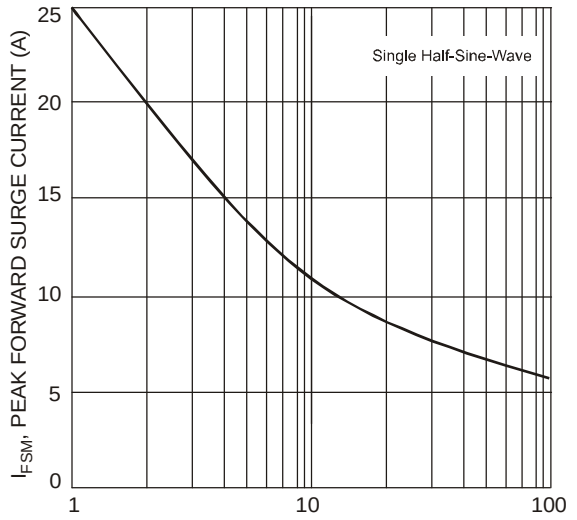

Fig. 5 Max Non-Repetitive Peak Forward Surge Current

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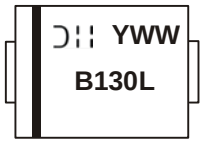
Ordering Information (Note 5)

Part Number	Case	Packaging
B130L-13-F	SMA	5000/Tape & Reel

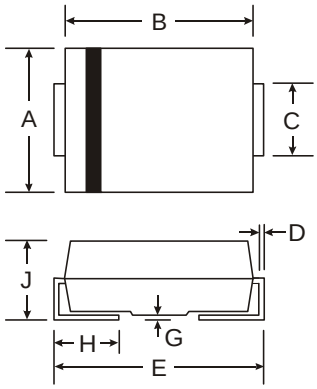
Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

Marking Information



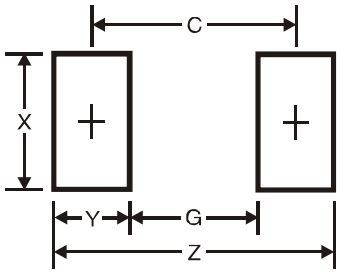
B130L = Product type marking code
= Manufacturers' code marking
YWW = Date code marking
Y = Last digit of year ex: 6 for 2006
WW = Week code 01 to 52

Package Outline Dimensions



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	0.05	0.20
H	0.76	1.52
J	2.01	2.30
All Dimensions in mm		

Suggested Pad Layout



Dimensions	Value (in mm)
Z	6.5
G	1.5
X	1.7
Y	2.5
C	4.0

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