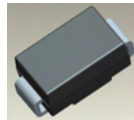


Features

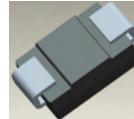
- Low Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automated Assembly
- Low Power Loss, High Efficiency
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **Green Molding Compound (No Halogen and Antimony) (Note 4)**

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
- 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 @ $T_A = 25^\circ\text{C}$ 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	V_{RRM}	30	V
Working Peak Reverse Voltage Blocking Voltage @ $I_R = 1\text{mA}$	V_{RWM} V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Average Rectified Output Current @ $T_T = 105^\circ\text{C}$	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	I_{FSM}	25	A

Thermal Characteristics

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

Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

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

- 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, $T_C = 40^\circ\text{C}$.
 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.

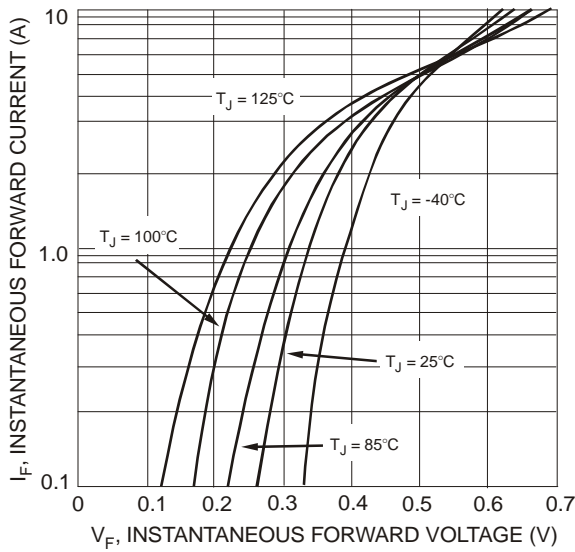


Fig. 1 Typical Forward Characteristics

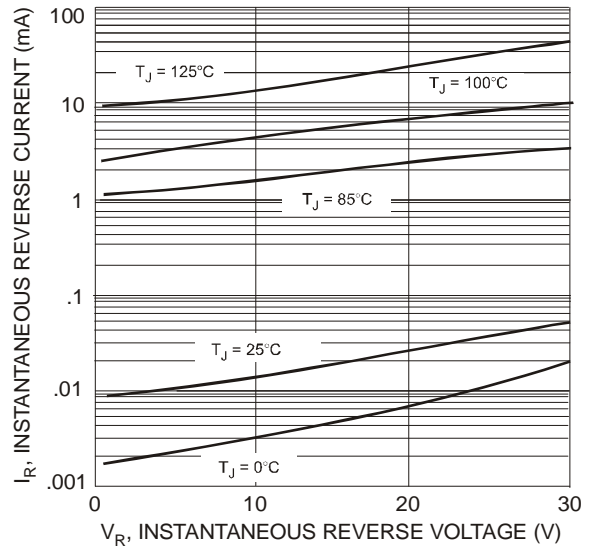


Fig. 2 Typical Reverse Characteristics

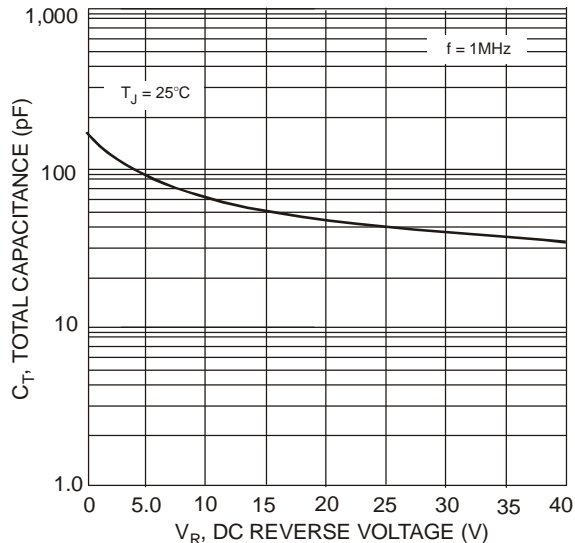


Fig. 3 Total Capacitance vs. Reverse Voltage

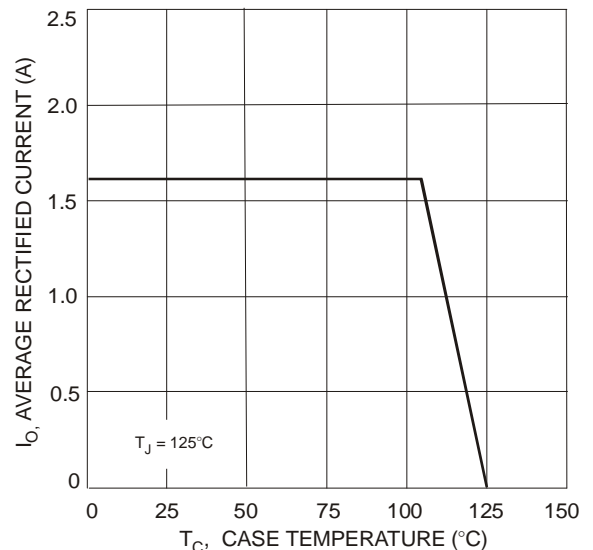


Fig. 4 Forward Current Derating Curve

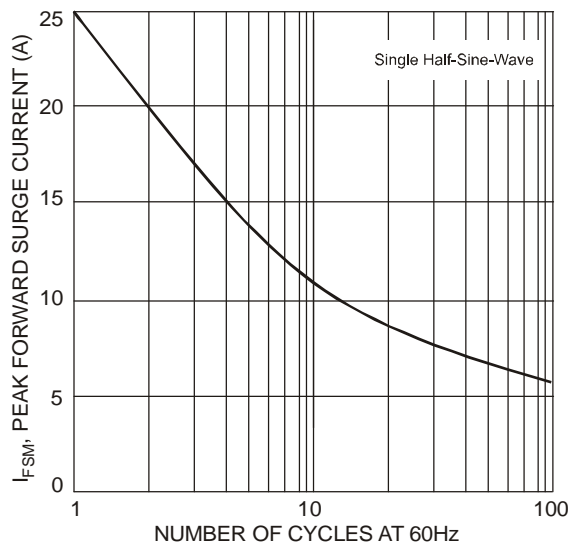


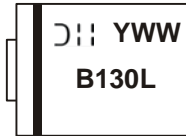
Fig. 5 Max Non-Repetitive Peak Forward Surge Current

Ordering Information (Note 5)

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

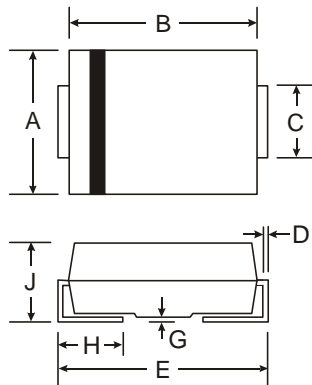
Notes: 5. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

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

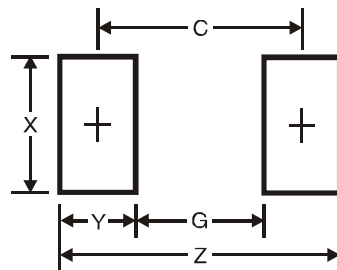
Package Outline Dimensions



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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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

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