

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 (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative.**

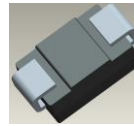
<https://www.diodes.com/quality/product-definitions/>

Mechanical Data

- Package: SMA
- Package Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 ③
- Polarity: Cathode Band or Cathode Notch
- Weight: 0.064 grams (Approximate)



Top View



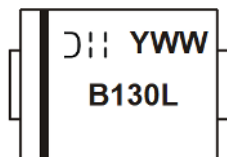
Bottom View

Ordering Information (Note 4)

Part Number	Package	Packing	
		Qty.	Carrier
B130L-13-F	SMA	5000	Tape & Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Marking Information



B130L = Product Type Marking Code
 D = Manufacturers' Code Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 2 for 2022)
 WW = Week Code (01 to 52)

Maximum Ratings @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	Value	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	30	V
Working Peak Reverse Voltage @ I _R = 1mA	V _{RWM}		
Blocking Voltage	V _R		
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 5)	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 _{θJT}	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	V	I _F = 1.0A, T _J = +25°C
		—	—	0.35		I _F = 1.0A, T _J = +100°C
		—	—	0.47		I _F = 2.0A, T _J = +25°C
		—	—	0.43		I _F = 2.0A, T _J = +100°C
Leakage Current (Note 6)	I _R	—	—	0.4	mA	V _R = 15V, T _A = +25°C
		—	—	12		V _R = 15V, T _A = +100°C
		—	—	1.0		V _R = 30V, T _A = +25°C
		—	—	25		V _R = 30V, T _A = +100°C
Total Capacitance	C _T	—	110	—	pF	V _R = 4V, f = 1MHz

Notes: 5. At rated V_R, square wave, 25kHz, T_C = +40°C.
6. Short duration pulse test used to minimize self-heating effect.

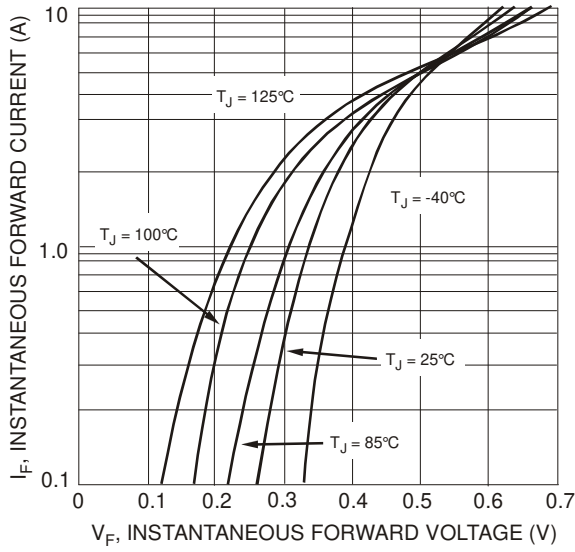


Fig. 1 Typical Forward Characteristics

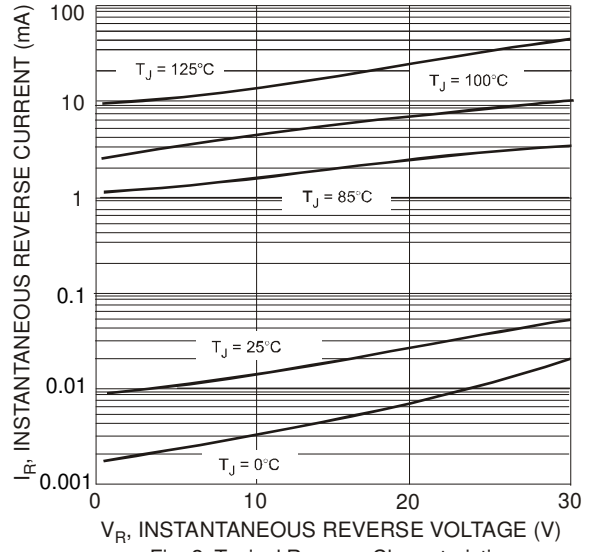


Fig. 2 Typical Reverse Characteristics

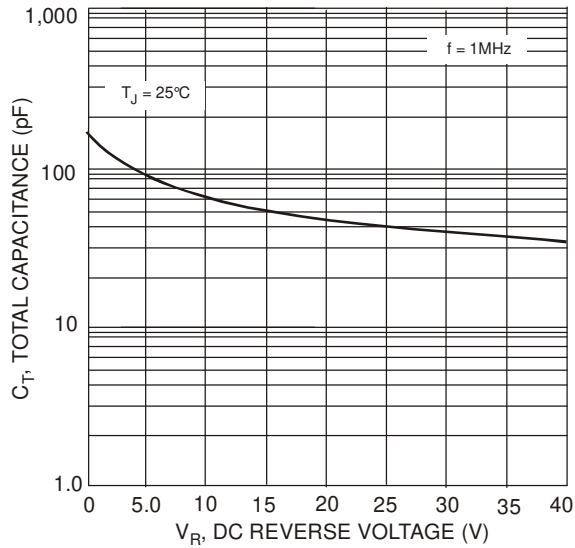


Fig. 3 Total Capacitance vs. Reverse Voltage

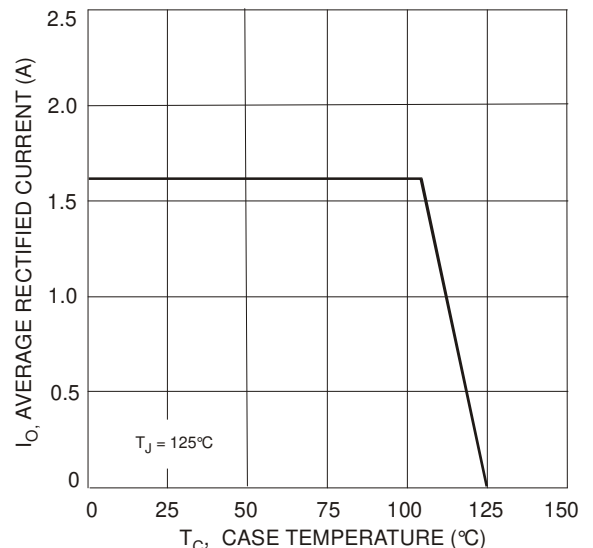


Fig. 4 Forward Current Derating Curve

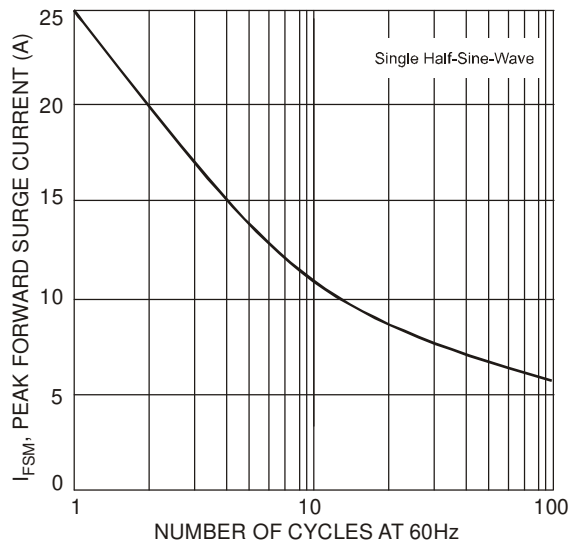
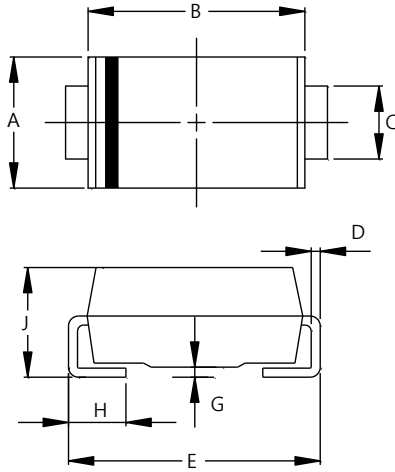


Fig. 5 Max Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SMA

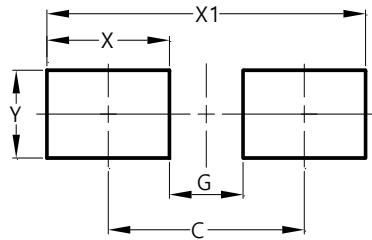


SMA		
Dim	Min	Max
A	2.29	2.92
B	4.00	4.60
C	1.27	1.63
D	0.15	0.31
E	4.80	5.59
G	0.05	0.20
H	0.76	1.52
J	1.96	2.40
All Dimensions in mm		

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

SMA



Dimensions	Value (in mm)
C	4.00
G	1.50
X	2.50
X1	6.50
Y	1.70

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