3.0A LOW VF SCHOTTKY BARRIER RECTIFIER

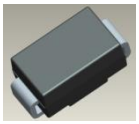
Features

- Very Low-Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automated Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 70A Peak
- **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/**

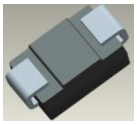
Mechanical Data

- Package: SMA/SMB
- 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 e3
- Polarity: Cathode Band or Cathode Notch
- Weight:
  - SMA: 0.064 grams (Approximate)
  - SMB: 0.093 grams (Approximate)

SMA/SMB



Top View



Bottom View

Ordering Information (Note 4)

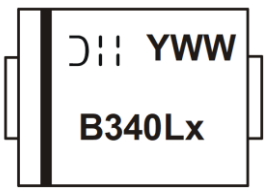
Orderable Part Number*	Package	Packing	
		Qty.	Carrier
B340LA-13-F	SMA	5,000	Tape & Reel
B340LA-13-F-N	SMA	5,000	Tape & Reel
B340LB-13-F	SMB	3,000	Tape & Reel

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/.

* If products manufactured in a specific region are required, select part numbers with the -N, -V, or -W suffix. These suffixes identify the wafer fabrication and assembly/test locations as defined in our Supply Resiliency information.

Marking Information

SMA/SMB



B340LA = Product Type Marking Code, ex: B340LA (SMA Package)
B340LB = Product Type Marking Code, ex: B340LB (SMB Package)
= Manufacturer's Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 6 for 2016)
WW = Week Code (01 to 53)
A bar or underline around the date code or product type marking code denotes assembly site if marked.

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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 Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	V
Average Rectified Output Current (Note 5) T_T = +90°C	I_O	3.0	A
Non-Repetitive Peak Forward Surge Current, Single Sine-Wave Superimposed on Rated Load, 60Hz	I_{FSM}	70	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Conditions
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	40	—	—	V	I_R = 2.0mA
Forward Voltage Drop	V_F	— —	0.310 —	0.350 0.450	V	I_F = 1.0A I_F = 3.0A
Leakage Current (Note 6)	I_R	—	—	150	μA	V_R = 15V
			— —	1.0 2.0	mA	V_R = 20V V_R = 40V
Total Capacitance	C_T	—	180	—	pF	f = 1MHz, V_R = 4.0VDC
Thermal Resistance, Junction to Terminal	$R_{\theta JT}$	—	35	—	°C/W	—

Notes: 5. Device mounted on FR-4 substate, 0.4"*0.5", 2oz, single-sided, PC boards with 0.2"*0.25" copper pad.
6. Short duration pulse test used to minimize self-heating effect.

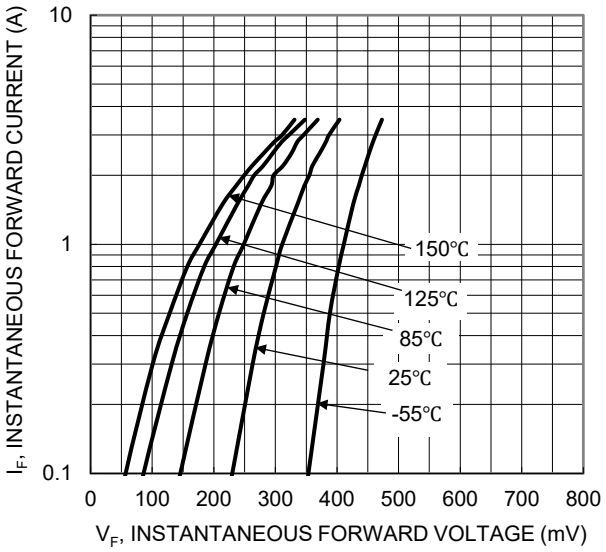


Fig. 1 Typical Forward Characteristics

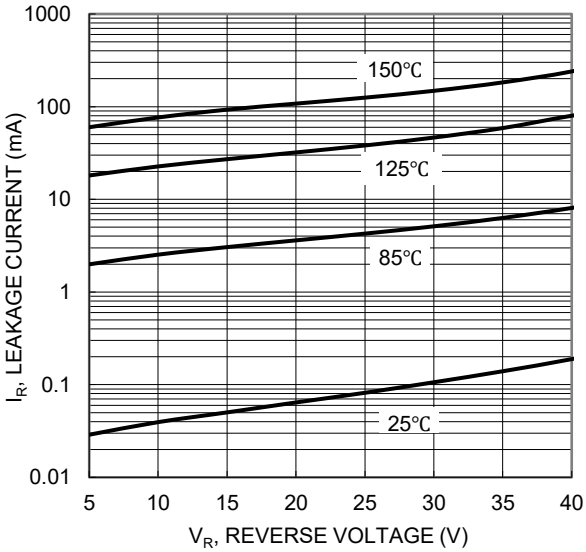


Fig. 2 Typical Reverse Characteristics

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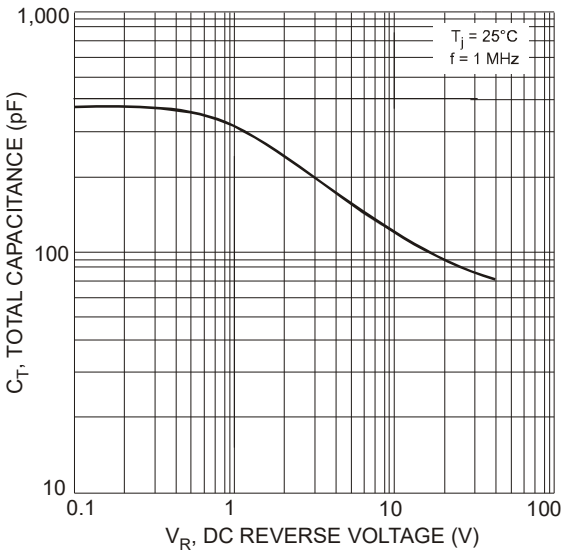


Fig. 3 Total Capacitance vs. Reverse Voltage

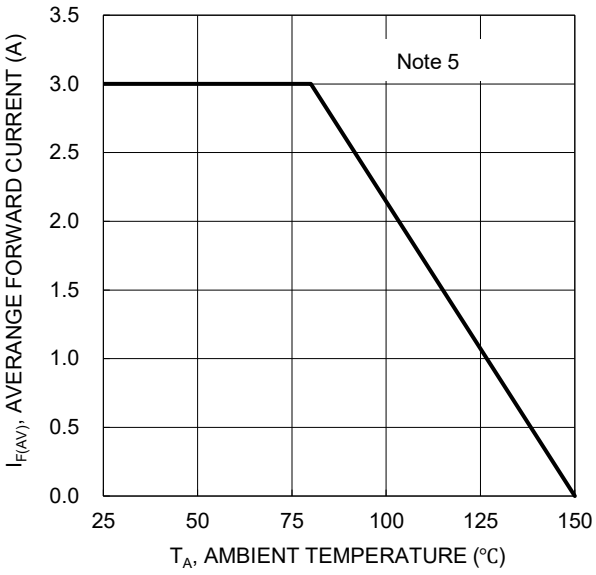


Fig. 4. DC Forward Current Derating

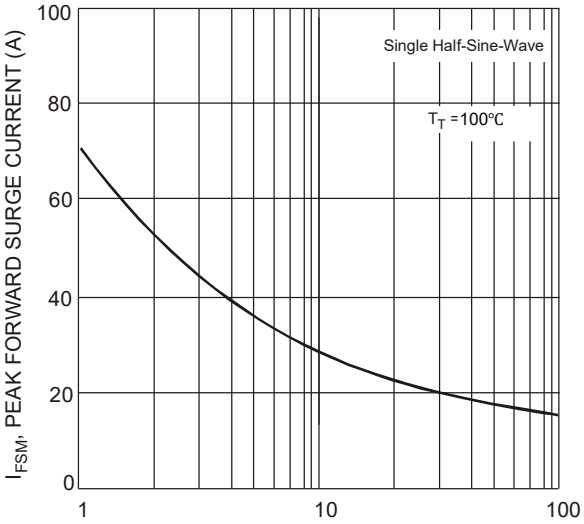


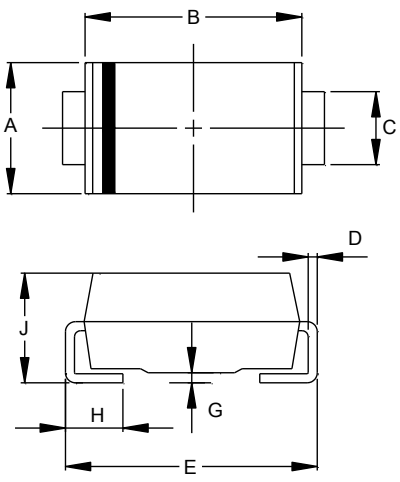
Fig. 5 Max Non-Repetitive Peak Forward Surge Current

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Package Outline Dimensions

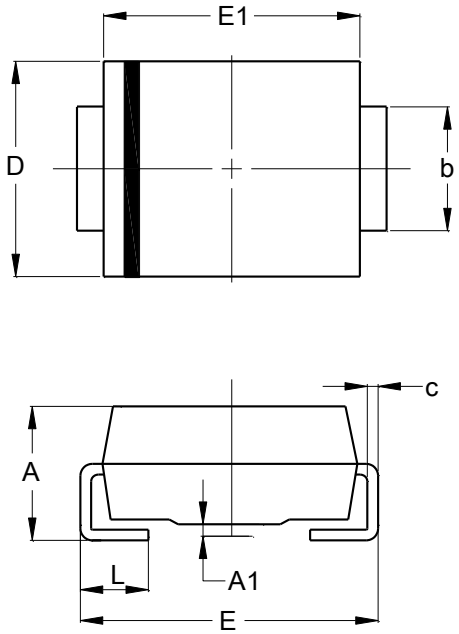
Please see http://www.diodes.com/package-outlines.html for the latest version.

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		

SMB



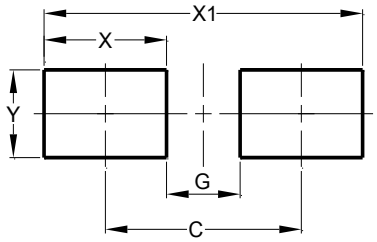
SMB		
Dim	**Min**	**Max**
A	2.00	2.50
A1	0.05	0.20
b	1.96	2.21
c	0.15	0.31
D	3.30	3.94
E	5.00	5.59
E1	4.06	4.57
L	0.76	1.52
All Dimensions in mm		

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Suggested Pad Layout

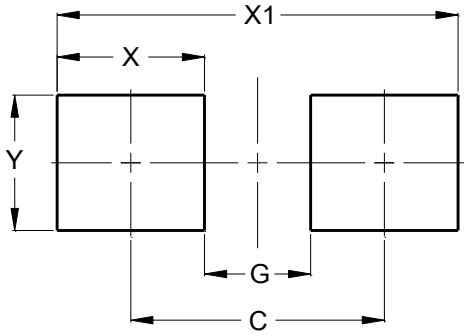
Please see http://www.diodes.com/package-outlines.html for the latest version.

SMA



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

SMB



Dimensions	Value (in mm)
C	4.30
G	1.80
X	2.50
X1	6.80
Y	2.30

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