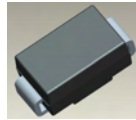


**3.0A LOW VF SCHOTTKY BARRIER RECTIFIER**
**Features**

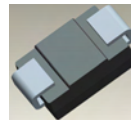
- Very Low Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automated Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 70A Peak
- **Lead Free Finish/RoHS Compliant (Note 3)**

**Mechanical Data**

- Case: SMA/SMB
- 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: SMA 0.064 grams (approximate)  
SMB 0.093 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	$V_{RRM}$	40	V
Working Peak Reverse Voltage	$V_{RWM}$		
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Average Rectified Output Current (Note 1) $T_T = 90^\circ\text{C}$	$I_O$	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 +125	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit	Conditions
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	40	—	—	V	$I_R = 2.0\text{mA}$
Forward Voltage Drop	$V_F$	—	0.310	0.350	V	$I_F = 1.0\text{A}$
		—	—	0.450		$I_F = 3.0\text{A}$
Leakage Current (Note 2)	$I_R$	—	—	150	uA	$V_R = 15\text{V}$
		—	—	1.0		$V_R = 20\text{V}$
		—	—	2.0		$V_R = 40\text{V}$
Total Capacitance	$C_T$	—	180	—	pF	$f = 1\text{MHz}, V_R = 4.0\text{VDC}$
Thermal Resistance, Junction to Terminal	$R_{\theta JT}$	—	25	—	$^\circ\text{C/W}$	—

- Notes:
1. When mounted on alumina substrate, 180° half sine wave.
  2. Short duration pulse test used to minimize self-heating effect.
  3. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see *EU Directive 2002/95/EC Annex Notes*.

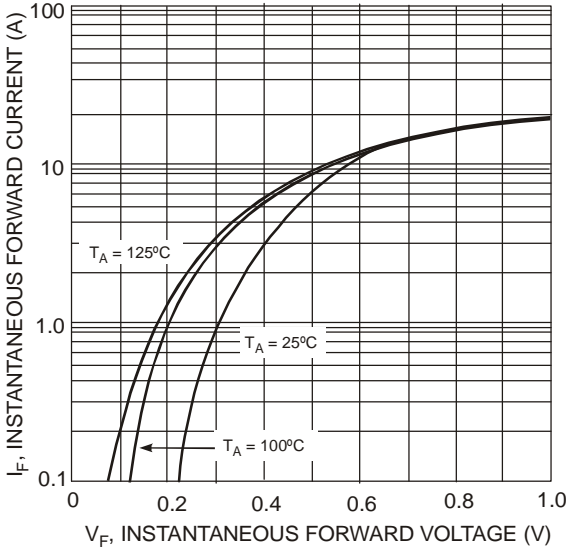


Fig. 1 Typical Forward Characteristics

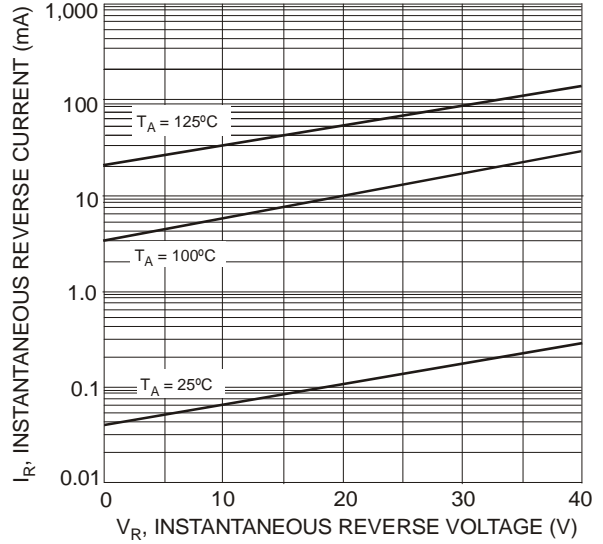


Fig. 2 Typical Reverse Characteristics

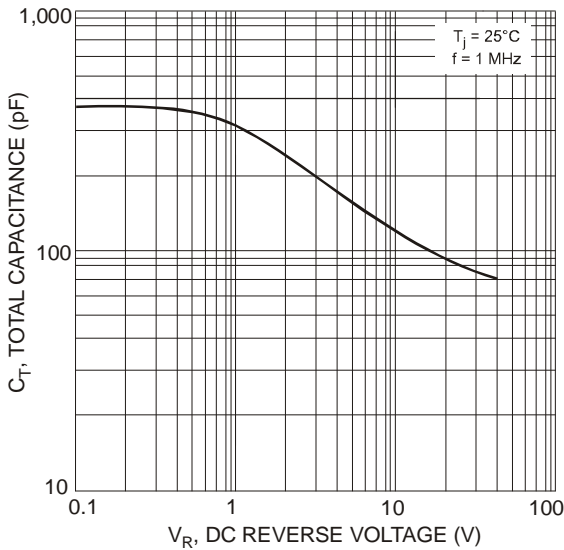


Fig. 3 Total Capacitance vs. Reverse Voltage

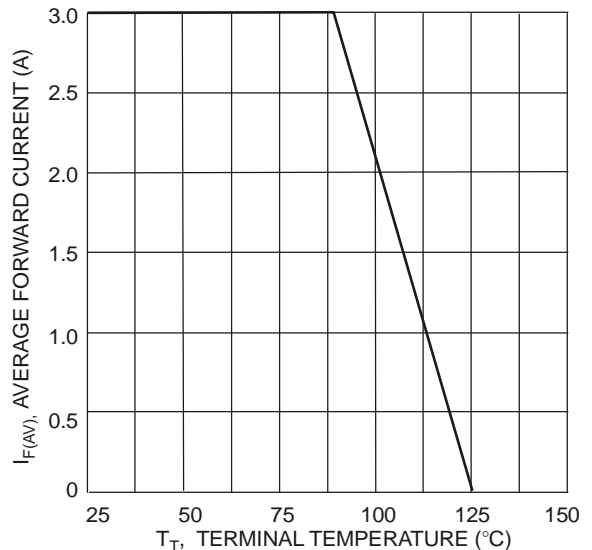


Fig. 4 Forward Current Derating Curve

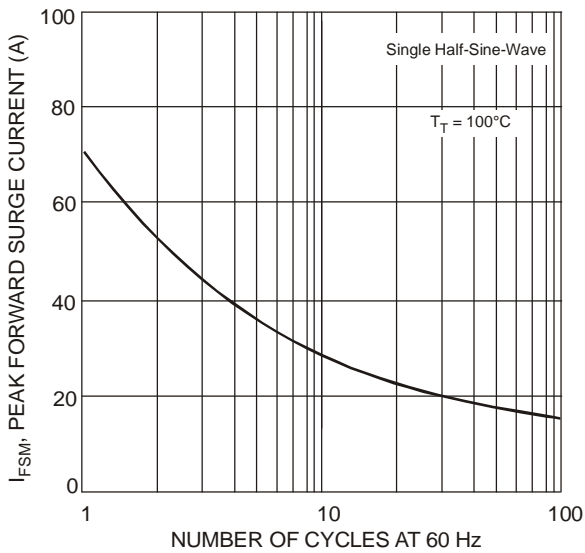
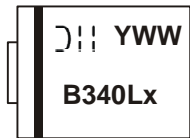


Fig. 5 Max Non-Repetitive Peak Forward Surge Current

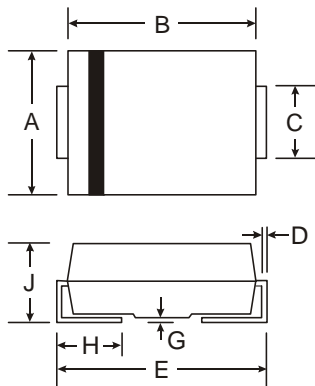
**Ordering Information** (Note 4)

Part Number	Case	Packaging
B340LA-13-F	SMA	5000/Tape & Reel
B340LB-13-F	SMB	3000/Tape & Reel

Notes: 4. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

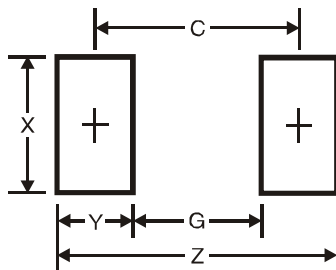
**Marking Information**


B340LA = Product type marking code, ex: B340LA (SMA package)  
 B340LB = Product type marking code, ex: B340LB (SMB package)  
 ⤴ = Manufacturers' code marking  
 YWW = Date code marking  
 Y = Last digit of year ex: 2 for 2002  
 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		

SMB		
Dim	Min	Max
A	3.30	3.94
B	4.06	4.57
C	1.96	2.21
D	0.15	0.31
E	5.00	5.59
G	0.05	0.20
H	0.76	1.52
J	2.00	2.62
All Dimensions in mm		

**Suggested Pad Layout**


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

SMB Dimensions	Value (in mm)
Z	6.7
G	1.8
X	2.3
Y	2.5
C	4.3

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