



**THE DATASHEET OF  
B340LB-13**

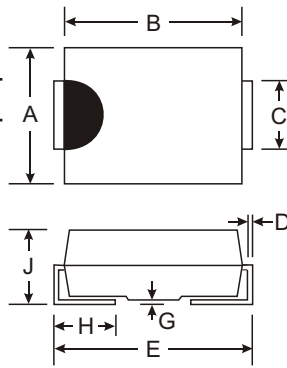


### Features

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

### Mechanical Data

- Case: Molded Plastic
- Plastic Material - UL Flammability Classification 94V-0
- Moisture sensitivity: Level 1 per J-STD-020A
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Also Available in Lead Free Plating (Matte Tin Finish). Please See Ordering Information, Note 4, on Page 2
- Polarity: Cathode Band or Cathode Notch
- Approx. Weight: SMA 0.064 grams  
SMB 0.093 grams
- Marking: Type Number



Dim	SMA		SMB	
	Min	Max	Min	Max
A	2.29	2.92	3.30	3.94
B	4.00	4.60	4.06	4.57
C	1.27	1.63	1.96	2.21
D	0.15	0.31	0.15	0.31
E	4.80	5.59	5.00	5.59
G	0.10	0.20	0.10	0.20
H	0.76	1.52	0.76	1.52
J	2.01	2.62	2.00	2.62

All Dimensions in mm

"A" Suffix Designates SMA Package  
 "B" Suffix Designates SMB Package

### Maximum Ratings @ T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load unless otherwise noted.  
 For capacitive load, derate current by 20%.

Characteristic	Symbol	B340LA/B	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	40	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	28	V
Average Rectified Output Current (Note 1) T <sub>L</sub> = 90°C	I <sub>O</sub>	3.0	A
Non-Repetitive Peak Forward Surge Current, single sine-wave superimposed on rated load, 60Hz	I <sub>FSM</sub>	70	A
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-40 to +125	°C

### Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

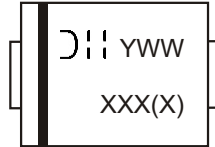
Characteristic	Symbol	Min	Typ	Max	Unit	Conditions
Reverse Breakdown Voltage (Note 2)	V <sub>(BR)R</sub>	40	—	—	—	I <sub>R</sub> = 2.0mA
Forward Voltage Drop (Note 2)	V <sub>FM</sub>	—	0.310	0.350 0.450	V	I <sub>F</sub> = 1.0A I <sub>F</sub> = 3.0A
Leakage Current (Note 2)	I <sub>RM</sub>	—	—	150	uA	V <sub>R</sub> = 15V
				1.0 2.0	mA	V <sub>R</sub> = 20V V <sub>R</sub> = 40V
Typical Total Capacitance	C <sub>T</sub>	—	180	—	pF	f = 1MHz, V <sub>R</sub> = 4.0VDC
Typical Thermal Resistance, Junction to Terminal	R <sub>θJT</sub>	—	25	—	°C/W	Mounted on alumina substrate

Notes: 1. When mounted on alumina substrate, 180° half sine wave.  
 2. Short duration test pulse used to minimize self-heating effect.

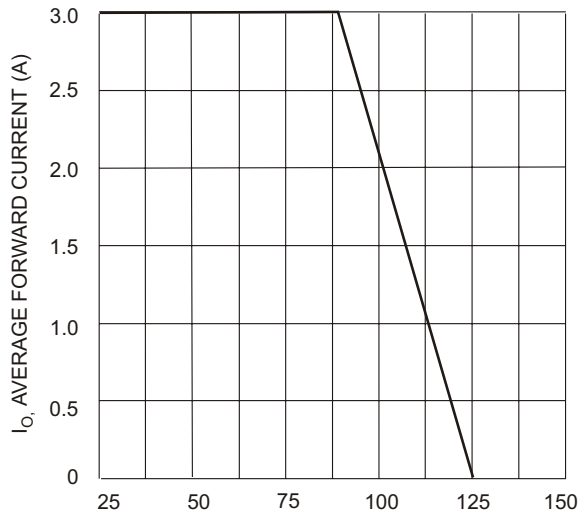
**Ordering Information** (Note 3 & 4)

Device	Packaging	Shipping
B340LA-13 B340LB-13	SMA SMB	5000/Tape & Reel 3000/Tape & Reel

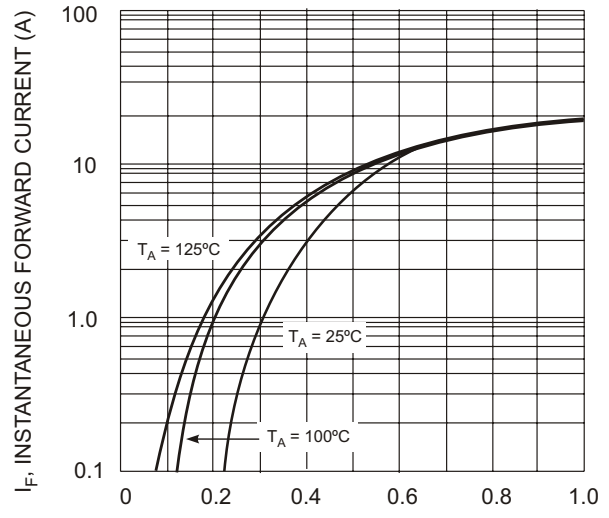
- Notes:
- For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.
  - For lead free terminal plating part number, please add "-F" suffix to part number above. Example: B340LA-13-F.



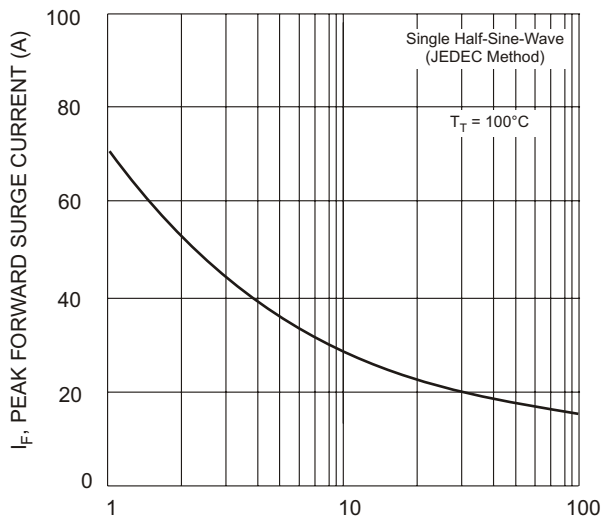
XXX = Product type marking code, ex: B340LA (SMA package)  
 XXXX = Product type marking code, ex: B340LB (SMB package)  
 D|| = Manufacturers' code marking  
 YWW = Date code marking  
 Y = Last digit of year ex: 2 for 2002  
 WW = Week code 01 to 52



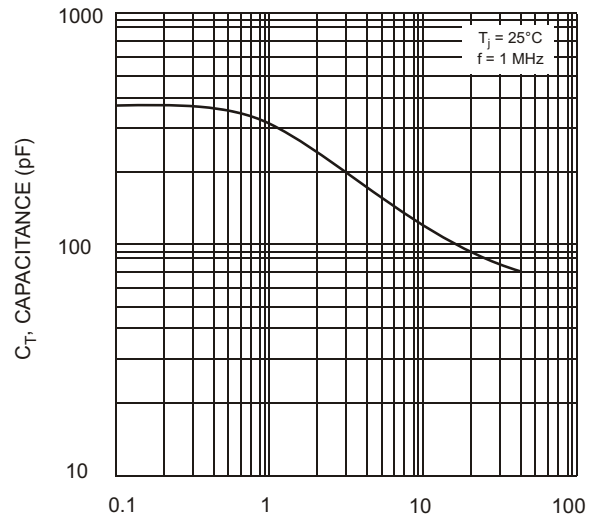
$T_T$ , TERMINAL TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



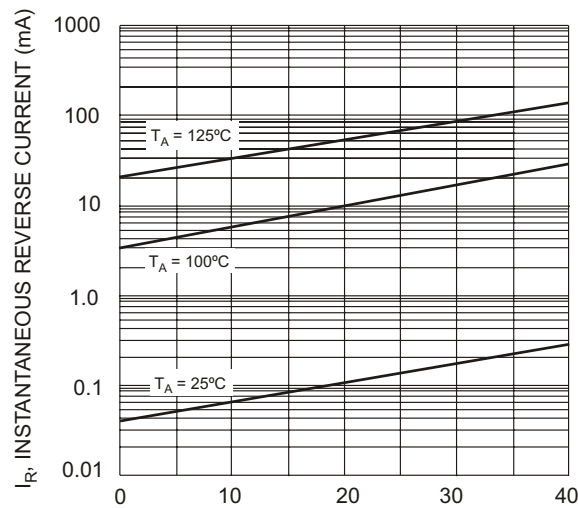
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Max Non-Repetitive Peak Forward Surge Current





$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Total Capacitance



$V_R$ , INSTANTANEOUS REVERSE VOLTAGE (V)  
Fig. 5 Typical Reverse Characteristics

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