



3.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automated Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 125A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Lead Free Finish, RoHS Compliant (Note 1)
- Green Molding Compound (No Halogen and Antimony) (Note 2)

Mechanical Data

- Case: SMB
- Case 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
- Polarity: Cathode Band
- Weight: 0.093 grams (approximate)







Bottom View

Ordering Information (Note 3)

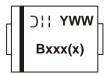
Part Number*	Case	Packaging
B3xxB-13-F	SMB	3000/Tape & Reel

^{*} xx = Device type, e.g. B320B-13-F (SMB package).

Notes:

- 1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see *EU Directive 2002/95/EC Annex Notes* 2. Product manufactured with Data Code 0924 (week 24, 2009) and newer are built with Green Molding Compound.
- $3. \ For packaging \ details, go \ to \ our \ website \ at \ http://www.diodes.com/datasheets/ap02007.pdf.$

Marking Information



Bxxx(x) = Product type marking code, ex: B320B);; = Manufacturers' code marking YWW = Date code marking Y = Last digit of year (ex: 2 for 2002) WW = Week code (01 to 53)



Maximum Ratings @TA = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitance load, derate current by 20%

Characteristic	Symbol	B320B	B330B	B340B	B350B	B360B	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	20	30	40	50	60	V
Average Rectified Output Current @ T _T =100°C	lo			3.0			Α
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I _{FSM}			100			Α

Thermal Characteristics

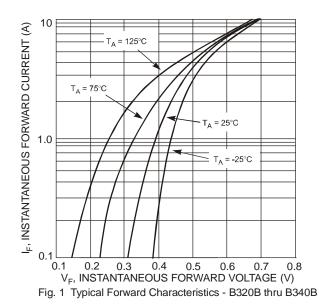
Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Terminal	$R_{ heta JT}$	25	°C/W
Typical Thermal Resistance, Junction to Ambient (Note 4)	$R_{ heta JA}$	95	°C/W
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

Electrical Characteristics @TA = 25°C unless otherwise specified

Charac	teristic	Symbol	Min	Тур	Max	Unit	Test Condition
Forward Voltage Drop	B320B, B330B, B340B	\/-	-	-	0.50	V	I _F = 3.0A, T _A = 25°C
Forward Voltage Drop	B350B, B360B		-	-	0.70		
Leakage Current (Note 5)	Current (Note E)	I _R	-	-	0.5	I ma	@ Rated V _R , T _A = 25°C
Leakage Current (Note 5)			-	-	20		@ Rated V _R , T _A = 100°C
Total Capacitance		C _T	-	-	200	pF	$V_R = 4V$, $f = 1MHz$

Notes: 4. Thermal Resistance: Junction to terminal, unit mounted on glass epoxy substrate with 2x3mm copper pad

5. Short duration pulse test used to minimize self-heating effect.



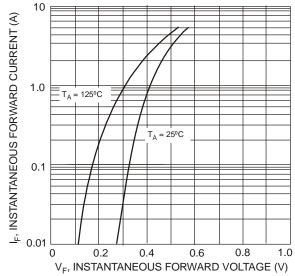
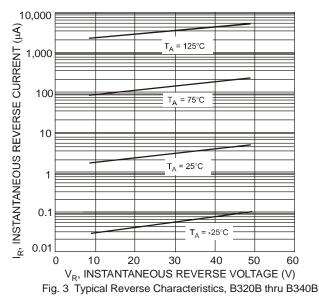
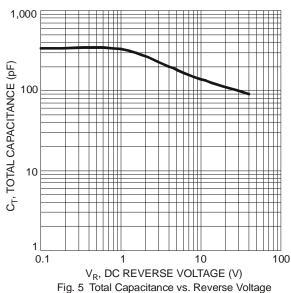


Fig. 2 Typical Forward Characteristics - B350B thru B360B







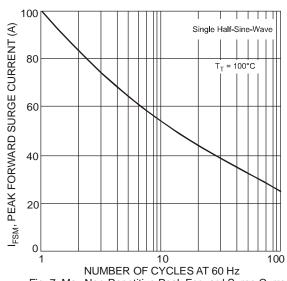


Fig. 7 Max Non-Repetitive Peak Forward Surge Current

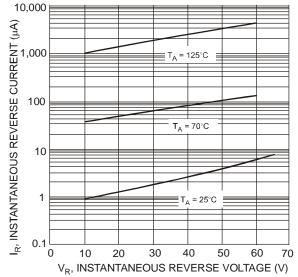
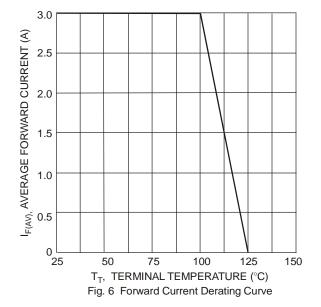
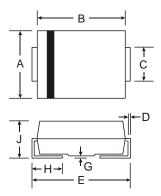


Fig. 4 Typical Reverse Characteristics, B350B thru B360B



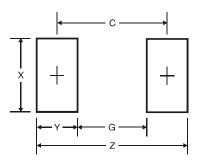


Package Outline Dimensions



SMB					
Dim	Min	Max			
Α	3.30	3.94			
В	4.06	4.57			
C	1.96	2.21			
D	0.15	0.31			
E	5.00	5.59			
G	0.05	0.20			
Η	0.76	1.52			
J	2.00	2.50			
All Dimensions in mm					

Suggested Pad Layout



Dimensions	Value (in mm)
Z	6.8
G	1.8
Х	2.3
Υ	2.5
С	4.3



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