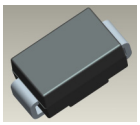
3.0A SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

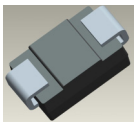
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automated Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 100A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **Green Molding Compound (No Halogen and Antimony) (Note 4)**

Mechanical Data

- Case: SMA
- Case Material: Molded Plastic. UL Flammability Classification 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
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 0.064 grams (approximate)



Top View



Bottom View

Maximum Ratings @T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitance load, derate current by 20%.

Characteristic	Symbol	B320A	B330A	B340A	B350A	B360A	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	I_O	3.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80					A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Terminal	$R_{\theta JT}$	25	°C/W
Typical Thermal Resistance, Junction to Ambient (Note 2)	$R_{\theta JA}$	100	°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	B320A, B330A, B340A B350A, B360A	V_F	- -	- -	0.50 0.70	V	I_F = 3.0A, T_A = 25°C
Leakage Current (Note 3)		I_R	- -	- -	0.5 20	mA	@ Rated V_R, T_A = 25°C @ Rated V_R, T_A = 100°C
Total Capacitance		C_T	-	-	200	pF	V_R = 4V, f = 1MHz

Notes:
1. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied. Please visit our website at http://www.diodes.com/quality/lead_free.html.
2. Thermal Resistance: Junction to terminal, unit mounted on glass epoxy substrate with 2x3mm copper pad.
3. Short duration pulse test used to minimize self-heating effect.
4. Product manufactured with Data Code 0924 (week 24, 2009) and newer are built with Green Molding Compound.

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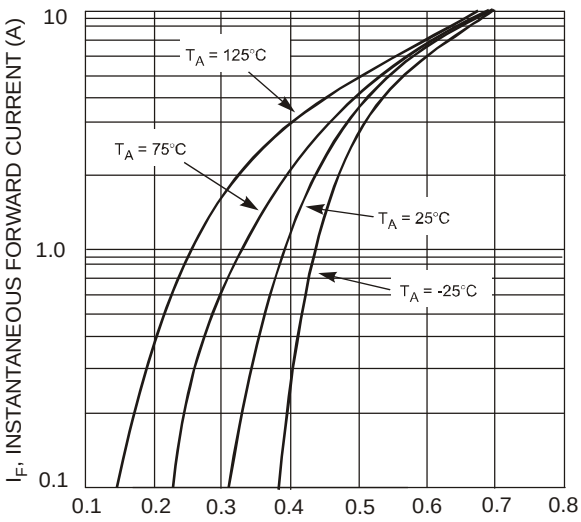


Fig. 1 Typical Forward Characteristics - B320A thru B340A

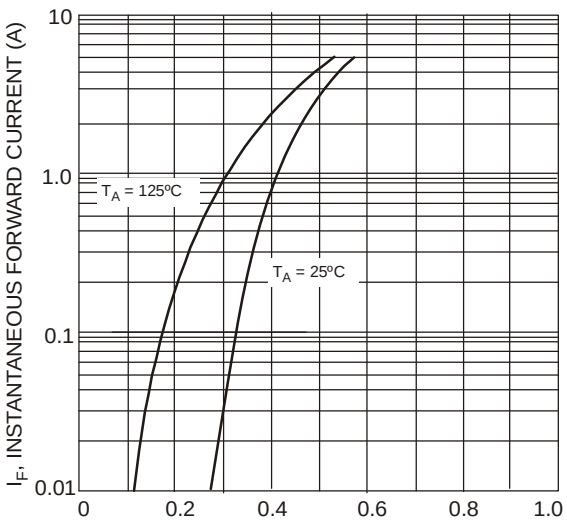


Fig. 2 Typ. Forward Characteristics - B350A thru B360A

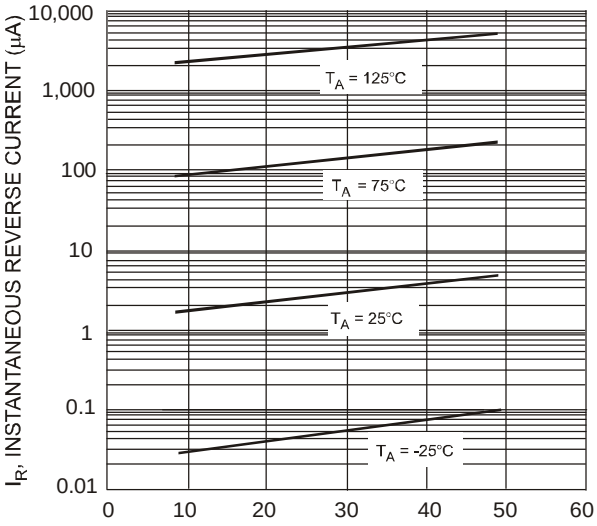


Fig. 3 Typical Reverse Characteristics, B320A thru B340A

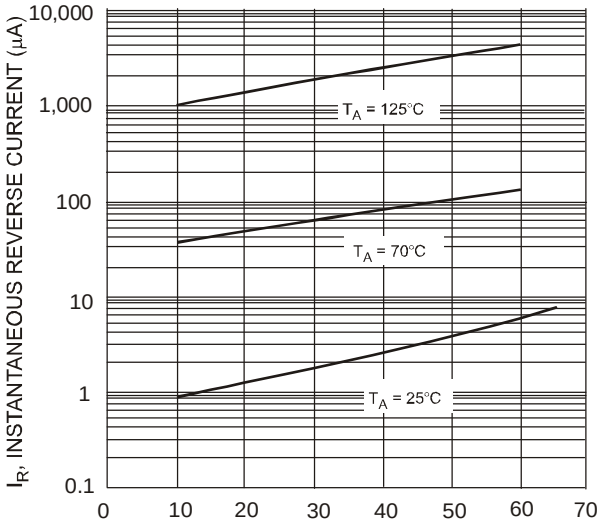


Fig. 4 Typical Reverse Characteristics, B350A thru B360A

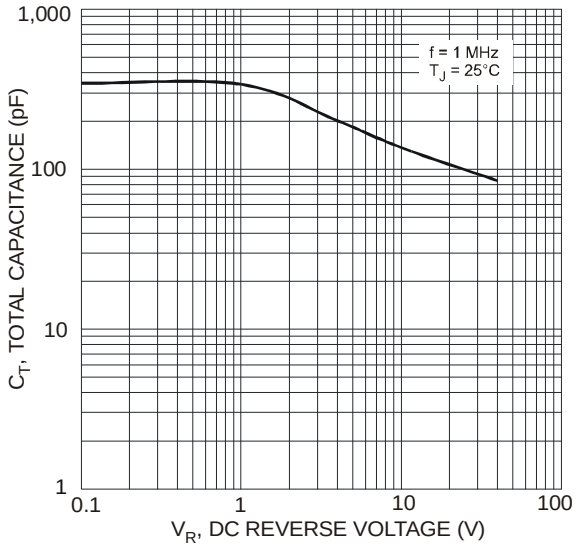


Fig. 5 Total Capacitance vs. Reverse Voltage

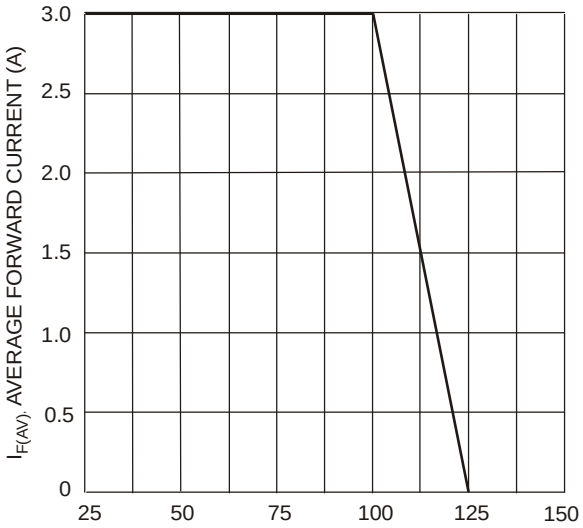


Fig. 6 Forward Current Derating Curve

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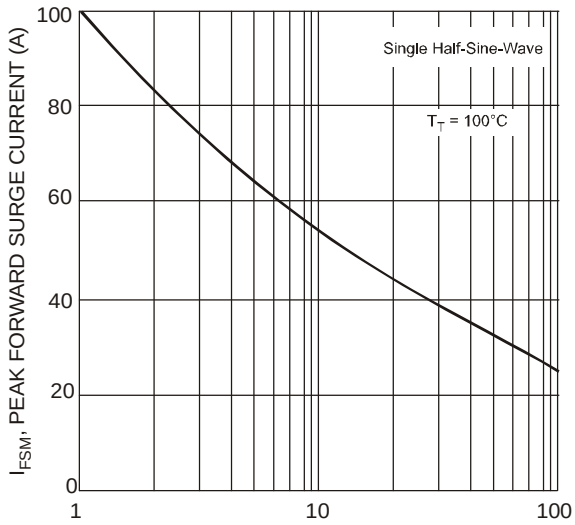


Fig. 7 Max Non-Repetitive Peak Fwd Surge Current

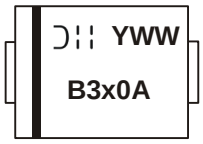
Ordering Information (Note 5)

Part Number*	Case	Packaging
B3XXA-13-F	SMA	5000/Tape & Reel

* xx = Device type, e.g. B320A-13-F (SMA package).

Notes: 5. For packaging details, go to our website at http://www.diodes.com/datasheets/ap02007.pdf.

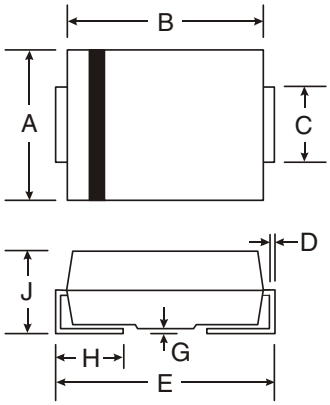
Marking Information (Note 6)



B3x0A = Product type marking code, ex: B320A
= Manufacturers' code marking
YWW = Date code marking
Y = Last digit of year (ex: 2 for 2002)
WW = Week code 01 to 52

Notes: 6. Device has a cathode band (as shown above) and may also have a cathode notch.

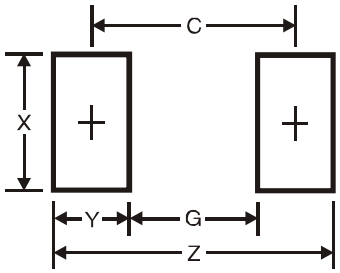
Package Outline Dimensions



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		

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Suggested Pad Layout



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

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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

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