

Product Summary

B320A-B340A:								
V _{RRM} (V)	l _o (A)	V _{F(MAX)} @ 3A (V)	I _{R(MAX)} @ V _{RRM} (mA)					
20, 30, 40	3.0	0.50	0.5					

B350-B360A:

V _{RRM} (V)	I _O (A)	V _{F(typ)} @ +125°C (V)	I _{R(MAX)} @ V _{RRM} (mA)
50, 60	3.0	0.70	0.5

Description and Applications

For use in low-voltage, high-frequency inverters, freewheeling, DC-DC converters, and polarity protection applications.

Features

- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automated Assembly
- Low Power Loss, High Efficiency
- Lead-Free Finish; RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Notes 3 & 4)
- Qualified to AEC-Q101 Standards for High Reliability

Mechanical Data

- Case: SMA
- Case Material: Molded Plastic. "Green" Molding Compound. 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 (3)
- Polarity: Cathode Band
- Weight: 0.064 grams (Approximate)

SMA



Bottom View

Ordering Information (Note 5)

Part Number*	Compliance	Case	Packaging
B3XXA-13-F	Standard	SMA	5,000/Tape & Reel

* XX = Device Type, e.g. B320A-13-F (SMA Package).

Marking Information (Note 6)



B3x0A = Product Type Marking Code, ex: B320A) | | = Manufacturers' Code Marking YWW = Date Code Marking Y = Last Digit of Year (ex: 15 for 2015) WW = Week Code (01 to 53)

Notes:

- 1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
 - 2. See http://www.diodes.com/quality/lead_free.html 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. Products manufactured with Date Code 0924 (week 24, 2009) and newer are built with Green Molding Compound.
- 5. For packaging details, go to our website at http://www.diodes.com/products/packages.html.
- 6. Device has a cathode band (as shown above) and may also have a cathode notch.



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		Ιo	3.0					А
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load		I _{FSM}			80			А

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Maximum Total Power Dissipation - Steady State, TA = +25°C (Note 7)	PD	850	mW
Typical Thermal Resistance, Junction to Ambient (Note 7)	R _{0JA}	140	°C/W
Typical Thermal Resistance, Junction to Terminal (Note 8)	R _{θJT}	25	°C/W
Typical Thermal Resistance, Junction to Ambient (Note 8)	R _{θJA}	100	°C/W
Operating Temperature Range	TJ	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	°C

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

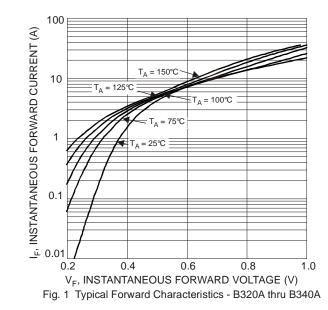
Characteristic		Symbol	Min	Тур	Max	Unit	Test Condition
Forward Valtage Drop	B320A, B330A, B340A	VF		-	0.50	V	I _F = 3.0A, T _A = +25°C
Forward Voltage Drop	B350A, B360A	۷F	V _F	_	0.70		
Lookogo Curropt (Noto 0)	akage Current (Note 9)		_	-	0.5	mA	@ Rated V _R , T _A = +25°C
Leakage Current (Note 9)			_		20		@ Rated V _R , T _A = +100°C
Total Capacitance		Ст		200	_	pF	$V_R = 4V, f = 1MHz$

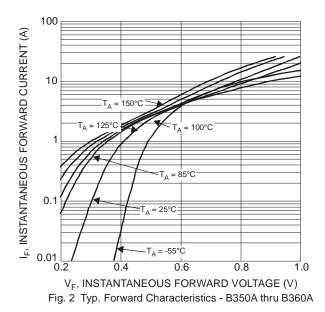
Notes:

7. Device mounted on FR-4 PCB, with minimum recommended pad layout.

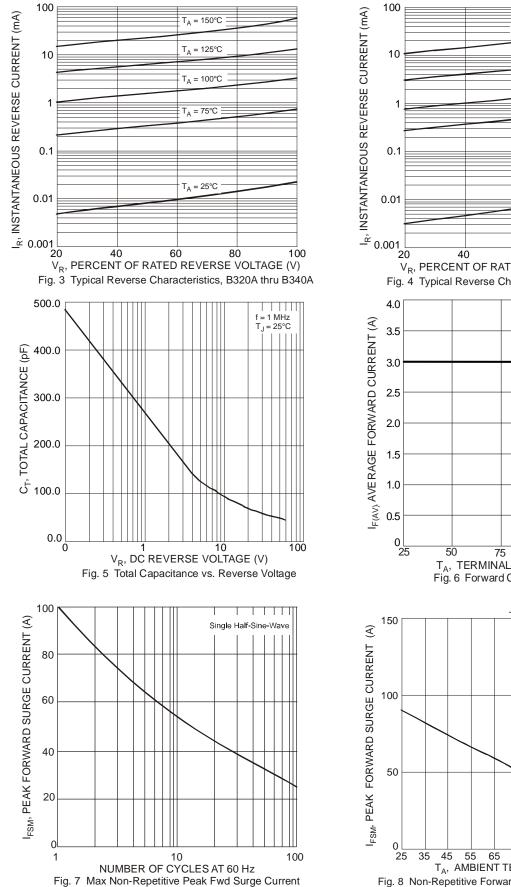
8. Device mounted on glass epoxy substrate with 2x3mm copper pad.

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









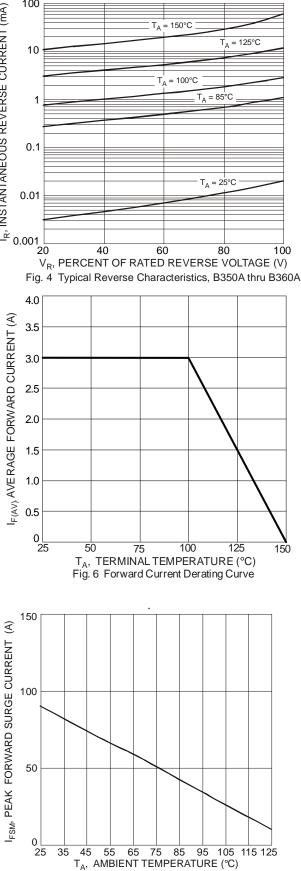
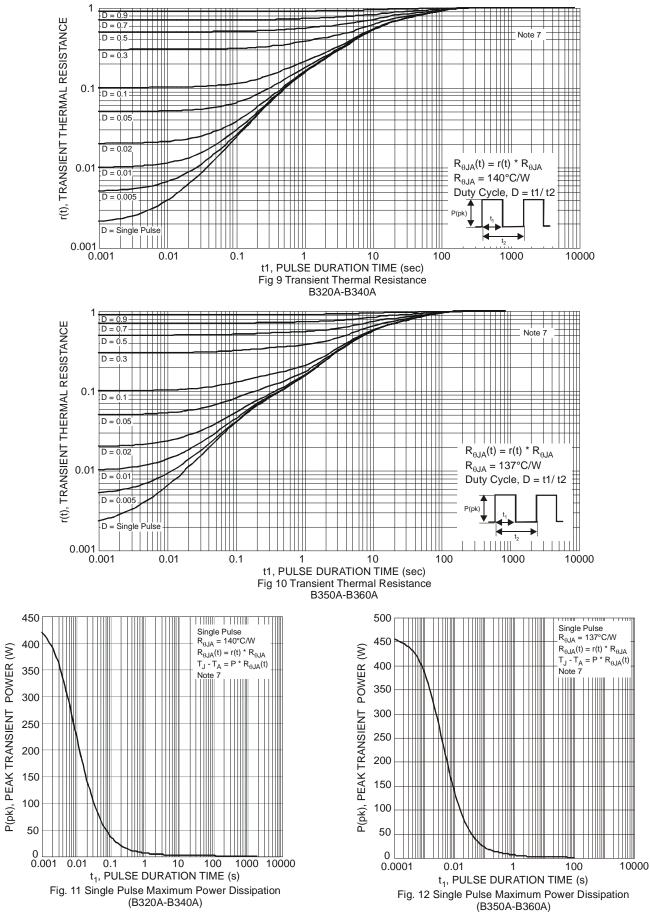


Fig. 8 Non-Repetitive Forward Surge Current Derating Curve



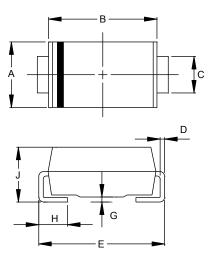


POWER (W)



Package Outline Dimensions

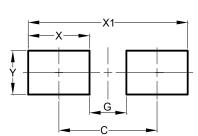
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for the latest version.



SMA						
Dim	Min	Max				
Α	2.29	2.92				
В	4.00	4.60				
С	1.27	1.63				
D	0.15	0.31				
ш	4.80	5.59				
G	0.05	0.20				
Н	0.76	1.52				
J	1.96	2.40				
All Dimensions in mm						

Suggested Pad Layout

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



Dimensions	Value (in mm)			
С	4.00			
G	1.50			
Х	2.50			
X1	6.50			
Y	1.70			

SMA

SMA



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