

B320A-B360A(LS)

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE – 20 to 60 Volts
FORWARD CURRENT – 3.0 Amperes

FEATURES

- For surface mounted applications
- Metal-Semiconductor junction with guard ring
- Epitaxial construction
- Very Low forward voltage drop
- High current capability
- IEC 61000-4-2(ESD),>10KV(contact),>15KV(Air)
- AEC-Q101-C Qualified
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- Halogen and Antimony Free. "Green" Device (Note 3)

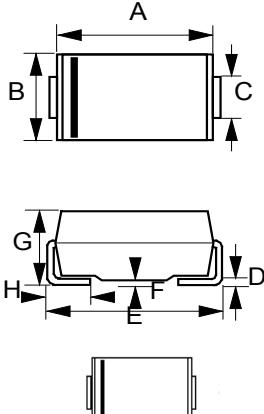
APPLICATION

- Low voltage high frequency inverters
- Free wheeling
- Polarity protection application

MECHANICAL DATA

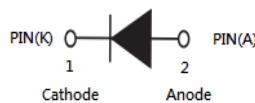
- Case: Molded plastic
- Case Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Weight: 0.002 ounces, 0.07 grams (Approximate)

SMA



SMA		
DIM	MIN	MAX
A	4.06	4.57
B	2.29	2.92
C	1.27	1.63
D	0.15	0.31
E	4.83	5.59
F	0.05	0.20
G	2.01	2.40
H	0.76	1.52

All Dimensions in millimeter



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	B320A	B340A	B350A	B360A	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	50	60	V
Maximum DC blocking voltage	V_{DC}	20	40	50	60	V
Maximum Average rectified output current @ $T_L=100^\circ\text{C}$	$I_{(AV)}$			3		A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	I_{FSM}		100			A
Operating junction temperature range	T_J	-55 to +125		-55 to +150		$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150				

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	MAX		UNIT
Forward voltage (Note 4)	$I_F=3.0\text{A}$	V_F	0.5	0.7	V
Maximum DC Reverse current at Rated DC Blocking Voltage	$T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	I_R	0.15 15	0.05 5	mA
Typical junction capacitance (Note 5)		C_J	200		pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP		UNIT
Typical thermal resistance (Note 6, 7)	R_{thJC}	15		
	R_{thJL}	22		$^\circ\text{C/W}$
	R_{thJA}	100		

Note :

- (1) EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
- (2) See <https://www.diodes.com/quality/lead-free/> 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) 300us pulse width, 2% duty cycle.
- (5) Measured at 1.0MHz and applied voltage of 4.0VDC.
- (6) Thermal Resistance Junction to Case, Lead and Ambient.
- (7) Unit mounted on 0.75t glass-epoxy substrate with 2x3mm copper pad.

REV.-19, Oct-2021, KSHA05

FIG.1- FORWARD CURRENT DERATING CURVE

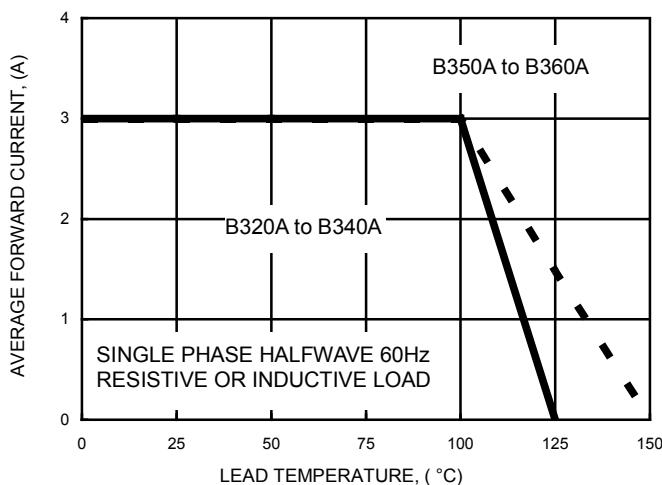


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

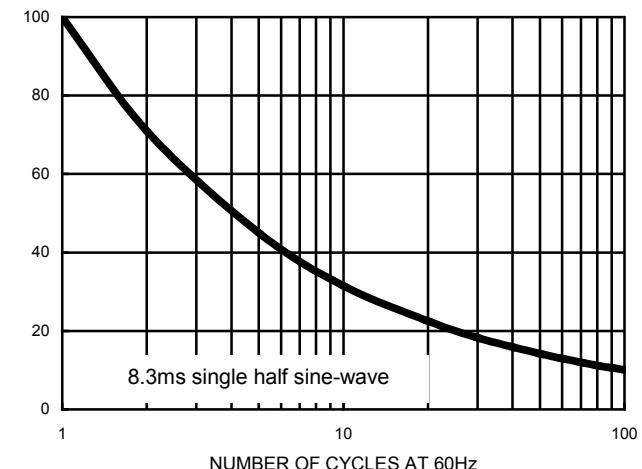


FIG.3- TYPICAL FORWARD CHARACTERISTICS

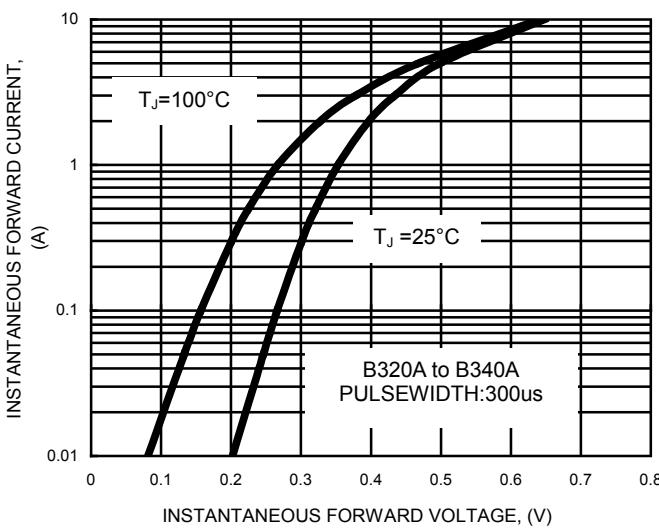


FIG.4- TYPICAL FORWARD CHARACTERISTICS

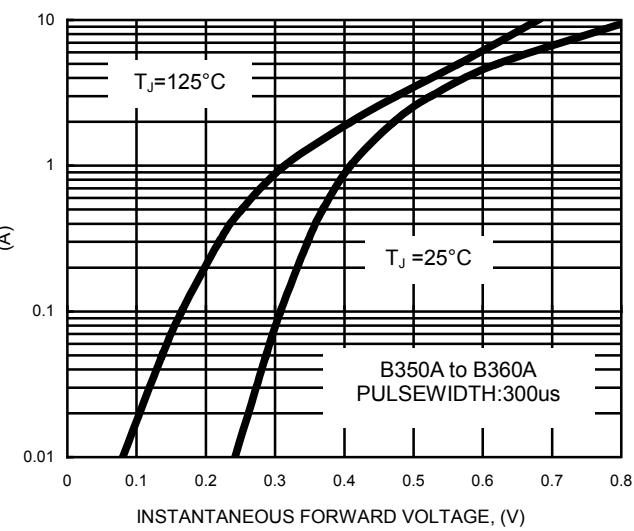


FIG.5- TYPICAL JUNCTION CAPACITANCE

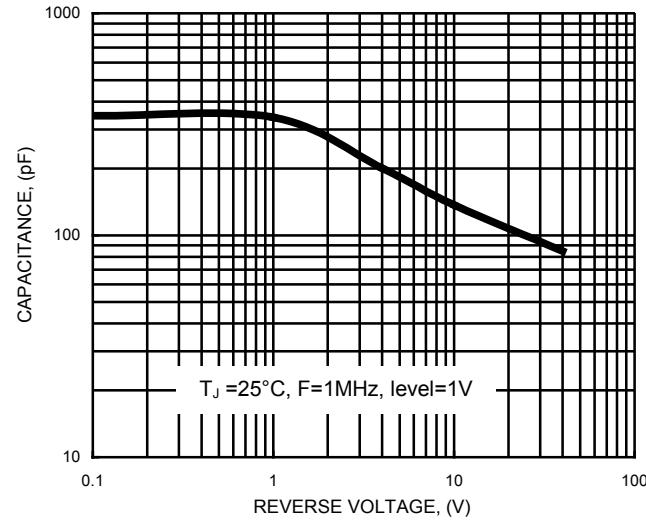
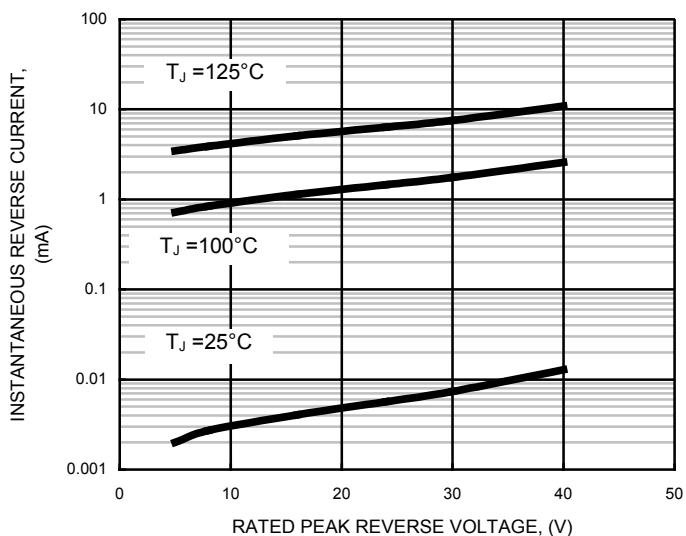


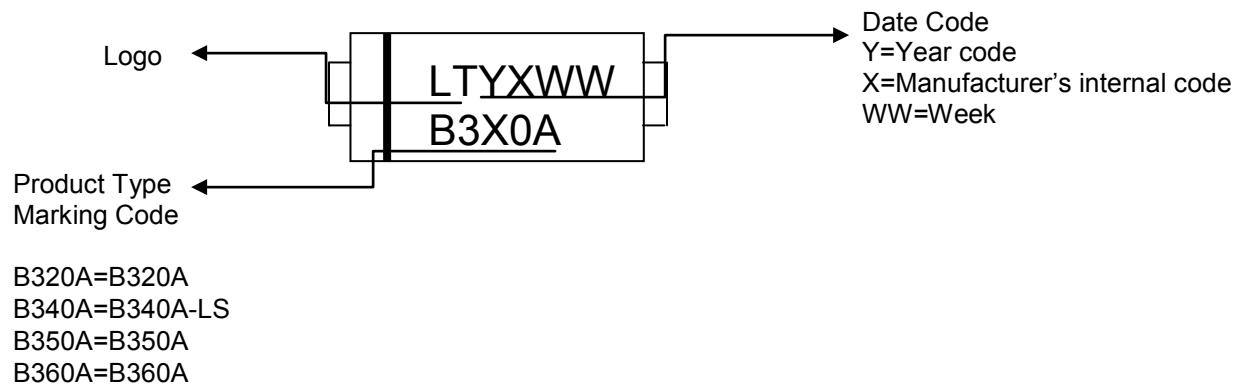
FIG.6- TYPICAL REVERSE CHARACTERISTICS



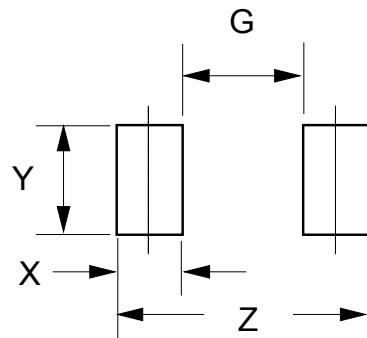
Ordering Information :

Part Number	Case	Packaging
B320A	SMA	5000 / Tape & Reel
B340A-LS	SMA	5000 / Tape & Reel
B350A	SMA	5000 / Tape & Reel
B360A	SMA	5000 / Tape & Reel

Marking Information :



Suggested Pad Layout :



Dim	SMA
G	2.90
X	2.30
Y	2.40
Z	7.50
All Dimensions in Millimeters	

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