

**SCHOTTKY  
SURFACE BRIDGE RECTIFIER**

**REVERSE VOLTAGE** – 100 Volts  
**FORWARD CURRENT** – 1.0 Amperes

**FEATURES**

- Rating to 100V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- Qualified is according to AEC-Q101 Rev\_C
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

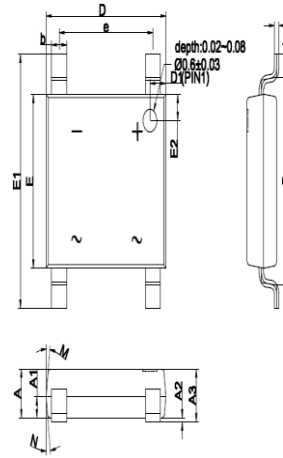
**APPLICATION**

- Energy saving Lamps
- Mobile Battery charger

**MECHANICAL DATA**

- Package Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".
- Moisture Sensitivity: Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Polarity: Indicated by cathode band
- Weight: 98 mg (Approximate)
- Marking code: B1100

**ABS**



ABS		
DIM	MIN	MAX
A	1.20	1.30
A1	0.43	0.63
A2	0.00	0.10
A3	1.20	1.40
b	0.50	0.80
C	0.10	0.30
D	4.85	5.25
D1	0.45	0.85
e	4.00 TYP.	
E	4.25	4.65
E1	6.40	6.80
E2	0.45	0.85
G	5.20	5.60
L	0.40	0.80
M	7° TYP.	
N	7° TYP.	

All dimension in millimeter

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

**ABSOLUTE RATINGS**

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	V
Maximum DC blocking voltage	$V_{DC}$	100	V
Maximum Average rectified output current	$I_{(AV)}$	1.0	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	$I_{FSM}$	30	A
$I^2t$ Rating for fusing (1ms<t<8.3ms)	$I^2t$	3.7	A <sup>2</sup> S
Operating junction and Storage Temperature range	$T_J, T_{STG}$	-55 ~ +150	°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage (Note4)	$I_F=1.0A$ $T_J=25^\circ C$ $T_J=125^\circ C$	$V_F$	-- --	0.85 0.60	V
Leakage current	$V_R=100V$ $T_J=25^\circ C$ $T_J=100^\circ C$	$I_R$	-- 0.002	10 5	$\mu A$ mA
Typical junction capacitance (Note 5)		$C_J$		55	pF

**THERMAL CHARACTERISTICS**

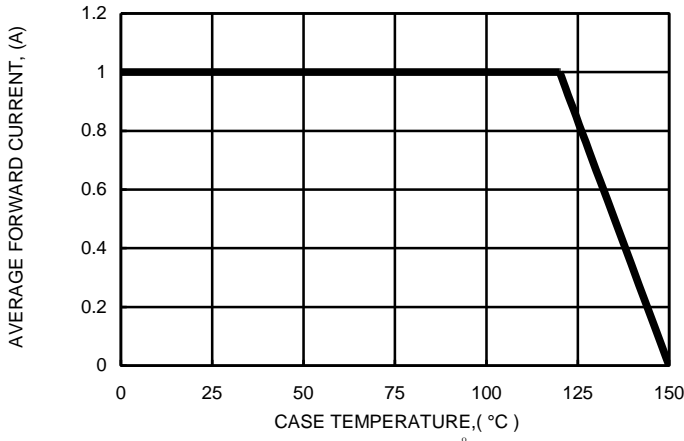
PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6,7)	$R_{thJc}$	18	°C/W
	$R_{thJl}$	14	

**Note:**

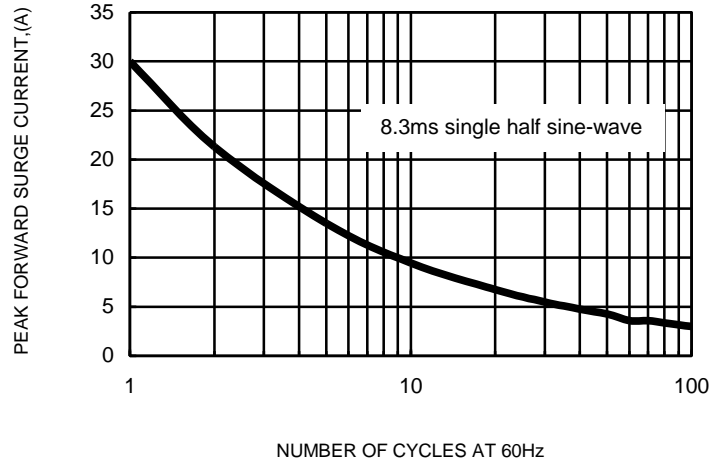
REV-2, Oct-2021, KBHA01

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 4.0V DC.
6. Thermal resistance test performed in accordance with JESD-51.
7. The unit mounted on glass-epoxy substrate with 1oz/ft<sup>2</sup> 2 mm x 2 mm copper pad.

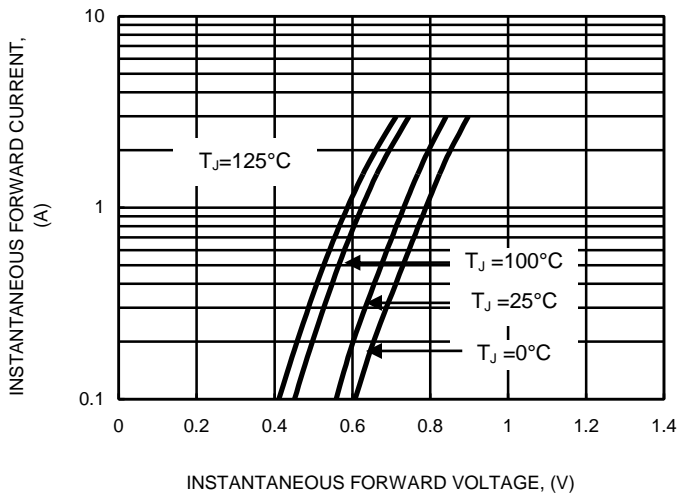
**FIG.1 FORWARD CURRENT DERATING CURVE**



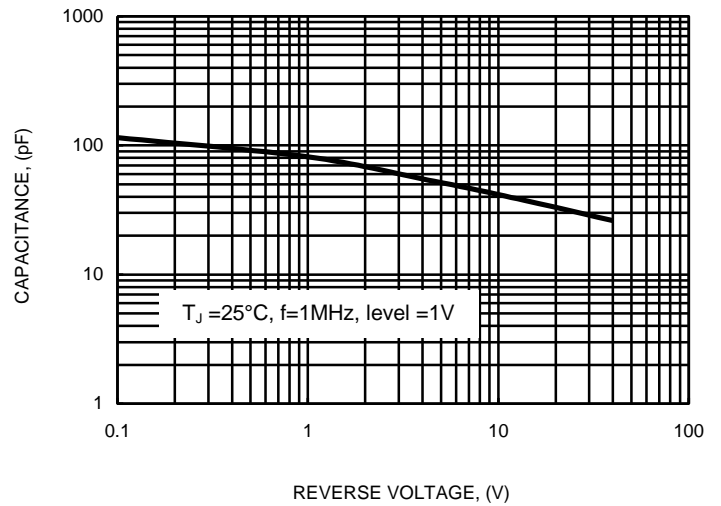
**FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT**



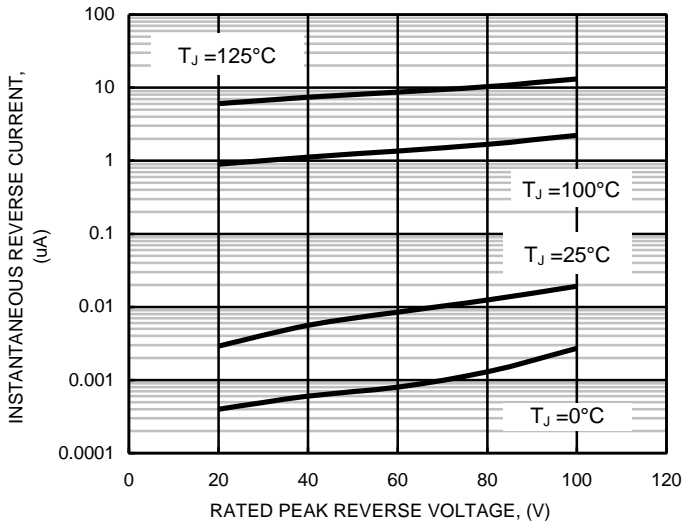
**FIG.3 TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 TYPICAL JUNCTION CAPACITANCE**



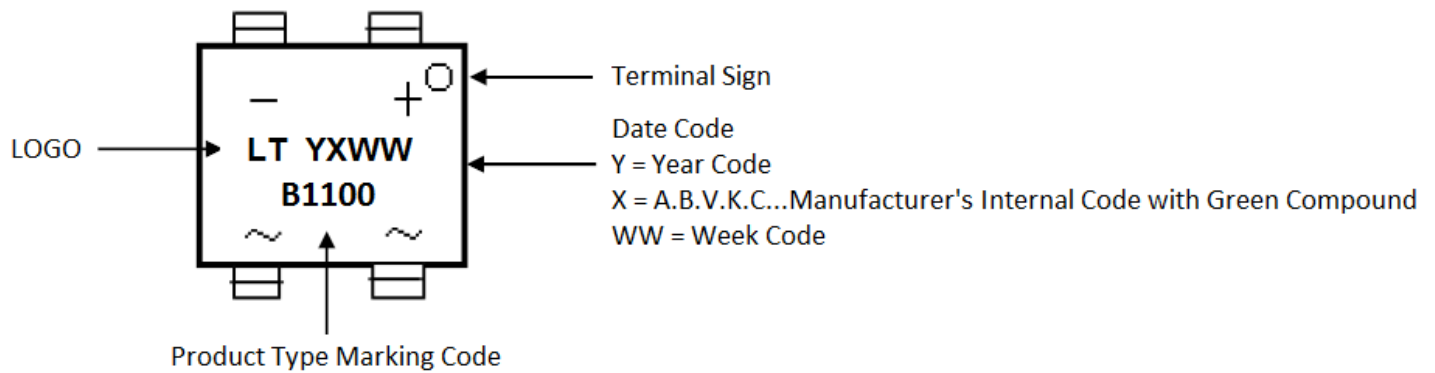
**FIG.5 TYPICAL REVERSE CHARACTERISTICS**



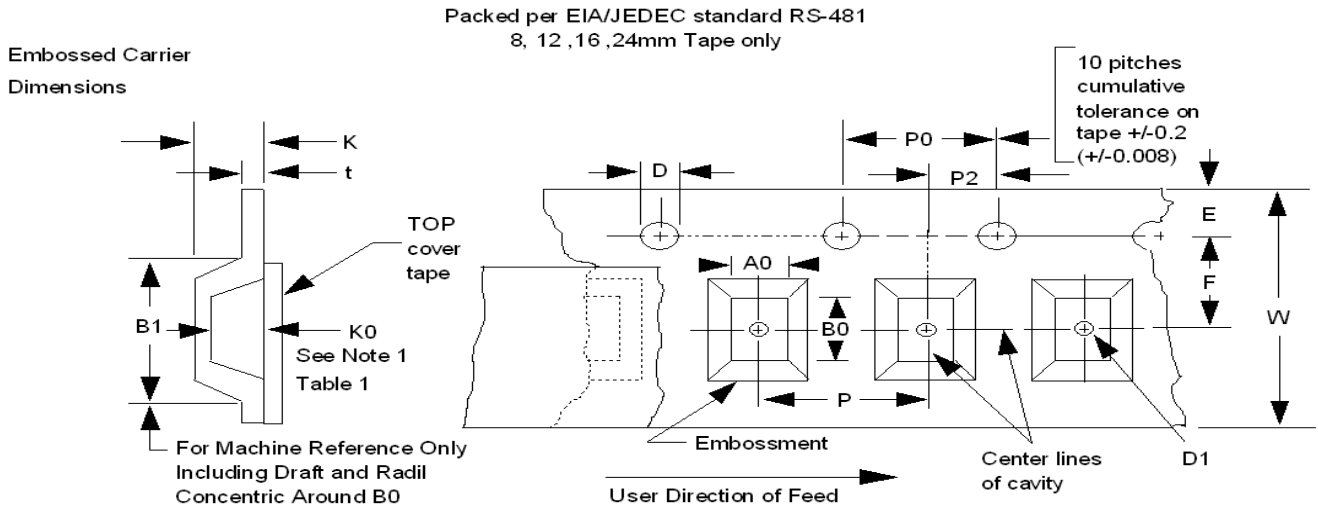
## Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
BABS1100	ABS	3000pcs	Tape & Reel

## Marking Information :



### Embossed Carrier Dimensions



#### EMBOSSED TYPE

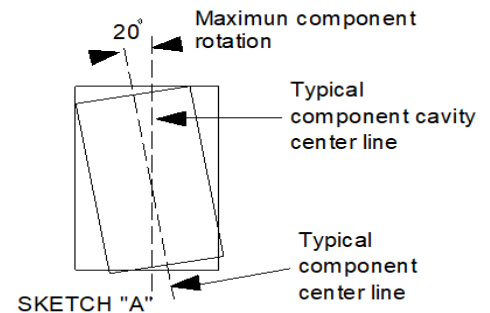
#### ALL DIMENSION IN MILLIMETERS AND (INCHES)

TAPE SIZE	D	E	PO	t (MAX)	A0B0K0	CONSTANT DIMENSION
12mm	1.55 $\pm$ 0.10/-0.0 (0.059 $\pm$ 0.004 -0.00)	1.75 $\pm$ 0.10 (0.069 $\pm$ 0.004)	4.0 $\pm$ 0.10 (0.157 $\pm$ 0.004)	0.6 (0.024)	SEE NOTE 1	

TAPE SIZE	B1 MAX	D1 MIN	F	K MAX	P2	R	W	P	VARIABLE DIMENSIONS
12mm	8.2 (0.323)	1.5 (0.59)	5.5 $\pm$ 0.05 (2.17 $\pm$ 0.002)	4.5 (0.117)	2.0 $\pm$ 0.05 (0.079 $\pm$ 0.002)	30 (1.181)	12.0 $\pm$ 0.30 (0.472 $\pm$ 0.012)	8.0 $\pm$ 0.10 (0.315 $\pm$ 0.004)	

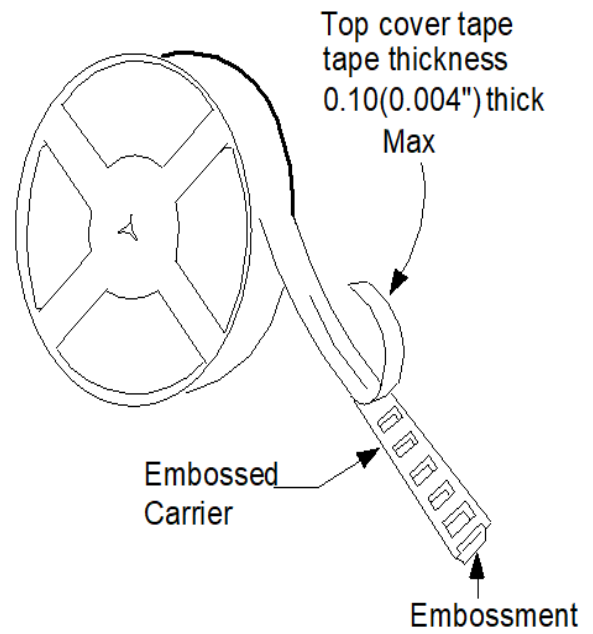
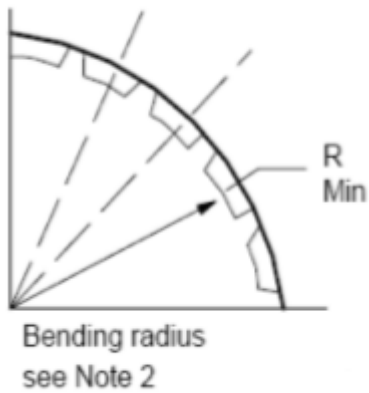
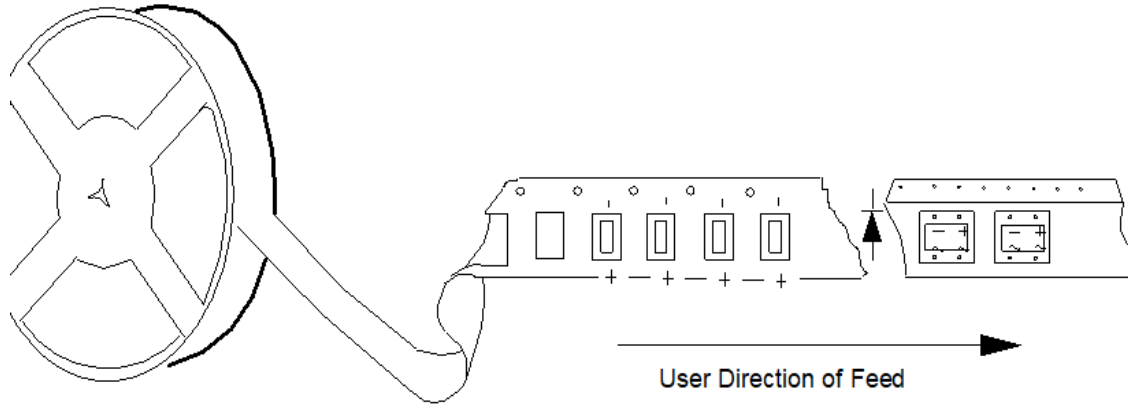
Note 1: A0B0K0 are determined by component size. The clearance between the component and the cavity must be within 0.05 min. to 0.50 max. for 8 mm tape. 0.05 min. to 0.65 max. for 12mm tape. 0.15 min. to 0.90 max. for 16mm tape and 0.05 min. to 1.00 max. for 24 mm tape and larger. The component cannot rotate more than 20° within the determined cavity. See sketch "A" below.

2: Tape and component shall pass around radius "R" without damage

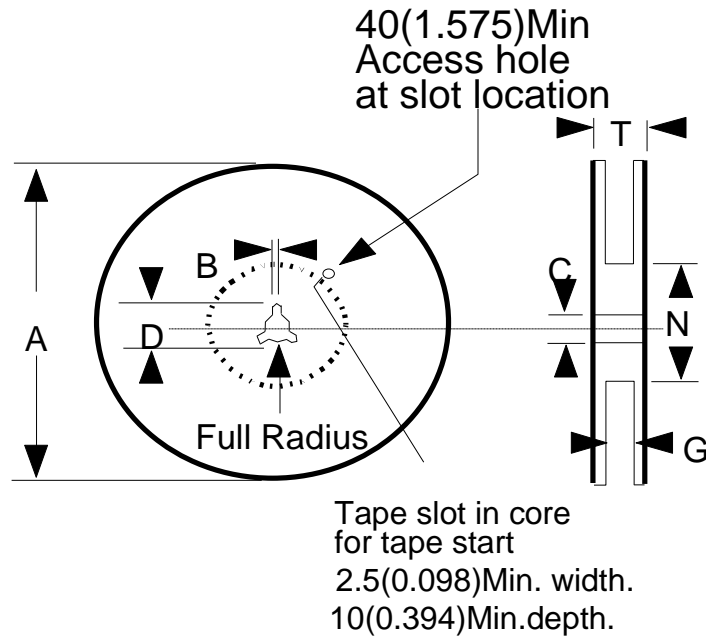


**PACKAGING INFORMATION**  
**BABS1100**

Polar Units



**PACKAGING INFORMATION**  
**BABS1100**



**REEL DIMENSIONS**

TAPE SIZE	A MAX	B MAX	C	D MIN	N MIN	G	T MAX
12mm	330 (13.0)	1.5 (0.06)	13.0+/-0.5 (0.512+/-0.020)	20.2 (0.80)	7.5 (2.952)	12.4+2.0/-0.0 (0.488+0.078/-0.0)	18.4 (0.724)

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