

**SURFACE MOUNT  
SCHOTTKY BARRIER RECTIFIER**

**REVERSE VOLTAGE – 30 Volts  
FORWARD CURRENT – 2 Amperes**

**FEATURES**

- Ultra-Small Surface Mount Package
- Qualification is according to AEC-Q101 Rev\_C
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**

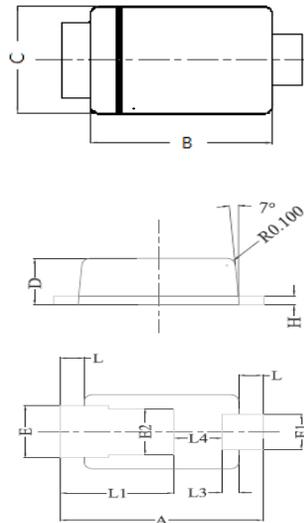
**APPLICATION**

- DC to DC converters
- Polarity protection applications
- Freewheeling diodes

**MECHANICAL DATA**

- Package: SOD-323EP Plastic
- Package Material: “Green” molding compound, UL flammability classification 94V-0, “Halogen-free”.
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Matte Tin Plated Leads (Ⓔ)
- Weight: 0.005 grams (Approximate)
- Marking code: B2E

**SOD-323EP**



SOD-323EP		
DIM	MIN	MAX
A	2.40	2.60
B	1.85	1.95
C	1.20	1.30
D	0.60	0.70
E	0.78	0.98
E1	0.50	0.70
E2	0.60	1.00
H	0.08	0.18
L	0.20	0.40
L1	1.40(TYP)	
L3	0.20(TYP)	
L4	0.40	0.80

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	$V_{RRM}$	30	V
Maximum DC blocking voltage	$V_{DC}$	30	V
Maximum Average rectified output current	$I_{(AV)}$	2	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	$I_{FSM}$	25	A
Operating junction and Storage Temperature range	$T_J, T_{STG}$	-55 to +125	°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITIONS		SYMBOL	MAX	UNIT
Forward voltage (Note 4)	$I_F=2A$	$T_J=25^\circ C$ $T_J=125^\circ C$	$V_F$	0.60 0.55	V
Leakage current	$V_R=30V$	$T_J=25^\circ C$ $T_J=125^\circ C$	$I_R$	60 40	$\mu A$ mA
Typical junction capacitance (Note 5)			$C_J$	1160	pF

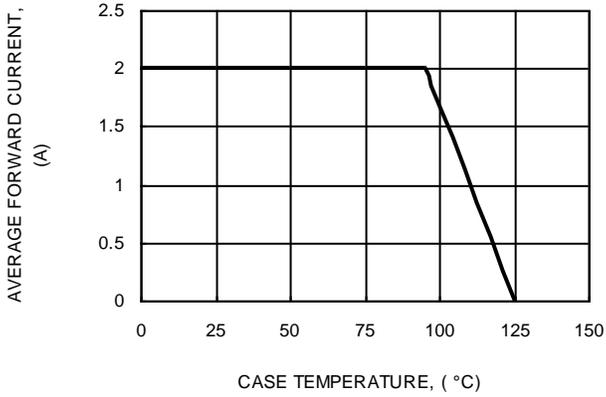
**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Notes 6, 7)	$R_{thJA}$	100	°C/W
	$R_{thJC}$	25	
	$R_{thJL}$	50	

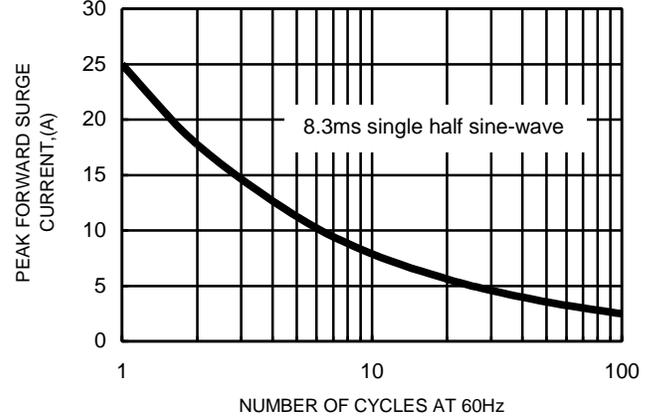
- Notes:**
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
  2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  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 Aluminum substrate PC board. (9.89mm x 9.74mm x 1.49mm)

**RATING AND CHARACTERISTIC CURVES**  
**FB230H**

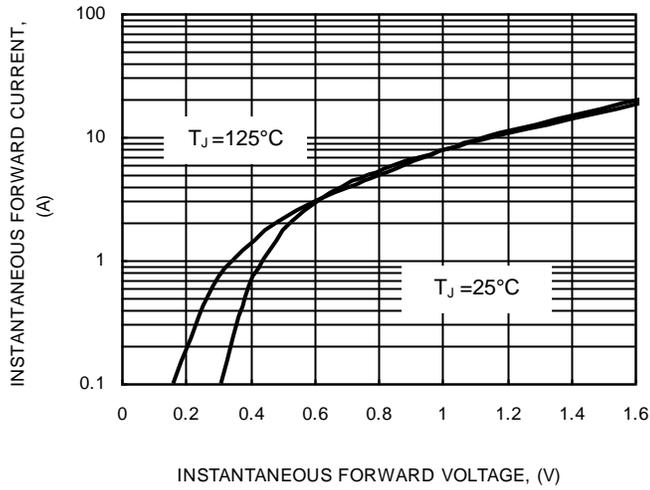
**FIG.1 FORWARD CURRENT DERATING CURVE**



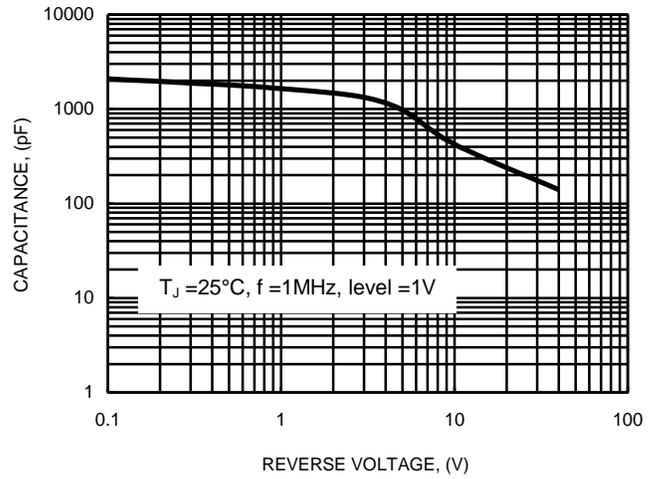
**FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT**



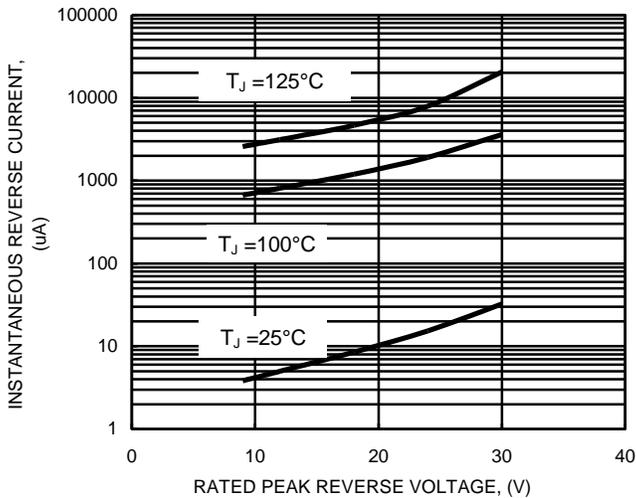
**FIG.3 TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 TYPICAL JUNCTION CAPACITANCE**



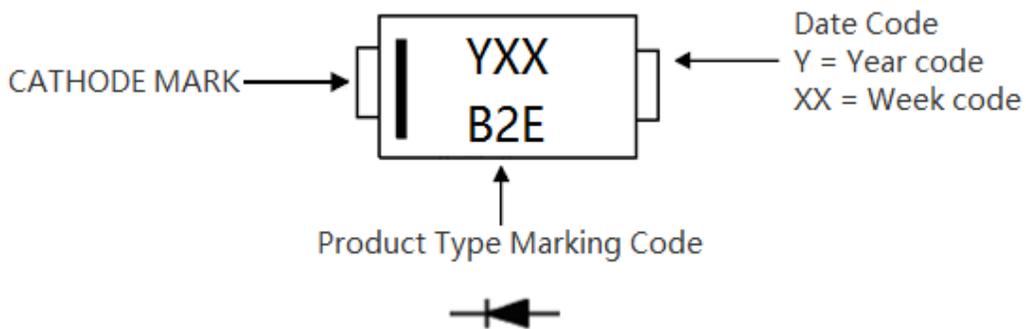
**FIG.5 TYPICAL REVERSE CHARACTERISTICS**



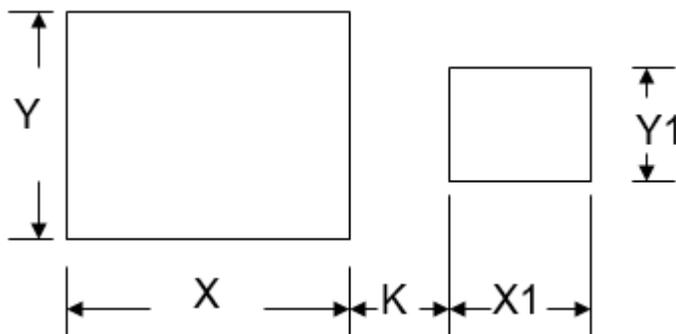
### Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
FB230H	SOD-323EP	3000	Tape & Reel

### Marking Information:



### Suggested Pad Layout:



Dim	Value
X	2.0
X1	0.8
Y	1.1
Y1	0.8
K	0.5
All dimension in millimeter	

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