

**SURFACE MOUNT  
SCHOTTKY BARRIER RECTIFIERS**

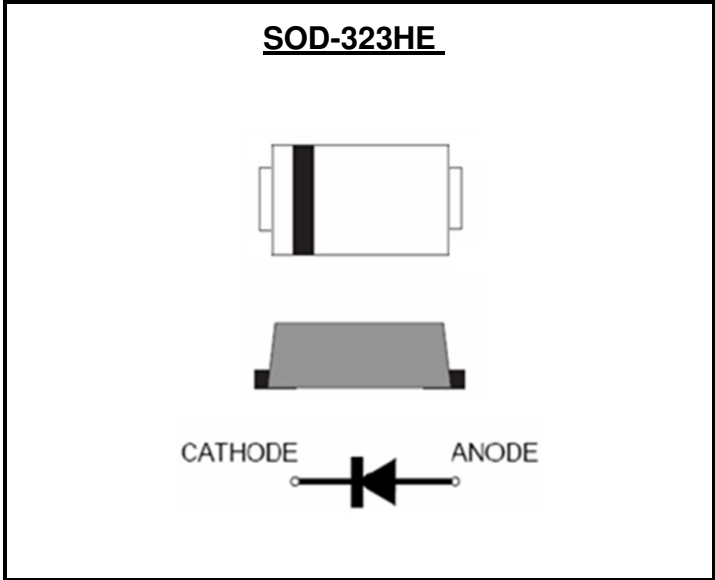
**REVERSE VOLTAGE – 20 to 200 Volts  
FORWARD CURRENT –1.0 Ampere**

**FEATURES**

- Low power loss, high efficiency.
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications.
- Guarding for over voltage protection.
- High temperature soldering guaranteed; 260°C/10 seconds at terminals.

**MECHANICAL DATA**

- Case: SOD-323HE molded plastic over sky die.
- Case material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl) “Halogen-free”
- Polarity: Color band denotes cathode end.
- Mounting Position: Any.
- Weight : 0.0053 g (Approximate)



**MAXIMUM RATINGS @ T<sub>A</sub> = 25°C unless otherwise specified**

PARAMETER	SYMBOL	FB 1020 HC	FB 1030 HC	FB 1040 HC	FB 1050 HC	FB 1060 HC	FB 1080 HC	FB 1100 HC	FB 1150 HC	FB 1200 HC	UNIT
Device marking code	Note	12	13	14	15	16	18	110	115	120	--
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current @ T <sub>C</sub> = 75°C	I <sub>F(AV)</sub>	1.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	22									A
Operating junction temperature range	T <sub>J</sub>	-55 to +125				-55 to +150					°C
Storage temperature range	T <sub>STG</sub>	-55 to +150									°C

**STATIC ELECTRICAL CHARACTERISTICS @ T<sub>A</sub> = 25°C unless otherwise specified**

PARAMETER	TEST CONDITION	SYMBOL	FB 1020 HC	FB 1030 HC	FB 1040 HC	FB 1050 HC	FB 1060 HC	FB 1080 HC	FB 1100 HC	FB 1150 HC	FB 1200 HC	UNIT
Forward voltage	I <sub>F</sub> = 0.7A I <sub>F</sub> = 1.0A T <sub>J</sub> = 25°C	V <sub>F</sub>	0.48 0.55		0.68		0.85		0.9	0.92		V
Leakage current	V <sub>R</sub> at rated T <sub>J</sub> = 25°C T <sub>J</sub> = 125°C	I <sub>R</sub>	0.25 10	0.13 10	0.03 10							mA
Typical junction capacitance at 4.0V, 1MHz		C <sub>J</sub>	160									pF

**THERMAL CHARACTERISTICS @ T<sub>A</sub> = 25°C unless otherwise specified**

PARAMETER	SYMBOL	TYP.	UNIT
Thermal resistance (Note 1)	R <sub>thJA</sub> R <sub>thJL</sub>	220 50	°C/W

**Note :**

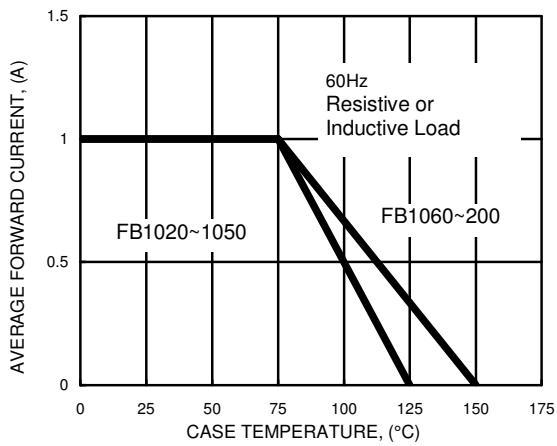
(1) 8.0mm<sup>2</sup> (0.013mm thick) land areas

REV. 0, Mar.-2017, KSHR03

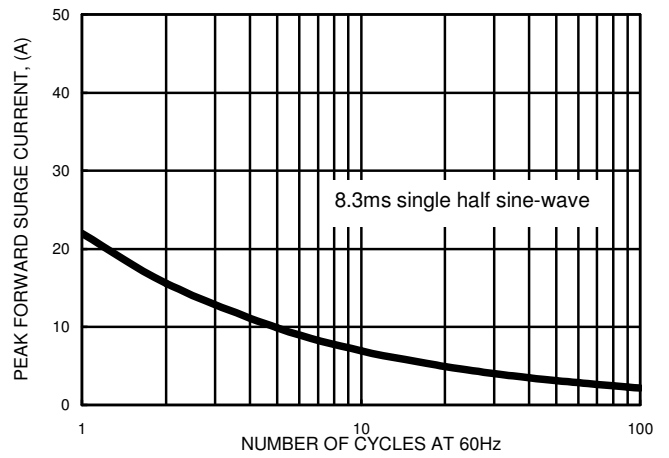
# RATING AND CHARACTERISTIC CURVES FB1020HC thru FB1200HC



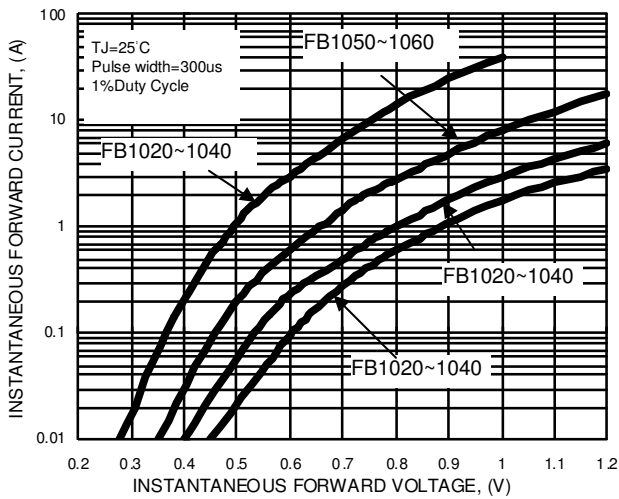
**FIG. 1 –Forward Current Derating Curve**



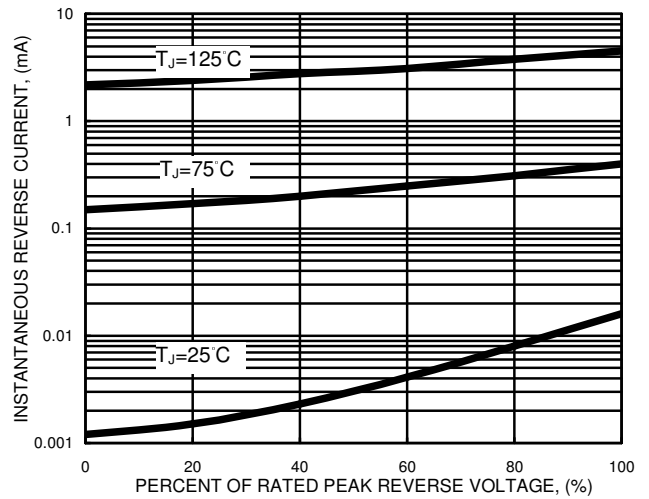
**FIG. 2 –Maximum Non-repetitive Peak Forward Surge Current**



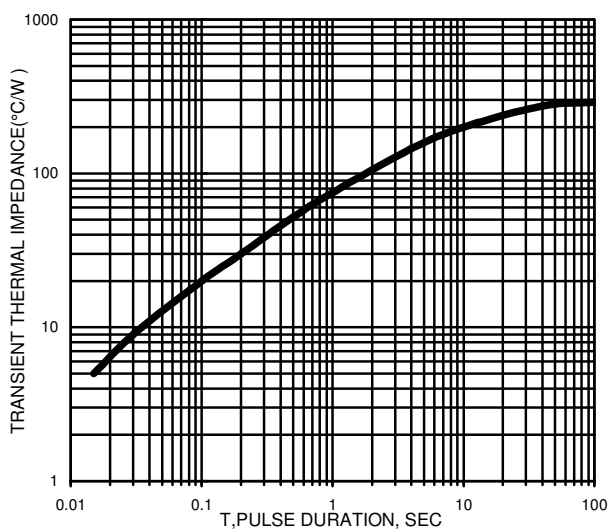
**FIG. 3 –Typical Instantaneous Forward Characteristics**



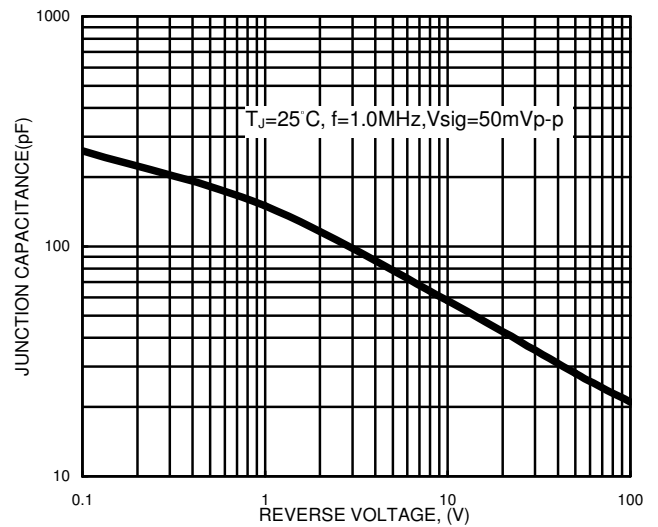
**FIG. 4 –Typical Reverse Characteristics**



**FIG. 5 –Typical transient thermal impedance**



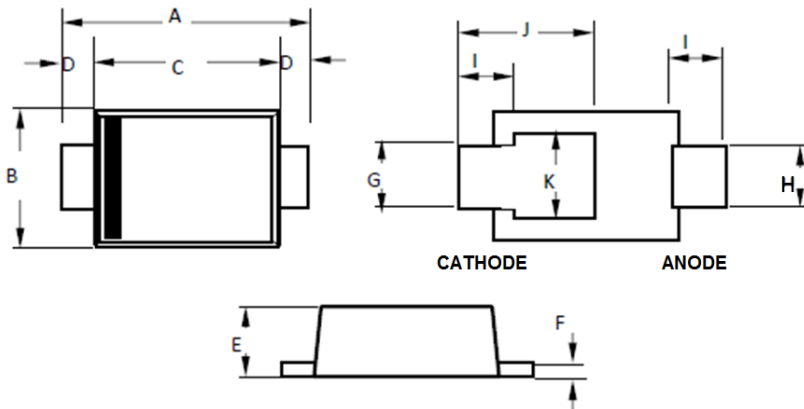
**FIG. 6 –Typical Junction Capacitance**



**MECHANICAL INFORMATION**  
**FB1020HC thru FB1200HC**

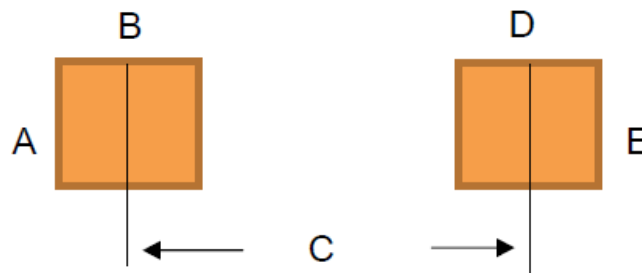
**Package Dimensions :**

SOD-323HE



Dim.	INCHES		MILLIMETERS	
	Min.	Max.	Min.	Max.
A	0.091	0.106	2.30	2.70
B	0.047	0.053	1.20	1.35
C	0.069	0.077	1.75	1.95
D	0.012 Typ.		0.30 Typ.	
E	0.022	0.030	0.55	0.75
F	0.004	0.008	0.10	0.20
G	0.020	0.022	0.50	0.55
H	0.020	0.022	0.50	0.55
I	0.016	0.024	0.40	0.60
J	0.045	0.061	1.15	1.55
K	0.032 Typ.		0.80 Typ.	

**Soldering Pad Layout :**



**Dimensions in inches and ( millimeters)**

PACKAGE	A	B	C	D	E
SOD-323HE	0.043(1.1)	0.079(2.0)	0.078(1.9)	0.031(0.8)	0.039(1.0)

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