

**SURFACE MOUNT  
SCHOTTKY BARRIER RECTIFIERS**

**REVERSE VOLTAGE – 20 to 80 Volts  
FORWARD CURRENT – 2.0 Amperes**

**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.
- Lead free in RoHS 2.0 compliant

**MECHANICAL DATA**

- Case: SOD-123FL 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 : 0.0155 g

**SOD-123FL**



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

PARAMETER	SYMBOL	FB2020L	FB2030L	FB2040L	FB2050L	FB2060L	FB2080L	UNIT
Device marking code	Note	22	23	24	25	26	28	--
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	V
Maximum average forward rectified current @ T <sub>C</sub> = 75°C	I <sub>F(AV)</sub>	2.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	50						A
Operating junction temperature range	T <sub>J</sub>	-55 to +150						°C
Storage temperature range	T <sub>STG</sub>	-65 to +175						°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITION	SYMBOL	FB2020L	FB2030L	FB2040L	FB2050L	FB2060L	FB2080L	UNIT
Forward voltage	I <sub>F</sub> = 2.0 A T <sub>J</sub> = 25°C	V <sub>F</sub>	0.50	0.50	0.50	0.70	0.70	0.85	V
Leakage current	V <sub>R</sub> at rated T <sub>J</sub> = 25°C T <sub>J</sub> = 100°C	I <sub>R</sub>	0.5 20						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>	85	°C/W

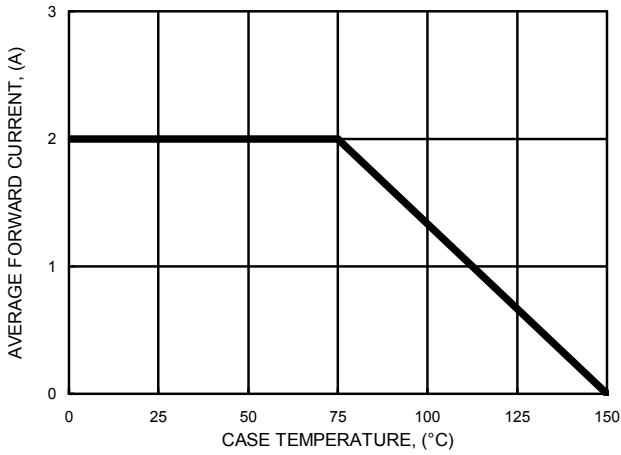
**Note :**

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

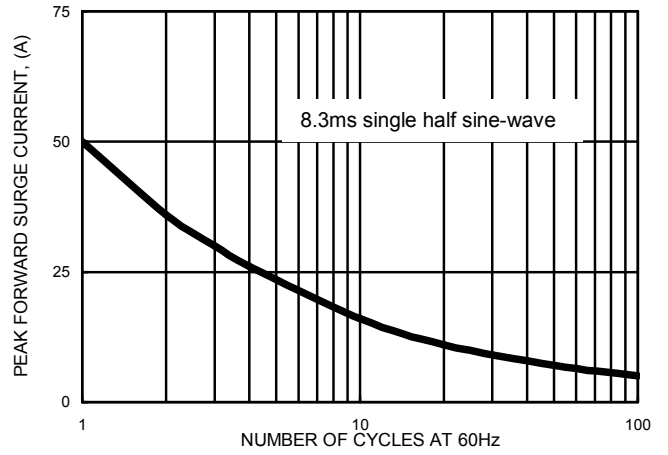
**RATING AND CHARACTERISTIC CURVES  
FB2020L thru FB2080L**



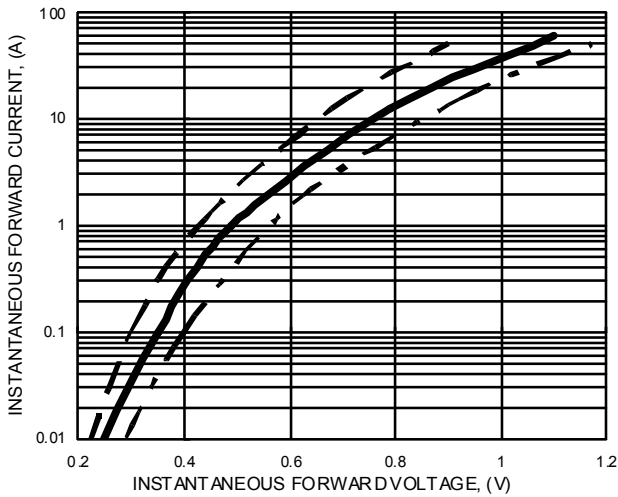
**FIG.1 – FORWARD CURRENT DEARTING CURVE**



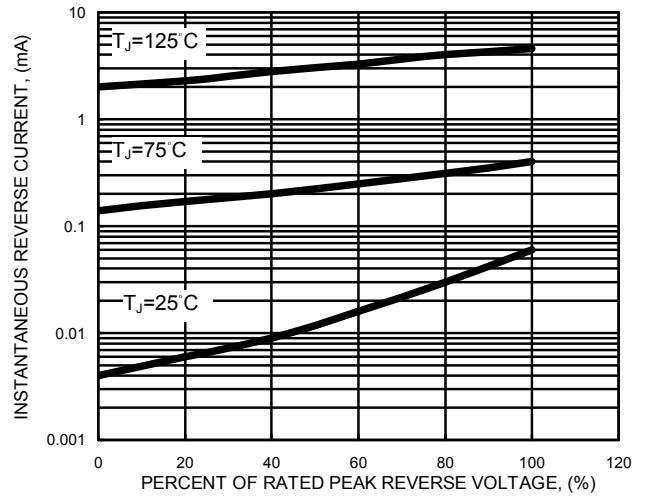
**FIG.2 – MAXIMUM NON-REPETITIVE SURGE CURRENT**



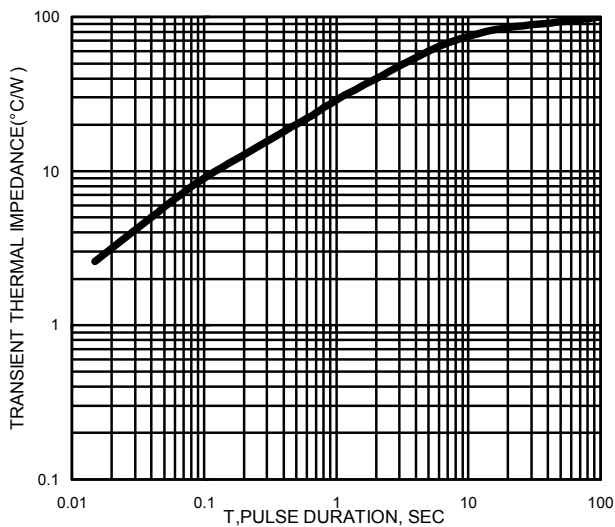
**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



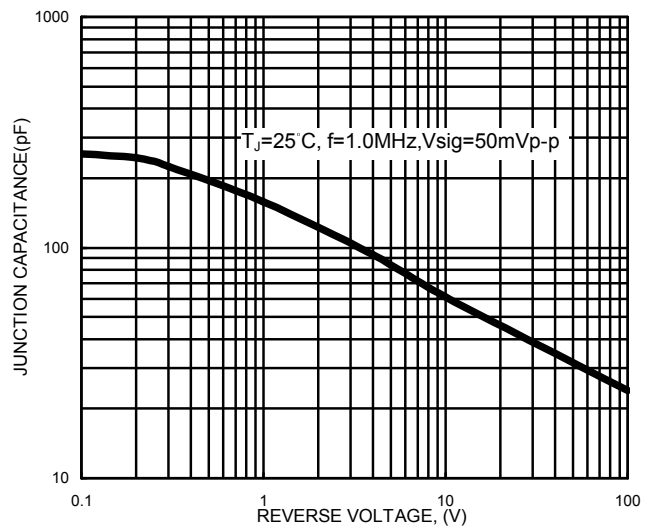
**FIG.4 – TYPICAL REVERSE CHARACTERISTIC**



**FIG.5 – TYPICAL TRANSIENT THERMAL IMPEDANCE**



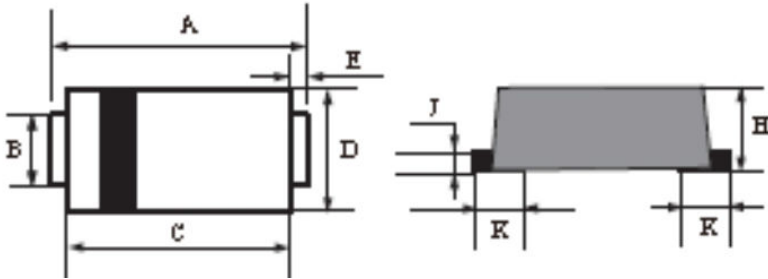
**FIG.6 – TYPICAL JUNCTION CAPACITANCE**



**MECHANICAL INFORMATION**  
**FB2020L thru FB2080L**

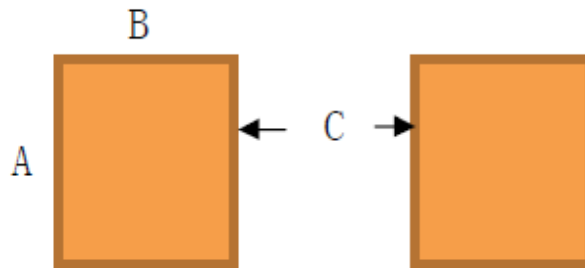
**Package Dimensions :**

SOD-123FL



Dim.	INCHES		MILLIMETERS	
	Min.	Max.	Min.	Max.
A	0.138	0.159	3.50	3.90
B	0.029	0.037	0.75	0.95
C	0.103	0.119	2.60	3.00
D	0.063	0.079	1.60	2.00
E	0.018 Typ.		0.45 Typ.	
H	0.036	0.047	0.90	1.20
J	0.005	0.009	0.12	0.22
K	0.032 Typ.		0.80 Typ.	

**Soldering Pad Layout :**



**Dimensions in inches and ( millimeters)**

PACKAGE	A	B	C
SOD-123FL	0.044(1.10)	0.040(1.00)	0.079(2.00)

## **Important Notice and Disclaimer**

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