

**SURFACE MOUNT
SCHOTTKY BARRIER RECTIFIERS**

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

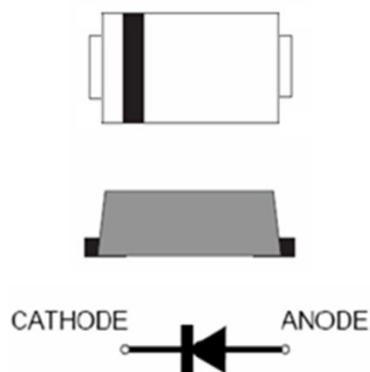
FEATURES

- 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_A = 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 _{RRM}	20	30	40	50	60	80	V
Maximum DC blocking voltage	V _{DC}	20	30	40	50	60	80	V
Maximum average forward rectified current @ T _C = 75°C	I _{F(AV)}	2.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	50						A
Operating junction temperature range	T _J	-55 to +150						°C
Storage temperature range	T _{STG}	-65 to +175						°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	FB2020L	FB2030L	FB2040L	FB2050L	FB2060L	FB2080L	UNIT
Forward voltage	I _F = 2.0 A	T _J = 25°C	V _F	0.50	0.50	0.50	0.70	0.70	0.85	V
Leakage current	VR at rated	T _J = 25°C T _J = 100°C	I _R	0.5 20						mA
Typical junction capacitance at 4.0V, 1MHz			C _J	160						pF

THERMAL CHARACTERISTICS @ T_A = 25°C unless otherwise specified

PARAMETER	SYMBOL	TYP.	UNIT
Thermal resistance (Note 1)	R _{thJA}	85	°C/W

Note :

(1) 8.0mm² (0.013mm thick) land areas

**RATING AND CHARACTERISTIC CURVES
FB2020L thru FB2080L**



FIG.1 – FORWARD CURRENT DEARTING CURVE

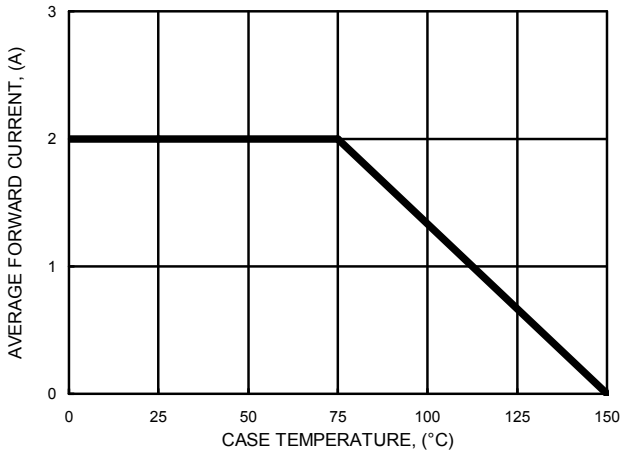


FIG.2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

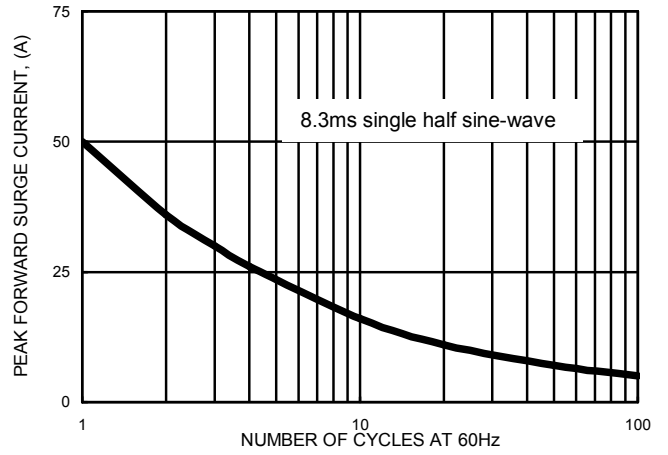


FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

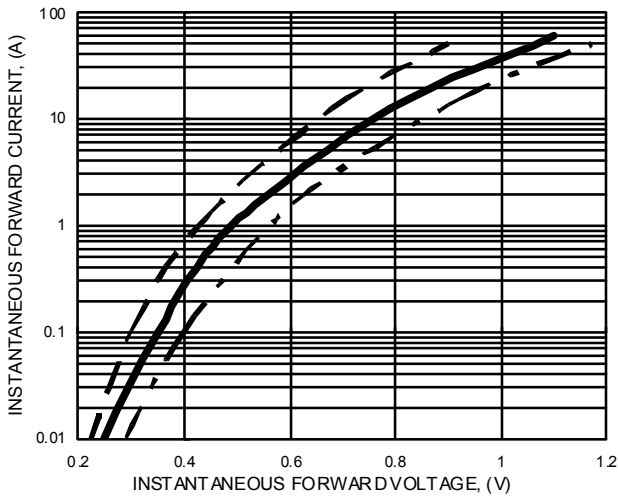


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

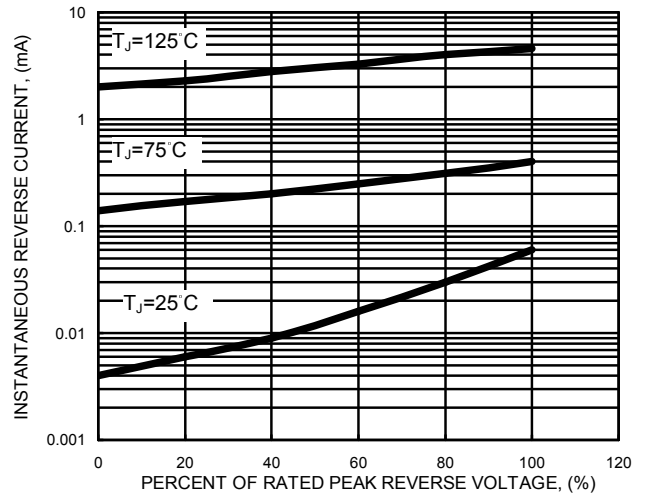


FIG.5 – TYPICAL TRANSIENT THERMAL IMPEDANCE

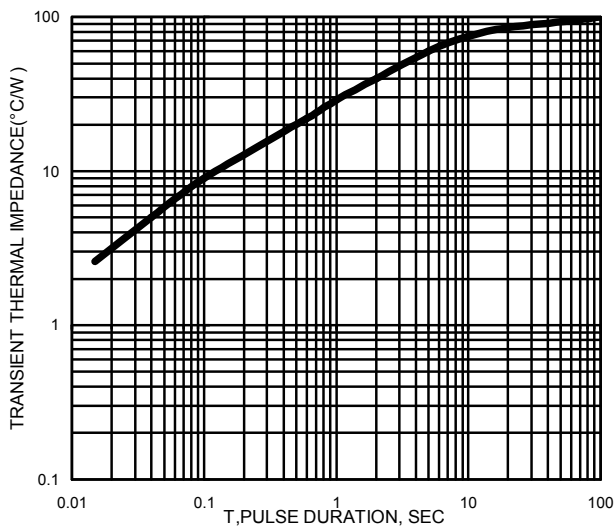
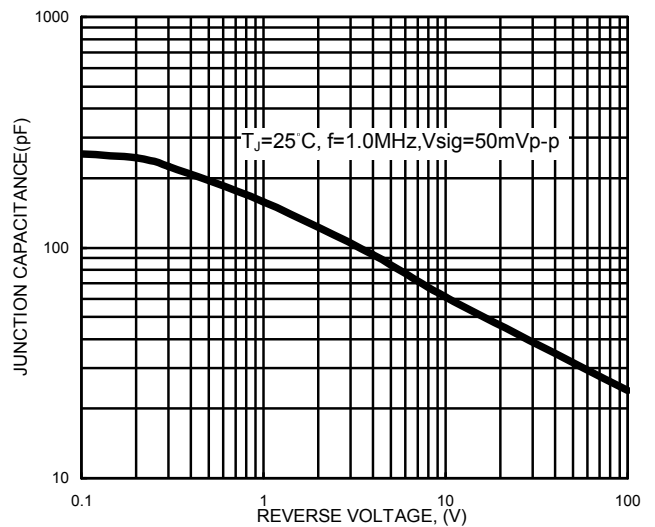


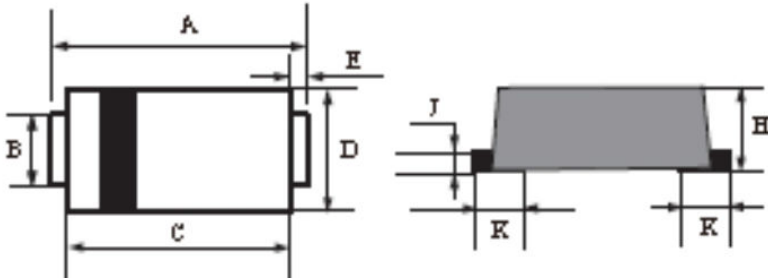
FIG.6 – TYPICAL JUNCTION CAPACITANCE



MECHANICAL INFORMATION
FB2020L thru FB2080L

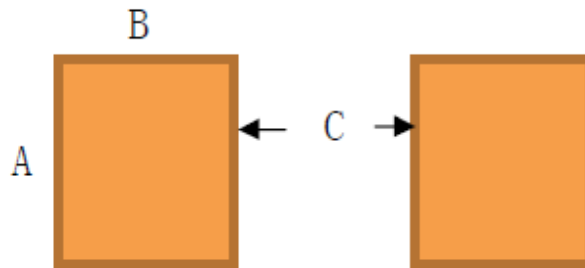
Package Dimensions :

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)

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