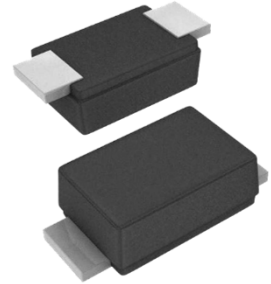


**Feature**

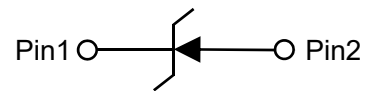
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications



SOD-123FL

**Mechanical Characteristics**

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 15mg/0.00048oz


**Circuit Diagram**
**Absolute maximum rating@25°C**

Rating	Symbol	Value	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Maximum RMS voltage	$V_{RMS}$	28	V
Maximum DC Blocking Voltage	$V_{DC}$	40	V
Forward Current @ $T_C = 100^\circ\text{C}$	$I_{F(AV)}$	2.0	A
Forward Surge Current at $t=8.3\text{ms}$	$I_{FSM}$	50	A
Typical Thermal Resistance <sup>1)</sup>	$R_{\theta JA}$	70	$^\circ\text{C}/\text{W}$
Operating Temperature	$T_J$	-55 ~ +125	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$

Note:

1) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

**Electrical characteristics per line@25°C (unless otherwise specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Leakage Current	$I_R$	$V_R = 5\text{V}$	-	-	5.0	$\mu\text{A}$
		$V_R = 40\text{V}$	-	50	500	
Forward Voltage	$V_F$	$I_F = 1.0\text{A}$	-	0.39	0.42	V
		$I_F = 2.0\text{A}$	-	0.42	0.45	

## Typical Characteristics

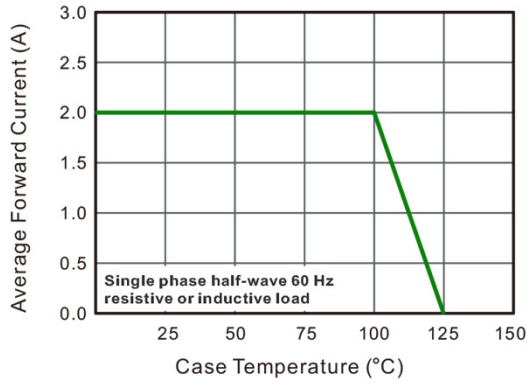


Fig.1 Forward Current Derating Curve

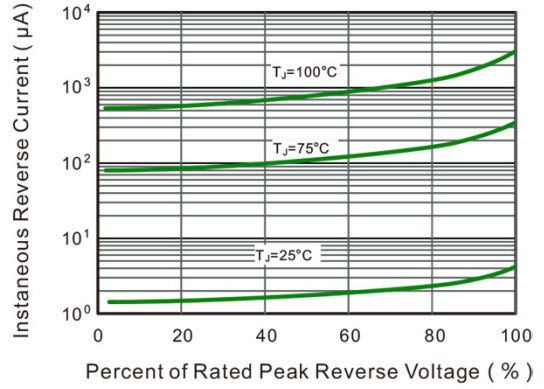


Fig.2 Typical Reverse Characteristics

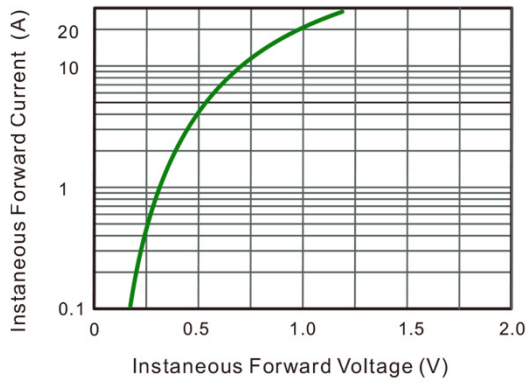


Fig.3 Typical Forward Characteristic

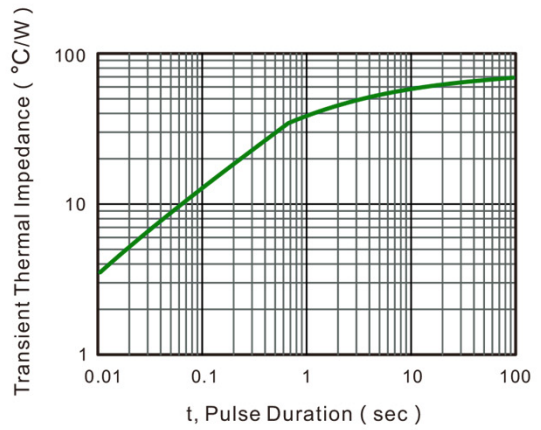


Fig.4 Typical Transient Thermal Impedance

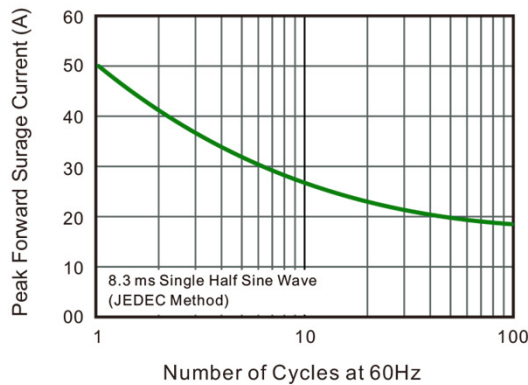
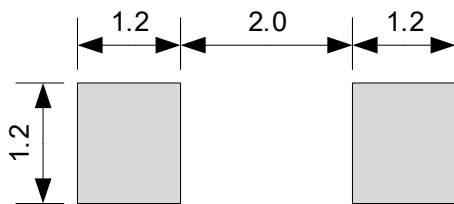
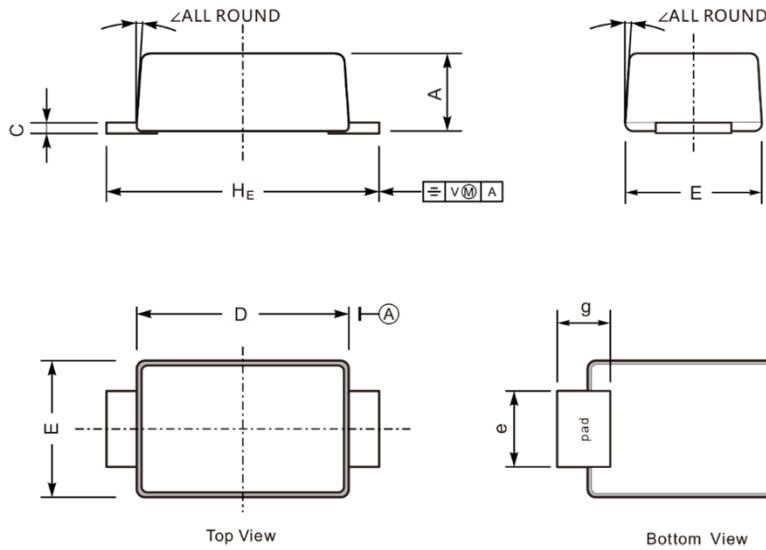


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

# Schottky Barrier diode

PSBD1DF40V2M

## Product dimension (SOD-123FL)



Unit:mm

Suggested PCB Layout

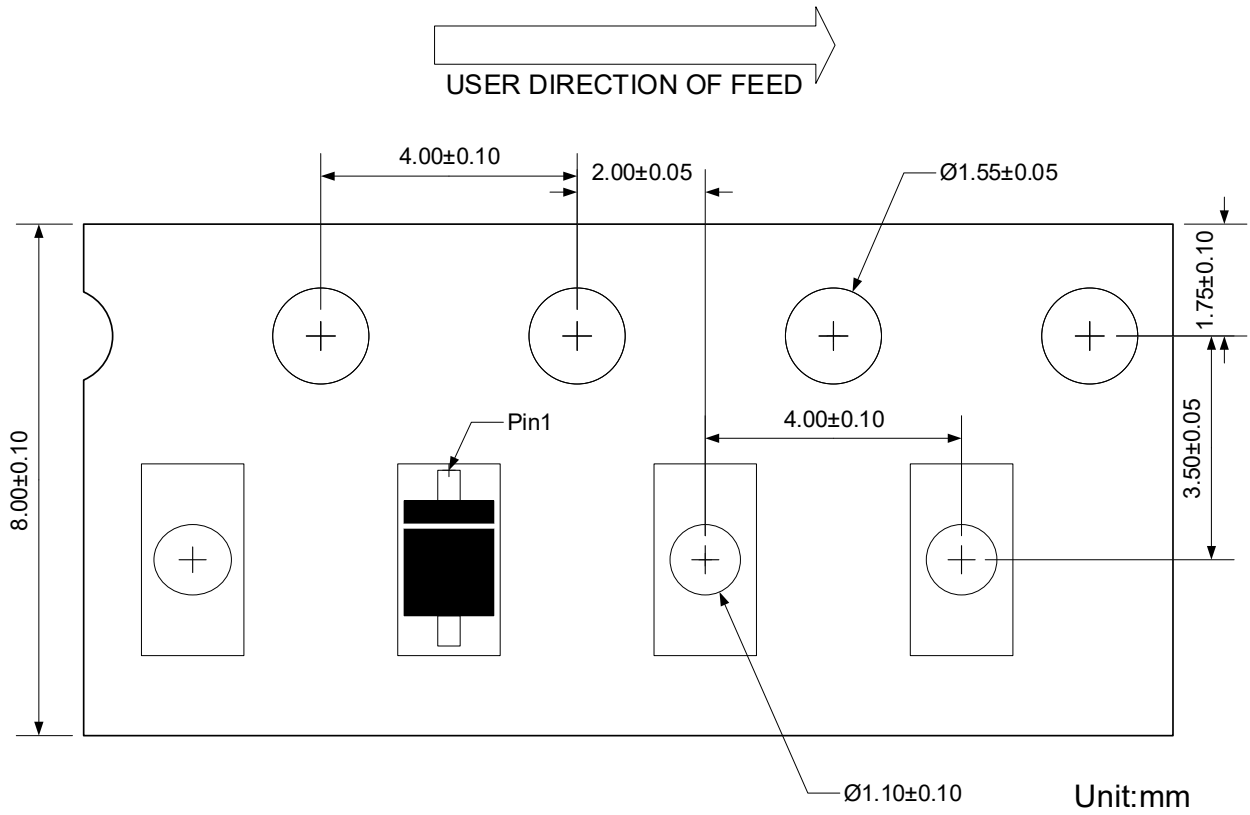
Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	0.90	1.10	0.035	0.043
C	0.12	0.20	0.005	0.008
D	2.60	2.90	0.102	0.114
E	1.70	1.90	0.067	0.075
e	0.80	1.10	0.031	0.043
g	0.70	0.90	0.028	0.035
H <sub>E</sub>	3.50	3.80	0.138	0.150
∠	7°			

## Ordering information


Device	Package	Reel	Shipping
PSBD1DF40V2M	SOD-123FL (Pb-Free)	7"	3000 / Tape & Reel

## Marking information






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