

# 1A, 40V Low Forward Voltage Schottky Rectifier

## FEATURES

- Trench MOS schottky barrier diode
- Low forward voltage drop
- Low profile - typical body height 1.1 mm
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- RoHS compliant
- Halogen-free according to IEC 61249-2-21 definition

## SOD-123FL



RoHS  
COMPLIANT

HALOGEN  
FREE

## MECHANICAL DATA

- Case: SOD-123FL
- Case material: molding compound meets UL 94V-0 flammability rating
- Polarity: color band denotes the cathode end

## TYPICAL APPLICATION

General purpose use in lighting, cellular phone, portable device, power supplies and other consumer applications.

## MAXIMUM RATINGS

$T_A=25^\circ\text{C}$  unless otherwise noted

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	40	V
Average Forward Rectified Current	$I_{F(AV)}$	1	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	$I_{FSM}$	40	A
Operating Junction Temperature Range	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS

$T_A=25^\circ\text{C}$  unless otherwise noted

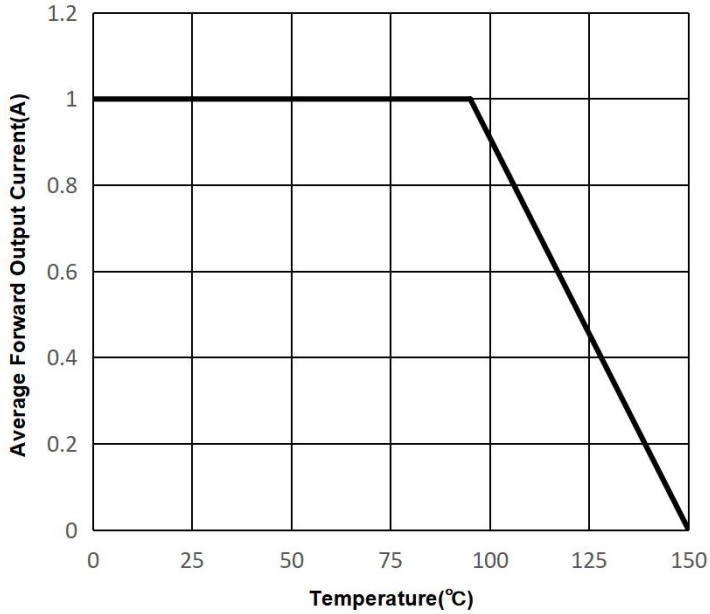
Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@ $I_F=1\text{A}$	$T_A=25^\circ\text{C}$	$V_F$	0.32	0.35	V
	$T_A=125^\circ\text{C}$		0.28	0.31	
Reverse Current @ $V_{RRM}$	$T_A=25^\circ\text{C}$	$I_R$	100	300	$\mu\text{A}$
	$T_A=125^\circ\text{C}$		5	20	mA
Typical Thermal Resistance		$R_{\theta JA}$	250		$^\circ\text{C}/\text{W}$

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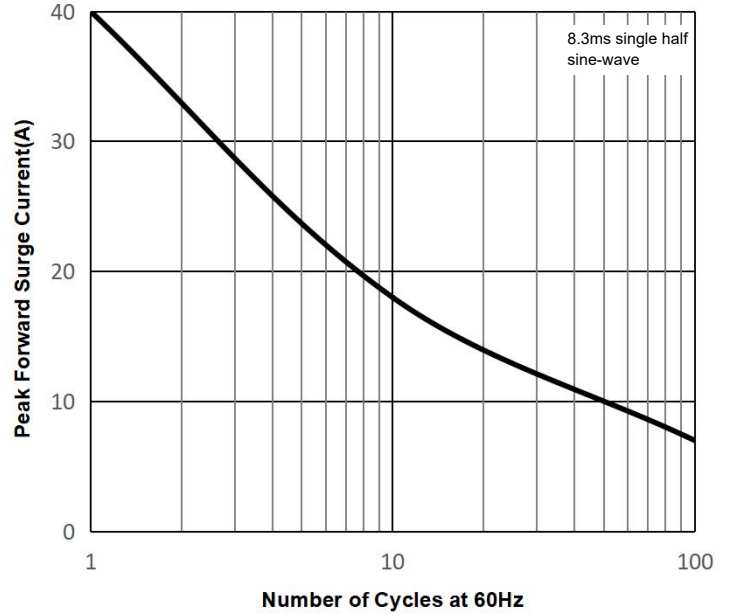
### RATINGS AND CHARACTERISTIC CURVES

$T_A=25^\circ\text{C}$  unless otherwise noted

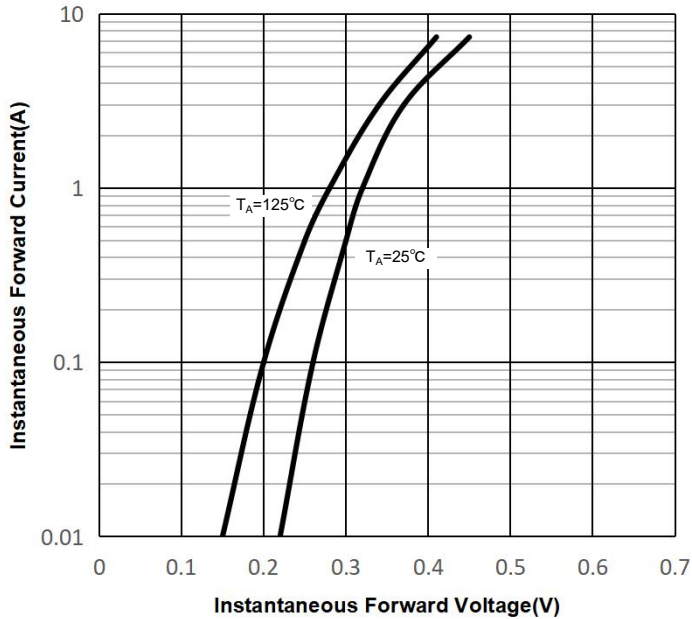
**FIG.1: Forward Output Current Derating Curve**



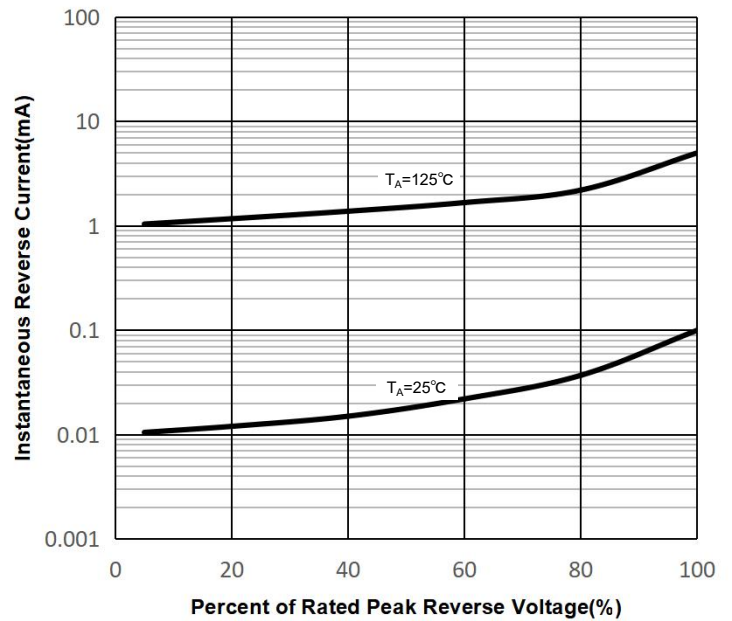
**FIG.2: Maximum Non-Repetitive Peak Forward Surge Current**



**FIG.3: Typical Forward Characteristics**

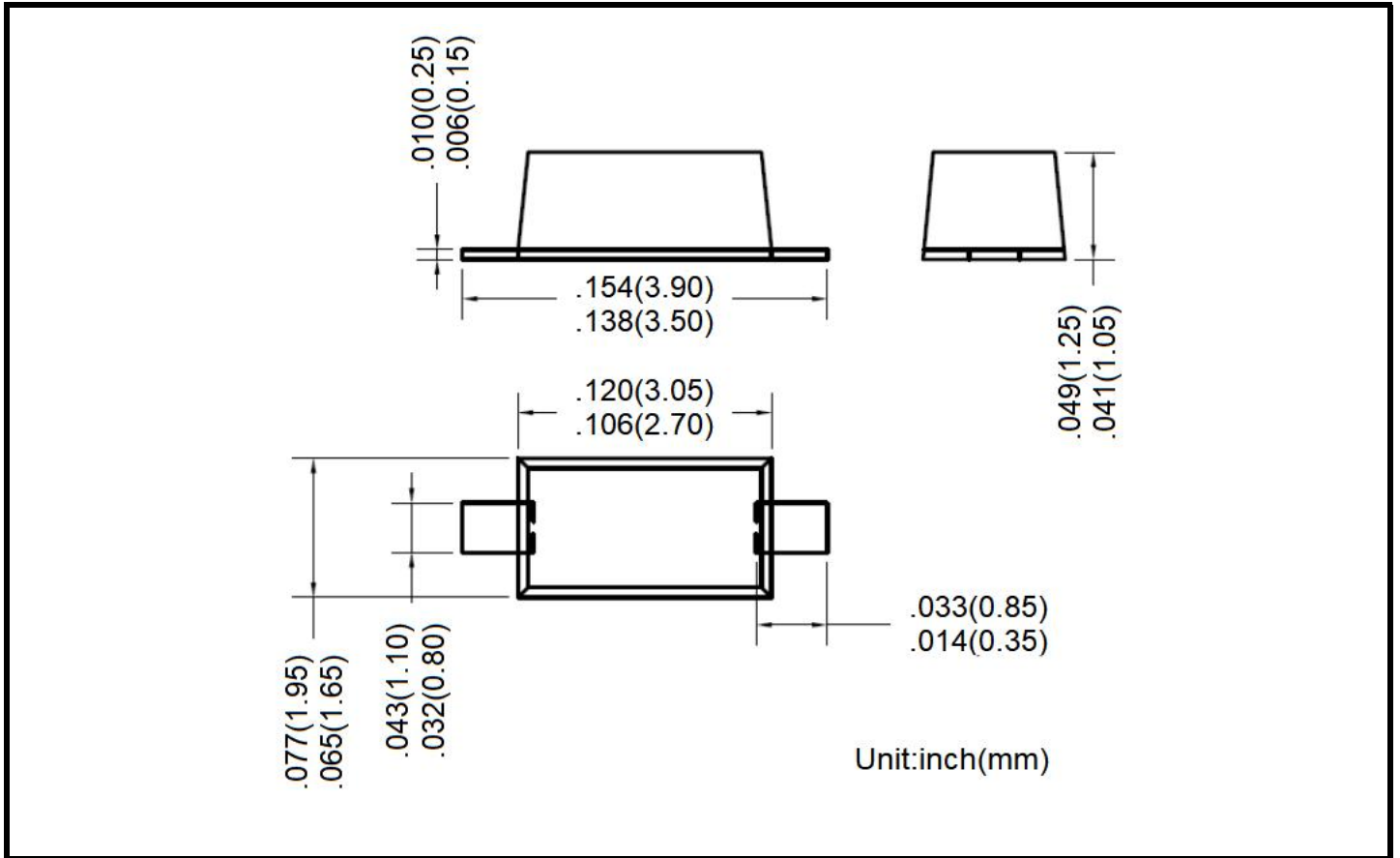


**FIG.4: Typical Reverse Characteristics**



## 1A, 40V Low Forward Voltage Schottky Rectifier

### PACKAGE OUTLINE DIMENSIONS



### PACKING INFORMATION

Package	Reel(PCS)	Inner Box(PCS)	Carton(PCS)
SOD-123FL	3,000	30,000	120,000