

# 3A, 45V Low Forward Voltage Schottky Rectifier

## FEATURES

- Planar MOS controlled diode
- Low forward voltage drop
- Low profile - max body height 0.9 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<sub>A</sub>=25°C unless otherwise noted

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	45	V
Average Forward Rectified Current	I <sub>F(AV)</sub>	3	A
Peak Forward Surge Current (8.3 ms single half sine-wave superimposed on rated load)	I <sub>FSM</sub>	80	A
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

T<sub>A</sub>=25°C unless otherwise noted

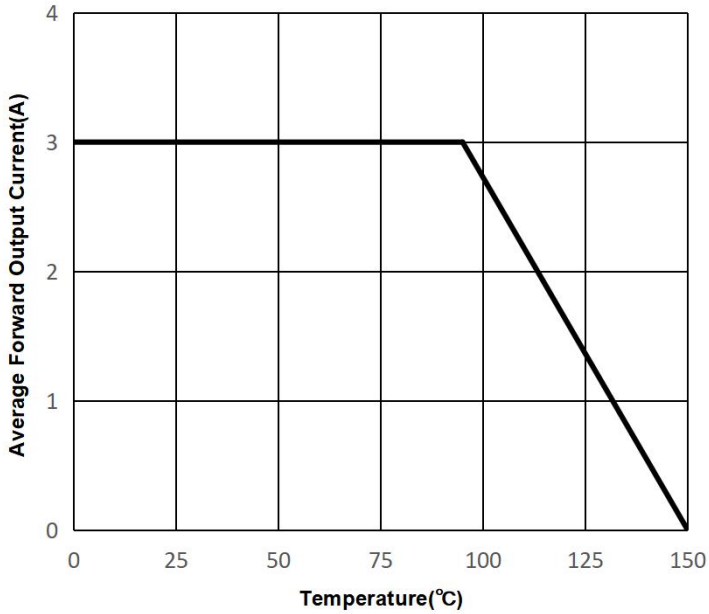
Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@I <sub>F</sub> =1A	T <sub>A</sub> =25°C	V <sub>F</sub>	0.34	0.37	V
	T <sub>A</sub> =125°C		0.28	0.32	
Forward Voltage@I <sub>F</sub> =3A	T <sub>A</sub> =25°C		0.42	0.45	
	T <sub>A</sub> =125°C		0.36	0.39	
Reverse Current @ V <sub>RRM</sub>	T <sub>A</sub> =25°C	I <sub>R</sub>	30	70	µA
	T <sub>A</sub> =125°C		20	50	mA
Typical Thermal Resistance		R <sub>θJA</sub>	250		°C/W

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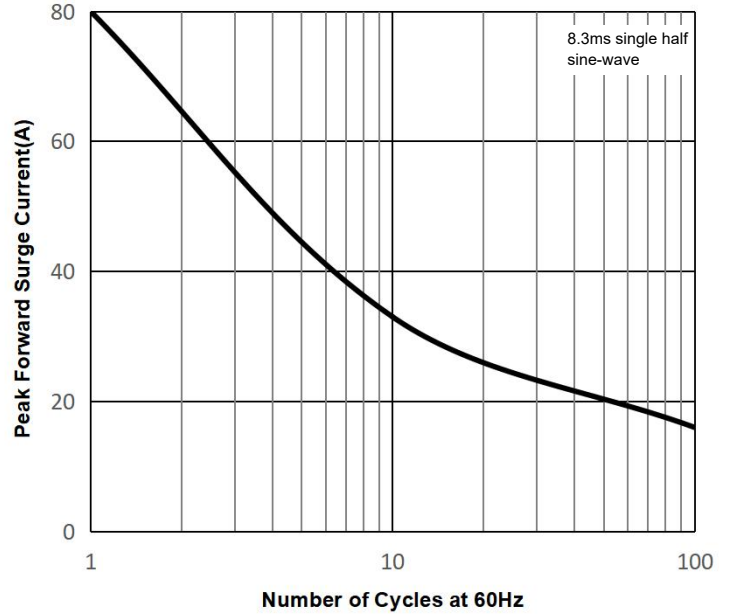
## RATINGS AND CHARACTERISTIC CURVES

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

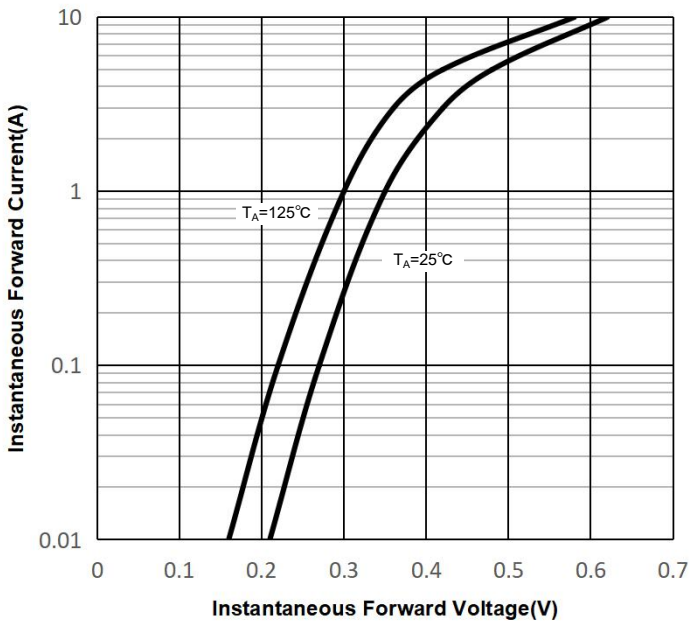
**FIG.1: Forward Output Current Derating Curve**



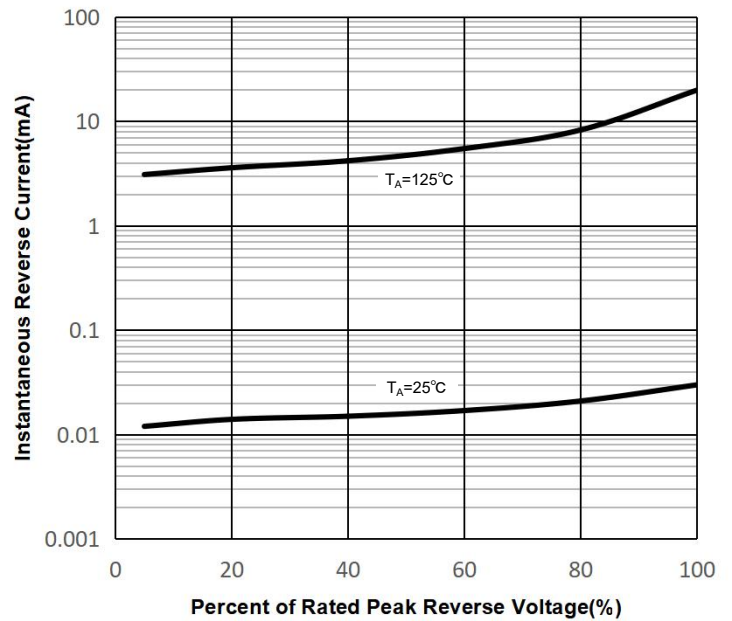
**FIG.2: Maximum Non-Repetitive Peak Forward Surge Current**



**FIG.3: Typical Forward Characteristics**

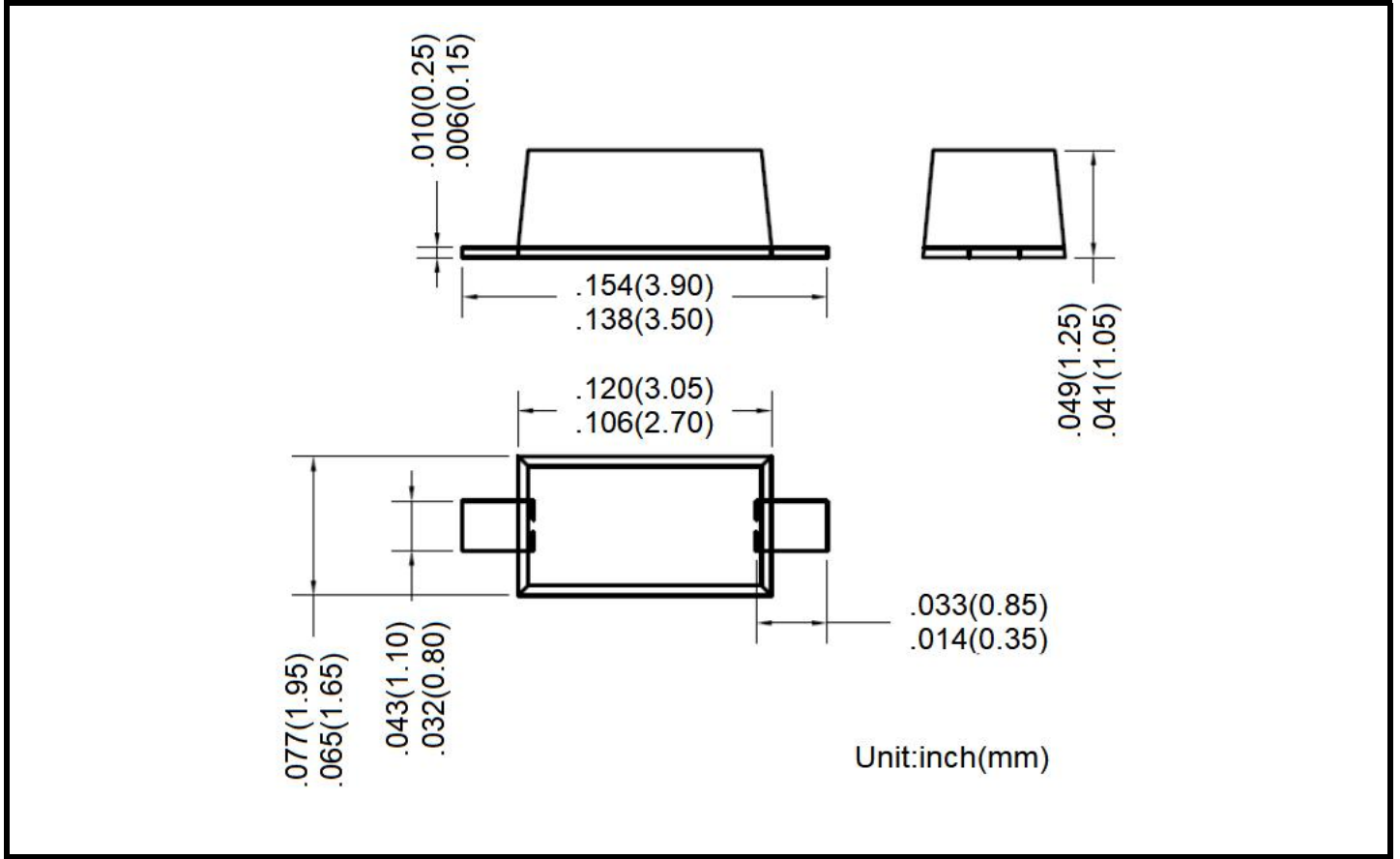


**FIG.4: Typical Reverse Characteristics**



**3A, 45V 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