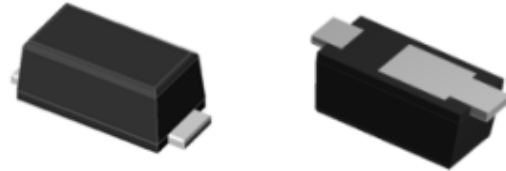


# 1A, 600V Fast Recovery Epitaxial Rectifier

## FEATURES

- Fast recovery epitaxial diode wafer
- Fast switching for high efficiency
- 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-123HS



**RoHS**  
COMPLIANT

**HALOGEN**  
FREE

## MECHANICAL DATA

- Case: SOD-123HS
- Case Material: Molding compound meets UL 94V-0 flammability rating

## TYPICAL APPLICATION

General purpose use in AC to DC bridge full wave rectification for SMPS, lighting, adapter, charger, home appliance, office equipment, high frequency and free wheeling diode circuits.

## MAXIMUM RATINGS

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

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	600	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)	$I_{FSM}$	18	A
Operating Junction Temperature Range	$T_J$	-55 to +175	°C
Storage Temperature Range	$T_{STG}$	-55 to +175	°C

## ELECTRICAL CHARACTERISTICS

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

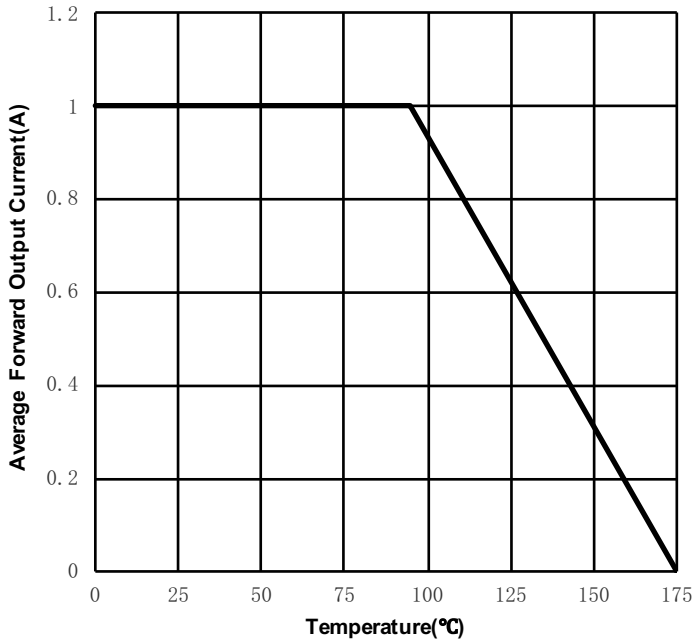
Parameter	Test Conditions	Symbol	Value		Unit
			Typ.	Max.	
Forward Voltage@ $I_F=0.5\text{A}$	$T_A=25^\circ\text{C}$	$V_F$	1.25	1.5	V
	$T_A=125^\circ\text{C}$		1	1.2	
Forward Voltage@ $I_F=1\text{A}$	$T_A=25^\circ\text{C}$		1.4	1.7	
	$T_A=125^\circ\text{C}$		1.15	1.37	
Reverse Current @ $V_{RRM}$	$T_A=25^\circ\text{C}$	$I_R$	0.02	1	µA
	$T_A=125^\circ\text{C}$		35	100	
Reverse Recovery Time	$I_F=0.5\text{A}, I_R=1\text{A}, I_{RR}=0.25\text{A}$	$T_{RR}$	30		nS

# 1A, 600V Fast Recovery Epitaxial Rectifier

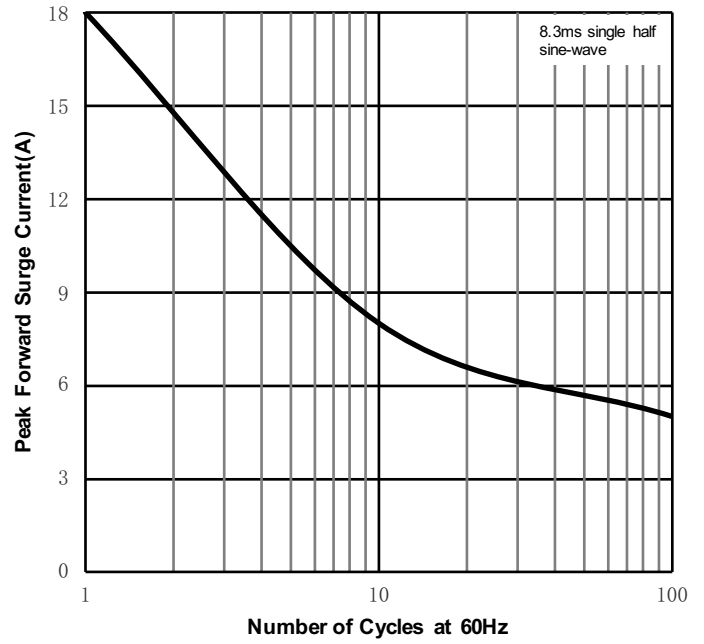
## RATINGS AND CHARACTERISTIC CURVES

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

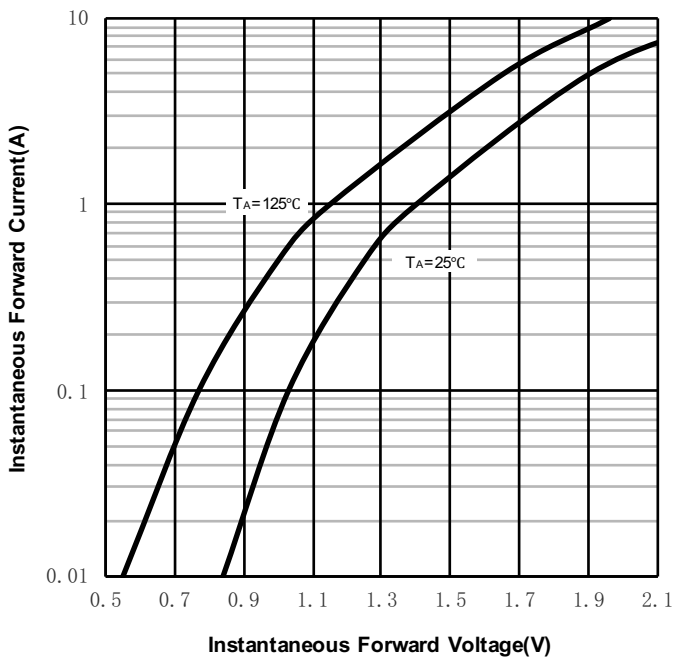
**FIG.1: Forward Output Current Derating Curve**



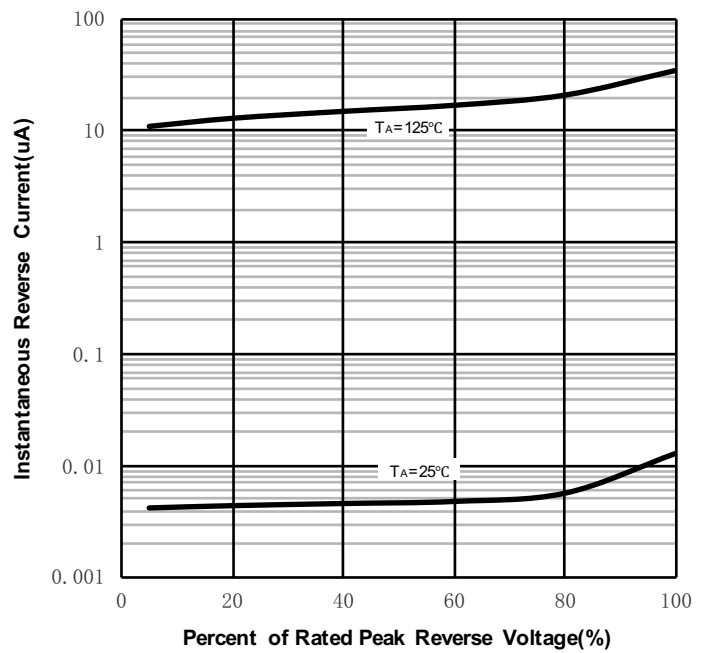
**FIG.2: Maximum Non-Repetitive Peak Forward Surge Current**



**FIG.3: Typical Forward Characteristics**

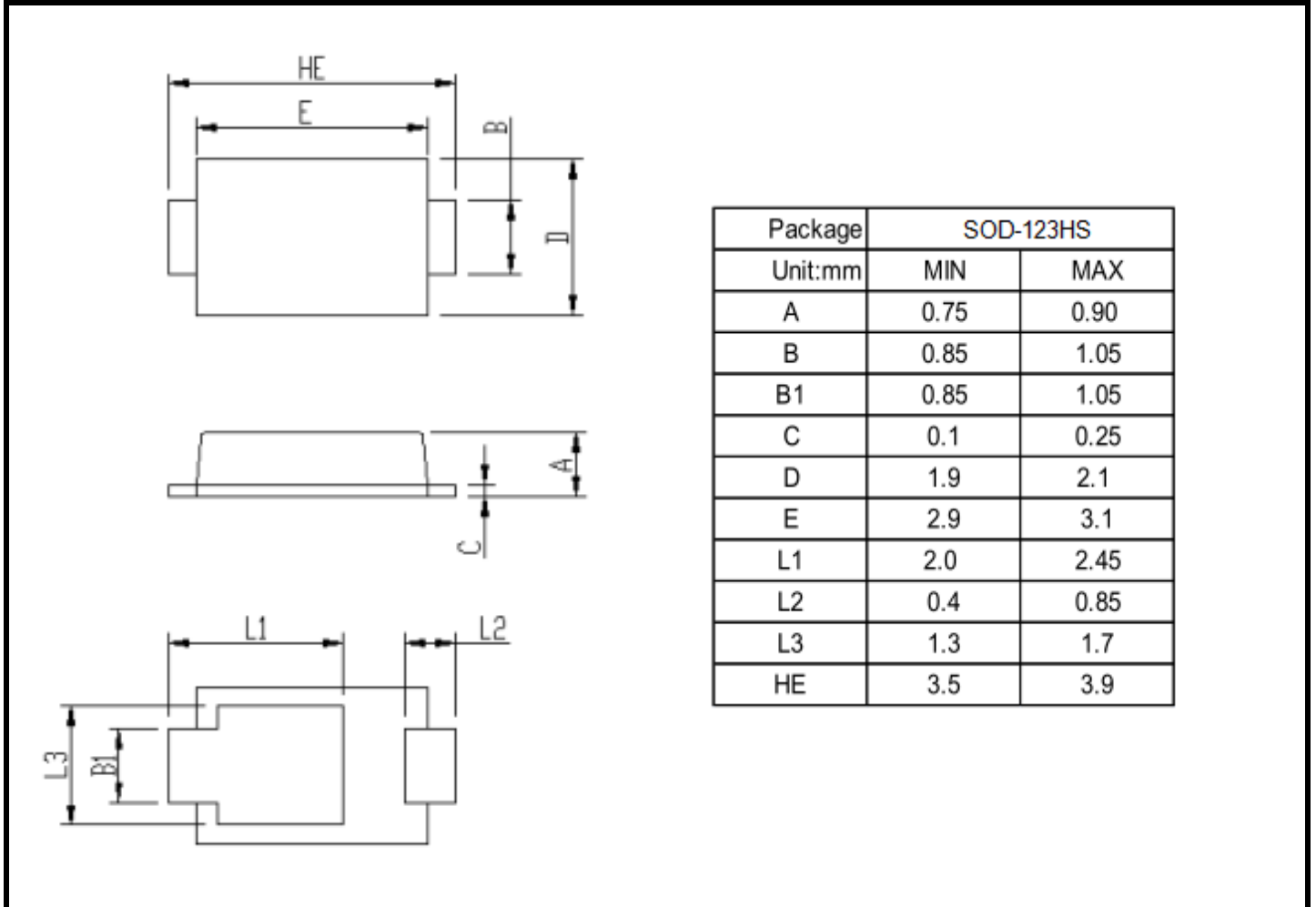


**FIG.4: Typical Reverse Characteristics**



## 1A, 600V Fast Recovery Epitaxial Rectifier

### PACKAGE OUTLINE DIMENSIONS



### PACKING INFORMATION

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

