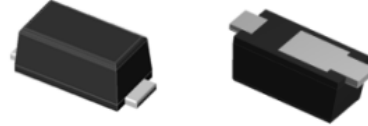


## 1A, 50V to 1000V General Purpose Rectifiers

### FEATURES

- Glass passivated rectifiers
- Low forward voltage drop
- Low leakage current
- 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
- Polarity: color band denotes cathode end

### TYPICAL APPLICATION

General purpose use in AC to DC wave rectification for SMPS, lighting, adapter, charger, home appliance, office equipment and telecommunication.

### MAXIMUM RATINGS

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

Parameter	Symbol	Value							Unit
		S1AS	S1BS	S1DS	S1GS	S1JS	S1KS	S1MS	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	
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

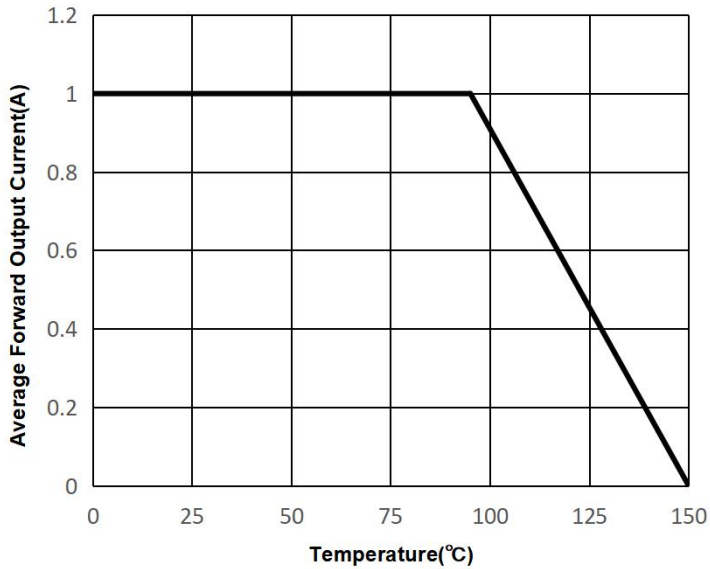
Parameter	Test Conditions	Symbol	Value	Unit
Forward Voltage @ $I_F=1\text{A}$	$T_A=25^\circ\text{C}$	$V_F$	1.0	V
	$T_A=125^\circ\text{C}$		0.88	
Reverse Current @ $V_{RRM}$	$T_J=25^\circ\text{C}$	$I_R$	5	$\mu\text{A}$
	$T_J=125^\circ\text{C}$		50	
Typical Thermal Resistance (junction to ambient)		$R_{\theta JA}$	30	$^\circ\text{C}/\text{W}$

## 1A, 50V to 1000V General Purpose Rectifiers

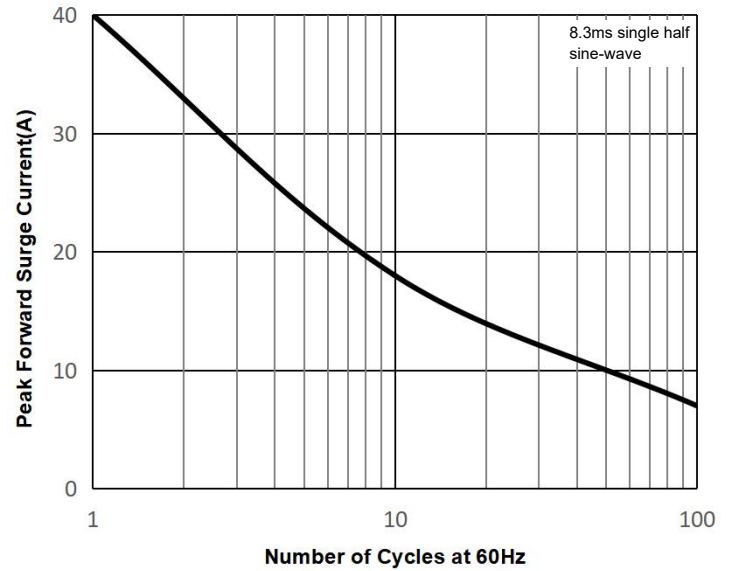
### RATINGS AND CHARACTERISTIC CURVES

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

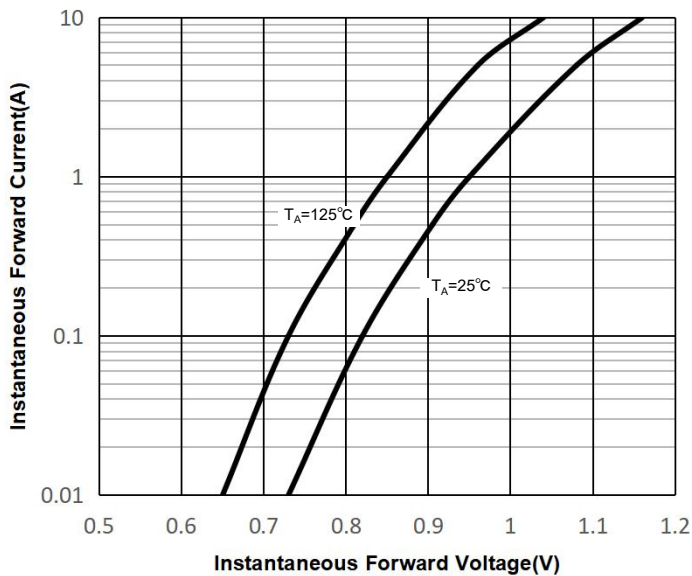
**FIG.1: Forward Output Current Derating Curve**



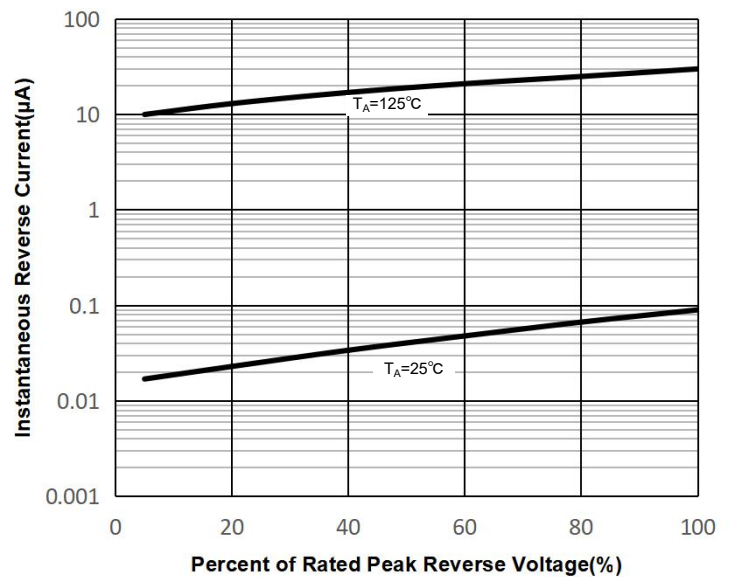
**FIG.2: Maximum Non-Repetitive Peak Forward Surge Current**



**FIG.3: Typical Forward Characteristics**

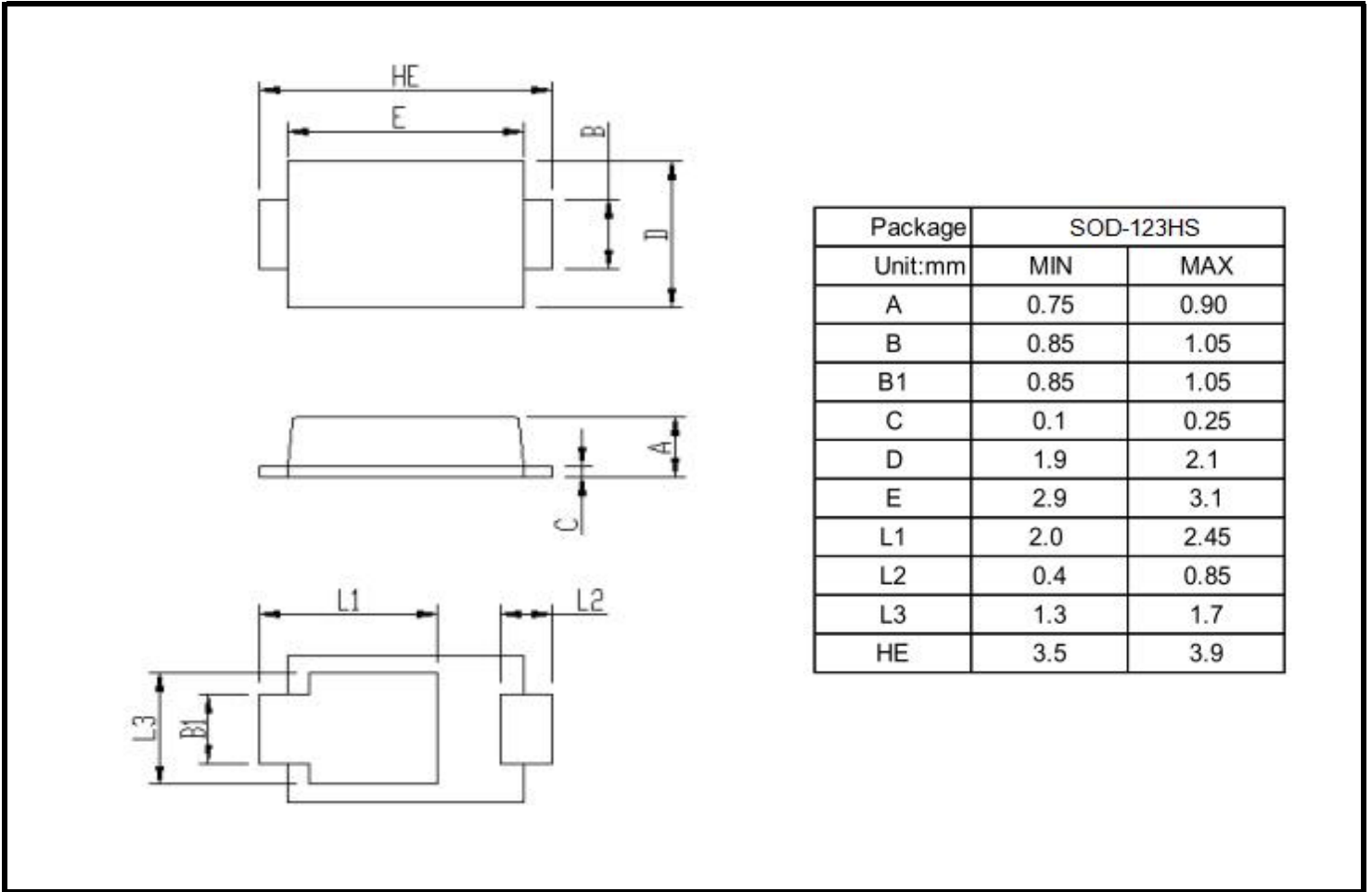


**FIG.4: Typical Reverse Characteristics**



## 1A, 50V to 1000V General Purpose Rectifiers

### PACKAGE OUTLINE DIMENSIONS



### PACKING INFORMATION

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