

# FrelTec

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Germany

Surface Mount Standard Rectifier  
SOD123HS

## SOD123HS

## Surface Mount Standard Rectifier

## SPECIFICATION

68B	PS1_XXXXXX	S13H	E03
Type	Type	Package	Packing
68B: Surface Mount Standard Rectifier	PS1_	SOD123HS	E03: tape in Embossed tape and reel for 3000 pc (7'REEL)

All products according to RoHS (2015/863/EU)

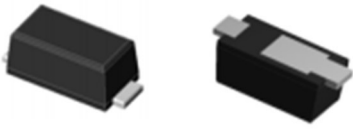
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SOD123HS

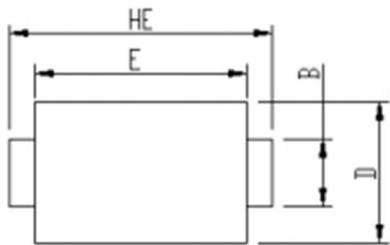
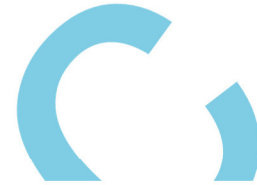
Surface Mount Standard Rectifier

PS15 thru PS16

PACKAGE OUTLINE

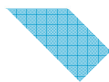
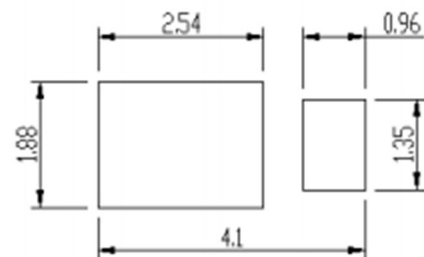
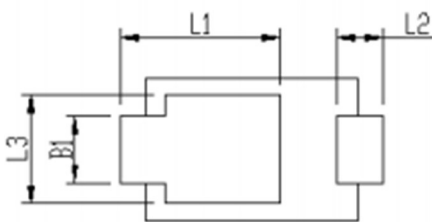


iSGA  
(SOD-123HS)



Package	iSGA	
Unit:mm	MIN	MAX
A	0.75	0.90
B	0.85	1.05
B1	0.85	1.05
C	0.1	0.25
D	1.9	2.1
E	2.9	3.1
L1	2.0	2.45
L2	0.4	0.85
L3	1.3	1.7
HE	3.5	3.9

Soldering footprint



## SOD123HS

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Maximum Ratings &amp; Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	PS15	PS16	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	60	V
Maximum RMS voltage	$V_{RMS}$	35	42	V
Maximum DC blocking voltage	$V_{DC}$	50	60	V
Maximum average forward rectified current	$I_{F(AV)}$	1,0		A
Peak forward surge current 8,3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	30		A
Rating for fusing ( $t < 8,3ms$ )	$I^2t$	3,75		A <sup>2</sup> sec
Operation junction temperature range	$T_j$	-55 to +150		°C
Storage temperature range	$T_{STG}$	-55 to +150		°C

Parameter	Test condition	Symbols	PS35	PS36	Unit
Minimum Breakdown voltage	$T_a = 25^\circ C$ , $I_R = 1mA$	VBR	50	60	Volts
Maximum instantaneous forward voltage	$I_F = 1A$ , $T_a = 25^\circ C$	$V_F$	0,61	0,65	
	$I_F = 1A$ , $T_a = 125^\circ C$		0,54	0,60	
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25^\circ C$	IR	6,36	50	uA
	$T_A = 125^\circ C$		3,41	10,00	mA
Typical junction capacitance	4,0V, 1 MHz	$C_j$	34		pF
Typical thermal resistance <sup>(1)</sup>	Junction to ambient	$R_{\theta JA}^{(1)}$	65		°C/W
	Junction to lead	$R_{\theta J}^{(1)}$	9		
	Junction to case	$R_{\theta JC}^{(2)}$	35		

Note:1).The thermal resistance from junction to ambient or lead, mounted on P.C.B with 5X5mm copper pads, 2 OZ, FR4 PCB

2).The thermal resistance from junction to case , mounted on P.C.B with recommended copper pads, 2 OZ, FR4 PCB.

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Characteristics(Typical)

## Surface Mount Standard Rectifier

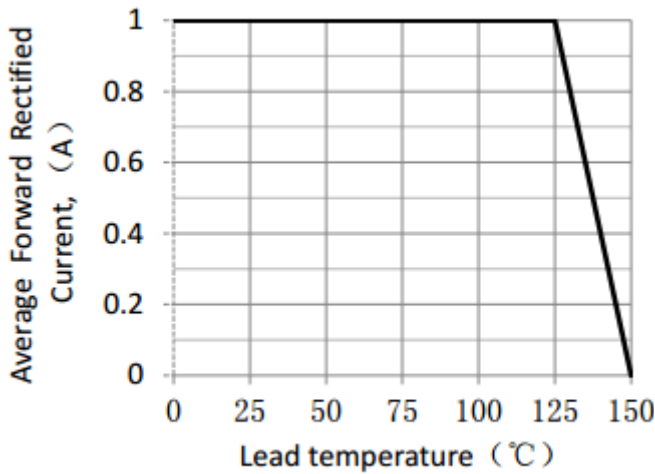


Figure 1. Forward Current Derating Curve

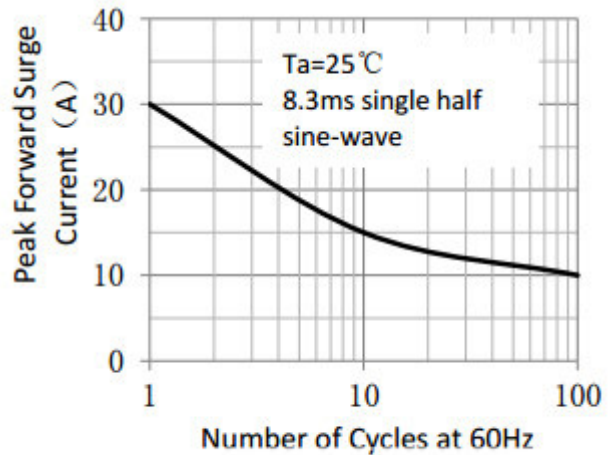


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

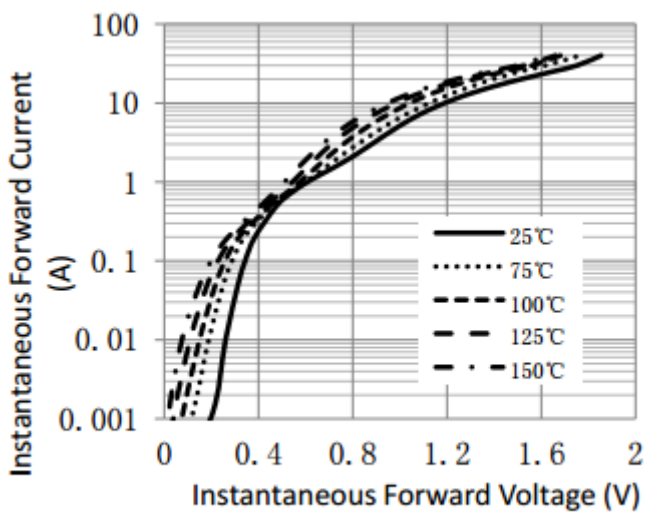


Figure 3. Typical Instantaneous Forward Characteristics

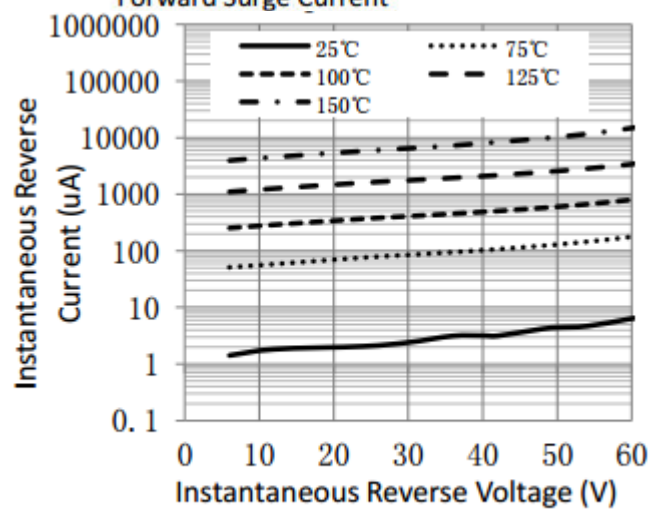


Figure 4. Typical Reverse Characteristics

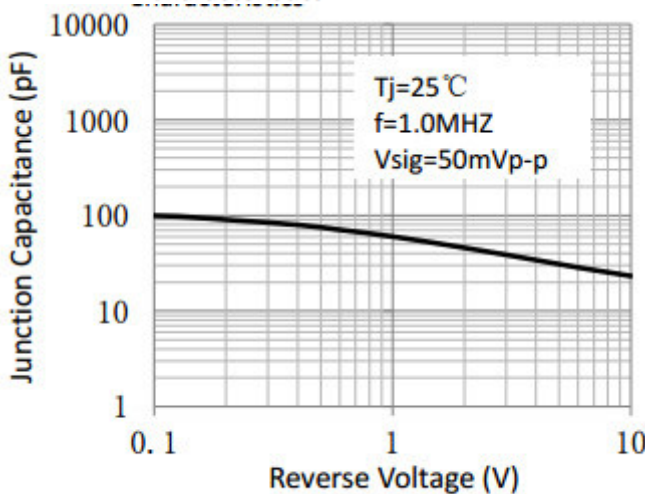


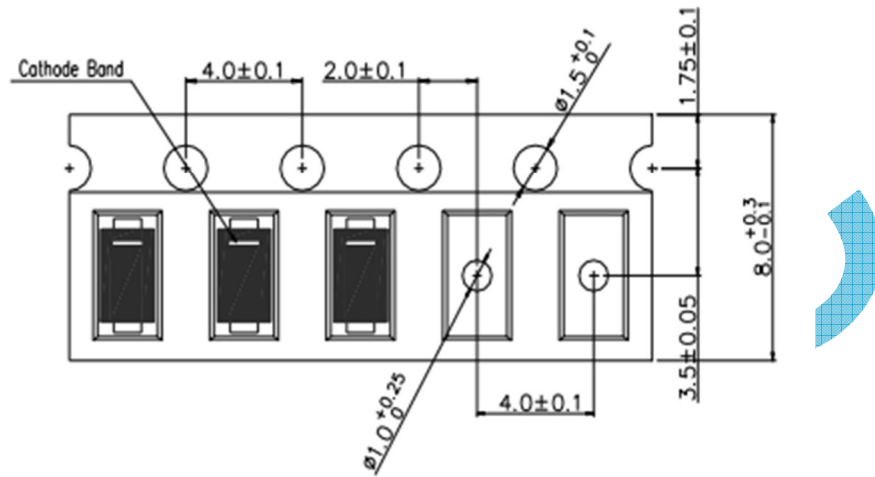
Figure 5. Typical Junction Capacitance

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## Surface Mount Standard Rectifier

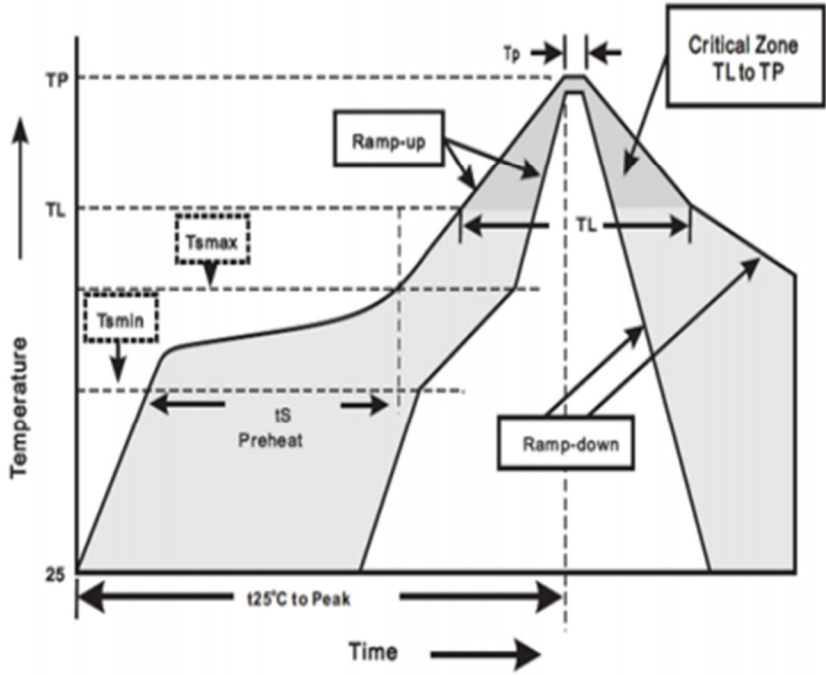
Size (Unit:mm)

### Tape & Reel Specification



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**Soldering Parameters**



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**Stock period**

The performance of these products, including the solderability, is guaranteed for 12 month, provided that they remain packed as they were when delivered and stored at a temperature of 20-30°C and a relative humidity 20-60%RH

1/30/2022

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