

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Surface Mount Standard Rectifier SOD123HS

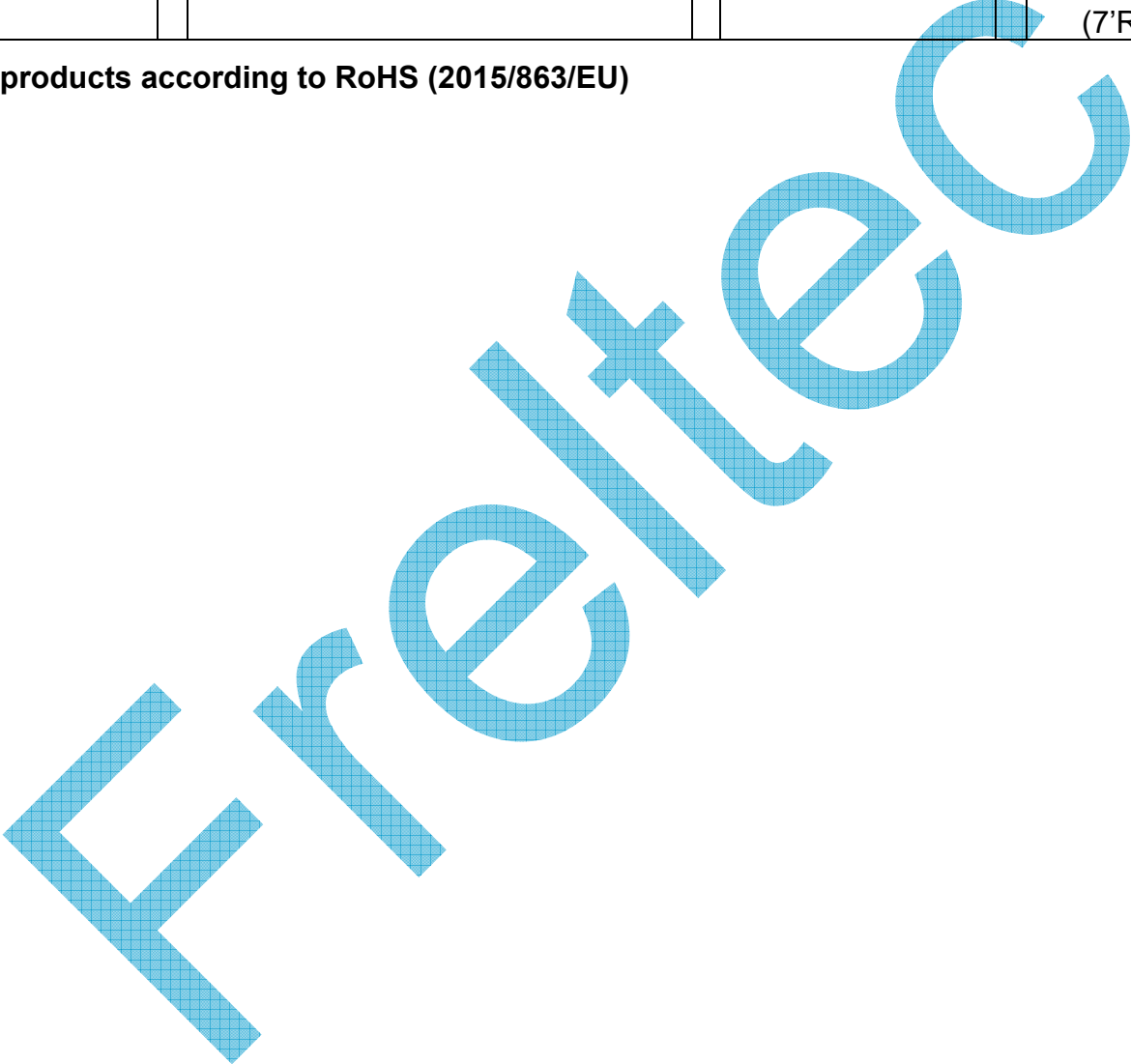
SOD123HS

Surface Mount Standard Rectifier

SPECIFICATION

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

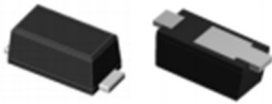
All products according to RoHS (2015/863/EU)



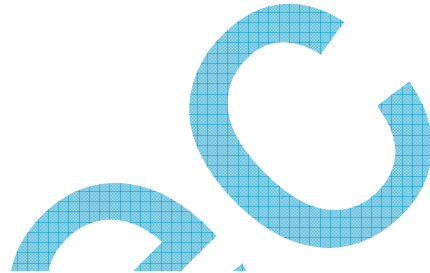
PACKAGE OUTLINE



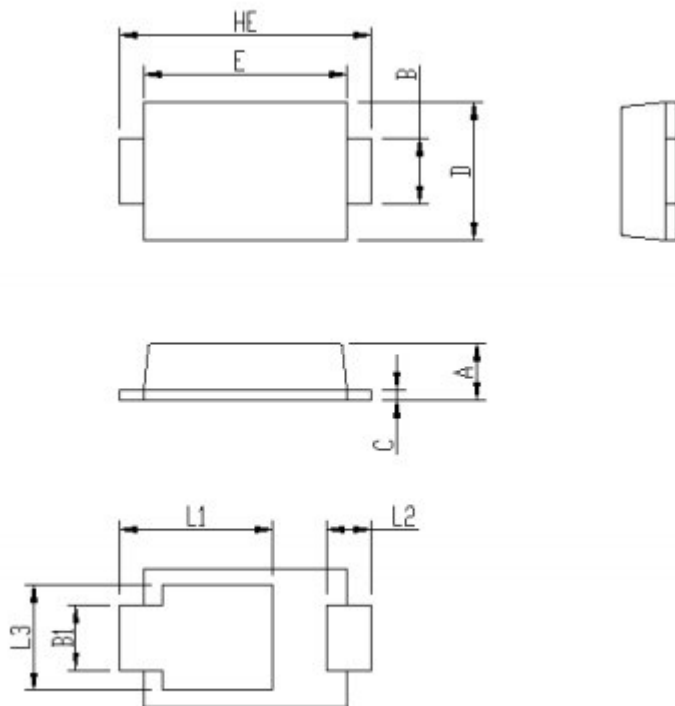
RoHS
COMPLIANT



iSGA
(SOD-123HS)

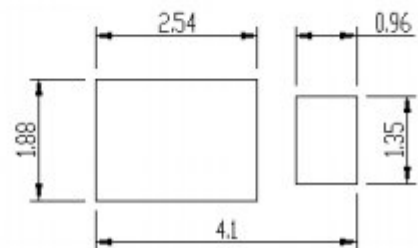


Package Outline Dimensions



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



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Maximum Ratings(TA = 25 °C unless otherwise noted)									
Parameter	Symbols	P1A	P2A	P3A	P4A	P5A	P6A	P7A	Unit
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	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average output rectified current	$I_{F(AV)}$	1,0							A
Peak forward surge current , 8,3ms single half sine-wave superimposed on rate load	I_{FSM}	40							A
Rating for fusing (t<8,3ms)	I^2t	7							A ² sec
Open junction and Storage temperature range	T_J, T_{STG}	-55 --- +150							°C

Electrical Characteristics(TA = 25 °C unless otherwise noted)										
Parameter	Test Conditions	Symbols	P1A	P2A	P3A	P4A	P5A	P6A	P7A	Unit
Maximum breakdown voltage	Ta=25 °C IR=100uA	V_{BR}	400			600		1000		Volts
Maximum instantaneous forward voltage	IF=1,1A Ta=25 °C	V_F	1,1							
	IF=1,1A Ta=125 °C		0,88							
Maximum DC reverse current at rated DC locking voltage	TA=25 °C	I_R	5							uA
	TA=125 °C		50							
Typical reverse recovery time	IF=0,5A. IR=1,0A IRR=0,25A	t_{rr}	1,5							uS
Typical junction capacitance	4,0 V, 1MHz	C_J	6,5							pF
Typical thermal resistance	Junction to ambient	$R_{\theta JA}^{1)}$	63							°C /W
	Junction to lead	$R_{\theta JL}^{1)}$	9							

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	Junction to case	$R_{\theta jc}^{2)}$	39	
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Notes: 1). The thermal resistance from junction to ambient and 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 recommend copper pads, 2 OZ, FR4 PCB.

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Ratings and Characteristics curves

(TA = 25 °C unless otherwise noted)

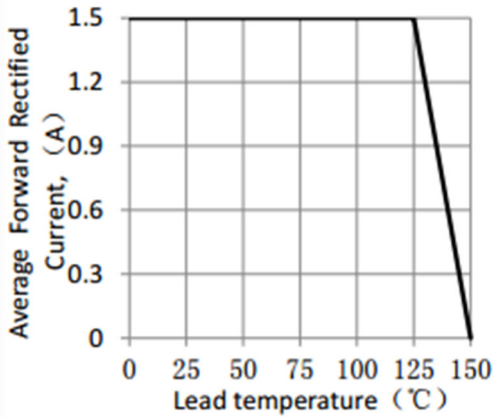


Figure 1. Forward Current Derating Curve

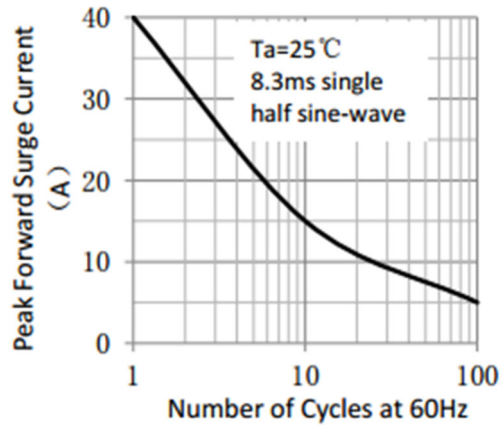


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

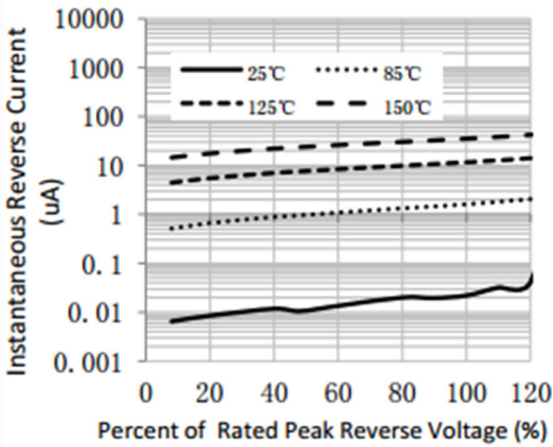


Figure 3. Typical Reverse Characteristics

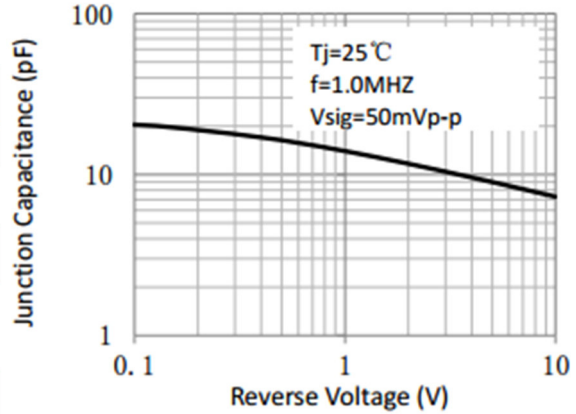


Figure 4. Typical Junction Capacitance

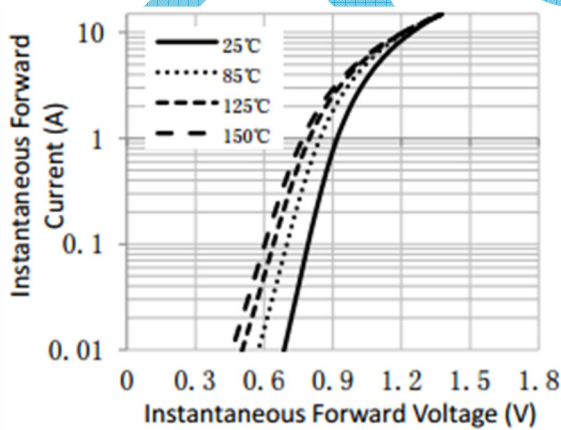


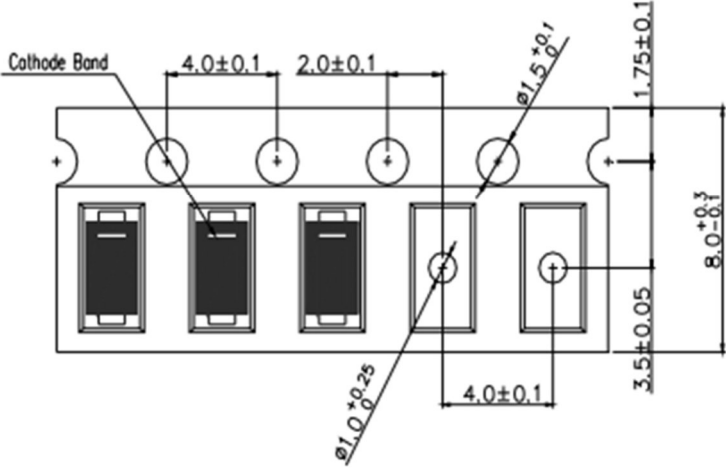
Figure 5. Typical Instantaneous Forward Characteristics

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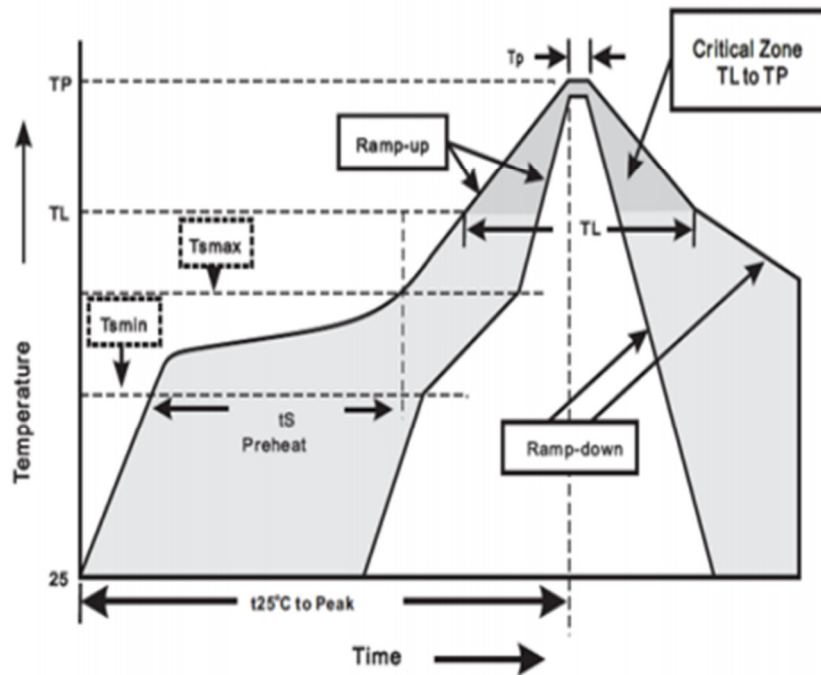
Tape and reel in specification

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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Please read cautions and warnings and important notes at the end of this document.

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