

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Surface Mount Standard Rectifier SOD123HS

SOD123HS

Surface Mount Standard Rectifier

SPECIFICATION

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

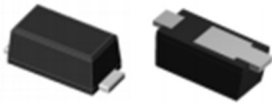
All products according to RoHS (2015/863/EU)

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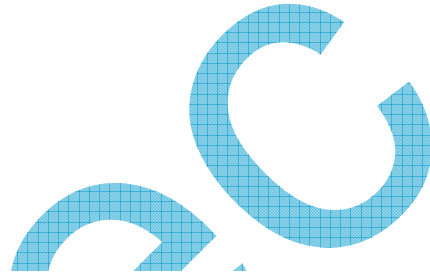
PACKAGE OUTLINE



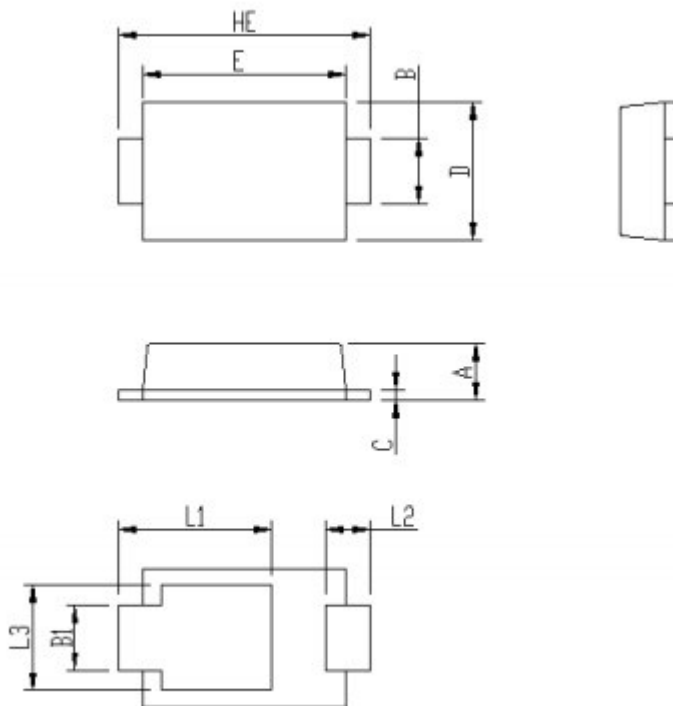
RoHS
COMPLIANT



iSGA
(SOD-123HS)

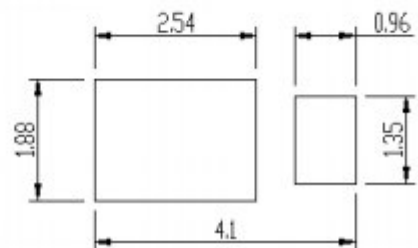


Package Outline Dimensions



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	P151A	P152A	P153A	P154A	P155A	P156A	P157A	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)}	1,5							A
Peak forward surge current , 8,3ms single half sine-wave superimposed on rate load	I _{FSM}	52							A
Rating for fusing (t<8,3ms)	I ² t	11							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	P151A	P152A	P153A	P154A	P155A	P156A	P157A	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	T _A =25 °C	I _R	5							uA
	T _A =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	10							pF
Typical thermal resistance	Junction to ambient	R _{θJA} ¹⁾	63							°C /W
	Junction to lead	R _{θJL} 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)

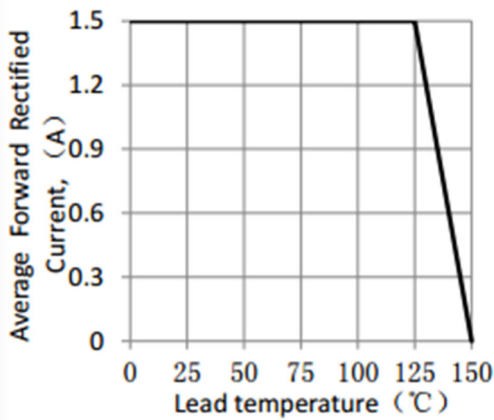


Figure 1. Forward Current Derating Curve

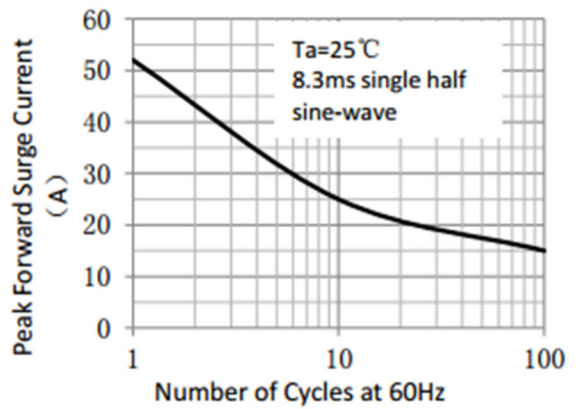


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

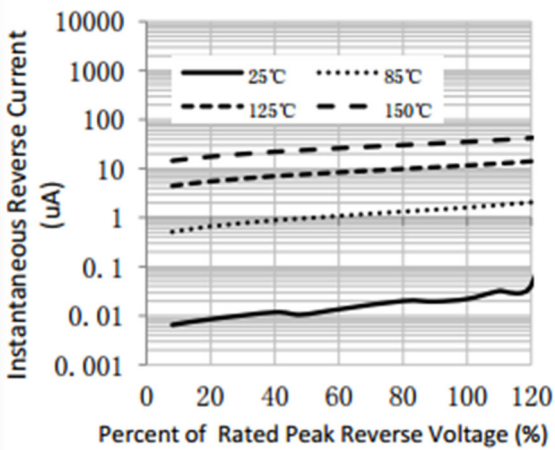


Figure 3. Typical Reverse Characteristics

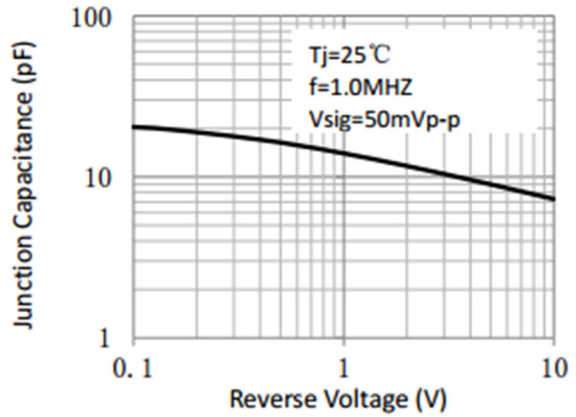


Figure 4. Typical Junction Capacitance

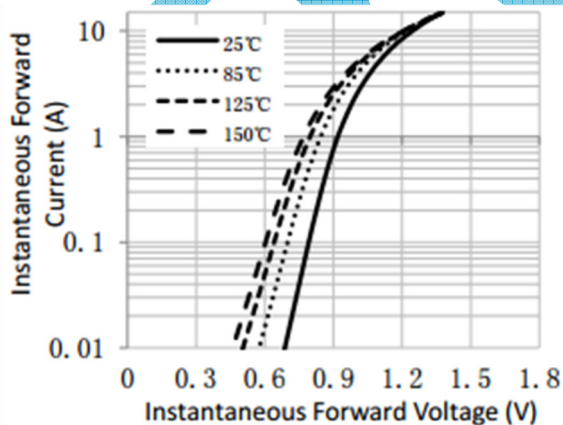


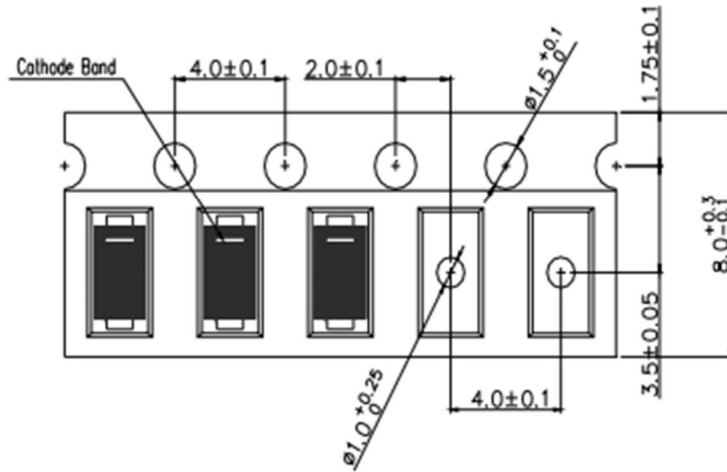
Figure 5. Typical Instantaneous Forward Characteristics

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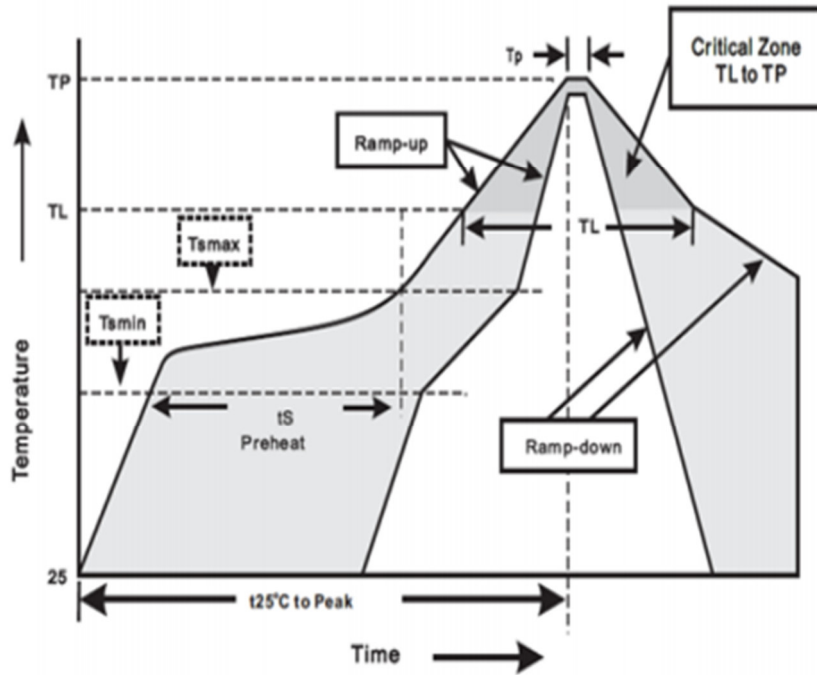
Tape and reel in specification

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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Published by FrelTec® GmbH
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