

# FrelTec

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## Surface Mount Standard Rectifier SOD123FL

## SOD123FL

## Surface Mount Standard Rectifier

## SPECIFICATION

68B	SGA1Jxxxxx	S13F	E03
Type	Type	Package	Packing
68B: Standard Rectifier	SGA1J	SOD123FL	E03: tape in Embossed tape and reel for 3000 pc (7'REEL)

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

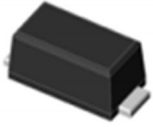
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SOD123FL

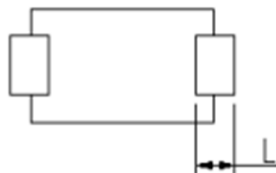
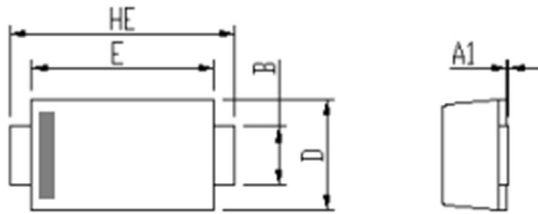
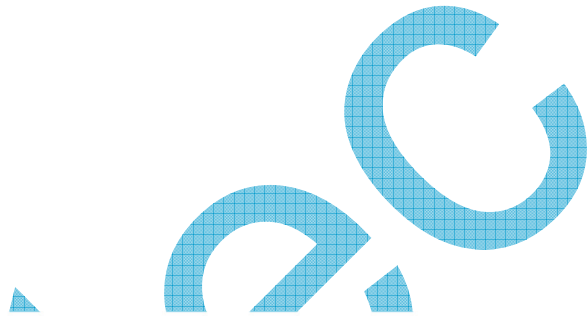
Surface Mount Standard Rectifier

SGA1J

PACKAGE OUTLINE

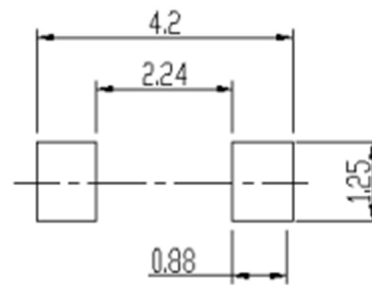


eSGA  
(SOD-123FL)



DIM	Unit: mm		Unit: inch	
	MIN	MAX	MIN	MAX
A	0.9	1.08	0.035	0.043
A1	0	0.1	0.000	0.004
B	0.85	1.05	0.033	0.041
C	0.1	0.25	0.004	0.010
D	1.7	2	0.067	0.079
E	2.9	3.1	0.114	0.122
L	0.43	0.83	0.017	0.033
HE	3.5	3.9	0.138	0.154

Soldering footprint



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Parameter	Symbols	SGA1J	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	V
Maximum RMS voltage	$V_{RMS}$	420	V
Maximum DC blocking voltage	$V_{DC}$	600	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	$I_{FSM}$	25	A
Open junction and Storage temperature range	$T_J, T_{STG}$	-55 --- +150	°C

Parameter	Test Conditions	Symbols	SGA1J	Unit
Maximum instantaneous forward voltage	1A	$V_F$	1.0	Volts
Maximum DC reverse current at rated DC locking voltage	$T_A=25\text{ °C}$	$I_R$	5	uA
	$T_A=125\text{ °C}$		50	
Typical reverse recovery time	$I_F=0,5A$ $I_R=1,0A$ $I_{RR}=0,25A$	$t_{rr}$	1,8	uS
Typical junction capacitance	4,0 V, 1MHz	$C_J$	6	pF
Typical thermal resistance <sup>(1)</sup>	Junction to ambient	$R_{\theta JA}$	70	°C /W
	Junction to mount	$R_{\theta JM}$	15	
	Junction to case	$R_{\theta JC}$	35	

Notes:1.The thermal resistance from junction to ambient and lead, mounted on P.C.B with 5x5mm copper pads,2 OZ, FR4 PCB.

Immunity to Electrical Static Discharge to the Following Standards ( $T_A=25\text{ °C}$ · unless otherwise noted)					
Standard	Test Type	Test Conditions	Symbol	Class	Value
JESD22-A114/AEC-Q101-001	Human body model (contact mode)	$C=100pF, R=1.5K\Omega$	VC	H3A	> 4KV

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JESD22-A115/AEC-Q101-002	Machine model(contact mode)	C=200pF,R=0Ω		M4	> 400V
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## Ratings and Characteristics curves

(TA = 25 °C unless otherwise noted)

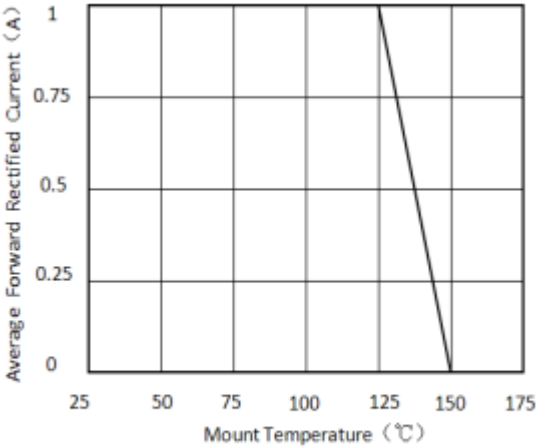


Figure 1. Forward Current Derating Curve

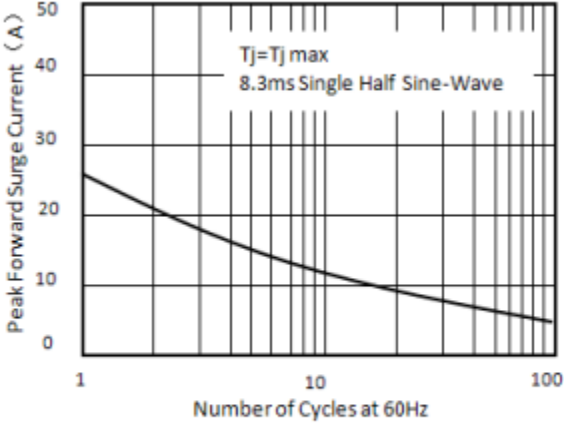


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

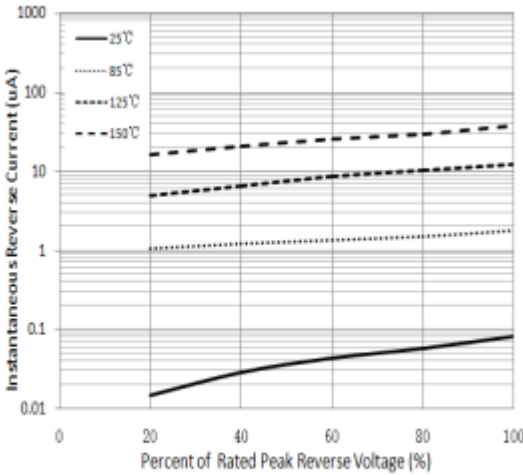


Figure 3. Typical Reverse Characteristics

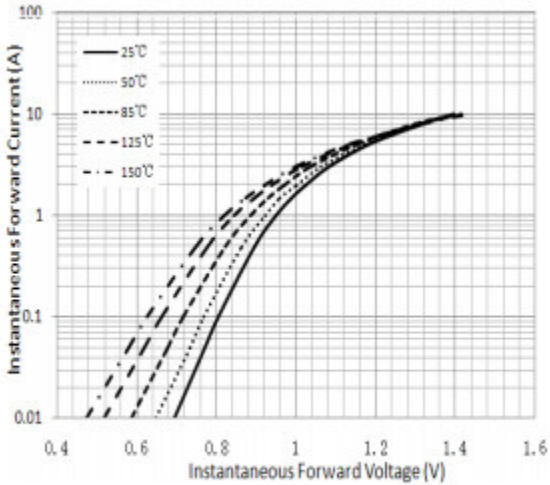


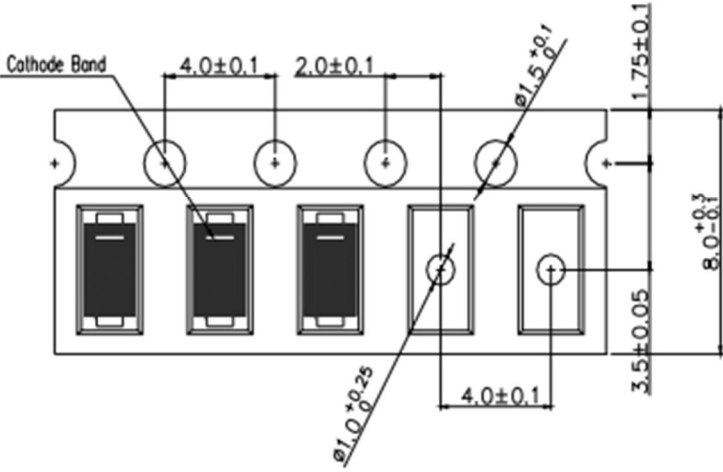
Figure 4. Typical Forward Characteristics

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## Surface Mount Standard Rectifier

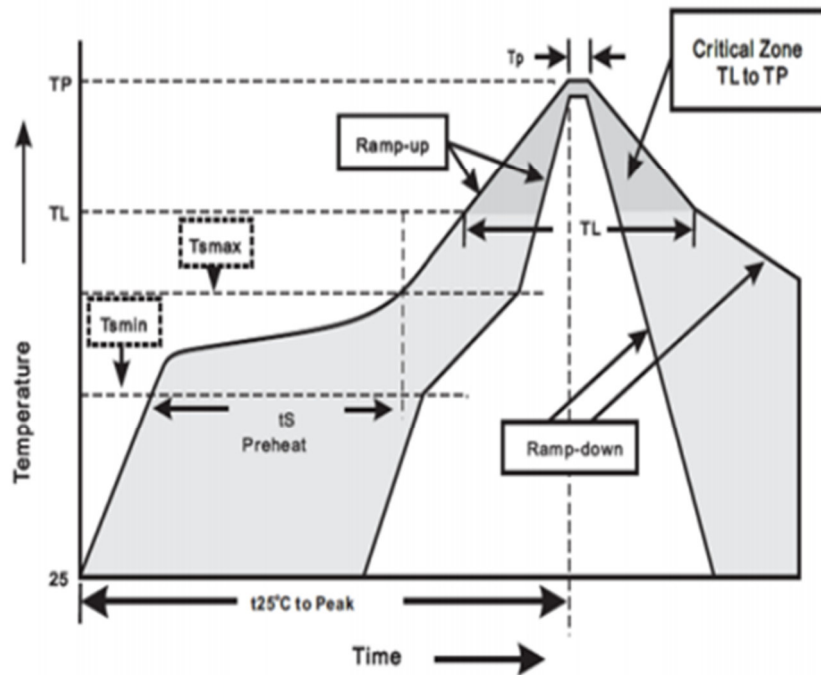
Tape and reel in specification

### 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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