

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Fast Recovery Rectifier
SOD123

SOD123

SPECIFICATION

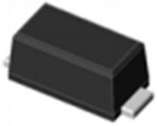
68B	RS1510FLxx	SD13	E03
Type	Type	Package	Packing
68B: Fast Recovery Rectifier	RS1510FL	SOD123	E03: tape in Embossed tape and reel for 3000 pc (7'REEL)

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

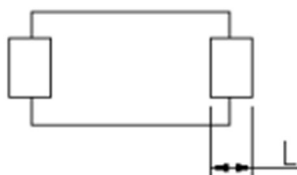
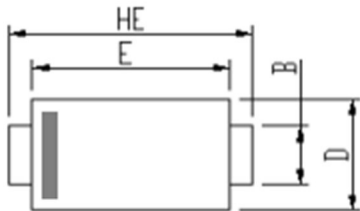
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PACKAGE OUTLINE

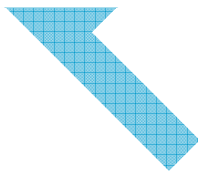
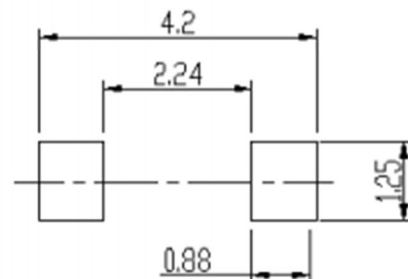


eSGA
(SOD-123FL)



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



SOD123

Fast Recovery Rectifier

Maximum Ratings & Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	RS1510FL	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC blocking voltage	V_{DC}	1000	V
Maximum average forward rectified current	$I_{F(AV)}$	1,5	A
Peak forward surge current 8,3 ms single half sine-wave superimposed on rated load	I_{FSM}	50	Amps
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150	°C

Parameter	Test condition	Symbols	RS1510FL	Unit
Maximum instantaneous forward voltage	1,5A	V_F	1,3	V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	I_R	5 50	μA
Maximum reverse recover time	$I_F=0,5\text{A}$, $I_R=1,0\text{A}$ $I_{rr}=0,25\text{A}$	t_{rr}	500	nS
Typical junction capacitance	4,0V, 1 MHz	C_J	7,5	pF
Typical thermal resistance ¹⁾	Junction to mount	$R_{\theta JM}$	5	°C/W
	Junction to ambient	$R_{\theta JA}$	70	
	Junction to case	$R_{\theta JC}$	30	

Note:1) Mounted on P.C.B with 5,0x5,0mm copper pads, 2 OZ, FR4 PCB

SOD123

Rating and Characteristics curves

(TA=25°C unless otherwise noted)

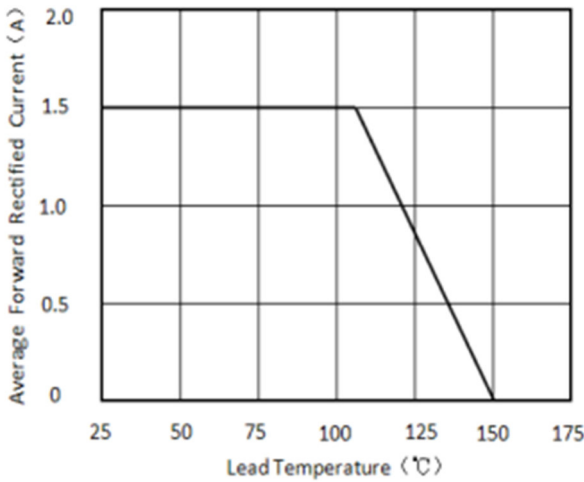


Figure 1. Forward Current Derating Curve

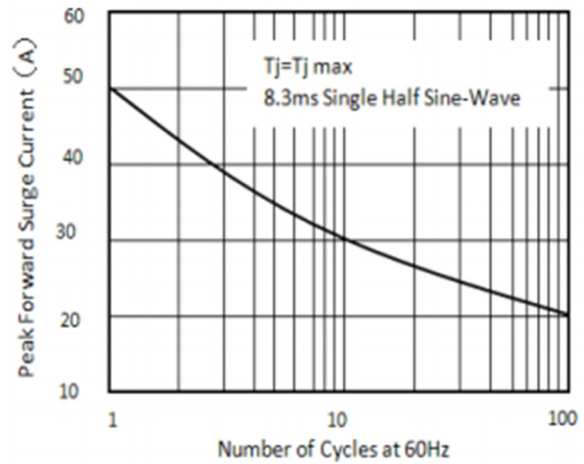


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

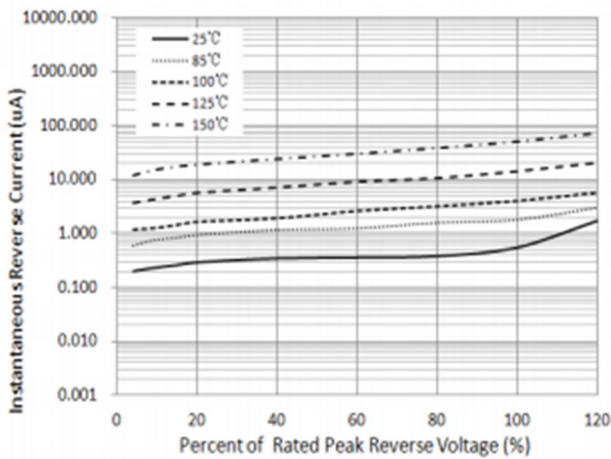


Figure 3. Typical Reverse Characteristics

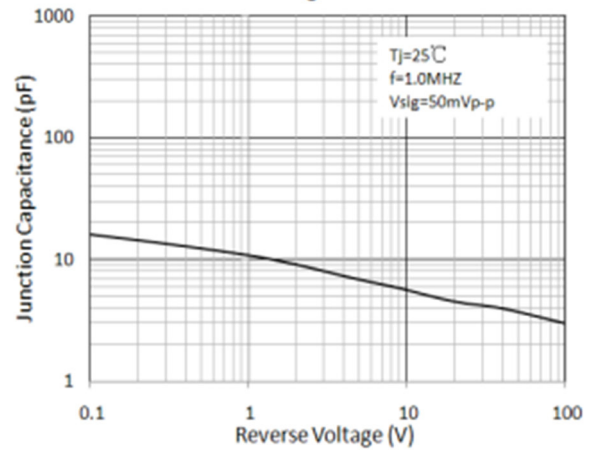


Figure 4. Typical Junction Capacitance

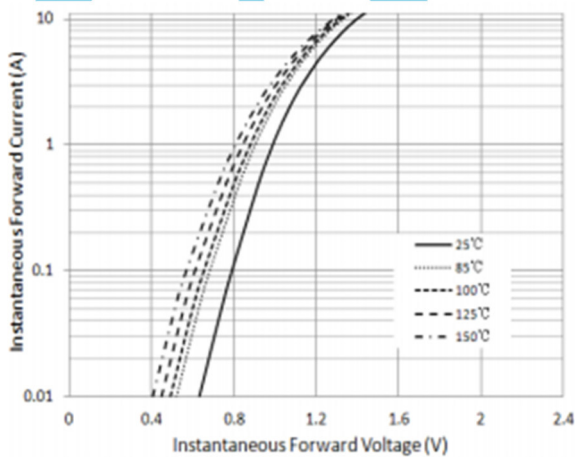
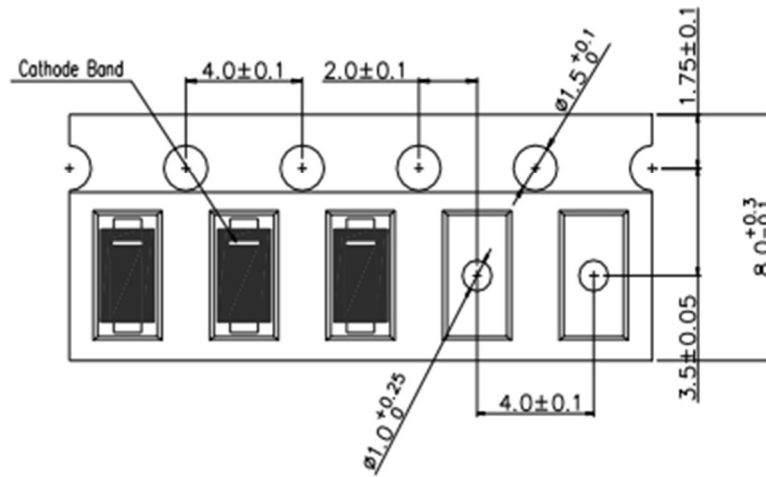


Figure 5. Typical Instantaneous Forward Characteristic

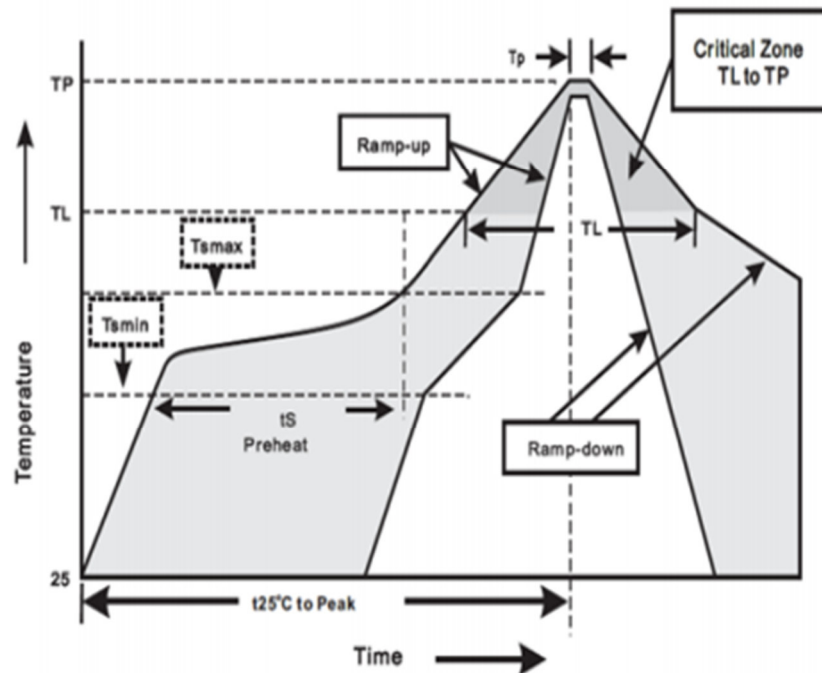
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Size (Unit:mm)

Tape & Reel Specification



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Soldering Parameters**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

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