

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Surface Mount Fast Recovery
Rectifier
SOD323FL

SOD123FL

Surface Mount Fast Recovery Rectifier

SPECIFICATION

68B	SGP_Rxxxxx	S33F	E03
Type	Type	Package	Packing
68B: Surface Mount Fast Recovery Rectifier	SGP_R	SOD323FL	E03: tape in Embossed tape and reel for 3000 pc (7'REEL)

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



SGP1R thru SGP7R

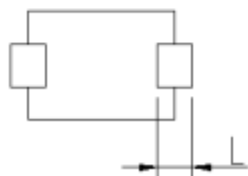
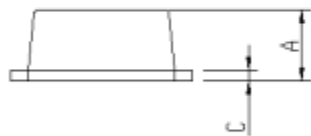
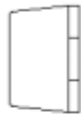
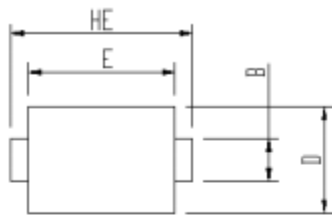
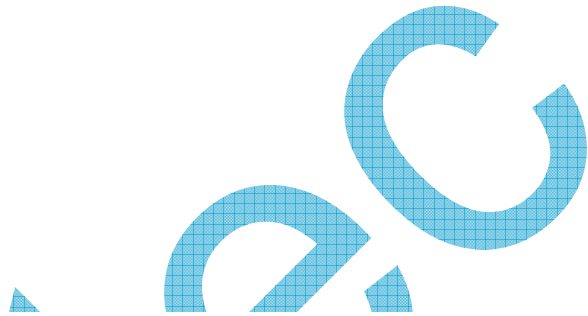
PACKAGE OUTLINE



RoHS
COMPLIANT

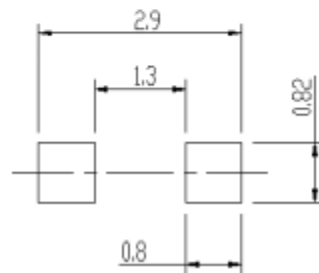


eSGP(SOD-323F)



Package	Unit:mm		Unit:inch	
	MIN	MAX	MIN	MAX
eSGP				
A	0.9	1.08	0.035	0.043
B	0.5	0.7	0.020	0.028
C	0.1	0.25	0.004	0.010
D	1.4	1.6	0.055	0.063
E	2.0	2.2	0.079	0.087
L	0.35	0.65	0.014	0.026
HE	2.4	2.8	0.094	0.110

Soldering footprint



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Maximum Ratings(TA = 25 °C unless otherwise noted)									
Parameter	Symbols	SGP1R	SGP2R	SGP3R	SGP4R	SGP5R	SGP6R	SGP7R	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}	25							A
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	RS1001 FL	RS1002 FL	RS1003 FL	RS1004 FL	RS1006 FL	RS1008 FL	RS1010 FL	Unit
Maximum instantaneous forward voltage	1A	V _F	1.3							Volts
Maximum DC reverse current at rated DC locking voltage	T _A =25 °C	I _R	5							uA
	T _A =125 °C		250							
Typical reverse recovery time	I _F =0,5A. I _R =1,0A I _{RR} =0,25A	t _{rr}	150				250	500		nS
Typical junction capacitance	4,0 V, 1MHz	C _J	5							pF
Typical thermal resistance ¹⁾	Junction to mount	R _{θJM}	76							°C /W

Notes:1). The thermal resistance from junction to mount, mounted on P.C.B with 5 x 5mm copper pads,2 OZ, FR4 PCB.

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Ratings and Characteristics curves

(TA = 25 °C unless otherwise noted)

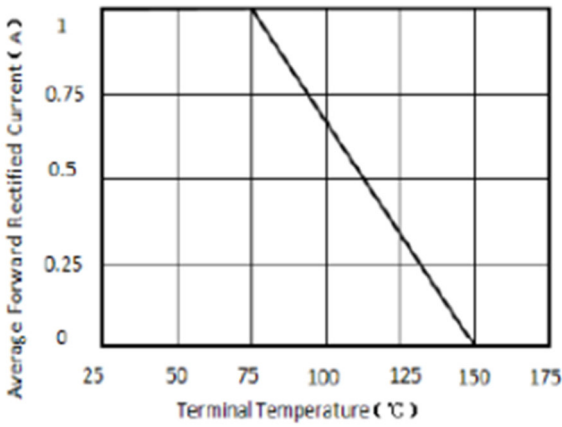


Figure 1. Forward Current Derating Curve

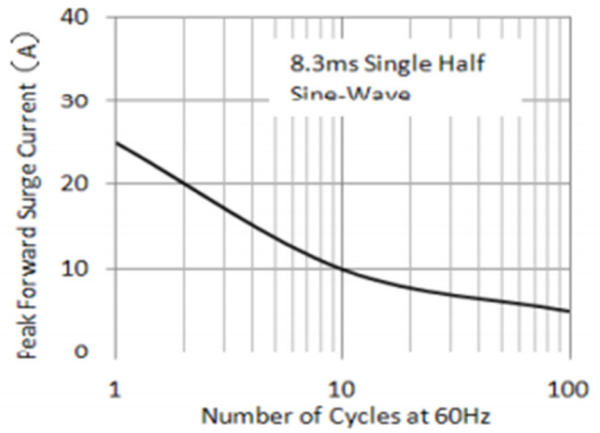


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

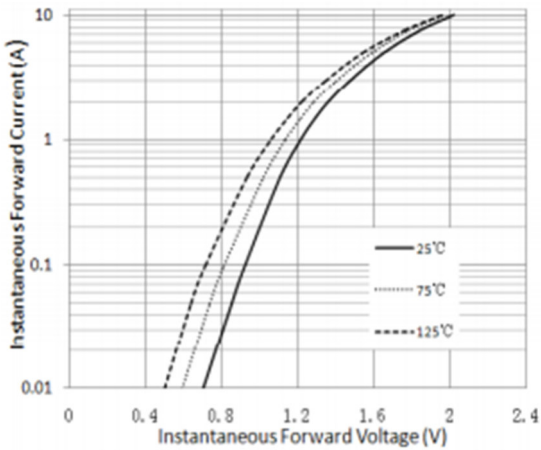


Figure 3. Typical Instantaneous Forward Characteristics

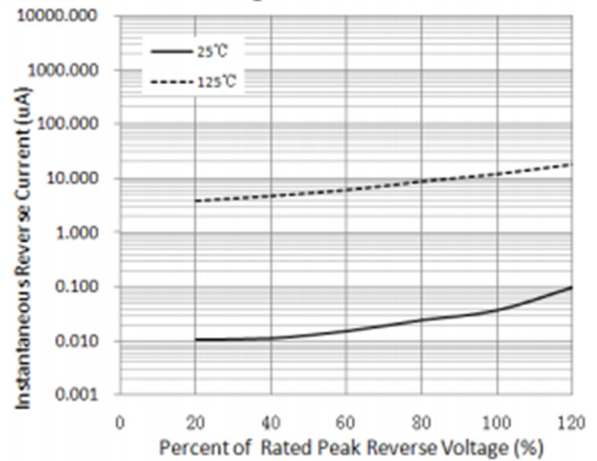


Figure 4. Typical Reverse Characteristics

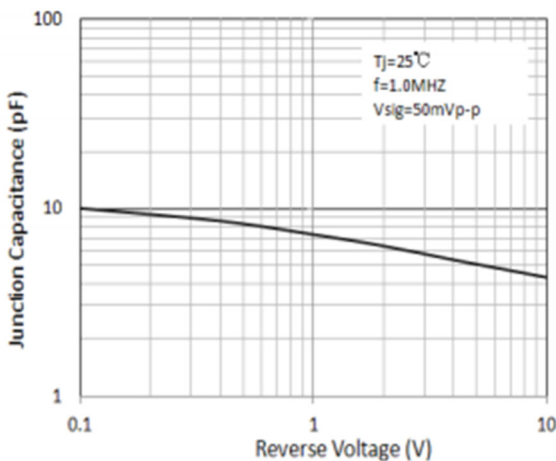


Figure 5. Typical Junction Capacitance

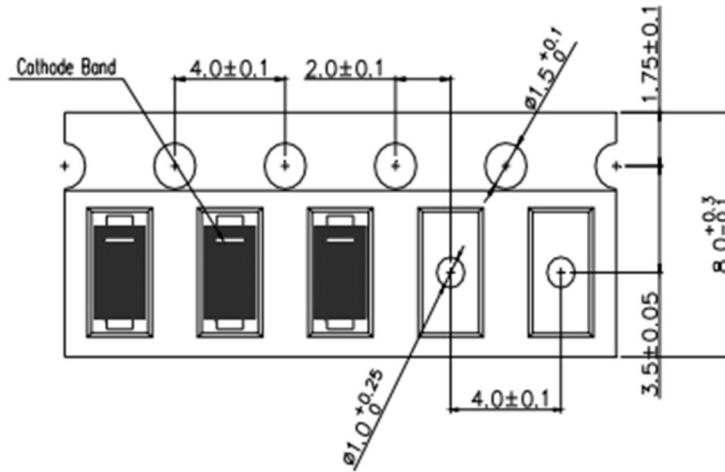


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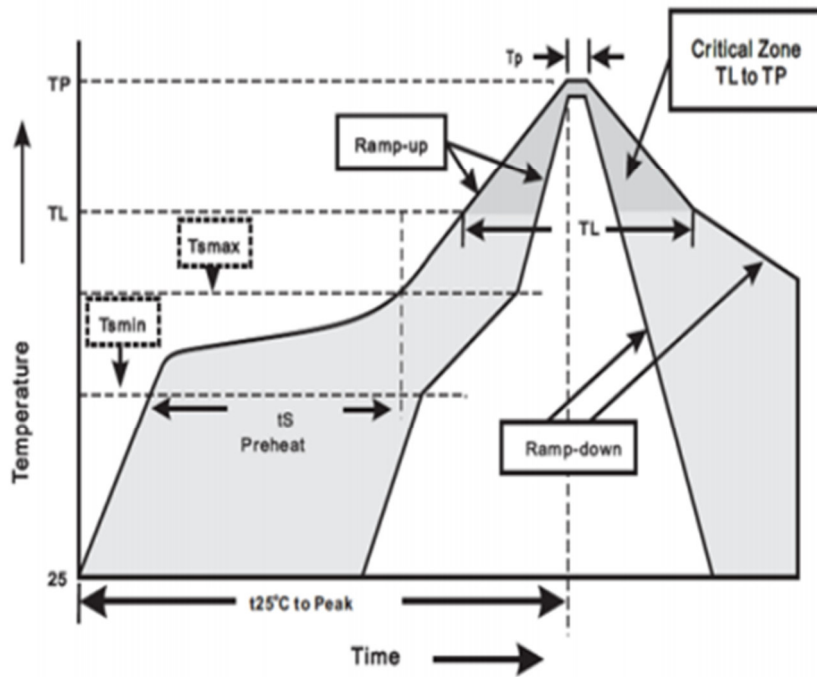
Tape and reel in specification

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

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

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