

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

High-efficiency Rectifier
SMA

SOD123

SPECIFICATION

683	US1_Lxxxxx	SD13	E03
Type	Type	Package	Packing
683: Ultra-fast Recover Rectifier	US1_L	SOD123	E03: tape in box (paper tape) for 3k pc (7'REEL)

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

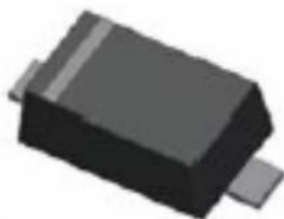
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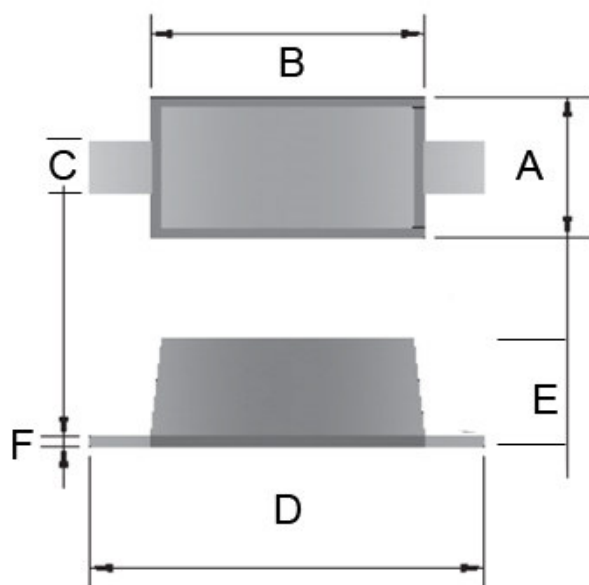
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Ultra-fast Recover Rectifier

US1_L

PACKAGE OUTLINE



DIMENSIONS



Dim	Min(mm)	Max(mm)
A	1,70	1,90
B	2,70	2,90
C	0,98	1,08
D	3,50	3,70
E	0,80	1,10
F	0,10	0,2

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Ultra-fast Recover Rectifier

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

	Symbols	US1 AL	US1 BL	US1 DL	US1 GL	US1 JL	US1 KL	US1 ML	Unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	IF(AV)	1,0							A
Peak forward surge current 8,3 ms single half sine-wave	IFSM	30							A
Typical thermal resistance	R θ JC	45							°C/W
Operating junction and storage temperature range	Tj, TSTG	-55 --- +150							°C

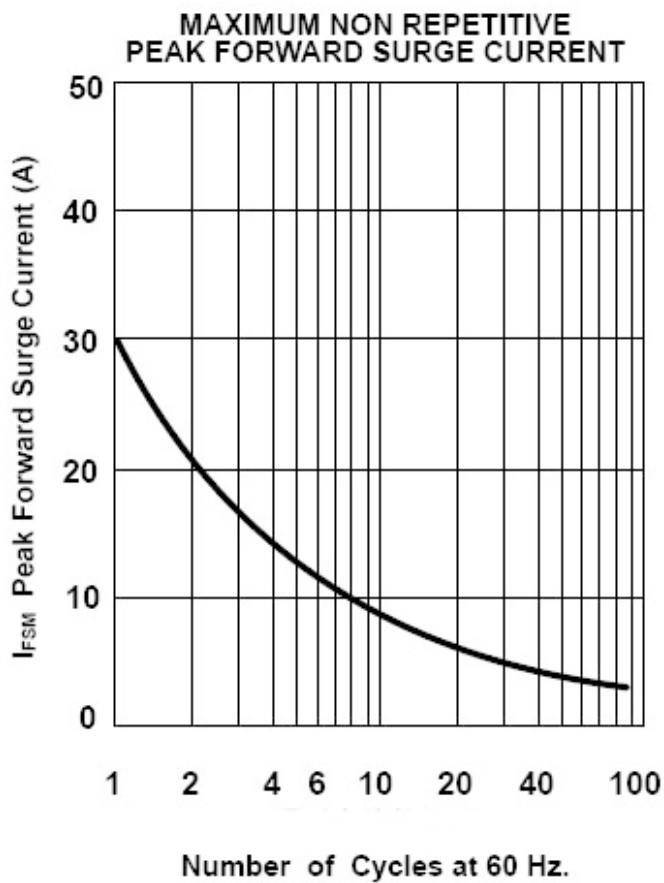
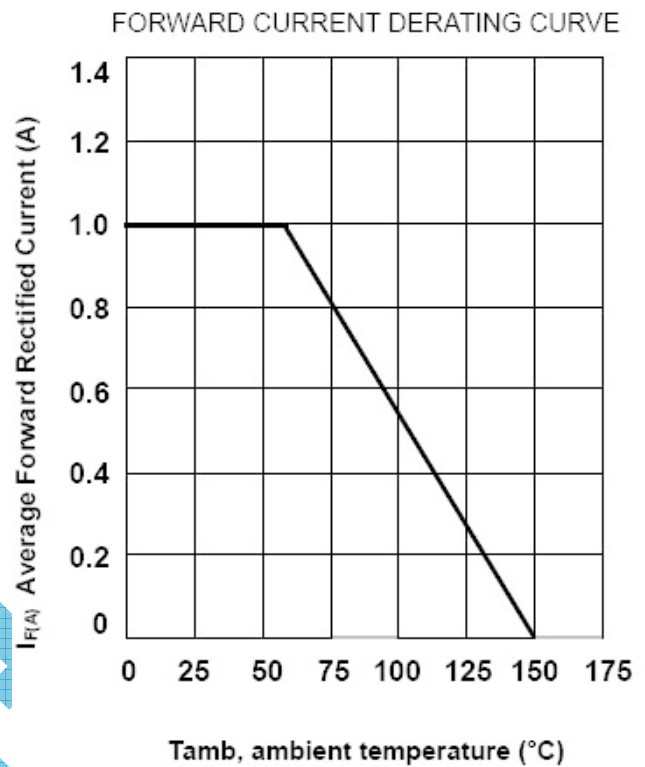
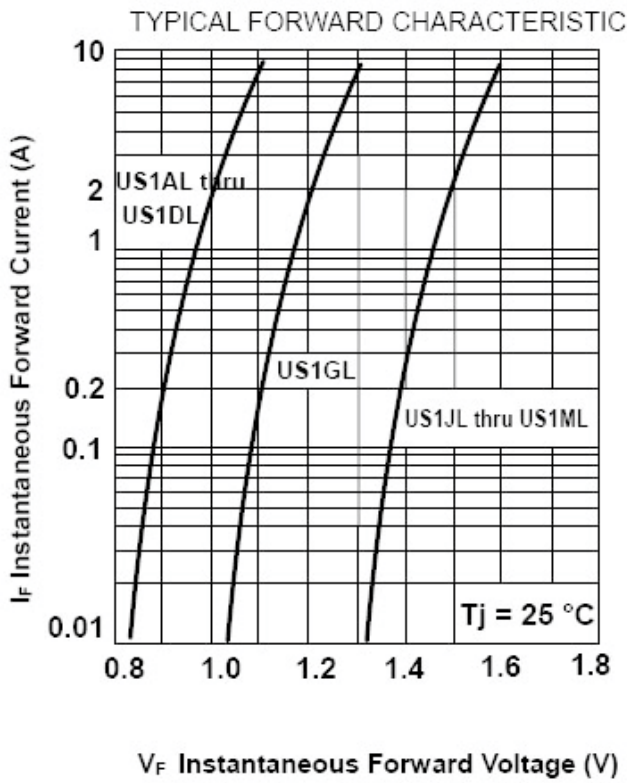
Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	US1 AL	US1 BL	US1 DL	US1 GL	US1 JL	US1 KL	US1 ML	Unit
IF = 1,0 A Maximum forward voltage	VF	1,0			1,3	1,7			V
TA= 25°C Maximum reverse current	IR				10				μ A
TA=125°C IF=0,5A IR=1,0A IREC=0,25A MAX, Reverse Recovery Time	trr	50			75			nS	
VR = 4.0V, f = 1MHz Type junction capacitance	Cj				15			pF	

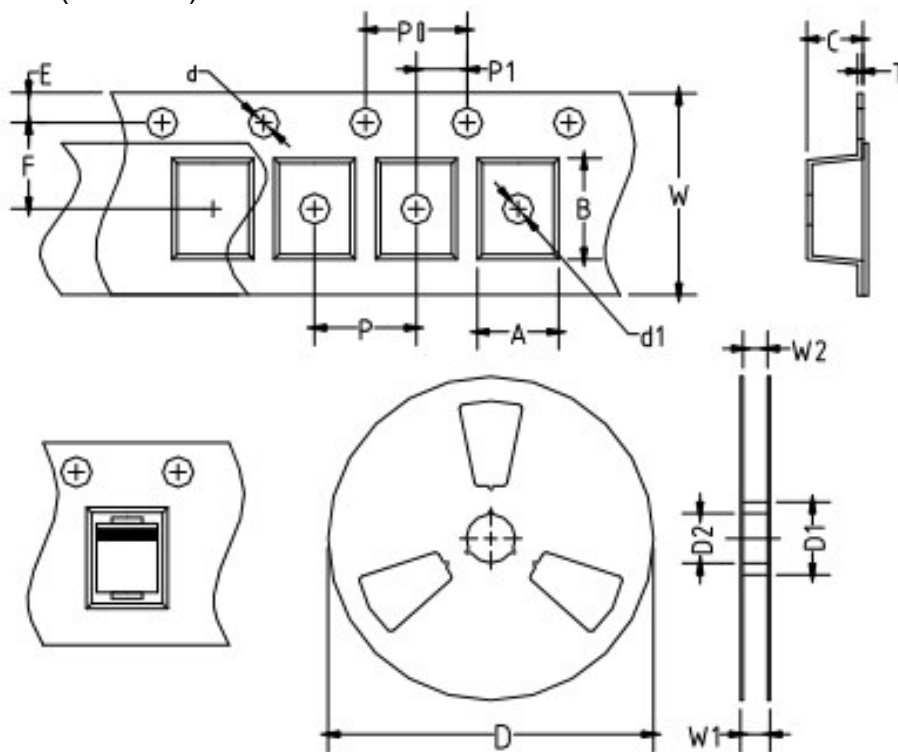
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Rating and Characteristic Curves



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Size (Unit:mm)

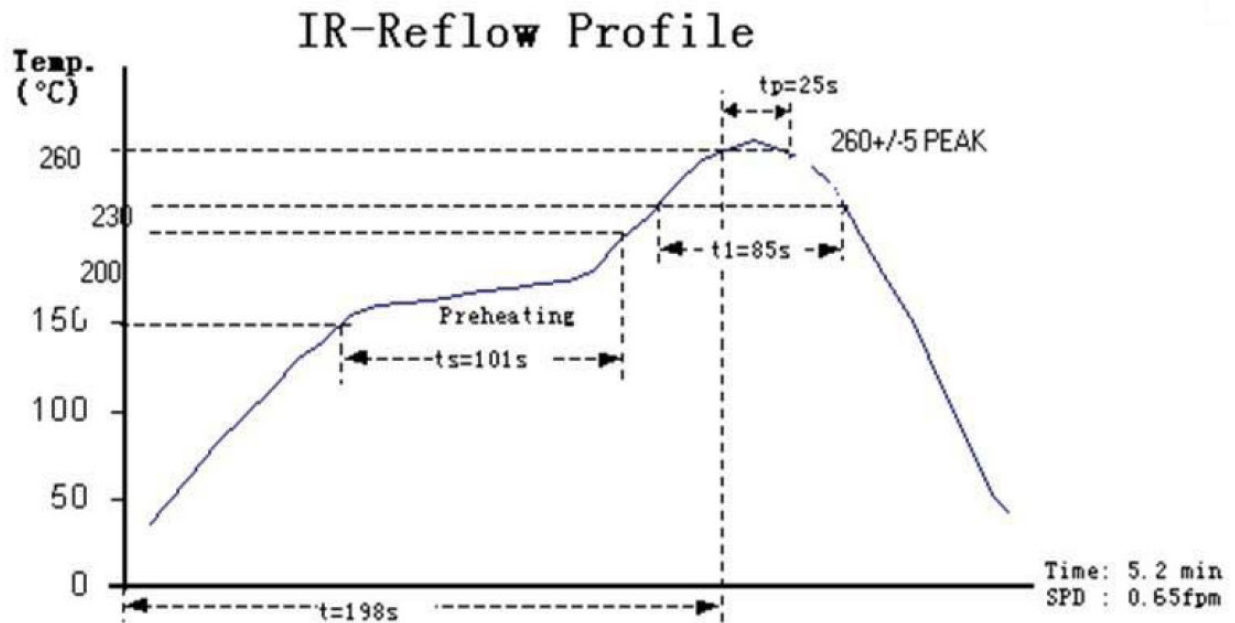


Item	Symbol	SOD123
Carrier width	A	1.80±0.15
Carrier length	B	3.94±0.15
Carrier depth	C	1.58±0.15
Sprocket hole	d	1.50±0.10
Carrier hole	d1	1.10±0.10
Reel outside diameter	D	177.8±1.0
Reel inner diameter	D1	54±1.0
Feed hole diameter	D2	13.0±1.0
Sprocket hole position	E	1.70±0.10
Punch hole position	F	3.50±0.05
Punch hole pitch	P	4.00±0.10
Sprocket hole pitch	P0	4.00±0.10
Embossment center	P1	2.00±0.10
Total tape thickness	T	0.20±0.10
Tape width	W	7.95±0.15
Reel width	W1	10.2±1.5
Reel width	W2	9.4±1.0

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Lead Free Reflow Soldering Profile

**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 0-35°C and a relative humidity 35-75%RH

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Published by FrelTec® GmbH
Mathildenstr, 10A; 82319 Starnberg; Germany
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