

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

General-purpose Rectifier
SOD123

SOD123

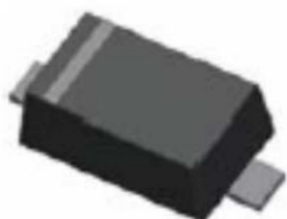
SPECIFICATION

683	S12_Lxxxxx	SD13	E03
Type	Type	Package	Packing
683: General- purpose Rectifier	S12_L	SOD123	E03: tape in box (paper tape) for 3k pc (7'REEL)

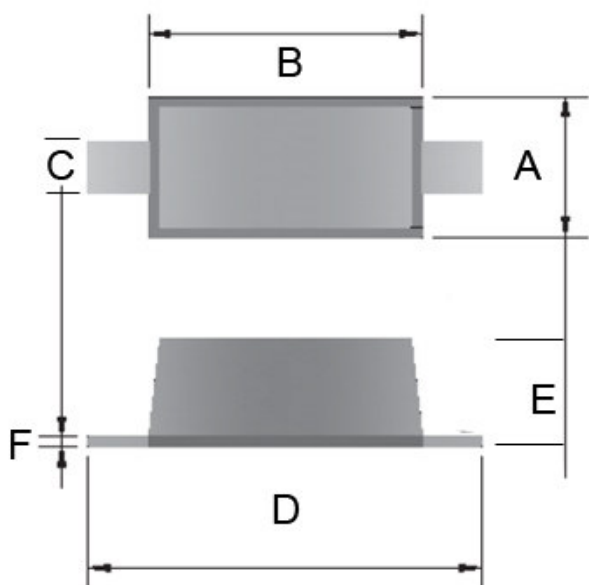
All products according to RoHS (2015/863/EU)

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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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General-purpose Rectifier

Maximum Ratings & Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

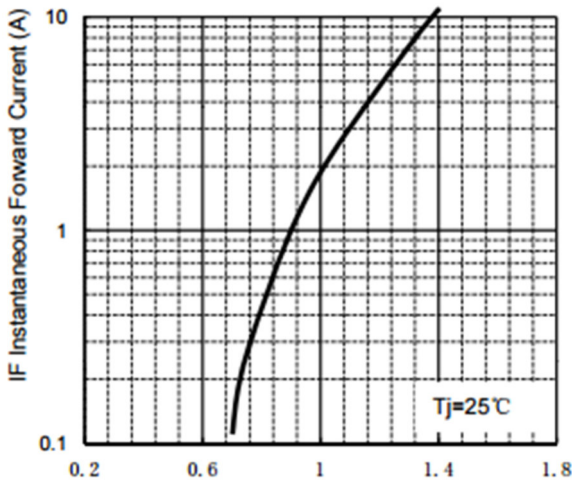
Parameter	Symbols	S12 AL	S12 BL	S12 DL	S12 GL	S12 JL	S12 KL	S12 ML	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current	$I_F(AV)$	1,2							A
Peak forward surge current 8,3 ms single half sine-wave	I_{FSM}	50							A
Typical thermal resistance	$R_{\theta JA}$	180							°C/W
Operating junction	T_j	150							°C
Storage temperature range	T_j, T_{stg}	-55 ... +150							°C

Parameter	Symbols	S12 AL	S12 BL	S12 DL	S12 GL	S12 JL	S12 KL	S12 ML	Unit
$I_F=1,2A$ Maximum forward voltage	V_F	1,1							V
$T_A=125^\circ C$ Maximum reverse current	I_R	5							uA

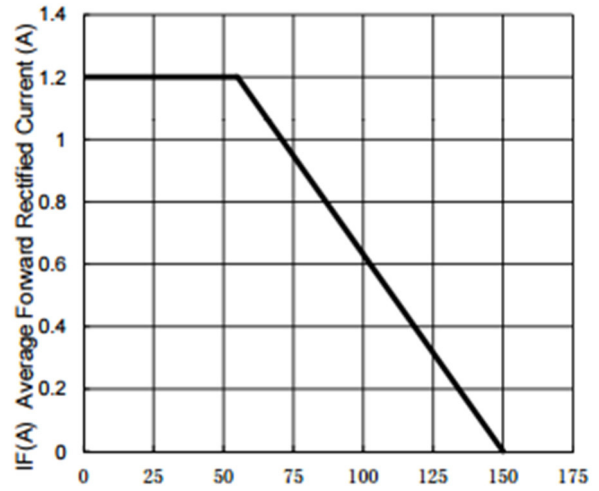
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Rating and Characteristic Curves

TYPICAL FORWARD CHARACTERISTIC

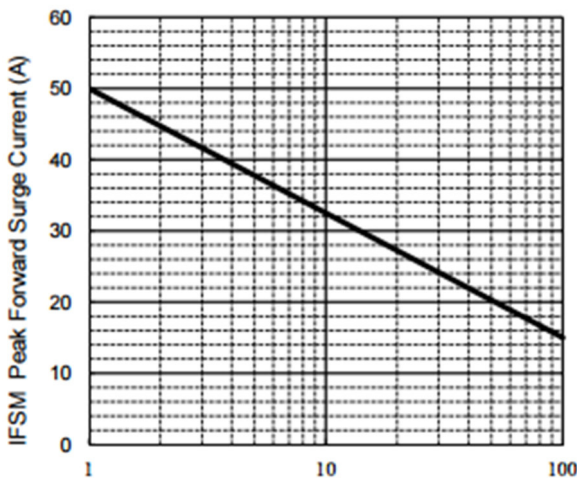


FORWARD CURRENT DERATING CURVE

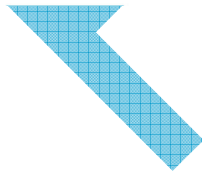


VF Instantaneous Forward Voltage (V)

Non Repetitive Peak Forward Surge Current-1

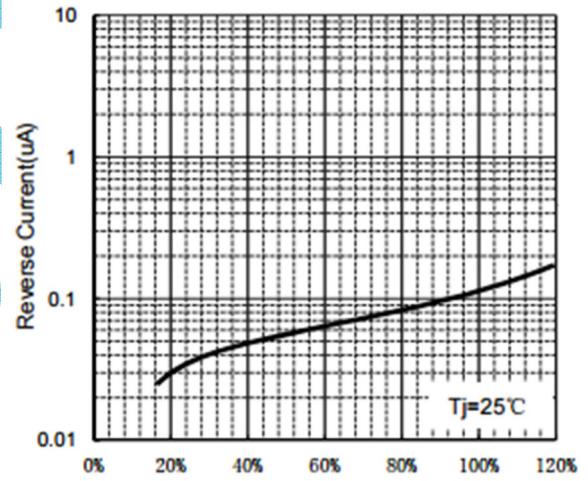


Number of Cycles at 60 Hz.



Tamb, ambient temperature (°C)

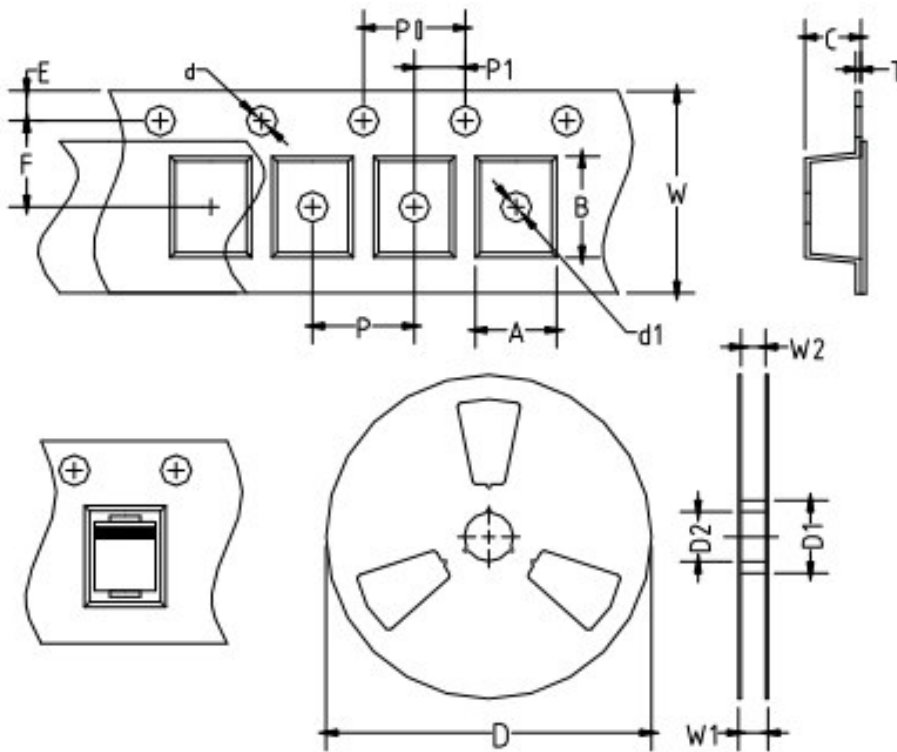
Typical Reverse Characteristics



Percent Of Rated Peak Reverse voltage %

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Size (Unit:mm)



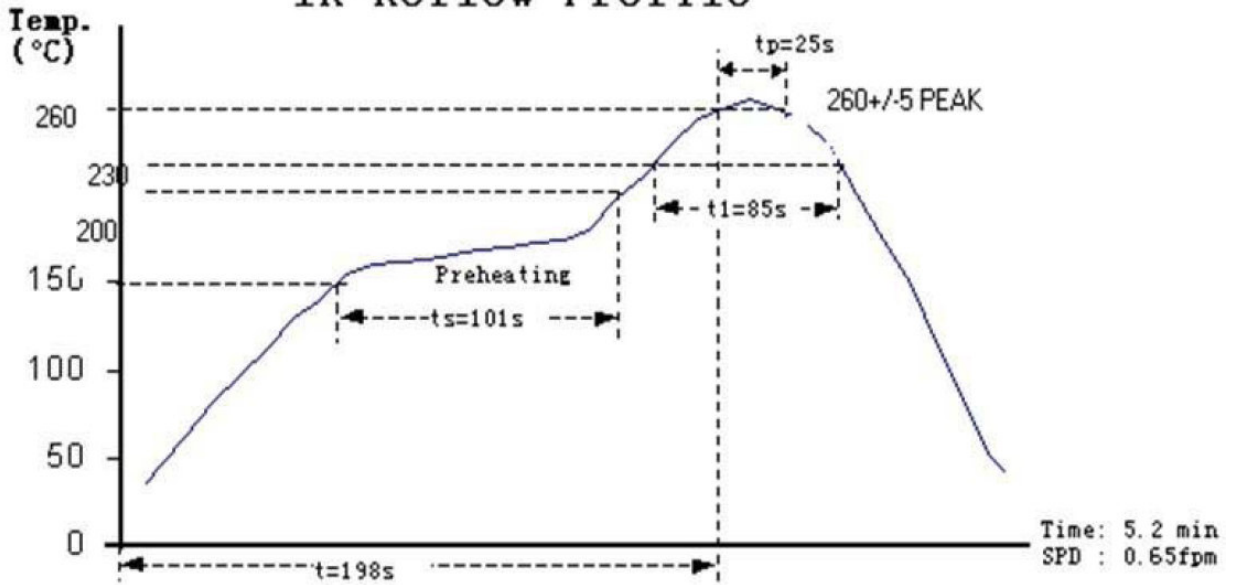
Item	Symbol	SOD123
Carrier width	A	1.80±0.15
Carrier length	B	3.94±0.15
Carrier depth	C	1.58±0.15
Sprocket hole	d	1.50±0.10
Carrier hole	d1	1.10±0.10
Reel outside diameter	D	177.8±1.0
Reel inner diameter	D1	54±1.0
Feed hole diameter	D2	13.0±1.0
Sprocket hole position	E	1.70±0.10
Punch hole position	F	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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General-purpose Rectifier

Lead Free Reflow Soldering Profile

IR-Reflow 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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