

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

Schottky Diode
SOD123

SOD123

SPECIFICATION

621		BAT__Wxxxx		SD13		E03
Type		Type		Package		Packing
621: Schottky Diode		BAT__W		SOD123		E03: Embossed tape and reel for 3k pc (7'REEL)

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

FrelTec

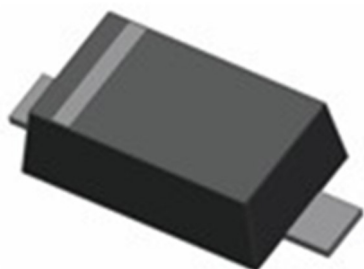
SOD123

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Schottky Diode

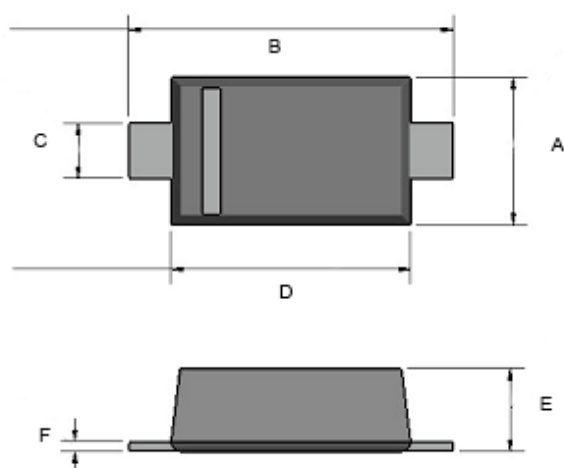
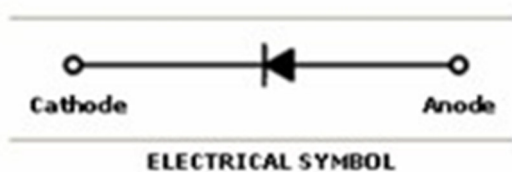
BAT_W

PACKAGE OUTLINE

Green Product



SOD-123 Flat Lead



DIM.	Unit(mm)	
	Min	Max
A	1,50	1,70
B	3,30	3,70
C	0,50	0,70
D	2,50	2,70
E	0,80	1,00
F	0,05	0,20

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Schottky Diode

Absolute Maximum Ratings $T_A = 25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
P_D	Power Dissipation	400	mW
T_{STG}	Storage Temperature Range	-65 to +125	$^{\circ}\text{C}$
T_J	Operating Junction Temperature	+125	$^{\circ}\text{C}$
V_{RRM}	Repetitive Peak Reverse Voltage	30	V
V_R	Maximum DC Blocking Voltage	30	V
$I_{F(AV)}$	Average Forward Rectified Current	200	mA
I_{FSM}	Peak Forward Surge Current	4	A

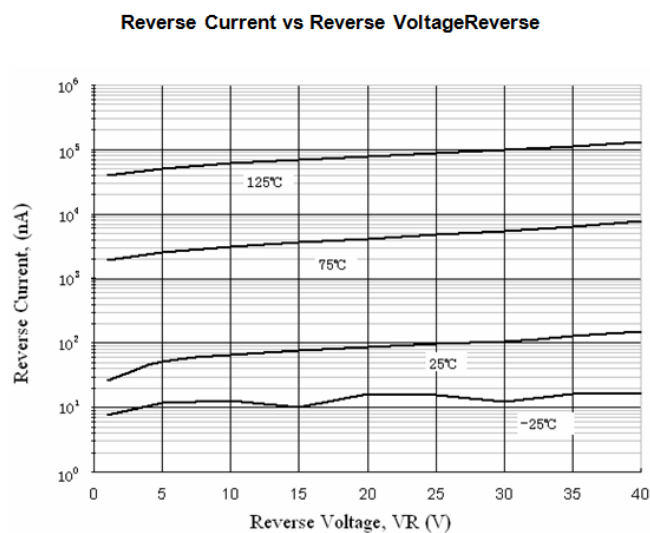
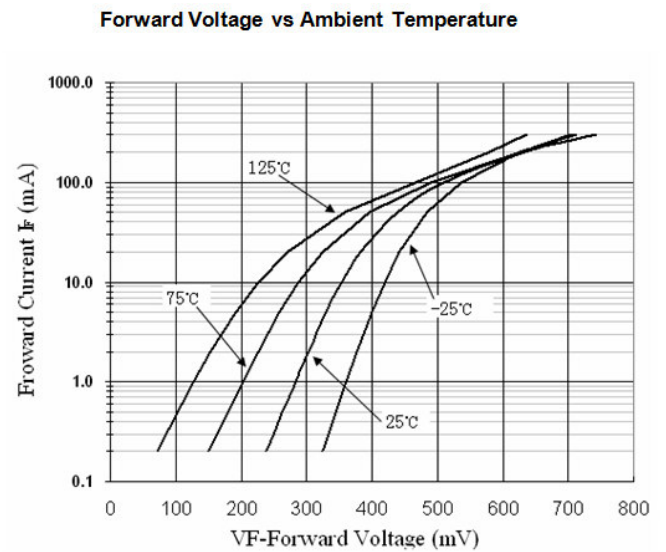
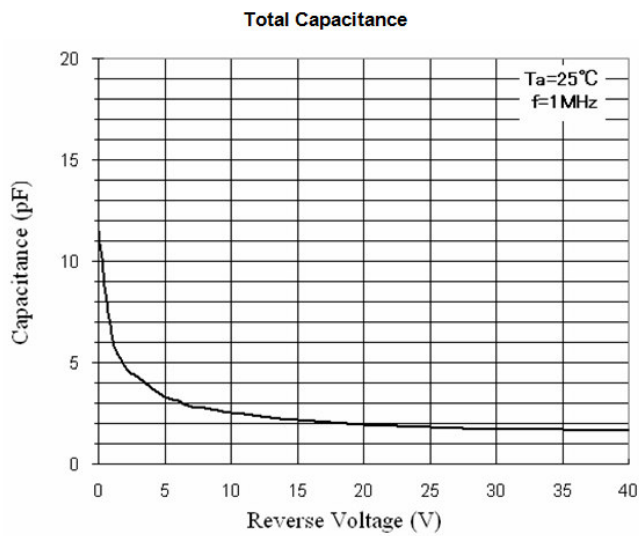
These ratings are limiting values above which the serviceability of the diode may be impaired.

Electrical Characteristics $T_A = 25^{\circ}\text{C}$ unless otherwise noted

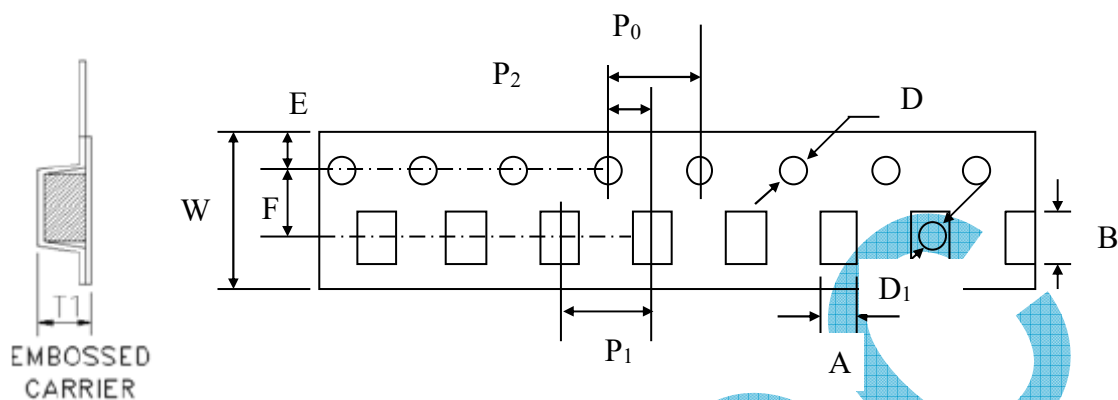
Symbol	Parameter	Test Condition	Limits		Unit
			Min	Max	
B_V	Breakdown Voltage	$I_R=10\mu\text{A}$	30		Volts
I_R	Reverse Leakage Current	$V_R=25\text{V}$		2	μA
V_F	Forward Voltage BAT54W	$I_F=0,1\text{mA}$		0,24	Volts
		$I_F=1\text{mA}$		0,32	
		$I_F=10\text{mA}$		0,40	
		$I_F=30\text{mA}$		0,50	
		$I_F=100\text{mA}$		0,80	
V_F	Forward Voltage BAT42W BAT43W BAT42W, BAT43W	$I_F=10\text{mA}$		0,40	Volts
		$I_F=50\text{mA}$		0,65	
		$I_F=2\text{mA}$		0,33	
		$I_F=15\text{mA}$		0,45	
		$I_F=200\text{mA}$	0,26	1,0	
T_{RR}	Reverse Recovery Time	$I_F=I_R=10\text{mA}$ $R_L=100\Omega$ $I_{RR}=1\text{mA}$		5	nS
C	Capacitance BAT42W, BAT43W	$V_R=1\text{V}$, $f=1\text{MHz}$		10 7	pF

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Typical Performance Characteristics



SPECIFICATION

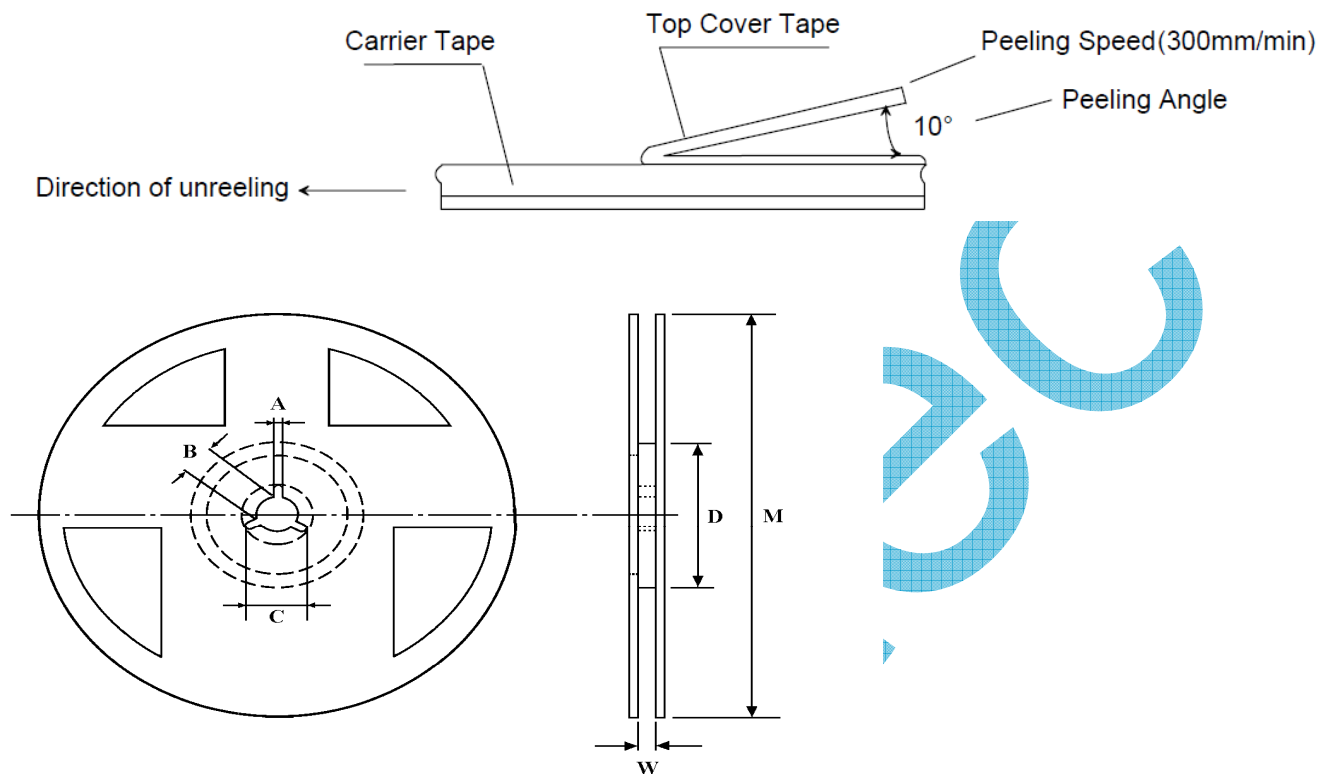
Tape And Reel Package

Type	A	B	W	E	F	P ₀	P ₁	P ₂	ΦD	ΦD ₁	T1
	1,85 ±0,1	3,94 ±0,1	8 ±0,30	1,75±0,01	3,5 ±0,05	4,00±0,10	4,00±0,10	2,00±0,05	1,55±0,03	1,5	1,58 ±0,1

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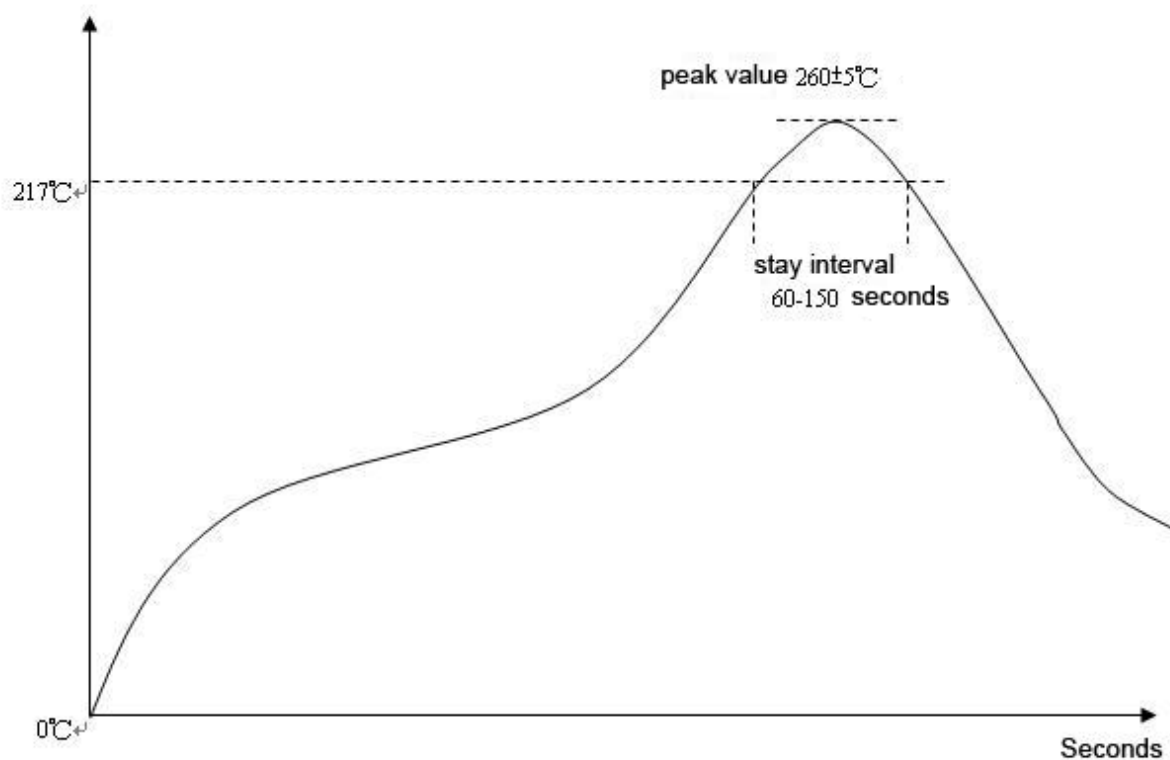
Cover Tape Peel off Strength

Specifications: peel force of top cover tape shall be between 8 to 40g
The peel speed shall be about 300mm/min \pm 5%



Type	Packaging	M	A	B	C	D	W	T
	Embossed	178,0 \pm 1,0	2 \pm 0,5	13,5 \pm 0,7	21 \pm 0,5	60,0 \pm 1,0	13,5 \pm 1,0	15,5 \pm 1,0

Lead Free Reflow Soldering Profile



Frel

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 $25^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and a relative humidity less than 80%RH

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