

FrelTec

Mathildenstr. 10A
82319 Starnberg
Germany

FrelTec

ESD
SOD523

SOD523

SPECIFICATION

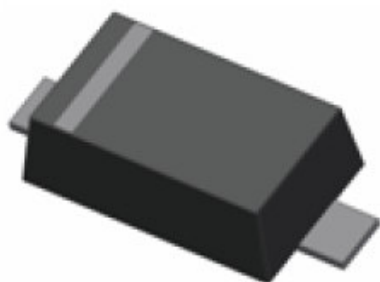
631	ESD5Z__xx	SD53	E03
Type	Type	Package	Packing
631: ESD	ESD5Z__	SOD523	E03: Embossed tape and reel for 3k pc (7' Reel)

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

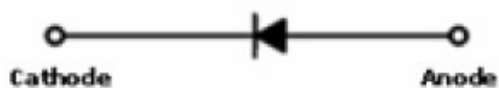
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PACKAGE OUTLINE

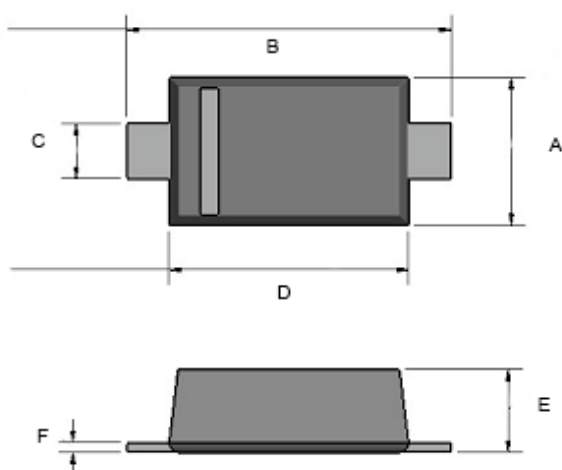
Green Product



SOD-523 Flat Lead



ELECTRICAL SYMBOL



DIM.	Unit(mm)	
	Min	Max
A	0,70	0,90
B	1,50	1,70
C	0,25	0,35
D	1,10	1,30
E	0,50	0,70
F		0,02

SOD523

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

Symbol	Parameter	Value	Units
V_{pp}	IEC61000-4-2(ESD) Air Contact	± 30 ± 30	KV
E_{SD}	Per Human Body Model Per Machine Model	16 400	KV V
P_D	Power Dissipation (Note 1)	150	mW
T_{STG}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	+150	$^\circ\text{C}$
T_L	Max Lead Solder Temperature range (10 Second Duration)	260	$^\circ\text{C}$

These ratings are limiting values above which the serviceability of the diode may be impaired.
Note 1. FR-5 = 1.0 x 0.75 x 0.62 in.

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

Device Type	V_{RWM} (Volts)	$I_R @ V_{RWM}$ (μA)	$V_{BR} @ I_T$ (Note 2) (Volts)	I_T (mA)	$V_C @ I_{PP+} = 5\text{A}$ (Volts)	I_{PP+} (A)	$V_C @ \text{Max } I_{PP+}$ (Volts)	P_{PK+} (W)	$C @ V_R = 0\text{V}, f = 1\text{MHz}$ (pF)
	Max	Max	Min	Typ,	Max	Max	Max	Max	Typ,
ESD5Z3V3	3,3	1	5,0	1,0	8,4	11,2	14,1	158	105
ESD5Z5V0	5,0	1	6,2	1,0	11,6	9,4	18,6	174	80
ESD5Z7V0	7,0	1	7,5	1,0	13,5	8,8	22,7	200	65

SURGE CURRENT WAVEFORM:

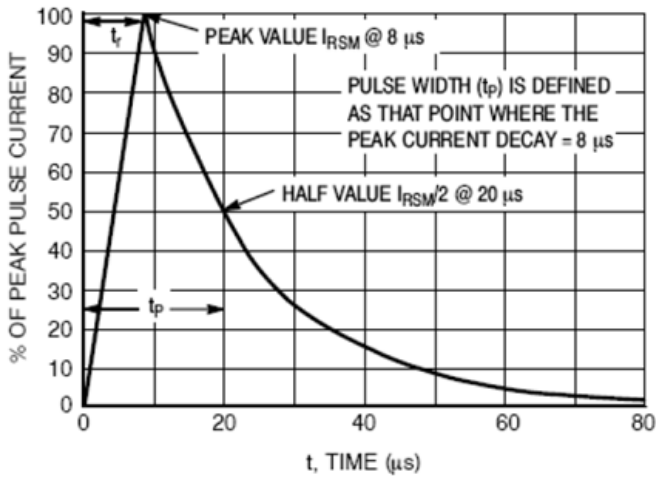
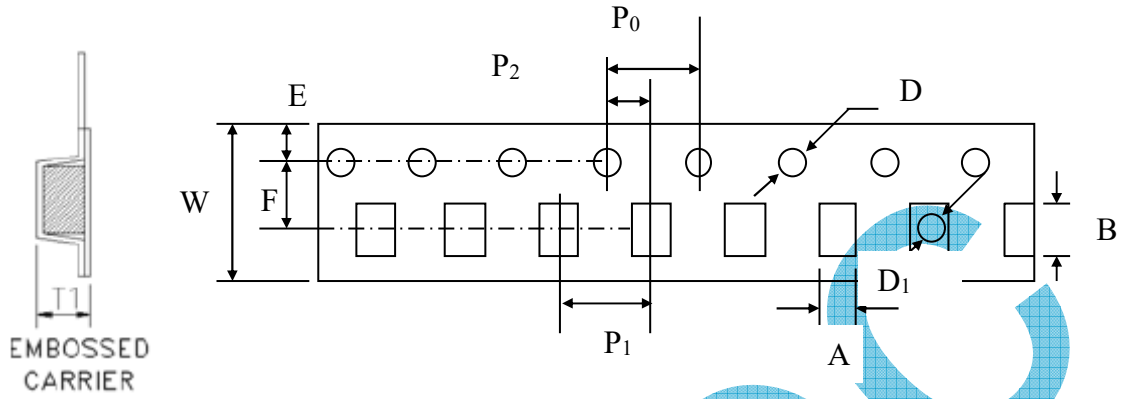


Figure 1. 8 x 20 µs Pulse Waveform

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SPECIFICATION

Tape And Reel Package



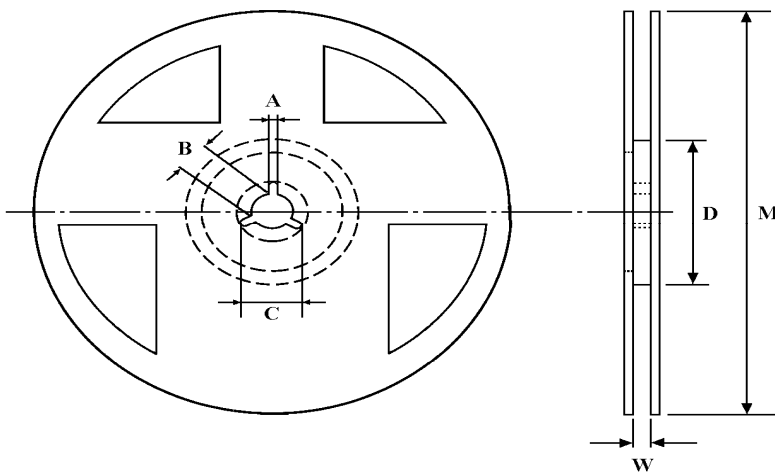
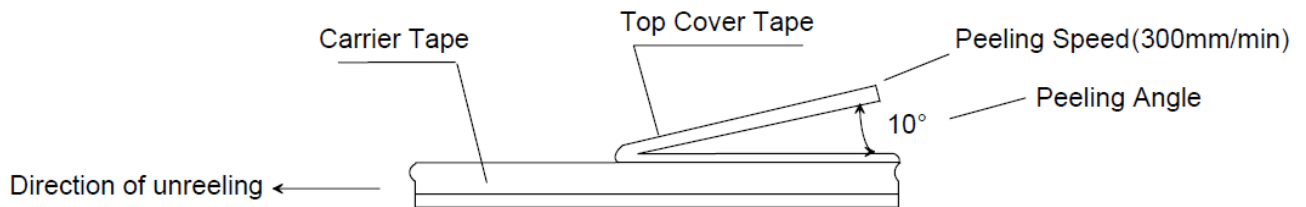
Type	A	B	W	E	F	P ₀	P ₁	P ₂	ΦD	ΦD ₁	T1
	1,85 ±0,1	3,94 ±0,1	8 ±0,30	1,75±0,01	3,5 ±0,05	4,00±0,10	4,00±0,10	2,00±0,05	1,55±0,03	1,5	1,58 ±0,1

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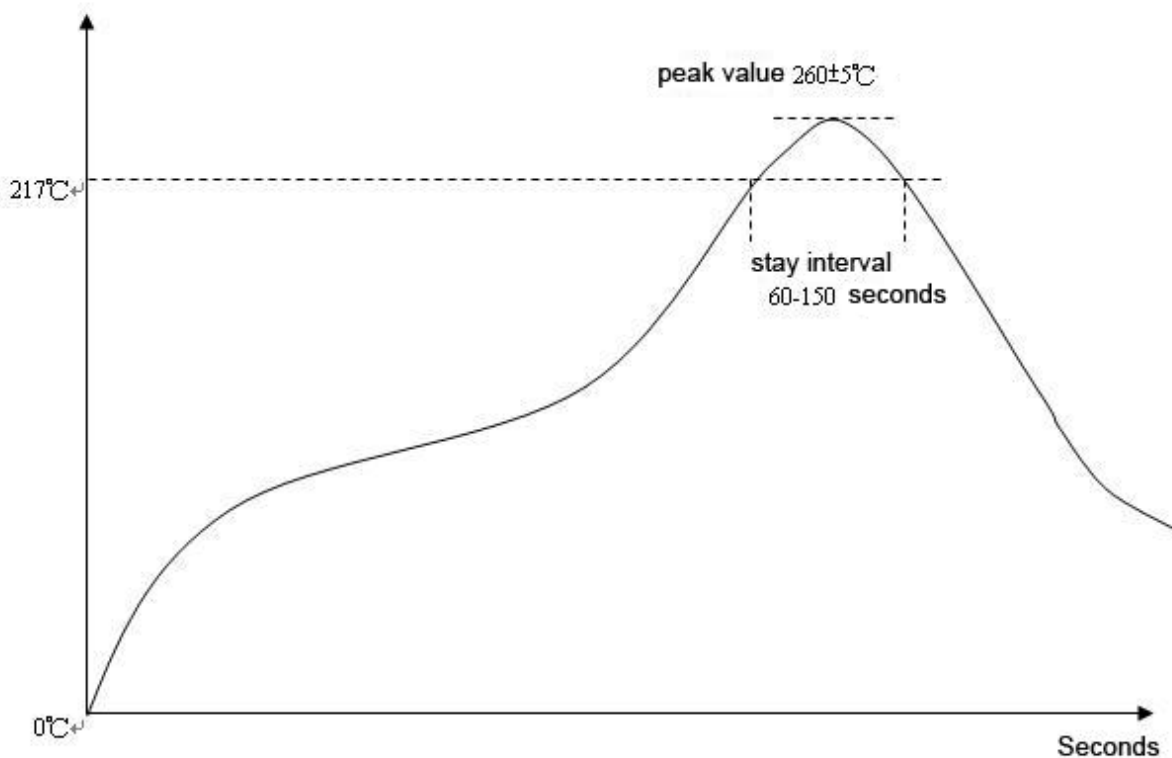
Cover Tape Peel off Strength

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



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

Lead Free Reflow Soldering Profile



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

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