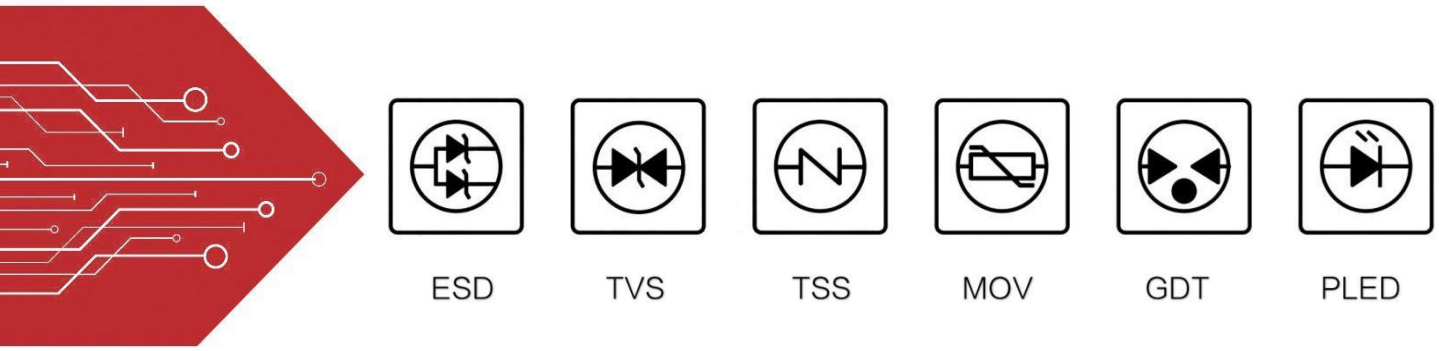
MSKSEMI
SEMICONDUCTOR

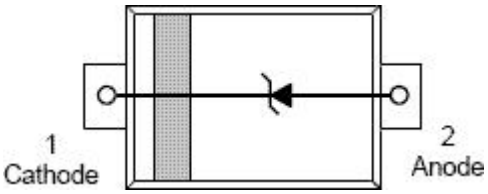


Product data sheet

Applications

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

SOD-523



Features

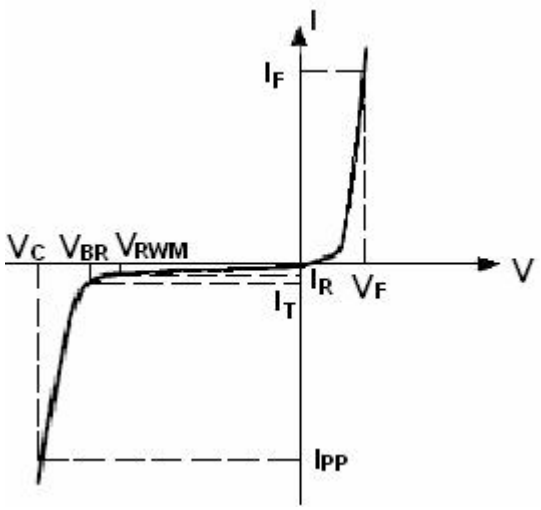
- Small Body Outline Dimensions
- Low Body Height
- Stand−off Voltage: 2.5 V − 12 V
- Peak Power up to 200 Watts @ 8 x 20 _s Pulse
- Low Leakage
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- IEC61000−4−2 Level 4 ESD Protection
- IEC61000−4−4 Level 4 EFT Protection
- We declare that the material of product compliance with RoHS requirements.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20μs)	200	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_{op}	Operating Temperature Range	-40 to +125	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	±15 ±8	KV
	IEC61000-4-4 (EFT)	40	A
	ESD Voltage Per Human Body Model	16	KV

Electrical Parameter

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
I_F	Forward Current
V_F	Forward Voltage @ I_F



Electrical Characteristics

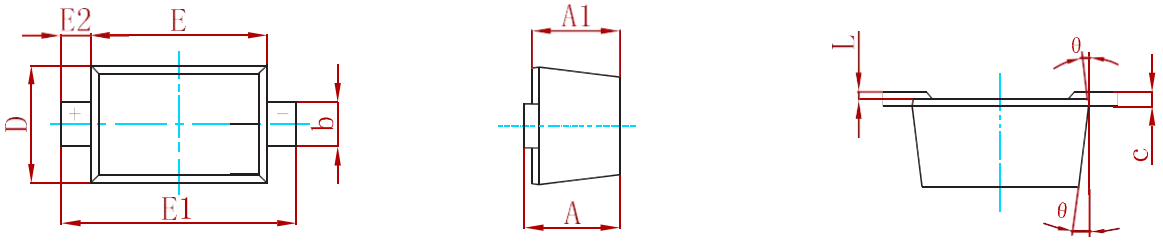
Ratings at 25°C ambient temperature unless otherwise specified.VF = 0.9V at IF = 10mA

Device	Device Marking	V_{RWM} (V)	I_R(uA) @ V_{RWM}	V_{BR} (V)@ I_T (Note 1)	I_T	V_C (V) @ I_{PP}=5 A*	V_C (V) @ Max I_{PP}*	I_{PP} (A)*	P_{PK} (W)*	C (pF)
		Max	Max	Min	mA	Typ	Max	Max	Max	Typ
ESD5Z2V5-MS	ZD	2.5	6.0	4.0	1.0	6.5	10.9	11.0	120	145
ESD5Z3V3-MS	ZE	3.3	1.0	5.0	1.0	8.4	14.1	11.2	158	105
ESD5Z5V0-MS	ZF	5.0	1.0	6.2	1.0	11.6	18.6	9.4	174	80
ESD5Z6V0-MS	ZG	6.0	1.0	6.8	1.0	12.4	20.5	8.8	181	70
ESD5Z7V0-MS	ZH	7.0	1.0	7.5	1.0	13.5	22.7	8.8	200	65
ESD5Z12V-MS	ZM	12	1.0	13.5	1.0	17	25	9.6	240	55

*Surge current waveform per Figure 1.

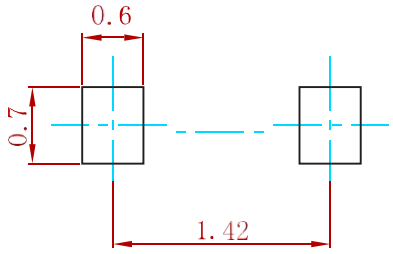
1. V_{BR} is measured with a pluse test current I_T at an ambient temperature of 25℃.

PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
0	7° REF		7° REF	

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
ESD5ZXXX-MS	SOD-523	3000

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