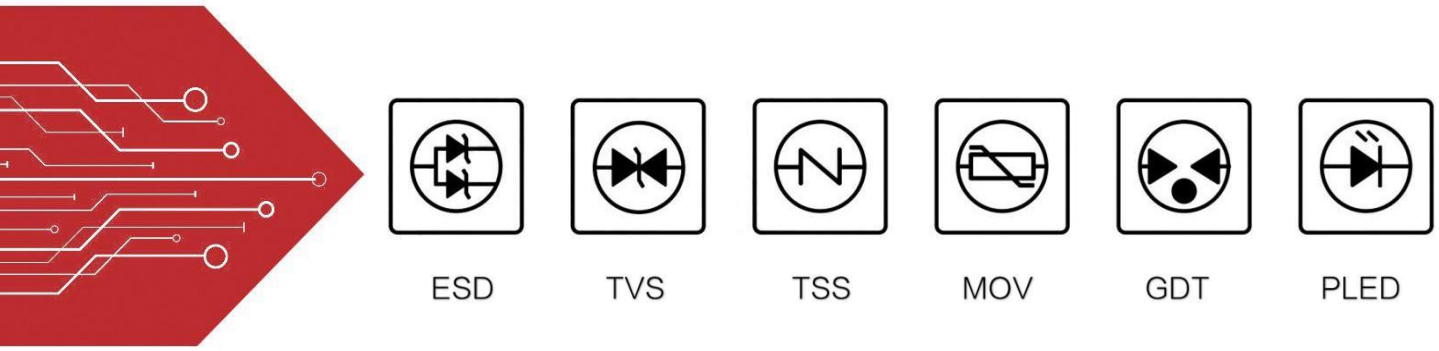
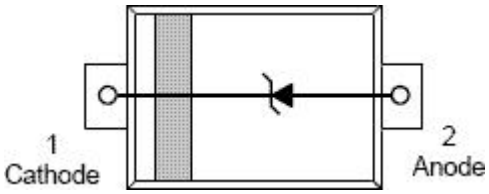
MSKSEMI
SEMICONDUCTOR



Product data sheet

SOD-523



Applications

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

Features

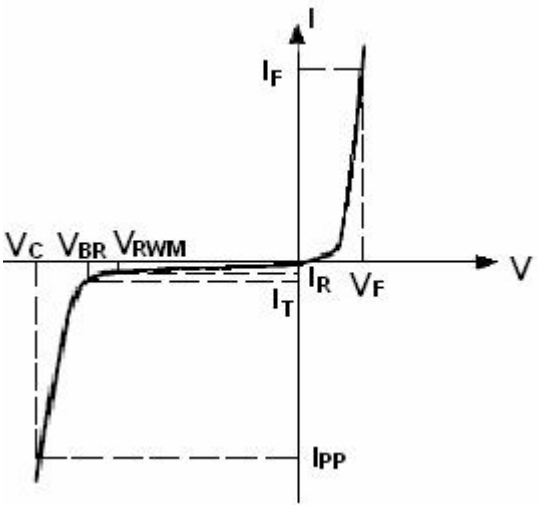
- Small Body Outline Dimensions
- Low Body Height
- Stand−off Voltage: 2.5 V − 12 V
- Peak Power up to 200 Watts @ 8 x 20 _s Pulse
- Low Leakage
- Response Time is Typically < 1 ns
- ESD Rating of Class 3 (> 16 kV) per Human Body Model
- IEC61000−4−2 Level 4 ESD Protection
- IEC61000−4−4 Level 4 EFT 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



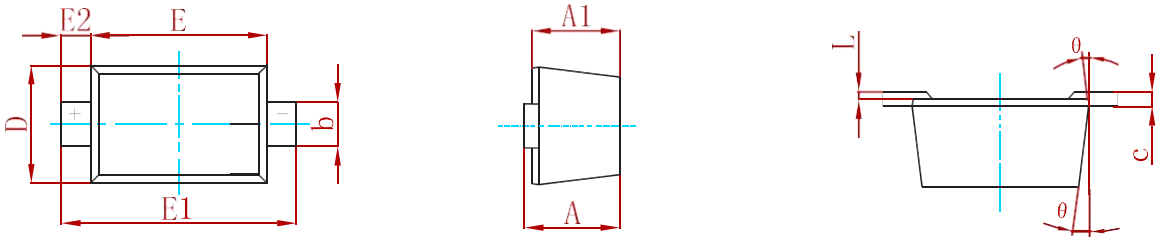
Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.VF = 0.9V at IF = 10mA

P/N	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
ESD5Z2.5T1G	ZD	2.5	6.0	4.0	1.0	6.5	10.9	11.0	120	145
ESD5Z3.3T1G	ZE	3.3	1.0	5.0	1.0	8.4	14.1	11.2	158	105
ESD5Z5.0T1G	ZF	5.0	1.0	6.2	1.0	11.6	18.6	9.4	174	80
ESD5Z6.0T1G	ZG	6.0	1.0	6.8	1.0	12.4	20.5	8.8	181	70
ESD527.0T1G	ZH	7.0	1.0	7.5	1.0	13.5	22.7	8.8	200	65
ESD5Z12T1G	ZM	12	1.0	13.5	1.0	17	25	9.6	240	55

*Surge current waveform per Figure 1.

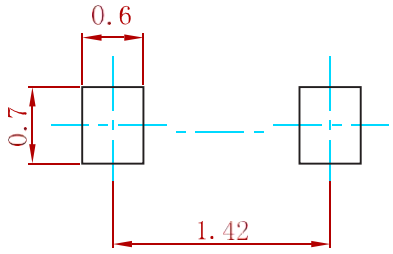
1. V_{BR} is measured with a pluse test current I_T at an ambient temperature of 25℃.

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
ESD5ZXXXT1G	SOD-523	3000

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