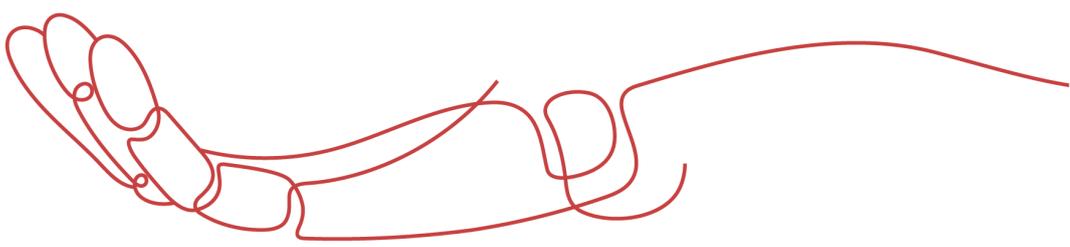


## PRODUCT DATA SHEET



To learn more about JGSEMI, please visit our website at



**Datasheet**



**Resources**

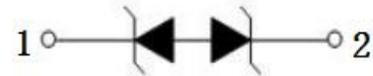


**Samples**

Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at [www.jg-semi.cn](http://www.jg-semi.cn). Please email any questions regarding the system integration to [JINGAO\\_questions@jgsemi.com](mailto:JINGAO_questions@jgsemi.com).

**FEATURES**

- Bi-directional ESD protection of one line
- Low capacitance: 15pF(Max.)
- Reverse stand-off voltage: 3.3V
- Low reverse clamping voltage
- Low leakage current
- Fast response time
- JESD22-A114-B ESD Rating of class 3B per human body model
- IEC 61000-4-2 Level 4 ESD protection


**SOD523 PINNING**

PIN	DESCRIPTION
1	Cathode
2	Anode

**APPLICATIONS**

- Computers and peripherals
- High speed data lines
- Audio and video equipment
- Cellular handsets and accessories
- Subscriber identity module(SIM) card protection
- Portable electronics
- FireWire
- Other electronics equipments communication systems

**MAXIMUM RATINGS (  $T_a=25^{\circ}\text{C}$  unless otherwise noted )**

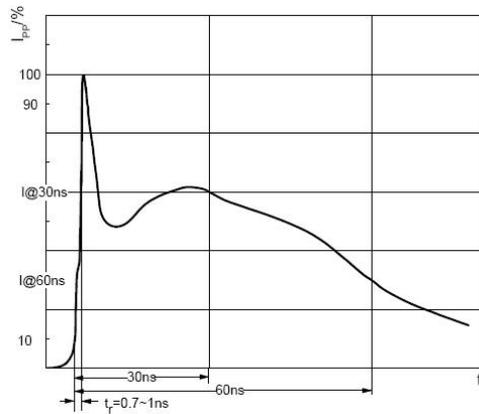
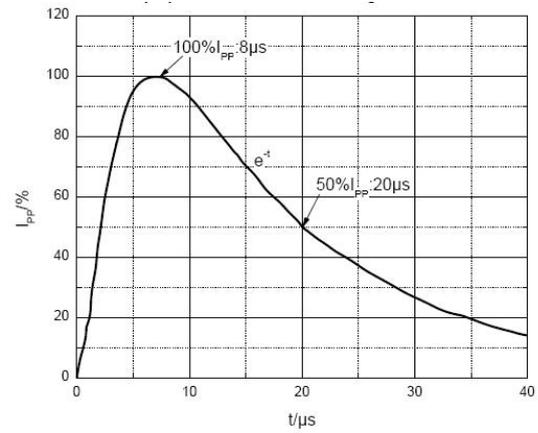
Parameter	Symbol	Limit	Unit	
IEC 61000-4-2 ESD Voltage	$V_{\text{ESD}}^{(1)}$	Air Model	$\pm 25$	kV
		Contact Model	$\pm 25$	
		Per Human Body Model	$\pm 16$	
		Machine Model	$\pm 0.4$	
Peak Pulse Power	$P_{\text{PP}}^{(2)}$	70	W	
Peak Pulse Current	$I_{\text{PP}}^{(2)}$	7	A	
Lead Solder Temperature – Maximum (10 Second Duration)	$T_L$	260	$^{\circ}\text{C}$	
Junction Temperature	$T_j$	150	$^{\circ}\text{C}$	
Storage Temperature Range	$T_{\text{stg}}$	-55 ~ +150	$^{\circ}\text{C}$	

(1).Device stressed with ten non-repetitive ESD pulses.

(2).Non-repetitive current pulse 8/20 $\mu\text{s}$  exponential decay waveform according to IEC61000-4-5.

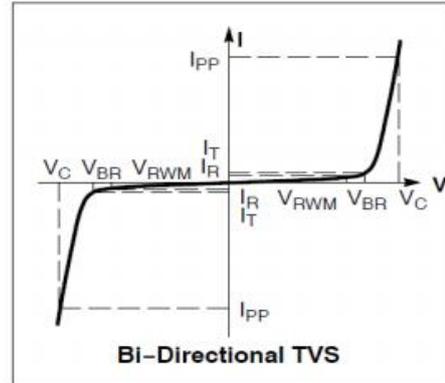
**ESD standards compliance**
**IEC61000-4-2 Standard**

Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15


**ESD pulse waveform according to IEC61000-4-2**

**8/20 $\mu s$  pulse waveform according to IEC 61000-4-5**

**ELECTRICAL CHARACTERISTICS(Ta=25°C unless otherwise specified)**

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 @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$P_{pk}$	Peak Power Dissipation
C	Capacitance @ $V_R = 0$ and $f = 1.0$ MHz

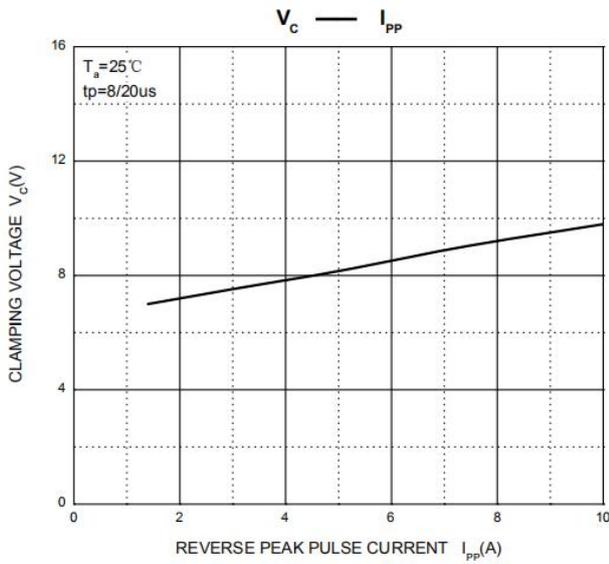
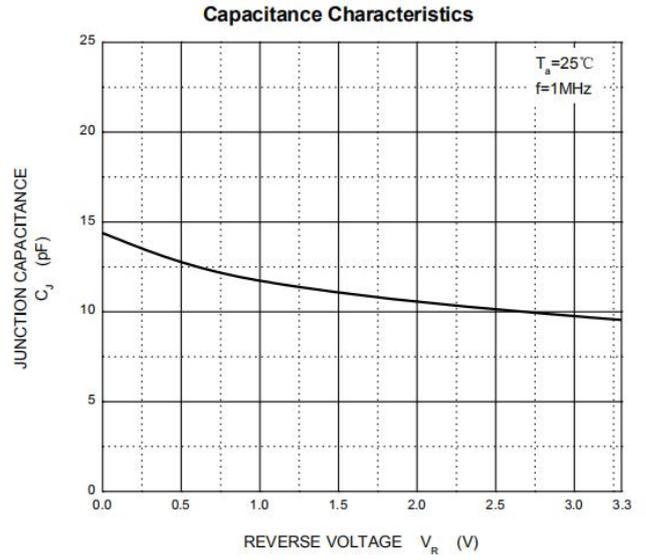
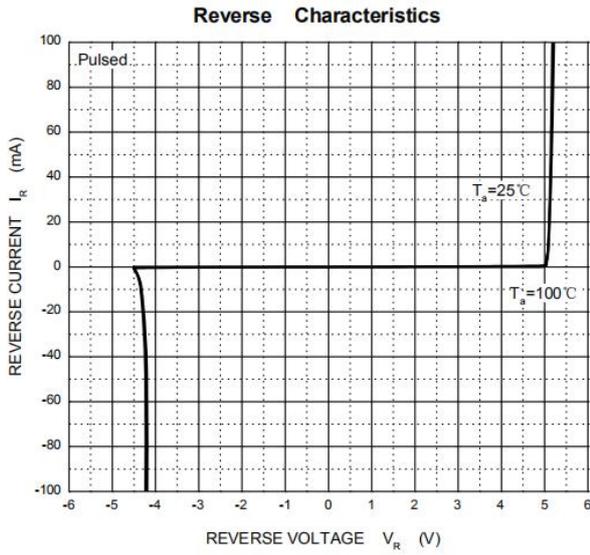


Item	Symbol	Test Conditions	Criterion			Unit
			Min	Typ	Max	
最大峰值功率	$P_{PK}$	$I_{pp}=8A, t_p=8/20\mu s$			100	W
维持电压	$V_{RWM}$				3.3	V
击穿电压	$V_{BR}$	$I_t=1mA$	3.5	4.1	5	V
漏电流	$I_R$	$V_{RWM}=\pm 3.3V$			0.1	$\mu A$
钳位电压	$V_C$	$I_{pp}=1A, t_p=8/20\mu s$			6.5	V
钳位电压	$V_C$	$I_{pp}=10A, t_p=8/20\mu s$		8	10	V
电容	$C_j$	$V_R=0V, f=1Mz$		15	20	pF

(1).Other voltages available upon request.

(2).Non-repetitive current pulse 8/20 $\mu s$  exponential decay waveform according to IEC61000-4-5

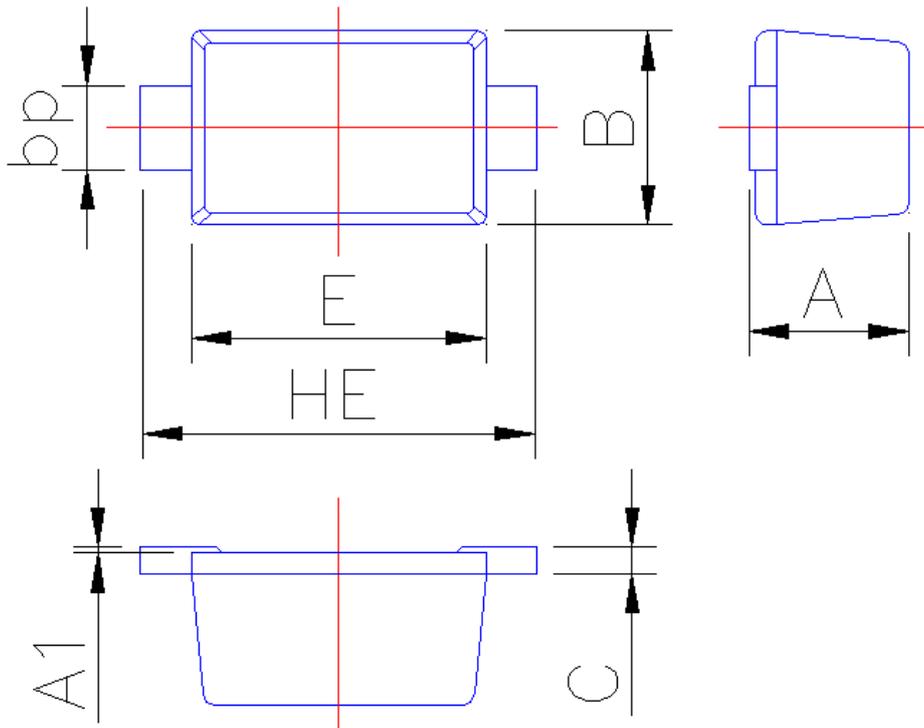
**TYPICAL CHARACTERISTICS**



**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SOD-523



Symbol	Dimension in Millimeters	
	Min	Max
A	0.60	0.70
A1	0	0.05
B	0.75	0.85
bp	0.25	0.40
C	0.09	0.15
E	1.15	1.25
HE	1.50	1.70

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