



Transient Voltage Suppressors for ESD Protection

General Description

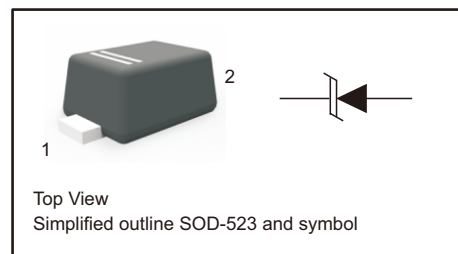
Designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. The combination of small size, high level of ESD protection makes them a flexible solution for applications such as Digital cameras, cellular phones, and MP3 Players. It is designed to replace multiplayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

Features

- Uni-directional ESD protection of one line
- Reverse stand off voltage: 12V
- Low reverse clamping voltage
- Low leakage current
- Fast response time
- IEC 61000-4-2 Level 4 ESD protection

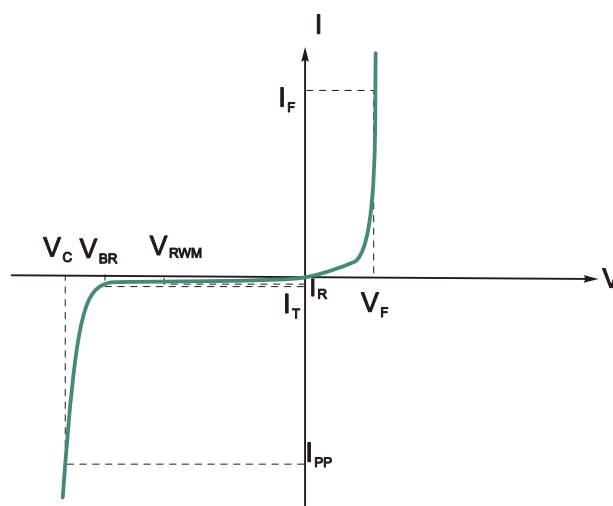
PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Electronics Parameter

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





Absolute Maximum Ratings And Characteristics (Ta = 25 °C)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μS)	P _{pk}	220	W
Peak Pulse Current	I _{pp}	9	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	±25 ±25	KV
Operating Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse stand-off voltage	V _{RWM}				12	V
Breakdown Voltage	V _{BR}	I _T =1mA	14.1		16.5	V
Reverse Leakage Current	I _R	V=V _{RWM} , Ta=25°C			1.0	uA
Forward voltage	V _F	I _F =10mA, Ta=25°C			0.9	V
Clamping Voltage	V _C	I _{PP} =9A, t _p =8/20us			24	V
Junction Capacitance	C _j	V _R =0V, f=1MHz		45		pF

Fig.1 Pulse Waveform

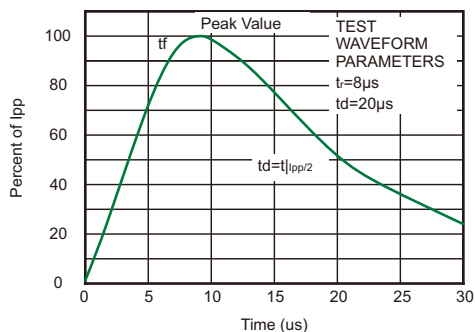
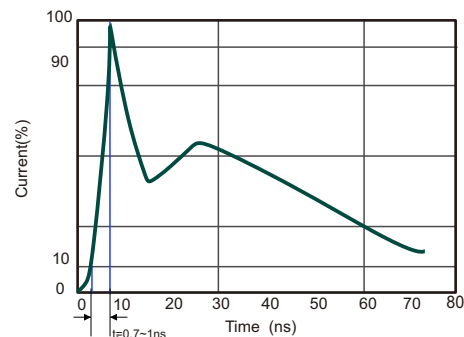


Fig.2 Contact discharge current waveform per IEC61000-4-2

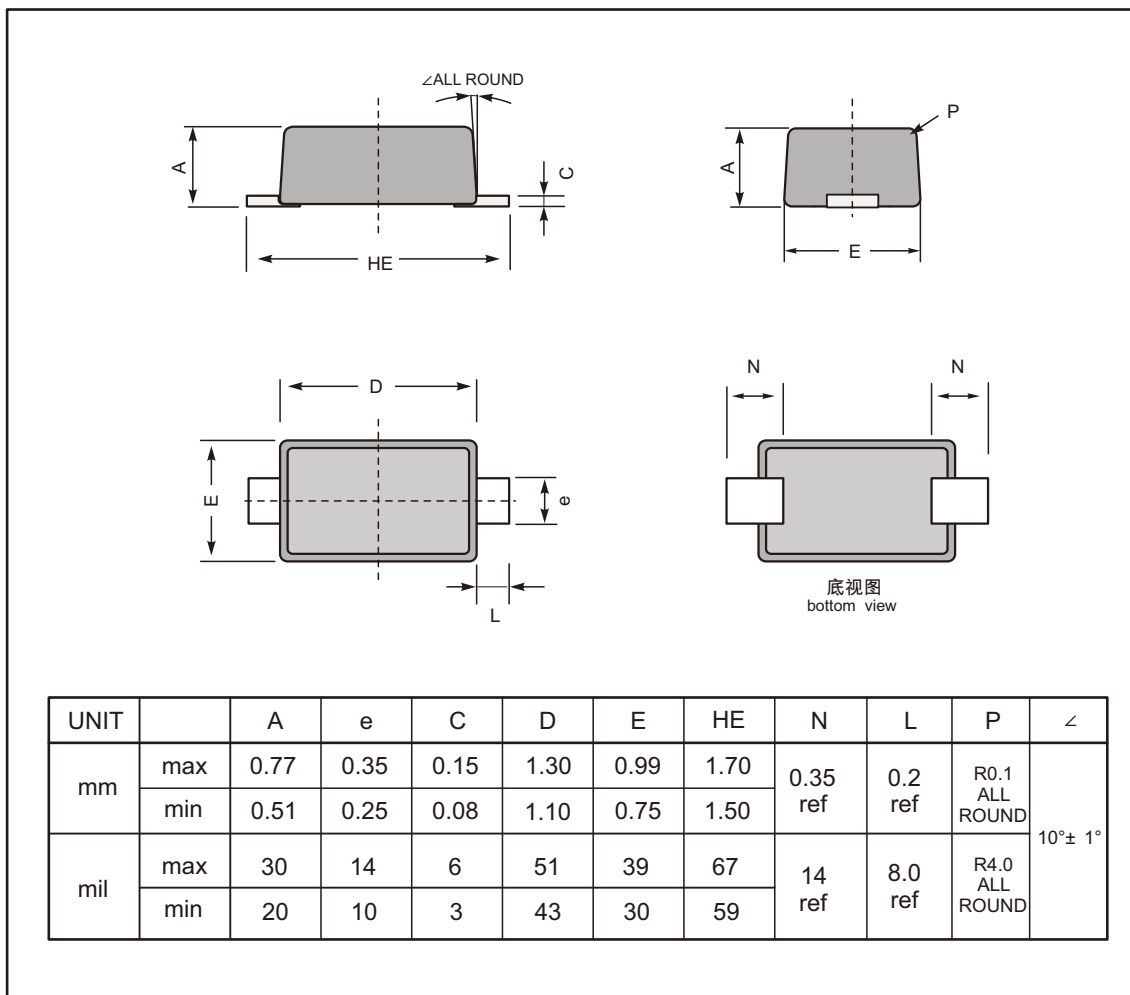




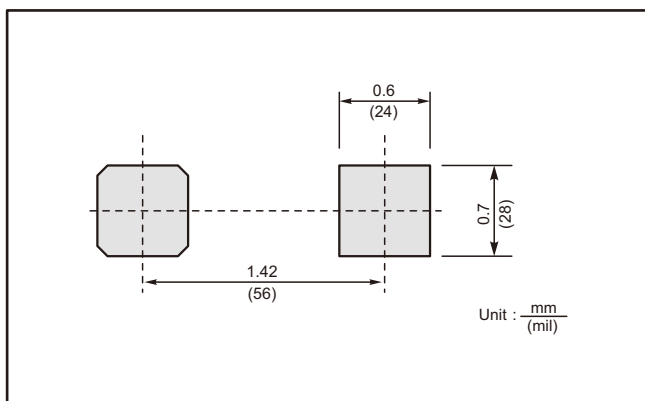
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-523



The recommended mounting pad size



Marking

Type number	Marking code
ESD12V0D5	12



Important Notice and Disclaimer

Jingdao Microelectronics reserves the right to make changes to this document and its products and specifications at any time without notice.

Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Jingdao Microelectronics makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Jingdao Microelectronics assume any liability for application assistance or customer product design.

Jingdao Microelectronics does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Jingdao Microelectronics.

Jingdao Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of Jingdao Microelectronics.