



Transient Voltage Suppressors for ESD Protection

General Description

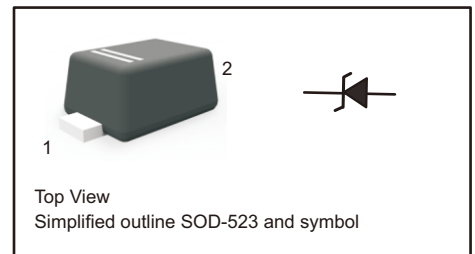
The ESD5V0D5LP is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium.

Features

- 170 Watts peak pulse power ($t_p = 8/20\mu s$)
- Uni-directional ESD protection of one line
- IEC 61000-4-2 (ESD) $\pm 30kV$ (air), $\pm 30kV$ (contact)
- Suitable replacement for MLV's in ESD protection applications

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



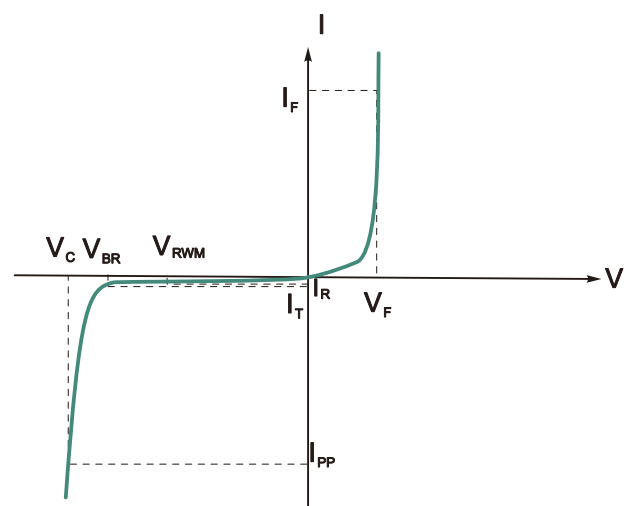
- Working voltages: 5V
- Low leakage current
- Low clamping voltage

APPLICATIONS

- Computers and peripherals
- Audio and video equipment
- Cellular handsets and accessories
- Portable electronics
- Other electronics equipments communication systems

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





MAXIMUM RATINGS(Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μS)	Ppk	170	W
Peak Pulse Current	Ipp	13	A
ESD per IEC 61000-4-2(Air)	VESD	±30	KV
ESD per IEC 61000-4-2(Contact)		±30	
Operating Temperature Range	TJ	-55~+150	°C
Storage Temperature Range	Tstg	-55~+150	°C

ELECTRICAL CHARACTERISTICS(Ta=25°C unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse Stand-off Voltage	VRWM				5	V
Breakdown Voltage	VBR	IT=1mA	6.2		7.3	V
Reverse Leakage Current	IR	V=VRWM, Ta=25°C			10	μA
Clamping Voltage	VC	IPP=13A, tp=8/20μs			13	V
Junction Capacitance	Cj	VR=0V , f=1MHz		95		pF



Fig.1 Typical Instaneous Forward Characteristics

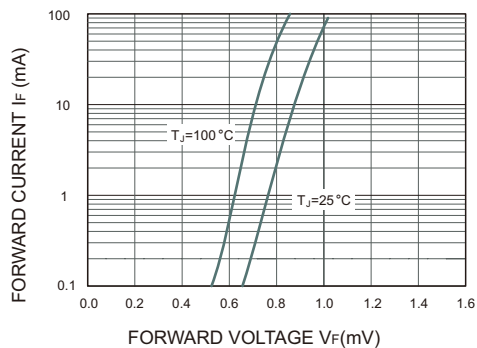


Fig.2 Typical Reverse Characteristics

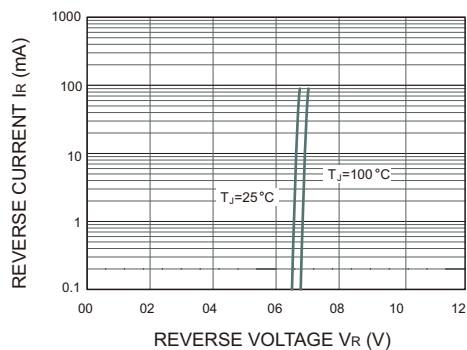


Fig.3 V_c — I_{PP}

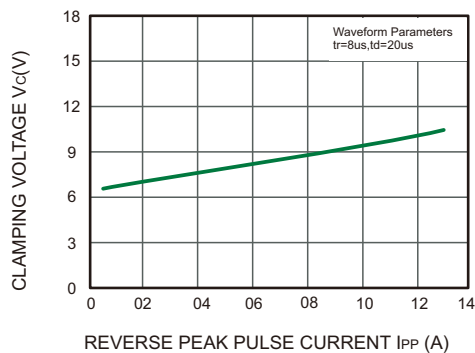
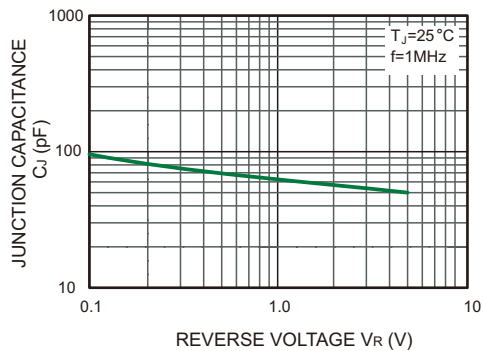


Fig.4 Typical Junction Capacitance

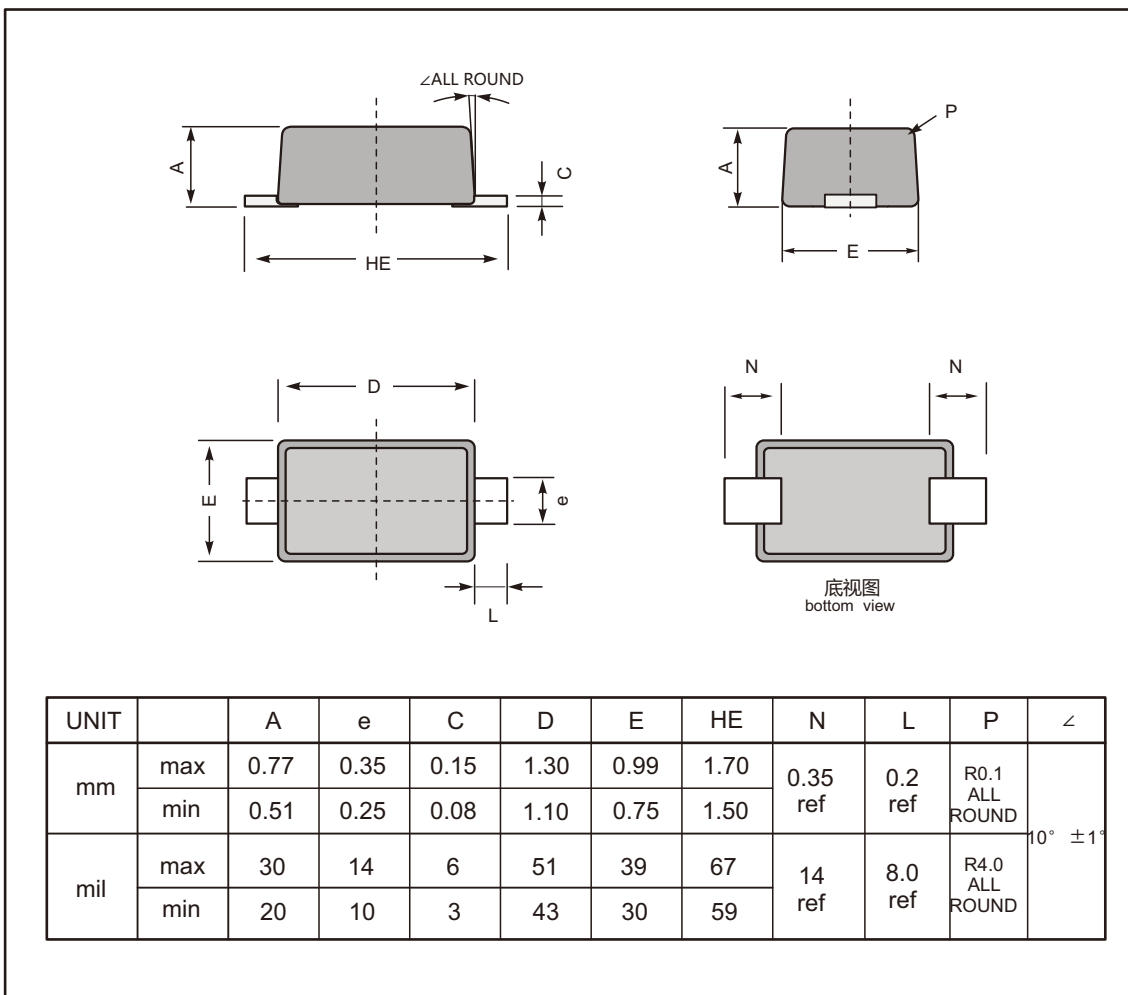




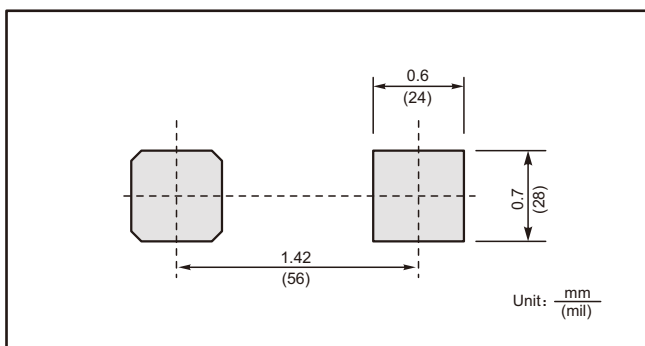
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-523



The recommended mounting pad size



Marking

Type number	Marking code
ESD5V0D5LP	50



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