

Bi-Directional TVS Diode

1 Features

- Working voltage: 5V
- SOD-323 Package
- 140 Watts peak pulse power ($t_p=8/20\mu s$)
- Transient protection for data lines to
 - IEC 61000-4-2 (ESD) $\pm 30kV$ (air)
 - $\pm 30kV$ (contact)
 - IEC61000-4-4(EFT)40A(5/50ns)
- Low leakage current
- Low clamping voltage
- Solid-state silicon-avalanche technology

2 Applications

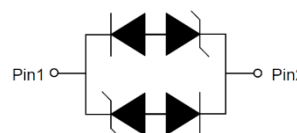
- End Equipment
 - Power lines
 - Personal digital assistants (PDA's)
 - Microprocessors based equipment
 - Notebooks, Desktops, and Servers
 - Cell phone Handsets and Accessories
 - Portable Electronics
 - Peripheral

3 Description

The SLVD35LCBL TVS diode is designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebooks, and PDA's. It offers superior electrical characteristics such as low clamping voltage, low leakage current and high surge capability. It is designed to protect sensitive electronic

components which are connected to power lines, from over-stress caused by ESD (Electrostatic Discharge), EFT (Electrical Fast Transients) and Lightning.

4 Pin Configuration and Bottom View



SOD-323

5 Device Information

PART NUMBER	PACKAGE	BODY SIZE (NOM)
SLVD35LCBL	SOD-323	2.50 mm x 1.30mm

6 Absolute maximum Ratings @25°C

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p=8/20 \mu s$)	P_{PP}	140	W
Operating Temperature	T_J	-55 to 125	°C
Lead Soldering Temperature	T_L	260 (10 s)	°C
Storage Temperature	T_{STG}	-55 to 150	°C
ESD Protection-Contact Discharge	V_{ESD}	± 30	kV
ESD Protection-Air Discharge	V_{ESD}	± 30	kV

7 Electrical characteristics (@25°C unless otherwise specified)

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Peak Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_R = 1\text{mA}$	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$, $T=25^\circ\text{C}$			1	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$, $t_P = 8/20\mu\text{s}$		8	9.8	V
Clamping Voltage	V_C	$I_{PP} = 8\text{A}$, $t_P = 8/20\mu\text{s}$		17	18.5	V
Junction Capacitance	C_j	$V_R=0\text{V}$, $f = 1\text{MHz}$			1.5	pF

8 Typical Characteristics

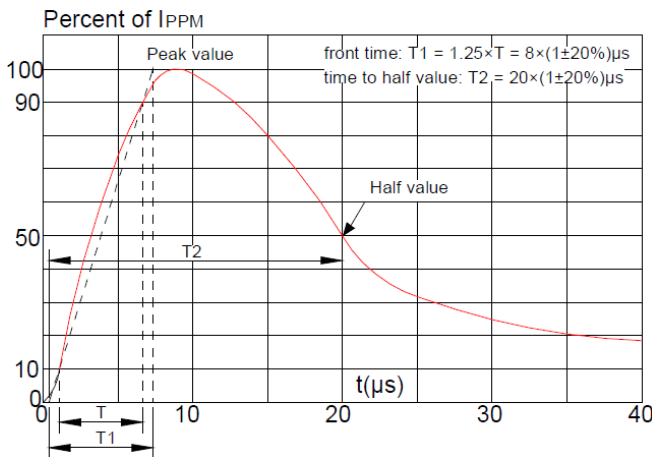


Fig1. Pulse Waveform (8/20us)

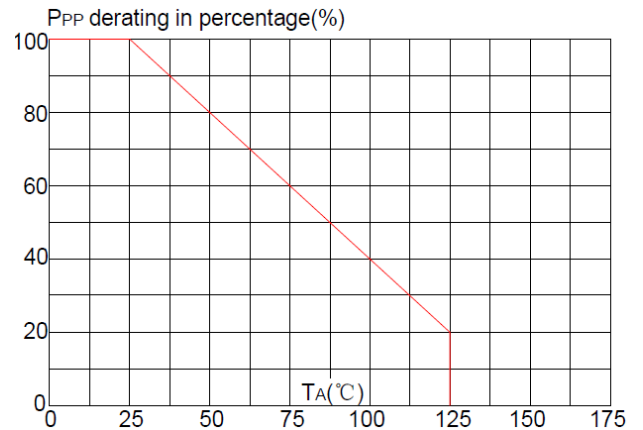


Fig2. Pulse Derating Curve

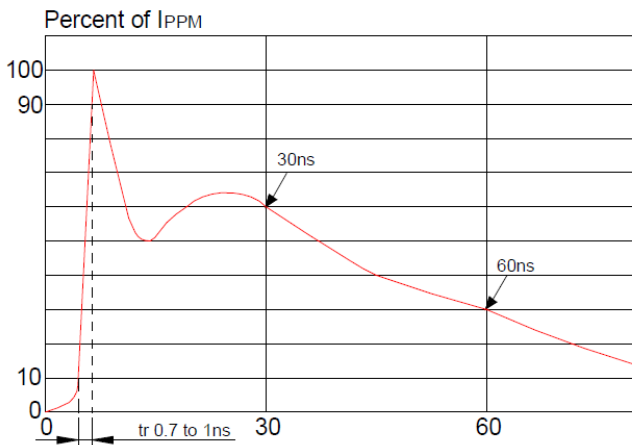
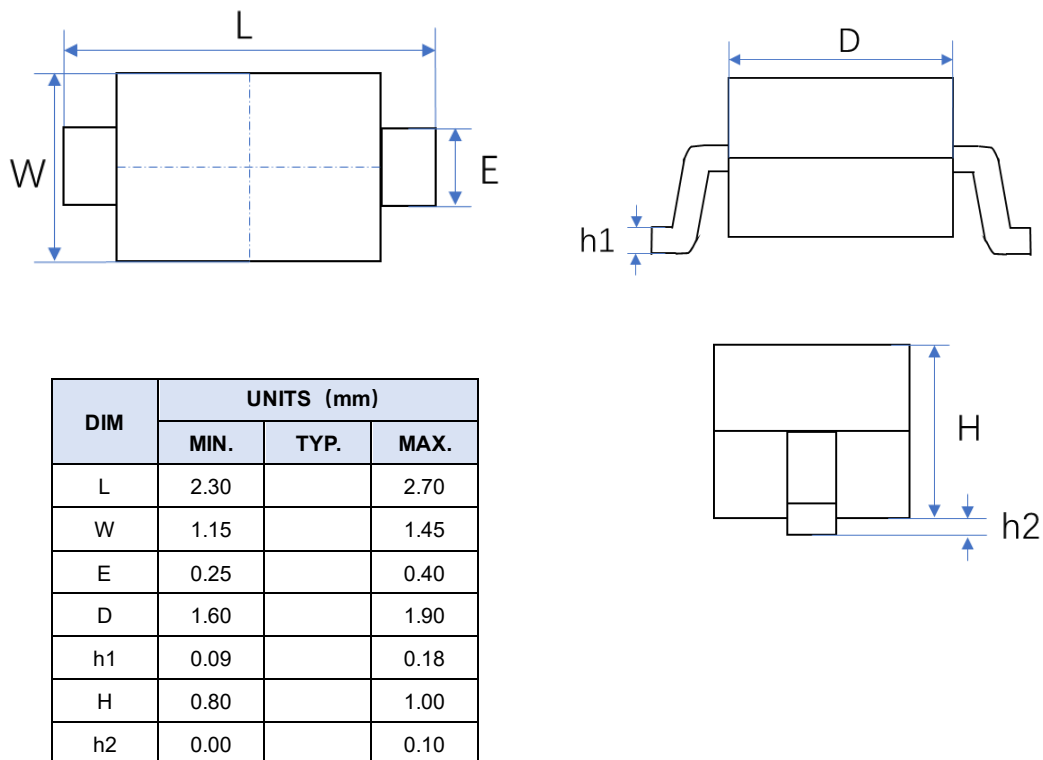
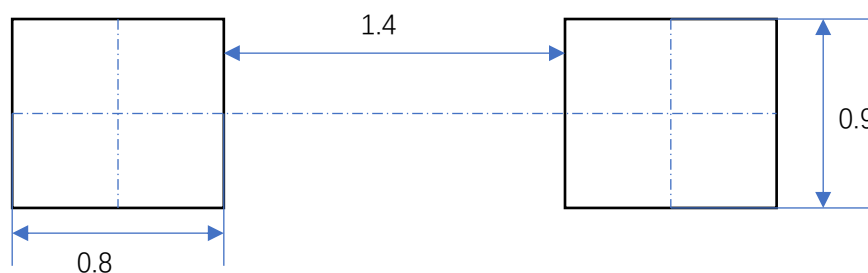


Fig3. ESD Clamping(8kV Contact Discharge)

9 Product dimension



10 PCB Layout Footprints (Units: mm)



11 Ordering Information

Part Number	Packaging	Reel Size
SLVD35LCBL	3000/Tape & Reel	7 inch