

## Electrostatic Discharged Protection Devices (ESD) Data Sheet

### Description

The LBD8A24L01 of Transient Voltage Suppressors is designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computer, and PDAs.

It offer superior electrical characteristics such as lower clamping voltage and no device degradation when compared to MLVs.

It is designed to protect sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD), lightning, electrical fast transients (EFT), and cable discharge events (CDE).

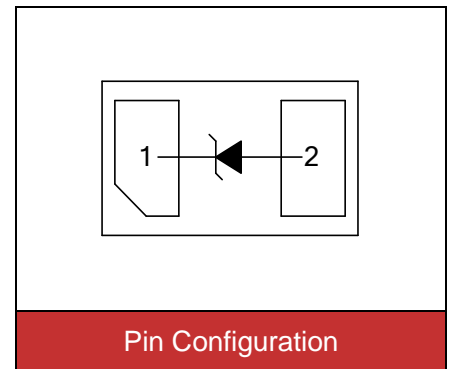


Contact : ±8kV  
Air : ±15kV



### Features

- IEC61000-4-2 ESD 15KV Air, 8KV contact compliance
- SOD882 surface mount package
- Working voltage: 24V
- Low leakage current
- Low operating and clamping voltages
- Solid-state silicon avalanche technology
- Lead Free/RoHS compliant
- Solder reflow temperature: Pure Tin-Sn, 260~270°C
- Flammability rating UL 94V-0
- Meets MSL level 1, per J-STD-020
- Marking: L4



### Maximum Ratings

Rating	Symbol	Value	Unit
ESD voltage (Contact discharge)	$V_{ESD}$	$\pm 8$	kV
ESD voltage (Air discharge)		$\pm 15$	
Storage & operating temperature range	$T_{STG}, T_J$	-55~+150	°C

**Electrical Characteristics (T<sub>J</sub>=25°C)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V <sub>RWM</sub>				24	V
Reverse breakdown voltage	V <sub>BR</sub>	I <sub>BR</sub> =1mA	26			V
Reverse leakage current	I <sub>R</sub>	V <sub>R</sub> =24V			1	μA
Clamping voltage (t <sub>p</sub> =8/20μs)	V <sub>C</sub>	I <sub>PP</sub> =1A			45	V
Clamping voltage (t <sub>p</sub> =8/20μs)	V <sub>C</sub>	I <sub>PP</sub> =3A			56	V
Peak Pulse Current(t <sub>p</sub> =8/20μs)	I <sub>PP</sub>				3	A
Off state junction capacitance	C <sub>J</sub>	0Vdc,f=1MHz		30		pF

**Typical Characteristics Curves**

Figure 1. Pulse Waveforms

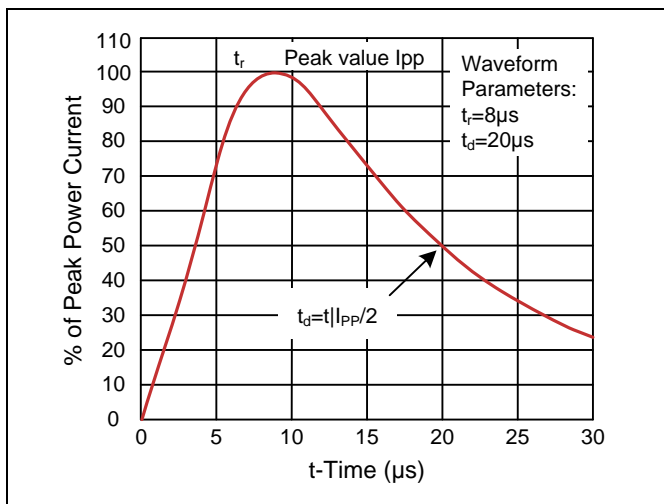


Figure 2. Clamping Voltage vs. Peak Pulse Current

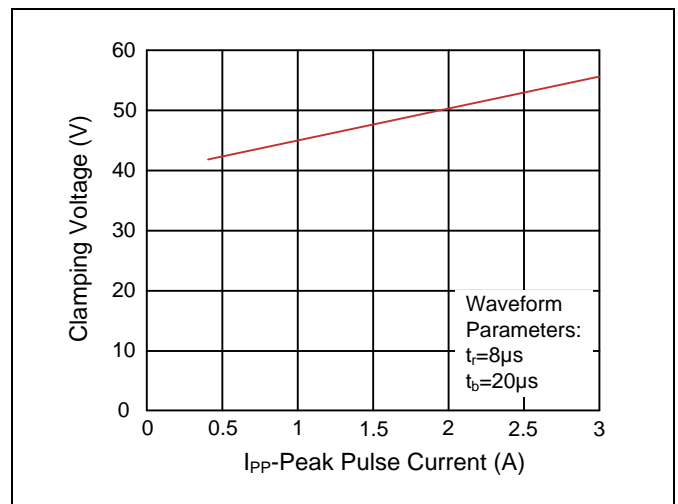


Figure 3. Capacitance vs. Reverse Voltage

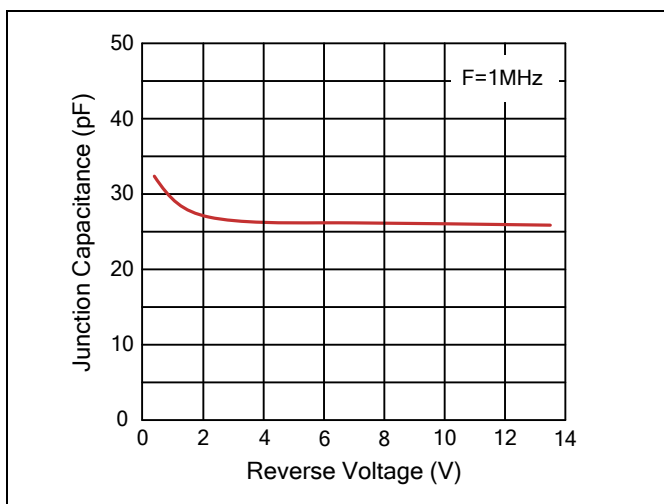
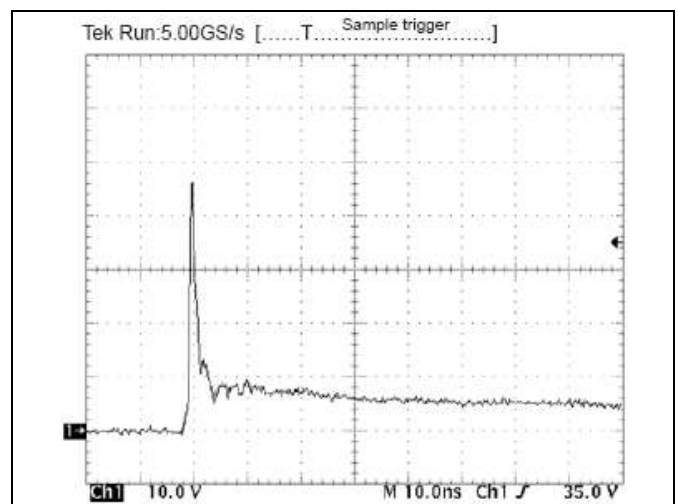


Figure 4. ESD Clamping(8kV Contact IEC61000-4-2)



**Dimensions (SOD882)**

	Dimension (mm)				
	Symbol	Millimeters		Inches	
		Min.	Max.	Min.	Max.
	A	0.95	1.05	0.037	0.041
B	0.55	0.65	0.022	0.026	
C	0.32	0.55	0.013	0.022	
D	0.45		0.018		
E	0.20	0.30	0.008	0.012	
F	0.45	0.55	0.018	0.022	

**Packaging**

<p><b>Tape</b></p>	Symbol	Dimension (mm)
	W	8.00±0.30
	P0	4.00±0.10
	P1	2.00±0.10
	P2	2.00±0.10
	D0	Φ1.55±0.10
	D1	Φ0.40±0.05
	E	1.75±0.10
	F	3.50±0.10
	A	0.75±0.10
	B	1.15±0.10
	K	0.60±0.05
	t	0.20±0.05
	<p><b>Reel</b></p>	D
D2		Φ13.00.
W1		9.50
Quantity: 10000PCS		