



General description

The SLESD8LB24C is a bi-directional TVS diode, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data and power line. The SLESD8LB24C complies with the IEC 61000-4-2 (ESD) standard with $\pm 15\text{KV}$ air and $\pm 15\text{KV}$ contact discharge. It is assembled into an ultra-small 1.6x0.6x0.5mm lead-free 0402 package. The small size and high ESD surge protection make SLESD8LB24C an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

Features and benefits

- Ultra small SMD package 1.0x0.6x0.5 mm
- Bidirectional ESD protection of one line
- Femtofarad capacitance: $C_j = 0.5\text{pF}$ (Typ)
- Complies with following standards: IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 15\text{KV}$, Contact discharge: $\pm 15\text{KV}$
- RoHS Compliant

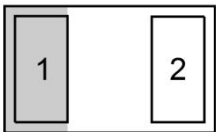
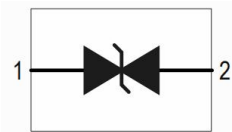
Application information

- USB Ports
- Display Ports
- MDDI Ports
- Digital Video Interface (DVI)

Ordering information

Device	Package	Marking	Packaging	Reel Size
SLESD8LB24C	DFN1006-2L	24L	10000/Tape & Reel	7 Inch

Schematic & Pin configuration

Mimensions	Circuit Diagram
	

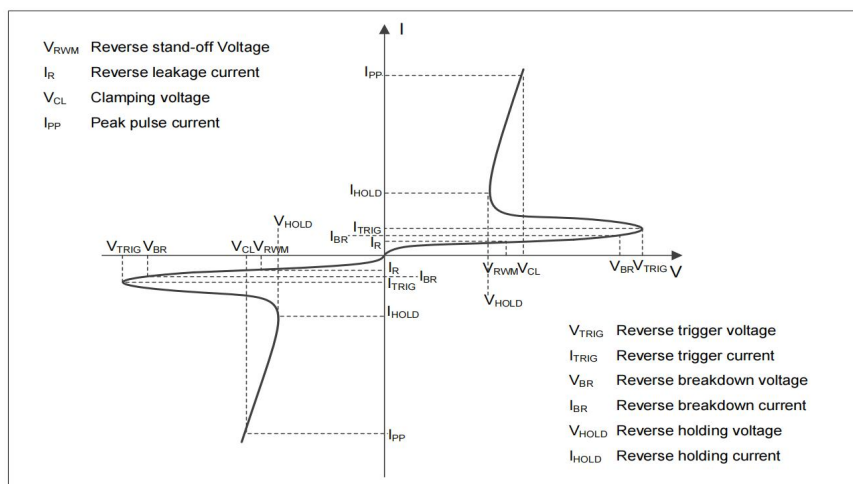
Maximum Ratings ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p = 8/20\text{ }\mu\text{S}$)	P_{PK}	40	W
Rated Peak Pulse Current ($T_p = 8/20\text{ }\mu\text{S}$)	I_{PP}	5.0	A
Maximum lead temperature for soldering during 10s	T_L	260	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$
Operating Temperature Range	T_{OP}	-40 to +125	$^{\circ}\text{C}$
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	15	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	15	kV

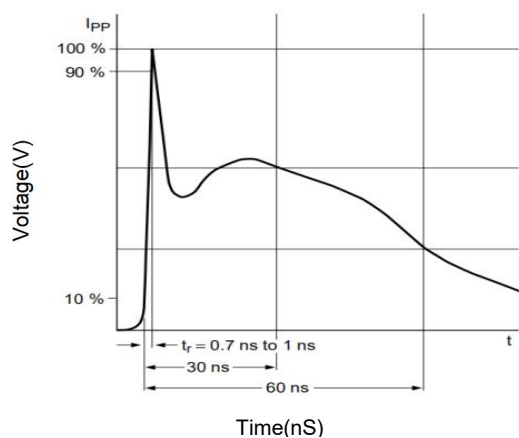
Electrical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	24	V	
Breakdown Voltage	V_{BR}	26	29	32	V	$I_T = 1\text{mA}$
Leakage Current I_{Leak}	I_R	--	--	0.1	μA	$V_{RWM} = 24\text{V}$
Clamping Voltage	V_C	--	4.0	--	V	$I_{PP} = 1\text{A}, T_p = 8/20\text{ }\mu\text{s}$
Clamping Voltage	V_C	--	6.0	8.0	V	$I_{PP} = 5\text{A}, T_p = 8/20\text{ }\mu\text{s}$
Clamping Voltage	V_C	--	8.2	--	V	$TLP = 16\text{A}$
Junction Capacitance	C_J	--	0.50	0.70	pF	$V_R = 0\text{V}, f = 1\text{MHz}$

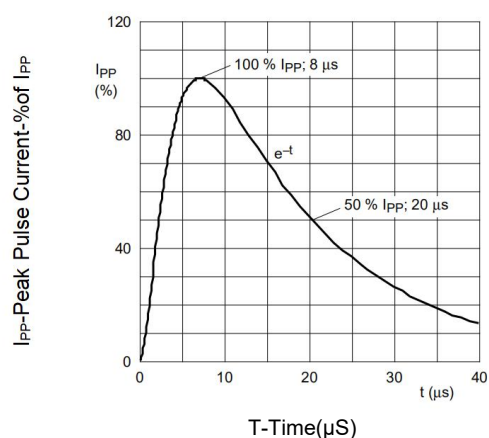
Portion Electronics Parameter



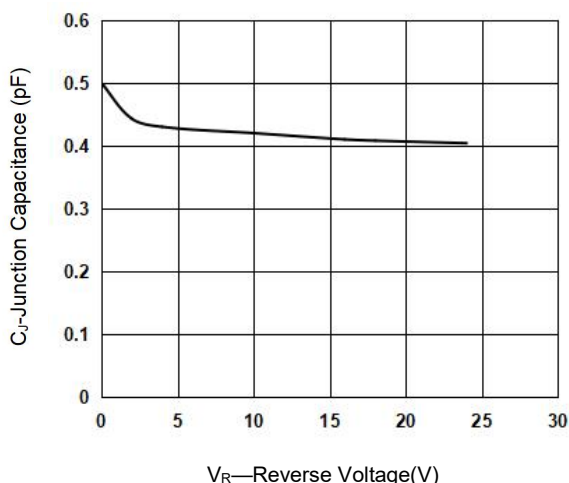
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



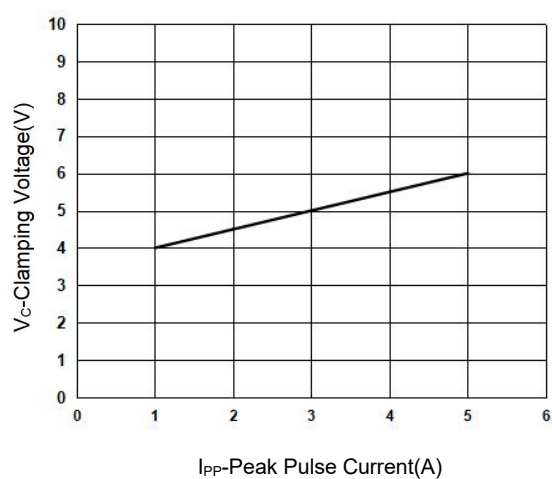
IEC61000-4-2 Pulse Waveform



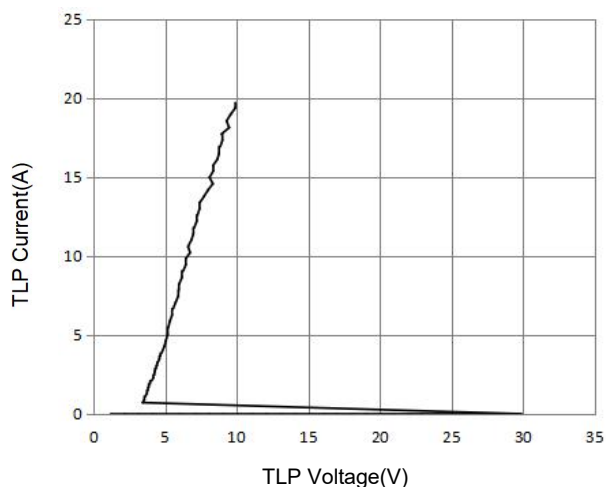
IEC61000-4-5 8X20µs Pulse Waveform



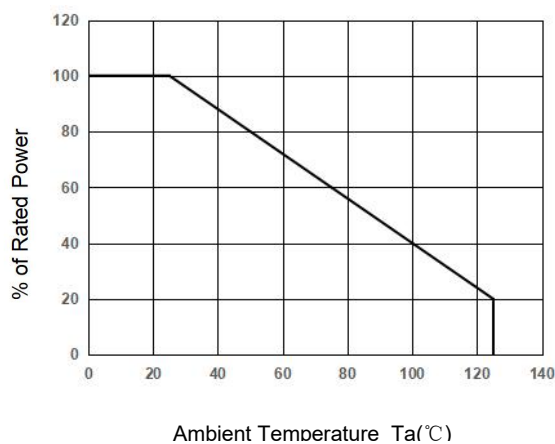
Junction Capacitance vs. Reverse Voltage



Clamping Voltage vs. Peak Pulse Current



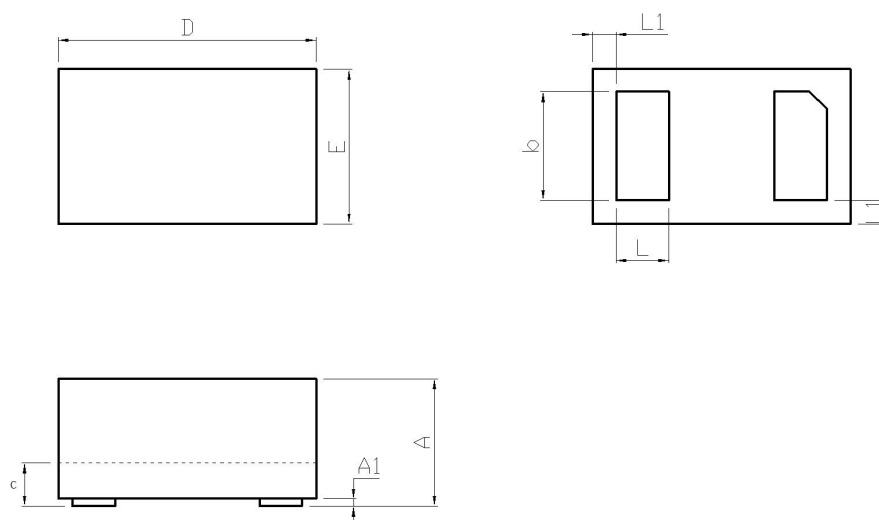
TLP Measurement Curve



Power Derating Curve

Package Outline Dimensions

DFN1006-2L



DFN1006-2L (mm)			
Dim	Min	Typ.	Max
A	0.45	0.50	0.55
A1	0	0.02	0.05
b	0.45	0.5	0.55
c	0.1	0.15	0.18
D	0.95	1.00	1.05
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.035	0.05	0.065