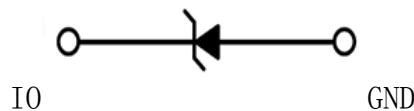


## 1. Features

- Replacement for MLV (0402)
- Protects I/O Port
- The peak pulse current per line ( $t_P = 8/20\text{ps}$ ) can reach 5(A).
- Response Time is  $<1\text{ ns}$
- Meets MSL 1 Requirements
- ROHS compliant
- IEC61000-4-2(ESD) : over or equal  $\pm 30\text{KV}(\text{air})$ , over or equal  $\pm 25\text{KV}(\text{contact})$
- Stand-off Voltage: 5V

## 2. Pin Description



## 3. Applications

- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- 10/100/1000 Mb/s Ethernet
- Digital Visual Interface (DVI)

## 4. Package Information

Type	Package	Size (mm)	Delivery Form	Delivery Quantity
SLESD5311N-2/TR	DFN1006	1.00x0.60x0.45	7" T&R	10,000

## 5. Limiting Values(TA = 25 °C, unless otherwise specified)

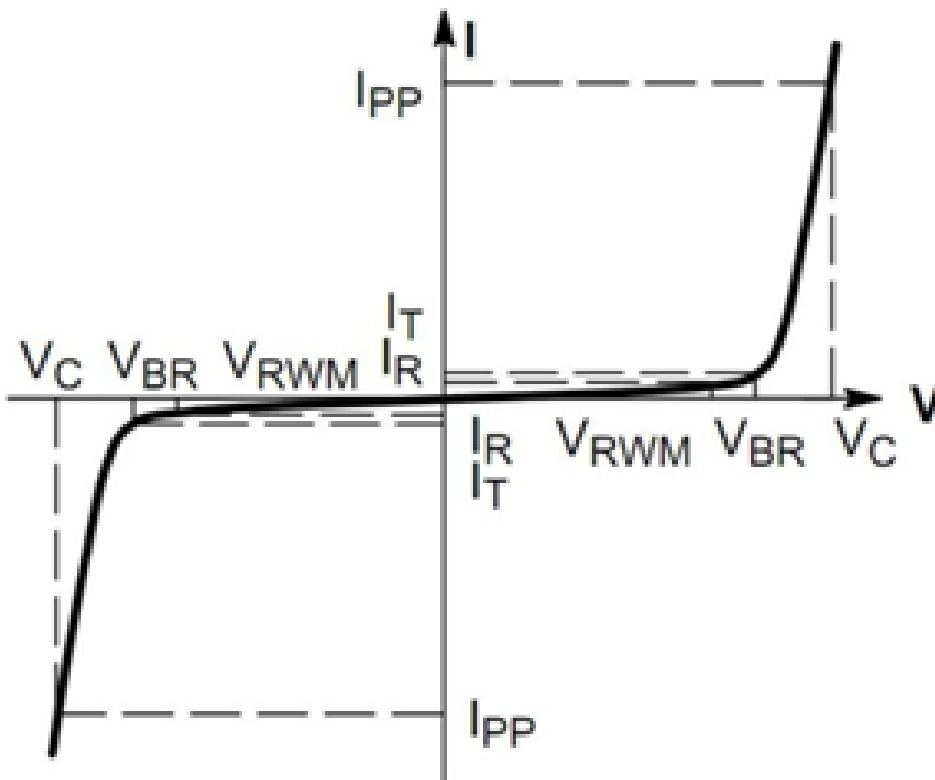
Symbol	Parameter		Ratings	Units
ESD	IEC 61000-4-2 (HBM-ESD)	Contact	±25	KV
		Air	±30	
T <sub>L</sub>	Lead Soldering Temperature		260	°C
T <sub>J</sub>	Operating Temperature		-55 to +125	°C
T <sub>STG</sub>	Storage Temperature		-55 to +150	°C

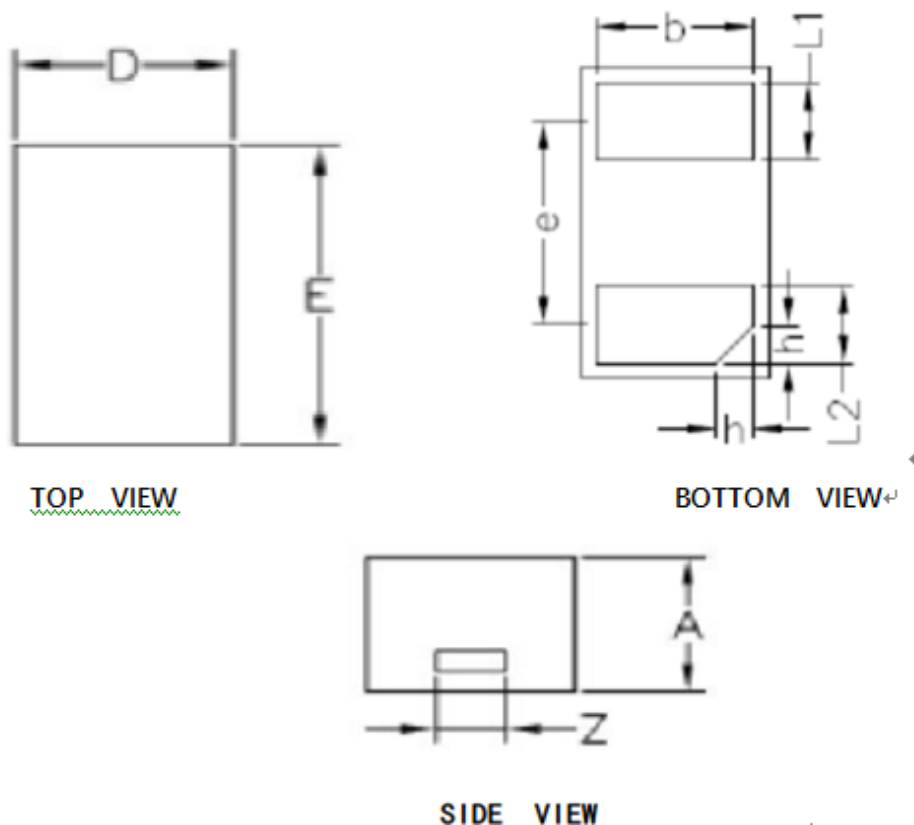
## 6. Electrical Characteristics(TA = 25 °C unless otherwise specified)

Symbol	Parameter	Conditions Between I/O and GND	Min.	Typ.	Max.	Units
V <sub>RWM</sub>	Reverse Working Voltage				5	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA,	6	7.5	9	v
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 24V		0.1	1	uA
V <sub>C</sub>	Clamping Voltage	I <sub>PP</sub> = 1A, tp =8/20uS			10	V
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz		0.7	0.9	pF

## 7. Typical Characteristics

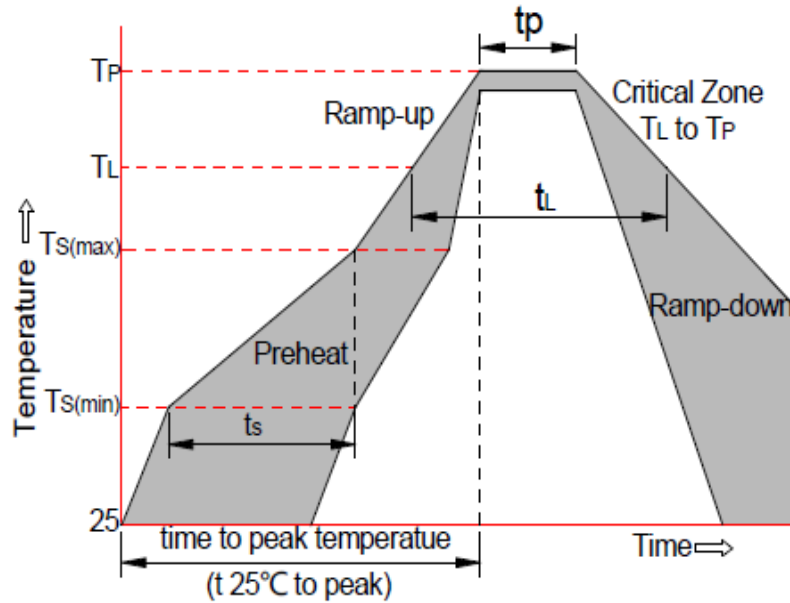
Fig.1 V-I Characteristics for Bidirectional Diode



**8. Package Dimension**


Symbol	Dimensions In Millimeters		
	Min	Nom	Max
D	0.55	0.60	0.65
E	0.95	1.00	1.05
b	0.40	0.45	0.50
e	0.65BSC		
h	0.10BSC		
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
A	0.45	0.50	0.55
z	0.15	0.20	0.25

## 9. Soldering Parameters



Reflow Condition		Pb-Free Assembly
Pre-heat	-Temperature Min ( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time (Min to Max) ( $t_s$ )	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3°C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquid us)	+217°C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_p$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6°C/sec. Max
xTime 25°C to Peak Temp ( $T_p$ )		8 min. Max
Do not exceed		+260°C