



## Discription

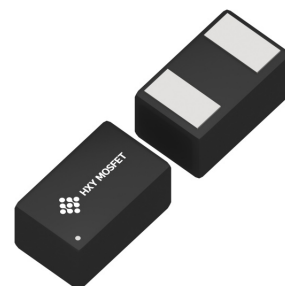
Low capacitance bidirectional ElectroStatic Discharge (ESD) protection diode in a DFN1006-2L(SOD-882) leadless ultra small Surface-Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients.

## Features

- ★ Bidirectional ESD protection of one line
- ★ Ultra Low capacitance:  $C_j = 0.35\text{pF(Typ)}$
- ★ Low clamping voltage  $V_C = 22.0\text{V @ }1\text{A (Typ)}$
- ★ Low leakage current: nA Level
- ★ ESD protection up to 30 kV
- ★ IEC 61000-4-2; level 4 (ESD)
- ★ IEC 61000-4-5 (surge); IPPM = 4 A

## Applications

- ★ Portable electronics
- ★ Computers and peripherals
- ★ Audio and video equipment
- ★ Cellular handsets and accessories
- ★ Communication systems
- ★ Power supplies



DFN1006-2L



Circuit Diagram

## Ordering Information

Product ID	Pack	Qty(PCS)
LESD8LF5.0CT5G	DFN1006-2L	10000

## Absolute Ratings( $T_{amb} = 25^{\circ}\text{C}$ )

Symbol	Parameter	Value	Units
$P_{PP}$	Peak Pulse Power ( $t_p = 8/20 \mu\text{s}$ )	88	W
$T_L$	Maximum lead temperature for soldering during 10s	260	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$
$T_{op}$	Operating Temperature Range	-40 to +125	$^{\circ}\text{C}$
$T_j$	Maximum junction temperature	150	$^{\circ}\text{C}$
	IEC61000-4-2 (ESD)	air discharge contact discharge	$\pm 10$ $\pm 15$ KV



## Electrical Characteristics

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
$V_{RWM}$	Reverse Working Voltage				5.0	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1mA$	6.5		9.0	V
$I_R$	Reverse Leakage Current	$V_{RWM} = 5.0V$			1.0	$\mu A$
$V_C$	Clamping Voltage	$I_{PP} = 1A, t_p = 8/20\mu s$			22.0	V
$C_J$	Junction Capacitance	$V_R = 0V, f = 1MHz$			0.35	pF

## Typical Characteristics

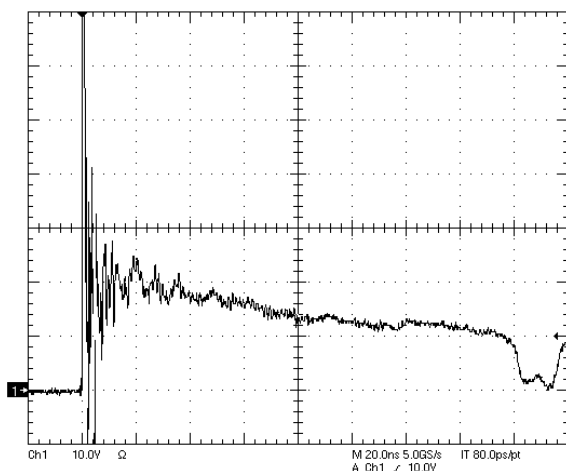


Figure 1. ESD Clamping Voltage Screenshot  
Positive 8 kV Contact per IEC61000-4-2

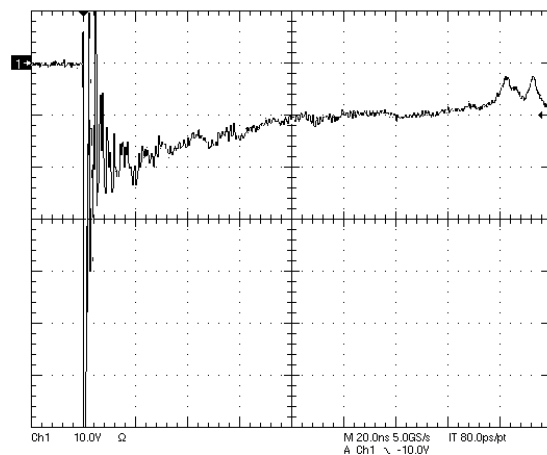


Figure 2. ESD Clamping Voltage Screenshot  
Negative 8 kV Contact per IEC61000-4-2



IEC 61000-4-2 Spec.

Level	Test Voltage (kV)	First Peak Current (A)	Current at 30 ns (A)	Current at 60 ns (A)
1	2	7.5	4	2
2	4	15	8	4
3	6	22.5	12	6
4	8	30	16	8

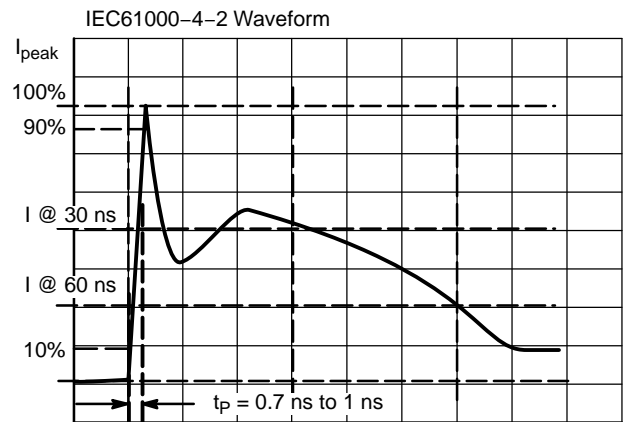


Figure 3. IEC61000-4-2 Spec

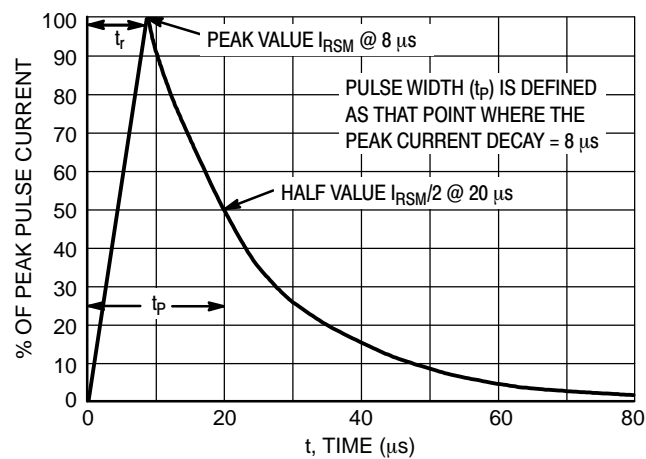
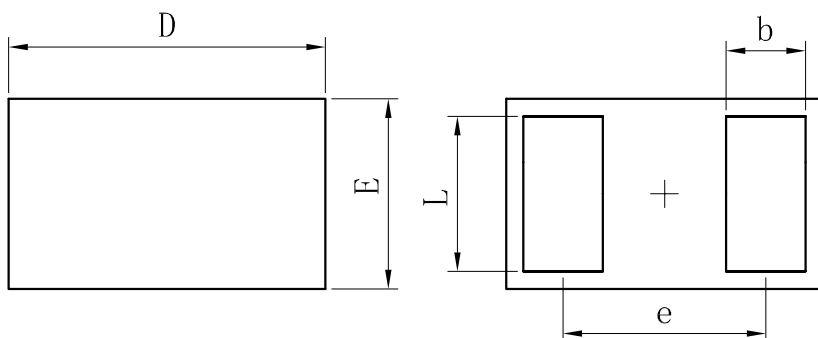


Figure 4. 8 X 20  $\mu s$  Pulse Waveform

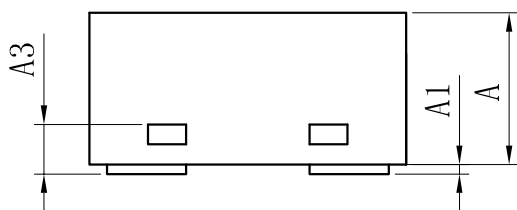


## Outline And Dimensions



TOP VIEW

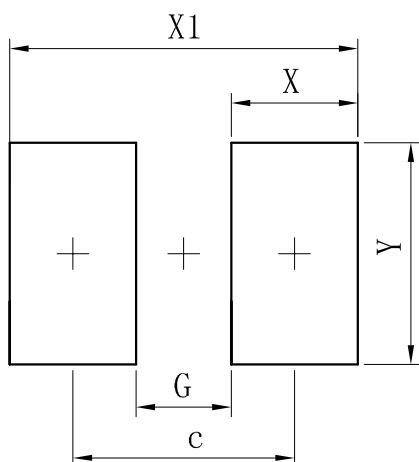
BOTTOM VIEW



SIDE VIEW

DFN1006-2L			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	–	0.64	–
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	–	0.05
A3	0.127REF.		
All Dimensions in mm			

## Soldering Footprint



Dimensions	(mm)
c	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70



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