

## Normal Capacitance ESD Protection Diode

### 1 Features

- IEC 61000-4-2 Level 4 ESD Protection
  - ±30-kV Contact Discharge
  - ±30-kV Air Gap Discharge
- Peak Reverse Working Voltage: 12 V (Maximum)
- IO Capacitance:
  - 12 pF (Typical)
- DC Breakdown Voltage: 13 to 16.7 V (Minimum to Maximum)
- Low Leakage Current: 1uA (Maximum)
- Low ESD Clamping Voltage: 26 V at 4 A TLP
- Industrial Temperature Range: –55°C to +150°C
- Package : DFN1006-2L

### 2 Applications

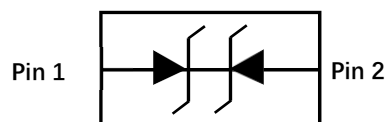
- End Equipment
  - TWS and Smart Wearable
  - TV and Monitors
  - Cellular handsets and accessories
  - Portable electronics
  - Communication systems
  - Computers and peripherals

### 3 Description

The SLEN212NCB is a bidirectional ESD protection diode for power circuit protection. The SLEN212NCB is rated to dissipate ESD strikes at the maximum level specified in the IEC 61000-4-2 international standard (Level 4).

The low dynamic resistance and low clamping voltage ensure system level protection against transient events.

### 4 Pin Configuration and Bottom View



### 5 Device Information

PART NUMBER	PACKAGE	BODY SIZE (NOM)
SLEN212NCB	DFN1006-2L	1.00 mm x 0.60mm

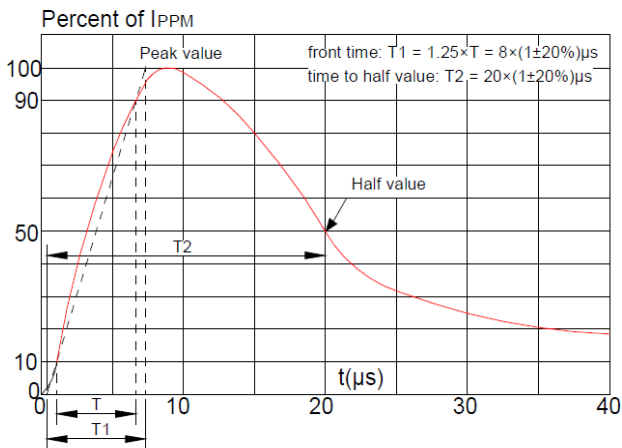
### 6 Absolute maximum Ratings @25°C

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20 μ s)	P <sub>PP</sub>	100	W
Peak Pulse Current (tp=8/20 μ s)	I <sub>PP</sub>	4	A
Operating Temperature	T <sub>J</sub>	-55 to 150	°C
Storage Temperature	T <sub>STG</sub>	-55 to 150	°C
ESD Protection-Contact Discharge	V <sub>ESD</sub>	±30	kV
ESD Protection-Air Discharge	V <sub>ESD</sub>	±30	kV

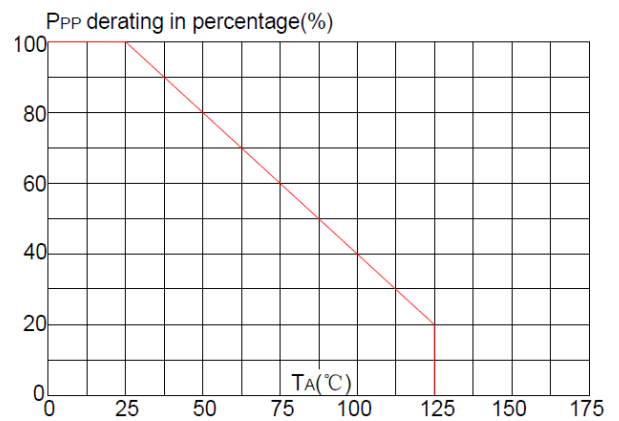
**7 Electrical characteristics (@25°C unless otherwise specified)**

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Peak Reverse Working Voltage	$V_{RWM}$				12	V
Breakdown Voltage	$V_{BR}$	$I_i = 1mA$	13		16.7	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 12V \quad T=25^\circ C$			1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP} = 1A \quad t_p = 8/20\mu s$		17		V
Clamping Voltage	$V_C$	$I_{PP} = 4A \quad t_p = 8/20\mu s$		26		V
Junction Capacitance	$C_j$	$V_R=0V \quad f = 1MHz$		12		pF

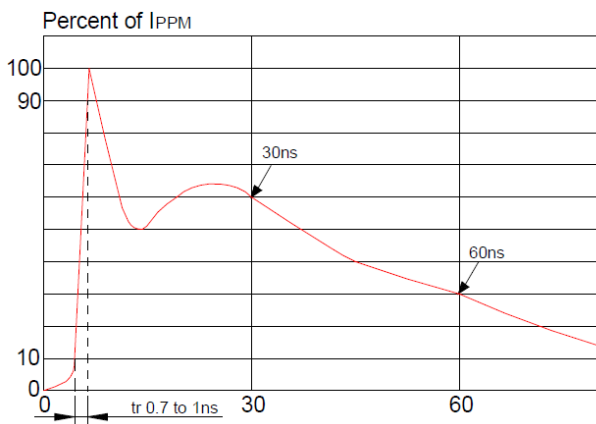
**8 Typical Characteristics**



**Pulse Waveform (8/20us)**



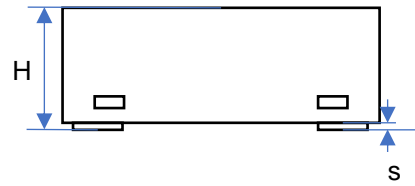
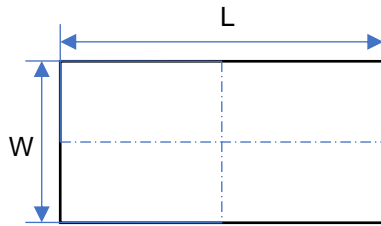
**Pulse Derating Curve**



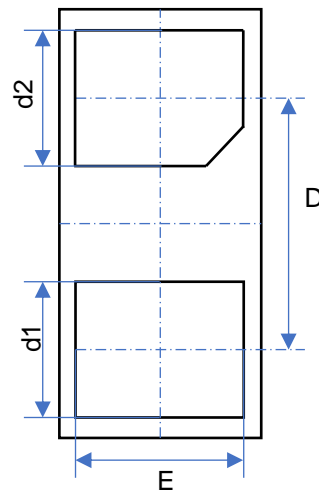
**ESD Clamping**

**9 Product dimension**

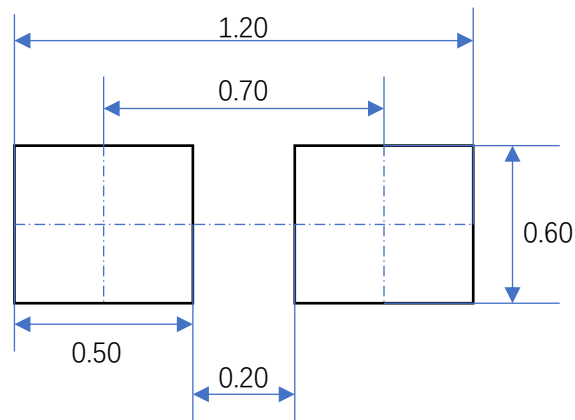
DFN1006-2L



DIM	UNITS (mm)		
	MIN.	TYP.	MAX.
L	0.95	1.00	1.08
W	0.55	0.6	0.68
H	0.39	0.44	0.50
s	0.00	0.02	0.05
D	0.60	0.65	0.70
E	0.40	0.50	0.60
d1	0.20	0.25	0.30
d2	0.20	0.25	0.30



**10 PCB Layout Footprints**



**11 Ordering Information**

Part Number	Packaging	Reel Size
SLEN212NCB	10000/Tape & Reel	7 inch