

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: 3.3V (Maximum)
- IO Capacitance:
 - 12 pF (Typical)
- DC Breakdown Voltage: 3.7 to 5 V (Minimum to Maximum)
- Low Leakage Current: 1uA (Maximum)
- Industrial Temperature Range: -55°C to $+150^{\circ}\text{C}$
- Package DFN1006-2L

2 Applications

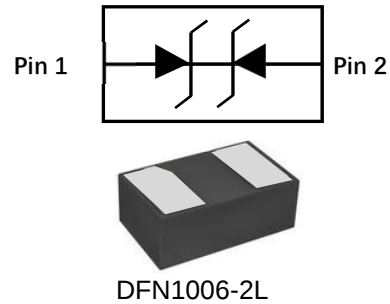
- End Equipment
 - TWS and Smart Wearable
 - TV and Monitors
 - Cellular handsets and accessories
 - Portable electronics
 - Communication systems
 - Computers and peripherals

3 Description

The SLEN23N3CB is a bidirectional ESD protection diode array for Mic and Audio circuit protection. The SLEN23N3CB 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	MARKING	PACKAGE	BODY SIZE (NOM)
SLEN23N3CB	F3	DFN1006-2L	1.00 mm x 0.60mm

6 Absolute maximum Ratings @25°C

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	95	W
Peak Pulse Current ($t_p=8/20\mu\text{s}$)	I_{PP}	10	A
Operating Temperature	T_J	-55 to 150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}\text{C}$
ESD Protection-Contact Discharge	V_{ESD}	± 30	kV
ESD Protection-Air Discharge	V_{ESD}	± 30	kV

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

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Peak Reverse Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	$I_t = 1\text{mA}$	3.7		5	V
Reverse Leakage Current	I_R	$V_{RWM} = 3.3\text{V}$ $T = 25^\circ\text{C}$			1	μA
Clamping Voltage	V_C	$I_{PP} = 5\text{A}$ $t_P = 8/20\mu\text{s}$		6	7	V
Clamping Voltage	V_C	$I_{PP} = 10\text{A}$ $t_P = 8/20\mu\text{s}$		8.5	9.5	V
Junction Capacitance	C_j	$V_R = 0\text{V}$ $f = 1\text{MHz}$		12	15	pF

8 Typical Characteristics

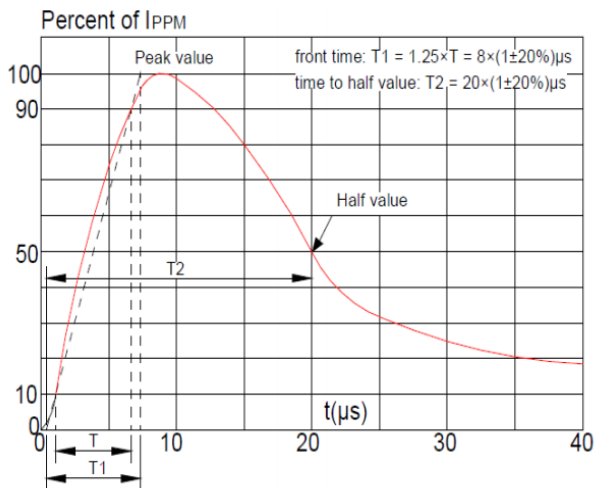


Fig 1. Pulse Waveform (8/20us)

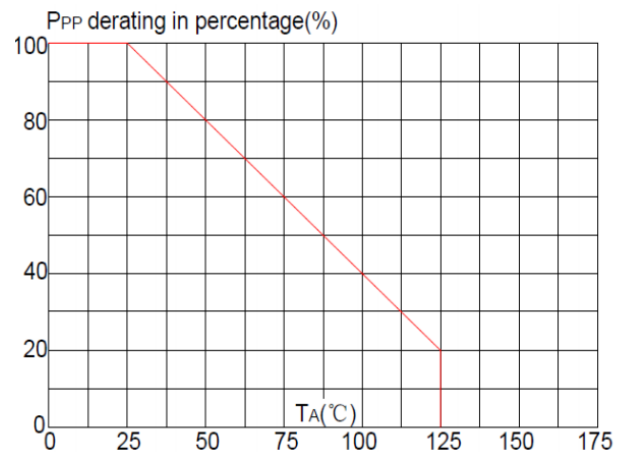


Fig 2. Pulse Derating Curve

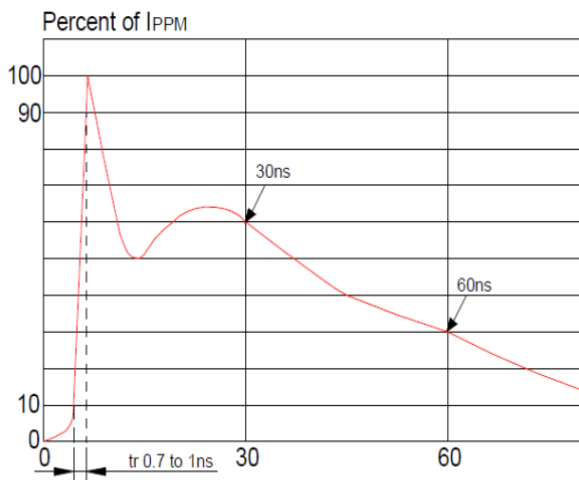
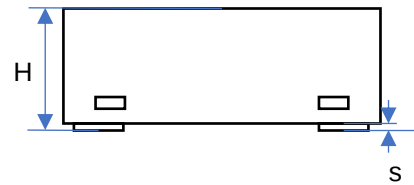
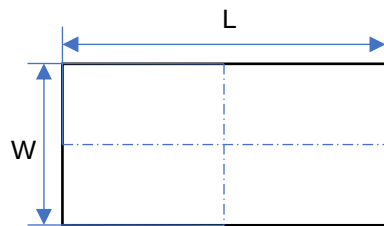


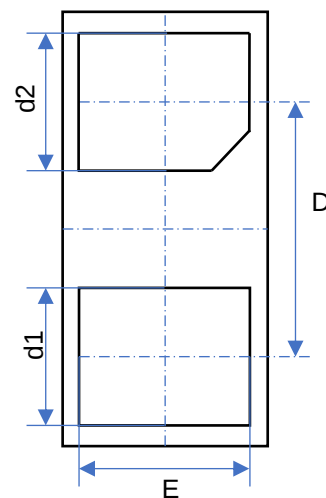
Fig 3. ESD Clamping(8kV Contact Discharge)

9 Product dimension

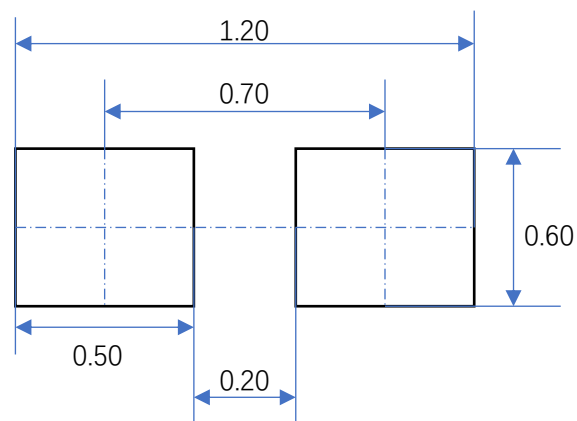
DFN1006-2L



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
SLEN23N3CB	10000/Tape & Reel	7 inch