

Normal Capacitance ESD Protection Diode

1 Features

- IEC 61000-4-2 ESD Protection
 - ±30-kV Contact Discharge
 - ±30-kV Air Gap Discharge
- Peak Reverse Working Voltage: 7.0 V (Maximum)
- IO Capacitance:
 - 16 pF (Typical)
- DC Breakdown Voltage: 7.6 to 9 V (Minimum to Maximum)
- Low Leakage Current: 1µA (Maximum)
- Package DFN1006-2L

2 Applications

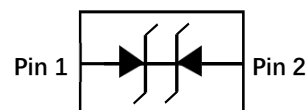
- End Equipment
 - TWS and Smart Wearable
 - TV and Monitors
 - Cellular handsets and accessories
 - Portable electronics
 - Communication systems
 - Computers and peripherals

3 Description

The SLEN27NCB is a bidirectional ESD protection diode for power circuit protection. The SLEN27NCB 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



DFN1006-2L

5 Device Information

PART NUMBER	MARKING	PACKAGE	BODY SIZE (NOM)
SLEN27NCB	7A	DFN1006-2L	1.00 mm x 0.60mm

6 Absolute maximum Ratings @25°C

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20µs)	P _{PP}	110	W
Peak Pulse Current (tp=8/20µs)	I _{PP}	8	A
Operating Temperature	T _J	-55 to 125	°C
Storage Temperature	T _{STG}	-55 to 150	°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}				7	V
Breakdown Voltage	V_{BR}	$I_t = 1mA$	7.6		9	V
Reverse Leakage Current	I_R	$V_{RWM} = 7V, T=25^\circ C$			1	μA
Clamping Voltage	V_C	$I_{PP} = 1A, t_P = 8/20\mu s$		10	12	V
Clamping Voltage	V_C	$I_{PP} = 8A, t_P = 8/20\mu s$		12	14	V
Junction Capacitance	C_j	$V_R=0V, f = 1MHz$		16		pF

8 Typical Characteristics

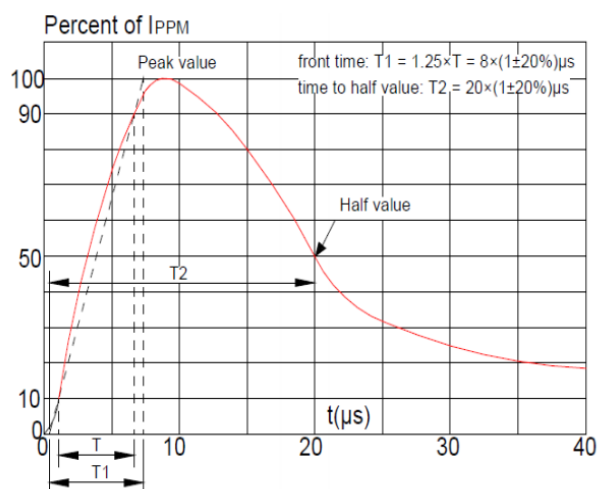


Fig 1. Pulse Waveform (8/20us)

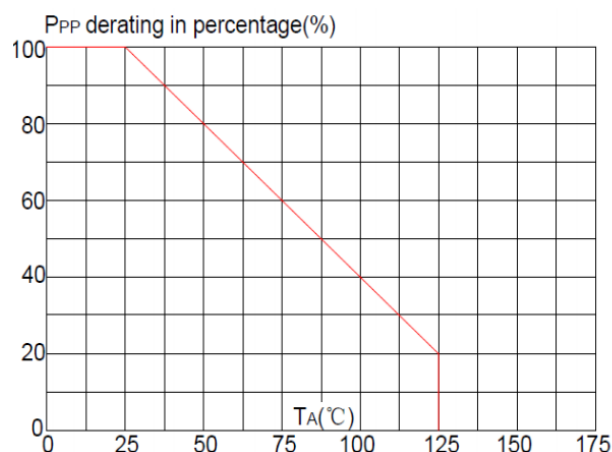


Fig 2. Pulse Derating Curve

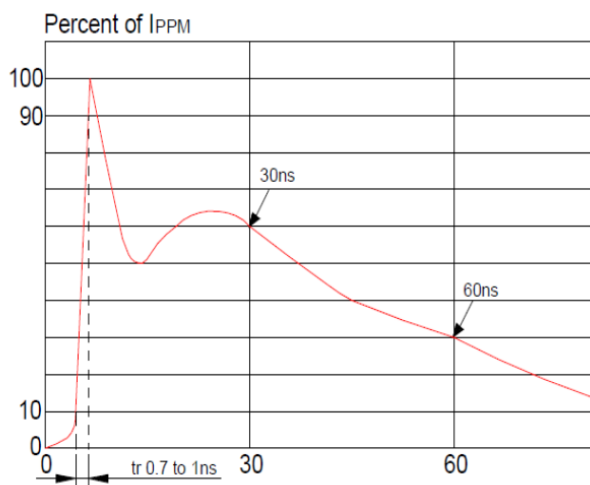
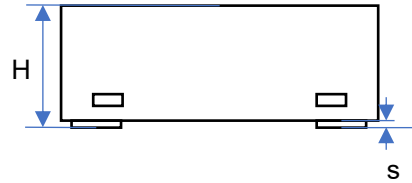
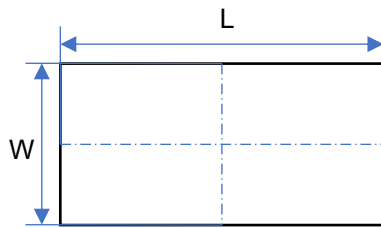


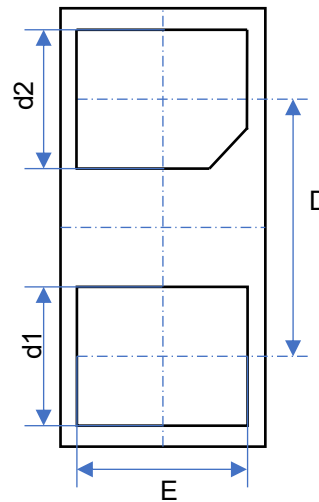
Fig 3. ESD Clamping(8kV Contact Discharge)

9 Product dimension

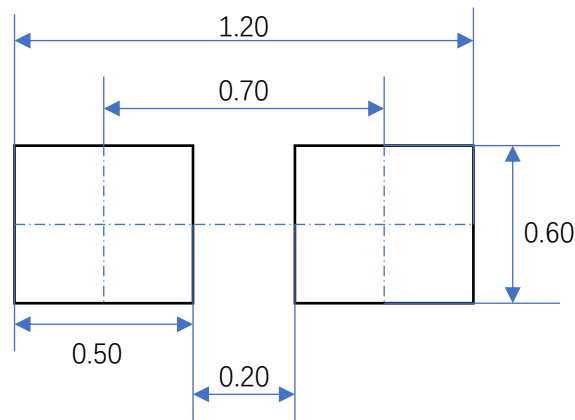
DFN1006-2L



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
SLEN27NCB	10000/Tape & Reel	7 inch