

## 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: 36V (Maximum)
- IO Capacitance:
  - 30 pF (Maximum)
- DC Breakdown Voltage: 38V (Minimum)
- Low Leakage Current: 1µA (Maximum)
- Industrial Temperature Range: –55°C to +125°C
- Package DFN1006-2L

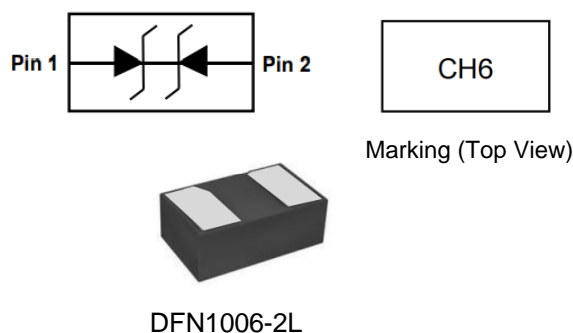
### 2 Applications

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

### 3 Description

The SLEN236NCB-D is a bidirectional ESD protection diode for circuit protection. The SLEN236NCB-D is rated to dissipate ESD strikes at the maximum level specified in the IEC 61000-4-2 international standard. The low dynamic resistance and low clamping voltage ensure system level protection against transient events.

### 4 Pin Configuration



### 5 Device Information

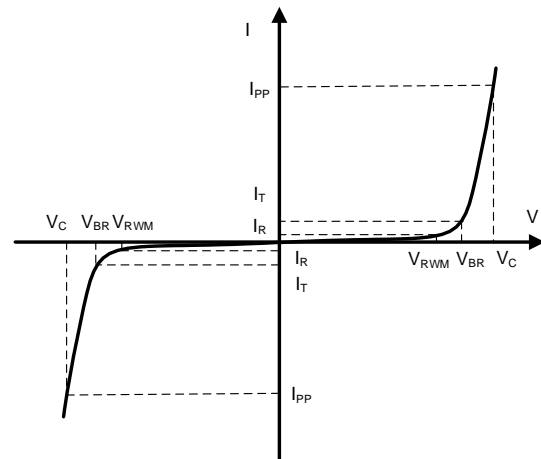
PART NUMBER	MARKING	PACKAGE	BODY SIZE (NOM)
SLEN236NCB-D	CH6	DFN1006-2L	1.00 mm x 0.60mm

### 6 Absolute maximum Ratings @25°C

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20µs)	P <sub>PP</sub>	260	W
Peak Pulse Current (tp=8/20µs)	I <sub>PP</sub>	4	A
Operating Temperature	T <sub>J</sub>	-55 to 125	°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 Electronics Parameter Definitions**

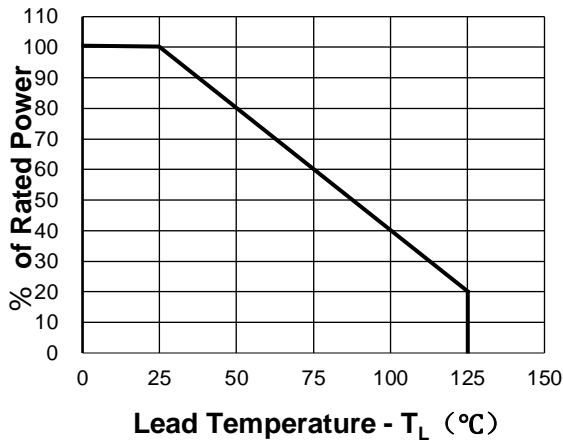
Symbol	Parameter
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$P_{PP}$	Peak Pulse Power
$C_J$	Junction Capacitance



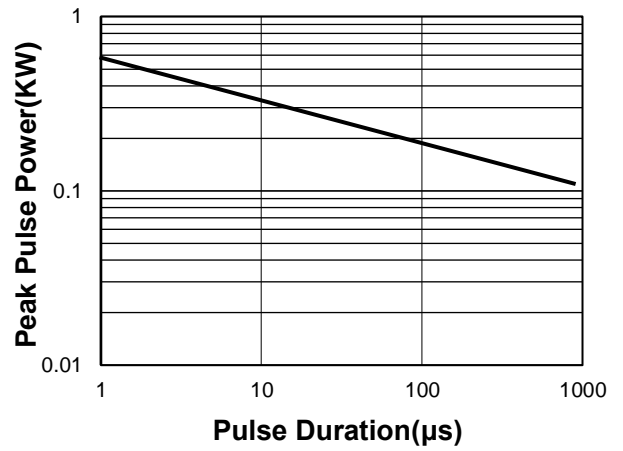
**8 Electrical characteristics (@25°C unless otherwise specified)**

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Peak Reverse Working Voltage	$V_{RWM}$				36	V
Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	38			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 36\text{V}, T=25^\circ\text{C}$			1	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$		45	52	V
Clamping Voltage	$V_C$	$I_{PP} = 4\text{A}, t_p = 8/20\mu\text{s}$		62	65	V
Junction Capacitance	$C_j$	$V_R=0\text{V}, f = 1\text{MHz}$		20	30	pF

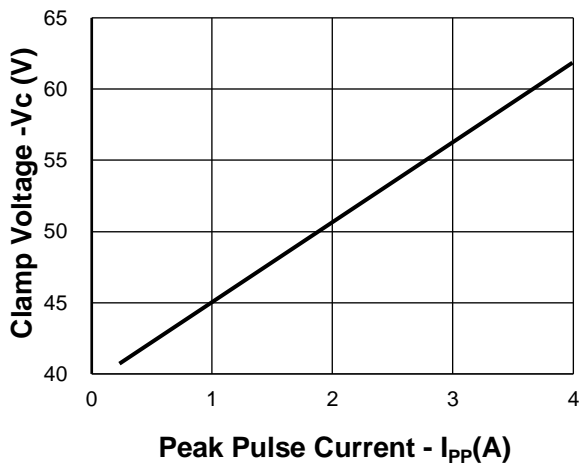
**9 Typical Characteristics**



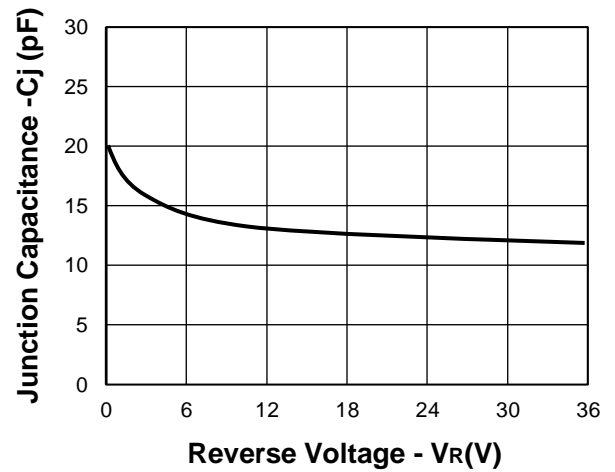
**Fig 1. Power Derating Curve**



**Fig 2. Peak Pulse Power vs. Pulse Time**



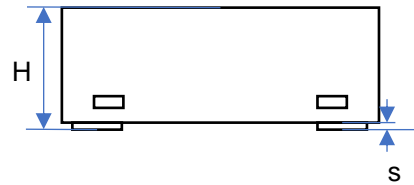
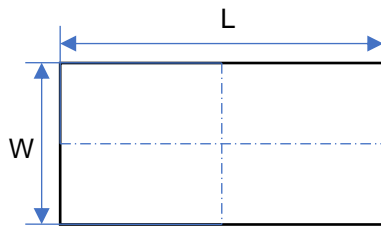
**Fig 3. Clamping Voltage vs. Peak Pulse Current**



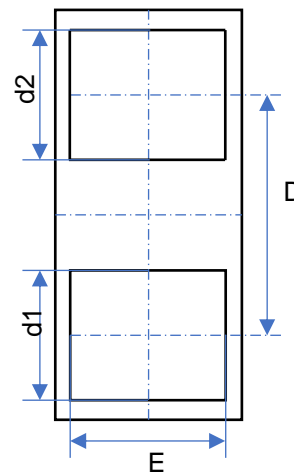
**Fig 4. Junction Capacitance vs. Reverse Voltage**

**10 Product dimension**

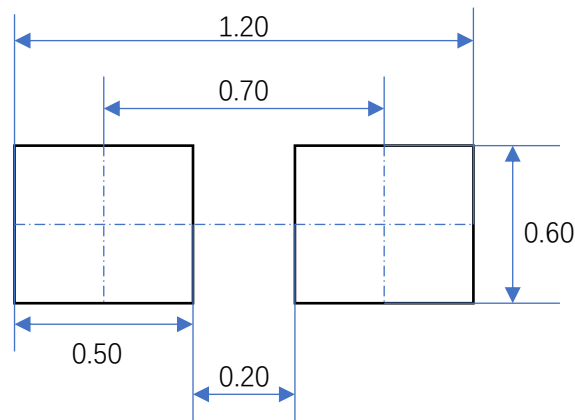
DFN1006-2L



DIM	UNITS (mm)		
	MIN.	TYP.	MAX.
L	0.95	1.00	1.08
W	0.55	0.60	0.68
H	0.39	0.44	0.55
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



**11 PCB Layout Footprints**



**12 Ordering Information**

Part Number	Packaging	Reel Size
SLEN236NCB-D	10000/Tape & Reel	7 inch