

Low Capacitance ESD Protection Diode

1 Features

- IEC 61000-4-2 Level 4 ESD Protection
 - ± 15 -kV Contact Discharge
 - ± 20 -kV Air Gap Discharge
- IEC 61000-4-4 EFT Protection
 - 40 A (5/50 ns)
- Peak Reverse Working Voltage: 3.3V (Maximum)
- IO Capacitance:
 - 0.3 pF (Typical)
- DC Breakdown Voltage: 3.5 V
- Low Leakage Current: 1 μ A (Maximum)
- Industrial Temperature Range: -55°C to $+150^{\circ}\text{C}$
- Package DFN0603-2L

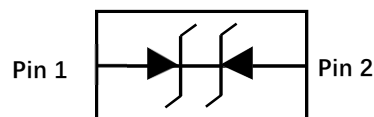
2 Applications

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

3 Description

The SLEN13L3CB is a bidirectional ESD protection, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive high-speed data lines. The SLEN13L3CB has an ultra-low capacitance with a typical value at 0.3pF, and complies with the IEC 61000-4-2 (ESD) with ± 20 kV air and ± 15 kV contact discharge. It is assembled into a DFN0603-2 leadfree package. The small size, ultra-low capacitance and high ESD surge protection make SLEN13L3CB an ideal choice to protect cell phone, digital video interfaces and other high speed ports.

4 Pin Configuration and Bottom View



DFN0603-2L

5 Device Information

PART NUMBER	PACKAGE	BODY SIZE (NOM)
SLEN13L3CB	DFN0603-2L	0.60 mm x 0.30mm

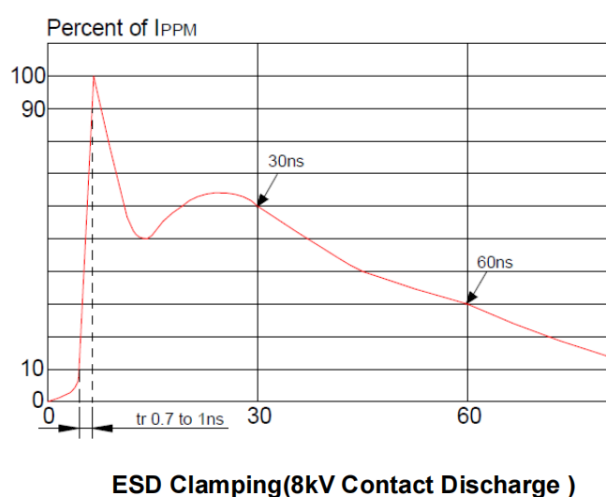
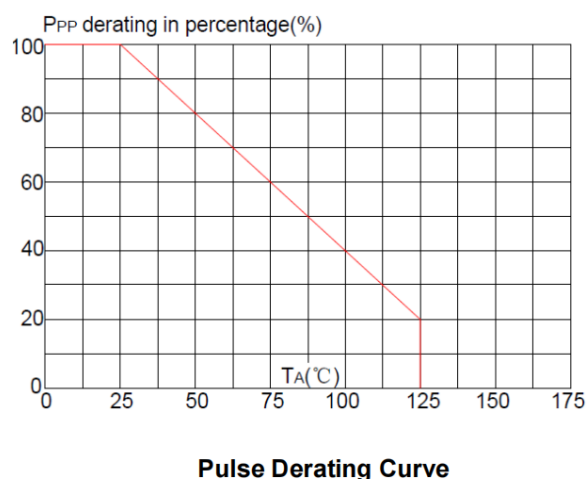
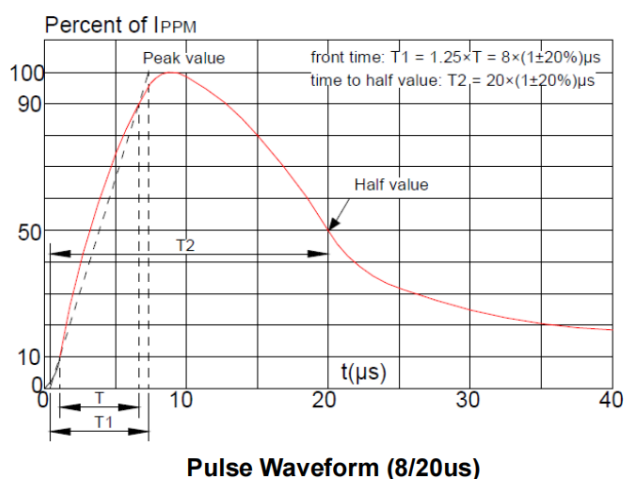
6 Absolute maximum Ratings @25°C

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20 μ s)	P _{PP}	100	W
Peak Pulse Current (tp=8/20 μ s)	I _{PP}	5	A
Operating Temperature	T _J	-55 to 125	$^{\circ}\text{C}$
Storage Temperature	T _{STG}	-55 to 150	$^{\circ}\text{C}$
ESD Protection-Contact Discharge	V _{ESD}	± 15	kV
ESD Protection-Air Discharge	V _{ESD}	± 20	kV

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

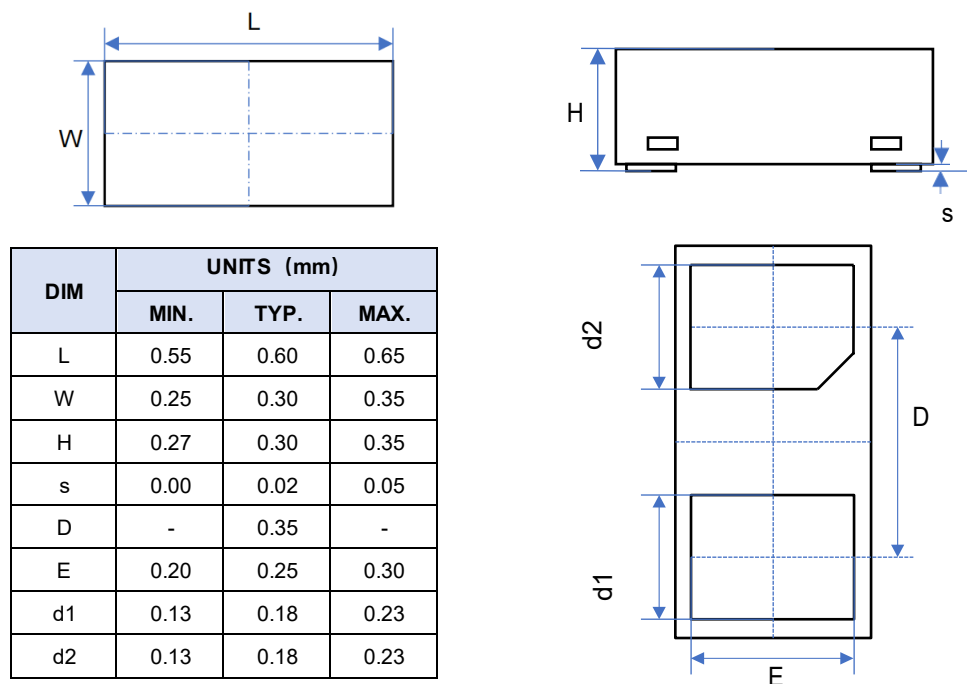
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Peak Reverse Working Voltage	V_{RWM}				3.3	V
Breakdown Voltage	V_{BR}	$I_t = 1\text{mA}$	3.5			V
Reverse Leakage Current	I_R	$V_{RWM} = 3.3\text{V}$, $T = 25^\circ\text{C}$			1	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$, $t_p = 8/20\mu\text{s}$			10	V
Clamping Voltage	V_C	$I_{PP} = 5\text{A}$, $t_p = 8/20\mu\text{s}$			20	V
Junction Capacitance	C_j	$V_R = 0\text{V}$, $f = 1\text{MHz}$		0.3	0.5	pF

8 Typical Characteristics

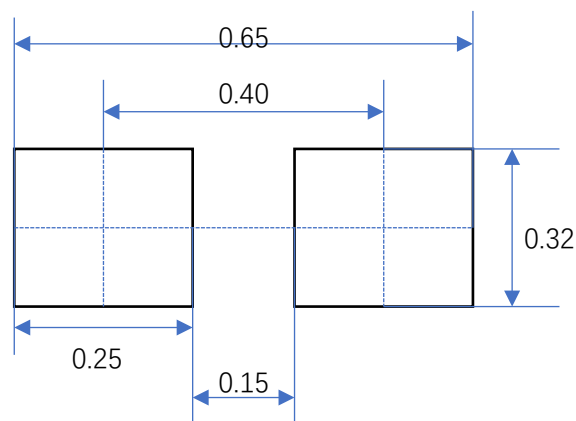


9 Product dimension

DFN0603-2L



10 PCB Layout Footprints



11 Ordering Information

Part Number	Packaging	Reel Size
SLEN13L3CB	10000/Tape & Reel	7 inch