

High 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: 12V (Maximum)
- IO Capacitance: 60pF (Maximum)
- DC Breakdown Voltage: 13.3 to 17.8 V (Minimum to Maximum)
- Low Leakage Current: 1uA (Maximum)
- SOD523 Package

2 Applications

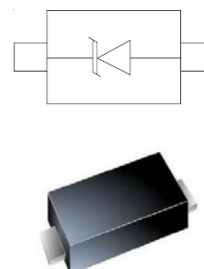
- End Equipment
 - TWS and Smart Wearable
 - TV and Monitors
 - Cellular handsets and accessories
 - Portable electronics
 - Communication systems
 - Computers and peripherals

3 Description

The SLED512HCU is a unidirectional ESD protection diode for circuit protection. The SLED512HCU 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)
SLED512HCU	SOD523	1.60 mm x 1.00mm

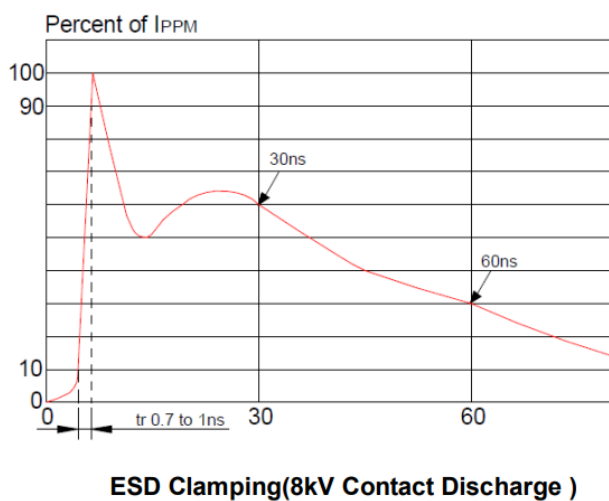
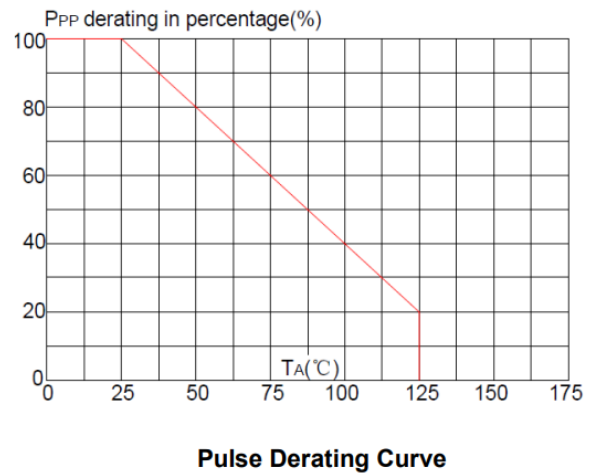
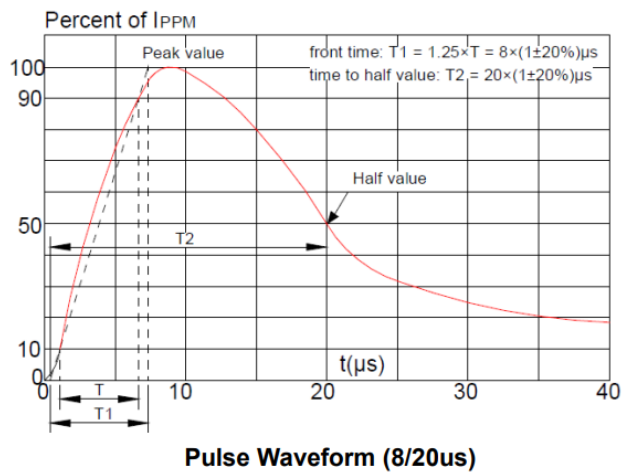
6 Absolute maximum Ratings @25°C

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p=8/20 \mu s$)	P_{PP}	200	W
Peak Pulse Current ($t_p=8/20 \mu s$)	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

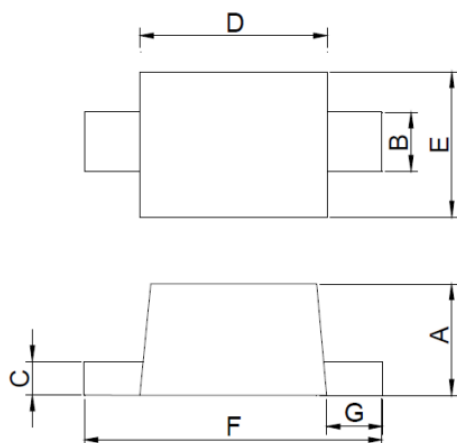
7 Electrical characteristics (@25°C unless otherwise specified)

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Peak Reverse Working Voltage	V_{RWM}				12	V
Breakdown Voltage	V_{BR}	$I_t = 1\text{mA}$	13.3		17.8	V
Reverse Leakage Current	I_R	$V_{RWM} = 12\text{V}$ $T = 25^\circ\text{C}$			1	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}$ $t_p = 8/20\mu\text{s}$			19	V
Clamping Voltage	V_C	$I_{PP} = 8\text{A}$ $t_p = 8/20\mu\text{s}$			25	V
Junction Capacitance	C_j	$V_R = 0\text{V}$ $f = 1\text{MHz}$			60	pF

8 Typical Characteristics

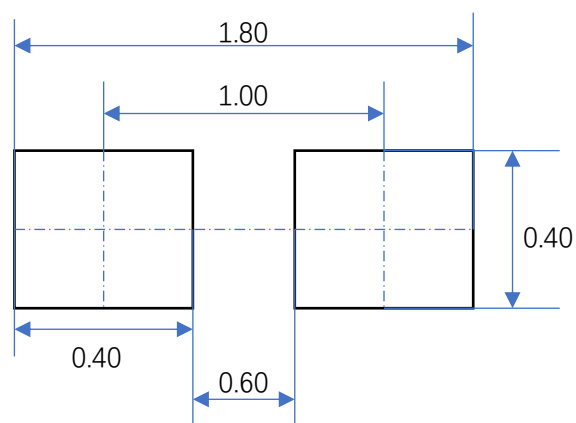


9 Product dimension



DIM	UNITS (mm)		
	MIN.	TYP.	MAX.
A	0.50	0.60	0.70
B	0.25	0.30	0.35
C	0.07	-	0.20
D	0.00	1.10	1.30
E	0.70	0.80	0.90
F	1.50	1.60	1.70
G	0.15	0.20	0.25

10 PCB Layout Footprints



11 Ordering Information

Part Number	Packaging	Reel Size
SLED512HCU	3000/Tape & Reel	7 inch