

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: 5V (Maximum)
- IO Capacitance:20pF ((Maximum)
- DC Breakdown Voltage: 6V (Minimum)
- Low Leakage Current: 1uA (Maximum)
- SOD-523 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 SLED55NCB is a Bidirectional ESD protection diode for circuit protection. The SLED55NCB is rated to dissipate ESD strikes at the maximum level

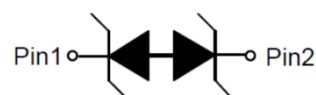
6 Absolute maximum Ratings @25°C

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20µs)	P _{PP}	80	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

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



SOD-523

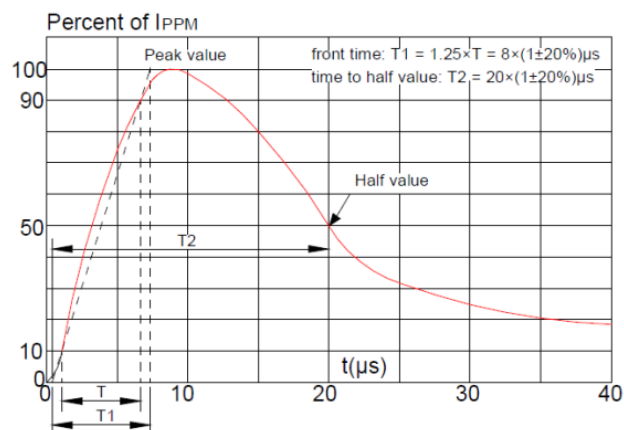
5 Device Information

PART NUMBER	PACKAGE	BODY SIZE (NOM)
SLED55NCB	SOD-523	1.60 mm x 1.00mm

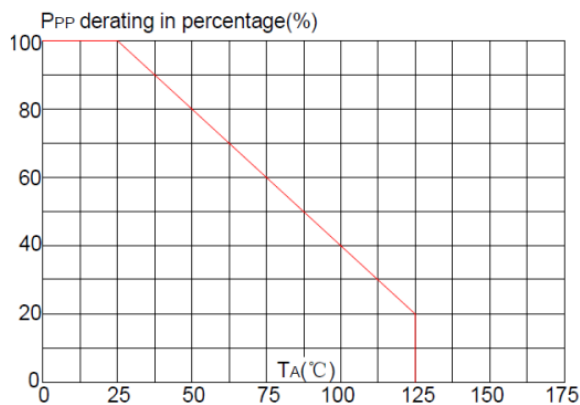
7 Electrical characteristics (@25°C unless otherwise specified)

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS
Peak Reverse Working Voltage	V_{RWM}				5	V
Breakdown Voltage	V_{BR}	$I_i = 1mA$	6		8	V
Reverse Leakage Current	I_R	$V_{RWM} = 5V$ $T=25^\circ C$			1	μA
Clamping Voltage	V_C	$I_{PP} = 5A$ $t_p = 8/20\mu s$		8	9	V
Clamping Voltage	V_C	$I_{PP} = 8A$ $t_p = 8/20\mu s$		9.5	10	V
Junction Capacitance	C_j	$V_R=0V$ $f = 1MHz$		15	20	pF

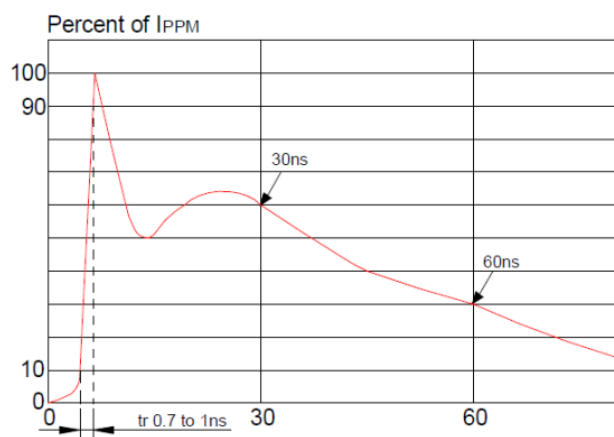
8 Typical Characteristics



Pulse Waveform (8/20us)



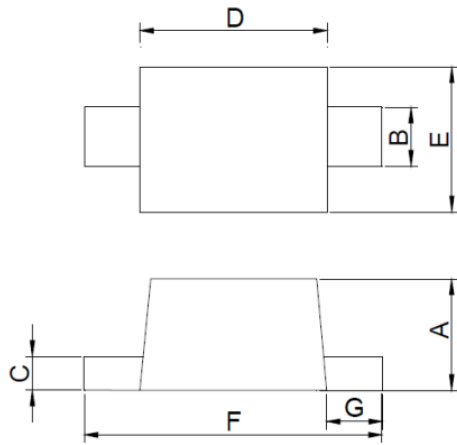
Pulse Derating Curve



ESD Clamping(8kV Contact Discharge)

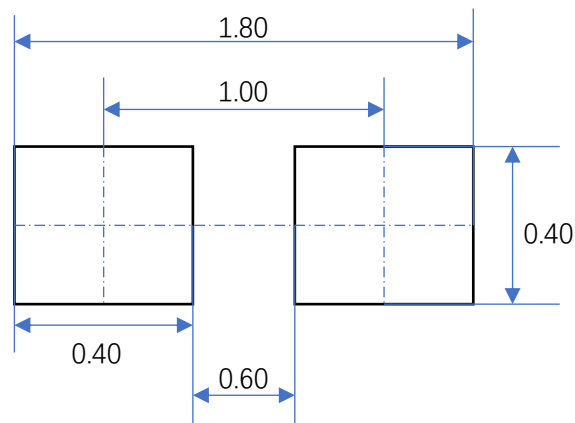
9 Product dimension

SOD-523



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
SLED55NCB	5000/Tape & Reel	7 inch