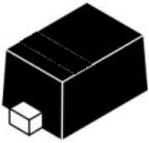
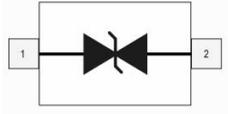




1-Line Bidirectional ESD Protection Diode

SOD523

### Schematic & Pin configuration

Simplified outline	Graphic symbol
	

### General description

Low capacitance bidirectional ElectroStatic Discharge (ESD) protection diode in a ultra-small and flat lead SOD523 plastic package designed to protect one signal line from the damage caused by ESD and other transients.

### Features and benefits

- Ultra Low Capacitance 0.3 pF(Typ)
- Reverse stand-off voltage: 5V Max
- Low leakage current: nA Level
- Response time is typically < 1 ns
- IEC61000-4-2 Level 4 ESD Protection

### Application information

- High- speed data lines
- Smart phones
- Display Ports
- MDDI Ports
- USB Ports
- Digital Video Interface (DVI)
- PCI Express and Serial SATA Ports

### Ordering information

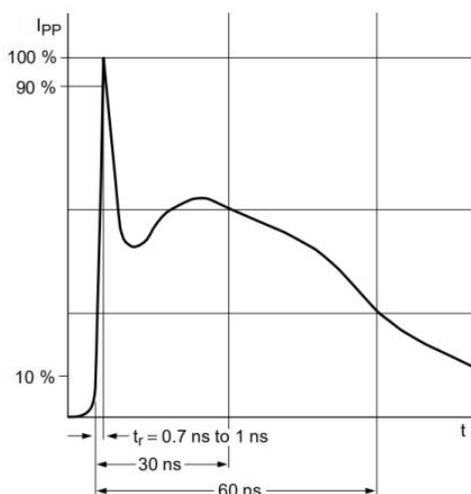
Device	Package	Marking	Packaging
ESD5LL5.0C	SOD523	L5	3000/Tape & Reel

### Maximum Ratings

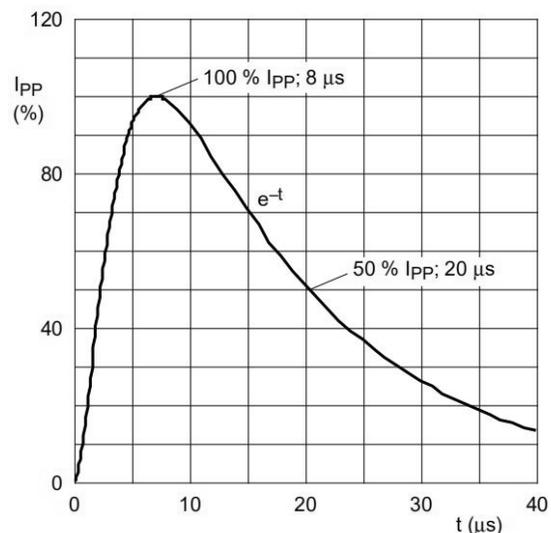
Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20μs)	P <sub>PPM</sub>	80	W
Peak Pulse Current (8/20μs)	I <sub>PP</sub>	4	A
ESD voltage IEC 61000-4-2 (air discharge)	V <sub>ESD</sub>	20	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V <sub>ESD</sub>	15	kV
Maximum lead temperature for soldering during 10s	T <sub>L</sub>	260	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C
Operating Temperature Range	T <sub>OP</sub>	-40 to +125	°C

### Electrical Characteristics (T<sub>OP</sub> = 25 °C, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V <sub>RWM</sub>	--	--	5.0	V	
Breakdown Voltage	V <sub>BR</sub>	6.2	--	8.5	V	I <sub>T</sub> =1mA
Leakage Current I <sub>Leak</sub>	I <sub>R</sub>	--	--	100	nA	V <sub>RWM</sub> =5V
Clamping Voltage	V <sub>C</sub>	--	--	20.0	V	I <sub>PP</sub> =4A, T <sub>p</sub> =8/20μs
Junction Capacitance	C <sub>J</sub>	--	0.3	0.40	pF	V <sub>R</sub> =0V, f=1MHz



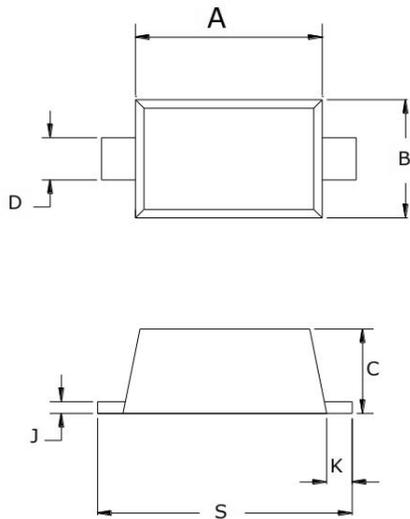
IEC61000-4-2 Waveform



IEC 61000-4-5 Waveform ( 8/20μs pulse)

## Package Outline Dimensions

### SOD523



SYMBOL	Dimensions In Millimet	
	MIN	MAX
A	1.10	1.30
B	0.70	0.90
C	0.50	0.70
D	0.25	0.35
J	0.07	0.20
K	0.15	0.25
S	1.50	1.70

## Soldering Footprint (mm)

