





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

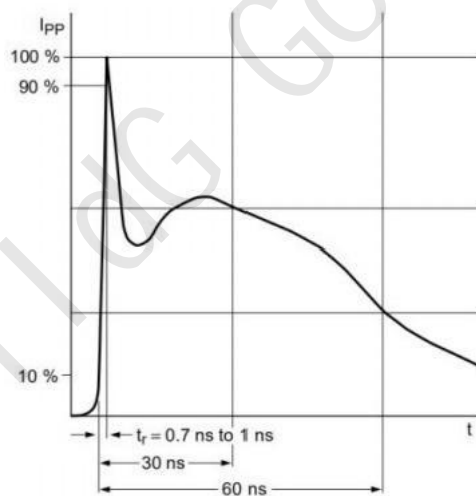
	Device	Package	Marking	Packaging
	ESD5LL5.0C	SOD523	L5	3000/Tape &Reel

Maximum Ratings

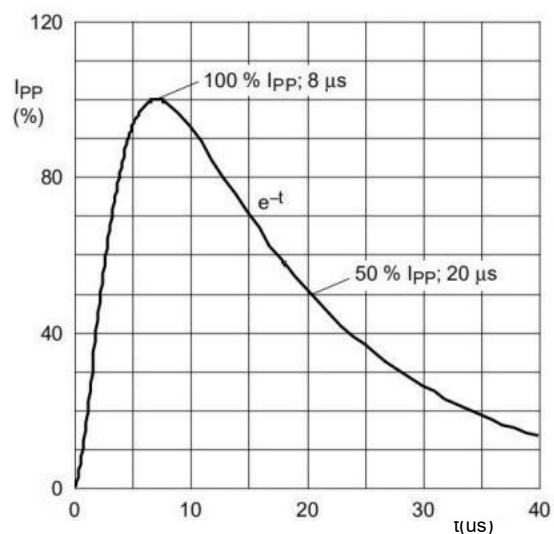
Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p=8/20 \mu s$)	PppM	80	W
Peak Pulse Current ($8/20 \mu s$)	Ipp	4	A
ESD voltage IEC 61000-4-2 (air discharge)	VESD	20	kV
ESD voltage IEC 61000-4-2 (contact discharge)	VESD	15	kV
Maximum lead temperature for soldering during 10s	TL	260	° C
Storage Temperature Range	Tstg	-55 to +150	° C
Operating Temperature Range	Top	-40 to +125	° C

Electrical Characteristics (Top=25 °C, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	Vrwm			5.0	V	
Breakdown Voltage	VBR	6.2		8.5	V	I _r =1mA
Leakage Current I _{Leak}	I _k			100	nA	V _{Rwm} =5V
Clamping Voltage	V _c			20.0	V	I _{pp} =4A, T _p =8/20 μ s
Junction Capacitance	C		0.3	0.40	pF	V _r =0V, f=1MHz



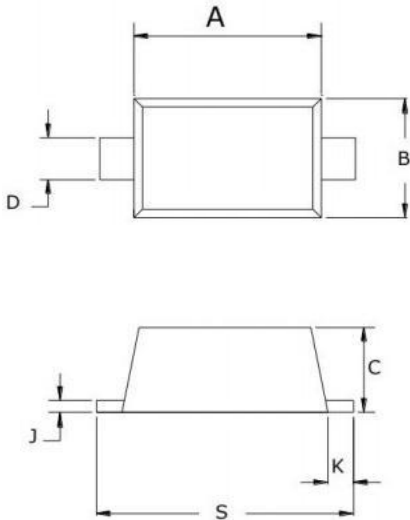
IEC61000-4-2 Waveform



IEC 61000-4-5 Waveform(8/20μs pulse)

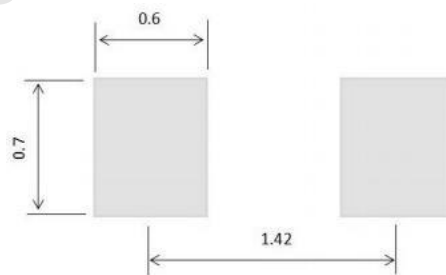
Package Outline Dimensions

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)



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