



1-Line Bidirectional ESD Protection Diode

SOD523

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 2.5 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


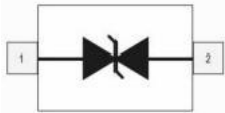
Application information

- Computers and peripherals
- Audio and video equipment
- Cellular handsets and accessories
 - 10/100/1000 Ethernet
- Local Area Network (LAN)equipment
- Communication systems
- SIM card protection
- Portable electronics

Ordering information

Device	Package	Marking	Packaging
ESD5LM5.0C	SOD523	LB	3000/Tape &Reel

Schematic &Pin configuration

Simplified outline	Graphic symbol
	

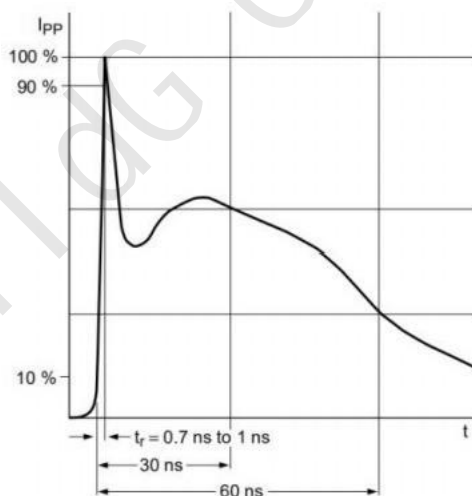
Maximum Ratings

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p=8/20 \mu s$)	PpPM	30	W
Maximum lead temperature for soldering during 10s	Tt	260	$^{\circ}C$
Storage Temperature Range	Tstg	-55 to +150	$^{\circ}C$
Operating Temperature Range	Top	-40 to +125	$^{\circ}C$
Maximum junction temperature	Tj	150	$^{\circ}C$
ESD voltage IEC 61000-4-2 (air discharge)	VESD	15	kV
ESD voltage IEC 61000-4-2 (contact discharge)	VESD	8	kV

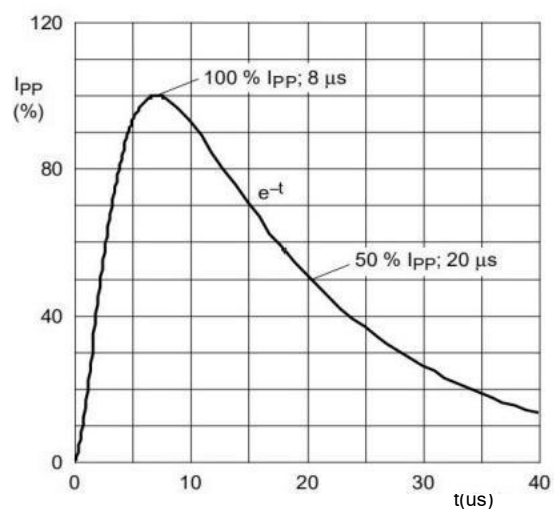
Electrical Characteristics(Top=25C,unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	VRWM			5.0	V	
Breakdown Voltage	VBR	6.0			V	$I_r=1mA$
Leakage Current ILeak	I_r			100	nA	$VRWM=5V$
Clamping Voltage	Vc			13.0	V	$I_{pp}=2A, T_p=8/20 \mu s$
Junction Capacitance	Cj		2.5	3.2	pF	$V_r=0V, f=1MHz$

Typical Electrical and Thermal Characteristics (Curves)



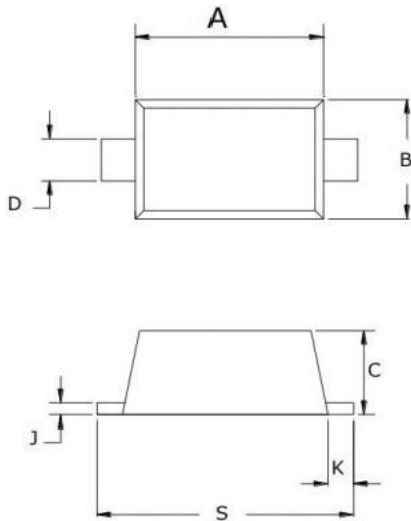
IEC61000-4-2 Waveform



IEC 61000-4-5 Waveform(8/20µs pulse)

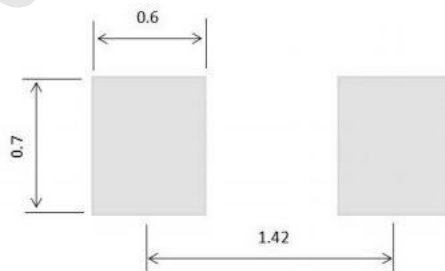
Package Outline Dimensions

SOD523



SYMBOL	MILLIMETERS		
	MIN	NOR	MAX
A	1.10	1.20	1.30
B	0.70	0.80	0.90
C	0.60	0.65	0.70
D	0.25	0.30	0.35
J	0.08	0.11	0.15
K	0.15	0.20	0.25
S	1.50	1.60	1.70

Soldering Footprint (mm)



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