

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 0.6 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



SOD523

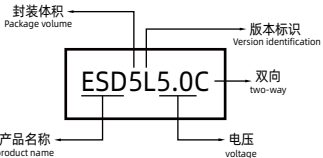
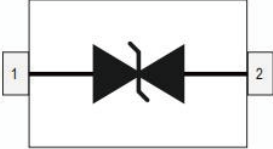
Application information

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

Ordering information

Device	Package	Reel Size	Qty(PCS)
ESD5L5.0C	SOD523	7 Inch	3000

Ordering information

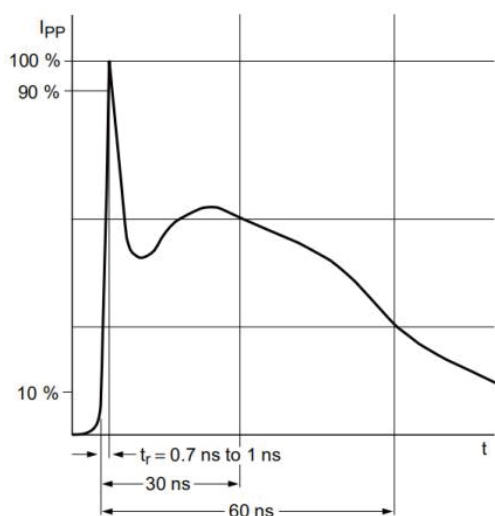
Marking	Naming rule	Graphic symbol
L5		

Maximum Ratings ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

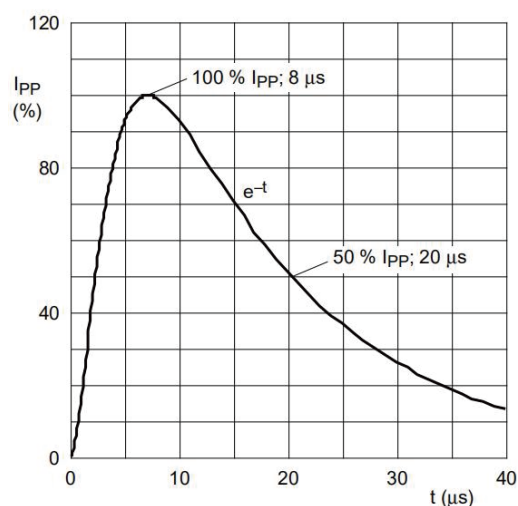
Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PPM}	45	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PPM}	3	A
Maximum lead temperature for soldering during 10s	T_L	260	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$
Operating Temperature Range	T_{OP}	-40 to +125	$^{\circ}\text{C}$
Maximum junction temperature	T_j	150	$^{\circ}\text{C}$
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	15	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	8	kV

Electrical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	5.0	V	
Breakdown Voltage	V_{BR}	6.5	--	8.5	V	$I_T = 1\text{mA}$
Leakage Current I_{Leak}	I_R	--	--	100	nA	$V_{RWM} = 5\text{V}$
Clamping Voltage	V_C	--	--	15.0	V	$I_{PP} = 3\text{A}, t_p = 8/20\mu\text{s}$
Junction Capacitance	C_j	--	0.6	0.8	pF	$V_R = 0\text{V}, f = 1\text{MHz}$

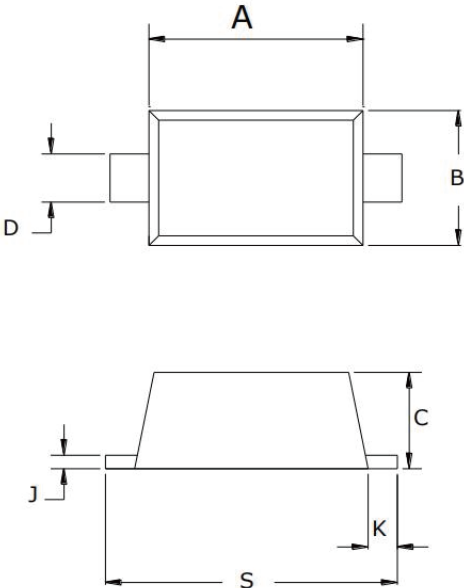


IEC61000-4-2 Waveform


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

Package Outline Dimensions

SOD523



SYMBOL	MILLIMETERS	
	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)

