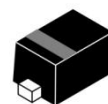


1-Line Uni-directional ESD Protection Diode



General description

The ESD9L5.0-SL is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time , make these parts ideal for ESD protection on designs where board space is at a premium.

Features and benefits

- Low Capacitance 0.5 pF(Typ)
- Reverse stand-off voltage: 5V Max
- Low leakage current: nA Level
- Low Clamping Voltage
- Response time is typically < 1 ns
- IEC61000-4-2 Level 4 ESD Protection

Application information

- 10/100/1000 Mbit/s Ethernet
- FireWire
- High- speed data lines
- Subscriber Identity Module (SIM) card protection
- Cellular handsets and accessories
- Portable electronics
- Communication systems
- Computers and peripherals
- Audio and video equipment
- Antenna protection

Ordering information

Device	Package	Marking	Packaging
ESD9L5.0-SL	SOD923	D	8000/Tape & Reel

Schematic & Pin configuration

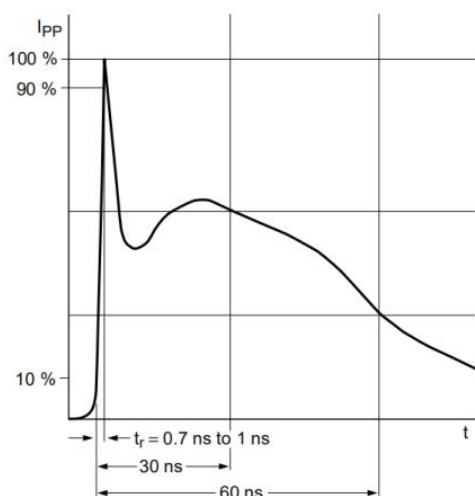
Simplified outline	Graphic symbol

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

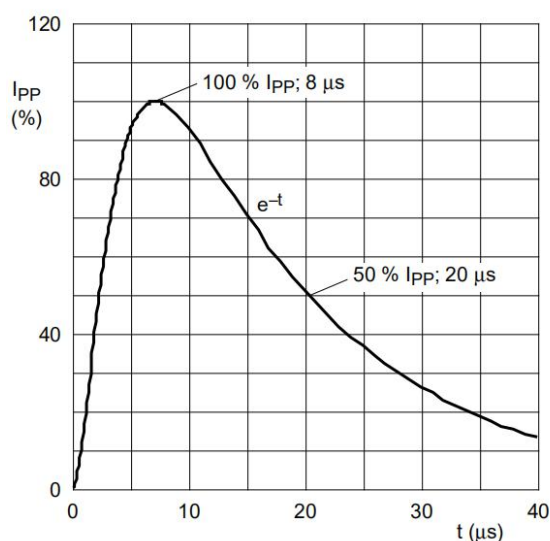
Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\text{ }\mu\text{s}$)	P_{PPM}	60	W
Peak Pulse Current ($t_p = 8/20\text{ }\mu\text{s}$)	I_{PPM}	4	A
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	20	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	15	kV
Maximum lead temperature for 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	$^{\circ}\text{C}$

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

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	5.0	V	
Breakdown Voltage	V_{BR}	6.5	--	9.0	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	$I_{PP}=4\text{A}, t_p=8/20\mu\text{s}$
Junction Capacitance	C_j	--	0.5	0.6	pF	$V_R=0\text{V}, f=1\text{MHz}$



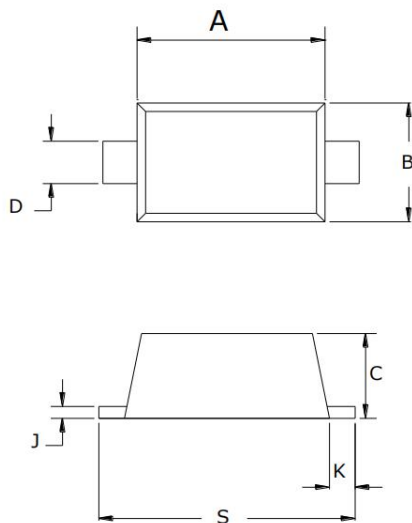
IEC61000-4-2 Waveform



IEC 61000-4-5 Waveform(8/20 μs pulse)

Package Outline Dimensions

SOD923



SYMBOL	MILLIMETERS	
	MIN	MAX
A	0.74	0.86
B	0.54	0.66
C	0.35	0.45
D	0.14	0.26
K	0.04	0.16
S	0.95	1.10

Soldering Footprint (mm)

