

General description

Unidirectional ElectroStatic Discharge (ESD) protection diode in a SOD923 plastic package designed to protect one transmission or data line from the damage caused by ESD and other transients.

Features and benefits

- Unidirectional ESD protection of one line
- Reverse stand-off voltage: 5.0V Max
- Low leakage current: nA Level
- Response time is typically < 1 ns
- Low clamping voltage: V_C : 10V @ $I_{PP} = 12A$ (TYP)
- ESD Protection: 30kV(air)/ 30kV(contact) (IEC61000-4-2)
- Surge Protection: 12A (IEC 61000-4-5 8/20 μs)

Application information

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

Ordering information

Device	Package	Packaging	Reel Size
SLESD9X5.0S	SOD923	8000/Tape & Reel	7 Inch

Schematic & Pin configuration

Simplified outline	Graphic symbol

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

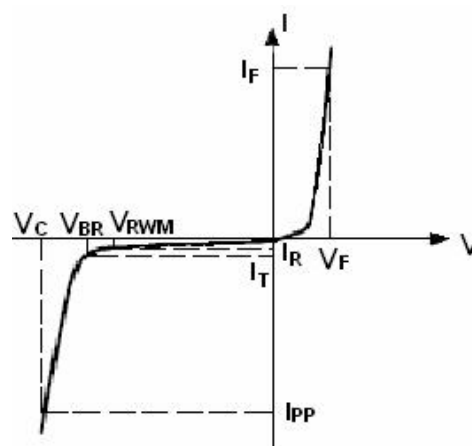
Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20\text{ }\mu\text{s}$)	P_{PPM}	144	W
Peak Pulse Current($t_p = 8/20\text{ }\mu\text{s}$)	I_{PPM}	12	A
Maximum lead temperature for soldering during 10s	T_L	260	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^{\circ}\text{C}$
Operating 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}	30	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	30	kV

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}	6.7	--	8.2	V	$I_T=1\text{mA}$
Leakage Current ILeak	I_R	--	--	0.1	μA	$V_{RWM}=5.0\text{V}$
Clamping Voltage	V_C	--	10	12	V	$I_{PP}=12\text{A}, t_p=8/20\mu\text{s}$
Junction Capacitance	C_J	--	70	80	pF	$V_R=0\text{V}, f=1\text{MHz}$

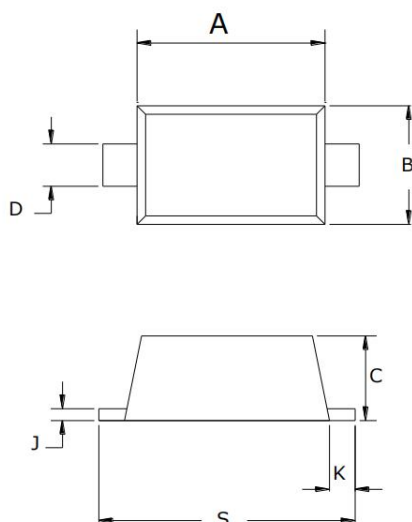
Portion Electronics Parameter

Symbol	Parametr
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
I_F	Forward Current
V_F	Forward Voltage @ I_F



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)

