

DESCRIPTION

The ESD9L5V 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.

APPLICATIONS

- ✧ Cell Phone Handsets and Accessories.
- ✧ Personal Digital Assistants (PDA's).
- ✧ Notebooks, Desktops, and Servers.
- ✧ Portable Instrumentation.
- ✧ Cordless Phones.
- ✧ Digital Cameras.
- ✧ Peripherals.
- ✧ MP3 Players.

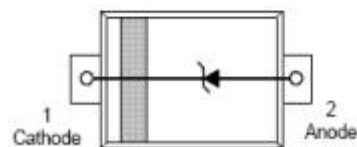
FEATURES

- ✧ Ultra low capacitance 0.5pF.
- ✧ Replacement for MLV(0402).
- ✧ Unidirectional configurations.
- ✧ Response Time is Typically < 1 ns.
- ✧ Protect one I/O or power line.
- ✧ Low clamping voltage.
- ✧ RoHS compliant.
- ✧ Transient protection for data lines to IEC 61000-4-2(ESD) $\pm 15\text{KV}(\text{air})$, $\pm 8\text{KV}(\text{contact})$; IEC 61000-4-4 (EFT) 40A (5/50ns).

SOD-923



PIN CONFIGURATION

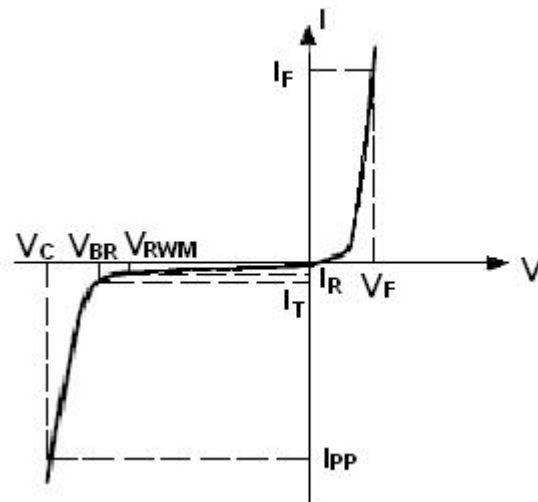


DEVICE CHARACTERISTICS

Maximum Ratings			
Parameter	Symbol	Value	Unit
Lead Soldering Temperature	T_L	260(10 sec)	$^{\circ}\text{C}$
Operating Temperature	T_J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL PARAMETER

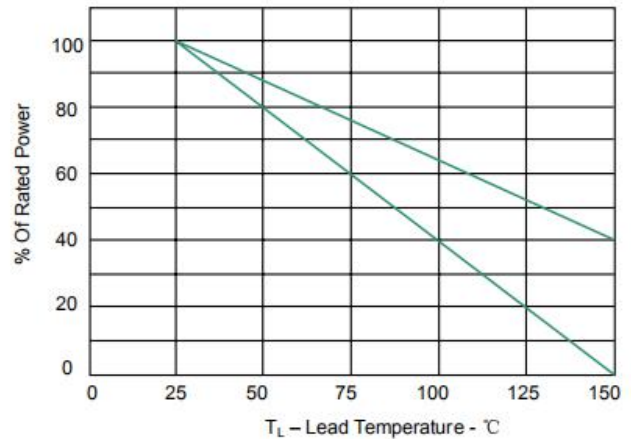
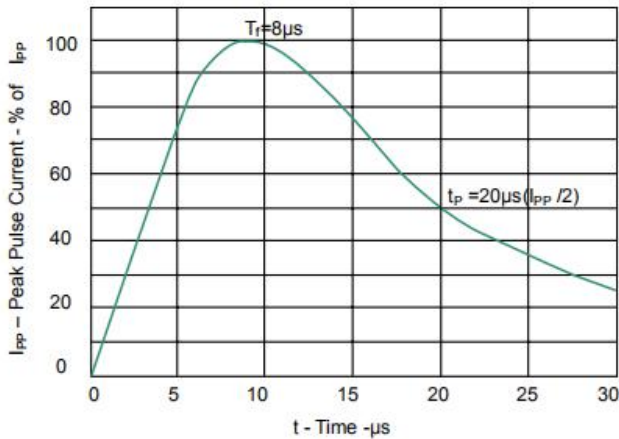
Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T
I_F	FORWARD CURRENT
V_F	FORWARD VOLTAGE @ I_F

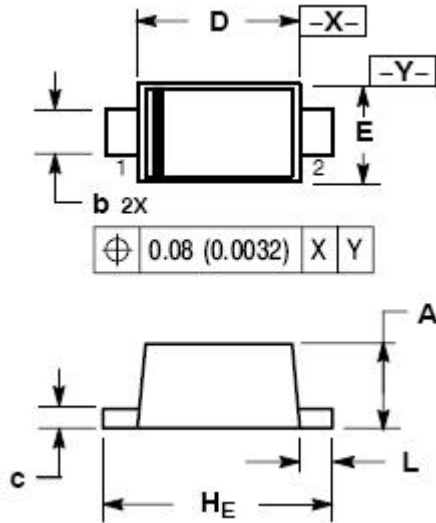
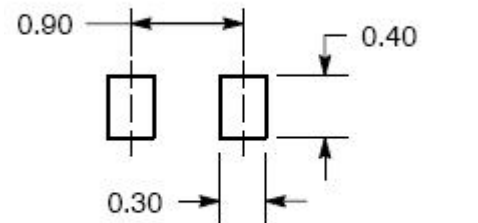


ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ-	Max.	Units
Working Voltage	V_{RWM}				5	V
Breakdown voltage	V_{BR}	$I_t=1\text{mA}$	5.4	7.0	8.5	V
Reverse Leakage Current	I_R	$V_{RWM} -5\text{V}$			1	pA
Forward Voltage	V_F	$I_F=1\text{OmA}$		0.8	1.25	V
Clamping Voltage	V_C	$I_{PP}=1\text{A } t_P=8/20\text{pS}$			9.8	V
Junction Capacitance	C_j	$V_R=0\text{V } f=1\text{MHz}$		0.5		pF

1. Capacitance is measured at $f=1\text{MHz}$, $V_R=0\text{V}$, $T_A=25^{\circ}\text{C}$.

TYPICAL CHARACTERISTICS


SOD-923 MECHANICAL DATA

SOLDERING FOOTPRINT*


DIMENSIONS: MILLIMETERS

SOD-923

Dim	Millimeters			Inches		
	Min	Nom	Max	Min	Nom	Max
A	0.36	0.40	0.43	0.014	0.016	0.017
b	0.15	0.20	0.25	0.006	0.008	0.010
c	0.07	0.12	0.17	0.003	0.005	0.007
D	0.75	0.80	0.85	0.030	0.031	0.033
E	0.55	0.60	0.65	0.022	0.024	0.026
HE	0.95	1.00	1.05	0.037	0.039	0.041
L	0.05	0.10	0.15	0.002	0.004	0.006

 Website: <http://www.jksemi.com>

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