

DESCRIPTION

The ESDA6V1L is a dual monolithic voltage suppressor designed to protect components which are connected to data and transmission lines against ESD. It clamps the voltage just above the logic level supply for positive transients and to a diode drop below ground for negative transients. It can also work as bidirectional suppressor by connecting only pin1 and 2.

APPLICATIONS

- ✧ Computers.
- ✧ Printers.
- ✧ Communication systems.
- ✧ It is particularly recommended for the RS232 I/O. port protection where the line interface withstands only with 2kV ESD surges.

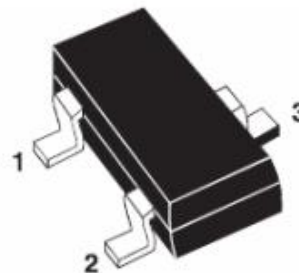
FEATURES

- ✧ 2 Unidirectional Transil functions
- Low leakage current: $I_{RM} \max < 1 \mu A$ at V_{RM} .
- ✧ 300W peak pulse power(8/20 μs).

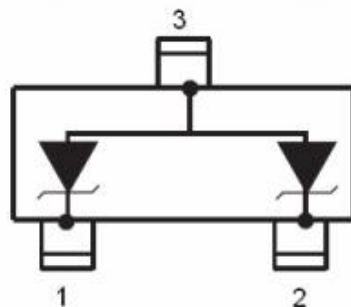
COMPLIES WITH THE FOLLOWING STANDARDS

- ✧ IEC61000-4-2.
- ✧ Level 4 15 kV (air discharge)
8 kV(contact discharge) .
- ✧ MIL STD 883E - Method 3015-7 Class 3
25 kV HBM (Human Body Model) .

SOT-23



PIN CONFIGURATION



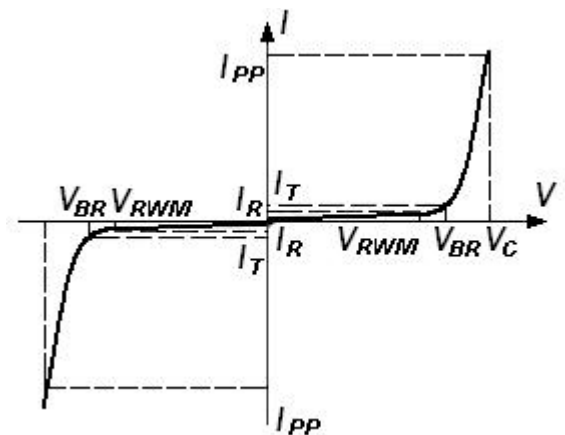
DEVICE CHARACTERISTICS

Absolute Ratings (Tamb=25°C)

Symbol	Parameter	Value	Units
Ppp	Peak Pulse Power (tp = 8/20μs)	300	W
TL	Maximum lead temperature for soldering during 10s	260	°C
Tstg	Storage Temperature Range	-55 to +155	°C
TOP	Operating Temperature Range	-40 to +125	°C
Tj	Maximum junction temperature	150	°C
VPP	Electrostatic discharge MIL STD 883C -Method 3015-6 IEC61000-4-2 air discharge IEC61000-4-2 contact discharge	25 15 8	kV

ELECTRICAL PARAMETER

Symbol	Parameter
Ipp	Maximum Reverse Peak Pulse Current
Vc	Clamping Voltage @ Ipp
VRWM	Working Peak Reverse Voltage
IR	Maximum Reverse Leakage Current @ VRWM
IT	Test Current
VBR	Breakdown Voltage @ IT



ELECTRICAL CHARACTERISTICS

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified. VF = 0.9V at IF = 10mA)							
Part Numbers	VBR			IT	VRWM	IR	C
	Min.	Typ.	Max.				Typ. 0v bias
	V	V	V	mA	V	μA	pF
ESDA6V1L	6.1	6.7	7.2	1	5.25	20	20

1. Square pulse IPP=15A, tp=2.5μs
2. $\Delta VBR = aT \cdot (T_{amb} - 25^{\circ}C) \cdot VBR(25^{\circ}C)$
3. Capacitance is measured by pin 1 to pin 3 or pin2 to pin 3.

TYPICAL CHARACTERISTICS

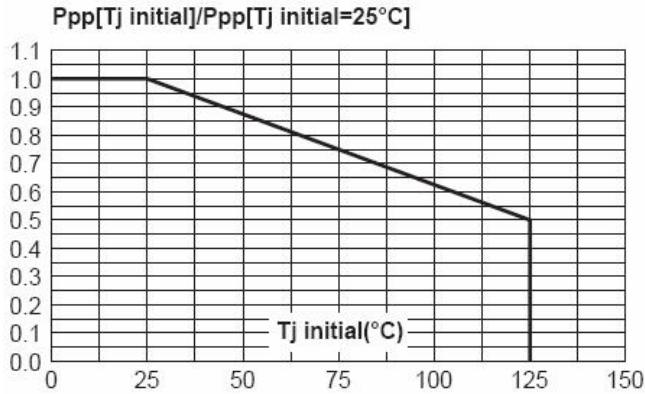


Fig1. Peak power dissipation versus Initial junction temperature

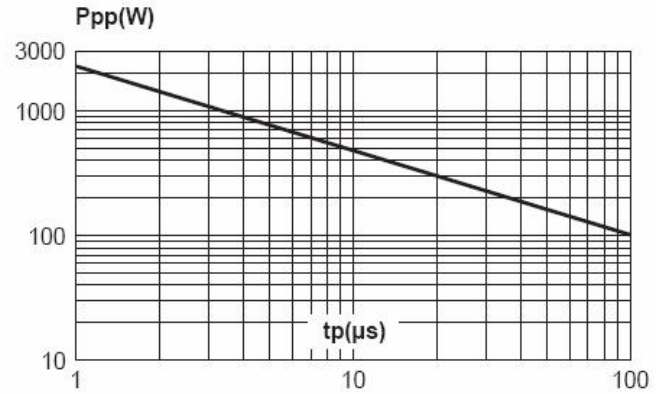


Fig2. Peak pulse power versus exponential pulse duration (T_j initial=25°C)

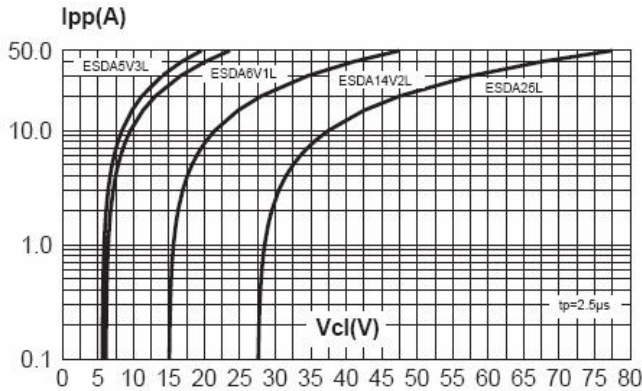


Fig3. Clamping voltage versus peak pulse current (T_j initial=25°C, rectangular Waveform, $t_p=2.5\mu s$)

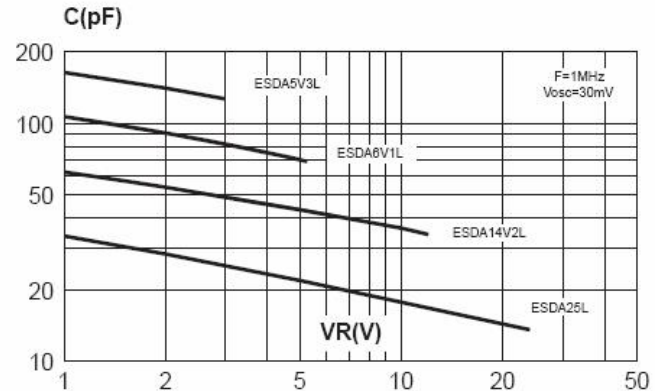


Fig4. Capacitance versus reverse Applied voltage

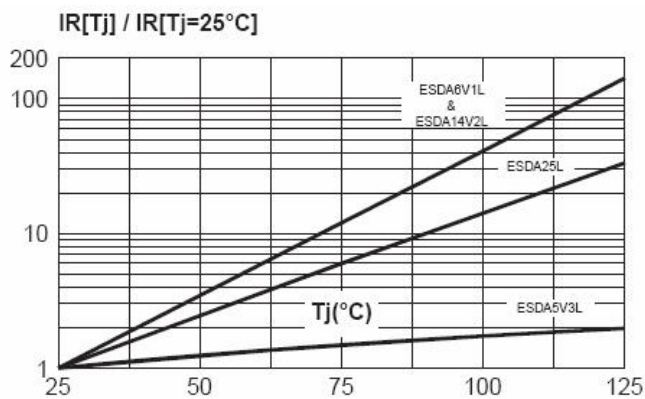


Fig5. Relative variation of leakage current Versus junction temperature

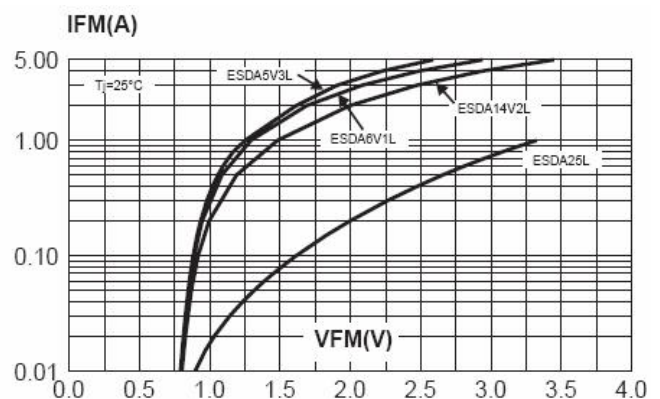
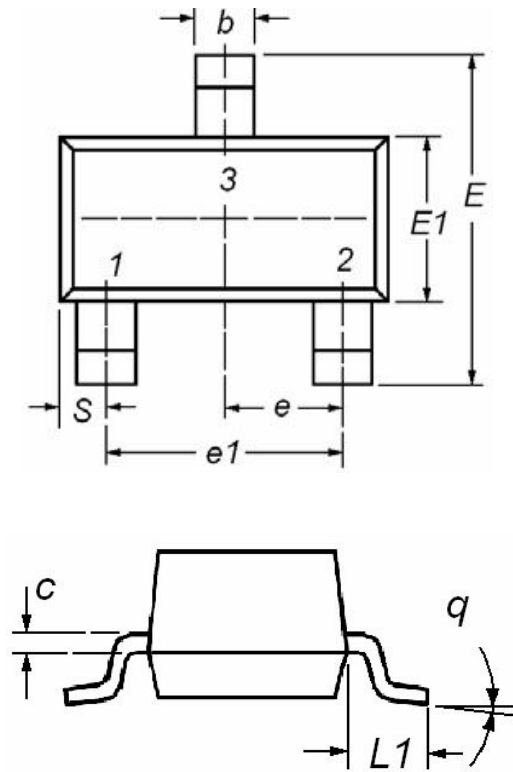


Fig6. Peak forward voltage drop versus peak forward current

SOT-23 MECHNICAL DATA



Dim	Millimeters		
	Min	TYP	Max
A	1.00	1.20	1.40
A1	0	0.05	0.10
A2	1.00	1.15	1.30
b	0.35	0.40	0.50
c	0.10	0.15	0.20
D	2.70	2.90	3.10
E	2.40	2.60	2.80
E1	1.40	1.50	1.60
e	0.85	1.00	1.15
e1	1.80	1.90	2.00
L1	0.40		
q	0°	5°	10°
S	0.45	0.50	0.55

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

For additional information, please contact your local Sales Representative.

©Copyright 2016, jksemi