

## ESDA14V2L

### 1. Description

The ESDA14V2L is a Transient Voltage Suppressor Arrays that designed to protect components which are connected to data and transmission lines against electrostatic discharge (ESD), electrical fast Transients (EFT), and lightning. All pins are rated to withstand 30kV ESD pulses using the IEC61000-4-2 air discharge method.

### 2. Features

- IEC 61000-4-2 Level 4 ESD Protection
  - $\pm 30\text{kV}$  Contact Discharge
  - $\pm 30\text{kV}$  Air Discharge
- 450W Peak pulse Power (8/20us)
- Low clamping voltage
- Working voltage: 12V
- Low leakage current
- ESD Protection > 15kV
- RoHS compliant
- Protecting one bidirectional or two unidirectional lines

### 3. Applications

- Portable electronics
- Control & monitoring systems
- Servers, notebooks, and desktop PCs
- Set-top box
- Communication systems

### 4. Ordering Information

Part Number	Package	Marking	Material	Packing	Quantity per reel	Flammability Rating	Reel Size
ESDA14V2L	SOT-23	M12	Halogen free	Tape & Reel	3,000 PCS	UL 94V-0	7 inches

Table-1 Ordering information

## 5. Pin Configuration and Functions

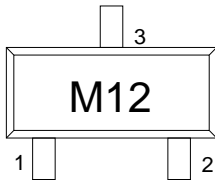
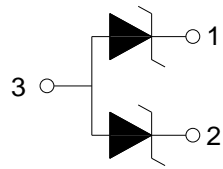
Pin	Name	Description	Outline	Circuit Diagram
1	IO	Connect to IO		
2	IO	Connect to IO		
3	GND	Connect to GND		

Table-2 Pin configuration

## 6. Specification

### 6.1. Absolute Maximum rating

Over operating free-air temperature range (unless otherwise noted)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)@25°C	$P_{pk}$	-	500	W
Peak pulse current (tp=8/20us)@25°C	$I_{PP}$	-	15	A
ESD (IEC61000-4-2 air discharge) @25°C	$V_{ESD}$	-	±30	kV
ESD (IEC61000-4-2 contact discharge) @25°C	$V_{ESD}$	-	±30	kV
Junction temperature	$T_J$	-	150	°C
Operating temperature	$T_{OP}$	-40	125	°C
Storage temperature	$T_{STG}$	-55	150	°C
Lead temperature	$T_L$	-	260	°C

Table-3 Absolute Maximum rating

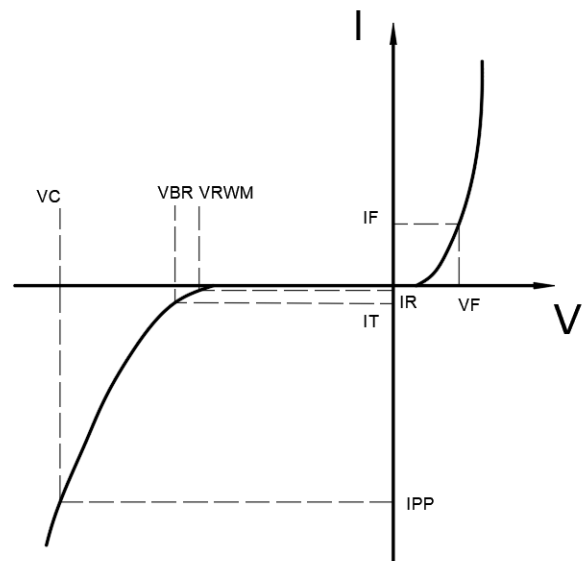
## 6.2. Electrical Characteristics

At TA = 25°C unless otherwise noted

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	$V_{RWM}$				12	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	13.5			V
Reverse Leakage Current	$I_R$	$V_{RWM}=12V$			1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=15A$ ; $t_p=8/20\mu s$		28		V
Junction Capacitance	$C_J$	$V_R=0V$ ; $f=1MHz$		100		pF

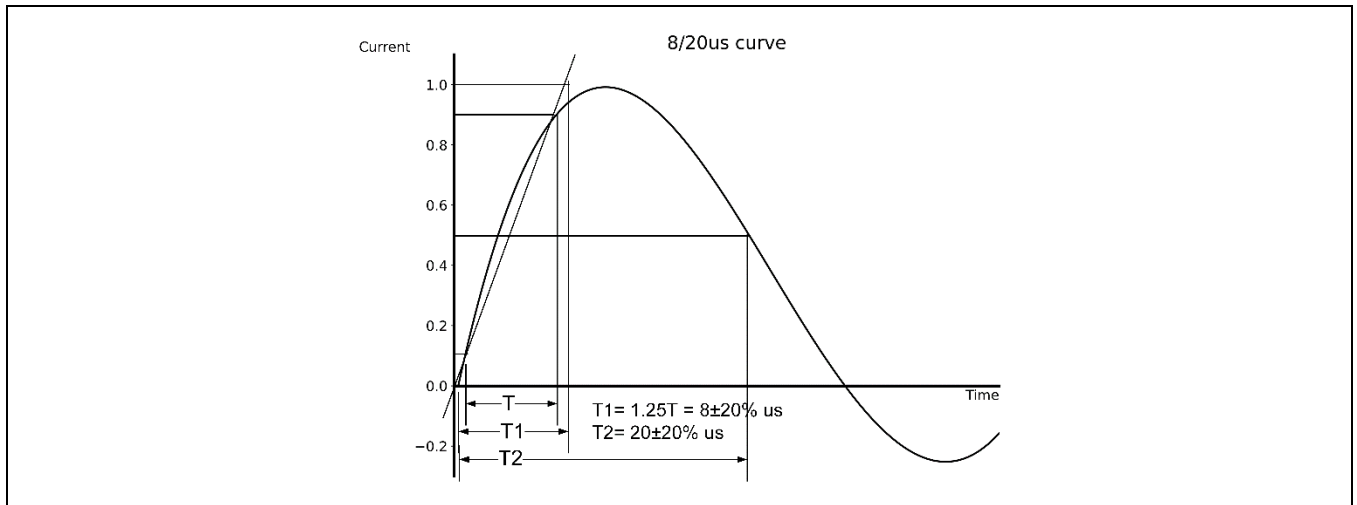
Table-4 Electrical Characteristics

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

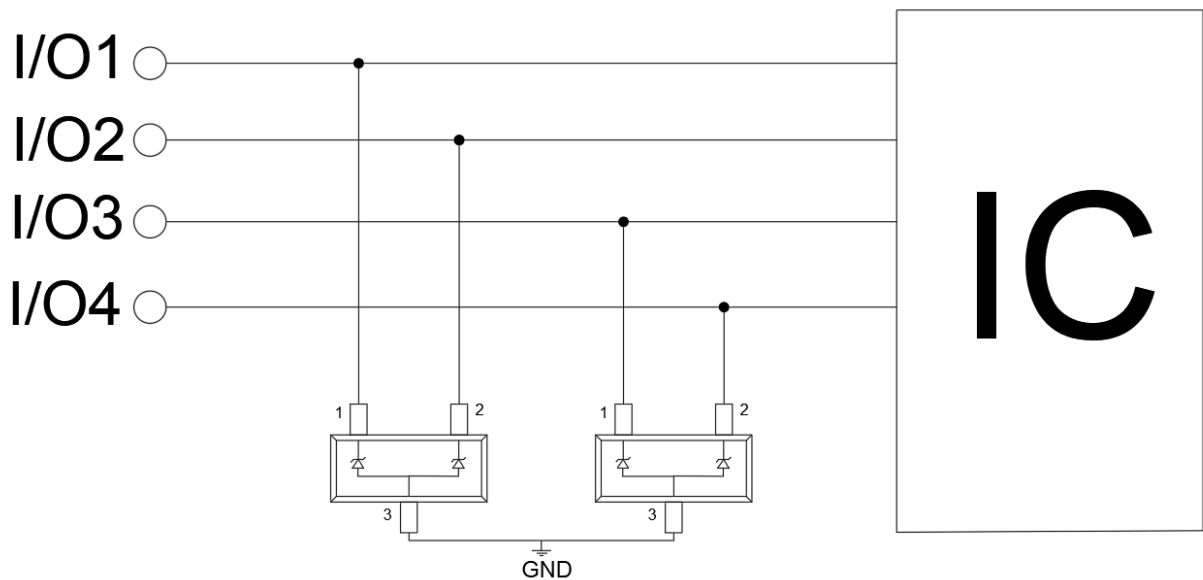




### 7. Typical Characteristic



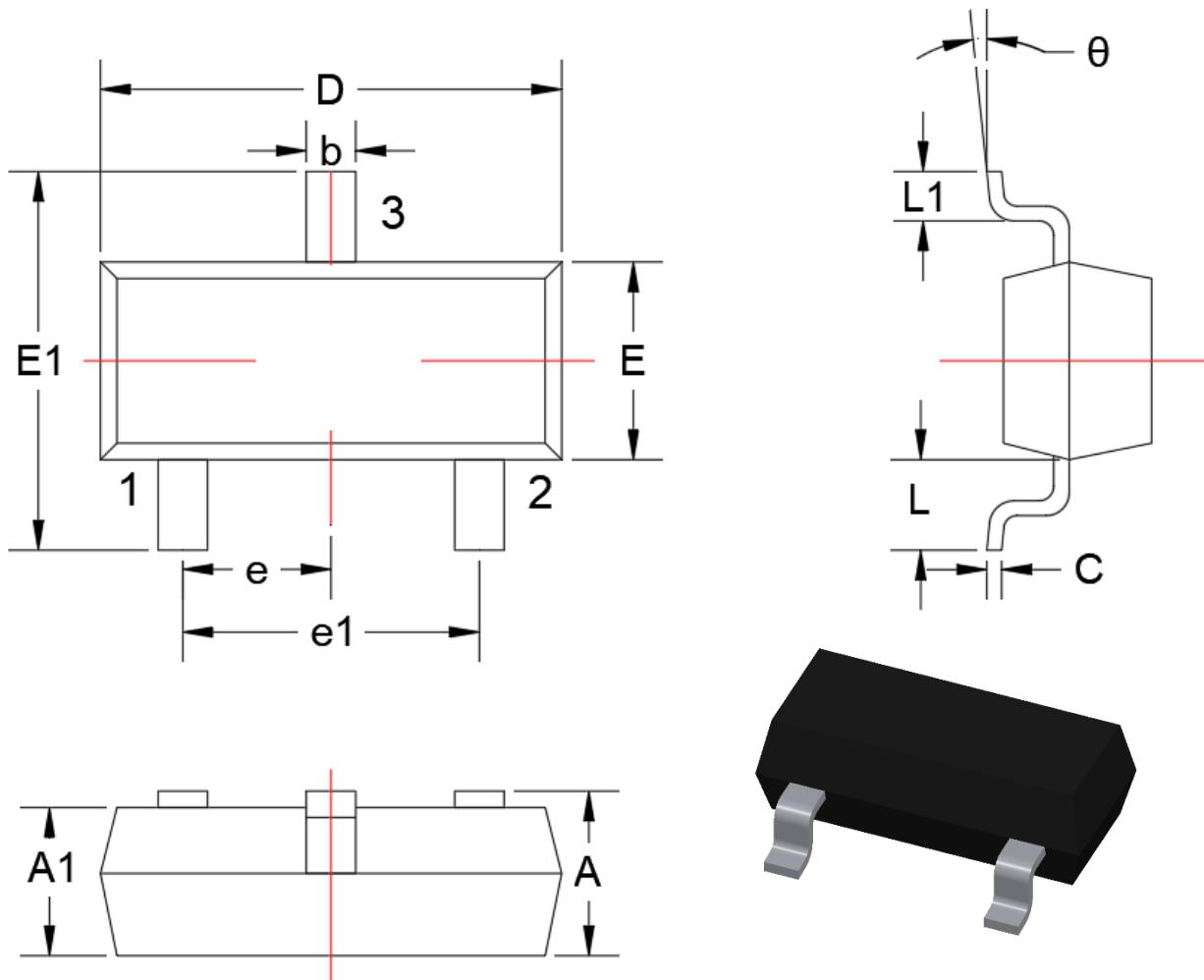
### 8. Typical Application



Typical Interface Application



9. Dimension

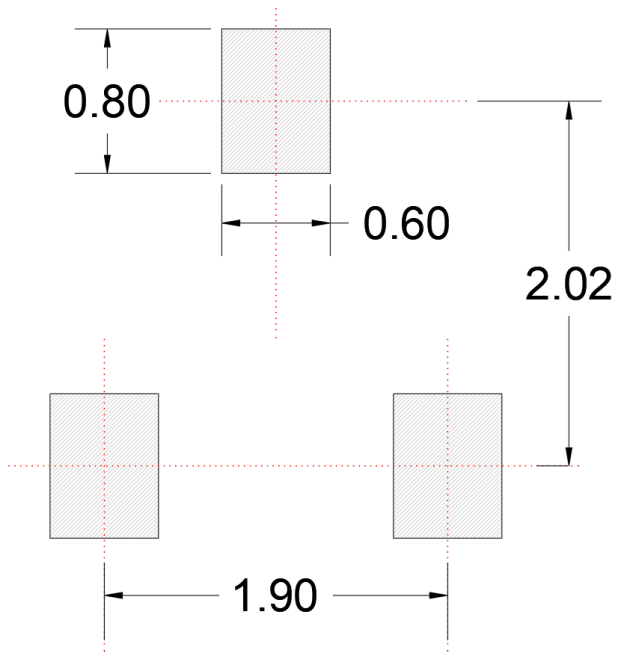


Dimensions in Millimeters					
Symbol	Min.	Max.	Symbol	Min.	Max.
A	0.9	1.15	e1	1.80	2.00
A1	0.00	0.10	L	0.55REF	
b	0.30	0.50	L1	0.30	0.50
C	0.08	0.15	θ	0°	8°
D	2.80	3.00			
E	1.20	1.40			
E1	2.25	2.55			
e	0.95TYP				

Table-5 Product dimensions



### 10. Recommended Land Pattern



Note:

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference only

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:*

*Click to view products by [DOWO](#) manufacturer:*

Other Similar products are found below :

[60KS200C](#) [D18V0L1B2LP-7B](#) [D5V0F4U5P5-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE8.2A](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#)  
[SMBJ33CATR](#) [SMBJ6.5A](#) [SMBJ8.0A](#) [ESD101-B1-02ELS E6327](#) [ESD112-B1-02EL E6327](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-](#)  
[HF](#) [3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [JANTX1N6126A](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [SCM1293A-04SO](#)  
[ESD200-B1-CSP0201 E6327](#) [SM12-7](#) [CEN955 W/DATA](#) [VESD12A1A-HD1-GS08](#) [CPDQC5V0-HF](#) [D1213A-01LP4-7B](#) [ESD101-B1-02EL](#)  
[E6327](#) [AOZ8808DI-03](#) [5KP15A](#) [5KP48A](#) [5KP90A](#) [ESD3V3D7-TP](#) [15KPA36A-LF](#) [P4KE56CA](#) [P4KE68A](#) [P4KE91CATR](#) [P6KE120A](#)  
[P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#) [SA90CA](#)