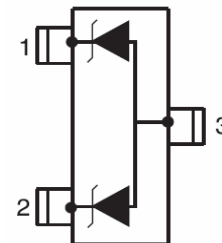
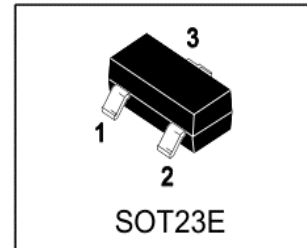


## Dual Transient Voltage Suppressors Array for ESD Protection

### General Description

The LTVS23H12CLT1G 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 pin 1 and 2.

# LTVS23H12CLT1G



### Applications

- Computers
- Printers
- Communication systems

### Features

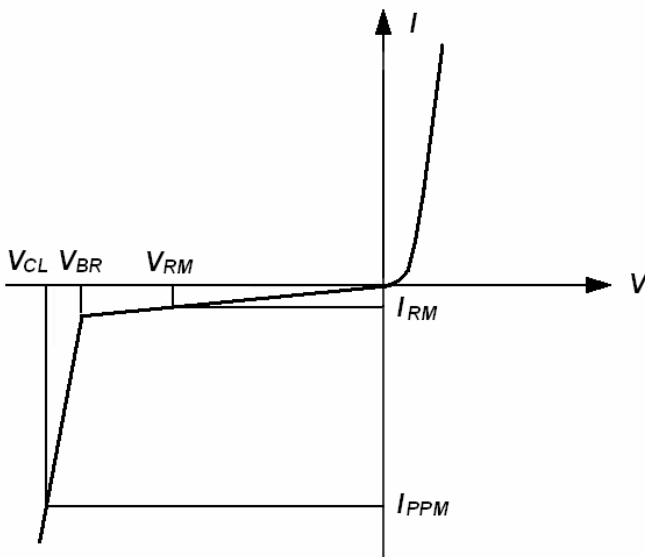
- 2 Unidirectional Transil functions
- Low leakage current:  $I_R \max < 1 \mu A$  at  $V_{RM}$
- 600W peak pulse power(8/20 $\mu$ s)
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- We declare that the material of product compliance with RoS requirements and alogen ree.

### ORDERING INFORMATION

Device	Making	Shipping
LTVS23H12CLT1G	H12	3000/Tape&Reel

Absolute Ratings ( $T_{amb}=25^{\circ}C$ )			
Symbol	Parameter	Value	Units
$P_{PP}$	Peak Pulse Power ( $t_p = 8/20\mu s$ )	600	W
$T_L$	Maximum lead temperature for soldering during 10s	260	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55 to +150	$^{\circ}C$
$T_{op}$	Operating Temperature Range	-40 to +125	$^{\circ}C$
$T_j$	Maximum junction temperature	150	$^{\circ}C$
$V_{PP}$	Electrostatic discharge		
	IEC61000-4-2 air discharge	30	kv
	IEC61000-4-2 contact discharge	30	

# LTVS23H12CLT1G



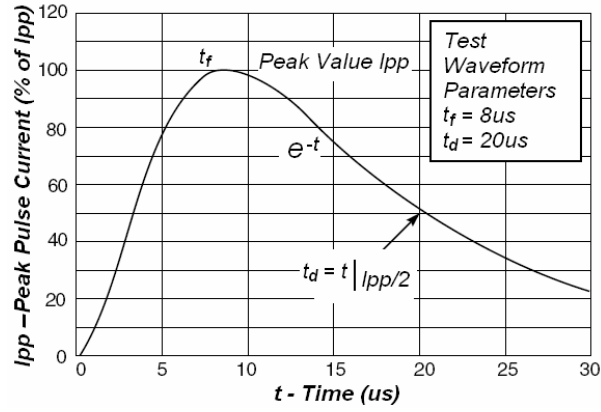
## Electrical Parameter

Symbol	Parameter
$V_{RM}$	Stand-off voltage
$V_{BR}$	Breakdown voltage
$V_{CL}$	Clamping voltage
$I_{RM}$	Leakage current
$I_{PPM}$	Peak pulse current

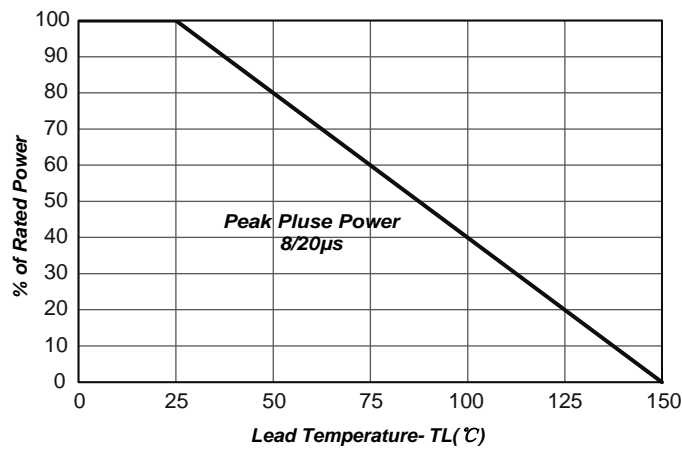
## Electrical Characteristics

Part Numbers	Rated Stand-off Voltage	Leakage Current	Breakdown Voltage		Clamping Voltage	Pulse Peak Current	Capacitance
		@ $V_{RM}$	1mA				
	$V_{RM}$	$I_{RM}(\mu A)$	$V_{BR}(V)$		$V_{CL}(V)$	$I_{PPM}(A)$	C(pF)
	V	Max	Min	Max	Max	Max	Typ
LTVS23H12CLT1G	12	1	13.3	16	25	30	200

# LTVS23H12CLT1G



**Fig1. Pulse Waveform**



**Fig2. Power Derating Curve**

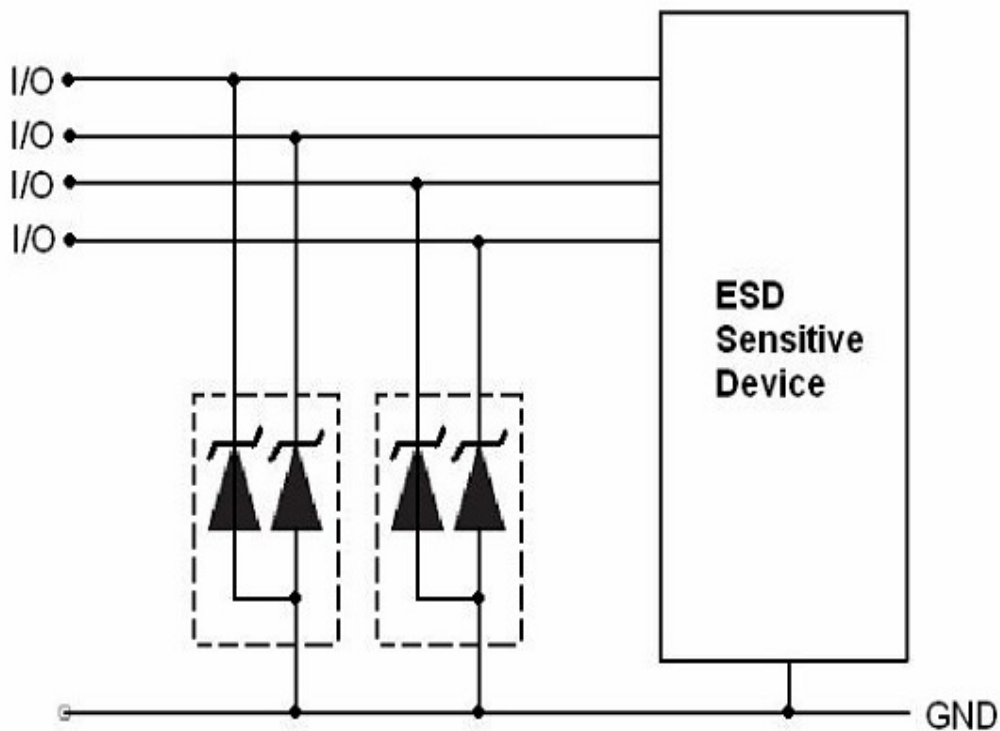
# LTVS23H12CLT1G

## Application Note

Electrostatic discharge (ESD) is a major cause of failure in electronic systems. Transient Voltage Suppressors (TVS) are an ideal choice for ESD protection. They are capable of clamping the incoming transient to a low enough level such that damage to the protected semiconductor is prevented.

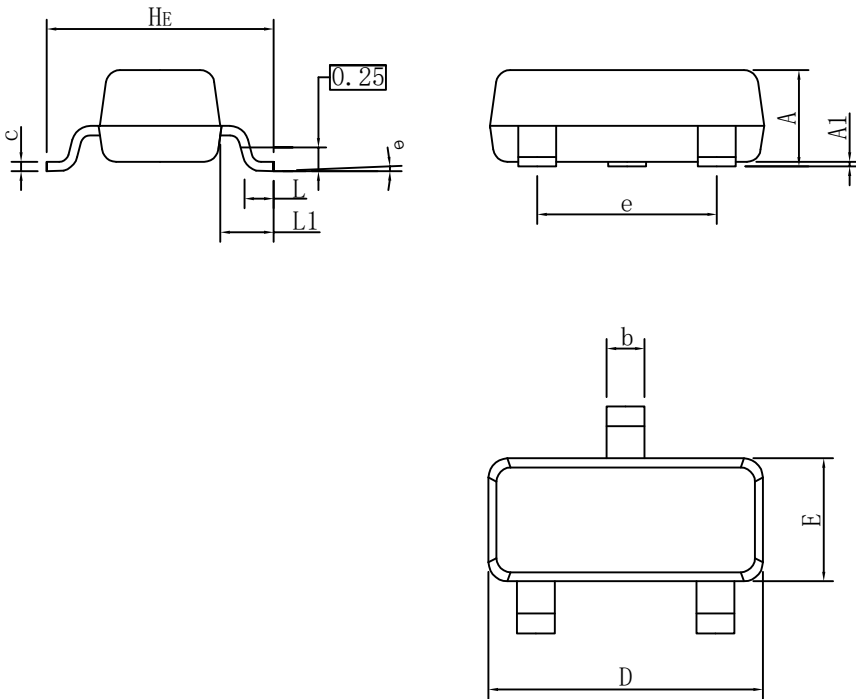
Surface mount TVS arrays offer the best choice for minimal lead inductance. They serve as parallel protection elements, connected between the signal line to ground. As the transient rises above the operating voltage of the device, the TVS array becomes a low impedance path diverting the transient current to ground. The LTVS23H12CLT1G array is the ideal board level protection of ESD sensitive semiconductor components.

The tiny SOT23 package allows design flexibility in the design of high density boards where the space saving is at a premium. This enables to shorten the routing and contributes to hardening against ESD.



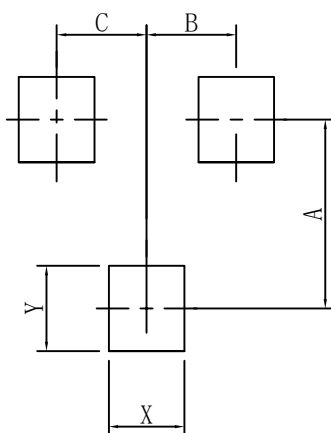
# LTVS23H12CLT1G

## OUTLINE AND DIMENSIONS



SOT23E			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.01	0.06	0.10
b	0.30	0.40	0.50
c	0.10	0.17	0.20
D	2.80	2.90	3.00
E	1.20	1.30	1.40
e	1.80	1.90	2.00
L	0.20	0.40	0.60
L1	0.60REF		
HE	2.20	2.40	2.60
$\theta$	0°	-	10°
All Dimensions in mm			

## SOLDERING FOOTPRINT



SOT23E	
DIM	(mm)
X	0.80
Y	0.90
A	2.00
B	0.95
C	0.95

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