

## SuperESD - CDSOD323-T36SC

### 1. Description

The CDSOD323-T36SC is Transient Voltage Suppressor that designed to protect components which are connected to data and transmission lines against electrostatic discharge (ESD), electrical fast transient (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
- Low leakage current
- ±30kV Contact Discharge
- RoHS compliant
- ±30kV Air Discharge
- Protecting one bi-directional lines
- 550W Peak pulse Power (8/20us)
- Working voltage: 36V
- Low clamping voltage

### 3. Applications

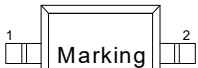
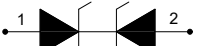
- Portable electronic
- Set-top box
- Control & monitoring systems
- Communications systems
- Servers, notebooks, and desktop PCs
- Cellular handsets and accessories

### 4. Ordering Information

Part Number	Package	Material	Packing	Quantity per reel	Flammability Rating	Reel Size
CDSOD323-T36SC	SOD-323	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	IO1	Connect to IO		

2	IO2	Connect to IO		
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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 <sub>pk</sub>	-	550	W
Peak pulse current (tp=8/20us)@25°C	I <sub>PP</sub>		6	A
ESD (IEC61000-4-2 air discharge) @25°C	V <sub>ESD</sub>	-	±30	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V <sub>ESD</sub>	-	±30	kV
Junction temperature	T <sub>J</sub>	-	150	°C
Operating temperature	T <sub>OP</sub>	-40	125	°C
Storage temperature	T <sub>STG</sub>	-55	150	°C
Lead temperature	T <sub>L</sub>	-	260	°C

Table-3 Absolute Maximum rating

### 6.2. Electrical Characteristics

Symbol	Description
V <sub>RWM</sub>	Rated reverse stand-off voltage
V <sub>BR</sub>	Minimum breakdown voltage @I <sub>T</sub> = 1mA

$V_{CL}$	Typical Clamping voltage
$I_{PP}$	Maximum peak pulse current
$I_R$	Reverse leakage current @ $V_{RWM}$
$C_o$	Typical line capacitance ( $V_{IO}=0V$ , $V_{P-P} = 30mV$ , $f = 1MHz$ )

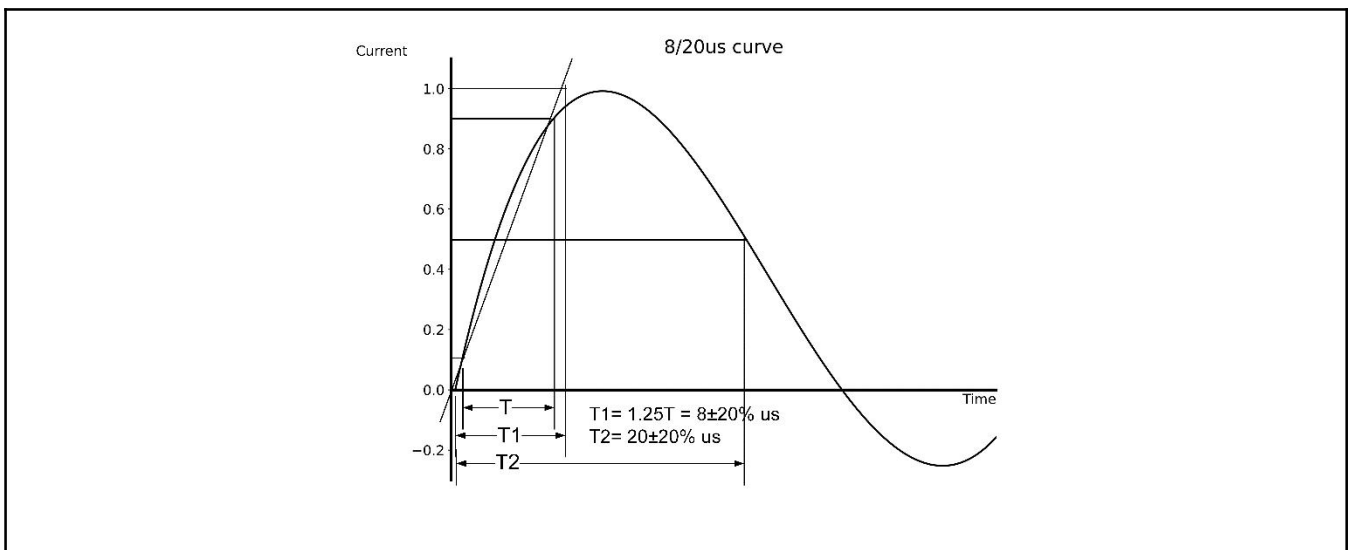
Table-4 Parameters Description

At  $T_A = 25^\circ C$  unless otherwise noted

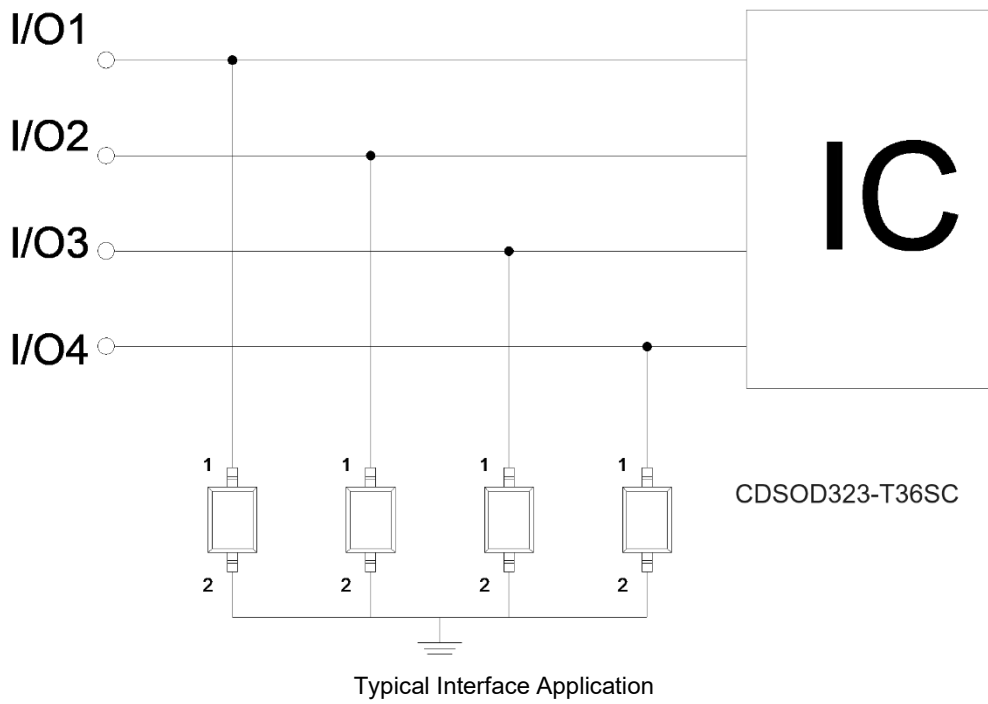
Part Number	$V_{RWM}$ (Max.)	$V_{BR}$ (Min.)	$V_{CL}@I=1A$ (Typ.)	$I_{PP}$ (Max.)	$V_{CL}@I=I_{PP}$ (Typ.)	$I_R$ (Max.)	$C_o$ (Typ.)
	(V)	(V)	(V)	(A)	(V)	( $\mu A$ )	(pF)
CDSOD323-T36SC	36	38.0	55.0	6	68	1.0	7

Table-5 Electrical Characteristics for All Series

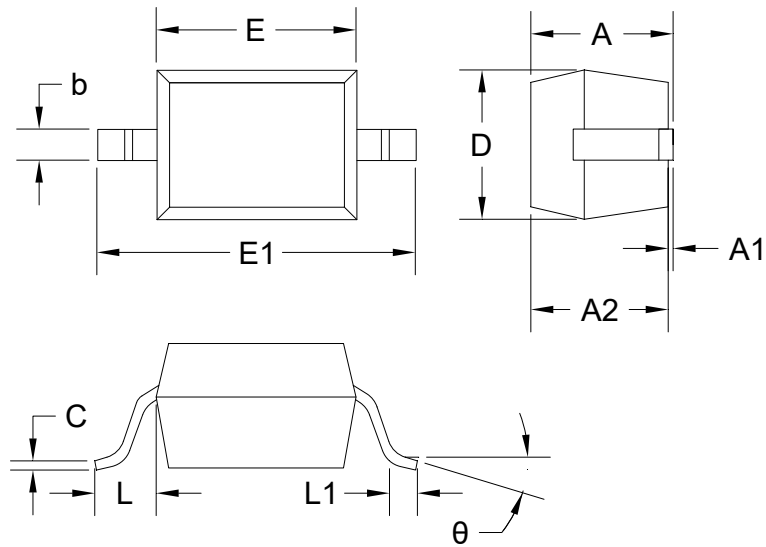
## 7. Typical Characteristic



## 8. Typical Application



9. Dimension (SOD-323)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039

A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
C	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475REF		0.019REF	
L1	0.250	0.400	0.010	0.016
$\theta$	0°	8°	0°	8°

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