

SuperESD - CDSOD323-TxxSC

1. Description

The CDSOD323-TxxSC 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
 - ±30kV Contact Discharge
 - ±30kV Air Discharge
- 550W Peak pulse Power (8/20us)
- Low clamping voltage

- Low leakage current
- RoHS compliant
- Protecting one bi-directional lines
- Working voltage:3.3/5/8/12/15/24/36V

3. Applications

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

4. Ordering Information

Part Number	Dookogo	Material	Packing	Quantity per	Flammabili	Reel	
Part Number	Package		racking	reel	ty Rating	Size	
CDSOD323-TxxSC	SOD-323	Halogen	Tape &	3,000 PCS	UL 94V-0	7 inches	
CD3OD323-1XX3C		free	Reel	3,000 FC3			
Madding faults - ODOODOO Tayoo and a							
Marking for the CDSOD323-TxxSC series							
V _{RWM}	5V	12V	15V	24V	36V		
Marking	Н	K	L	M	2N		

Table-1 Ordering information



5. Pin Configuration and Functions

Pin	Name	Description	Outline	Circuit Diagram
1	IO1	Connect to IO	1 Abouting 2	.1
2	IO2	Connect to IO	Marking	

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}	-	550	W
Peak pulse current (tp=8/20us)@25°C	l _{PP}		Refer to Table-5	Α
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	TJ	-	150	°C
Operating temperature	T _{OP}	-40	125	°C
Storage temperature	T_{STG}	-55	150	℃
Lead temperature	T∟	-	260	°C

Table-3 Absolute Maximum rating



6.2. Electrical Characteristics

Symbol	Description				
V_{RWM}	Rated reverse stand-off voltage				
V _{BR}	Minimum breakdown voltage @I _T = 1mA				
V _{CL}	Typical Clamping voltage				
Ірр	Maximum peak pulse current				
I _R	Reverse leakage current @V _{RWM}				
Co	Typical line capacitance (V _{IO} =0V, V _{P-P} = 30mV, f = 1MHz)				

Table-4 Parameters Description

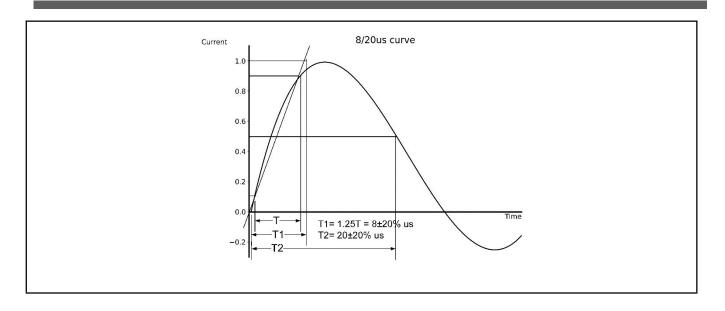
At TA = 25°C unless otherwise noted

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.)
1 art Number	(V)	(V)	(V)	(A)	(V)	(uA)	(pF)
CDSOD323-T05SC	5	6.5	9.5	30	18	1.0	100
CDSOD323-T12SC	12	13.3	20.0	15	26	1.0	25
CDSOD323-T15SC	15	16.5	25.0	12	30	1.0	20
CDSOD323-T24SC	24	26.0	40.0	8	45	1.0	15
CDSOD323-T36SC	36	38.0	55.0	6	68	1.0	7

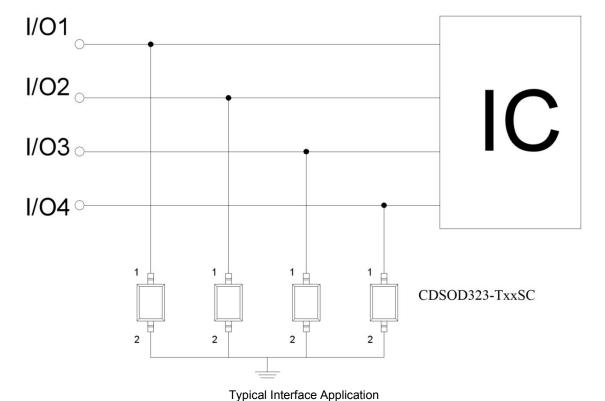
Table-5 Electrical Characteristics for All Series

7. Typical Characteristic



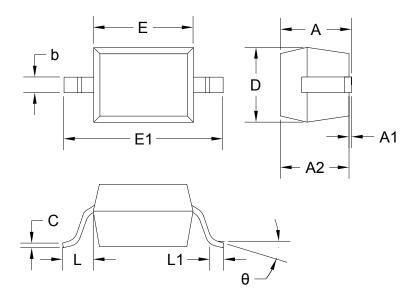


8. Typical Application





9. Dimension (SOD-323)



Symbol	Dimensions i	n Millimeters	Dimensions in Inches		
Symbol	Min.	Max.	Min.	Max.	
Α		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	
С	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	
θ	0°	8°	0°	8°	



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