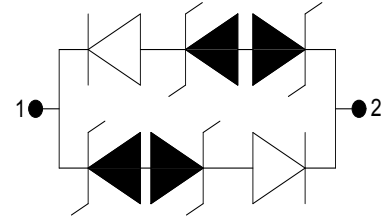


Description

The CDSOD323-T05C 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 25kV ESD pulses using the IEC61000-4-2 air discharge method.



Features

- IEC 61000-4-2 Level 4 ESD Protection
 - $\pm 25\text{kV}$ Contact Discharge
 - $\pm 25\text{kV}$ Air Discharge
- 300W Peak pulse Power (8/20us)
- Low clamping voltage
- Working voltage: 5.0V
- Low leakage current
- RoHS compliant
- Protecting one bi-directional lines
- Junction capacitance: 0.8pF Typ.

Applications

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

Absolute Maximum rating Overoper atingfree-airtempe raturerange(unle ssotherwisenoted)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power (tp=8/20us)@25°C	P _{pk}		300	W
Peak pulse current (tp=8/20us)@25°C	I _{PP}		15	A
ESD (IEC61000-4-2 air discharge) @25°C	V _{ESD}		±25	kV
ESD (IEC61000-4-2 contact discharge) @25°C	V _{ESD}		±25	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

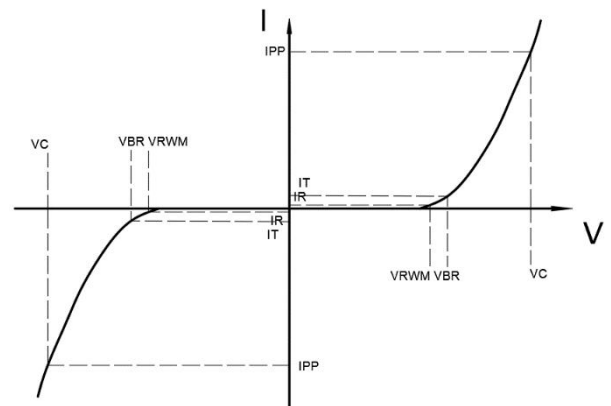
Table-3 Absolute Maximum rating

Electrical Characteristics At $T_A = 25^\circ\text{C}$ unless otherwise noted

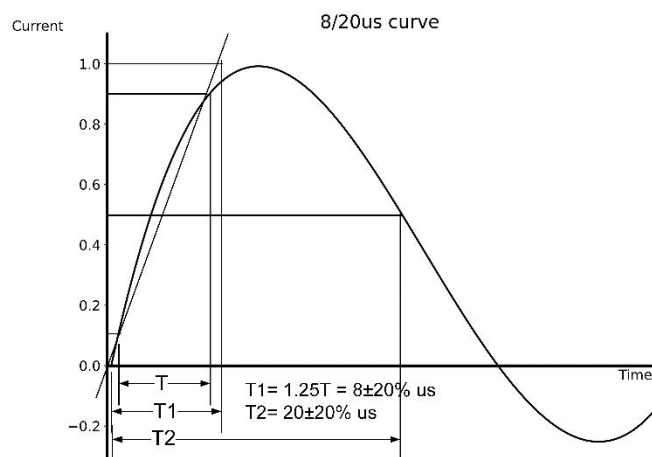
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	6.5			V
Reverse Leakage Current	I_R	$V_{RWM}=5.0\text{V}$			1	μA
Clamping Voltage	V_C	$I_{PP}=1\text{A}$; $t_p=8/20\mu\text{s}$			8	V
Clamping Voltage	V_C	$I_{PP}=15\text{A}$; $t_p=8/20\mu\text{s}$			20	V
Junction Capacitance	C_J	I/O to GND; $V_R=0\text{V}$; $f=1\text{MHz}$		0.8		pF

Table-4 Electrical Characteristics

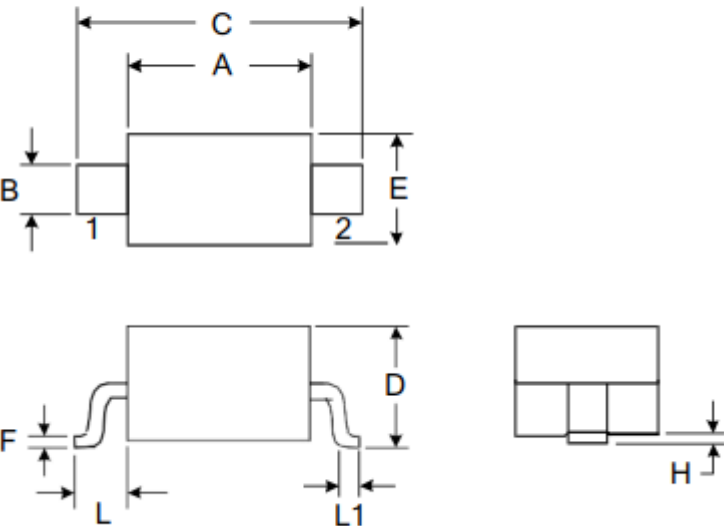
Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}



Typical Characteristic

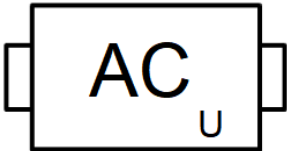


Outline Drawing – SOD323



DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.500	2.700	0.098	0.106
D		1.000		0.039
E	1.200	1.400	0.047	0.055
F	0.080	0.150	0.003	0.006
L	0.475 REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
UMW CDSOD323-T05C	SOD-323	3000	Tape and reel