

1.Description

The CESDXXD5 is a Transient Voltage Suppressor that designed to protect components which are connected to data and transmission lines against electrostatic discharge (ESD) , electrical fastTransients (EFT) , and lightning . All pins are rated to withstand 30kv ESD pulses using the IEC61000-4-2 air discharge methods.

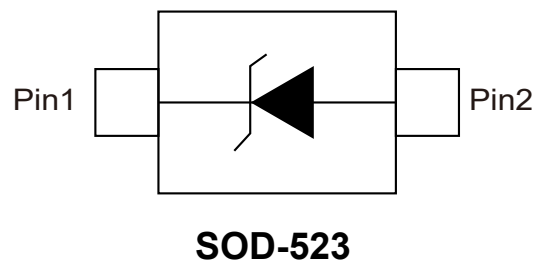
2.Features

- IEC 61000-4-2 Level 4 ESD Protection
- - $\pm 30\text{kV}$ Contact Discharge
- - $\pm 30\text{kV}$ Air Discharge
- 250W Peak pulse Power (8/20us)
- RoHS compliance
- Unidirectional configuration
- Low clamping voltage
- Low leakage current
- Protects one power or I/O

3.Applications

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

4.Pinning information





5. Absolute Maximum Ratings $T_A = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Units
Peak pulse power ($t_p=8/20\mu\text{s}$)@ 25°C	P_{PK}		250	W
Peak pulse current ($t_p=8/20\mu\text{s}$)@ 25°C	I_{PP}		Refer to Table-5	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	$^\circ\text{C}$
Operating temperature	T_{OP}	-40	125	$^\circ\text{C}$
Storage temperature	T_{STG}	-55	150	$^\circ\text{C}$
Lead temperature	T_L		260	$^\circ\text{C}$

6. Electrical Characteristics

Symbol	Description
V_{RWM}	Rated reverse stand-off voltage
V_{BR}	Minimum breakdown voltage @ $I_T=1\text{mA}$
V_{CL}	Typical Clamping voltage
I_{PP}	Maximum peak pulse current
I_R	Reverse leakage current @ V_{RWM}
C_O	Typical line capacitance($V_{IO}=0\text{V}, V_{P-P}=30\text{mV}, f=1\text{MHz}$)

Table-4 Parameters Description



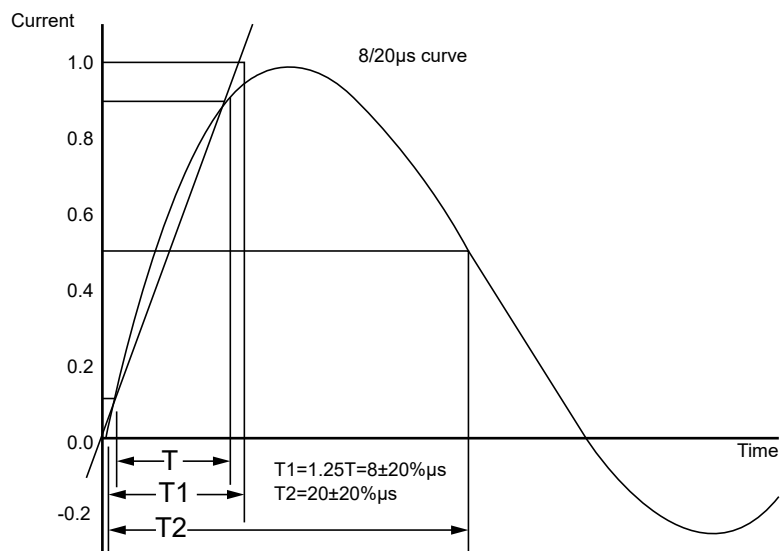
7. At $T_A=25^{\circ}\text{C}$ unless otherwise noted

Part Number	V_{RWM}	V_{BR}	$V_{CL}@I=1A$	I_{PP}	$V_{CL}@I=I_{PP}$	I_R	C_J	I_T
	(V)	(V)	(V)	(A)	(V)	(μA)	(pF)	mA
CESD3V3D5	3.3	4.5	8.5	16.0	18.0	1.0	200	1
CESD5V0D5	5.0	6.5	9.5	15.0	20.0	1.0	180	1
CESD12VD5	12.0	13.3	20.0	8.0	35.0	1.0	100	1
CESD15VD5	15.0	16.5	25.0	6.0	45.0	1.0	60	1
CESD24VD5	24.0	26.0	40.0	4.0	55.0	1.0	40	1

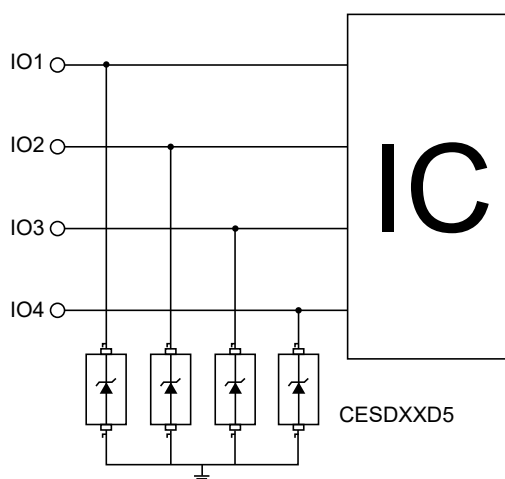
Table-5 Electrical Characteristics for All Series



8. Typical Characteristic

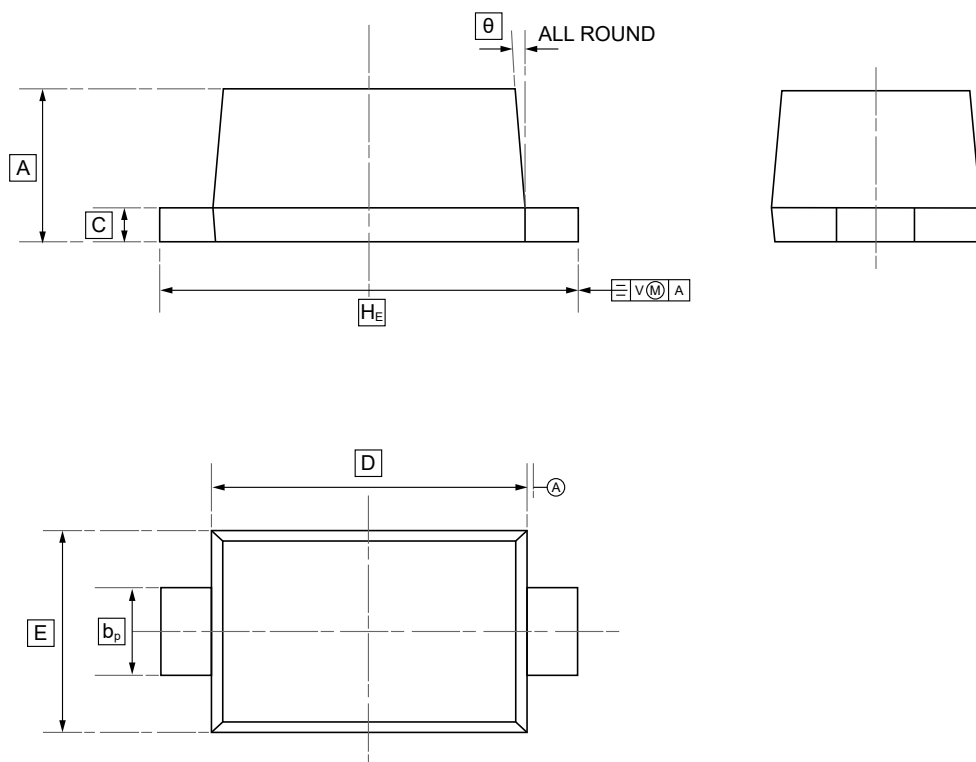


9. Typical Application





10.SOD-523 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	b _p	C	D	E	H _E	θ
Min	0.58	0.3	0.100	1.15	0.75	1.5	5°
Max	0.68	0.4	0.135	1.25	0.85	1.7	



11.Ordering information



ww: Batch Code

Order Code	Marking	Package	Base QTY	Delivery Mode
UMW CESD3V3D5	ZM	SOD-523	3000	Tape and reel
UMW CESD5V0D5	ZP	SOD-523	3000	Tape and reel
UMW CESD12VD5	ZY	SOD-523	3000	Tape and reel
UMW CESD15VD5	ZE	SOD-523	3000	Tape and reel
UMW CESD24VD5	ZF	SOD-523	3000	Tape and reel



12.Disclaimer

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