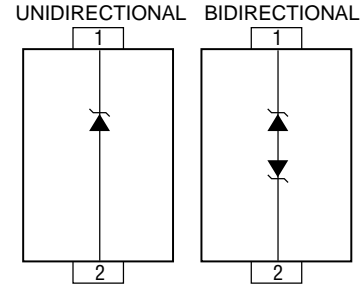


General Information

Offers Transient Voltage Suppressor Diodes for surge and ESD protection applications in SOD-323 package size format. The Transient Voltage Suppressor series offers a choice of voltage types ranging from 3 V to 36 V in a unidirectional or bidirectional configuration.



Features

- ESD protection 30 kV max.
- Surge protection >24 A
- Protects 1 line
- Uni/bidirectional configuration

Applications

- Computer notebooks
- Cellular phones
- Personal Digital Assistants (PDAs)
- Digital cameras

Electrical & Thermal Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Value	Unit
Unidirectional Peak Pulse Power (t _p = 8/20 μs)	P _{PP}	500	W
Bidirectional Peak Pulse Power (t _p = 8/20 μs)	P _{PP}	400	W
Operating Temperature	T _L	-55 to +150	°C
Storage Temperature	T _{STG}	-55 to +150	°C
ESD Protection (per IEC 61000-4-2) Contact - Min. Contact - Max. Air - Min. Air - Max.	ESD	±8 ±30 ±15 ±30	kV

Parameter	Symbol	CDSOD323-								Unit
		Uni-T03S	Bi-T03SC	Uni-T05S	Bi-T05SC	Uni-T08S	Bi-T08SC	Uni-T12S	Bi-T12SC	
Min. Breakdown Voltage @ 1 mA	V _{BR}	4.0	4.0	6.0	6.0	8.5	8.5	13.3	13.3	V
Working Peak Voltage	V _M	3.3	3.3	5.0	5.0	8.0	8.0	12.0	12.0	V
Maximum Clamping Voltage @ I _P = 1 A	V _F	7.0	8.0	9.8	9.8	13.4	13.4	19.0	19.0	V
Typical Clamping Voltage @ 8/20 μs @ I _{PP}	V _C	10.9 V @ 43 A	10.9 V @ 43 A	13.5 V @ 42 A	14.5 V @ 28 A	16.9 V @ 34 A	18.5 V @ 17 A	25.9 V @ 21 A	29.5 V @ 14 A	V
Maximum Leakage Current @ V _{WM}	I _D	125	125	10	10	10	10	1	1	μA
Typical Capacitance @ 0 V, 1 MHz	C _P	500	200	350	175	250	150	150	50	pF

Notes:

1. Part numbers with suffix "C" indicate bidirectional device, i.e. CDSOD323-T05SC.
2. For bidirectional devices only, the electrical specifications apply in both directions.

Electrical & Thermal Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

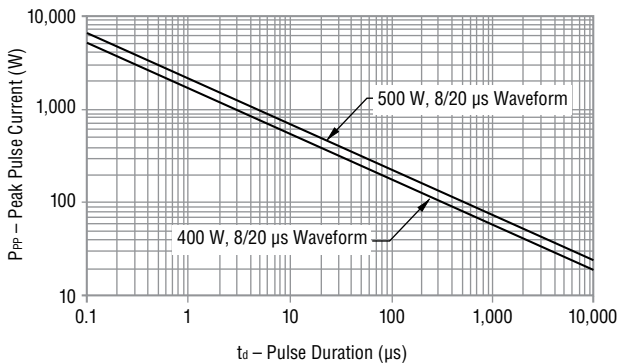
Parameter	Symbol	CDSOD323-								Unit
		Uni-T15S	Bi-T15SC	Uni-T18S	Bi-T18SC	Uni-T24S	Bi-T24SC	Uni-T36S	Bi-T36SC	
Min. Breakdown Voltage @ 1 mA	V _{BR}	16.7	16.7	20.0	20.0	26.7	26.7	40.0	40.0	V
Working Peak Voltage	V _M	15.0	15.0	18.0	18.0	24.0	24.0	36.0	36.0	V
Maximum Clamping Voltage @ I _P = 1 A	V _F	24.0	24.0	29.0	29.0	43.0	43.0	60.0	60.0	V
Typical Clamping Voltage @ 8/20 μs @ I _{PP}	V _C	30.0 V @ 17 A	33.0 V @ 12 A	40.0 V @ 9 A	40.0 V @ 9 A	49.0 V @ 12 A	46.2 V @ 9 A	75.0 V @ 5 A	75.0 V @ 5 A	v
Maximum Leakage Current @ V _{WM}	I _D	1								μA
Typical Capacitance @ 0 V, 1 MHz	C _P	100	40	90	40	88	40	75	35	pF

Notes:

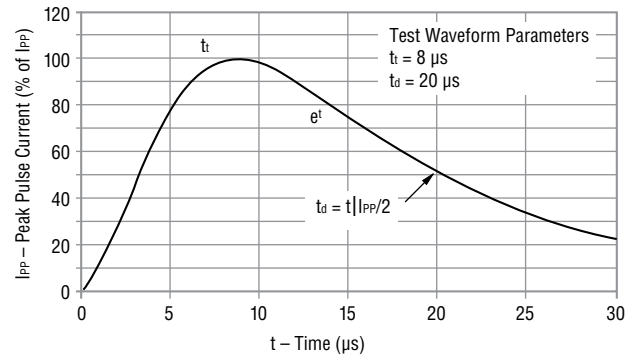
1. Part numbers with suffix "C" indicate bidirectional device, i.e. CDSOD323-T05SC.
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Performance Graphs

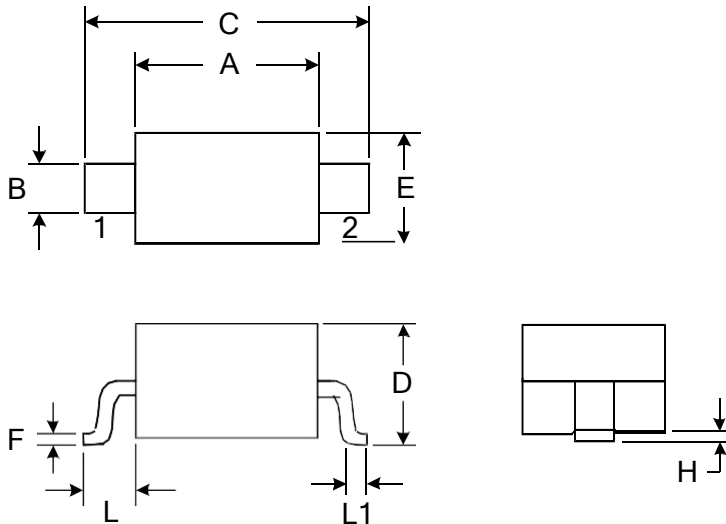
Peak Pulse Power vs. Pulse Time



Pulse Waveform



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-T03SC	SOD-323	3000	Tape and reel