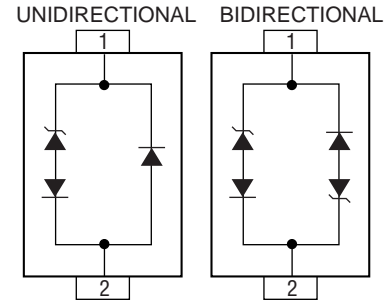


## General Information

Portable communications, computing and video equipment manufacturers are challenging the semiconductor industry to develop increasingly smaller electronic components. The Transient Voltage Suppressor Array series offers a choice of voltage types ranging from 3 V to 24 V in a unidirectional or bidirectional configuration.



## Features

- Protects one line or one I/O port
- Bidirectional configuration
- ESD protection 30 kV max.
- Low capacitance: ~3 pF typical

## Applications

- Cellular phones
- PDAs and notebooks
- Digital cameras
- MP3 players and GPS
- USB interface

## Electrical & Thermal Characteristics (@ T<sub>A</sub> = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20 μs)	P <sub>PP</sub>	350	W
Operating Temperature	T <sub>J</sub>	-55 to +150	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C

Parameter	Symbol	CDSOD323-								Unit
		Uni-T03	Bi-T03C	Uni-T05	Bi-T05C	Uni-T08	Bi-T08C	Uni-T12	Bi-T12C	
Minimum Breakdown Voltage @ 1 mA	V <sub>BR</sub>	4.0		6.0		8.5		13.3		V
Working Peak Voltage	V <sub>WM</sub>	3.3		5.0		8.0		12.0		V
Maximum Clamping Voltage @ I <sub>P</sub> = 1 A	V <sub>C</sub>	7.0		9.8		13.4		19.0		V
Typical Clamping Voltage @ 8/20 μs @ I <sub>PP</sub>	V <sub>C</sub>	19.0 V @ 20 A		18.3 V @ 17 A		18.5 V @ 17 A		28.3 V @ 11 A		V
Maximum Leakage Current @ V <sub>WM</sub>	I <sub>D</sub>	5		5		2		1		μA
Typical Capacitance @ 0 V, 1 MHz	C <sub>J</sub>	3								pF

Parameter	Symbol	CDSOD323-						Unit
		Uni-T15	Bi-T15C	Uni-T18	Bi-T18C	Uni-T24	Bi-T24C	
Minimum Breakdown Voltage @ 1 mA	V <sub>BR</sub>	16.7		20.0		26.7		V
Working Peak Voltage	V <sub>WM</sub>	15.0		18.0		24.0		V
Maximum Clamping Voltage @ I <sub>P</sub> = 1 A	V <sub>C</sub>	24.0		29.0		43.0		V
Typical Clamping Voltage @ 8/20 μs @ I <sub>PP</sub>	V <sub>C</sub>	31.8 V @ 10 A		45.0 V @ 8 A		56.0 V @ 6 A		V
Maximum Leakage Current @ V <sub>WM</sub>	I <sub>D</sub>	1						μA
Typical Capacitance @ 0 V, 1 MHz	C <sub>J</sub>	3						pF

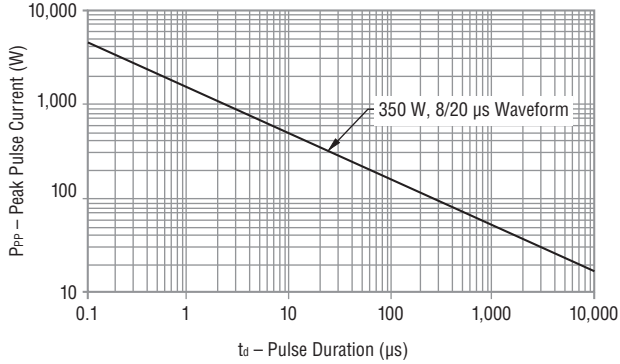
Notes:

1. Part numbers with suffix "C" indicate bidirectional device, i.e. CDSOD323-T05C.
2. For bidirectional devices only, the electrical specifications apply in both directions.

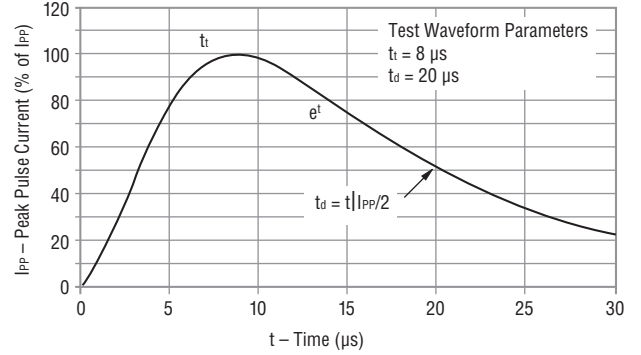
## CDSOD323-T03C - TVS Diode Array Series

### Performance Graphs

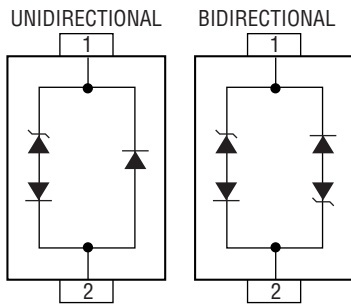
#### Peak Pulse Power vs Pulse Time



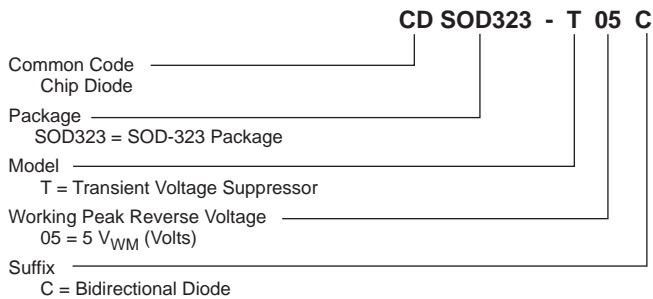
#### Pulse Waveform



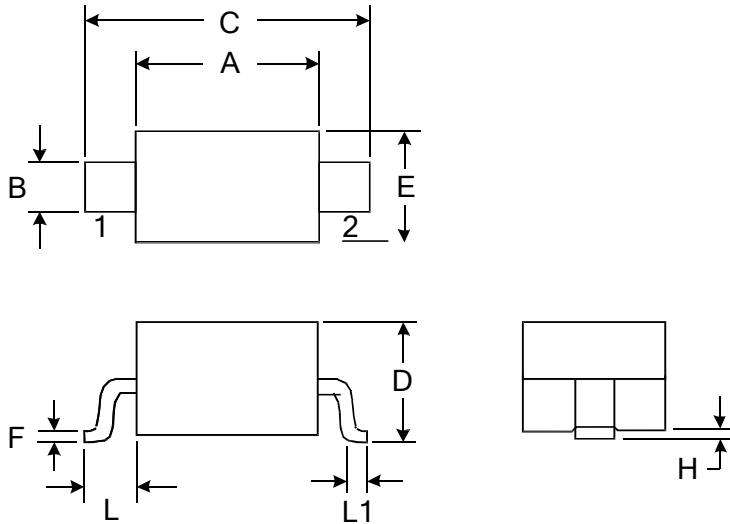
### Block Diagram



### How to Order

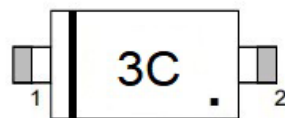


Outline Drawing – SOD-323



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	Marking	Package	Baseqty	Deliverymode
UMW CDSOD323-T03	3	SOD-323	3000	Tape and reel
UMW CDSOD323-T03C	3C	SOD-323	3000	Tape and reel
UMW CDSOD323-T05	5	SOD-323	3000	Tape and reel
UMW CDSOD323-T05C	5C	SOD-323	3000	Tape and reel
UMW CDSOD323-T08	8	SOD-323	3000	Tape and reel
UMW CDSOD323-T08C	8C	SOD-323	3000	Tape and reel
UMW CDSOD323-T12	2	SOD-323	3000	Tape and reel
UMW CDSOD323-T12C	2C	SOD-323	3000	Tape and reel
UMW CDSOD323-T15	6	SOD-323	3000	Tape and reel
UMW CDSOD323-T15C	6C	SOD-323	3000	Tape and reel
UMW CDSOD323-T18	1	SOD-323	3000	Tape and reel
UMW CDSOD323-T18C	1C	SOD-323	3000	Tape and reel
UMW CDSOD323-T24	4	SOD-323	3000	Tape and reel
UMW CDSOD323-T24C	4C	SOD-323	3000	Tape and reel