UMW CDSOD323-T03SC

1.Description

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

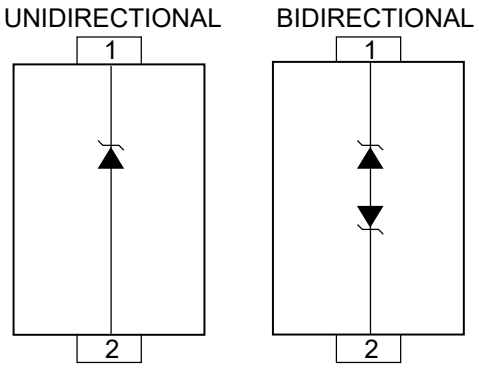
2.Features

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

3.Applications

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

4.Pinning information



SOD-323

5.Electrical & Thermal Characteristics

Parameter	Symbol	Value	Units
Unidirectional Peak Pulse Power (tp = 8/20 μs)	P_{PP}	500	W
Bidirectional Peak Pulse Power (tp = 8/20 μs)	P_{PP}	400	W
Junction Temperature	T_L	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
ESD Protection (per IEC 61000-4-2) Contact - Min.	E_{SD}	±8	kV
Contact - Max.		±30	kV
Air - Min.		±15	kV
Air - Max		±30	kV

6.Electrical & Thermal Characteristics

Parameter	Symbol	Uni-T03S	Bi-T03SC	Uni-T05S	Bi-T05SC	Uni-T08S	Bi-T08SC	Uni-T12S	Bi-T12SC	Unit
Min. Breakdown Voltage @ 1mA	V_{BR}	4	4	6	6	8.5	8.5	13.3	13.3	V
Working Peak Voltage	V_M	3.3	3.3	5	5	8	8	12	12	V
Maximum Clamping Voltage @ I_P=1A	V_F	7	8	9.8	9.8	13.4	13.4	19	19	V
Typical Clamping Voltage	V_C	10.9V	10.9V	13.5V	14.5V	16.9V	18.5V	25.9V	29.5V	V
@ 8/20 μs @ I_{PP}	V_C	@43A	@43A	@42A	@28A	@34A	@17A	@21A	@14A	V
Maximum Leakage Current @ V_{WM}	I_D	125	125	10	10	10	10	1	1	μA
Typical Capacitance @0V, 1MHz	C_P	500	200	350	175	250	150	150	50	pF

Parameter	Symbol	Uni-T15S	Bi-T15SC	Uni-T18S	Bi-T18SC	Uni-T24S	Bi-T24SC	Uni-T36S	Bi-T36SC	Unit
Min. Breakdown Voltage @ 1mA	V_{BR}	16.7	16.7	20	20	26.7	26.7	40	40	V
Working Peak Voltage	V_M	15	15	18	18	24	24	36	36	V
Maximum Clamping Voltage @ I_P=1A	V_F	24	24	29	29	43	43	60	60	V
Typical Clamping Voltage	V_C	30V	33V	40V	40V	49V	46.2V	75V	75V	V
@ 8/20 μs @ I_{PP}	V_C	@17A	@12A	@9A	@9A	@12A	@9A	@5A	@5A	V
Maximum Leakage Current @ V_{WM}	I_D	1								μA
Typical Capacitance @0V, 1MHz	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.

2.For bidirectional devices only, the electrical specifications apply in both directions.

7.Typical characteristic

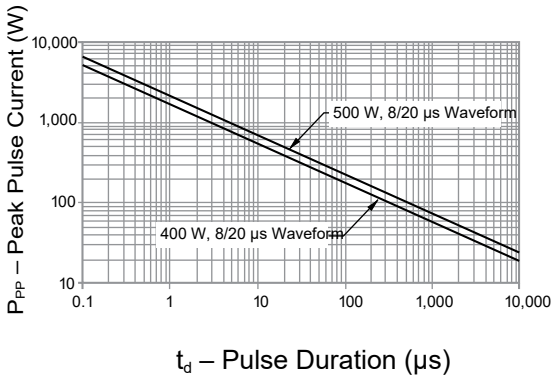


Figure 1: Peak Pulse Power vs Pulse Time

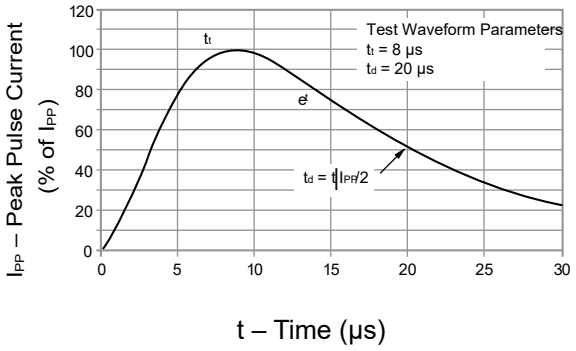
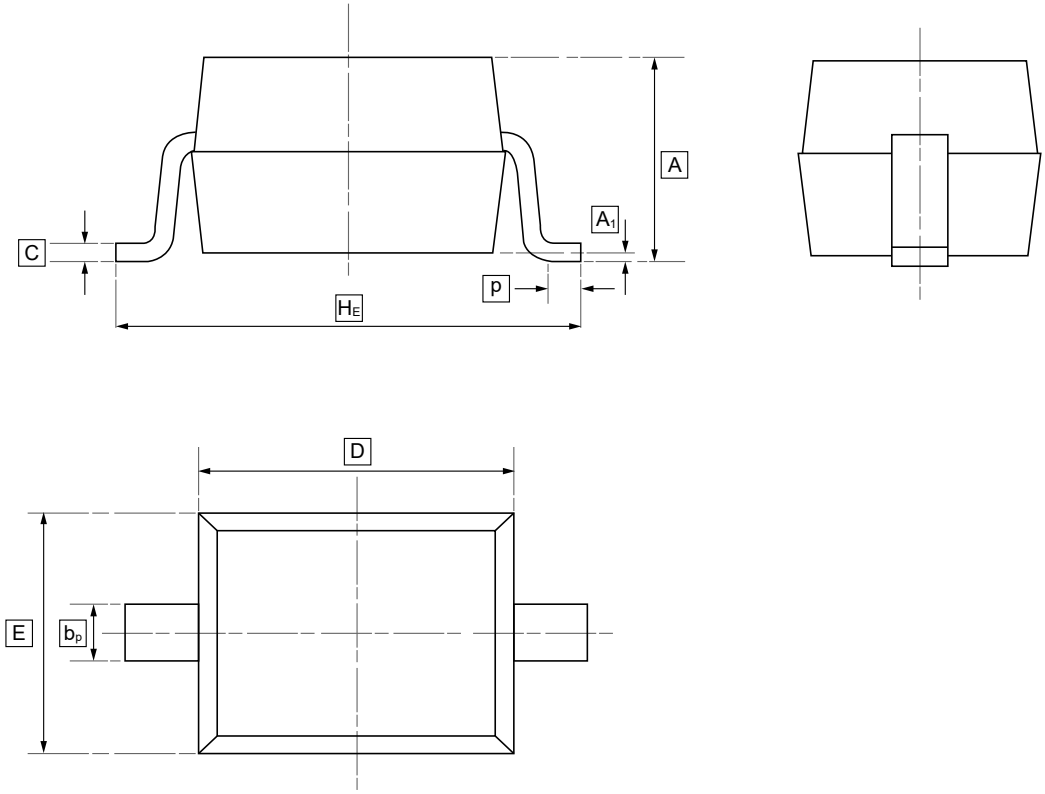


Figure 2: Pulse Waveform

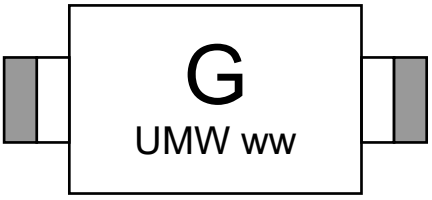
8.SOD-323 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	b_p	C	D	E	H_E	A_1	p
Min	0.80	0.25	0.10	1.50	1.15	2.30	0.01	0.20
Max	1.20	0.40	0.15	1.80	1.35	2.80	0.10	0.50

9.Ordering information



ww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW CDSOD323-T03SC	SOD-323	3000	Tape and reel

10.Disclaimer

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