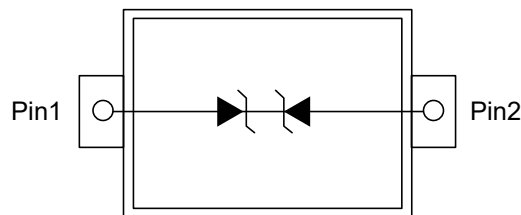


## 1.Features

- 300 Watts peak pulse power ( $t_p=8/20\mu s$ )
- Transient protection for data lines to  
IEC 61000-4-2 (ESD)  $\pm 15kV$  (air),  $\pm 8kV$
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 24A (8/20  $\mu s$ )
- Small package for use in portable electronics
- Suitable replacement for MLV's in ESD  
protection applications
- Small Body Outline Dimensions
- Protects one I/O or power line
- Low clamping voltage
- Working voltages: 5V and 36V
- Low leakage current
- Solid-state silicon-avalanche technology
- We declare that the material of product  
compliance with RoHS requirements

## 2.Pinning information



**SOD-323**



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

| Parameter                                         | Symbol               | Maximum    | Units            |
|---------------------------------------------------|----------------------|------------|------------------|
| Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )        | $P_{PP}$             | 300        | W                |
| Maximum lead temperature for soldering during 10s | $T_L$                | 260        | $^\circ\text{C}$ |
| Storage Temperature Range                         | $T_{STG}$            | -55 to 155 | $^\circ\text{C}$ |
| Junction Temperature                              | $T_{OP}$             | -40 to 125 | $^\circ\text{C}$ |
| Maximum junction temperature                      | $T_J$                | 150        | $^\circ\text{C}$ |
| IEC61000-4-2 (ESD)                                | air discharge        | $\pm 15$   | kV               |
|                                                   | contact discharge    | $\pm 8$    | kV               |
| IEC61000-4-4(EFT)                                 |                      | 40         | A                |
| ESD Voltage                                       | Per Human Body Model | 16         | kV               |



#### 4. Electrical Characteristic ( $T_A=25^\circ\text{C}$ unless otherwise noted)

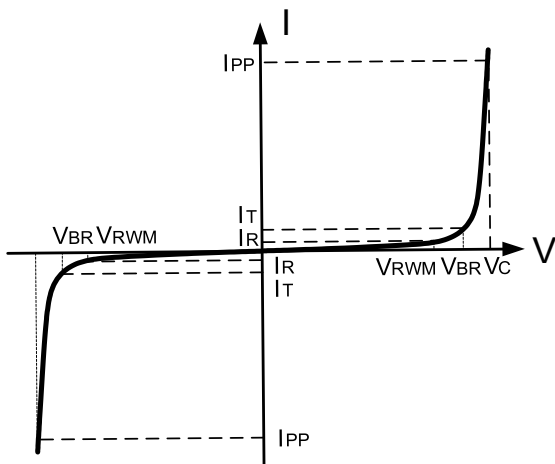
| Device    | Device Marking | $V_{RWM}$<br>(V) | $I_R(\mu\text{A})$<br>$V_{RWM}$ | $V_{BR}(\text{V})$<br>$I_T(\text{Note1})$ | $I_T$ | $V_C(\text{V})$<br>$I_{PP}=5\text{A}^*$ | $V_C(\text{V})$<br>$\text{Max}=I_{PP}^*$ | $I_{PP}$<br>(A)* | $P_{PK}$<br>(W)* | C<br>(pF) |
|-----------|----------------|------------------|---------------------------------|-------------------------------------------|-------|-----------------------------------------|------------------------------------------|------------------|------------------|-----------|
|           |                | Max              | Max                             | Min                                       | mA    | Typ                                     | Max                                      | Max              | Max              | Typ       |
| ESD3Z5V0C | 3M             | 5                | 1                               | 5.6                                       | 1     | 11.6                                    | 18.6                                     | 9.4              | 174              | 35        |

Notes:

\*Surge current waveform per Figure 1.

1.  $V_{BR}$  is measured with a pulse test current  $I_T$  at an ambient temperature of  $25^\circ\text{C}$ .

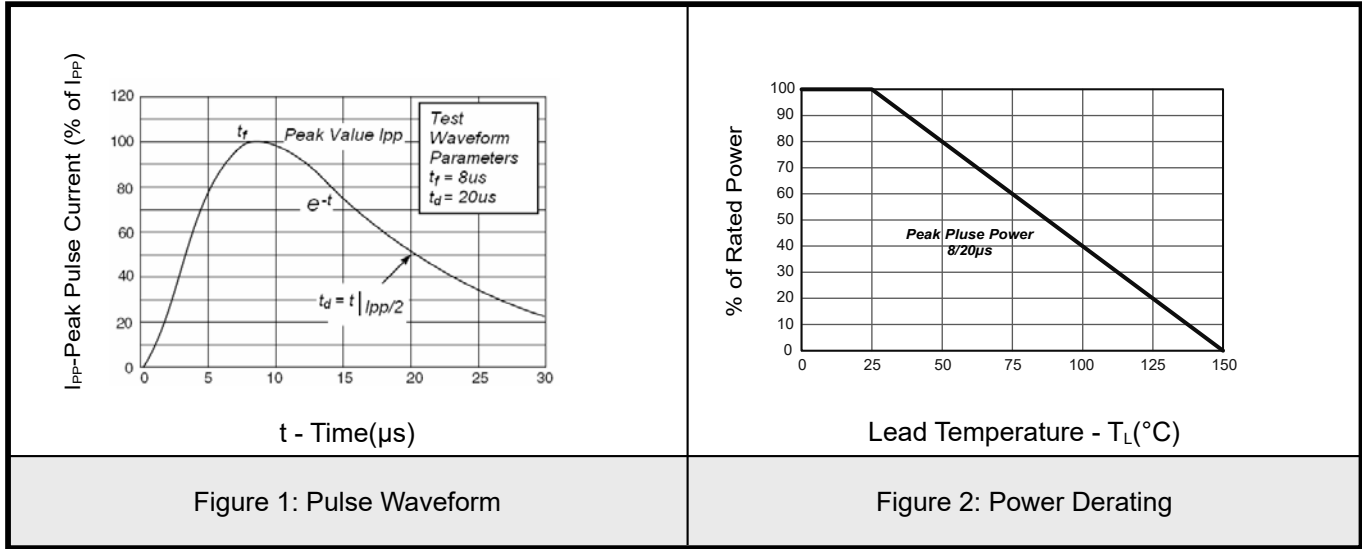
#### 5. Electrical Parameters ( $T_A=25^\circ\text{C}$ unless otherwise noted )



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

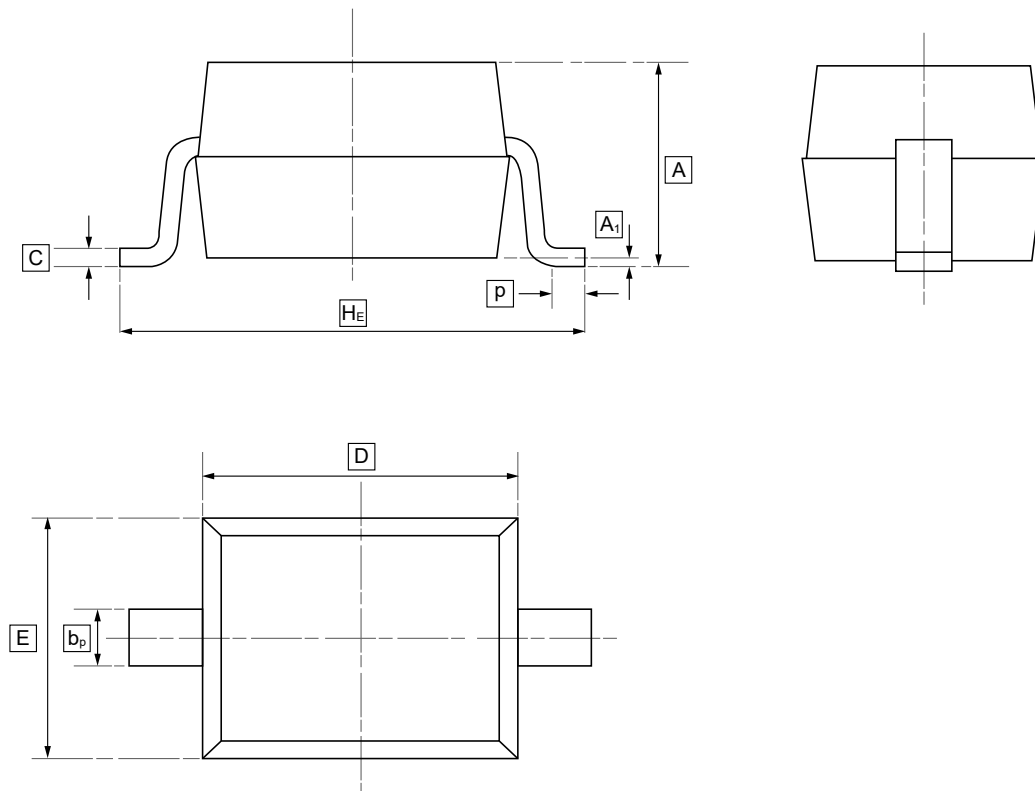


6. Typical characteristic





## 7.SOD-323 Package Outline Dimensions

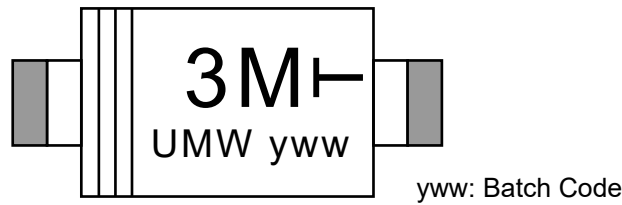


### DIMENSIONS (mm are the original dimensions)

| Symbol | A    | $b_p$ | C    | D    | E    | $H_E$ | $A_1$ | P    |
|--------|------|-------|------|------|------|-------|-------|------|
| Min    | 0.90 | 0.25  | 0.10 | 1.60 | 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 |



8.Ordering information



| Order Code    | Package | Base QTY | Delivery Mode |
|---------------|---------|----------|---------------|
| UMW ESD3Z5V0C | SOD-323 | 3000     | Tape and reel |



## **9.Disclaimer**

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