

SOD-323 Plastic-Encapsulate ESD Protection Diodes

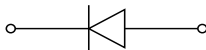
Features

- Low leakage current
- Low clamping voltage
- IEC 61000-4-2 (ESD Air): ±30kV
- IEC 61000-4-2 (ESD Contact): ±30kV
- IEC 61000-4-5 (Lightning 8/20μs): 10A

Applications

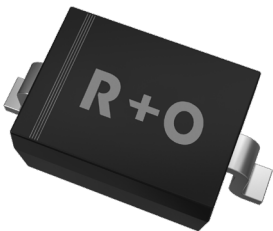
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation, Digital Cameras
- Peripherals, Audio Players, Industrial Equipment

Function Diagram



Reverse Working Voltage  
5V Max.  
High capacitance  
160 pF(Max.)

SOD-323



Maximum Ratings (Ta=25°C Unless otherwise specified)

| SYMBOL           | PARAMETER                           | CONDITIONS                      | VALUE       | UNIT |
|------------------|-------------------------------------|---------------------------------|-------------|------|
| VESD             | Electrostatic Discharge Voltage     | ESD per IEC 61000-4-2( Air )    | ±30         | KV   |
|                  |                                     | ESD per IEC 61000-4-2( Contact) | ±30         | KV   |
| P <sub>PP</sub>  | Peak Pulse Power                    | tp = 8/20 μs                    | 200         | W    |
| I <sub>PP</sub>  | Rated Peak Pulse Current            | tp = 8/20 μs                    | 10          | A    |
| T <sub>J</sub>   | Operating JunctionTemperature Range | —                               | -55 to +150 | °C   |
| T <sub>STG</sub> | Operating JunctionTemperature Range | —                               | -55 to +150 | °C   |

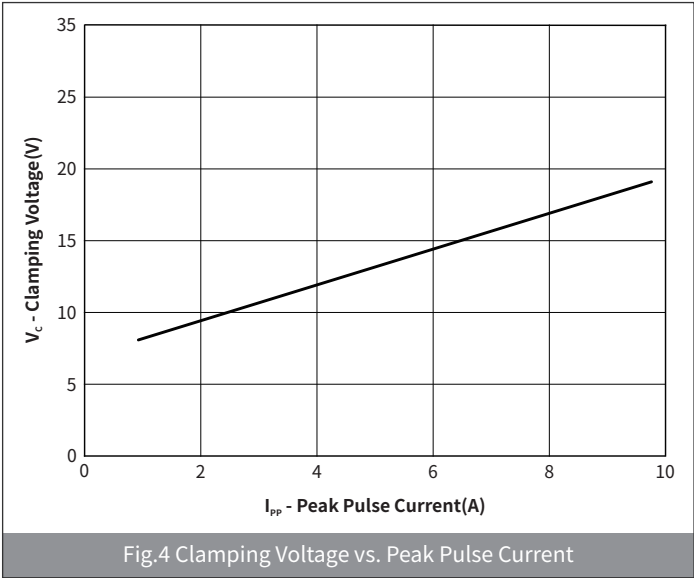
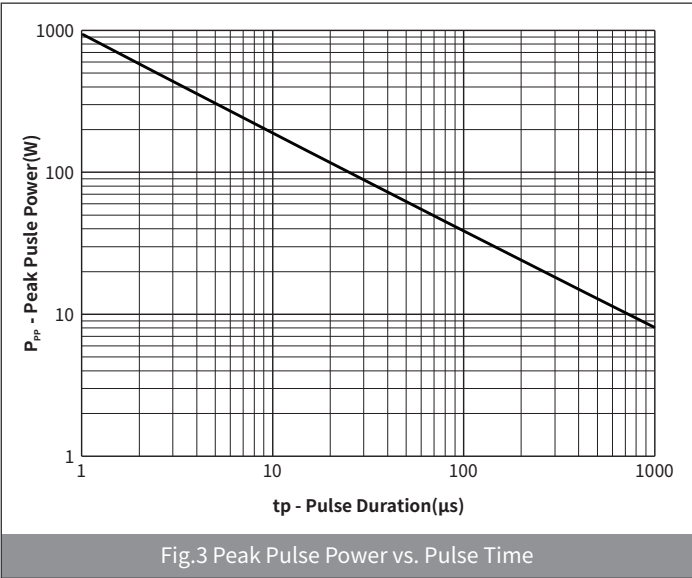
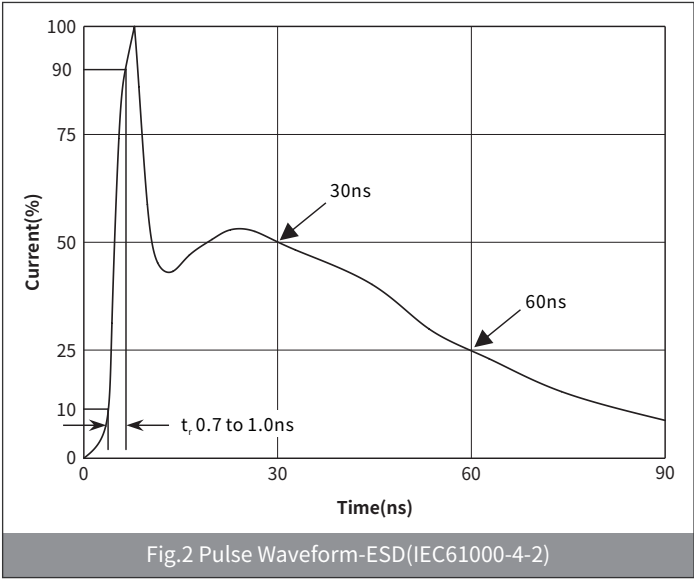
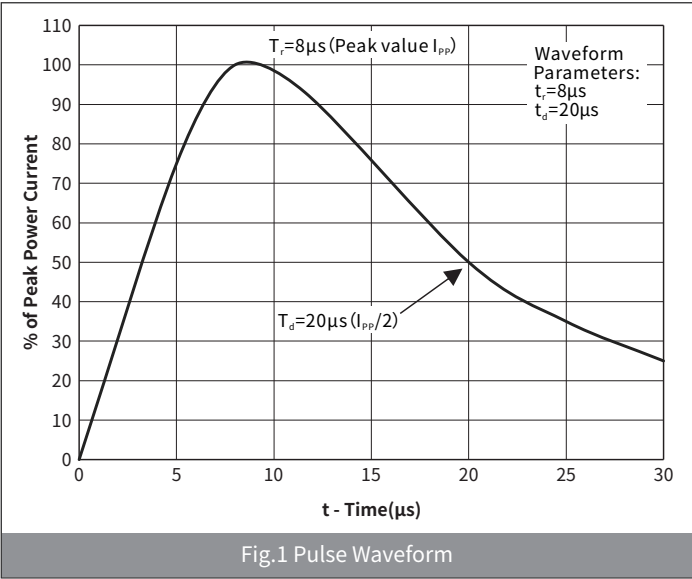
Electrical Parameter

| SYMBOL           | PARAMETER                                        |
|------------------|--------------------------------------------------|
| V <sub>C</sub>   | Clamping Voltage @ I <sub>pp</sub>               |
| V <sub>BR</sub>  | Breakdown Voltage @ I <sub>T</sub>               |
| I <sub>PP</sub>  | Peak Pulse Current                               |
| I <sub>T</sub>   | Test Current                                     |
| I <sub>R</sub>   | Reverse Leakage Current @ VRWM                   |
| V <sub>RWM</sub> | Peak Reverse Working Voltage                     |
| P <sub>PP</sub>  | Peak Pulse Power Dissipation                     |
| C <sub>J</sub>   | Junction Capacitance @ V <sub>R</sub> =0V,f=1MHz |
| I <sub>F</sub>   | Forward Current                                  |
| V <sub>F</sub>   | Forward Voltage @I <sub>F</sub>                  |

● Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER                    | SYMBOL    | CONDITION                                     | Min | Typ | Max | UNIT          |
|------------------------------|-----------|-----------------------------------------------|-----|-----|-----|---------------|
| Peak Reverse Working Voltage | $V_{RWM}$ | $T_a=25^{\circ}\text{C}$                      | —   | —   | 5.0 | V             |
| Breakdown Voltage            | $V_{BR}$  | $I_T=1\text{mA}, T_a=25^{\circ}\text{C}$      | 6.0 | —   | —   | V             |
| Reverse Leakage Current      | $I_R$     | $V_{RWM}=5.0\text{V}, T_a=25^{\circ}\text{C}$ | —   | —   | 0.5 | $\mu\text{A}$ |
| Clamping Voltage             | $V_C$     | $I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$       | —   | 7.0 | —   | V             |
| Clamping Voltage             | $V_C$     | $I_{PP}=10\text{A}, t_p=8/20\mu\text{s}$      | —   | 11  | 20  | V             |
| Junction Capacitance         | $C_J$     | $V_{RWM}=0\text{V}, f=1\text{MHz}$            | —   | —   | 160 | pF            |

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



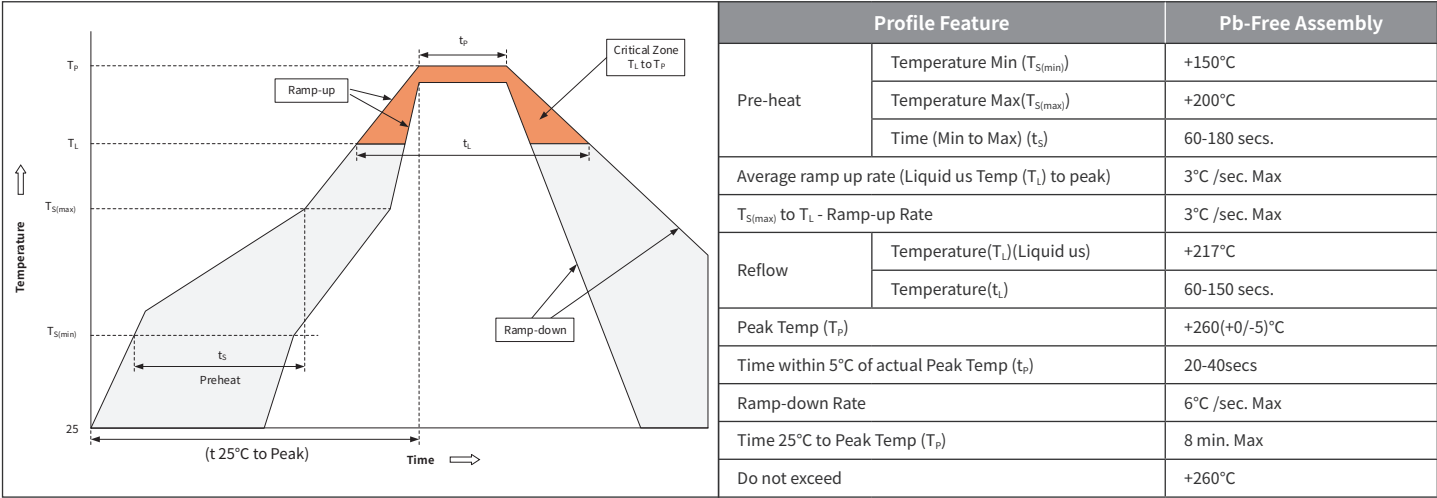
# H5VHD3UB

Uni-directional 5V High Capacitance ESD

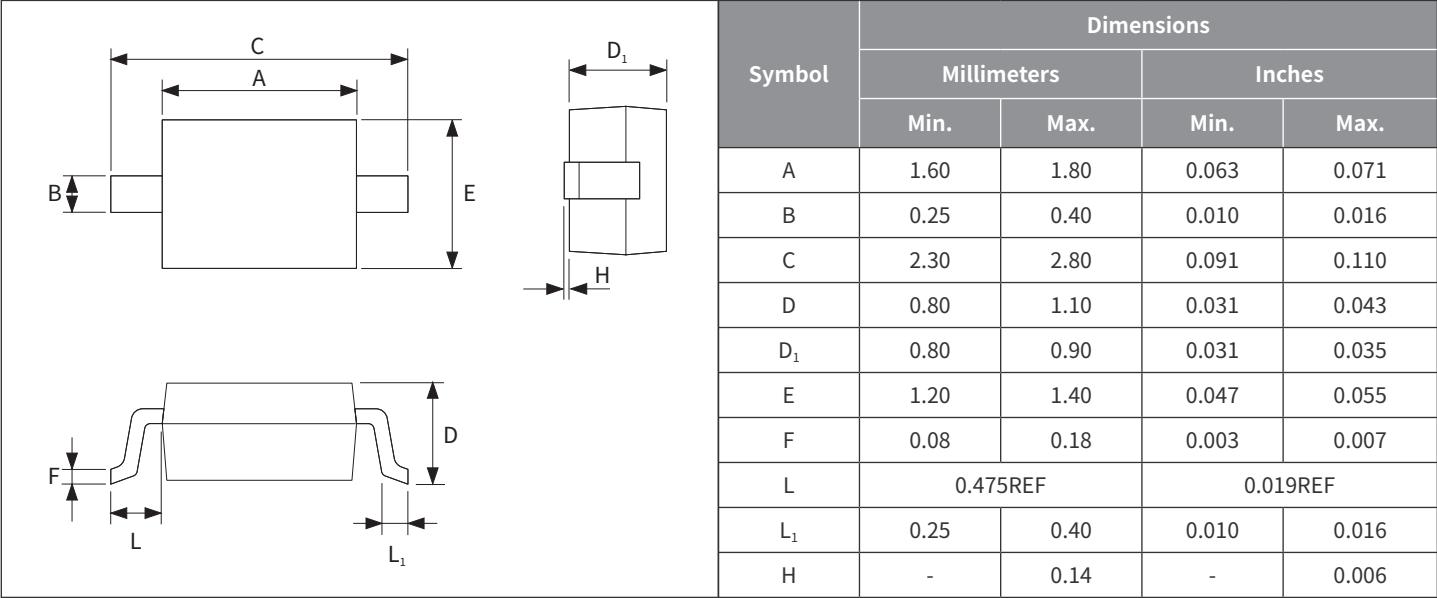
## ● Ordering Information

| PACKAGE | PACKAGE CODE | UNIT WEIGHT(g) | REEL(pcs) | BOX(pcs) | CARTON(pcs) | DELIVERY MODE |
|---------|--------------|----------------|-----------|----------|-------------|---------------|
| SOD-323 | R1           | 0.0048         | 3000      | 45000    | 180000      | 7"            |

## ● Recommended Soldering Conditions



## ● Package Outline Dimensions (SOD-323)



## ● Suggested Pad Layout

