

SOD-523 Plastic-Encapsulate ESD Protection Diodes

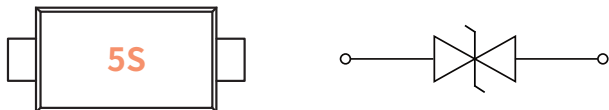
Features

- Low leakage current
- SOD-523 surface mount package
- IEC 61000-4-2 (ESD Air): ±15kV
- IEC 61000-4-2 (ESD Contact): ±15kV
- IEC 61000-4-5 (Lightning 8/20μs): 5A

Applications

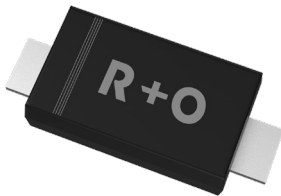
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation, Digital Cameras
- Peripherals, Audio Players
- Industrial Equipment

Function Diagram



Reverse Working Voltage  
5V Max.  
Ultra Small Capacitance  
0.3pF(Typ.)

SOD-523

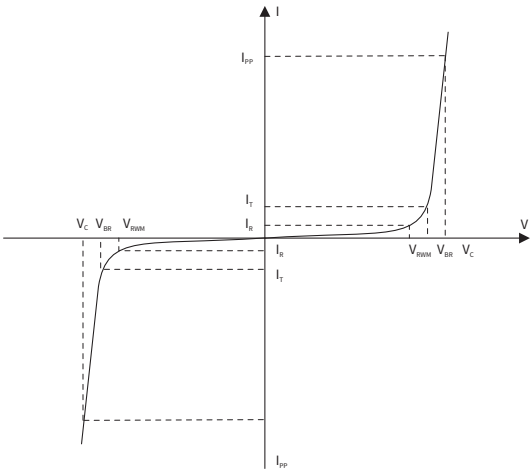


Maximum Ratings (Ta=25°C Unless otherwise specified)

| SYMBOL           | PARAMETER                           | CONDITIONS                      | VALUE       | UNIT |
|------------------|-------------------------------------|---------------------------------|-------------|------|
| VESD             | Electrostatic Discharge Voltage     | ESD per IEC 61000-4-2( Air )    | ±15         | KV   |
|                  |                                     | ESD per IEC 61000-4-2( Contact) | ±15         | KV   |
| P <sub>PP</sub>  | Peak Pulse Power                    | tp = 8/20 μs                    | 125         | W    |
| I <sub>PP</sub>  | Rated Peak Pulse Current            | tp = 8/20 μs                    | 5.0         | A    |
| T <sub>J</sub>   | Operating JunctionTemperature Range | —                               | -55 to +125 | °C   |
| T <sub>STG</sub> | Operating JunctionTemperature Range | —                               | -55 to +150 | °C   |

Electrical Parameter

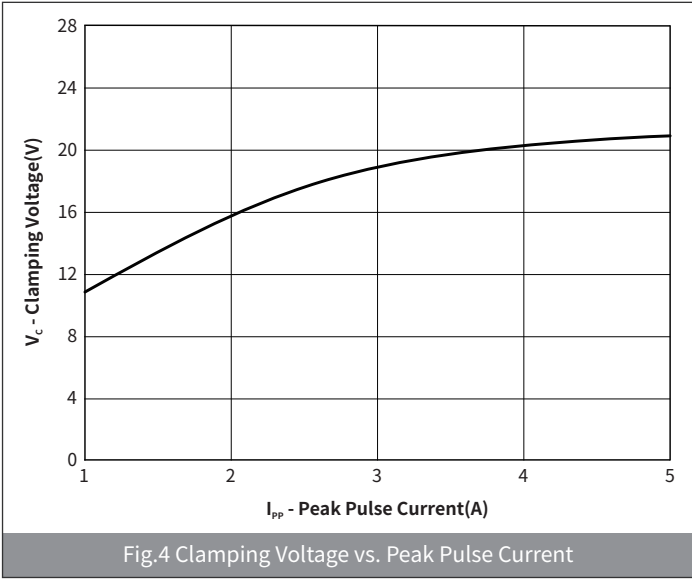
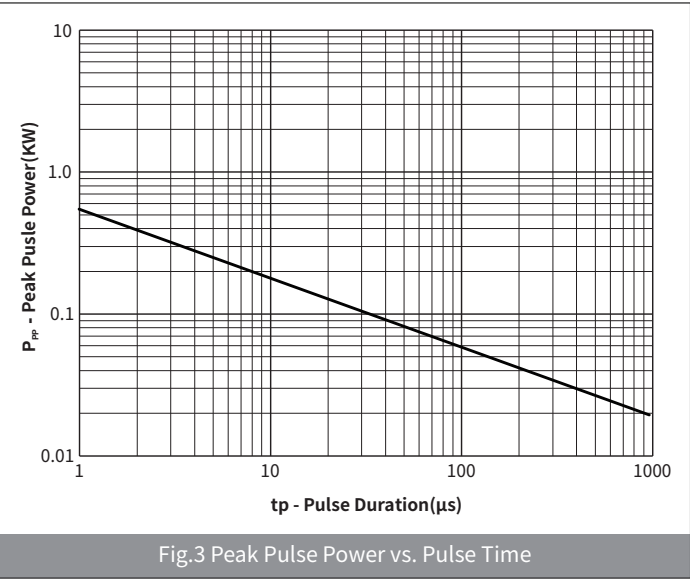
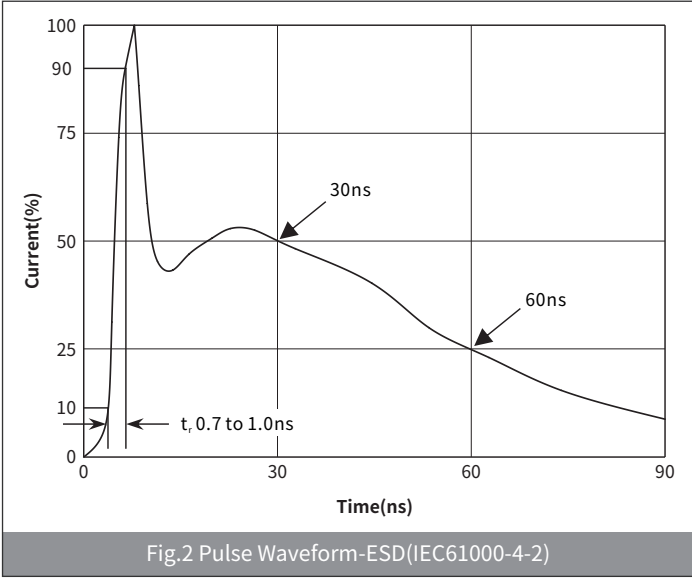
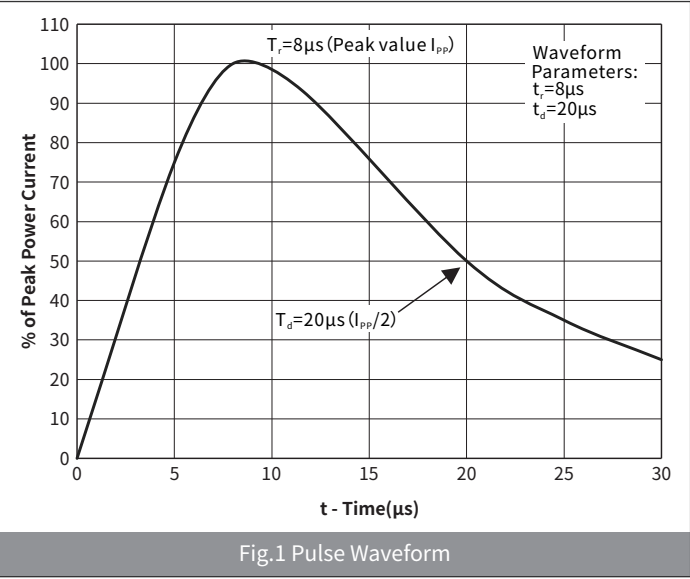
| SYMBOL           | PARAMETER                                        |
|------------------|--------------------------------------------------|
| V <sub>C</sub>   | Clamping Voltage @ I <sub>PP</sub>               |
| V <sub>BR</sub>  | Breakdown Voltage @ I <sub>T</sub>               |
| I <sub>PP</sub>  | 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 | $V_{RWM}$ | $T_a=25^{\circ}C$            | —   | —   | 5.0 | V       |
| Breakdown Voltage            | $V_{BR}$  | $I_R=1mA, T_a=25^{\circ}C$   | 6.0 | —   | 10  | V       |
| Reverse Leakage Current      | $I_R$     | $V_R=5V, T_a=25^{\circ}C$    | —   | —   | 0.2 | $\mu A$ |
| Clamping Voltage             | $V_C$     | $I_{PP}=1.0A, t_p=8/20\mu s$ | —   | —   | 12  | V       |
|                              |           | $I_{PP}=5A, t_p=8/20\mu s$   | —   | —   | 25  |         |
| Junction Capacitance         | $C_J$     | $V_R=0V, f=1MHz$             | —   | 0.3 | 0.5 | pF      |

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



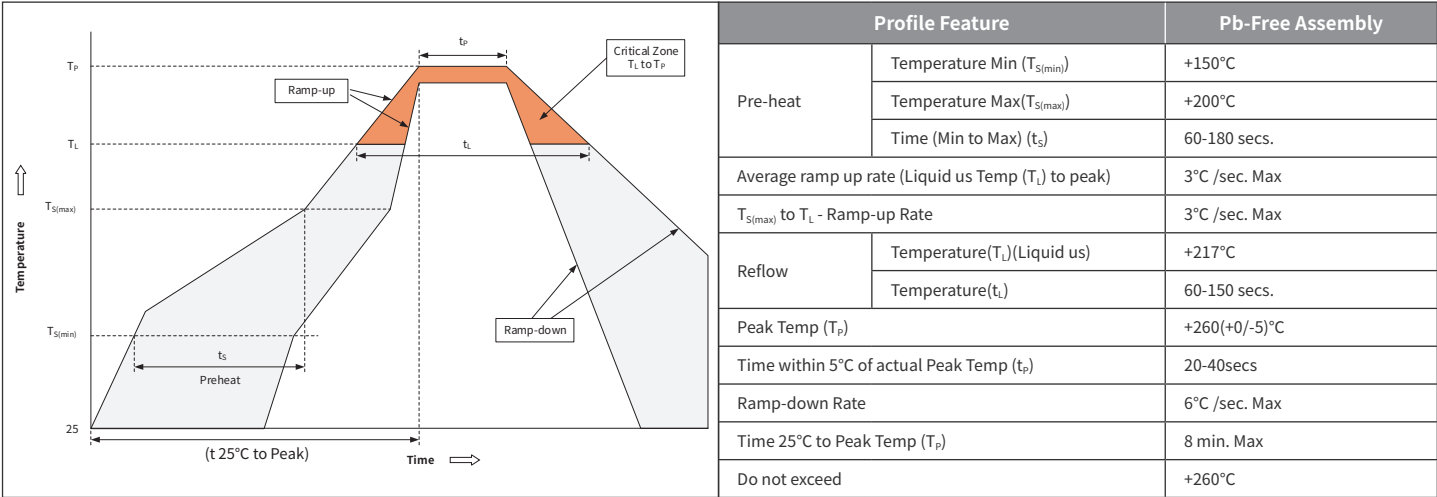
# H5VUD5BB

Bi-directional 5V Ultra Small Capacitance ESD

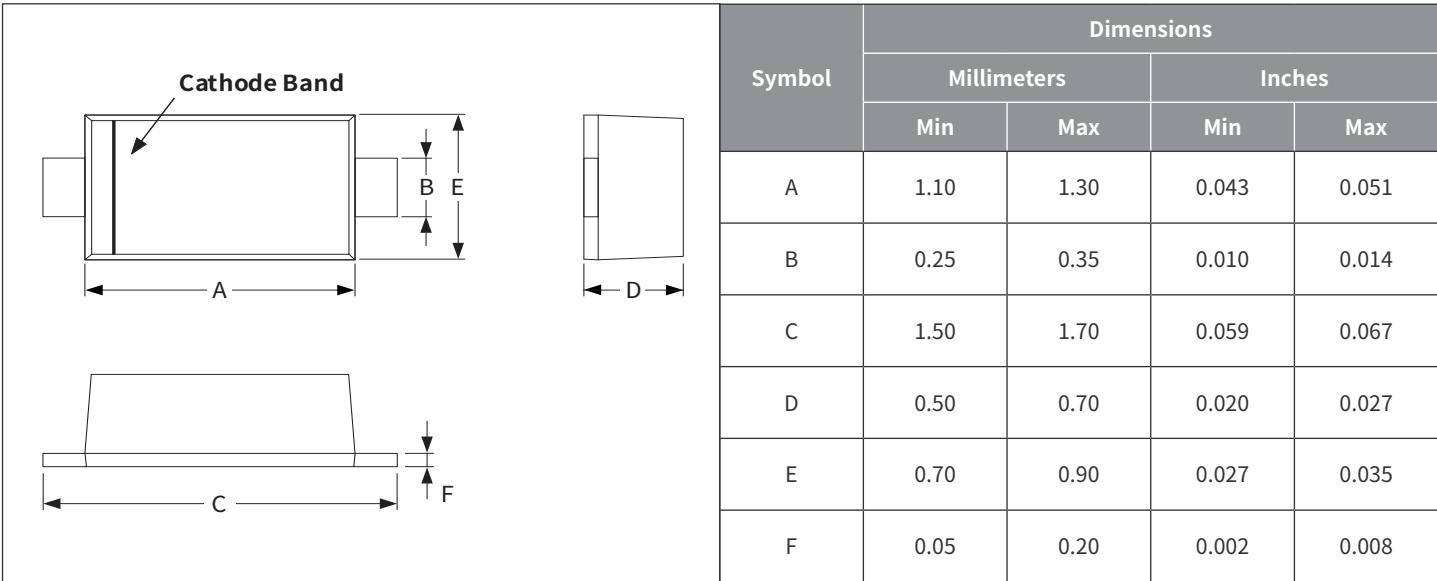
## Ordering Information

| PREFERRED P/N | PACKAGE CODE | PACKAGE | SIZE(mm)        | DELIVERY MODE | MPQ(PCS) |
|---------------|--------------|---------|-----------------|---------------|----------|
| H5VUD5BB      | R1           | SOD-523 | 0.30×0.80×0.115 | 7"REEL        | 3000     |
|               | R1H          | SOD-523 | 0.30×0.80×0.115 | 7"REEL        | 8000     |

## Recommended Soldering Conditions



## Package Outline Dimensions (SOD-523)



## Suggested Pad Layout

