

SOD-123FL 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): 140A

Applications

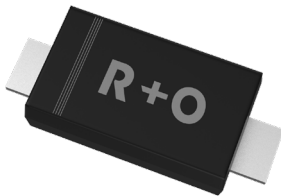
- I/O Interface.
- AC/DC Power supply
- Notebooks and Handhelds
- Portable Instrumentation,Digital Cameras
- Peripherals, Audio Players, Industrial Equipment

Function Diagram



Reverse Working Voltage  
18.0V Max.  
High capacitance  
320pF(Typ.)

SOD-123FL

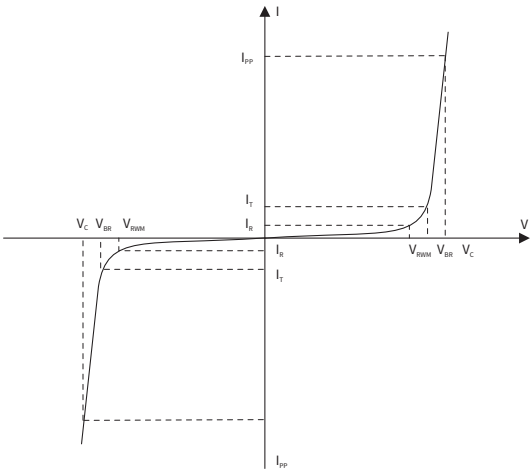


Maximum Ratings (Ta=25°C Unless otherwise specified)

| 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                    | 4000        | W    |
| I <sub>PP</sub>  | Rated Peak Pulse Current            | tp = 8/20 μs                    | 140         | 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

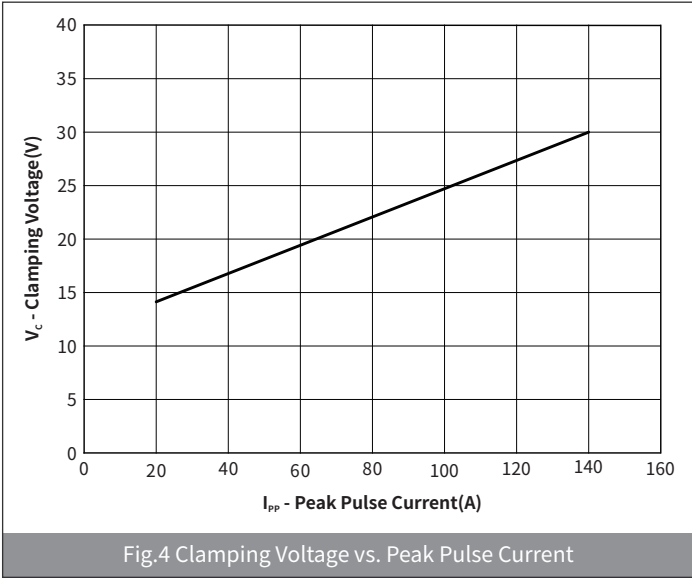
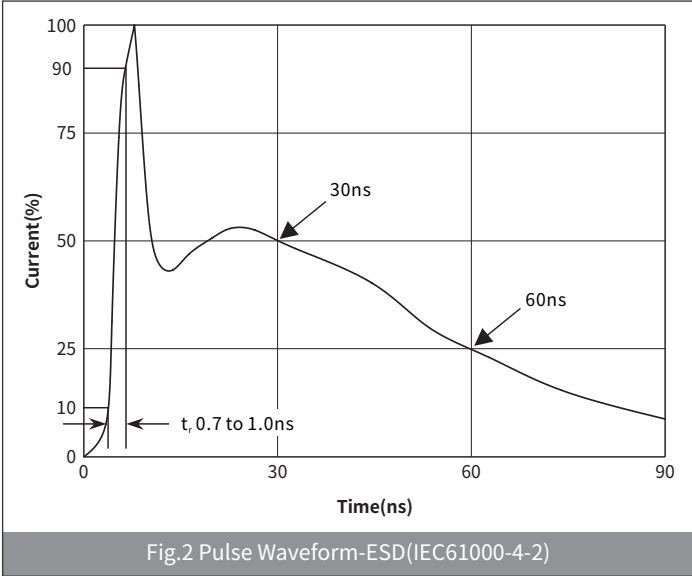
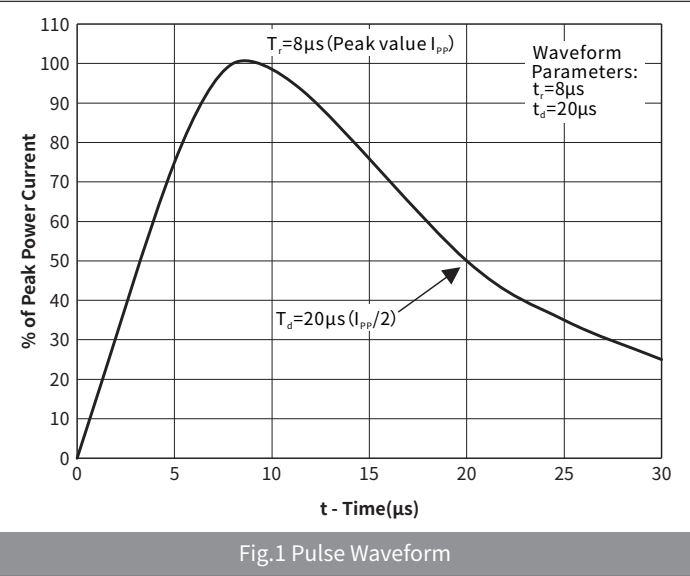
| SYMBOL           | PARAMETER                                        |
|------------------|--------------------------------------------------|
| V <sub>C</sub>   | Clamping Voltage @ I <sub>PP</sub>               |
| V <sub>BR</sub>  | Breakdown Voltage @ I <sub>T</sub>               |
| I <sub>PP</sub>  | 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 | $V_{RWM}$ | $T_a=25^{\circ}C$                | —    | —   | 18.0 | V       |
| Breakdown Voltage            | $V_{BR}$  | $I_T=1.0mA, T_a=25^{\circ}C$     | 20.0 | —   | 22.1 | V       |
| Reverse Leakage Current      | $I_R$     | $V_{RWM}=18.0V, T_a=25^{\circ}C$ | —    | —   | 1.0  | $\mu A$ |
| Clamping Voltage             | $V_C$     | $I_{PP}=140A, t_p=8/20\mu s$     | —    | —   | 30.0 | V       |
| Junction Capacitance         | $C_J$     | $V_{RWM}=0V, f=1MHz$             | —    | 320 | —    | pF      |

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



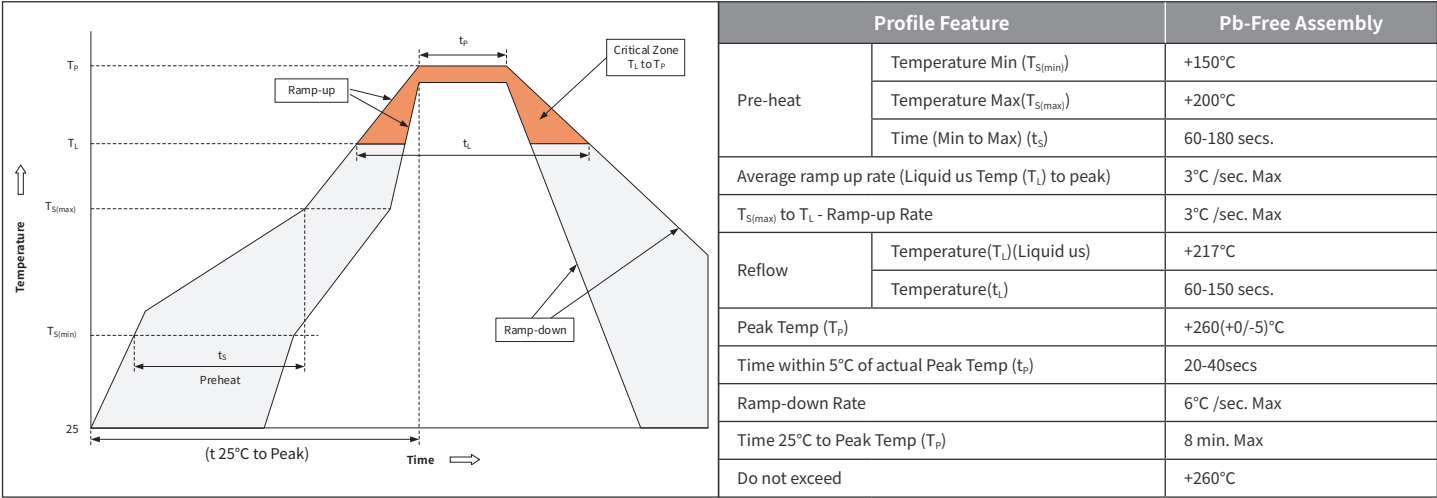
# H18VHD1B

Bi-directional 18.0V High Capacitance ESD

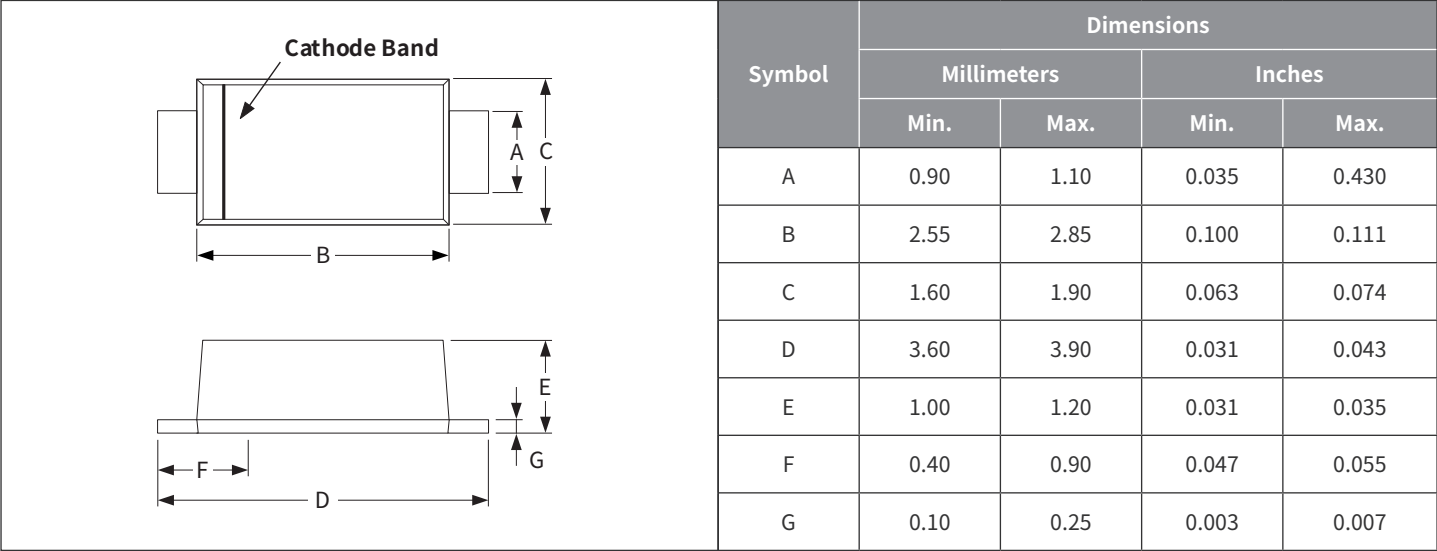
## Ordering Information

| PACKAGE   | PACKAGE CODE | UNIT WEIGHT(g) | REEL(pcs) | BOX(pcs) | CARTON(pcs) | DELIVERY MODE |
|-----------|--------------|----------------|-----------|----------|-------------|---------------|
| SOD-123FL | R1           | 0.0169         | 3000      | 45000    | 180000      | 7"            |

## Recommended Soldering Conditions



## Package Outline Dimensions (SOD -123FL)



## Suggested Pad Layout

