

SOT-563 Plastic-Encapsulate ESD Protection Diodes

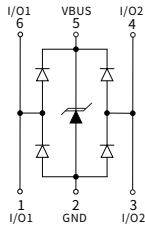
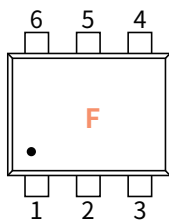
Features

- 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):5.5A

Applications

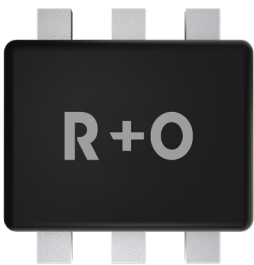
- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation,Digital Cameras
- Peripherals, Audio Players, Industrial Equipment

Function Diagram



Reverse Working Voltage  
5V Max.  
Low capacitance  
0.5 pF(Max.)

SOT-563

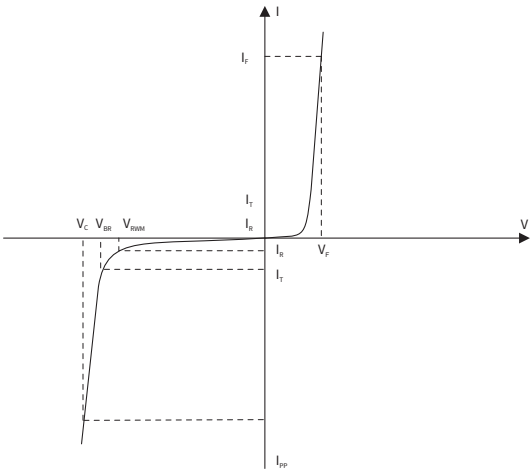


Maximum Ratings (Ta=25°C Unless otherwise specified)

| 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                    | 80          | W    |
| I <sub>PP</sub>  | Rated Peak Pulse Current            | tp = 8/20 μs                    | 5.5         | 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

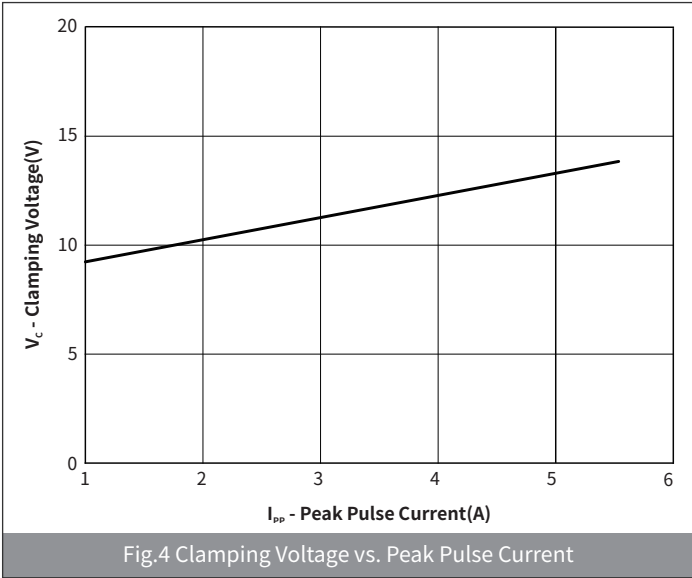
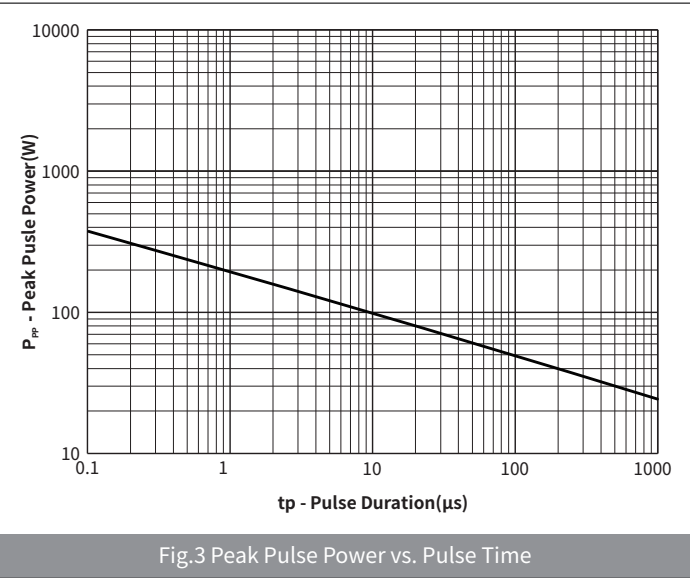
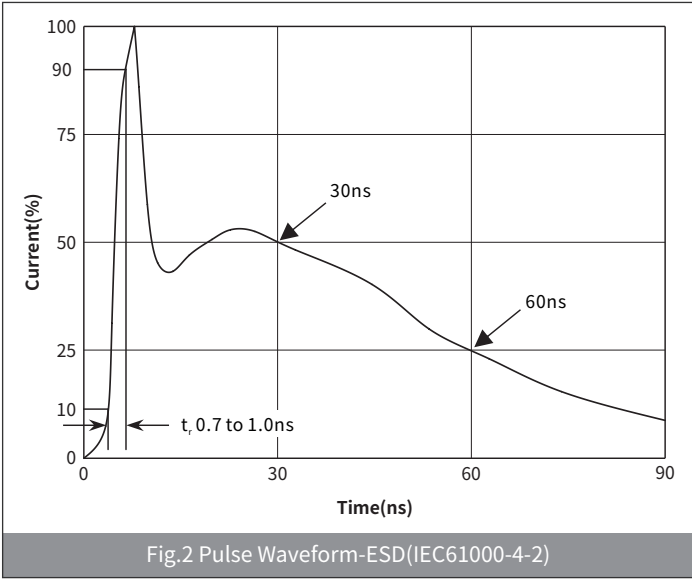
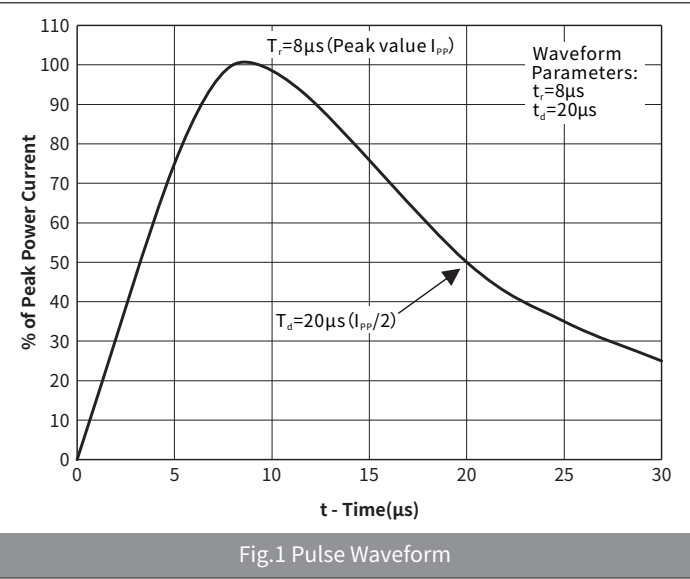
| SYMBOL           | PARAMETER                                        |
|------------------|--------------------------------------------------|
| V <sub>C</sub>   | Clamping Voltage @ I <sub>pp</sub>               |
| V <sub>BR</sub>  | Breakdown Voltage @ I <sub>r</sub>               |
| I <sub>PP</sub>  | 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            | $V_{BR}$  | $I_T=1mA, T_a=25^{\circ}C$      | 6.0 | —   | —    | V       |
| Reverse Leakage Current      | $I_R$     | $V_{RWM}=5.0V, T_a=25^{\circ}C$ | —   | —   | 0.08 | $\mu A$ |
| Clamping Voltage             | $V_C$     | $I_{PP}=1A, t_p=8/20\mu s$      | —   | —   | 10   | V       |
| Clamping Voltage             | $V_C$     | $I_{PP}=5.5A, t_p=8/20\mu s$    | —   | —   | 14   | V       |
| Junction Capacitance         | $C_J$     | $V_{RWM}=0V, f=1MHz$            | —   | —   | 0.5  | pF      |

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



# USBLC6-2P6

Uni-directional 5V Low Capacitance ESD

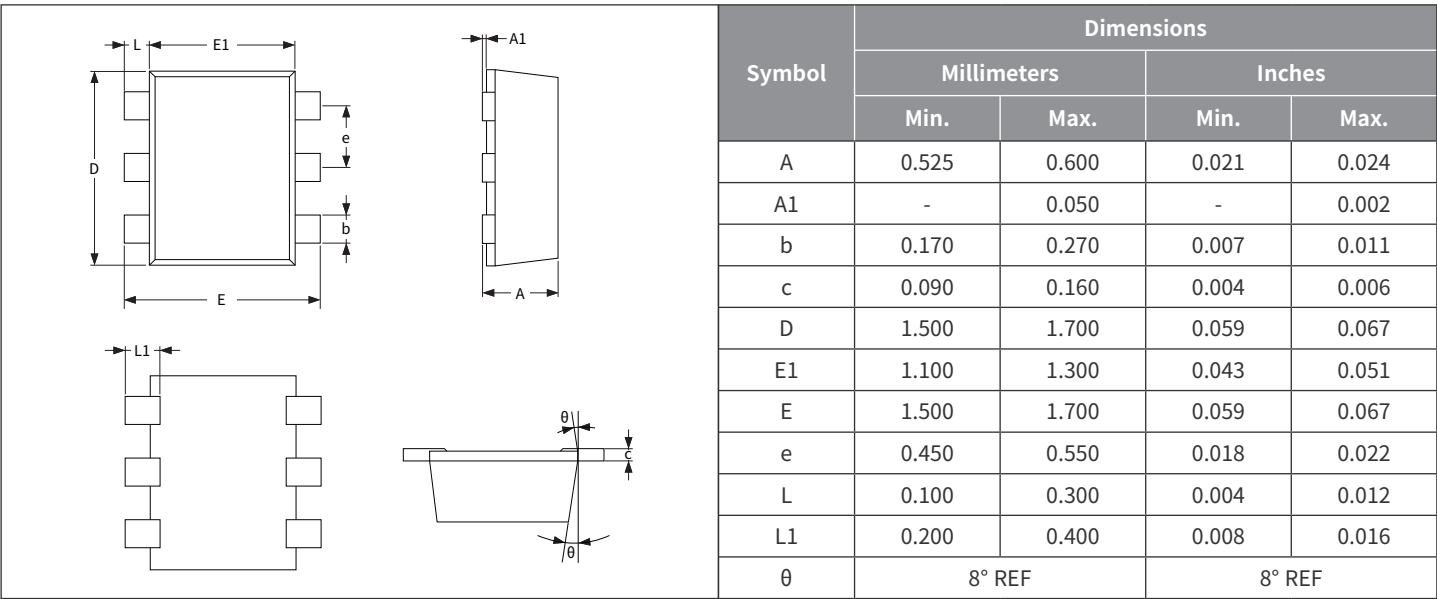
## ● Ordering Information

| PREFERED P/N | PACKAGE | SIZE(mm)     | DELIVERY MODE | MPQ(PCS) |
|--------------|---------|--------------|---------------|----------|
| USBLC6-2P6   | SOT-563 | 0.55×1.6×1.6 | 7" REEL       | 3000     |

## ● Recommended Soldering Conditions



## ● Package Outline Dimensions (SOT-563)



## ● Suggested Pad Layout

