

DFN1006-2L Plastic-Encapsulate ESD Protection Diodes

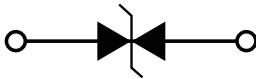
Features

- 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): 55A

Applications

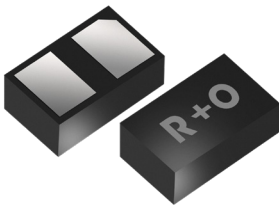
- Cellular Handsets and Accessories
- Notebooks and Handhelds
- Audio Players, Peripherals
- Personal Digital Assistants
- Portable Instrumentation
- Keypads, Side Keys, LCD Displays

Function Diagram



Reverse Working Voltage  
4.5V Max.  
High capacitance  
150pF(Max.)

DFN1006-2L

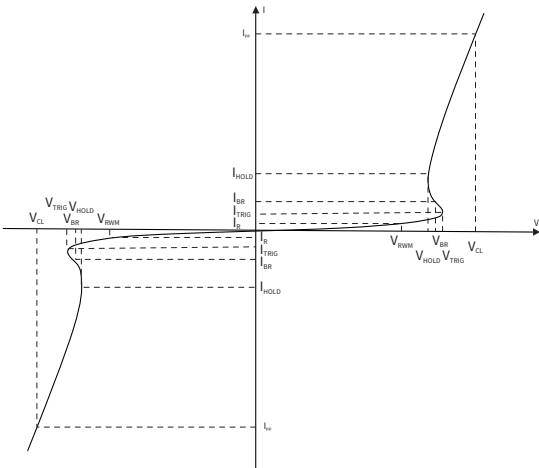


Maximum Ratings (Ta=25°C Unless otherwise specified)

| SYMBOL           | PARAMETER                           | CONDITIONS                      | VALUE       | UNIT |
|------------------|-------------------------------------|---------------------------------|-------------|------|
| V <sub>ESD</sub> | 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                    | 825         | W    |
| I <sub>PP</sub>  | Rated Peak Pulse Current            | tp = 8/20 μs                    | 55          | A    |
| T <sub>J</sub>   | Operating JunctionTemperature Range | —                               | -55 to +125 | °C   |
| T <sub>STG</sub> | Operating JunctionTemperature Range | —                               | -55 to +125 | °C   |

Electrical Parameter

| SYMBOL            | PARAMETER                          |
|-------------------|------------------------------------|
| V <sub>CL</sub>   | Clamping Voltage @ I <sub>PP</sub> |
| I <sub>R</sub>    | Reverse leakage current            |
| I <sub>PP</sub>   | Peak Pulse Current                 |
| V <sub>TRIG</sub> | Reverse trigger voltage            |
| I <sub>TRIG</sub> | Reverse trigger current            |
| V <sub>RWM</sub>  | Peak Reverse Working Voltage       |
| P <sub>PP</sub>   | Peak Pulse Power Dissipation       |
| V <sub>BR</sub>   | Reverse breakdown voltage          |
| I <sub>BR</sub>   | Reverse breakdown current          |
| V <sub>HOLD</sub> | Reverse holding voltage            |
| I <sub>HOLD</sub> | Reverse holding current            |



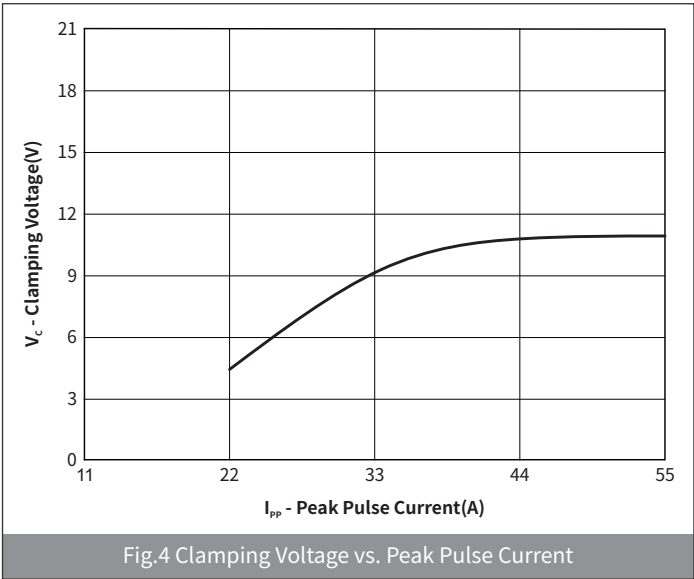
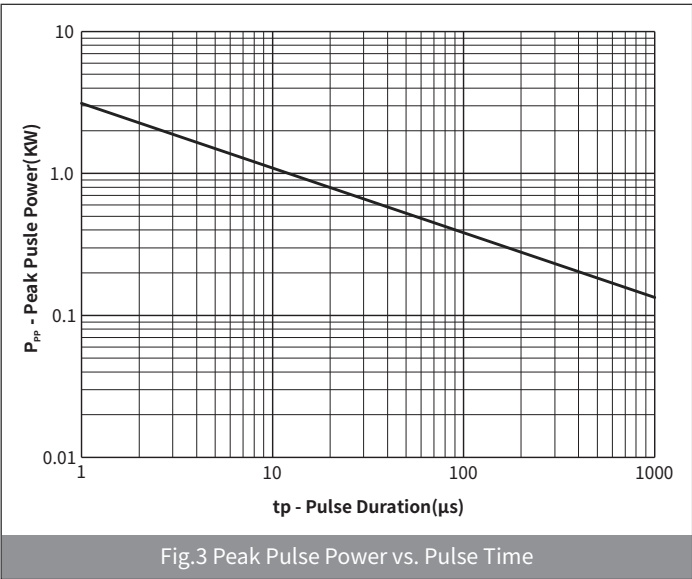
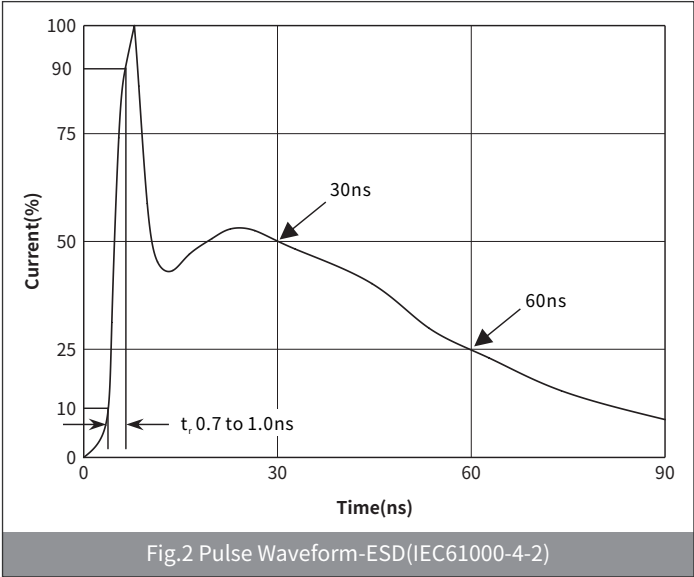
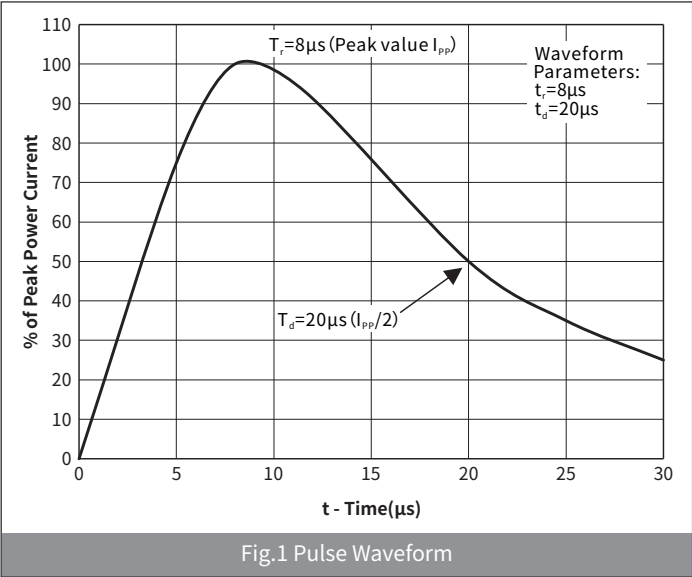
● Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER                    | SYMBOL     | CONDITION                       | Min | Typ | Max | UNIT    |
|------------------------------|------------|---------------------------------|-----|-----|-----|---------|
| Peak Reverse Working Voltage | $V_{RWM}$  | $T_a=25^{\circ}C$               | —   | —   | 4.5 | V       |
| Breakdown Voltage            | $V_{BR}$   | $I_R=1.0mA, T_a=25^{\circ}C$    | 4.5 | 5.5 | 8.5 | V       |
| Reverse Leakage Current      | $I_R$      | $V_{RWM}=4.5V, T_a=25^{\circ}C$ | —   | —   | 0.1 | $\mu A$ |
| Hold Voltage of Snapback(1)  | $V_{HOLD}$ | Anode to GND                    | 4.5 | —   | —   | V       |
|                              |            | GND to Anode                    | 3.3 | —   | —   |         |
| Clamping Voltage             | $V_C$      | $I_{PP}=55A, t_p=8/20\mu s$     | —   | 11  | 15  |         |
| Junction Capacitance         | $C_J$      | $V_{RWM}=0V, f=1MHz$            | —   | 100 | 150 | pF      |

Note :

1.There specifications are guaranteed by design and characterization.

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



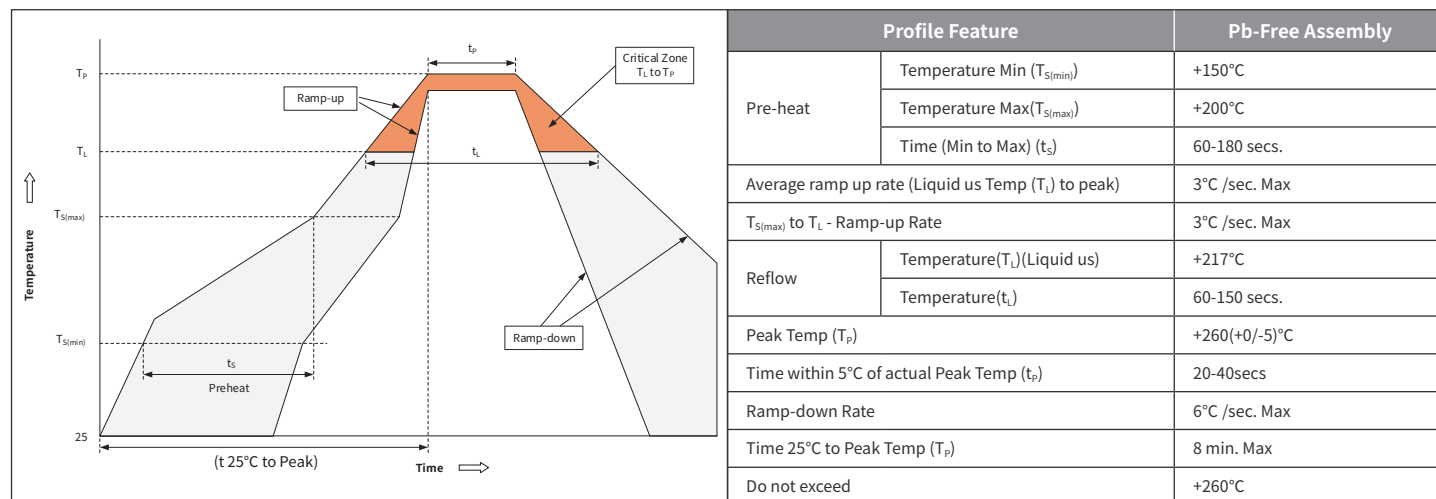
# H4S5N10B

Bi-directional 4.5V High Capacitance

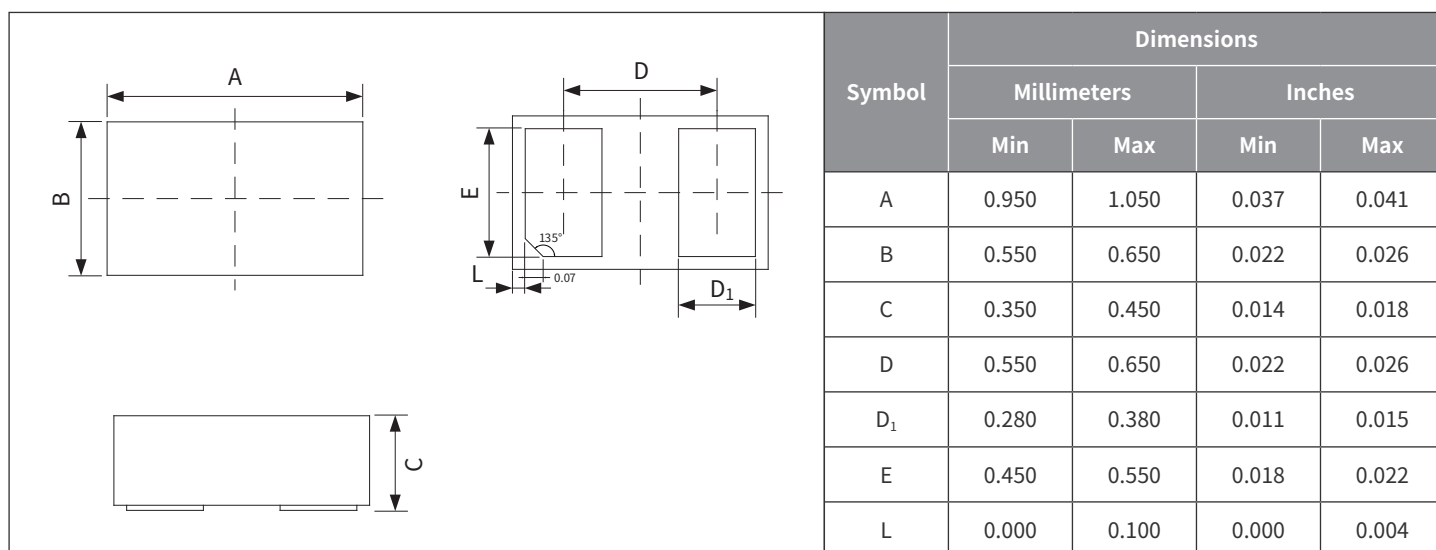
## ● Ordering Information

| PREFERED P/N | PACKAGE    | SIZE(mm)       | DELIVERY MODE | MPQ(PCS) |
|--------------|------------|----------------|---------------|----------|
| H4S5N10B     | DFN1006-2L | 1.00×0.60×0.37 | 7" REEL       | 10,000   |

## ● Recommended Soldering Conditions



## ● Package Outline Dimensions (DFN1006-2L)



## ● Suggested Pad Layout

