



## Discription

Low capacitance bidirectional ElectroStatic Discharge (ESD) protection diode in a DFN1006-2L(SOD-882) leadless ultra small Surface-Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients.

## Features

- ★ Bidirectional ESD protection of one line
- ★ Femtofarad capacitance:  $C_j = 15\text{pF}$  (Typ)
- ★ Low clamping voltage  $V_C = 11.0\text{V}$  @Max (Max)
- ★ Low leakage current: nA Level
- ★ ESD protection up to 30 kV
- ★ IEC 61000-4-2; level 4 (ESD)
- ★ IEC 61000-4-5 (surge); IPPM = 30 A



DFN1006-2L



Circuit Diagram

## Applications

- ★ Portable electronics
- ★ Computers and peripherals
- ★ Audio and video equipment
- ★ Cellular handsets and accessories
- ★ Communication systems
- ★ Power supplies

## Ordering Information

| Product ID | Pack       | Qty(PCS) |
|------------|------------|----------|
| AU3321P1   | DFN1006-2L | 10000    |

## Absolute Ratings( $T_{amb} = 25^{\circ}\text{C}$ )

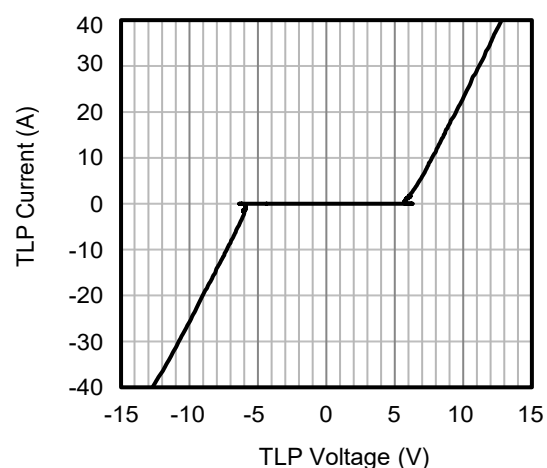
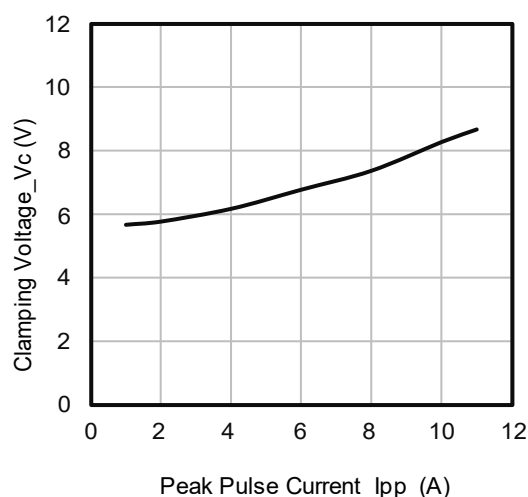
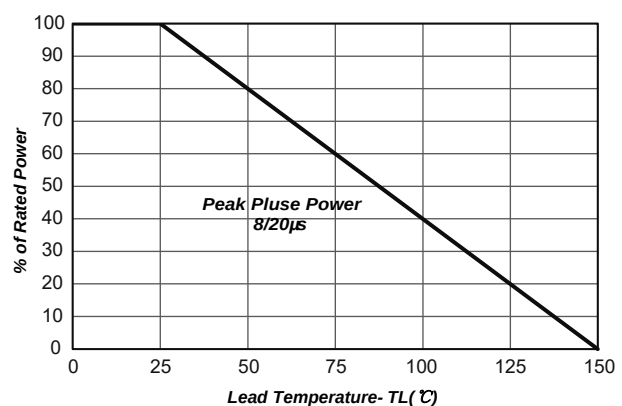
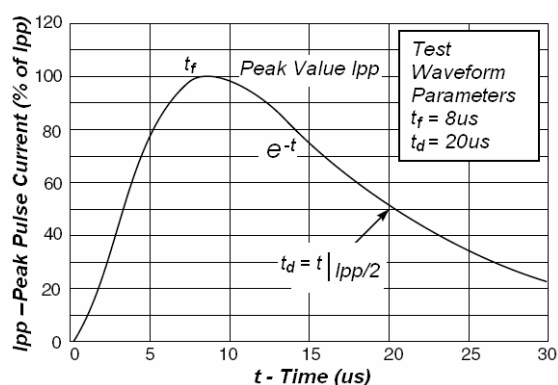
| Symbol           | Parameter                                         | Value                              | Units        |    |
|------------------|---------------------------------------------------|------------------------------------|--------------|----|
| P <sub>PP</sub>  | Peak Pulse Power (t <sub>p</sub> = 8/20 μ s)      | 100                                | W            |    |
| T <sub>L</sub>   | Maximum lead temperature for soldering during 10s | 260                                | °C           |    |
| T <sub>stg</sub> | Storage Temperature Range                         | -55 to +150                        | °C           |    |
| T <sub>op</sub>  | Operating Temperature Range                       | -55 to +150                        | °C           |    |
| T <sub>j</sub>   | Maximum junction temperature                      | 150                                | °C           |    |
|                  | IEC61000-4-2 (ESD)                                | air discharge<br>contact discharge | ± 30<br>± 30 | KV |
|                  | IEC61000-4-4 (EFT)                                | 40                                 | A            |    |



## Electrical Characteristics

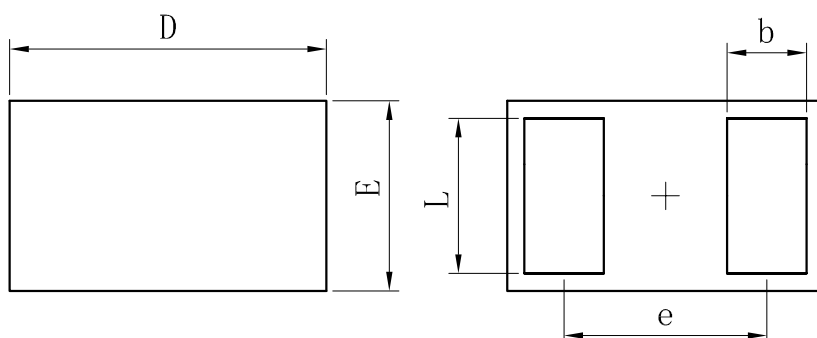
| Symbol    | Parameter                 | Test Condition                 | Min | Typ | Max  | Units   |
|-----------|---------------------------|--------------------------------|-----|-----|------|---------|
| $V_{RWM}$ | Reverse Working Voltage   |                                |     |     | 3.3  | V       |
| $V_{BR}$  | Reverse Breakdown Voltage | $I_T = 1mA$                    | 5.0 |     | 6.5  | V       |
| $I_R$     | Reverse Leakage Current   | $V_{RWM} = 3.3V$               |     |     | 0.05 | $\mu A$ |
| $V_C$     | Clamping Voltage          | $I_{PP} = 1A, t_p = 8/20\mu s$ |     |     | 7.0  | V       |
|           |                           | $I_{PP} = 9A, t_p = 8/20\mu s$ |     |     | 11.0 | V       |
| $C_J$     | Junction Capacitance      | $V_R = 0V, f = 1MHz$           |     | 15  |      | pF      |

## Typical Characteristics



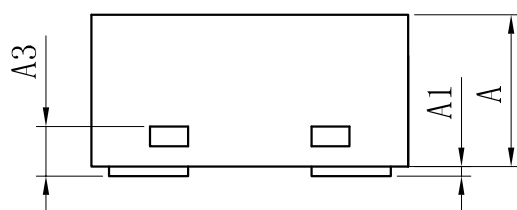


## Outline And Dimensions



TOP VIEW

BOTTOM VIEW



SIDE VIEW

| DFN1006-2L           |           |      |      |
|----------------------|-----------|------|------|
| Dim                  | Min       | Typ  | Max  |
| D                    | 0.95      | 1.00 | 1.05 |
| E                    | 0.55      | 0.60 | 0.65 |
| e                    | –         | 0.64 | –    |
| L                    | 0.44      | 0.49 | 0.54 |
| b                    | 0.20      | 0.25 | 0.30 |
| A                    | 0.43      | 0.48 | 0.53 |
| A1                   | 0         | –    | 0.05 |
| A3                   | 0.127REF. |      |      |
| All Dimensions in mm |           |      |      |

## Soldering Footprint



| Dimensions | (mm) |
|------------|------|
| c          | 0.70 |
| G          | 0.30 |
| X          | 0.40 |
| X1         | 1.10 |
| Y          | 0.70 |



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