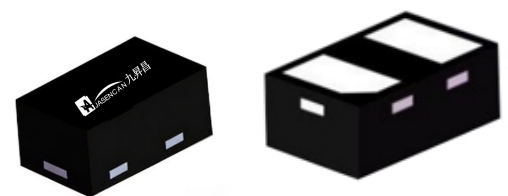


### General Description

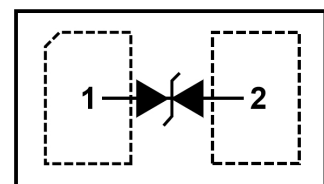
The JS5VS10BGJ is designed to protect voltage sensitive components from damage or latch-up due to ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD for board level. Because of its small size and bi-directional design, it is ideal for use in cellular phones, and portable applications that require audio line protection.

### Specification Features

- Miniaturized packaging size suitable for high-density applications:  
nom 0.039" x 0.024" (1.0x0.6mm)
- Standard Capacitance 19 pF
- Low Clamping Voltage:  $V_C=12V@I_{PP}=9A$
- Reverse Working (Stand-off) Voltage: 5V
- Low Leakage current
- Response Time is Typically < 1 ns



DFN1006-2L(Pb-Free)



Schematic Diagram

### Application

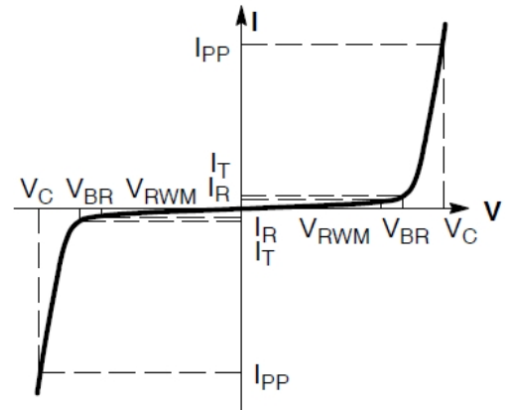
- Smartphones, tablet computers
- Blu-ray and DVD recorders and players
- Video equipment and accessories

### Maximum Ratings

| Rating  | Symbol    | Value    | Unit        |
|---|-----------|----------|-------------|
| Peak pulse power ( $t_p = 8/20\mu s$ )          | $P_{PK}$  | 110      | W           |
| ESD according to IEC61000-4-2 air discharge     | $V_{ESD}$ | $\pm 30$ | kV          |
| ESD according to IEC61000-4-2 contact discharge |           | $\pm 30$ |             |
| Operating Temperature Range                     | $T_J$     | -55~150  | $^{\circ}C$ |
| Storage temperature                             | $T_{STG}$ | -55~150  | $^{\circ}C$ |

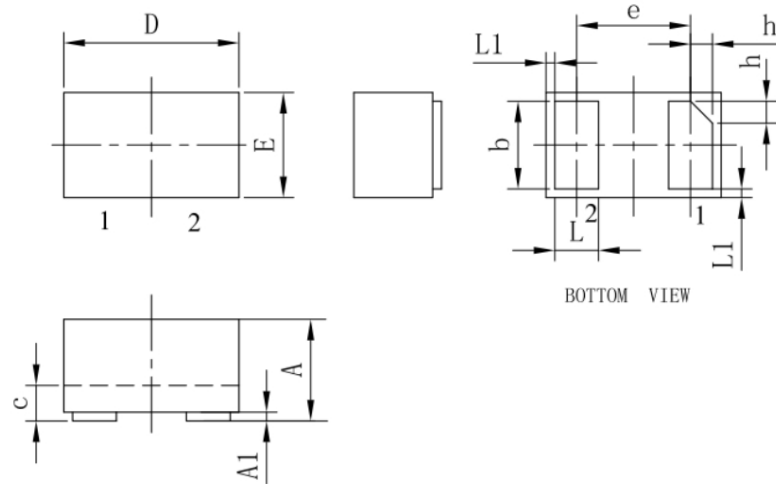
### Electrical Characteristics( $T_J = 25^\circ\text{C}$ unless otherwise specified)

| Symbol    | Parameter                                    |
|-----------|--|
| $I_{PP}$  | Maximum Reverse Peak Pulse Current           |
| $V_C$     | Clamping Voltage @ $I_{PP}$                  |
| $V_{RWM}$ | Working Peak Reverse Voltage                 |
| $I_R$     | Maximum Reverse Leakage Current @ $V_{RWM}$  |
| $I_T$     | Test Current                                 |
| $V_{BR}$  | Breakdown Voltage @ $I_T$                    |
| $P_{PK}$  | Peak Power Dissipation                       |
| $C$       | Max. Capacitance @ $V_R = 0$ and freq.=1 MHz |



| Parameter                 | Symbol    | Conditions                              | Min. | Typ. | Max. | Units |
|---------------------------|-----------|---|------|------|------|-------|
| Reverse Stand-off Voltage | $V_{RWM}$ |   |      |      | 5    | V     |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T=1\text{mA}$                        | 5.6  |      | 7.5  | V     |
| Reverse Leakage Current   | $I_R$     | $V_{RWM}=5\text{V}$                     |      |      | 100  | nA    |
| Clamping Voltage          | $V_C$     | $I_{PP}=1\text{A}, t_p=8/20\mu\text{s}$ |      |      | 8.5  | V     |
| Clamping Voltage          | $V_C$     | $I_{PP}=9\text{A}, t_p=8/20\mu\text{s}$ |      | 10   | 12   | V     |
| Junction Capacitance      | $C_J$     | $V_R=0\text{V}, f=1\text{MHz}$          |      | 19   |      | pF    |

### Package Outline Dimensions



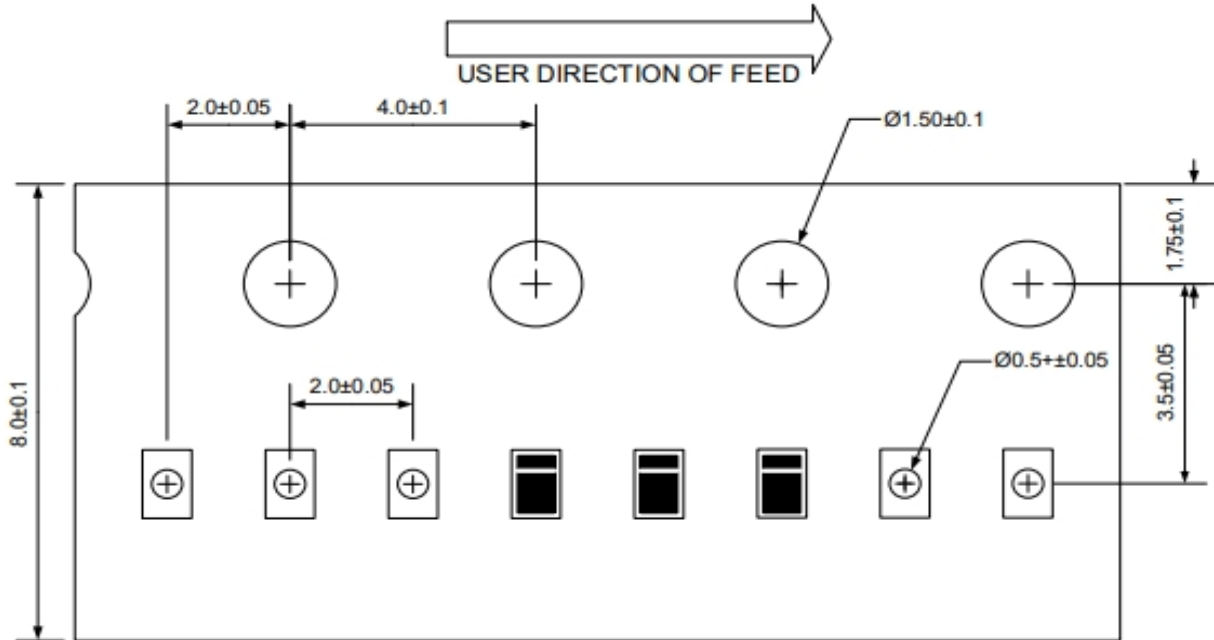
**DFN1006-2L**

|    | Millimeters |           |           | Inches    |           |           |
|----|-------------|-----------|-----------|-----------|-----------|-----------|
|    | Min. (mm)   | Typ. (mm) | Max. (mm) | Min. (in) | Typ. (in) | Max. (in) |
| A  | 0.45        | 0.50      | 0.55      | 0.018     | 0.020     | 0.022     |
| A1 | 0.00        | 0.02      | 0.05      | 0.000     | 0.001     | 0.002     |
| b  | 0.45        | 0.50      | 0.55      | 0.018     | 0.020     | 0.022     |
| c  | 0.12        | 0.15      | 0.18      | 0.005     | 0.006     | 0.007     |
| D  | 0.95        | 1.00      | 1.05      | 0.037     | 0.039     | 0.041     |
| e  | 0.65BSC     |           |           | 0.026BSC  |           |           |
| E  | 0.55        | 0.60      | 0.65      | 0.022     | 0.024     | 0.026     |
| L  | 0.20        | 0.25      | 0.30      | 0.008     | 0.010     | 0.012     |
| L1 | 0.05REF     |           |           | 0.002REF  |           |           |
| h  | 0.07        | 0.12      | 0.17      | 0.003     | 0.005     | 0.007     |

### Ordering information

| Device     | Package             | Reel | Marking | Shipping            |
|------------|---------------------|------|---------|---------------------|
| JS5VS10BGJ | DFN1006-2L(Pb-Free) | 7"   |         | 10000 / Tape & Reel |

### Load with information



Unit:mm