

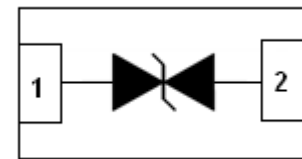


FEATURES

- ✧ Protects one bi-directional I/O line
- ✧ Low clamping voltage
- ✧ Working voltage: 5.0V
- ✧ RoHS compliant
- ✧ Low leakage current



DFN1006-2L



PIN Configuration

MAIN APPLICATIONS

- ✧ Cell phone handsets and accessories
- ✧ Personal digital assistants (PDA's)
- ✧ Laptop computers
- ✧ Digital cameras

PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) ±20kV (air), ±15kV (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5 (Lightning) 3A (8/20µs)

MECHANICAL CHARACTERISTICS

- ✧ DFN1006-2L package
- ✧ Molding compound flammability rating: UL 94V-0
- ✧ Quantity per reel: 10,000pcs
- ✧ Lead finish: lead free
- ✧ Marking code: VB

ABSOLUTE MAXIMUM RATINGS (T_A=25°C, RH=45%-75%, unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|------------------|---------------|------|
| Peak pulse power dissipation on 8/20µs waveform | P _{PP} | 40 | W |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | +/- 20 | kV |
| ESD per IEC 61000-4-2 (Contact) | | +/- 15 | |
| Lead soldering temperature | T _L | 260 (10 sec.) | °C |
| Operating junction temperature range | T _J | -55 to +125 | °C |
| Storage temperature range | T _{STG} | -55 to +150 | °C |

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|---------------------------|-----------|---|-----|------|------|---------------|
| Reverse working voltage | V_{RWM} | | | | 5.0 | V |
| Reverse breakdown voltage | V_{BR} | $I_T = 1\text{mA}$ | 6.0 | | | V |
| Reverse leakage current | I_R | $V_{RWM} = 5\text{V}$ | | | 0.15 | μA |
| Peak pulse current | I_{PP} | $t_p=8/20\mu\text{s}$ | | | 3 | A |
| Clamping voltage | V_C | $I_{PP}=3\text{A}, t_p = 8/20\mu\text{s}$ | | 12.5 | 13.5 | V |
| Junction capacitance | C_J | $V_{RWM} = 0\text{V}, f = 1\text{MHz}$ | | 3 | 4 | pF |

RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

FIG.1: V- I curve characteristics (Bi-directional)

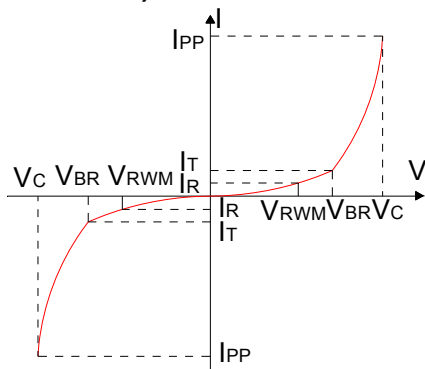


FIG.2: Pulse waveform (8/20 μs)

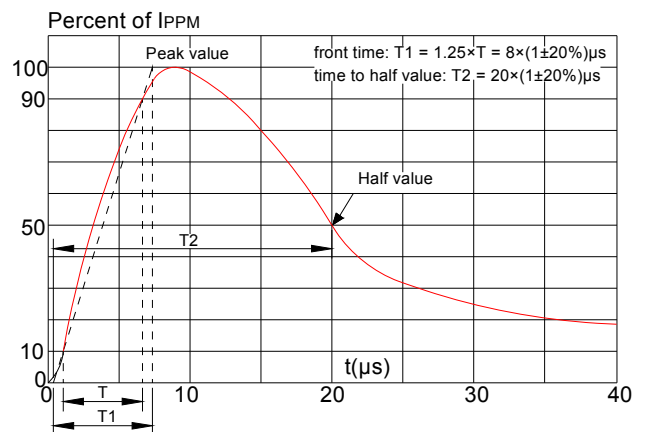


FIG.3: Pulse derating curve

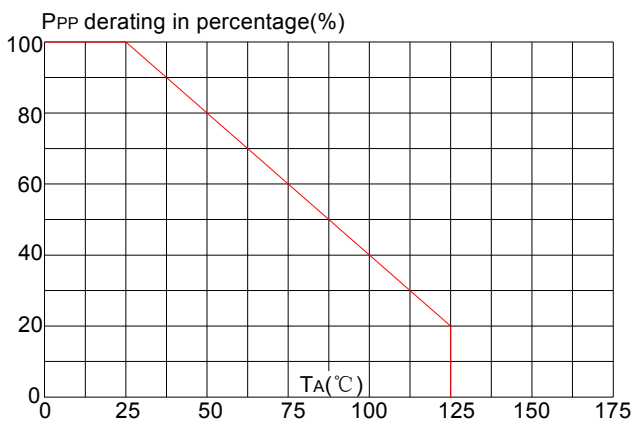
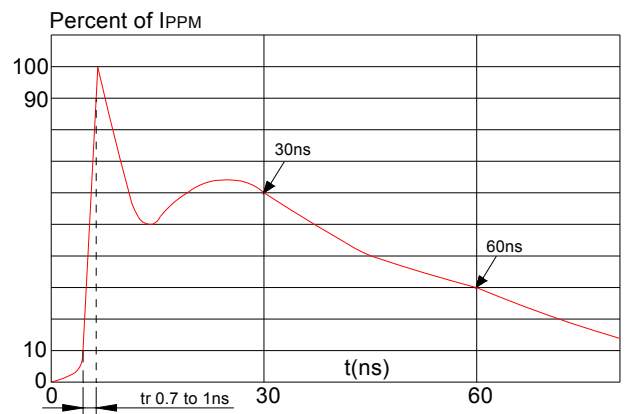
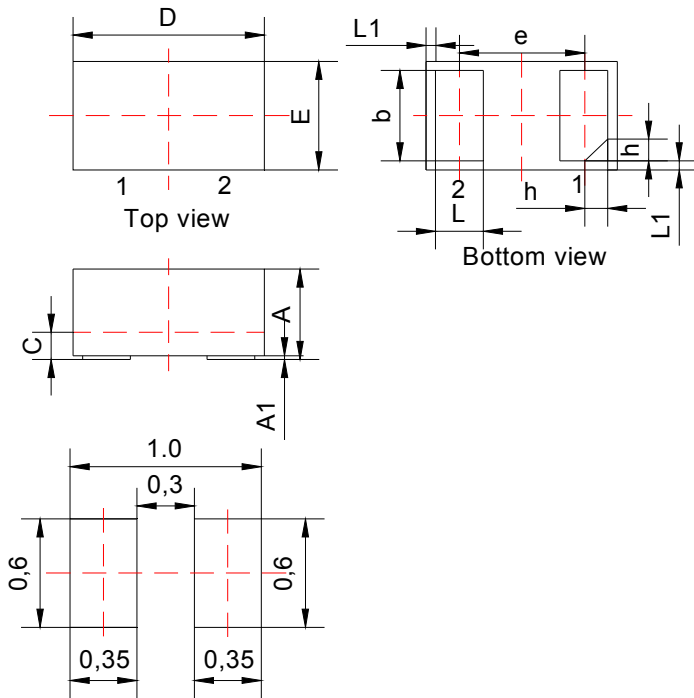


FIG.4: ESD clamping (15KV contact)



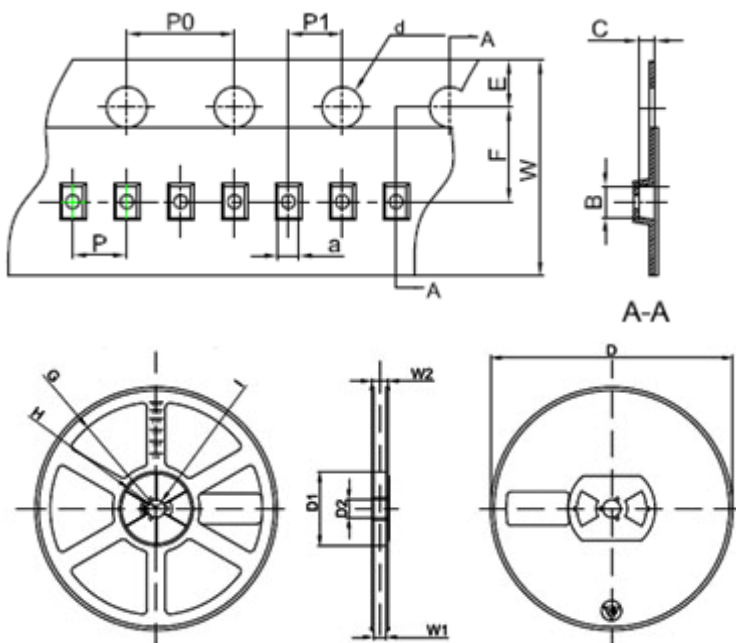
PACKAGE MECHANICAL DATA



Recommended Soldering Footprint

| Symbol | Millimeter | | |
|--------|------------|------|------|
| | Min. | Typ. | Max. |
| A | 0.45 | 0.50 | 0.55 |
| A1 | 0 | 0.02 | 0.05 |
| b | 0.45 | 0.50 | 0.55 |
| C | 0.12 | 0.15 | 0.18 |
| D | 0.95 | 1.00 | 1.05 |
| e | 0.65BSC | | |
| E | 0.55 | 0.60 | 0.65 |
| L | 0.20 | 0.25 | 0.30 |
| L1 | 0.05REF | | |
| h | 0.07 | 0.12 | 0.17 |

TAPE AND REEL INFORMATION-DFN1006-2L



Packaging Description:


DFN1006-2L parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 10,000units per 7" or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static coated).

| Symbol | Millimeter | Inches |
|--------|------------|--------|
| | Typ. | Typ. |
| a | 0.66 | 0.026 |
| B | 1.15 | 0.045 |
| C | 0.66 | 0.026 |
| d | Φ1.50 | Φ0.059 |
| E | 1.75 | 0.069 |
| F | 3.50 | 0.138 |
| P0 | 4.00 | 0.157 |
| P | 2.00 | 0.079 |
| P1 | 2.00 | 0.079 |
| W | 8.00 | 0.315 |
| D | Φ178 | Φ7.008 |
| D1 | 54.40 | 2.142 |
| D2 | 13.00 | 0.512 |
| G | R78.00 | R3.071 |
| H | R25.60 | R1.008 |
| I | R6.50 | R0.256 |
| W1 | 9.50 | 0.374 |
| W2 | 12.30 | 0.484 |

ORDERING INFORMATION

| OUTLINE | Package | Reel Size | Quantity Per Reel |
|---------|------------|-----------|-------------------|
| TAPING | DFN1006-2L | 7 Inch | 10,000 pcs |

MARKING CODE

| Part Number | Marking Code |
|-------------|--|
| JEB05DFB | <div style="display: flex; align-items: center; justify-content: center;"> Pin 1 <div style="border: 1px solid black; padding: 5px; margin: 0 10px;">  </div> Pin 2 </div> |

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