

RoHS Device
Halogen Free



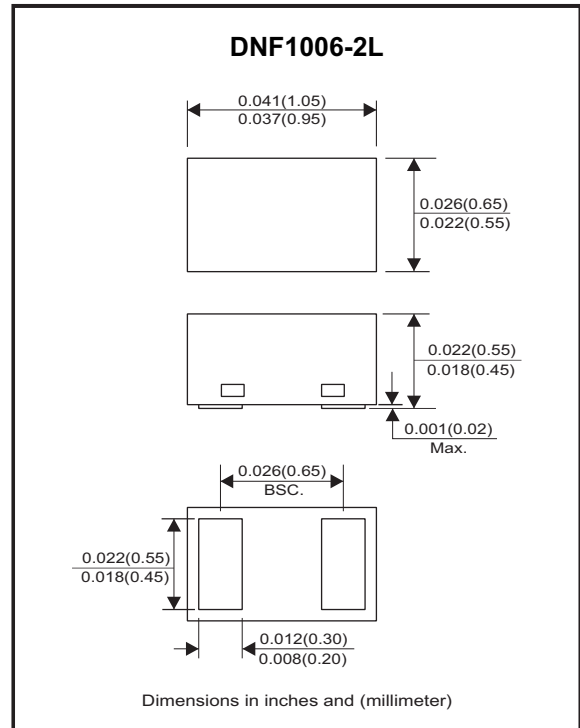
Features

- Bi-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Working Voltage: 5V
- Typical capacitance: 0.3pF

Mechanical data

- Case: DFN1006-2L/0402 small outline plastic package. molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- High temperature soldering guaranteed: 260°C/10 second.
- Weight: 0.001 grams(approx.).

Circuit diagram



Maximum Rating (at TA=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|---------------------|-------------|------|
| Peak pulse power (tp = 8/20µs waveform) | PPP | 63 | W |
| ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact) | VESD ⁽¹⁾ | ±15 ±8 | kV |
| Operating temperature rang | TJ | -55 to +150 | °C |
| Storage temperature rang | TSTG | -55 to +150 | °C |

Electrical Characteristics (at TA=25°C unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|---------------------------|-----------------------|-------------------|-----|-----|-----|------|
| Reverse stand-off voltage | | VRWM | - | - | 5 | V |
| Reverse leakage current | VR = 5 V | IR | - | - | 100 | nA |
| Reverse breakdown voltage | IR = 1 mA | V(BR) | 6 | - | 10 | V |
| Clamping voltage | I _{PP} = 1 A | VC | - | 13 | 15 | V |
| | I _{PP} = 3 A | VC ⁽²⁾ | - | 19 | 21 | V |
| Junction capacitance | VR = 0V , F=1MHz | CJ | - | 0.3 | 0.6 | pF |

Notes: 1. Device stressed with ten non-repetitive ESD pulses.

2. Non-Repetitive current pulse 8/20us exponential decay waveform according to IEC61000-4-5

RATING AND CHARACTERISTIC CURVES (RCLAMP0521P)

Fig.1 - 8/20us Peak Pulse Current Wave
Form Acc. IEC 61000-4-5

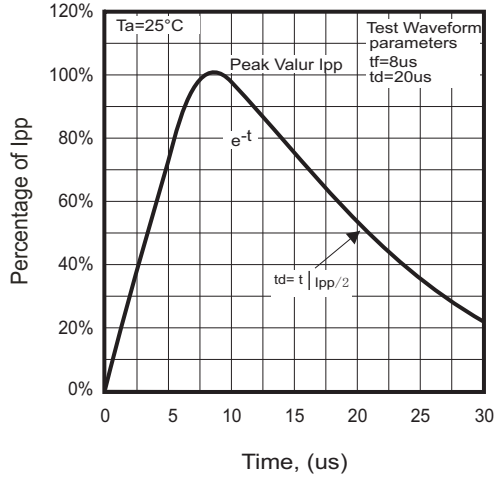


Fig.2 - Typical Capacitance Between
Terminals Characteristics

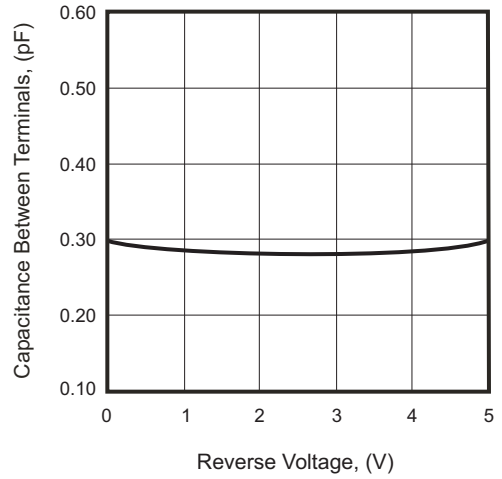


Fig.3 - Clamping Voltage Vs.
Peak Pulse Current

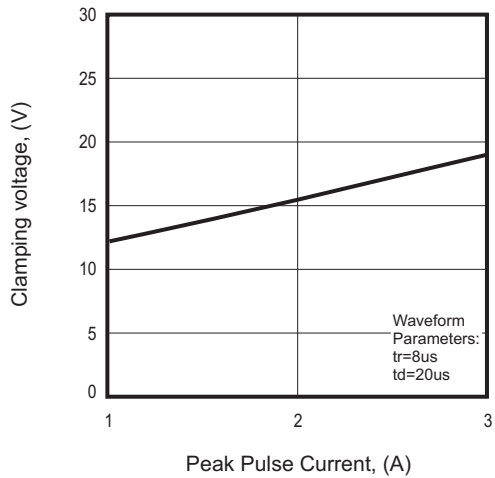
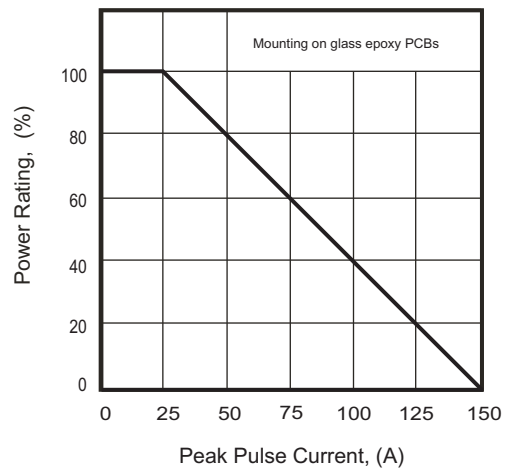
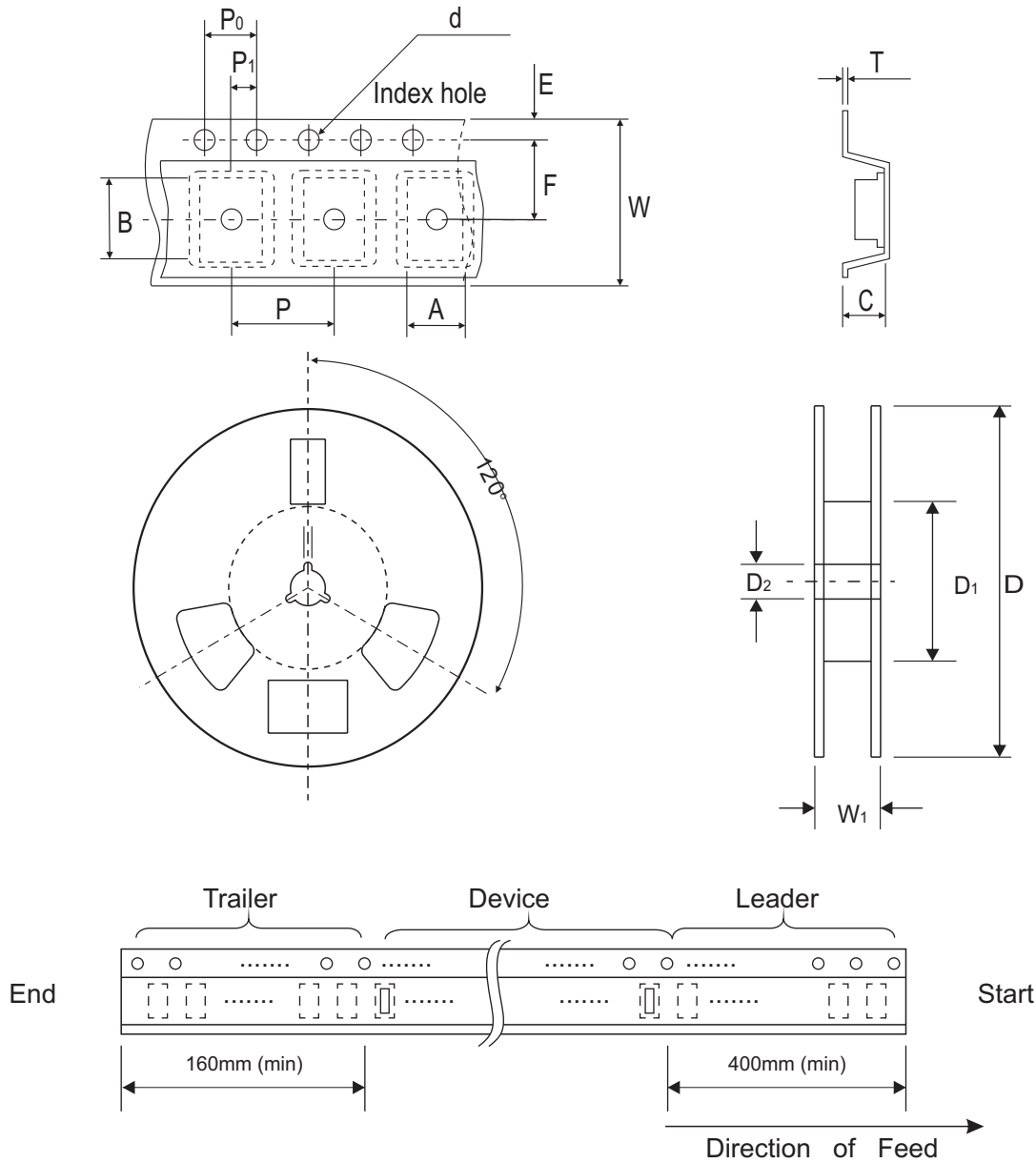


Fig.4 - Power Rating Derating Curve



Reel Taping Specification

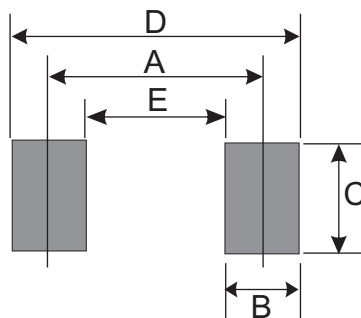


| DFN1006-2L | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|------------|--------|---------------|---------------|---------------|----------------------|---------------|----------------|----------------|
| | (mm) | 0.75 ± 0.05 | 1.17 ± 0.05 | 0.65 ± 0.05 | 1.50 + 0.10 - 0 | 178.00 ± 1.00 | 60.00 ± 0.50 | 13.50 ± 0.20 |
| | (inch) | 0.030 ± 0.002 | 0.046 ± 0.002 | 0.026 ± 0.002 | 0.059 + 0.004 - 0 | 7.008 ± 0.039 | 2.362 ± 0.020 | 0.531 ± 0.008 |

| DFN1006-2L | SYMBOL | E | F | P | P ₀ | P ₁ | T | W | W ₁ |
|------------|--------|---------------|---------------|---------------|----------------|----------------|--------------------------|---------------|----------------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 0.20 + 0.02 - 0.05 | 8.00 ± 0.20 | 12.00 + 0.50 - 0 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.008 + 0.001 - 0.002 | 0.315 ± 0.008 | 0.472 + 0.020 - 0 |

Suggested PAD Layout

| SIZE | DFN1006-2L | |
|----------|------------|--------|
| | (mm) | (inch) |
| A | 0.70 | 0.028 |
| B | 0.40 | 0.016 |
| C | 0.60 | 0.024 |
| D | 1.10 | 0.043 |
| E | 0.30 | 0.012 |



Standard Packaging

| Case Type | REEL PACK | |
|-------------------|------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| DFN1006-2L | 10,000 | 7 |