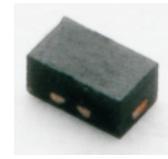


## CPDZ9V0U-HF

**RoHS Device**  
**Halogen Free**



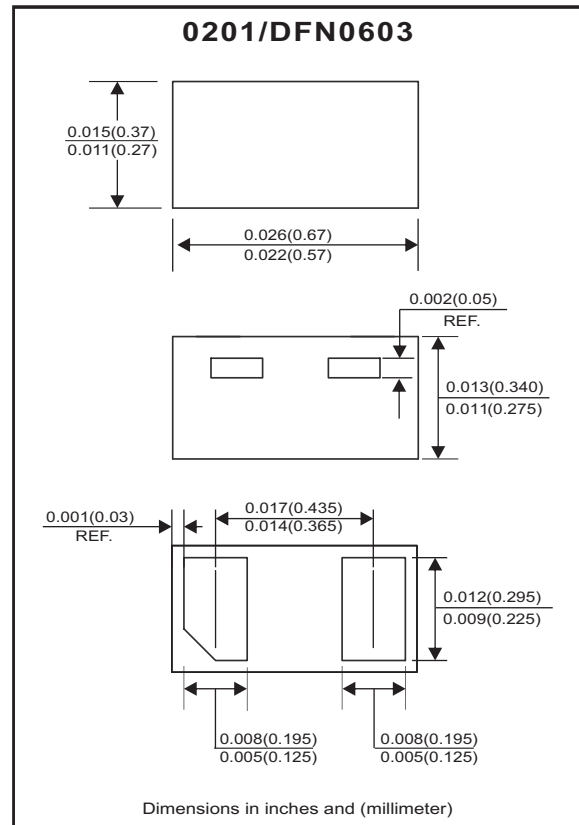
### Features

- Uni-directional ESD protection.
- High reliability.
- Designed for mounting on small surface.
- Extremely thin/leadless package.

### Mechanical data

- Case: 0201/DFN0603 package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Mounting position: Any

### Circuit diagram



### Maximum Rating And Electrical Characteristics

(at TA=25°C unless otherwise noted)

| Parameter                 | Conditions                                   | Symbol           | Min | Typ | Max  | Unit |
|---------------------------|--|------------------|-----|-----|------|------|
| Reverse stand-off voltage |  | V <sub>RWM</sub> |     |     | 9.0  | V    |
| Breakdown voltage         | I <sub>R</sub> = 1mA                         | V <sub>BR</sub>  | 10  | 12  | 14   | V    |
| Forward voltage           | I <sub>F</sub> = 10 mA                       | V <sub>F</sub>   |     |     | 1.0  | V    |
| Leakage current           | V <sub>R</sub> = 9V                          | I <sub>L</sub>   |     |     | 1.0  | uA   |
| ESD capability            | IEC 61000-4-2(air)                           | ESD              |     |     | 30   | kV   |
|                           | IEC 61000-4-2(contact)                       |                  |     |     | 30   | kV   |
| Clamping voltage          | I <sub>PP</sub> = 1A, T <sub>P</sub> =8/20us | V <sub>C</sub>   |     |     | 15.0 | V    |
|                           | I <sub>PP</sub> = 2A, T <sub>P</sub> =8/20us |                  |     |     | 17.5 |      |
| Peak pulse power          | t <sub>p</sub> = 8/20                        | P <sub>PP</sub>  |     |     | 35   | W    |
| Junction capacitance      | V <sub>R</sub> = 0V, f = 1MHz                | C <sub>T</sub>   |     | 14  |      | pF   |
| Operation temperature     |  | T <sub>j</sub>   | -55 |     | 150  | °C   |
| Storage temperature       |  | T <sub>STG</sub> | -55 |     | 150  | °C   |

## RATING AND CHARACTERISTIC CURVES (CPDZ9V0U-HF)

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

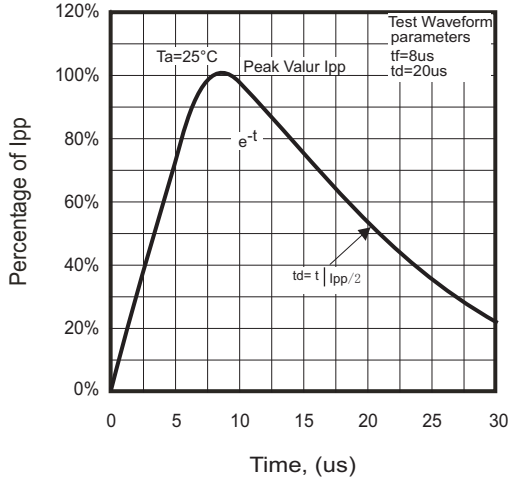


Fig.2 - Current Derating Curve

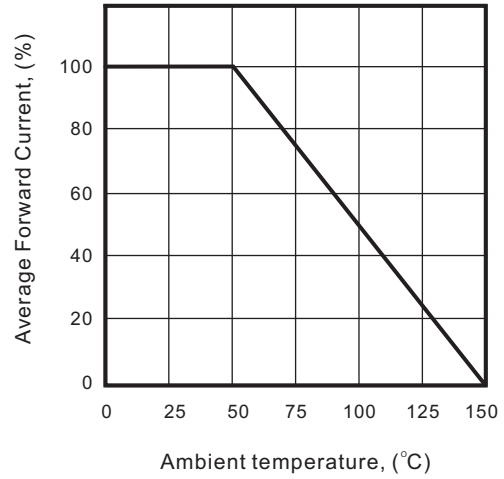


Fig.3 - Clamping Voltage vs. Peak Pulse Current

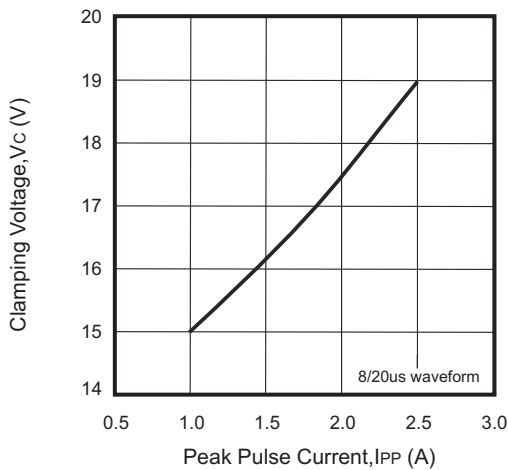


Fig.4 - Capacitance of Diode

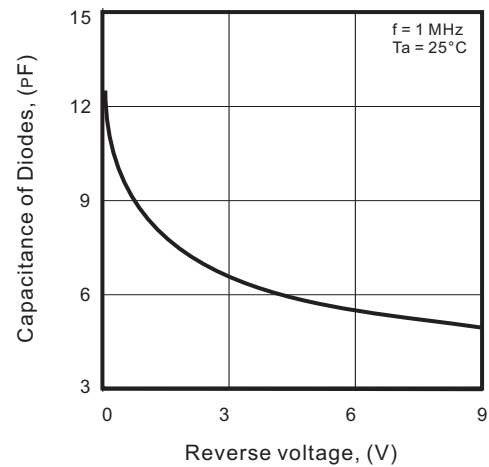
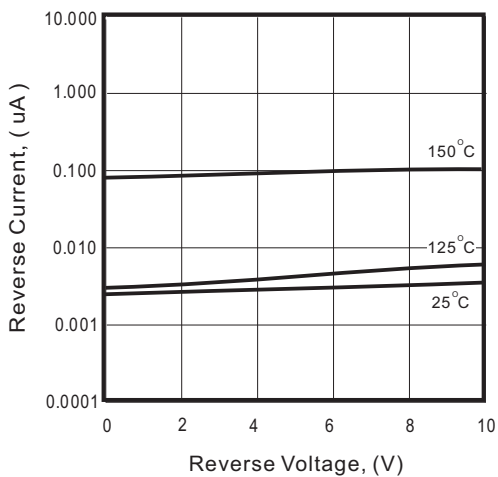
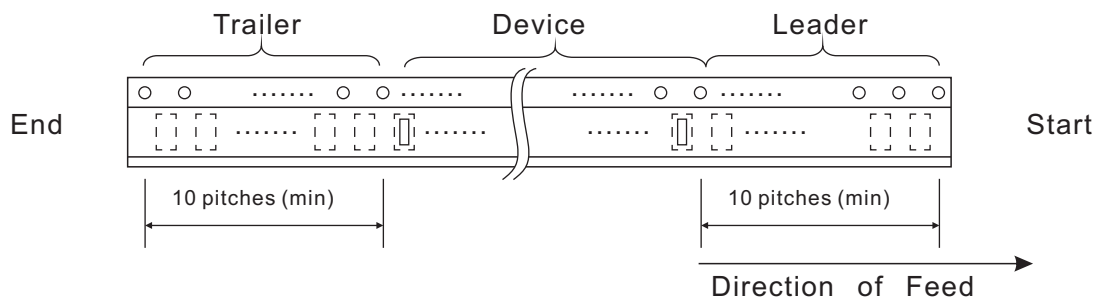
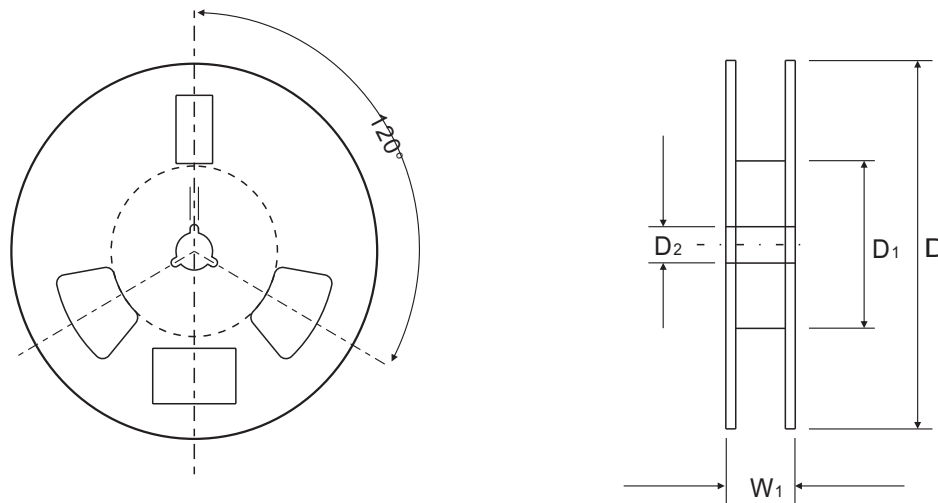
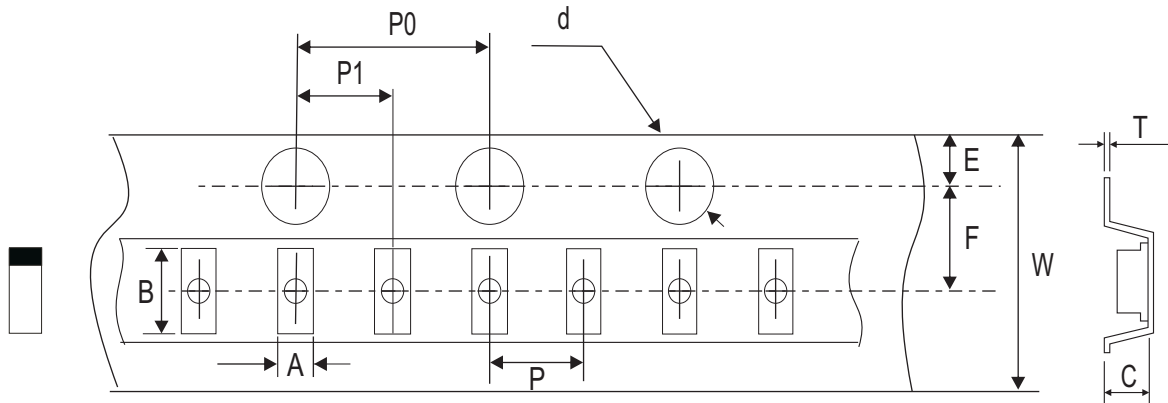


Fig. 5 - Reverse Characteristics



## Reel Taping Specification



| 0201<br>(DFN0603) | SYMBOL | A                  | B             | C             | d             | D             | D <sub>1</sub> | D <sub>2</sub> |
|-------------------|--------|--------------------|---------------|---------------|---------------|---------------|----------------|----------------|
|                   | (mm)   | 0.39 +0.03/-0.02   | 0.72 ± 0.03   | 0.36 ± 0.03   | 1.50 + 0.10   | 178 ± 1.00    | 54.4 ± 0.40    | 13.0 ± 0.20    |
|                   | (inch) | 0.015 +0.001/0.001 | 0.028 ± 0.001 | 0.014 ± 0.001 | 0.059 + 0.004 | 7.008 ± 0.039 | 2.142 ± 0.016  | 0.512 ± 0.008  |

| 0201<br>(DFN0603) | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | T             | W             | W <sub>1</sub> |
|-------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
|                   | (mm)   | 1.75 ± 0.10   | 3.50 ± 0.05   | 2.00 ± 0.05   | 4.00 ± 0.05    | 2.00 ± 0.05    | 0.23 ± 0.05   | 8.00 ± 0.10   | 12.30 ± 0.10   |
|                   | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.079 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.004  | 0.009 ± 0.002 | 0.315 ± 0.008 | 0.484 ± 0.004  |

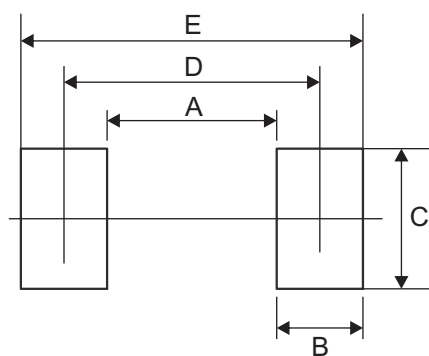
## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CPDZ9V0U-HF | J            |



## Suggested PAD Layout

| SIZE     | 0201(DFN0603) |        |
|----------|---------------|--------|
|          | (mm)          | (inch) |
| <b>A</b> | 0.18          | 0.007  |
| <b>B</b> | 0.24          | 0.009  |
| <b>C</b> | 0.31          | 0.012  |
| <b>D</b> | 0.42          | 0.017  |
| <b>E</b> | 0.66          | 0.026  |



## Standard Packaging

| Case Type     | Qty Per Reel | Reel Size |
|---------------|--------------|-----------|
|               | (Pcs)        | (inch)    |
| 0201(DFN0603) | 8,000        | 7         |