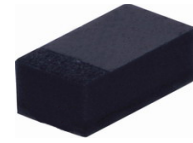


## CPDZ3V3U-HF

### RoHS Device

### Halogen Free

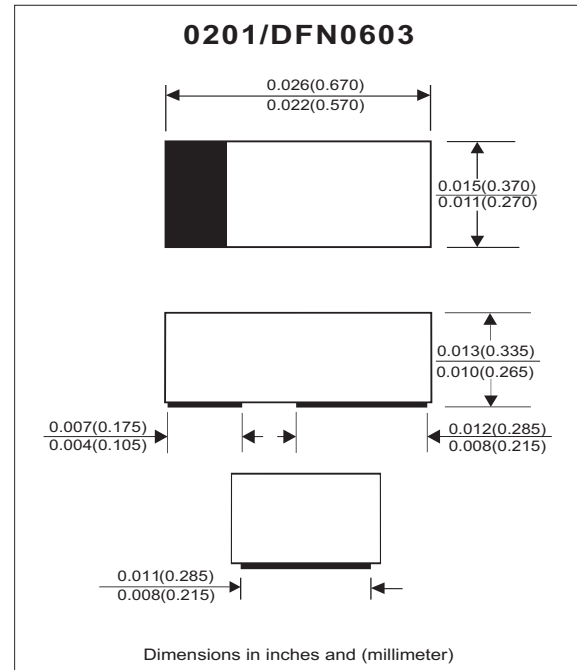


### Features

- Uni-directional ESD protection.
- Surface mount package.
- Ultra small SMD package:0201
- High component density.
- Low clamping voltage.
- Low leakage.

### 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> |     |     | 3.3  | V    |
| Breakdown voltage         | I <sub>R</sub> = 1mA              | V <sub>BR</sub>  | 5.7 | 6.2 | 6.7  | V    |
| Forward voltage           | I <sub>F</sub> = 10 mA            | V <sub>F</sub>   |     |     | 1.2  | V    |
| Leakage current           | V <sub>R</sub> = 3.3V             | I <sub>L</sub>   |     |     | 0.1  | uA   |
| Junction capacitance      | V <sub>R</sub> = 0V, f=1MHz       | C <sub>T</sub>   |     | 35  |      | pF   |
| ESD capability            | IEC 61000-4-2(air)                | ESD              |     |     | 30   | kV   |
|                           | IEC 61000-4-2(contact)            |                  |     |     | 30   | kV   |
| Clamping voltage          | I <sub>PP</sub> = 1A, TP=8/20us   | V <sub>C</sub>   |     |     | 7.5  | V    |
|                           | I <sub>PP</sub> = 6.5A, TP=8/20us |                  |     |     | 10.6 | V    |
| Peak pulse power          | T <sub>P</sub> =8/20us            | P <sub>PP</sub>  |     |     | 70   | W    |
| Operation temperature     |                                   | T <sub>OP</sub>  | -40 |     | 125  | °C   |
| Storage temperature       |                                   | T <sub>STG</sub> | -55 |     | 150  | °C   |

## RATING AND CHARACTERISTIC CURVES (CPDZ3V3U-HF)

Fig.1 - 8/20us Peak Pulse Current Waveform Acc. IEC 6100-4-5

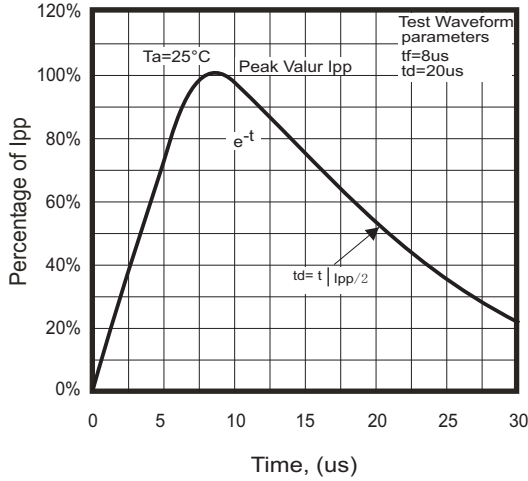


Fig.2 - Power Rating Derating Curve

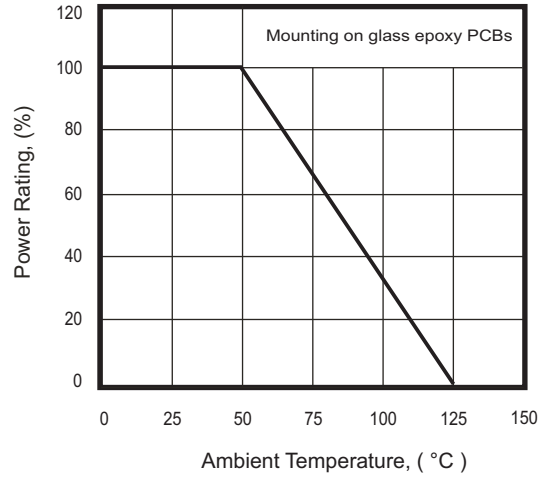


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

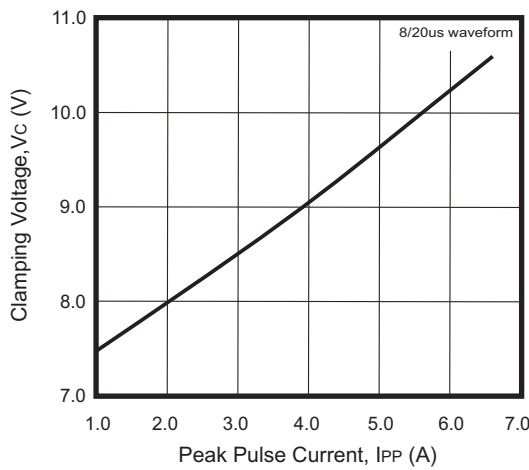


Fig.4 - Reverse Characteristics

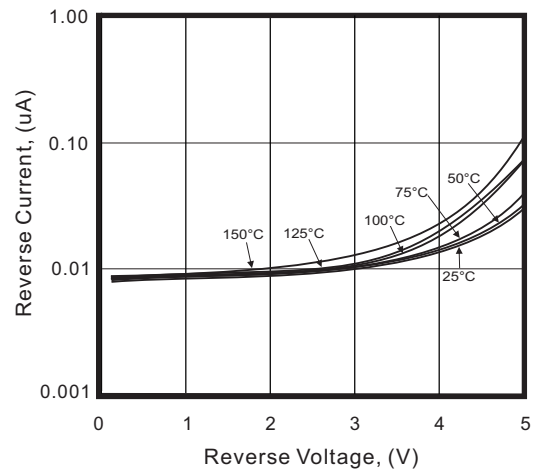
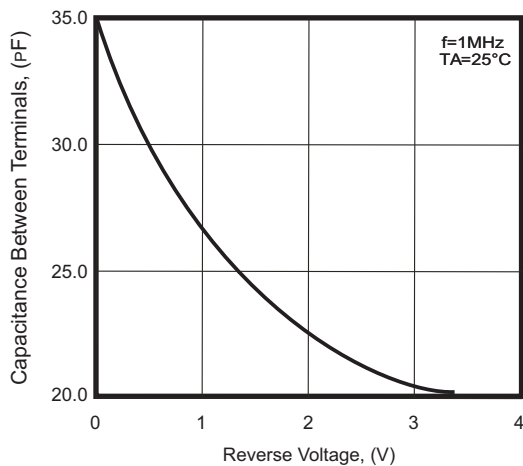


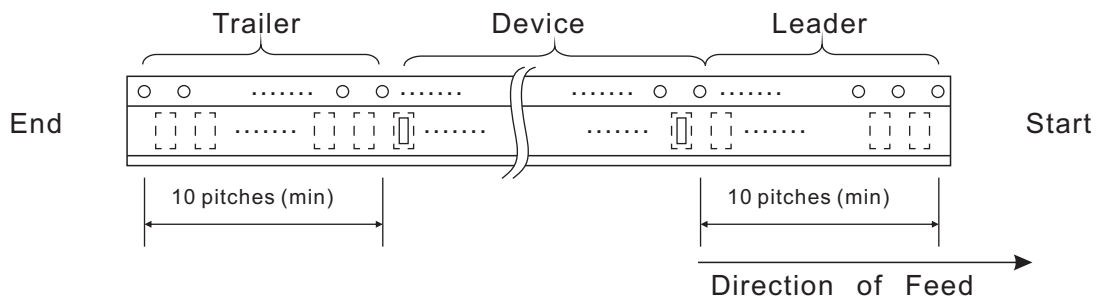
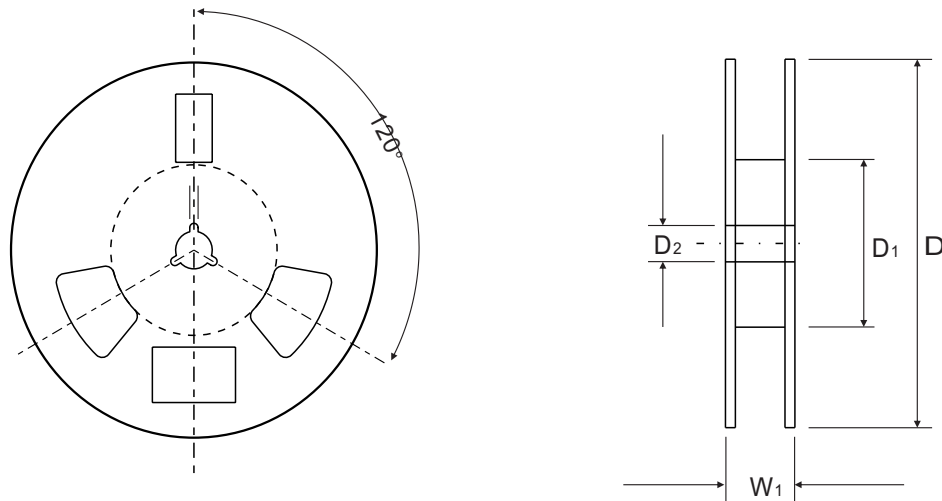
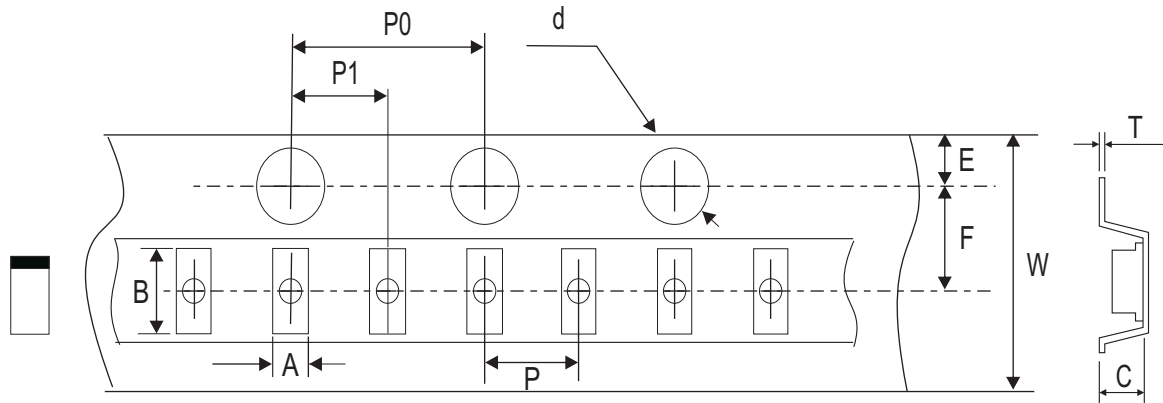
Fig.5 - Capacitance Between Terminals Characteristics



Company reserves the right to improve product design , functions and reliability without notice.

REV: B

## 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  |

Company reserves the right to improve product design, functions and reliability without notice.

REV: B

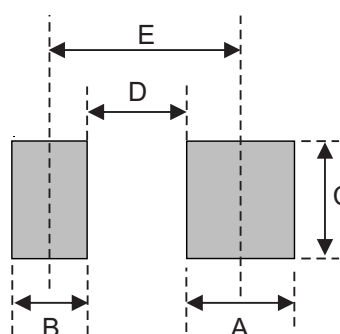
## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CPDZ3V3U-HF | C            |



## Suggested PAD Layout

| SIZE | 0201(DFN0603) |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 0.310         | 0.122  |
| B    | 0.200         | 0.079  |
| C    | 0.350         | 0.014  |
| D    | 0.150         | 0.006  |
| E    | 0.365         | 0.014  |



## Standard Packaging

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