



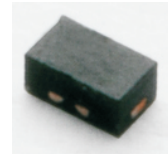
THE DATASHEET OF CPDZ3V3U-HF



CPDZ3V3U-HF

RoHS Device

Halogen Free



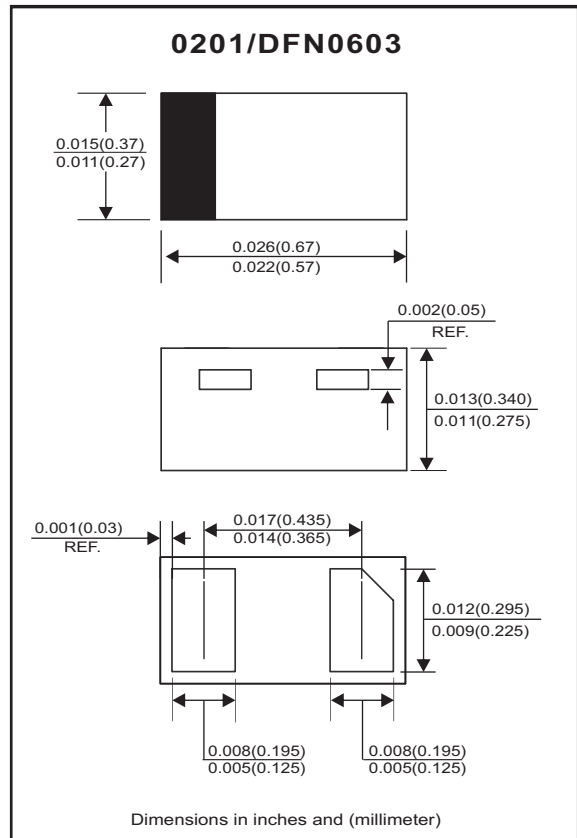
Features

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

RATING AND CHARACTERISTIC CURVES (CPDZ3V3U-HF)

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

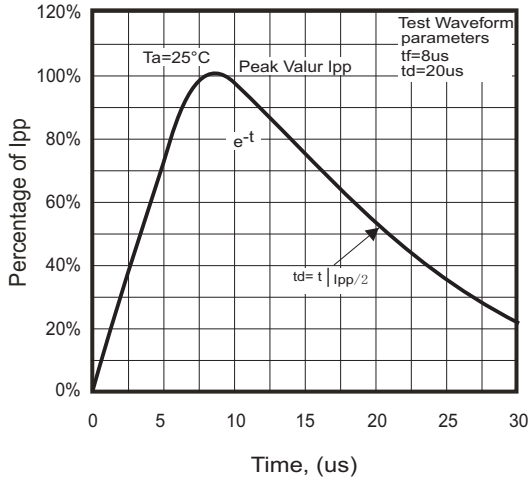


Fig.2 - Power Rating Derating Curve

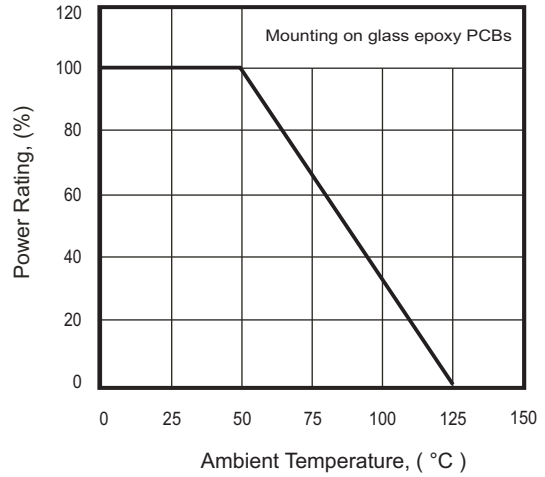


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

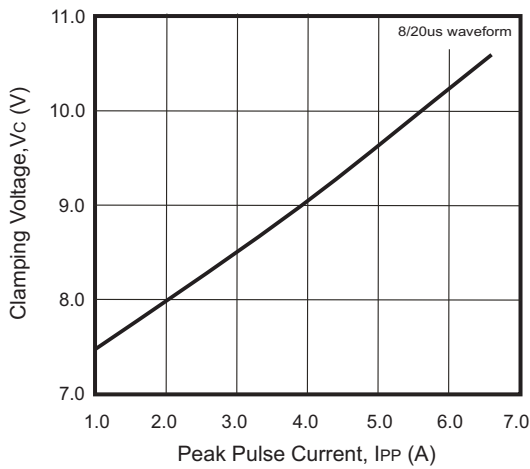


Fig.4 - Reverse Characteristics

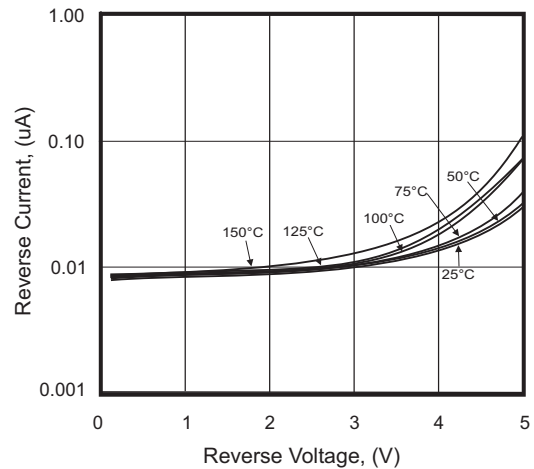
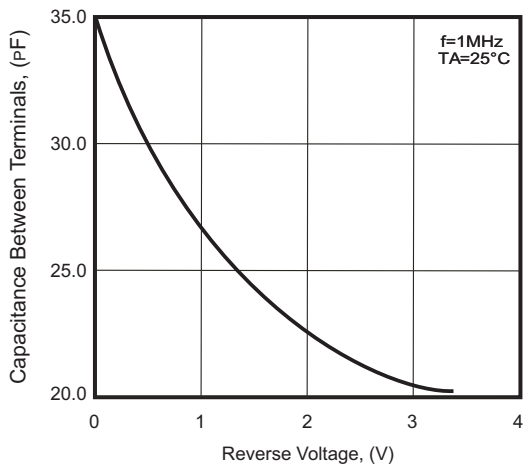


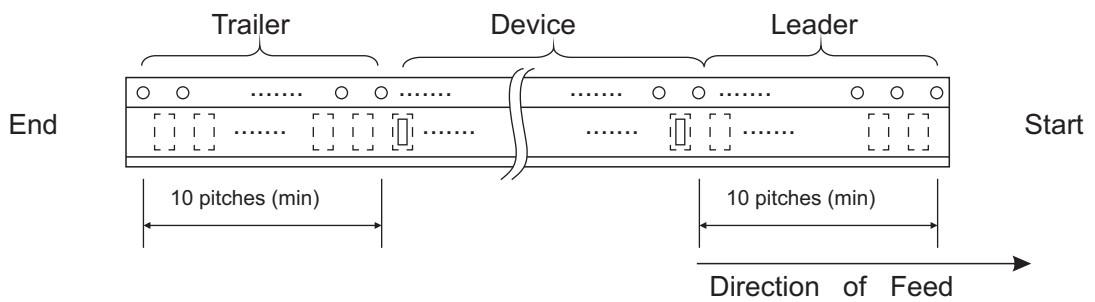
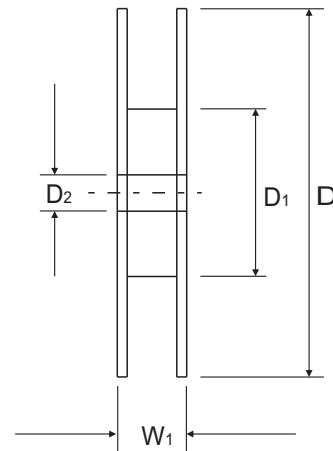
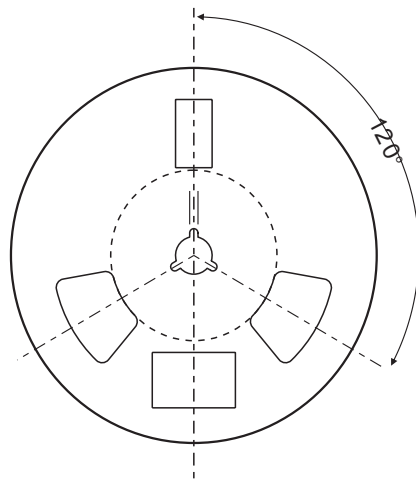
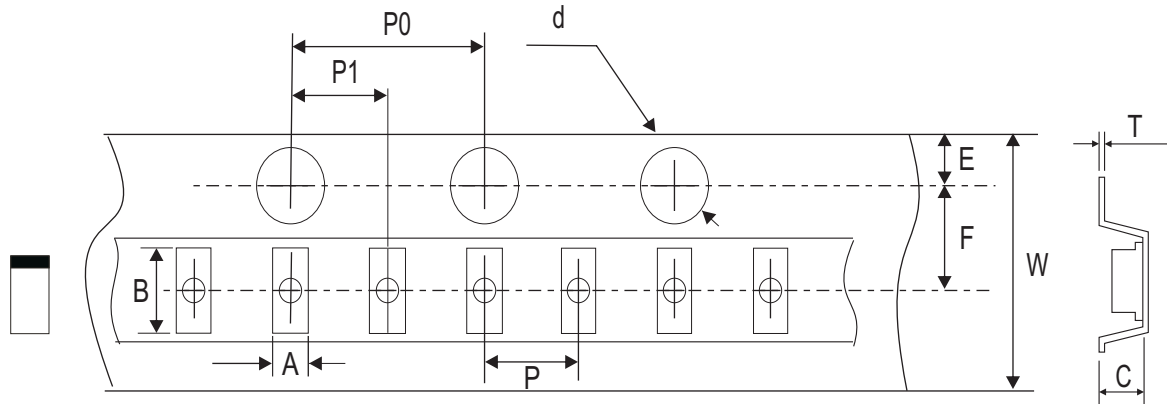
Fig.5 - Capacitance Between Terminals Characteristics



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

REV:

Reel Taping Specification



| 0201 (DFN0603) | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|-------------------|--------|--------------------|---------------|---------------|---------------|---------------|----------------|----------------|
| | (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 (DFN0603) | SYMBOL | E | F | P | P ₀ | P ₁ | T | W | W ₁ |
|-------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| | (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 |

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REV:

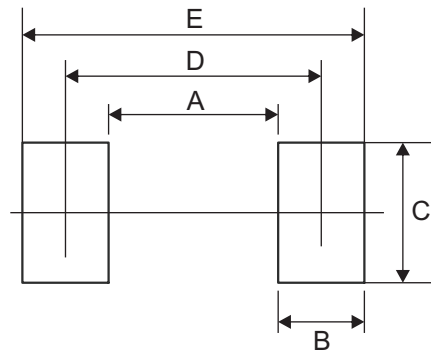
Marking Code

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



Suggested PAD Layout

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



Standard Packaging

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

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