



THE DATASHEET OF CPDV3V3A-HF



CPDV3V3A-HF

RoHS Device
Halogen Free

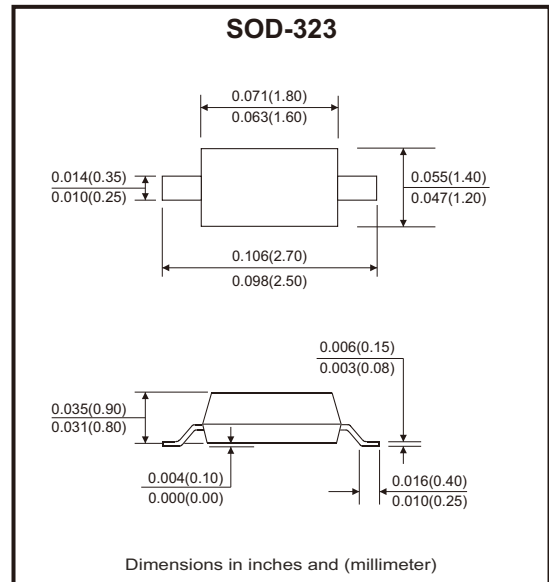


Features

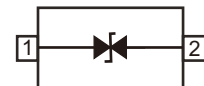
- Transient protection for high-speed data lines
IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
IEC61000-4-4 (EFT) 40A (5/50ns)
Cable discharge event (CDE)
- Ultra-small package.
- Protects one data, control line.
- Low capacitance: 0.25pF (typical).
- Low leakage current.
- Low clamping voltage.

Mechanical data

- Case: SOD-323 package.
- Flammability rating: UL 94V-0.
- High temperature soldering guaranteed:
260°C/10s



Circuit diagram



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

| Parameter | Symbol | Value | Unit |
|---------------------------------|------------------|-------------|------|
| ESD per IEC 61000-4-2 (air) | V _{ESD} | ± 20 | kV |
| ESD per IEC 61000-4-2 (contact) | | ± 20 | |
| Peak pulse power (8/20 μ s) | P _{PP} | 100 | W |
| Operating temperature range | T _{OPT} | -55 to +125 | °C |
| Storage temperature range | T _{STG} | -55 to +150 | °C |

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

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|---------------------------|---|------------------|-----|------|-----|------|
| Reverse working voltage | | V _{RWM} | | | 3.3 | V |
| Reverse breakdown voltage | I _T = 1mA | V _{BR} | 4.2 | | | V |
| Reverse leakage current | V _{RWM} = 3.3V | I _R | | | 100 | nA |
| Clamping voltage | I _{PP} = 1A, T _P = 8/20 μ s | V _C | | | 12 | V |
| | I _{PP} = 4A, T _P = 8/20 μ s | | | | 25 | |
| Junction capacitance | V _R = 0V, f = 1MHz | C _J | | 0.25 | 0.4 | pF |

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

REV:A

Rating and Characteristic Curves (CPDV3V3A-HF)

Fig.1 - Power Derating Curve

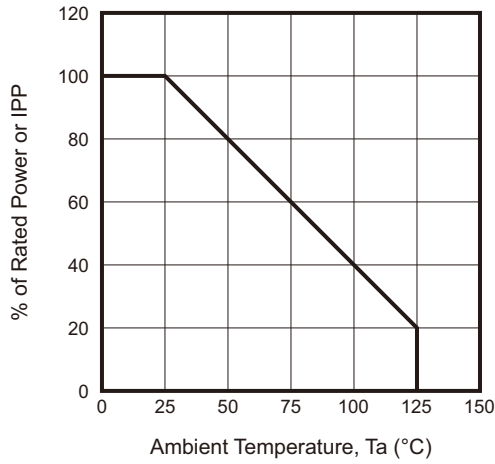


Fig.2 - Clamping Voltage vs Peak Pulse Current

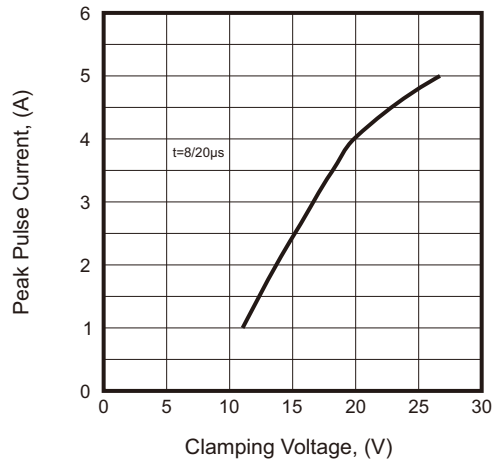


Fig.3 - Voltage Sweeping

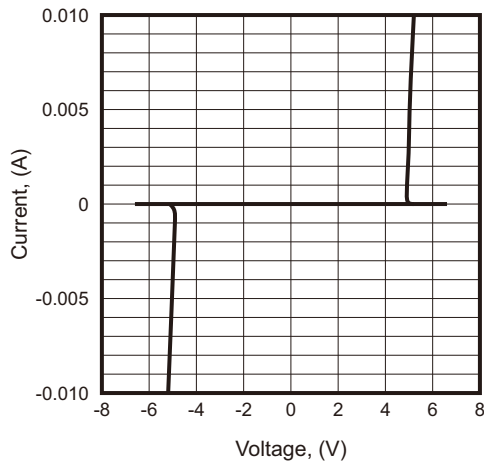


Fig.4 - Voltage vs Capacitance

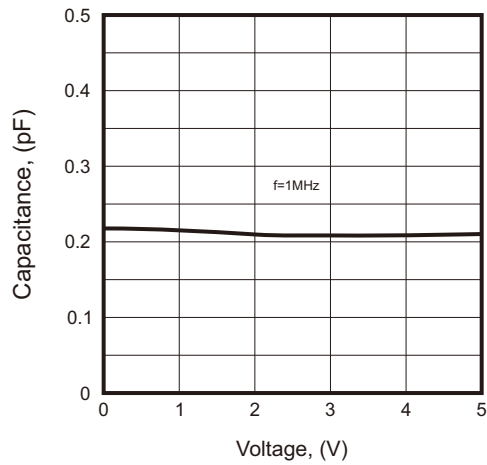


Fig.5 - ESD Clamping (+8kV Contact per IEC 61000-4-2)

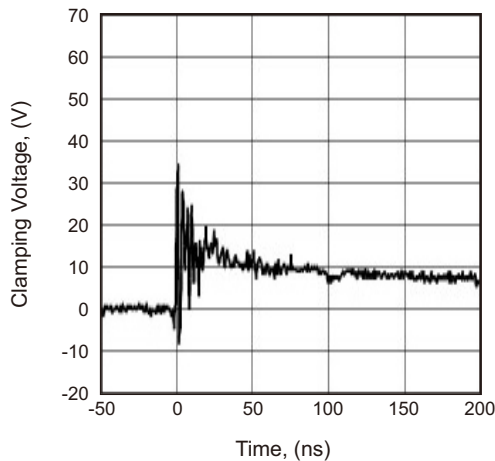
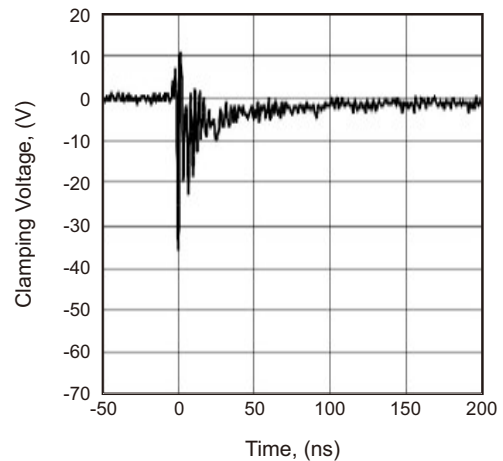
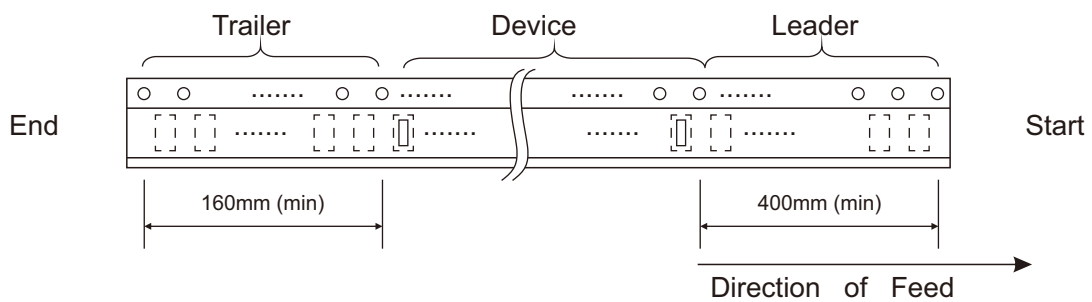
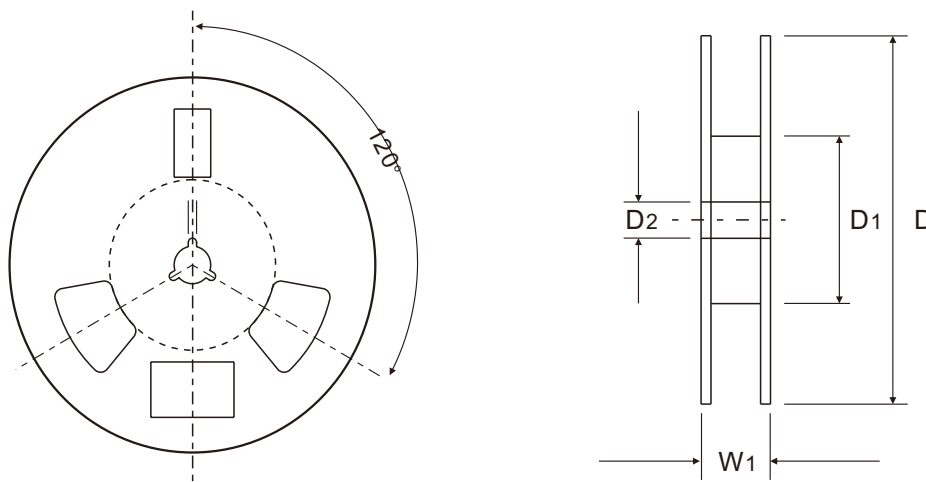
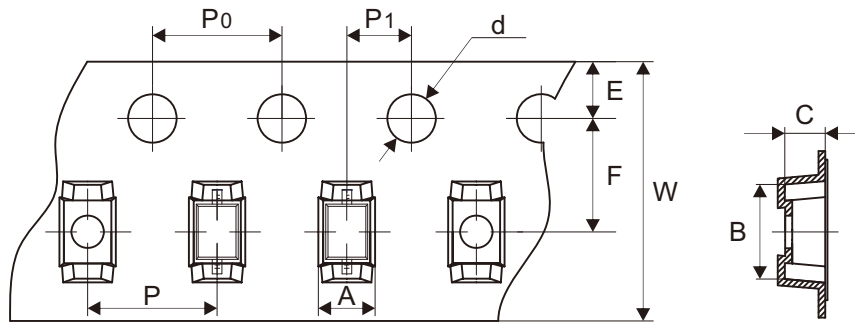


Fig.6 - ESD Clamping (-8kV Contact per IEC 61000-4-2)



Reel Taping Specification



| SOD-323 | SYMBOL | A | B | C | d | D | D1 | D2 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 1.46 ± 0.05 | 2.90 ± 0.05 | 1.25 ± 0.05 | 1.50 ± 0.10 | 178.00 ± 2.00 | 54.40 ± 1.00 | 13.00 ± 1.00 |
| | (inch) | 0.057 ± 0.002 | 0.114 ± 0.002 | 0.049 ± 0.002 | 0.059 ± 0.004 | 7.008 ± 0.079 | 2.142 ± 0.039 | 0.512 ± 0.039 |

| SOD-323 | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|--------------------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 8.00 + 0.30 - 0.10 | 12.30 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.315 + 0.012 - 0.004 | 0.484 ± 0.039 |

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Marking Code

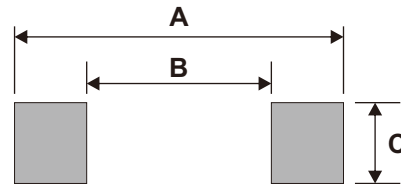
| Part Number | Marking Code |
|-------------|--------------|
| CPDV3V3A-HF | 3BU |



xxx = Product type marking code

Suggested PAD Layout

| SIZE | SOD-323 | |
|------|---------|--------|
| | (mm) | (inch) |
| A | 2.85 | 0.112 |
| B | 1.60 | 0.063 |
| C | 0.85 | 0.033 |





Note: 1.The pad layout is for reference purposes only.

Standard Packaging

| Case Type | REEL PACK | |
|-----------|------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOD-323 | 3,000 | 7 |

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