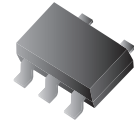


## CPDV5-3V3UP-HF

RoHS Device  
Halogen Free



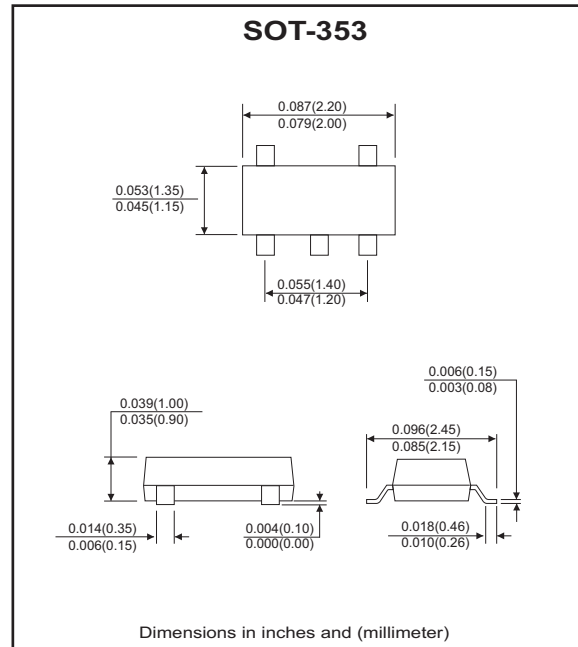
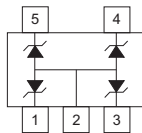
### Features

- IEC61000-4-2 Level 4 ESD protection
- Working voltage: 3.3V
- Low leakage current.
- Low operating and clamping voltages.

### Mechanical data

- Case: SOT-353 standard package ,molded plastic.
- Terminals: Tin plated, solderable per MIL-STD-750,method 2026.
- Mounting position: Any
- Weight: 0.0070 gram (approx.).

### Circuit Diagram



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

| Parameter  | Symbol | Value       | Unit |
|--|--------|-------------|------|
| Peak pulse power ( tp = 8/20 us)                             | PPP    | 40          | W    |
| Peak pulse current ( tp = 8/20 us)                           | IPP    | 5           | A    |
| ESD per IEC 61000-4-2(Air)<br>ESD per IEC 61000-4-2(Contact) | VESD   | ±20<br>±15  | kV   |
| Operating temperature  | Tj     | -55 to +125 | °C   |
| Storage temperature  | TSTG   | -55 to +125 | °C   |

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

| Parameter                 | Conditions            | Symbol | Min | Typ  | Max | Unit |
|---------------------------|-----------------------|--------|-----|------|-----|------|
| Reverse stand-off voltage |                       | VRWM   |     |      | 3.3 | V    |
| Punch-through voltage     | IP T = 2uA            | VPT    | 3.5 |      |     | V    |
| Snap-back voltage         | ISB = 50mA            | VSB    | 2.8 |      |     | V    |
| Reverse leakage current   | VRWM = 3.3V           | IR     |     | 0.05 | 0.5 | uA   |
| Clamping voltage          | IPP = 1 A, tp=8/20us  | Vc     |     |      | 5.5 | V    |
|                           | IPP = 5 A, tp=8/20us  | Vc     |     |      | 8.0 | V    |
| Reverse clamping voltage  | IPPR = 1 A, tp=8/20us | VCR    |     |      | 2.4 | V    |
| Junction capacitance      | VR = 0 V, f = 1MHz    | Cj     |     | 12   | 16  | pF   |

## RATING AND CHARACTERISTIC CURVES (CPDV5-3V3UP-HF)

Fig.1 - Non-repetitive max. peak pulse power vs. pulse time

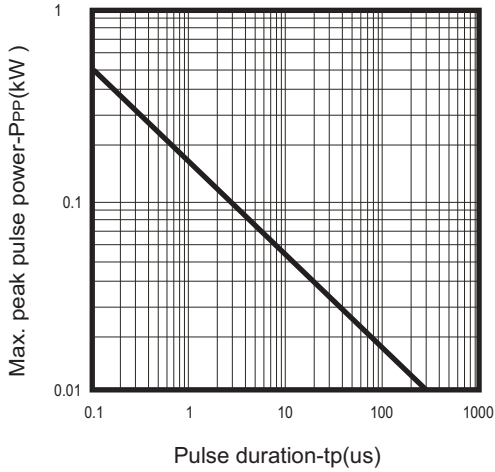


Fig.2 - Power rating derating curve

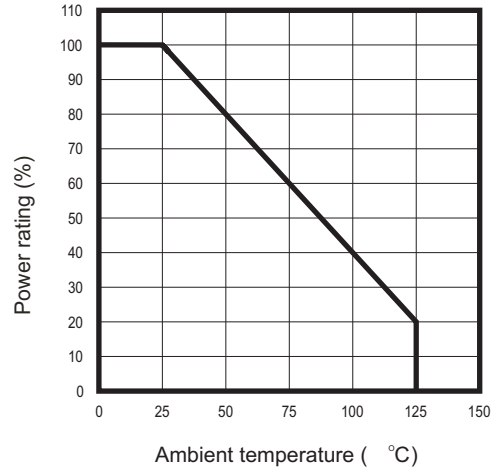


Fig.3 - Clamping voltage vs. peak pulse current

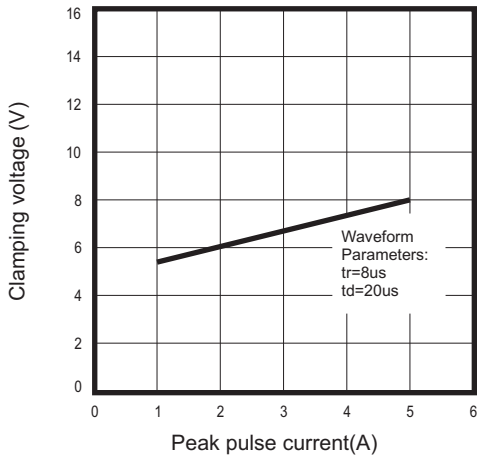


Fig.4 - Forward voltage vs. Forward current

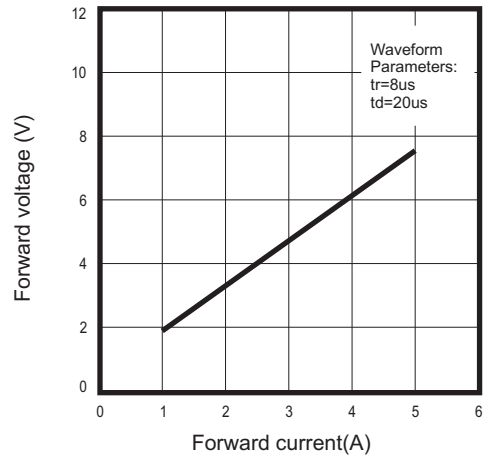
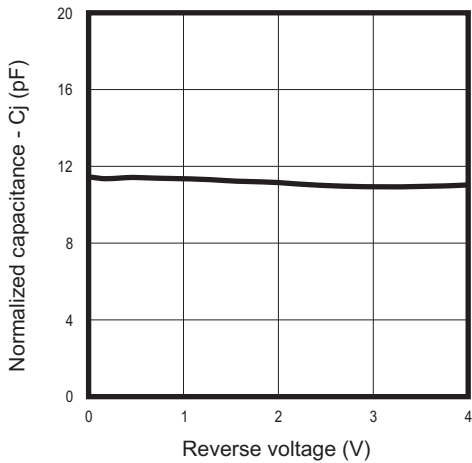
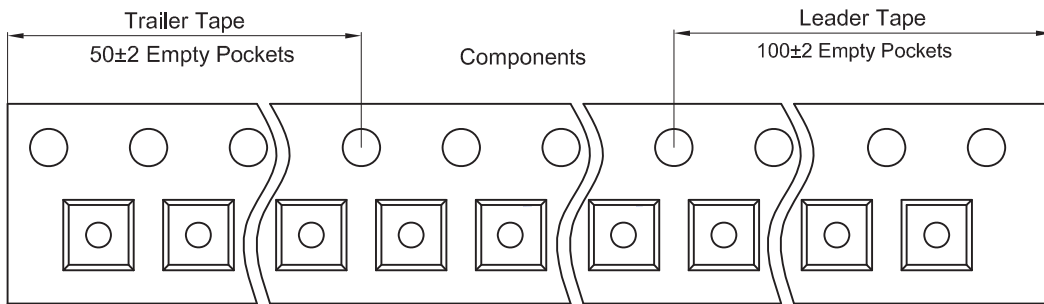
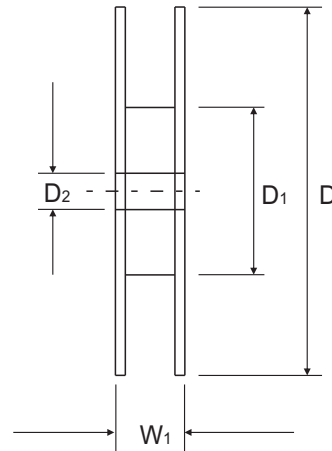
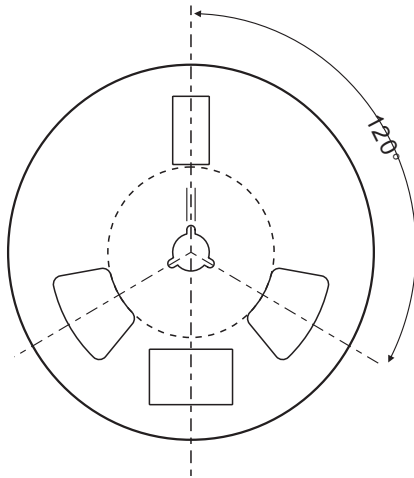
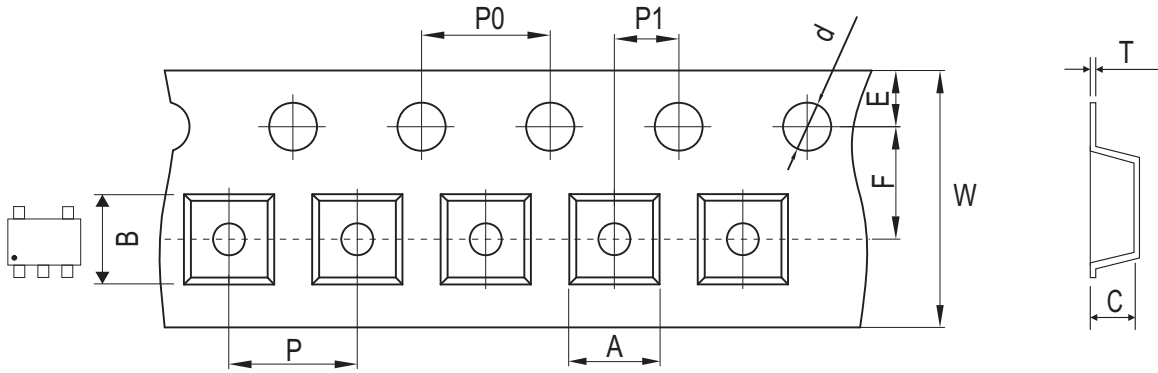


Fig.5 - Junction capacitance vs. reverse voltage



## Reel Taping Specification

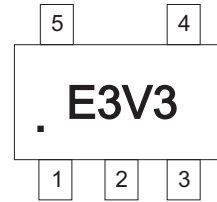


| SOT-353 | SYMBOL | A             | B             | C             | d             | D             | D1            | D2            |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
|         | (mm)   | 2.25 ± 0.05   | 2.55 ± 0.05   | 1.20 ± 0.05   | 1.50 ± 0.10   | 178 ± 2.00    | 54.40 ± 1.00  | 13.00 ± 1.00  |
|         | (inch) | 0.089 ± 0.002 | 0.100 ± 0.002 | 0.047 ± 0.002 | 0.059 ± 0.004 | 7.008 ± 0.079 | 2.142 ± 0.039 | 0.512 ± 0.039 |

| SOT-353 | 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 ± 1.0   |
|         | (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 |

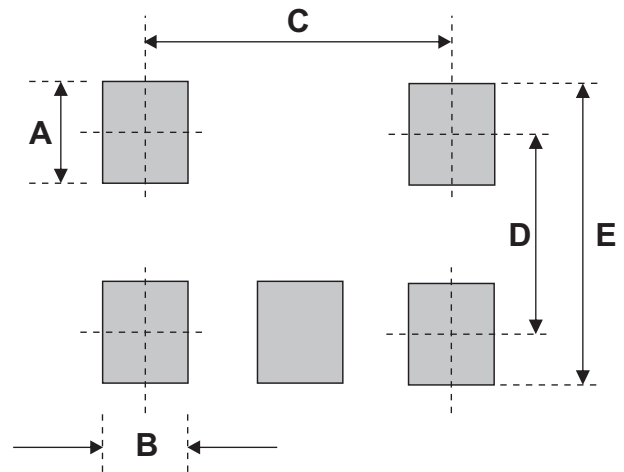
## Marking Code

| Part Number    | Marking Code |
|----------------|--------------|
| CPDV5-3V3UP-HF | E3V3         |



## Suggested PAD Layout

| SIZE | SOT-353 |        |
|------|---------|--------|
|      | (mm)    | (inch) |
| A    | 0.80    | 0.031  |
| B    | 0.40    | 0.016  |
| C    | 1.30    | 0.051  |
| D    | 1.94    | 0.076  |
| E    | 2.74    | 0.108  |



## Standard Packaging

| Case Type | REEL PACK    |                  |
|-----------|--------------|------------------|
|           | REEL ( pcs ) | Reel Size (inch) |
| SOT-353   | 3,000        | 7                |

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