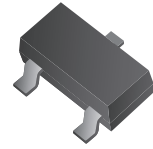


# CPDT-24V-HF

RoHS Device

Halogen Free

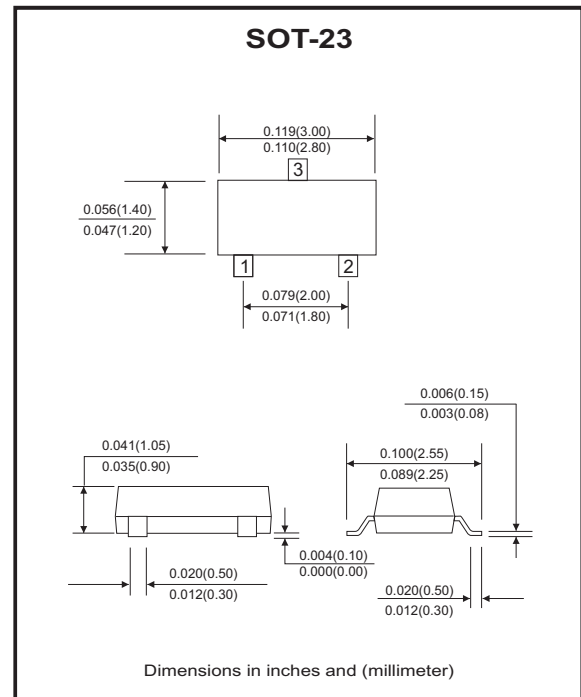
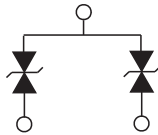


## Features

- Common anode ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- High component density.

## Mechanical data

- Case: SOT-23 Standard package, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Marking code:E24
- Mounting position: Any.
- Weight: 0.0078 gram(approx.).



## Maximum Ratings and Electrical Characteristics

(at TA=25°C unless otherwise noted)

| Parameter               | Conditions                                    | Symbol           | Min | Typ | Max     | Unit |
|-------------------------|-----------------------------------------------|------------------|-----|-----|---------|------|
| Diode breakdown voltage | I <sub>R</sub> = 1mA                          | V <sub>BD</sub>  | 25  | 28  |         | V    |
| Leakage current         | V <sub>R</sub> = 24V                          | I <sub>L</sub>   |     | 0.1 | 2.0     | uA   |
| Junction capacitance    | V <sub>R</sub> = 0V, f = 1MHz                 | C <sub>T</sub>   |     | 10  |         | pF   |
| ESD capability          | IEC 61000-4-2(air)<br>IEC 61000-4-2(contact)  | ESD              |     |     | 16<br>8 | kV   |
| Clamping voltage        | I <sub>PP</sub> = 1A, T <sub>P</sub> = 8/20us | V <sub>C</sub>   |     |     | 47      | V    |
| Peak pulse power        | T <sub>P</sub> = 8/20us                       | P <sub>PP</sub>  |     |     | 47      | W    |
| Operation temperature   |                                               | T <sub>j</sub>   |     |     | 125     | °C   |
| Storage temperature     |                                               | T <sub>STG</sub> | -55 |     | 150     | °C   |

## RATING AND CHARACTERISTIC CURVES (CPDT-24V-HF)

Fig. 1 - 8/20us Peak pulse current wave form acc. IEC 61000-4-5

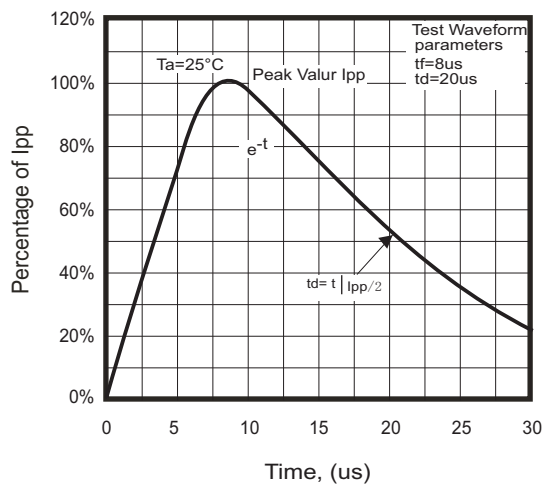


Fig. 2 - Reverse characteristics

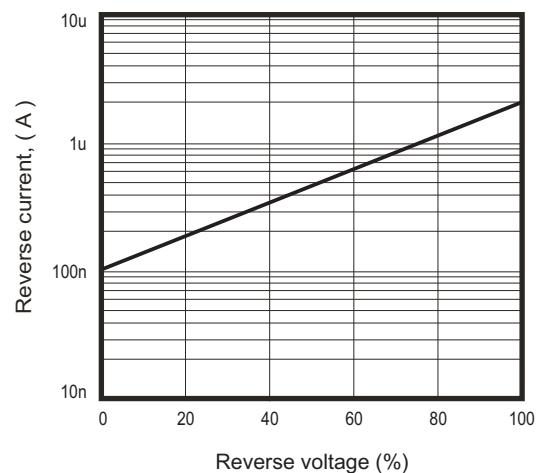


Fig.3 - Capacitance between terminals characteristics

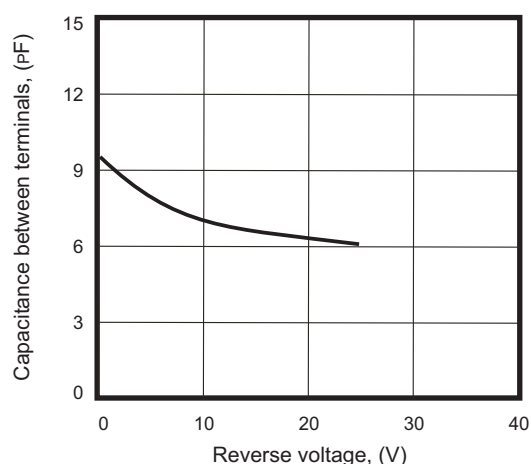
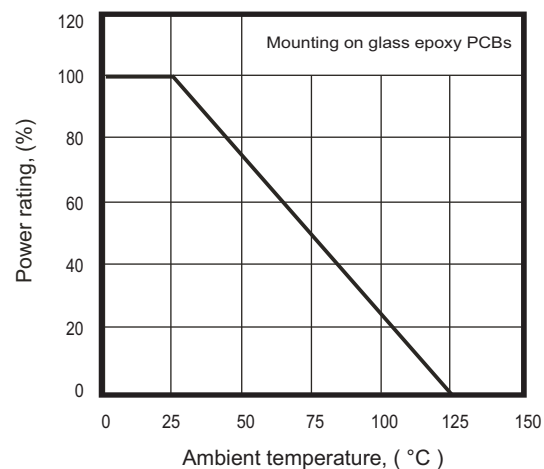
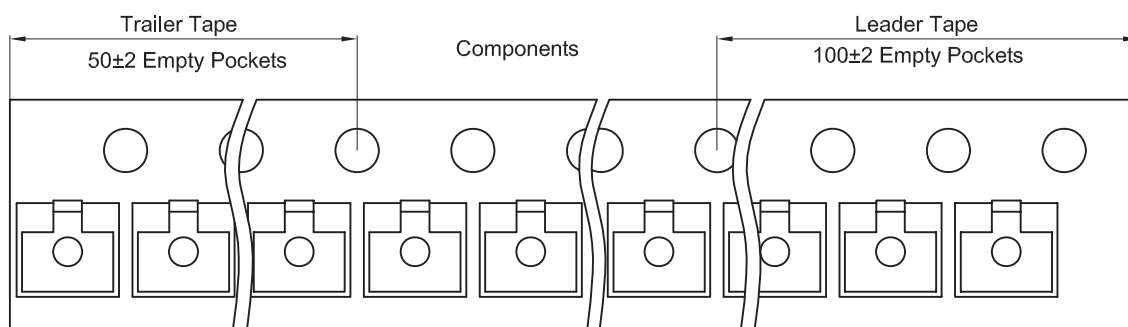
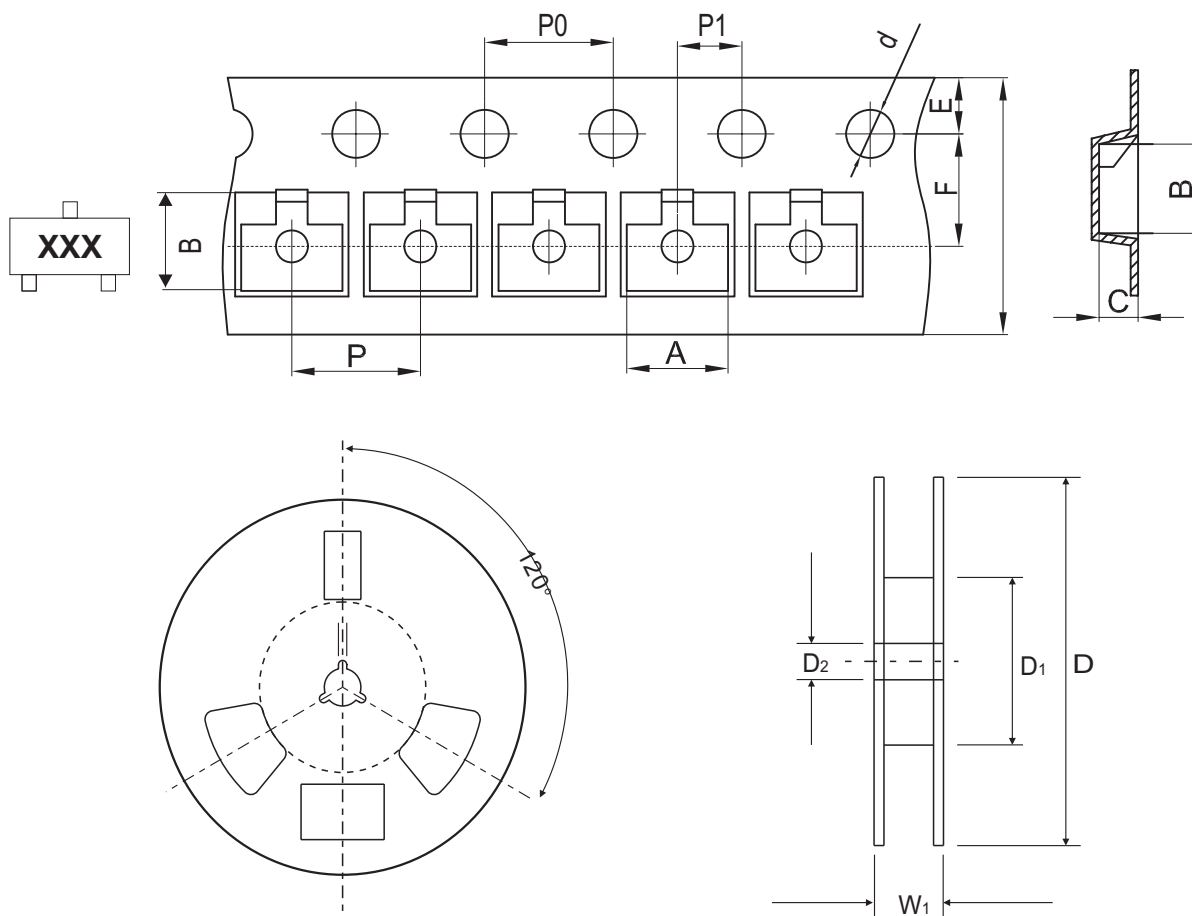


Fig.4 - Power rating derating curve



## Reel Taping Specification

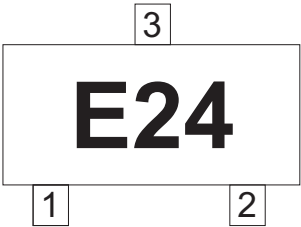


| SOT-23 | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1                | D2                |
|--------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|        | (mm)   | $3.15 \pm 0.10$   | $2.77 \pm 0.10$   | $1.22 \pm 0.10$   | $1.50 \pm 0.10$   | $178 \pm 2.00$    | $54.40 \pm 1.00$  | $13.00 \pm 1.00$  |
|        | (inch) | $0.124 \pm 0.004$ | $0.109 \pm 0.004$ | $0.048 \pm 0.004$ | $0.059 \pm 0.004$ | $7.008 \pm 0.079$ | $2.142 \pm 0.039$ | $0.512 \pm 0.039$ |

| SOT-23 | SYMBOL | E                 | F                 | P                 | P0                | P1                | W                         | W1                |
|--------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------------|-------------------|
|        | (mm)   | $1.75 \pm 0.10$   | $3.50 \pm 0.10$   | $4.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $8.00 + 0.30 / - 0.10$    | $12.30 \pm 1.0$   |
|        | (inch) | $0.069 \pm 0.004$ | $0.138 \pm 0.004$ | $0.157 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.315 + 0.012 / - 0.004$ | $0.484 \pm 0.039$ |

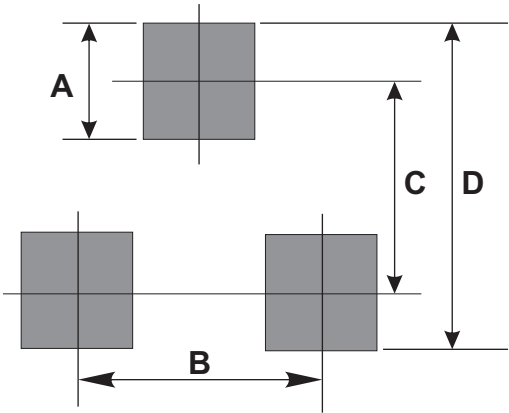
Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CPDT-24V-HF | E24          |



Suggested PAD Layout

| SIZE | SOT-23 |        |
|------|--------|--------|
|      | (mm)   | (inch) |
| A    | 0.80   | 0.031  |
| B    | 1.90   | 0.075  |
| C    | 2.02   | 0.080  |
| D    | 2.82   | 0.111  |



Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| SOT-23    | 3,000           | 7                   |

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