

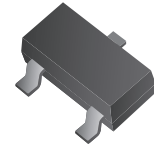


THE DATASHEET OF ACPDT-24V



ACPDT-24V

RoHS Device

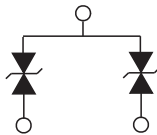
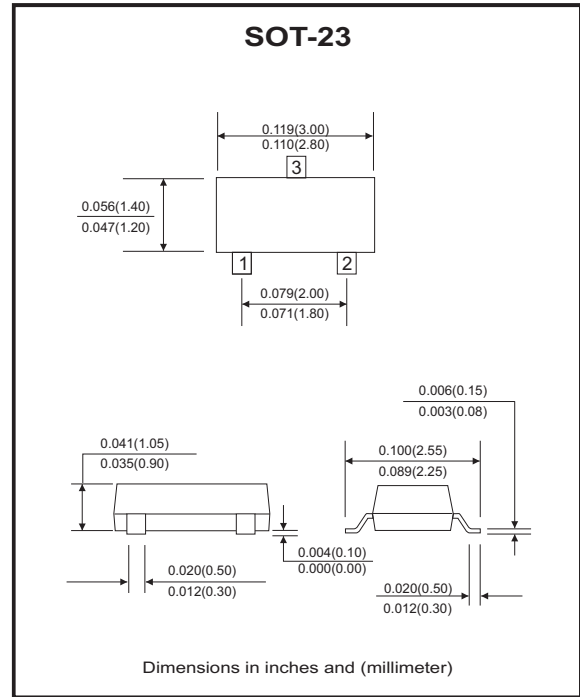


Features

- Common anode ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- High component density.
- Comply with AEC-Q101.

Mechanical data

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



Maximum Rating and Electrical Characteristics

(at TA=25°C unless otherwise noted)

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|-------------------------|--|-----------|-----|-----|---------|---------------|
| Diode breakdown voltage | $I_R = 1\text{mA}$ | V_{BD} | 25 | 28 | | V |
| Leakage current | $V_R = 24\text{V}$ | I_L | | 0.1 | 2.0 | μA |
| Junction capacitance | $V_R = 0\text{V}, f = 1\text{MHz}$ | C_T | | 10 | | pF |
| ESD capability | IEC 61000-4-2(air) IEC 61000-4-2(contact) | ESD | | | 16 8 | kV |
| Clamping voltage | $I_{PP} = 1\text{A}, T_P = 8/20\mu\text{s}$ | V_C | | | 47 | V |
| Peak pulse power | $T_P = 8/20\mu\text{s}$ | P_{PP} | | | 47 | W |
| Operation temperature | | T_J | | | 125 | °C |
| Storage temperature | | T_{STG} | -55 | | 150 | °C |

RATING AND CHARACTERISTIC CURVES (ACPDT-24V)

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

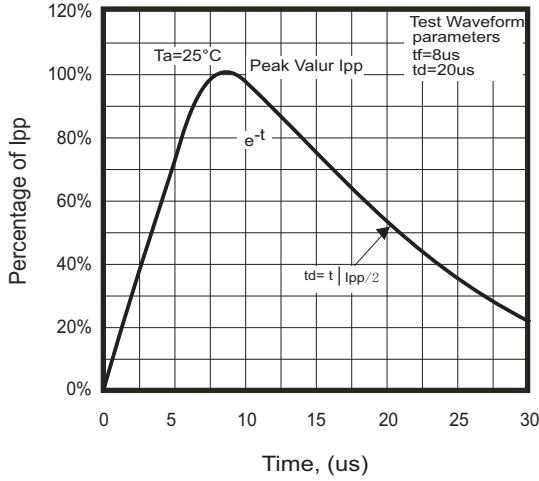


Fig. 2 - Reverse characteristics

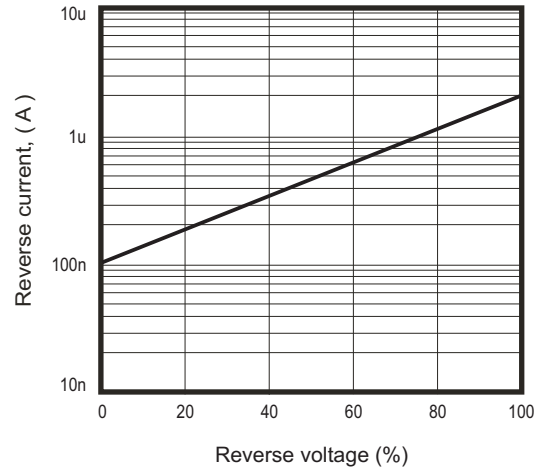


Fig.3 - Capacitance between terminals characteristics

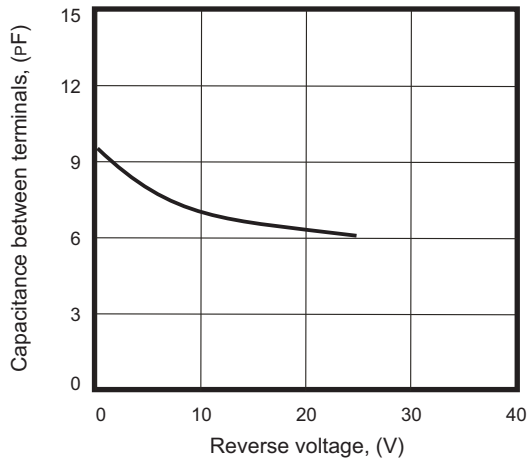
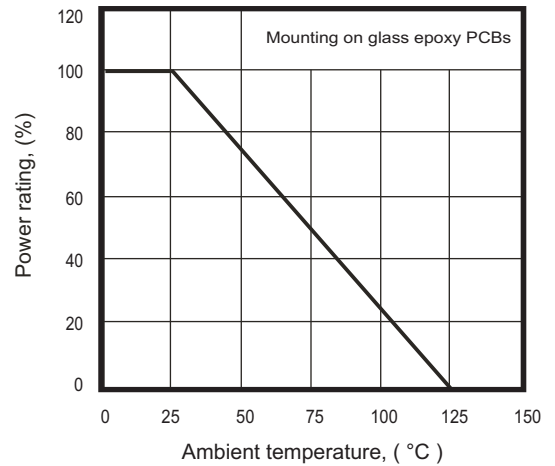
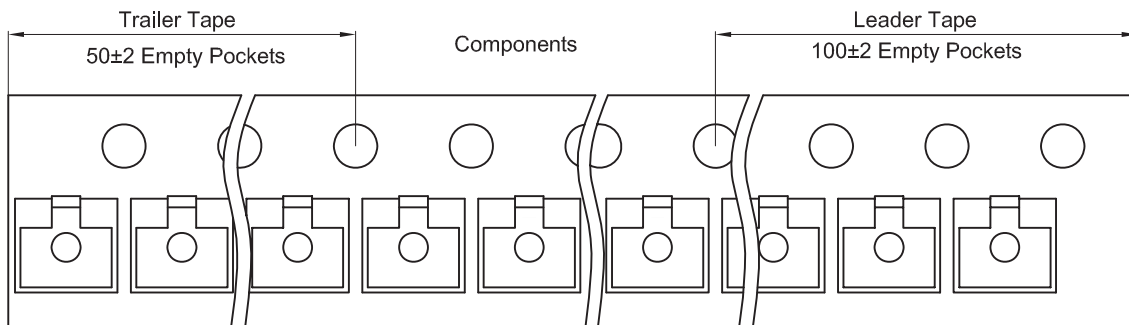
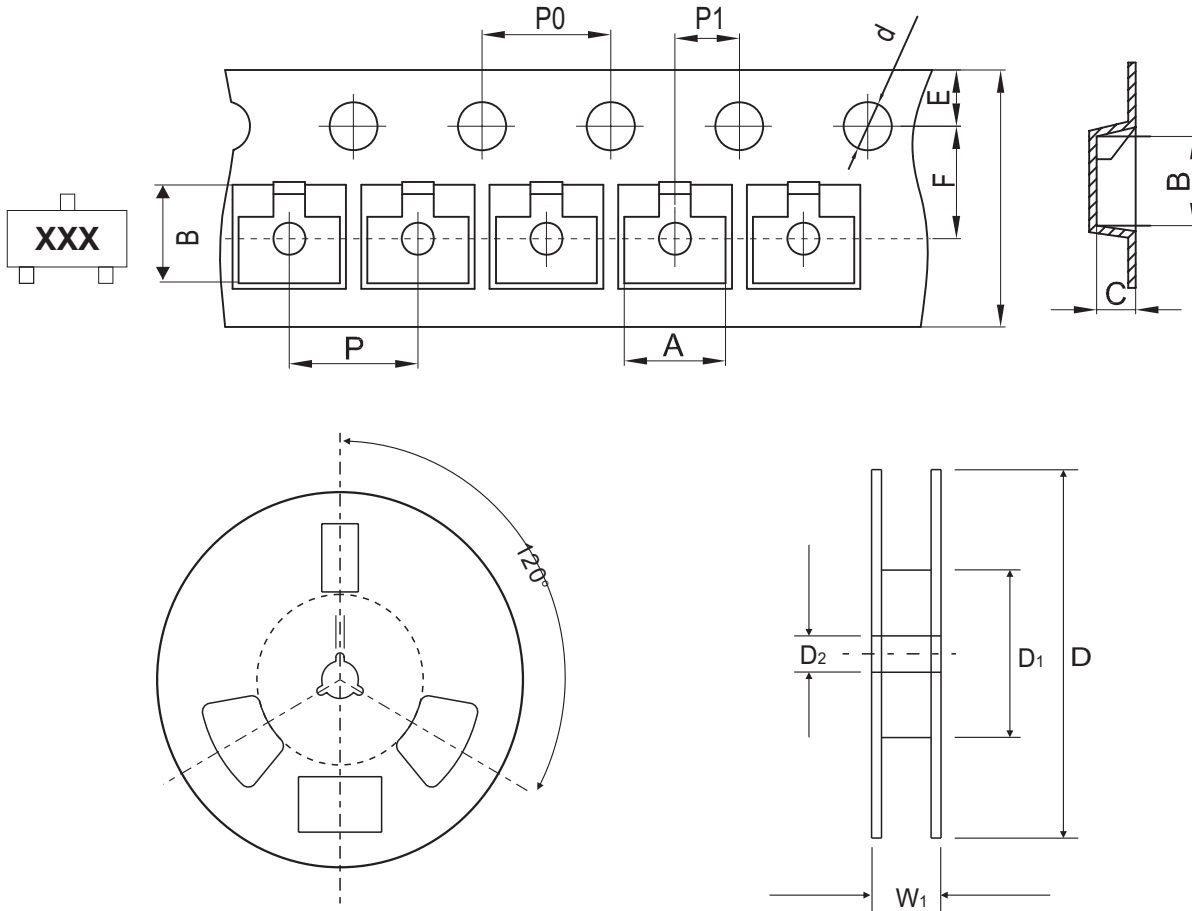


Fig.4 - Power rating derating curve



Reel Taping Specification

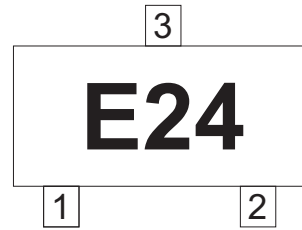


| SOT-23 | SYMBOL | A | B | C | d | D | D1 | D2 |
|--------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 3.15 ± 0.10 | 2.77 ± 0.10 | 1.22 ± 0.10 | 1.50 ± 0.10 | 178 ± 2.00 | 54.40 ± 1.00 | 13.00 ± 1.00 |
| | (inch)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

| SOT-23 | 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 |

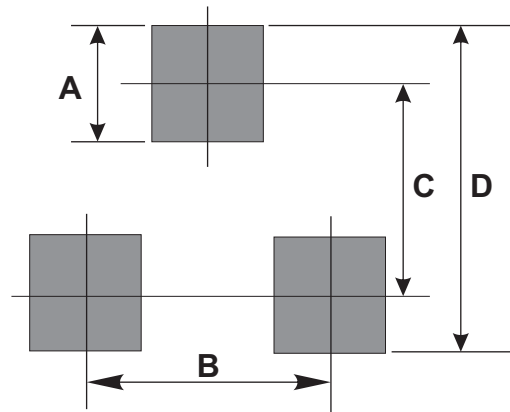
Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| ACPDT-24V | 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 (pcs) | Reel Size (inch) |
| SOT-23 | 3,000 | 7 |

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