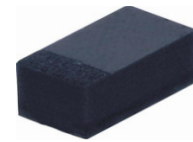


CPDQR24VEU-HF

RoHS Device
Halogen Free



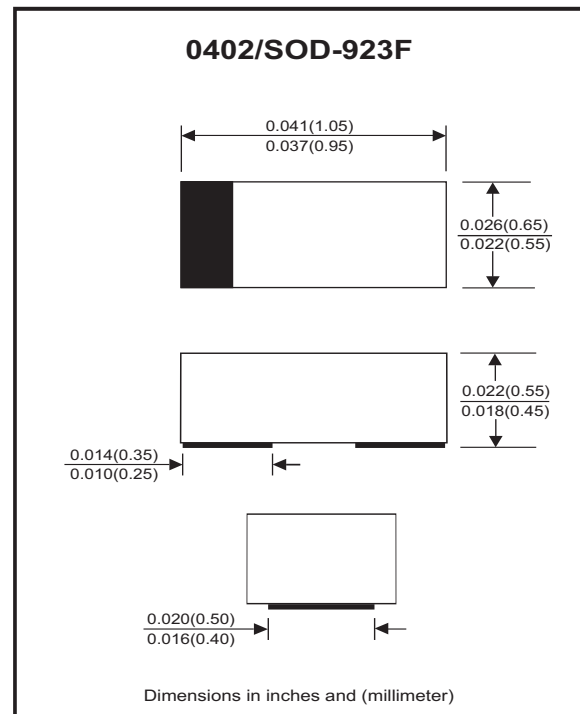
Features

- Uni-directional ESD protection.
- Surface mount package.
- Ultra small SMD package:0402.
- High component density.

Mechanical data

- Case: 0402/SOD-923F standard package, molded plastic.
- Terminals: Gold plated, Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- Weight: 0.001 grams(approx.).

Circuit Diagram



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

| Parameter | Conditions | Symbol | Value | Unit |
|-----------------------------|--|------------------|----------|------|
| Peak pulse power | T _P = 8/20us | P _{PP} | 105 | W |
| Peak pulse current | T _P = 8/20us | I _{PP} | 2.5 | A |
| ESD capability | IEC 61000-4-2(air) IEC 61000-4-2(contact) | ESD | ±25 | kV |
| Operation temperature range | | T _j | -55~+125 | °C |
| Storage temperature range | | T _{STG} | -55~+150 | °C |

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

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|------------------------------|--|------------------|------|-----|----------|------|
| Working peak reverse voltage | | V _{RWM} | | | 24 | V |
| Forward voltage | I _F = 10mA | V _F | | 0.8 | | V |
| Breakdown voltage | I _T = 1mA | V _{BR} | 26.5 | | 32 | V |
| Reverse leakage current | V _{RWM} = 24V | I _R | | | 100 | nA |
| Clamping voltage | I _{PP} = 1A, T _P = 8/20us I _{PP} = 2.5A, T _P = 8/20us | V _C | | | 34 42 | V |
| Junction capacitance | V _R = 0V, f = 1MHz | C _J | | | 35 | pF |

RATING AND CHARACTERISTIC CURVES (CPDQR24VEU-HF)

Fig.1 - 8/20us Peak Pulse Current Wave
Form Acc. IEC 61000-4-5

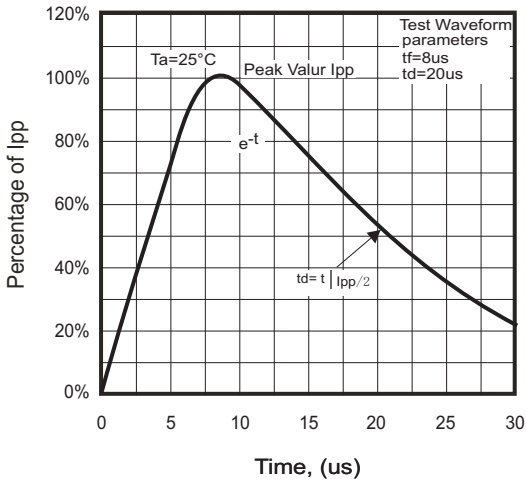


Fig.2 - Power rating derating curve

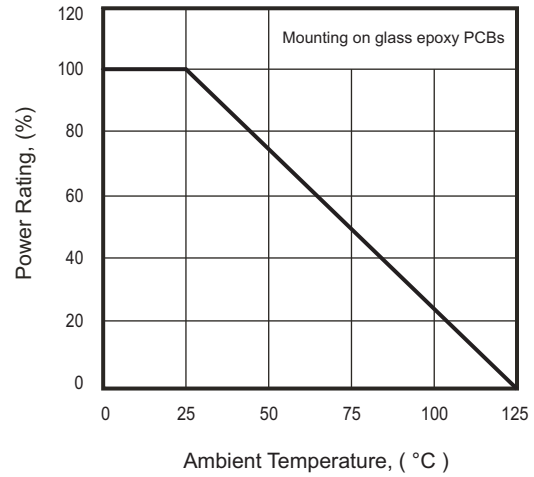


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

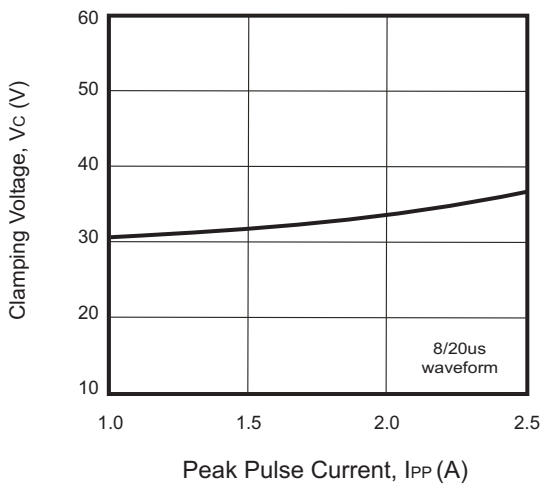
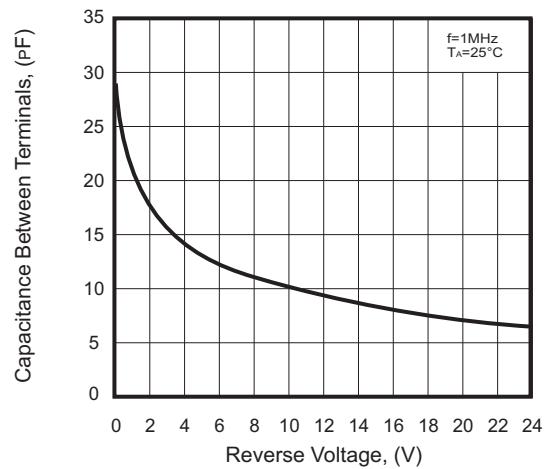
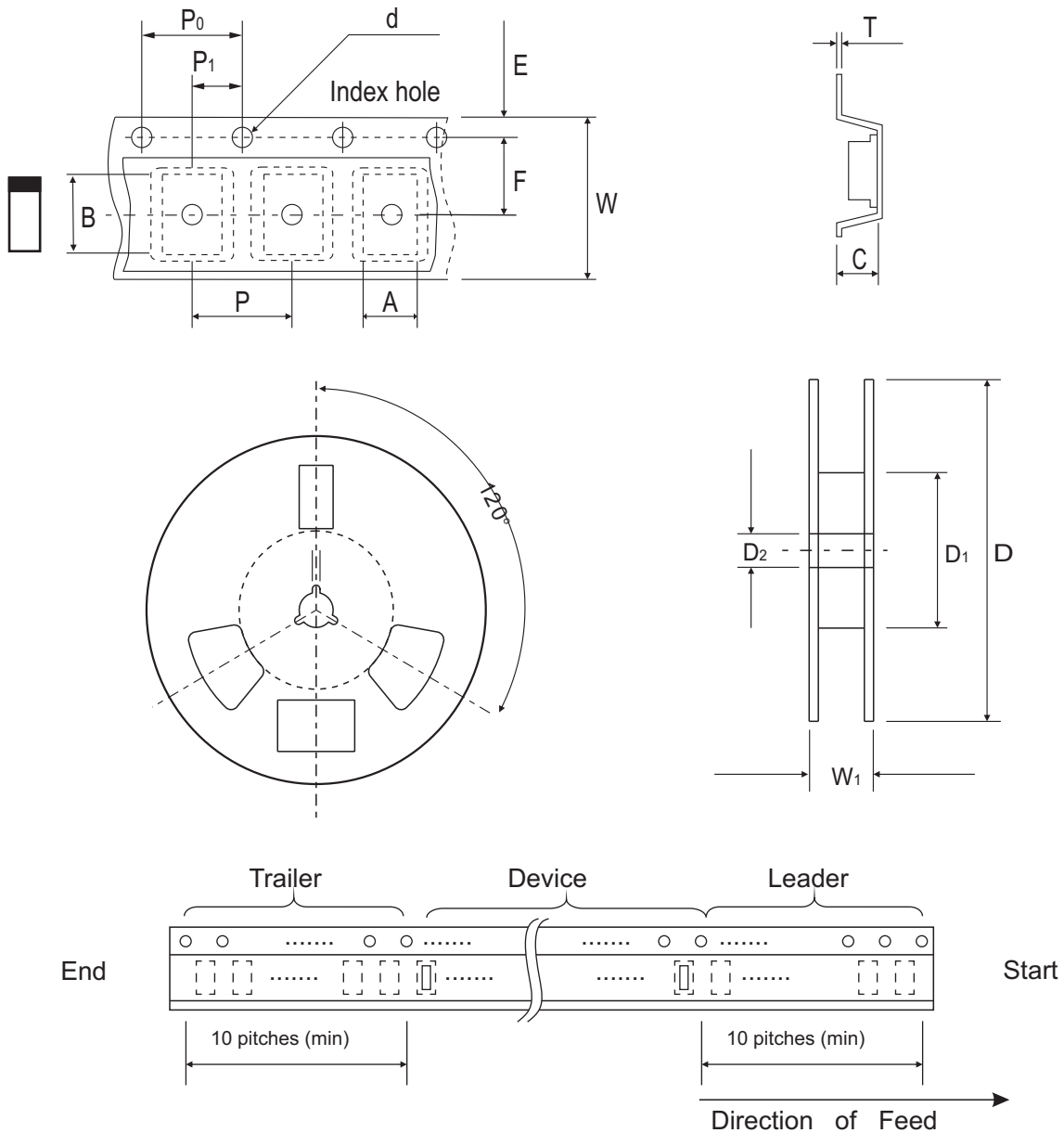


Fig.4 - Capacitance Between Terminals Characteristics



Reel Taping Specification



| 0402 (SOD-923F) | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|--------------------|--------|---------------|---------------|---------------|----------------------|---------------|----------------------|----------------|
| | (mm) | 0.75 ± 0.05 | 1.17 ± 0.05 | 0.65 ± 0.05 | 1.50 + 0.10 - 0 | 178 ± 1 | 60.0 + 0.50 - 0 | 13.0 ± 0.20 |
| | (inch) | 0.030 ± 0.002 | 0.046 ± 0.002 | 0.026 ± 0.002 | 0.059 + 0.004 - 0 | 7.008 ± 0.039 | 2.362 + 0.020 - 0 | 0.512 ± 0.008 |

| 0402 (SOD-923F) | SYMBOL | E | F | P | P ₀ | P ₁ | T | W | W ₁ |
|--------------------|--------|---------------|---------------|---------------|----------------|----------------|--------------------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 0.20 + 0.02 - 0.05 | 8.00 ± 0.20 | 12.0 + 0.50/-0 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.008 + 0.001 - 0.002 | 0.315 ± 0.008 | 0.472 ± 0.006 |

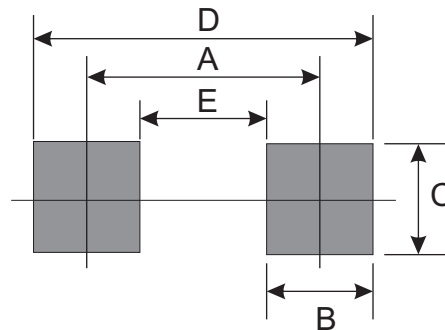
Marking Code

| Part Number | Marking Code |
|---------------|--------------|
| CPDQR24VEU-HF | E4 |



Suggested PAD Layout

| SIZE | 0402/SOD-923F | |
|------|---------------|--------|
| | (mm) | (inch) |
| A | 0.750 | 0.030 |
| B | 0.500 | 0.020 |
| C | 0.700 | 0.028 |
| D | 1.250 | 0.049 |
| E | 0.250 | 0.010 |



Standard Packaging

| Case Type | REEL PACK | |
|---------------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| 0402/SOD-923F | 5,000 | 7 |