

CPDU3V3UP-HF

RoHS Device
Halogen Free

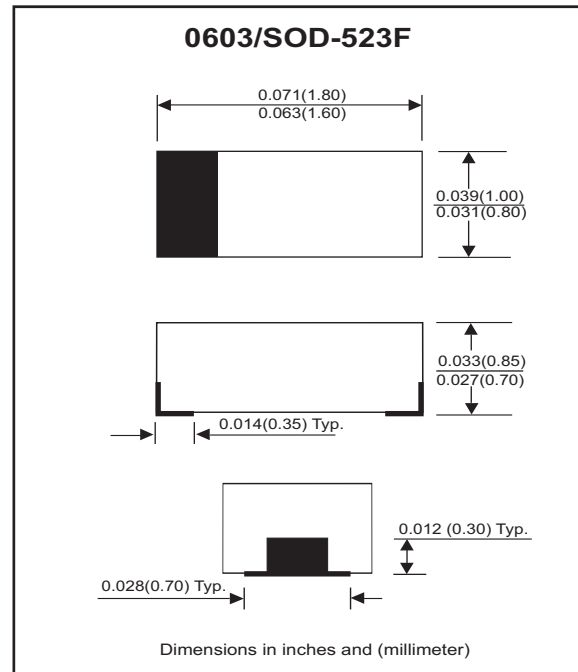


Features

- Working voltage: 3.3V
- Low leakage current.
- Low operating and clamping voltages.

Mechanical data

- Case: 0603/SOD-523F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking code: E3V3
- Mounting position: Any
- Weight: 0.003 gram(approx.).



Circuit Diagram



Maximum Rating (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) | I _{PP} | 5 | A |
| ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact) | V _{ESD} | ±20 ±15 | kV |
| Operating temperature | T _j | -55 to +125 | °C |
| Storage temperature | T _{STG} | -55 to +125 | °C |

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

| Parameter | Conditions | Symbol | Min | Typ | Max | Unit |
|---------------------------|-----------------------------------|------------------|-----|------|-----|------|
| Reverse stand-off voltage | | V _{RWM} | | | 3.3 | V |
| Punch-through voltage | I _{PT} = 2uA | V _{PT} | 3.5 | | | V |
| Snap-back voltage | I _{SB} = 50mA | V _{SB} | 2.8 | | | V |
| Reverse leakage current | V _{RWM} = 3.3V | I _R | | 0.05 | 0.5 | uA |
| Clamping voltage | I _{PP} = 1 A, tp=8/20us | V _C | | | 5.5 | V |
| | I _{PP} = 5 A, tp=8/20us | V _C | | | 8.0 | V |
| Reverse clamping voltage | I _{PPR} = 1 A, tp=8/20us | V _{CR} | | | 2.4 | V |
| Junction capacitance | V _R = 0 V, f = 1MHz | C _j | | 12 | 16 | pF |

RATING AND CHARACTERISTIC CURVES (CPDU3V3UP-HF)

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

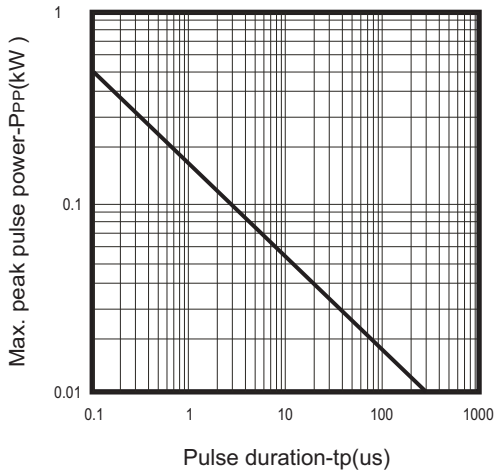


Fig. 2 - Power rating derating curve

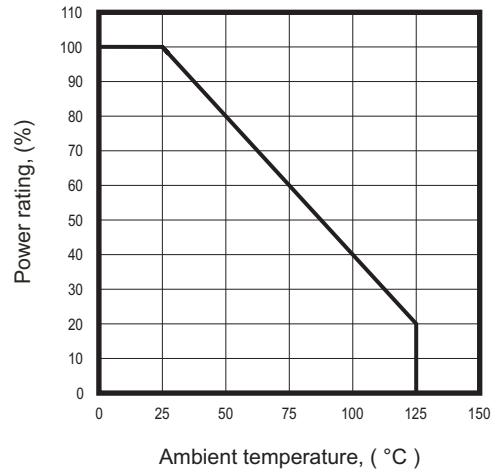


Fig.3 - Clamping voltage vs. peak pulse current

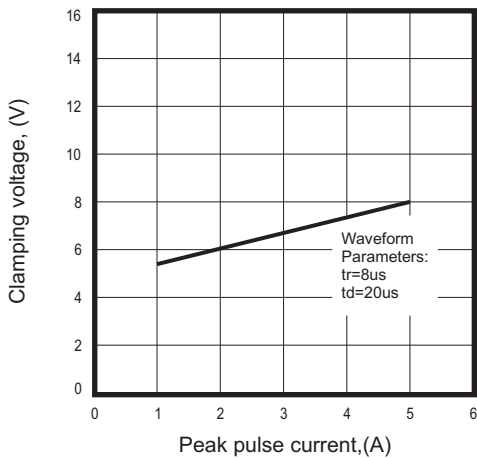


Fig.4 - Forward voltage vs. Forward current

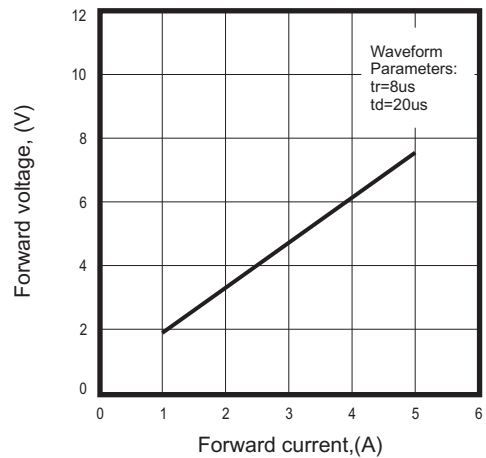
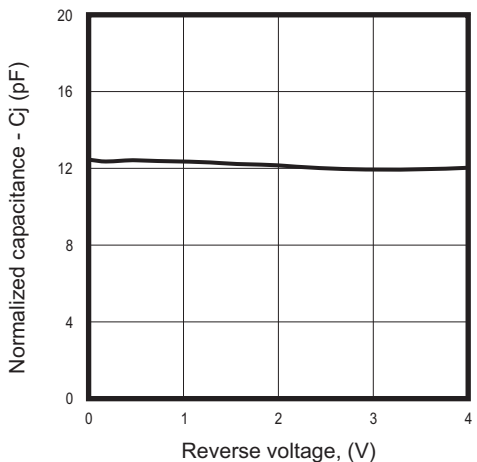
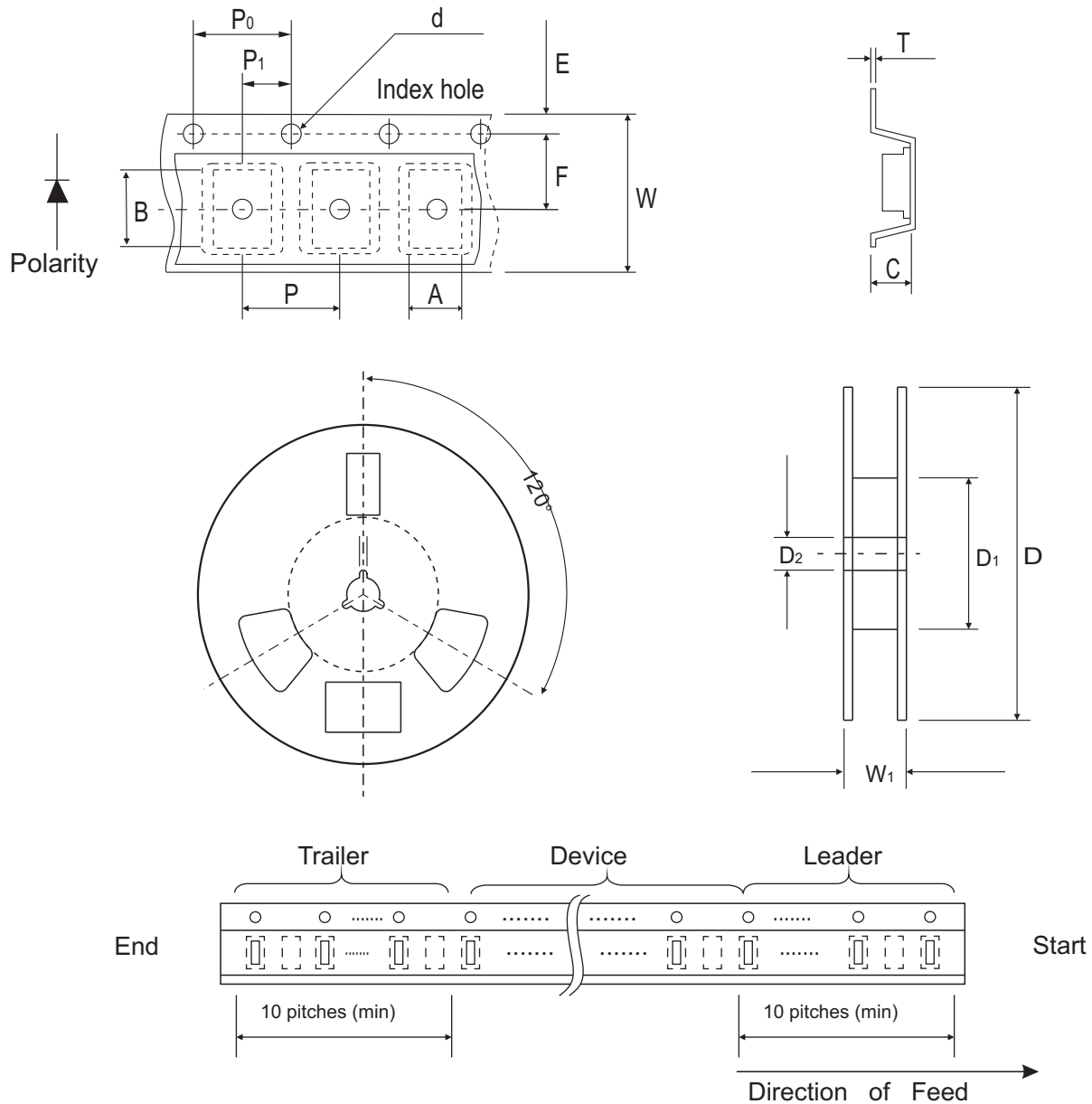


Fig.5 - Junction capacitance vs. reverse voltage



Reel Taping Specification



| 0603 (SOD-523) | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|-------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
| | (mm) | 1.00 ± 0.10 | 1.85 ± 0.10 | 1.00 ± 0.10 | 1.55 ± 0.05 | 178 ± 1 | 60.0 MIN. | 13.0 ± 0.20 |
| | (inch) | 0.039 ± 0.004 | 0.073 ± 0.004 | 0.039 ± 0.004 | 0.061 ± 0.002 | 7.008 ± 0.04 | 2.362 MIN. | 0.512 ± 0.008 |

| 0603 (SOD-523) | SYMBOL | E | F | P | P ₀ | P ₁ | T | W | W ₁ |
|-------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 0.23 ± 0.05 | 8.00 ± 0.20 | 13.5 MAX. |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.009 ± 0.002 | 0.315 ± 0.008 | 0.531 MAX. |

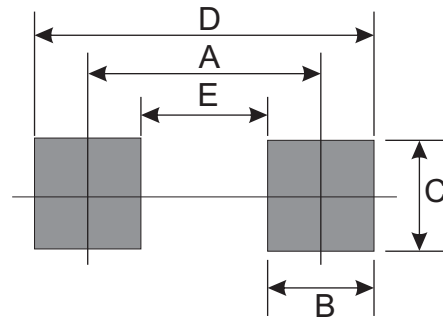
Marking Code

| Part Number | Marking Code |
|--------------|--------------|
| CPDU3V3UP-HF | E3V3 |



Suggested PAD Layout

| SIZE | 0603/SOD-523F | |
|------|---------------|--------|
| | (mm) | (inch) |
| A | 1.70 | 0.067 |
| B | 0.60 | 0.024 |
| C | 0.80 | 0.031 |
| D | 2.30 | 0.091 |
| E | 1.10 | 0.043 |



Standard Packaging

| Case Type | REEL PACK | |
|---------------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| 0603/SOD-523F | 4,000 | 7 |