

CPDH3V3UP-HF

RoHS Device

Halogen Free

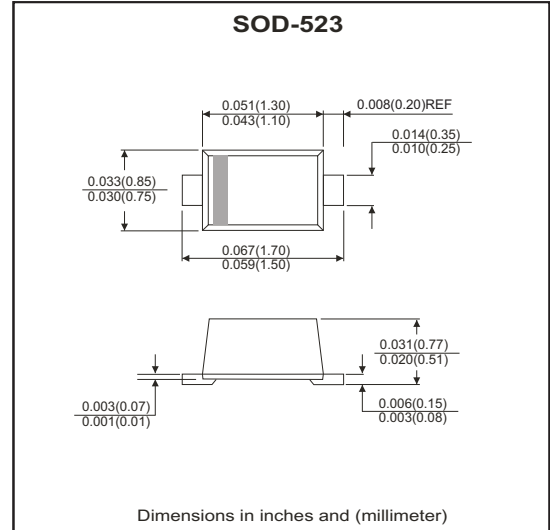


Features

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

Mechanical data

- Case: SOD-523 standard package ,molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Marking Code: E3
- Mounting position: Any
- Weight: 0.0012 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) | VESD | ±20 | kV |
| ESD per IEC 61000-4-2(Contact) | | ±15 | |
| 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 (CPDH3V3UP-HF)

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

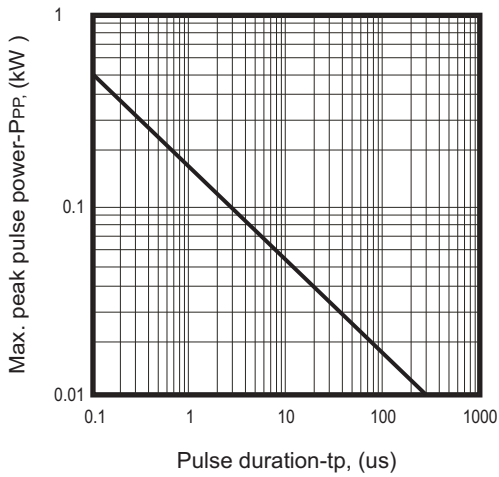


Fig. 2 - Power rating derating curve

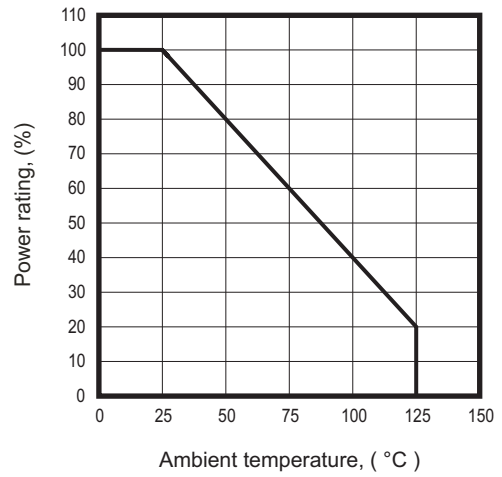


Fig.3 - Clamping voltage vs. peak pulse current

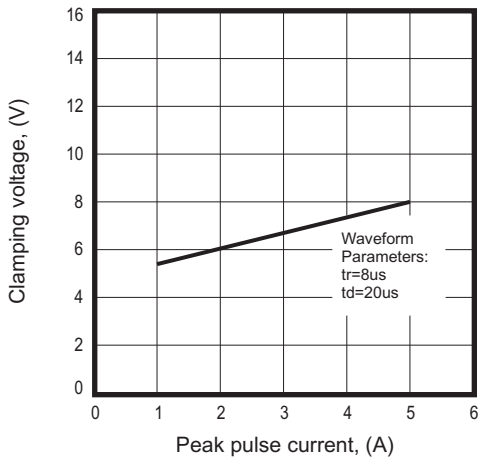


Fig.4 - Forward voltage vs. Forward current

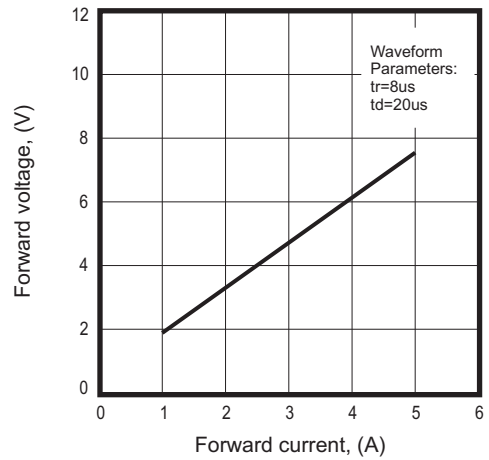
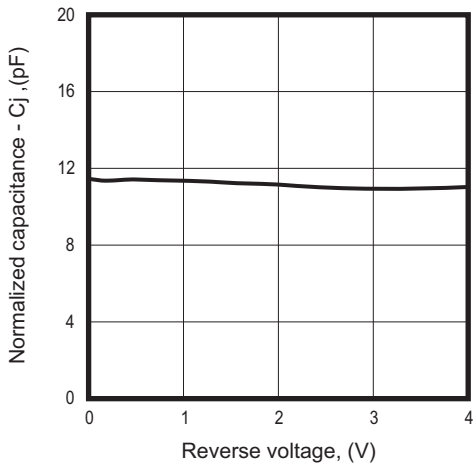
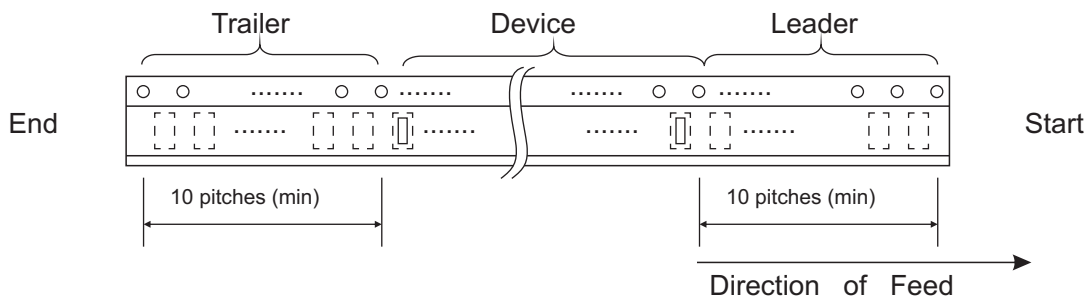
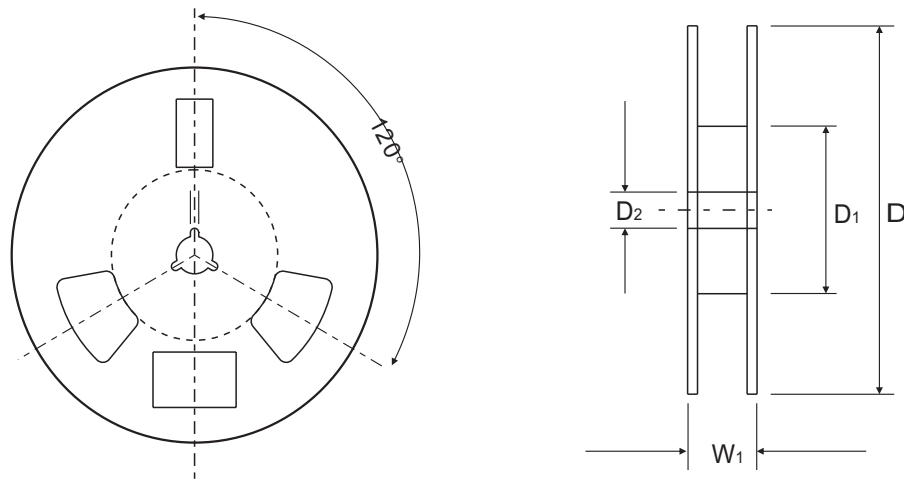
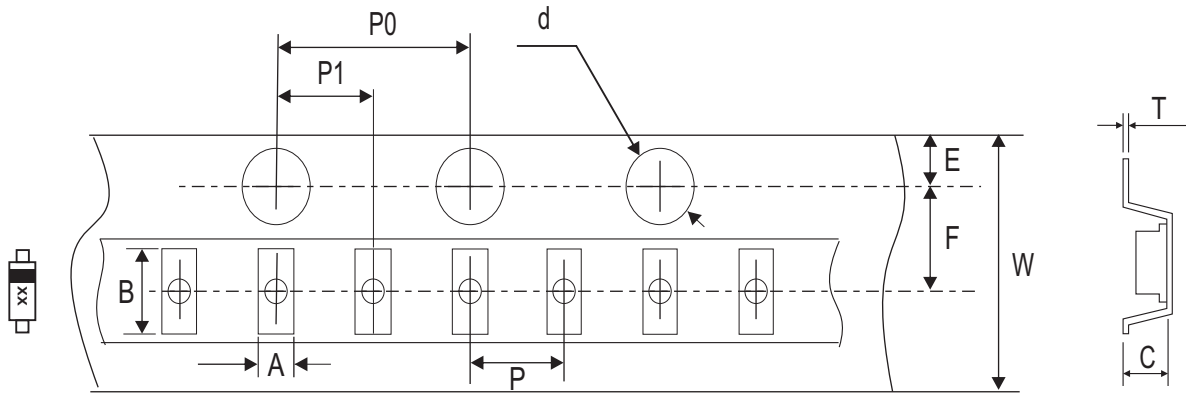


Fig.5 - Junction capacitance vs. reverse voltage



Reel Taping Specification



| SOD-523 | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|---------|--------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
| | (mm) | 0.90 ± 0.05 | 1.94 ± 0.05 | 0.73 ± 0.05 | 1.50 ± 0.10 | 178 ± 2.00 | 54.40 ± 1.00 | 13.00 ± 1.00 |
| | (inch) | 0.035 ± 0.002 | 0.076 ± 0.002 | 0.029 ± 0.002 | 0.059 ± 0.004 | 7.008 ± 0.079 | 2.142 ± 0.039 | 0.511 ± 0.039 |

| SOD-523 | SYMBOL | E | F | P | P ₀ | P ₁ | W | W ₁ |
|---------|--------|---------------|---------------|---------------|----------------|----------------|-------------------------|----------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 2.00 ± 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 |

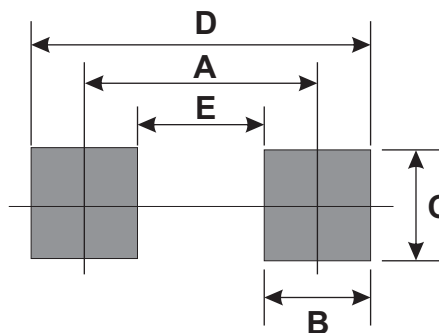
Marking Code

| Part Number | Marking Code |
|--------------|--------------|
| CPDH3V3UP-HF | E3 |



Suggested PAD Layout

| SIZE | SOD-523 | |
|------|---------|--------|
| | (mm) | (inch) |
| A | 1.42 | 0.055 |
| B | 0.60 | 0.024 |
| C | 0.70 | 0.028 |
| D | 2.02 | 0.079 |
| E | 0.82 | 0.031 |



Standard Packaging

| Case Type | REEL PACK | |
|-----------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOD-523 | 3,000 | 7 |