

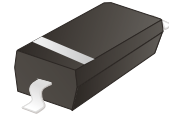
CDBW120-HF Thru. CDBW140-HF

Forward current: 1.0A

Reverse voltage: 20 to 40V

RoHS Device

Halogen Free

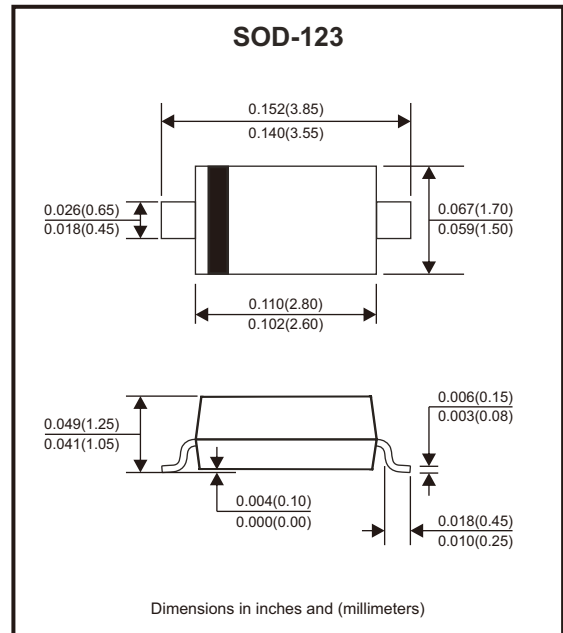


Features

- High current capability.
- Low forward voltage drop.

Mechanical Data

- Case: SOD-123, molded plastic.
- Polarity: Color band denotes cathode end.
- Epoxy UL: 94V-0.
- Mounting position: Any.



Circuit Diagram



Maximum Ratings (at Ta=25°C, unless otherwise noted)

| Parameter | Symbol | CDBW120-HF | CDBW130-HF | CDBW140-HF | Unit |
|--|------------------|------------|------------|------------|------|
| Max. repetitive peak reverse voltage | V _{RRM} | 20 | 30 | 40 | V |
| Max. RMS voltage | V _{RMS} | 14 | 21 | 28 | V |
| Max. DC blocking voltage | V _{DC} | 20 | 30 | 40 | V |
| Max. average forward rectified current | I _{FM} | 1 | | | A |
| Peak forward surge current 8.3ms single half sine-wave | I _{FSM} | 9 | | | A |
| Typical thermal resistance | R _{θJA} | 250 | | | °C/W |
| Power dissipation | P _D | 500 | | | mW |
| Operating 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 | CDBW120-HF | CDBW130-HF | CDBW140-HF | Unit |
|-----------------------------------|-------------------|--------|------------|------------|------------|------|
| Maximum forward voltage | IF = 1.0A | VF | 0.450 | 0.550 | 0.600 | V |
| | IF = 3.0A | | 0.750 | 0.875 | 0.900 | |
| Maximum reverse breakdown voltage | IR = 1mA | VR | 20 | 30 | 40 | V |
| Maximum reverse current | VR = 20V CDBW120 | IR | 1 | | | mA |
| | VR = 30V CDBW130 | | | | | |
| | VR = 40V CDBW140 | | | | | |
| Type junction capacitance | VR = 4V, f = 1MHz | Cj | 120 | | | pF |

Rating and Characteristic Curves (CDBW120-HF Thru. CDBW140-HF)

Fig.1 - Forward Characteristics

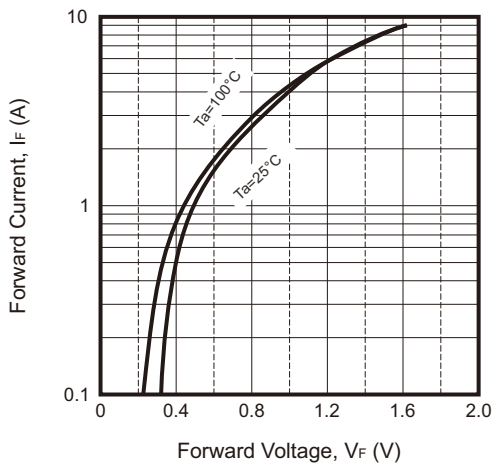


Fig.2 - Reverse Characteristics

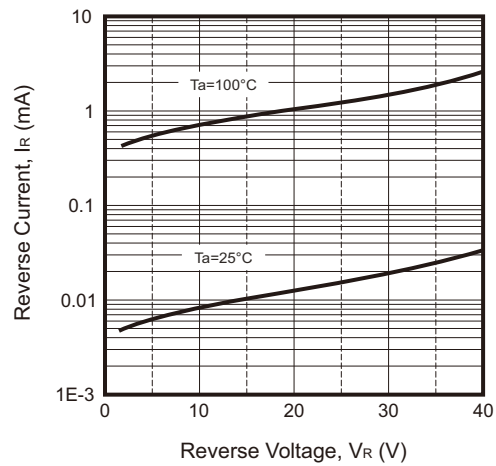


Fig.3 - Capacitance Characteristics

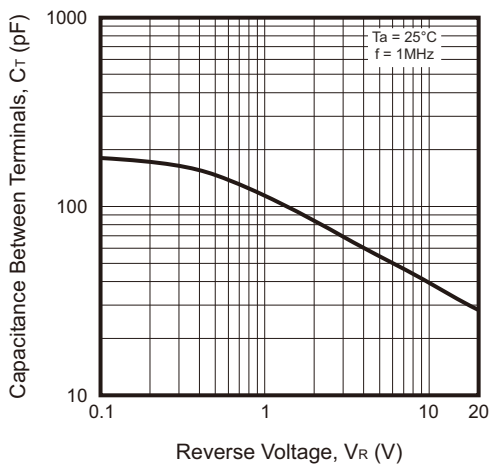
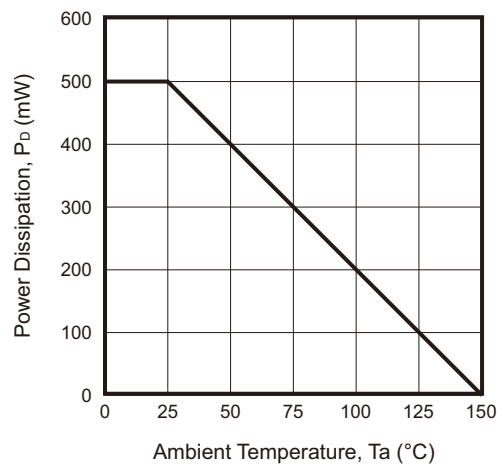
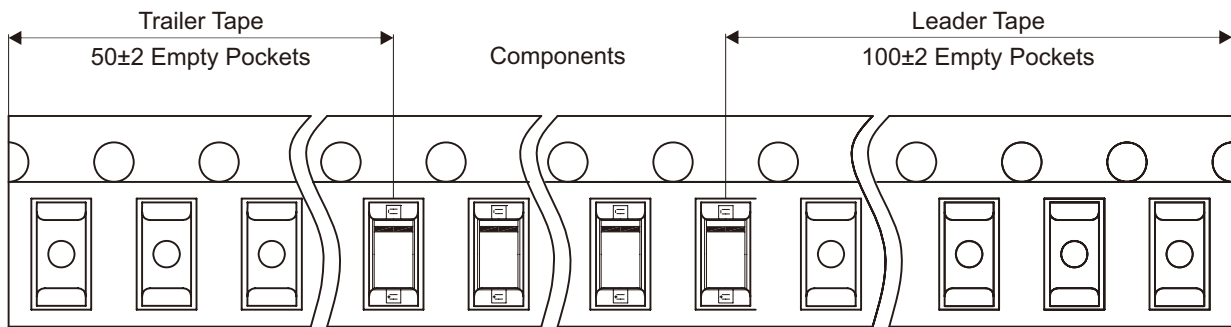
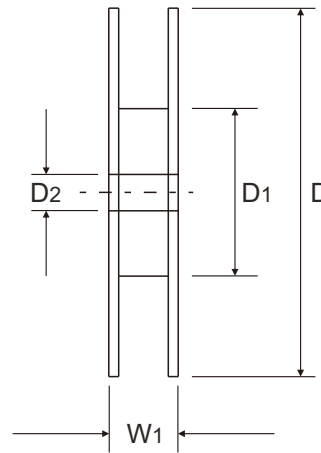
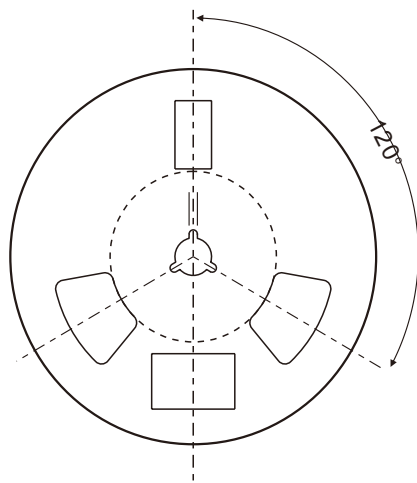
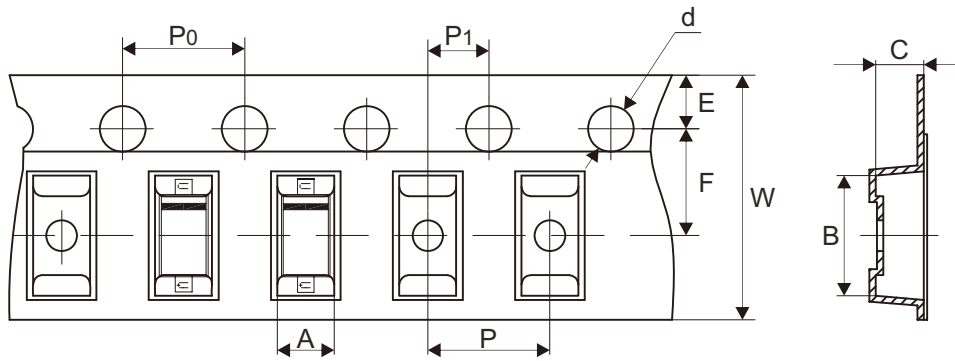


Fig.4 - Power Derating Curve



Reel Taping Specification



| SOD-123 | SYMBOL | A | B | C | d | D | D1 | D2 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 1.85 ± 0.05 | 3.94 ± 0.05 | 1.57 ± 0.05 | 1.55 ± 0.10 | 178.00 ± 2.00 | 54.40 ± 1.00 | 13.00 ± 1.00 |
| | (inch) | 0.073 ± 0.002 | 0.155 ± 0.002 | 0.062 ± 0.002 | 0.061 ± 0.004 | 7.008 ± 0.079 | 2.142 ± 0.039 | 0.512 ± 0.039 |

| SOD-123 | SYMBOL | E | F | P | P1 | P0 | W | W1 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|--------------------------|---------------|
| | (mm) | 1.75 ± 0.10 | 3.50 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 4.00 ± 0.10 | 8.00 + 0.06 - 0.10 | 12.30 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.157 ± 0.004 | 0.315 + 0.002 - 0.004 | 0.484 ± 0.039 |

Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CDBW120-HF | SJ |
| CDBW130-HF | SK |
| CDBW140-HF | SL |



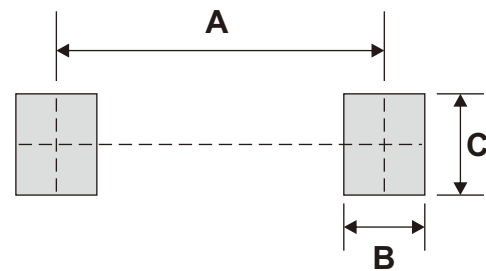
█ = Cathode band

xx = Product type marking code

Solid dot = Control code

Suggested P.C.B. PAD Layout

| SIZE | SOD-123 | |
|------|---------|--------|
| | (mm) | (inch) |
| A | 3.24 | 0.128 |
| B | 0.80 | 0.031 |
| C | 1.00 | 0.039 |



Note: 1. The pad layout is for reference purposes only.

Standard Packaging

| Case Type | REEL PACK | |
|-----------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| SOD-123 | 3,000 | 7 |