

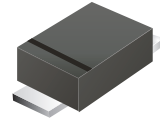
## CDBMS120-HF Thru. CDBMS1200-HF

Reverse Voltage: 20 to 200 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

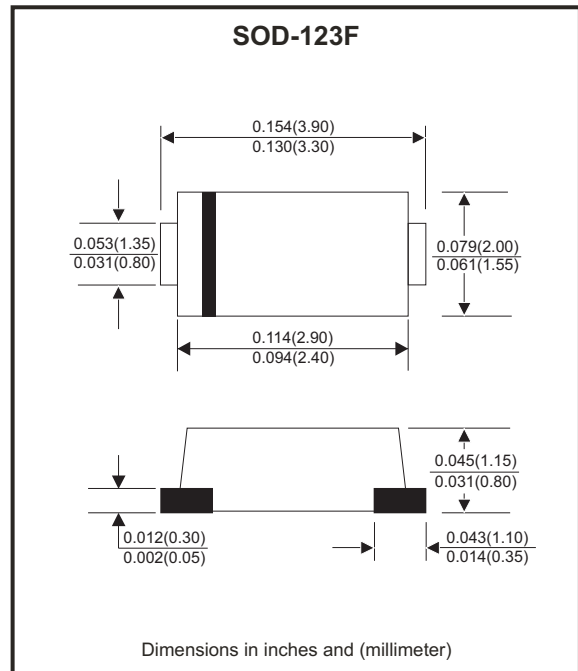


### Features

- High current capability.
- Extremely low thermal resistance.
- For surface mount application.
- Low forward voltage.

### Mechanical data

- Epoxy: UL 94V-0 rated flame retardant.
- Case: SOD-123F, molded plastic.
- Terminals: Lead Free Plating (Tin Finish)  
Solderable per MIL-STD-202, method 208.
- Polarity: Indicated by cathode band.
- Weight: 0.022 grams (Approx.)



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

| Parameter  | Symbol           | CDBMS       |        |        |        |             |         |         |         | Unit |    |    |
|--|------------------|-------------|--------|--------|--------|-------------|---------|---------|---------|------|----|----|
|  |                  | 120-HF      | 130-HF | 140-HF | 160-HF | 180-HF      | 1100-HF | 1150-HF | 1200-HF |      |    |    |
| Max. Repetitive peak reverse voltage   | V <sub>RRM</sub> | 20          | 30     | 40     | 60     | 80          | 100     | 150     | 200     | V    |    |    |
| Max. RMS voltage   | V <sub>RMS</sub> | 14          | 21     | 28     | 42     | 56          | 70      | 105     | 140     | V    |    |    |
| Max. DC blocking voltage   | V <sub>DC</sub>  | 20          | 30     | 40     | 60     | 80          | 100     | 150     | 200     | V    |    |    |
| Max. Average forward rectified current   | I <sub>F</sub>   | 1.0         |        |        |        |             |         |         |         | A    |    |    |
| Max. Instantaneous forward voltage<br>I <sub>F</sub> =1.0A @T <sub>A</sub> =25°C                         | V <sub>F</sub>   | 0.52        |        | 0.66   |        | 0.83        |         | 0.87    |         | 0.90 | V  |    |
| Peak forward surge current, 8.3ms<br>single half sine-wave superimposed<br>on rated load (JEDEC methode) | I <sub>FSM</sub> | 30          |        |        |        |             |         |         |         | A    |    |    |
| Max. DC reverse current @T <sub>A</sub> =25°C<br>at Rated DC blocking voltage @T <sub>A</sub> =100°C     | I <sub>R</sub>   | 0.5         |        |        |        | 0.2         |         |         |         | 20   | 10 | mA |
| Typical junction capacitance (Note 1)  | C <sub>J</sub>   | 60          |        |        |        | 25          |         |         |         | pF   |    |    |
| Typical thermal resistance   | R <sub>θJC</sub> | 45          |        |        |        |             |         |         |         | °C/W |    |    |
| Operating temperature range  | T <sub>J</sub>   | -50 to +125 |        |        |        | -50 to +150 |         |         |         | °C   |    |    |
| Storage temperature range  | T <sub>STG</sub> | -55 to +150 |        |        |        |             |         |         |         | °C   |    |    |

Note: 1. Measured at 1.0MHZ and applied reverse voltage of 4V DC.

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## Rating and Characteristic Curves (CDBMS120-HF Thru. CDBMS1200-HF)

Fig.1 - Typical Forward Current Derating Curve

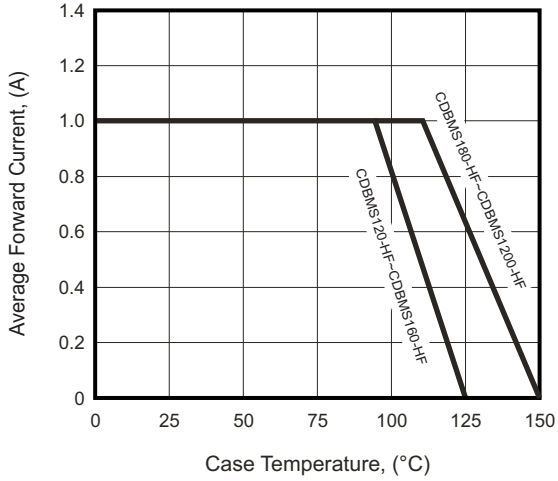


Fig.2 - Typical Forward Characteristics

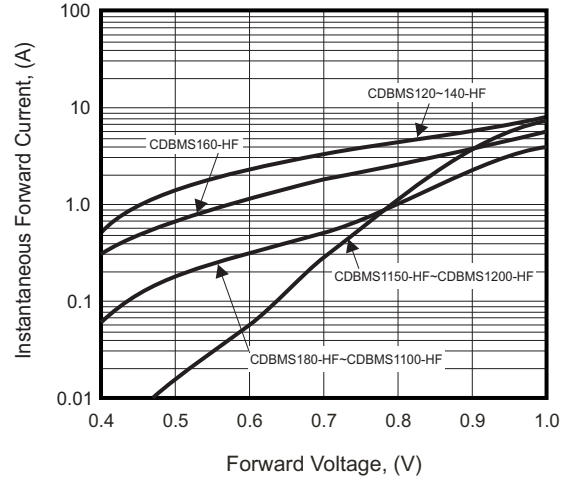


Fig.3 - Maximum Non-repetitive Forward Surge Current

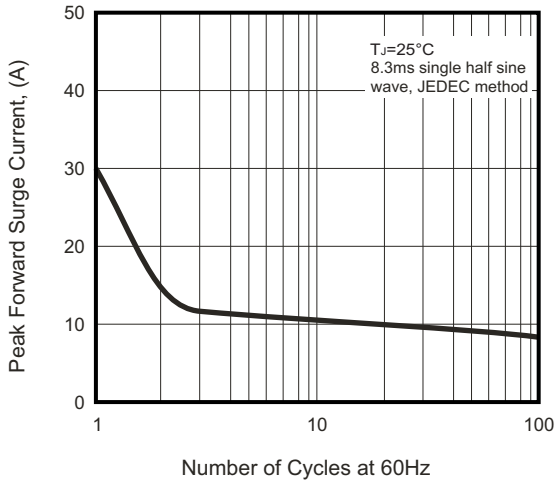


Fig.4 - Typical Reverse Characteristics

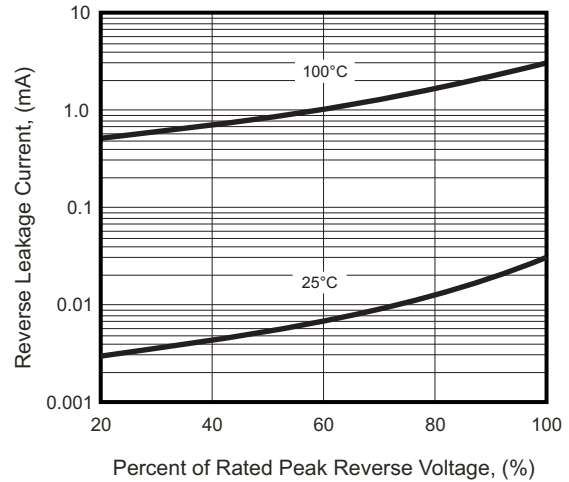
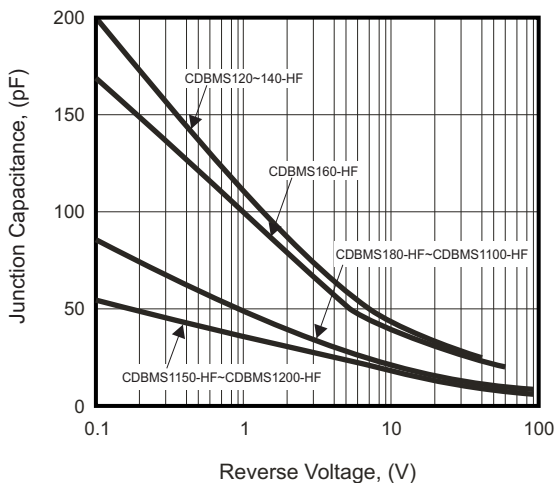
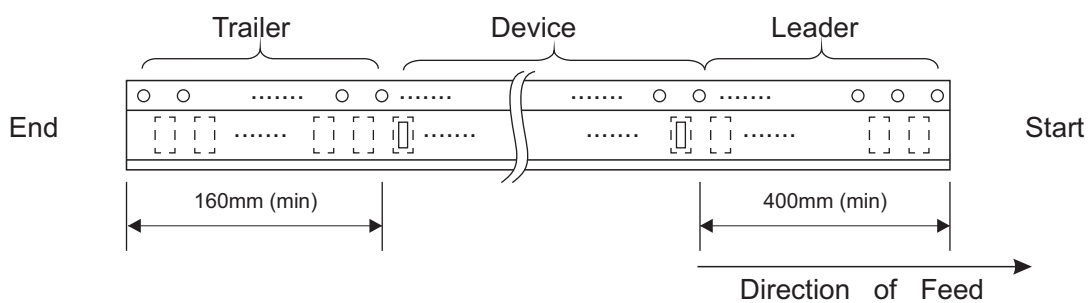
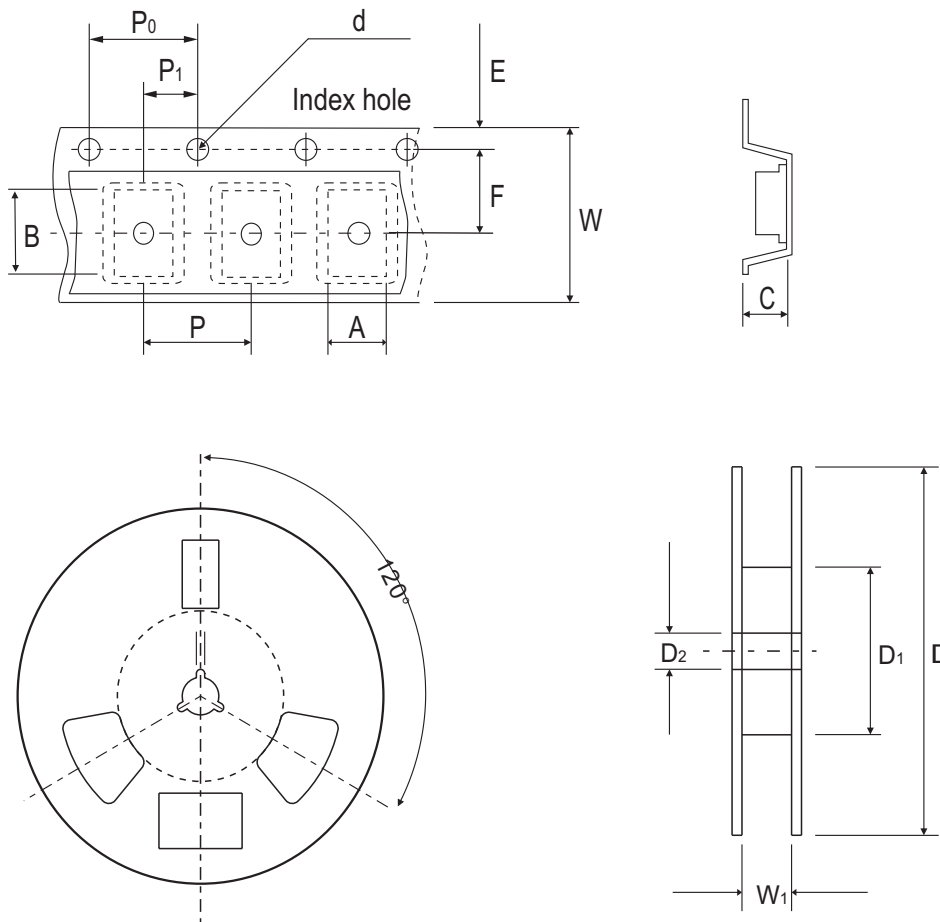


Fig.5 - Typical Junction Capacitance



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## Reel Taping Specification



| SOD-123F | SYMBOL | A             | B             | C             | d             | D             | D1         | D2            |
|----------|--------|---------------|---------------|---------------|---------------|---------------|------------|---------------|
|          | (mm)   | 3.00 ± 0.10   | 5.60 ± 0.10   | 1.20 ± 0.10   | 1.50 ± 0.10   | 330 ± 2.00    | 50.00 Min. | 13.50 ± 1.00  |
|          | (inch) | 0.118 ± 0.004 | 0.220 ± 0.004 | 0.047 ± 0.004 | 0.059 ± 0.004 | 13.00 ± 0.079 | 1.969 Min. | 0.531 ± 0.039 |

| SOD-123F | SYMBOL | E             | F             | P             | P0            | P1            | W             | W1         |
|----------|--------|---------------|---------------|---------------|---------------|---------------|---------------|------------|
|          | (mm)   | 1.75 ± 0.10   | 5.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.05   | 2.00 ± 0.05   | 12.00 ± 0.20  | 18.40 Max. |
|          | (inch) | 0.069 ± 0.004 | 0.217 ± 0.002 | 0.158 ± 0.004 | 0.158 ± 0.002 | 0.079 ± 0.002 | 0.472 ± 0.008 | 0.724 Max. |

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REV: A

## Marking Code

| Part Number  | Marking Code |
|--------------|--------------|
| CDBMS120-HF  | C2.          |
| CDBMS130-HF  | C3.          |
| CDBMS140-HF  | C4.          |
| CDBMS160-HF  | C6.          |
| CDBMS180-HF  | C8.          |
| CDBMS1100-HF | CA.          |
| CDBMS1150-HF | CB.          |
| CDBMS1200-HF | CC.          |

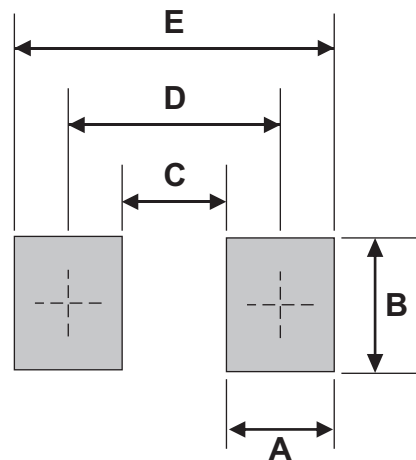


XX = Product type marking code

“.” = Halogen Free

## Suggested PAD Layout

| SIZE | SOD-123F |        |
|------|----------|--------|
|      | (mm)     | (inch) |
| A    | 1.34     | 0.053  |
| B    | 1.80     | 0.071  |
| C    | 1.52     | 0.060  |
| D    | 2.86     | 0.113  |
| E    | 4.20     | 0.165  |



Note:

1. The pad layout is for reference purposes only.

## Standard Packaging

| Case Type | REEL PACK    |                  |
|-----------|--------------|------------------|
|           | REEL ( pcs ) | Reel Size (inch) |
| SOD-123F  | 3,000        | 13               |

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