

## CDBFR03100-HF

$I_o = 300 \text{ mA}$   
 $V_R = 100 \text{ Volts}$   
 RoHS Device  
 Halogen Free



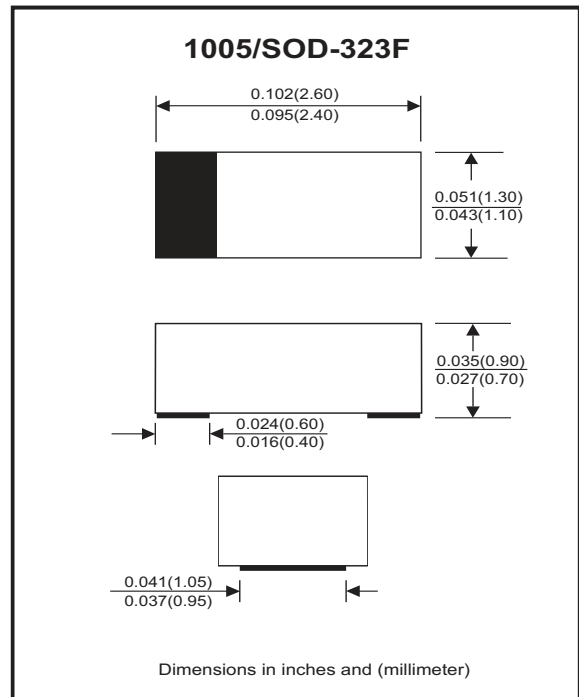
### Features

- Designed for mounting on small surface.
- Extremely thin/leadless package.
- Low drop-down voltage.
- Majority carrier conduction.

### Mechanical data

- Case: 1005/SOD-323F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026
- Polarity: Indicated by cathode band.
- Mounting position: Any
- Weight: 0.006 grams(approx.).

### Circuit Diagram



### Maximum Rating (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                            | Conditions  | Symbol    | Value       | Unit             |
|--------------------------------------|---|-----------|-------------|------------------|
| Max. Repetitive peak reverse voltage |   | $V_{RRM}$ | 100         | V                |
| Max. RMS voltage                     |   | $V_{RMS}$ | 70          | V                |
| Max. Reverse voltage                 |   | $V_R$     | 100         | V                |
| Max. Average forward current         |   | $I_o$     | 300         | mA               |
| Max. Forward surge current           | 8.3 ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$ | 3           | A                |
| Power dissipation                    |   | $P_D$     | 200         | mW               |
| Junction temperature range           |   | $T_j$     | -40 to +150 | $^\circ\text{C}$ |
| Storage temperature range            |   | $T_{STG}$ | -55 to +150 | $^\circ\text{C}$ |

### Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter                     | Conditions                         | Symbol | Min | Typ  | Max  | Unit          |
|-------------------------------|------------------------------------|--------|-----|------|------|---------------|
| Forward voltage               | $I_F = 300\text{mA}$               | $V_F$  |     | 0.75 | 0.82 | V             |
| Reverse current               | $V_R = 100\text{V}$                | $I_R$  |     |      | 50   | $\mu\text{A}$ |
| Capacitance between terminals | $f = 1\text{MHz}, V_R = 1\text{V}$ | $C_T$  |     | 25   |      | pF            |

Notes: Pulse test with  $PW=300\mu\text{sec}$ , 1% duty cycle

## RATING AND CHARACTERISTIC CURVES (CDBFR03100-HF)

Fig.1 - Typical Forward Characteristics

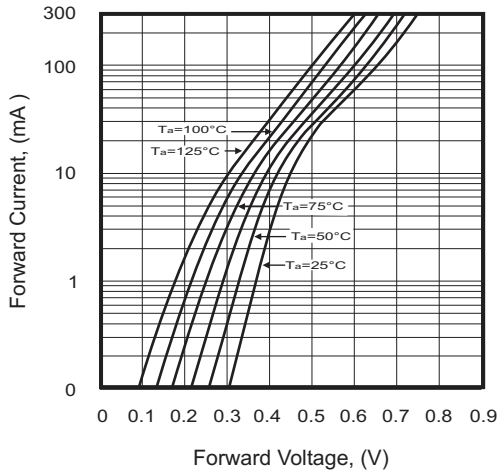


Fig.2 - Typical Reverse Characteristics

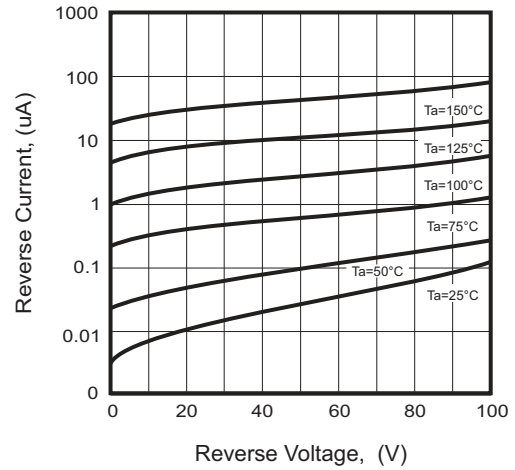


Fig.3 - Typical Capacitance Between Terminals Characteristics

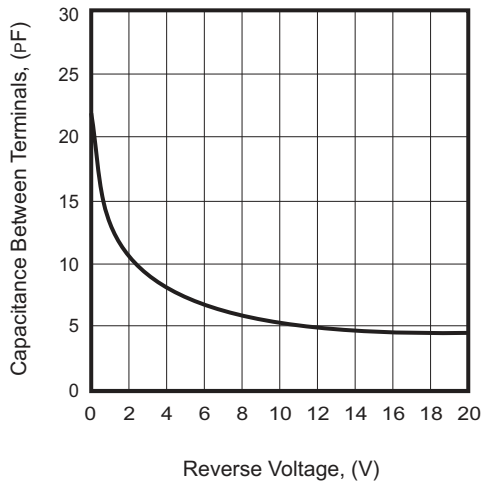
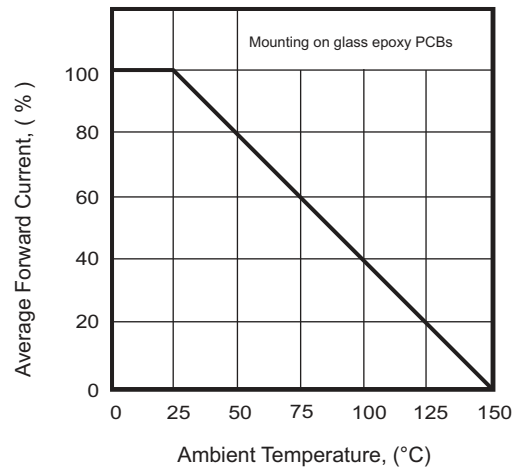
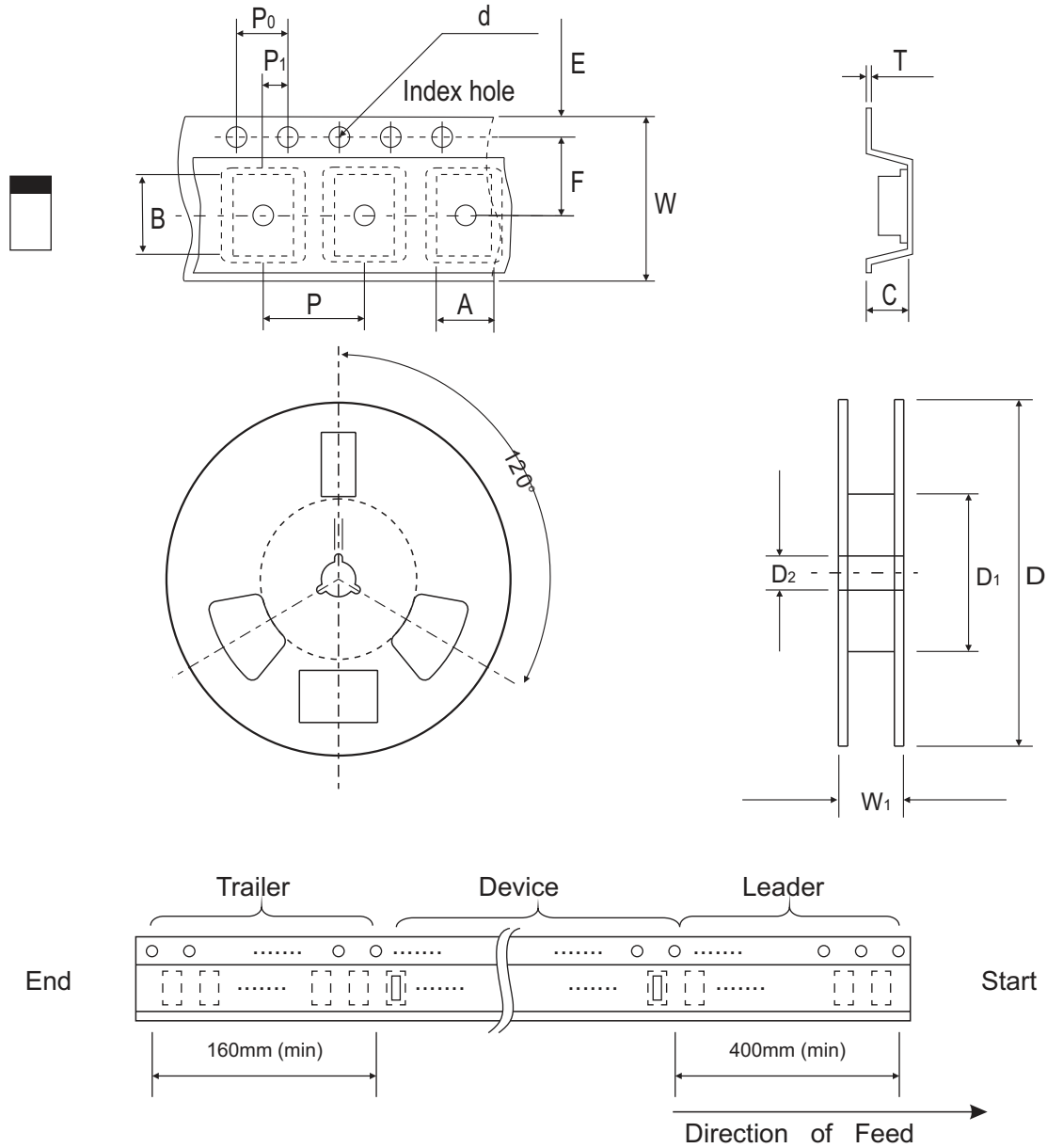


Fig.4 - Current Derating Curve



## Reel Taping Specification



| 1005 / SOD-323F | SYMBOL | A             | B             | C             | d                    | D             | D <sub>1</sub> | D <sub>2</sub> |
|-----------------|--------|---------------|---------------|---------------|----------------------|---------------|----------------|----------------|
|                 | (mm)   | 1.45 ± 0.05   | 2.80 ± 0.05   | 1.00 ± 0.05   | 1.50 + 0.10<br>- 0   | 178.00 ± 1.00 | 60.00 ± 0.50   | 13.50 ± 0.20   |
|                 | (inch) | 0.057 ± 0.002 | 0.110 ± 0.002 | 0.039 ± 0.002 | 0.059 + 0.004<br>- 0 | 7.008 ± 0.039 | 2.362 ± 0.020  | 0.531 ± 0.008  |

| 1005 / SOD-323F | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | T             | W             | W <sub>1</sub>       |
|-----------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------------|
|                 | (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 ± 0.10   | 12.00 + 0.50<br>- 0  |
|                 | (inch) | 0.069 ± 0.004 | 0.138 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.002  | 0.008 ± 0.002 | 0.315 ± 0.004 | 0.472 + 0.020<br>- 0 |

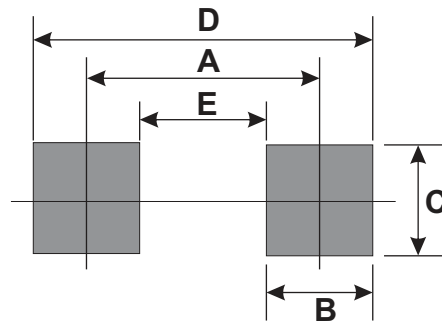
## Marking Code

| Part Number   | Marking Code |
|---------------|--------------|
| CDBFR03100-HF | BS           |



## Suggested PAD Layout

| SIZE | 1005/SOD-323F |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 2.00          | 0.079  |
| B    | 0.70          | 0.028  |
| C    | 1.30          | 0.051  |
| D    | 2.70          | 0.106  |
| E    | 1.30          | 0.051  |



## Standard Packaging

| Case Type     | Qty per Reel | Reel Size |
|---------------|--------------|-----------|
|               | (Pcs)        | (inch)    |
| 1005/SOD-323F | 4,000        | 7         |