

## CDBF0240

$I_o = 200 \text{ mA}$

$V_R = 40 \text{ Volts}$

RoHS Device



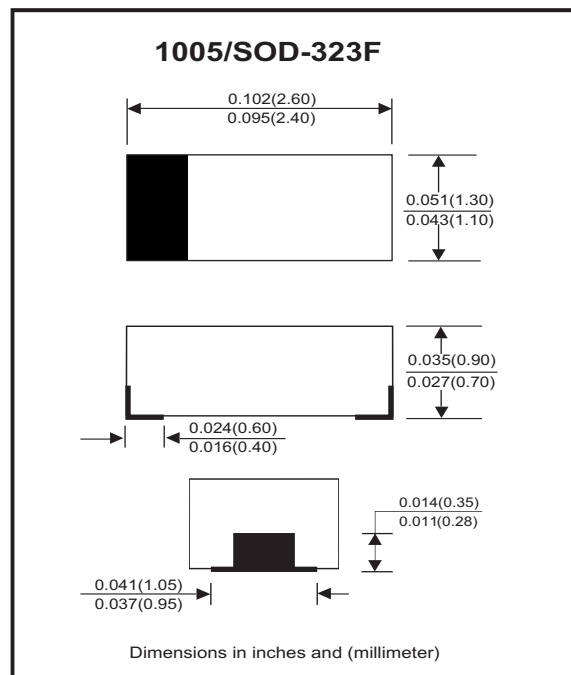
### Features

- Designed for mounting on small surface.
- Extremely thin/leadless package.
- 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    | Min | Typ | Max  | Unit             |
|---------------------------------|-----------------------------------------------------------------------|-----------|-----|-----|------|------------------|
| Repetitive peak reverse voltage |                                                                       | $V_{RRM}$ |     |     | 45   | V                |
| Reverse voltage                 |                                                                       | $V_R$     |     |     | 40   | V                |
| Average forward current         |                                                                       | $I_o$     |     |     | 200  | mA               |
| Forward current, surge peak     | 8.3 ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$ |     | 3   |      | A                |
| Power dissipation               |                                                                       | $P_D$     |     |     | 250  | mW               |
| Junction temperature            |                                                                       | $T_j$     |     |     | +125 | $^\circ\text{C}$ |
| Storage temperature             |                                                                       | $T_{STG}$ | -40 |     | +125 | $^\circ\text{C}$ |

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

| Parameter                     | Conditions                                     | Symbol | Min | Typ  | Max  | Unit          |
|-------------------------------|------------------------------------------------|--------|-----|------|------|---------------|
| Forward voltage               | $I_F = 200 \text{ mA DC}$                      | $V_F$  |     | 0.45 | 0.55 | V             |
| Reverse current               | $V_R = 30 \text{ V}$                           | $I_R$  |     | 1    | 10   | $\mu\text{A}$ |
| Capacitance between terminals | $F = 1 \text{ MHz}$ and 10 VDC reverse voltage | $C_T$  |     | 9    |      | pF            |

RATING AND CHARACTERISTIC CURVES (CDBF0240)

Fig. 1 - Forward characteristics

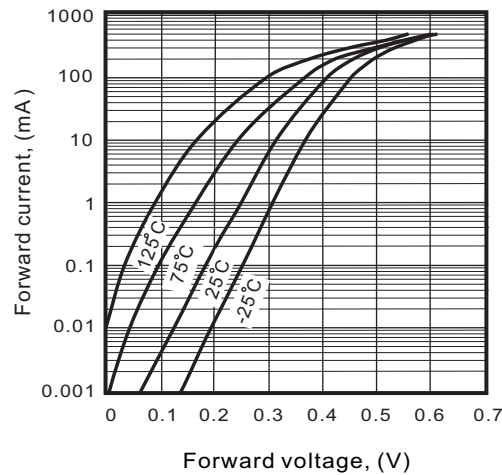


Fig. 2 - Reverse characteristics

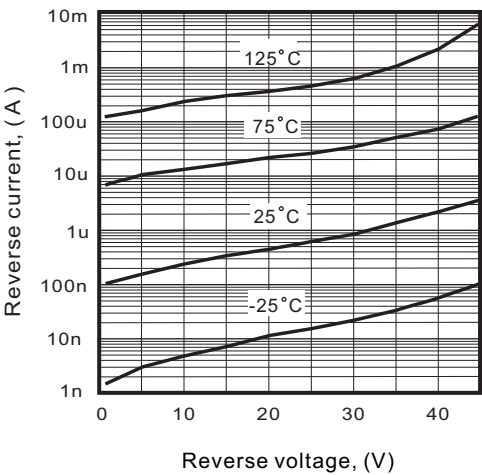


Fig. 3 - Capacitance between terminals characteristics

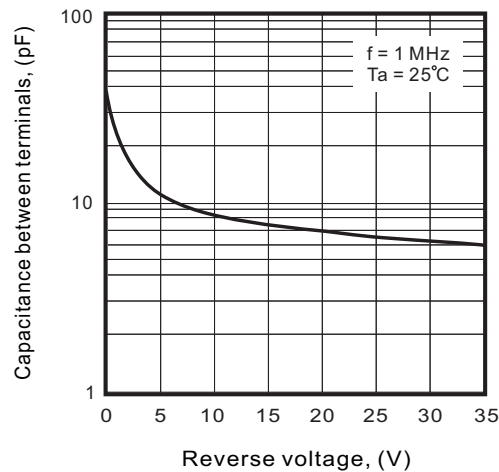
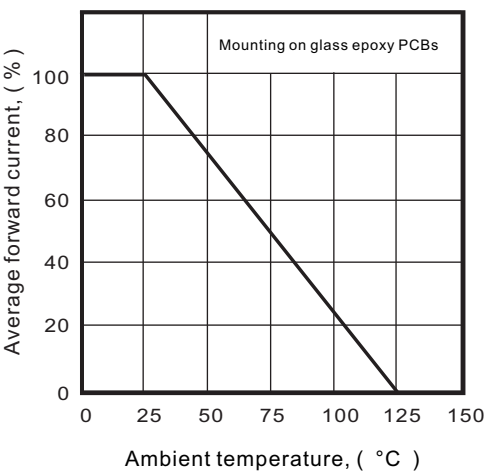
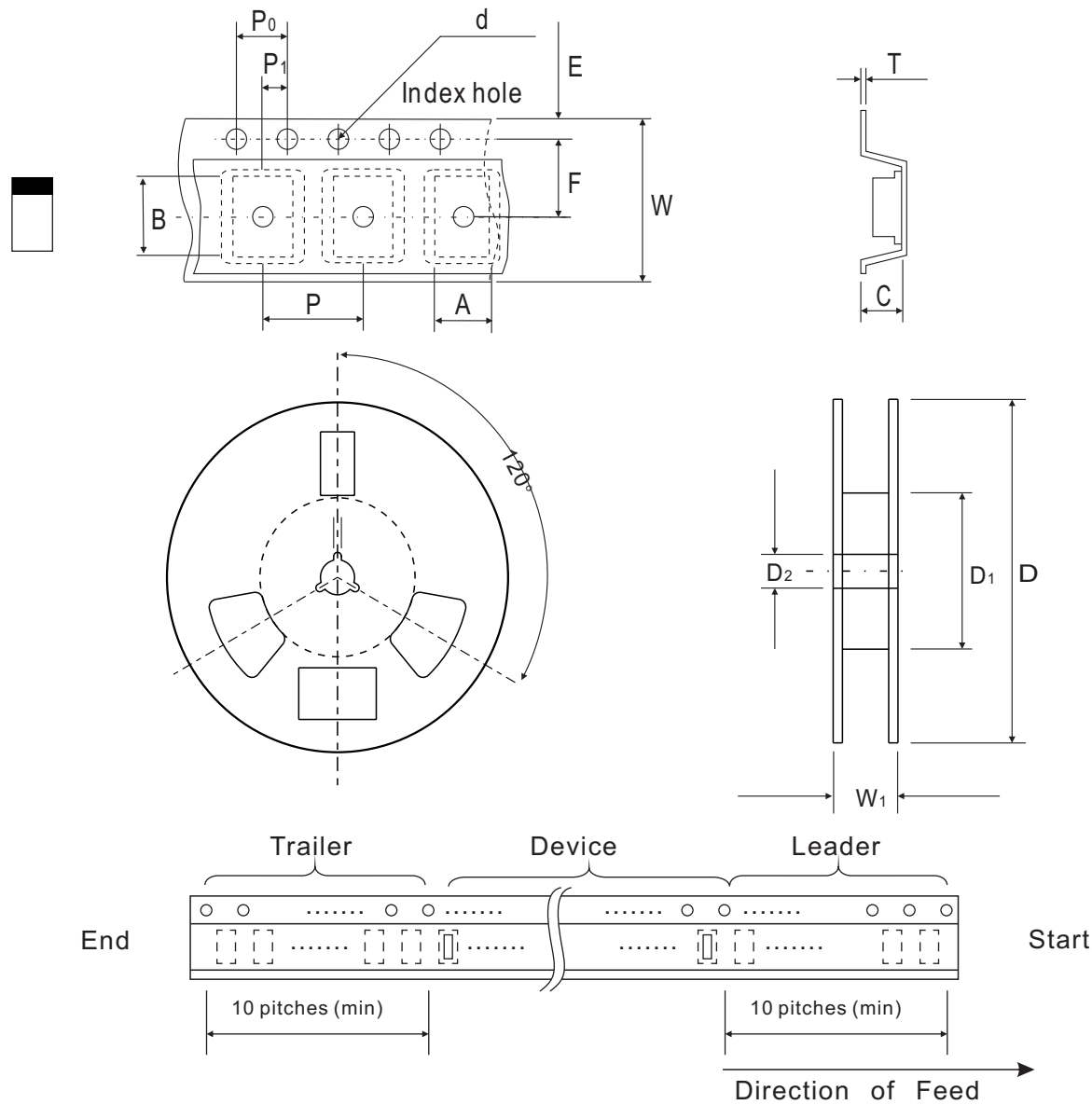


Fig. 4 - Current derating curve



Reel Taping Specification



|                    |        |               |               |               |               |              |                |                |
|--------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
| 1005<br>(SOD-323F) | SYMBOL | A             | B             | C             | d             | D            | D <sub>1</sub> | D <sub>2</sub> |
|                    | (mm)   | 1.55 ± 0.10   | 2.65 ± 0.10   | 1.05 ± 0.10   | 1.55 ± 0.05   | 178 ± 1      | 60.0 MIN.      | 13.0 ± 0.20    |
|                    | (inch) | 0.061 ± 0.004 | 0.104 ± 0.004 | 0.041 ± 0.004 | 0.061 ± 0.002 | 7.008 ± 0.04 | 2.362 MIN.     | 0.512 ± 0.008  |

|                    |        |               |               |               |                |                |               |               |                |
|--------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| 1005<br>(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 ± 0.20   | 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.     |

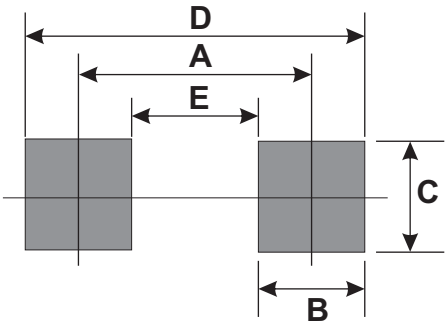
## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CDBF0240    | B7           |



## Suggested PAD Layout

| SIZE | 1005/SOD-323F |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 2.10          | 0.083  |
| B    | 1.20          | 0.047  |
| C    | 1.20          | 0.047  |
| D    | 3.30          | 0.130  |
| E    | 0.90          | 0.035  |



## Standard Packaging

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