

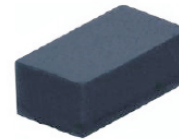
## CDBFR0320/0330/0340-HF

$I_o = 350 \text{ mA}$

$V_R = 20 \text{ to } 40 \text{ Volts}$

RoHS Device

Halogen Free

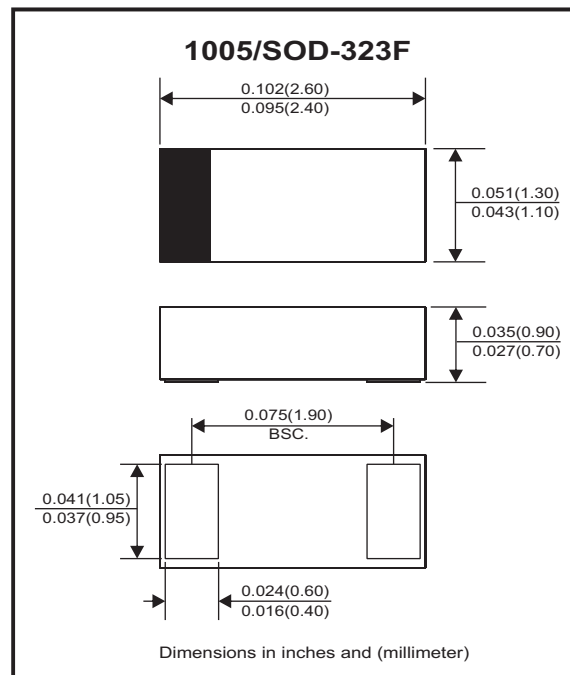


### Features

- Low forward voltage.
- 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  | Symbol          | CDBFR0320-HF | CDBFR0330-HF | CDBFR0340-HF | Unit               |
|--|-----------------|--------------|--------------|--------------|--------------------|
| Repetitive Peak reverse voltage                            | $V_{RRM}$       | 20           | 30           | 40           | V                  |
| Reverse voltage  | $V_R$           | 20           | 30           | 40           | V                  |
| RMS reverse voltage  | $V_{R(MS)}$     | 14           | 21           | 28           | V                  |
| Average forward rectified current                          | $I_o$           | 350          |              |              | mA                 |
| Peak forward surge current<br>8.3 ms single half sine-wave | $I_{FSM}$       | 1.5          |              |              | A                  |
| Power dissipation  | $P_D$           | 200          |              |              | mW                 |
| Thermal resistance junction to ambient air                 | $R_{\theta JA}$ | 500          |              |              | $^\circ\text{C/W}$ |
| Junction temperature                                       | $T_j$           | +125         |              |              | $^\circ\text{C}$   |
| Storage temperature range                                  | $T_{STG}$       | -65 to +125  |              |              | $^\circ\text{C}$   |

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

| Parameter                     | Conditions   | Symbol   | Min | Typ | Max          | Unit          |
|-------------------------------|--|----------|-----|-----|--------------|---------------|
| Reverse current               | $V_R = 10\text{V}$<br>$V_R = 20\text{V}$<br>$V_R = 30\text{V}$ | $I_R$    |     |     | 5<br>5<br>5  | $\mu\text{A}$ |
| Forward voltage               | $I_F = 20\text{mA}$<br>$I_F = 200\text{mA}$                    | $V_F$    |     |     | 0.37<br>0.60 | V             |
| Capacitance between terminals | $f = 1 \text{ MHz}$ , and 0V DC reverse voltage                | $C_T$    |     | 50  |              | pF            |
| Reverse recovery time         | $I_F = I_R$ , $I_{rr} = 0.1X I_R$ , $R_L = 100 \text{ ohm}$    | $T_{rr}$ |     | 6.4 |              | nS            |

## RATING AND CHARACTERISTIC CURVES (CDBFR0320/0330/0340-HF)

Fig. 1 - Forward Characteristics

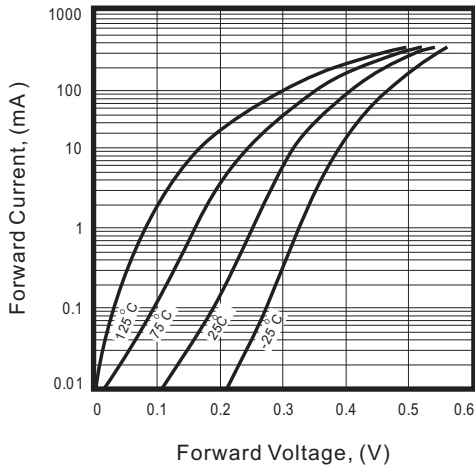


Fig. 2 - Reverse Characteristics

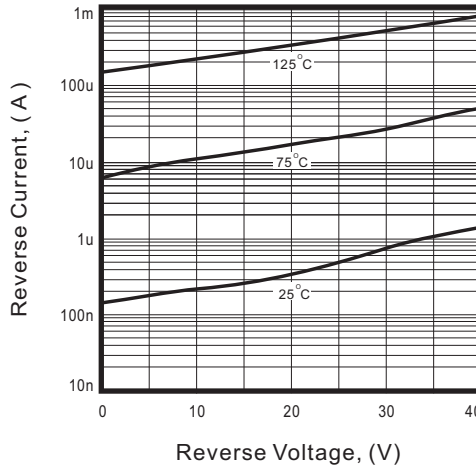


Fig.3 - Capacitance Between Terminals Characteristics

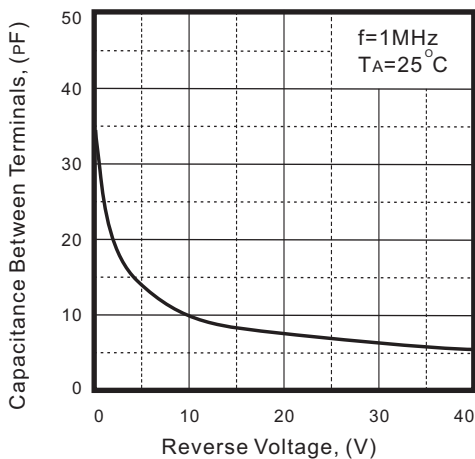
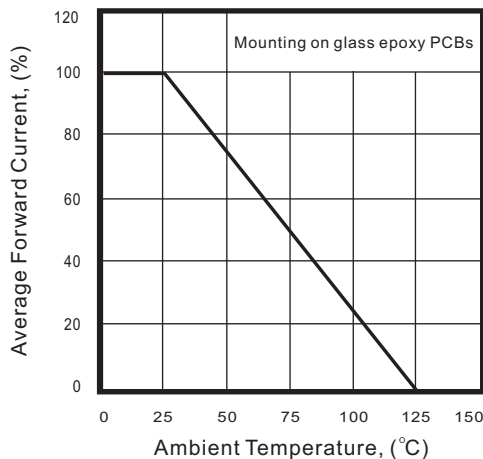
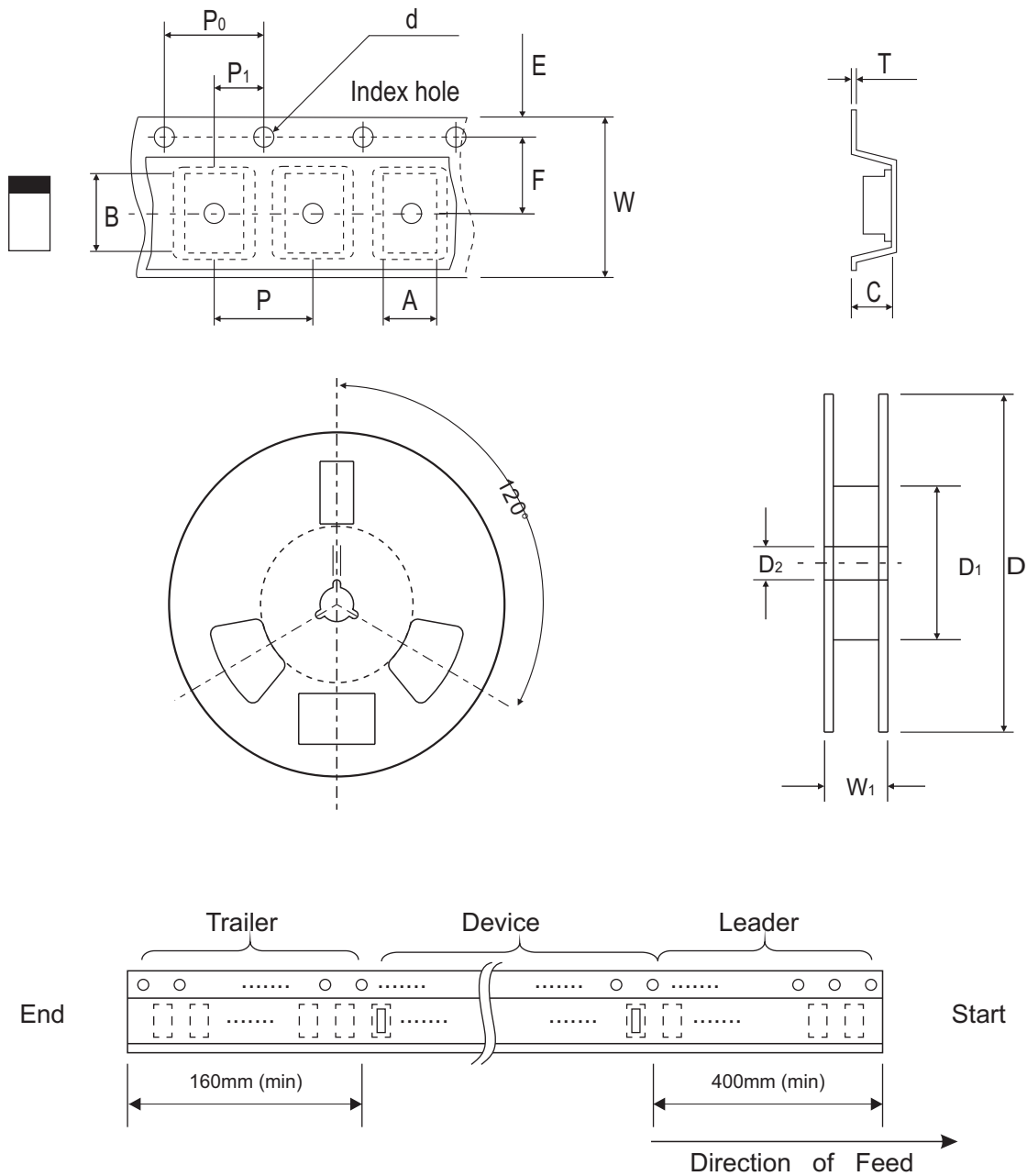


Fig.4 - Current Derating Curve



## Reel Taping Specification



| 1005<br>(SOD-323F) | SYMBOL | A             | B             | C             | d                    | D             | D <sub>1</sub> | D <sub>2</sub> |
|--------------------|--------|---------------|---------------|---------------|----------------------|---------------|----------------|----------------|
|                    | (mm)   | 1.45 ± 0.05   | 2.80 ± 0.05   | 1.00 ± 0.05   | 1.50 + 0.10<br>- 0   | 178.00 ± 1.00 | 60.0 ± 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<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 ± 0.10   | 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  | 0.009 ± 0.002 | 0.315 ± 0.004 | 0.472 + 0.020<br>- 0 |