

## CDBQC0130L-HF

$I_o = 100 \text{ mA}$   
 $V_R = 30 \text{ Volts}$   
 RoHS Device  
 Halogen Free



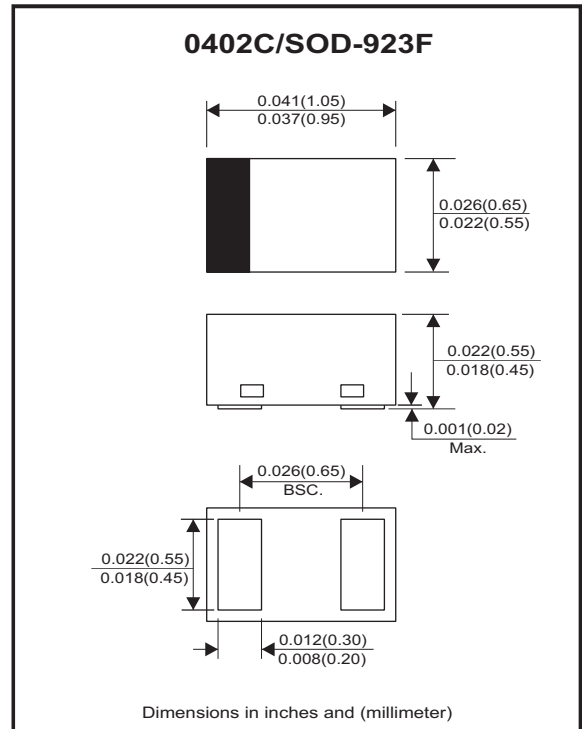
### Features

- Low forward voltage.
- Designed for mounting on small surface.
- Extremely thin package.
- Majority carrier conduction.

### Mechanical data

- Case: 0402C/SOD-923F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Polarity: Cathode band & BP
- Mounting position: Any
- Weight: 0.001 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   |                                      | $V_{RRM}$       |     |     | 35   | V                         |
| Reverse voltage                   |                                      | $V_R$           |     |     | 30   | V                         |
| Average forward rectified current |                                      | $I_o$           |     |     | 100  | mA                        |
| Peak forward surge current        | 8.3 ms single half sine-wave (1 cyc) | $I_{FSM}$       |     |     | 3    | A                         |
| Thermal resistance                | Junction to ambient                  | $R_{\theta JA}$ |     | 200 |      | $^\circ\text{C}/\text{W}$ |
| Junction temperature range        |                                      | $T_j$           | -40 |     | +125 | $^\circ\text{C}$          |
| Storage temperature range         |                                      | $T_{STG}$       | -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               | $I_F = 10\text{mA}$                  | $V_F$  |     | 0.25 | 0.30 | V             |
| Reverse current               | $V_R = 10\text{V}$                   | $I_R$  |     |      | 10   | $\mu\text{A}$ |
| Capacitance between terminals | $V_R = 1\text{V}, f = 1 \text{ MHz}$ | $C_T$  |     | 14   | 20   | pF            |

## RATING AND CHARACTERISTIC CURVES (CDBQC0130L-HF)

Fig.1 - Forward Characteristics

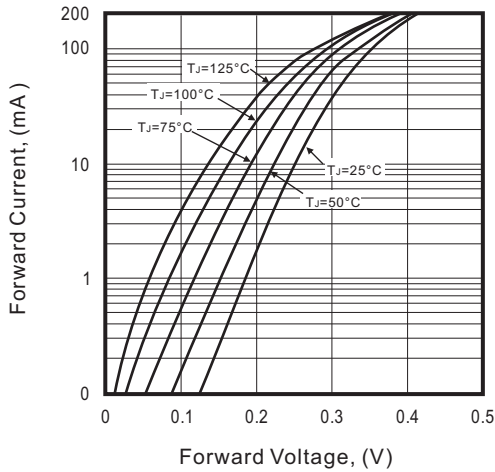


Fig.2 - Reverse Characteristics

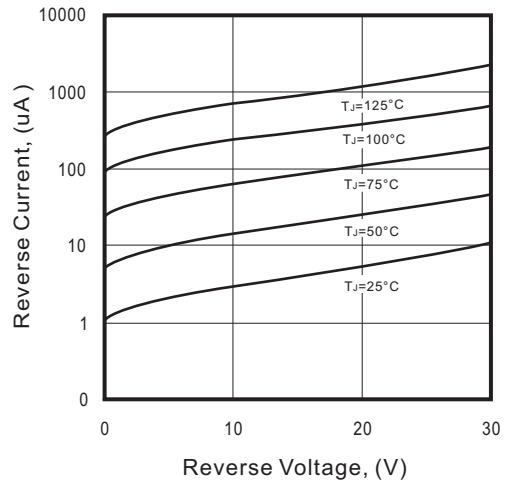


Fig.3 - Typical Capacitance Between Terminals Characteristics

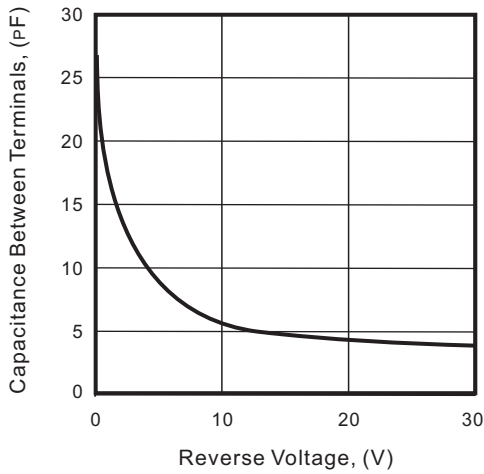
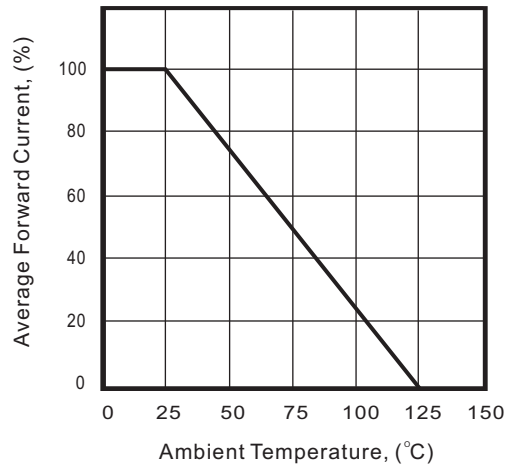
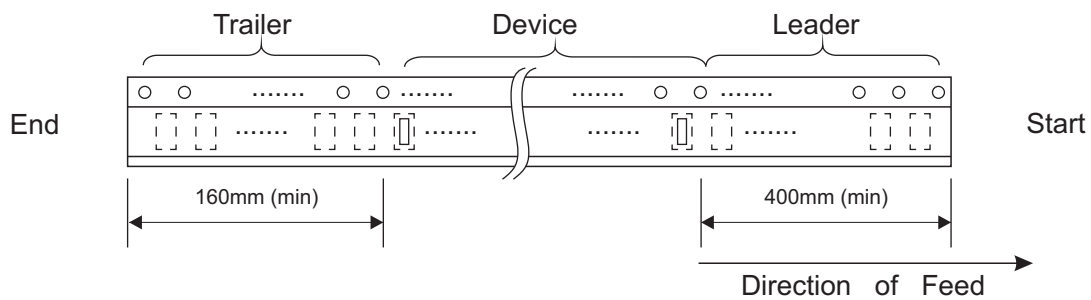
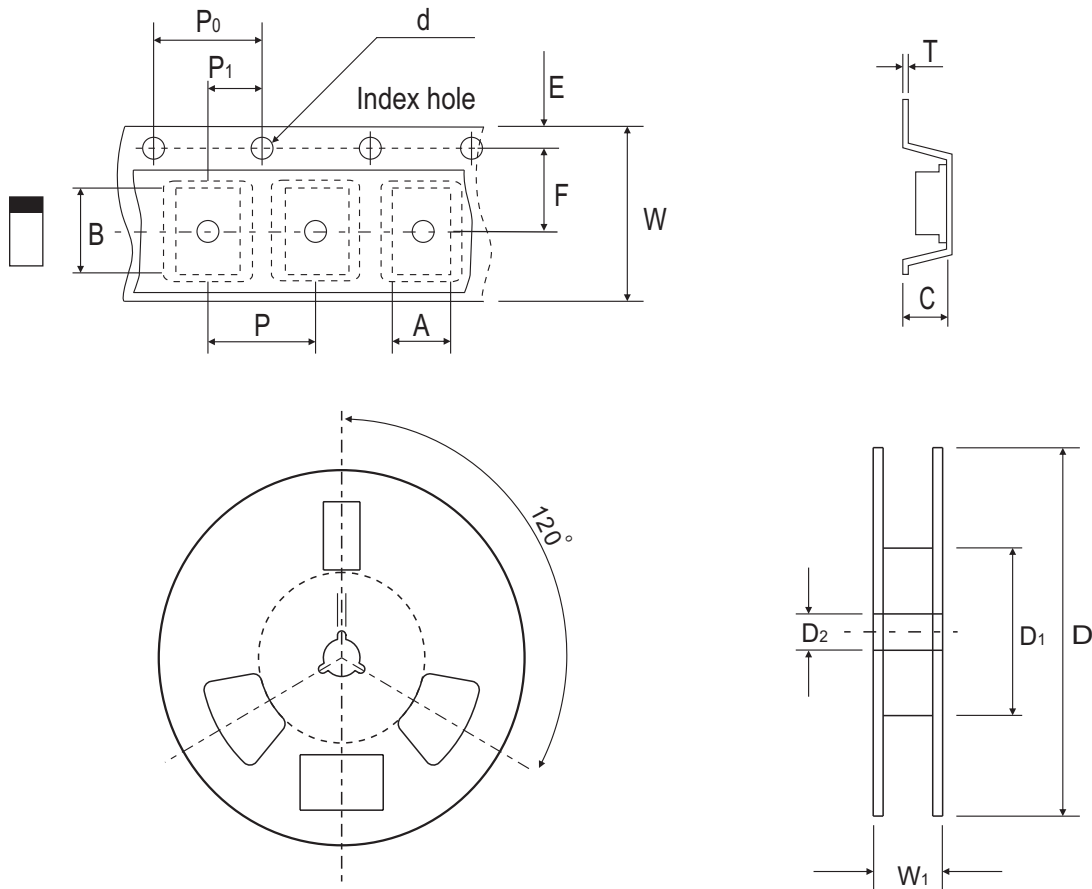


Fig.4 - Current Derating Curve



## Reel Taping Specification



| 0402C<br>(SOD-923F) | SYMBOL | A             | B             | C             | d                    | D             | D <sub>1</sub> | D <sub>2</sub> |
|---------------------|--------|---------------|---------------|---------------|----------------------|---------------|----------------|----------------|
|                     | (mm)   | 0.75 ± 0.05   | 1.17 ± 0.05   | 0.65 ± 0.05   | 1.50 + 0.10<br>- 0   | 178.00 ± 1.00 | 60.00 ± 0.50   | 13.50 ± 0.20   |
|                     | (inch) | 0.030 ± 0.002 | 0.046 ± 0.002 | 0.026 ± 0.002 | 0.059 + 0.004<br>- 0 | 7.008 ± 0.039 | 2.362 ± 0.020  | 0.531 ± 0.008  |

| 0402C<br>(SOD-923F) | 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 ± 0.10   | 4.00 ± 0.10   | 4.00 ± 0.10    | 2.00 ± 0.10    | 0.20 + 0.02<br>- 0.05    | 8.00 ± 0.20   | 12.00 + 0.50<br>- 0  |
|                     | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.004  | 0.008 + 0.001<br>- 0.002 | 0.315 ± 0.008 | 0.472 + 0.020<br>- 0 |

Company reserves the right to improve product design, functions and reliability without notice.

REV:C

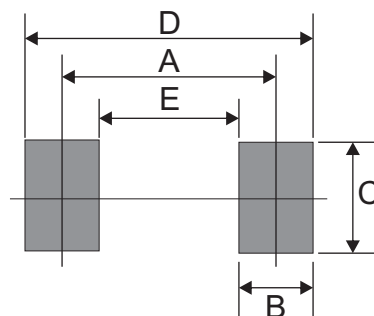
## Marking Code

| Part Number   | Marking Code |
|---------------|--------------|
| CDBQC0130L-HF | BP           |



## Suggested PAD Layout

| SIZE | 0402C/SOD-923F |        |
|------|----------------|--------|
|      | (mm)           | (inch) |
| A    | 0.70           | 0.028  |
| B    | 0.40           | 0.016  |
| C    | 0.60           | 0.024  |
| D    | 1.10           | 0.043  |
| E    | 0.30           | 0.012  |



## Standard Packaging

| Case Type      | REEL PACK    |                  |
|----------------|--------------|------------------|
|                | REEL ( pcs ) | Reel Size (inch) |
| 0402C/SOD-923F | 5,000        | 7                |