

## CDBU70-HF

**Io = 70 mA**  
**VR = 70 Volts**  
**RoHS Device**  
**Halogen Free**

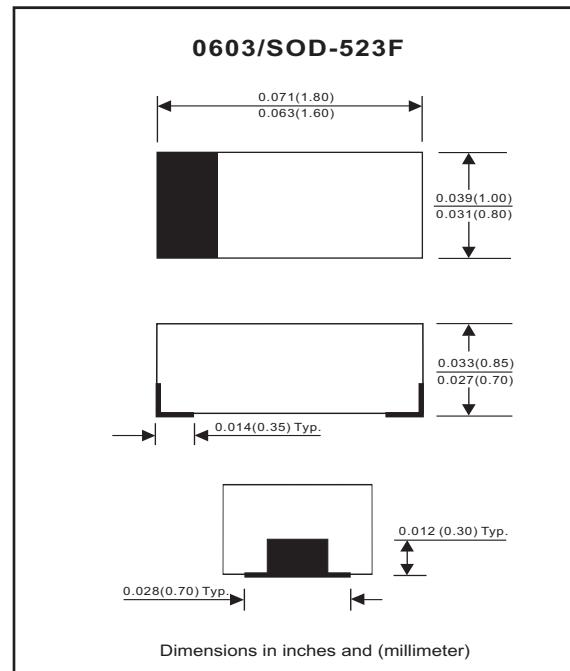


### Features

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

### Mechanical data

- Case: 0603/SOD-523F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking code: cathode band & BG
- Mounting position: Any
- Weight: 0.003 gram(approx.).



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

| Parameter                         | Conditions   | Symbol               | Min | Typ | Max  | Unit |
|-----------------------------------|--|----------------------|-----|-----|------|------|
| Peak reverse voltage              |  | V <sub>RM</sub>      |     |     | 70   | V    |
| Reverse voltage                   |  | V <sub>R</sub>       |     |     | 70   | V    |
| RMS reverse voltage               |  | V <sub>R</sub> (RMS) |     |     | 49   | V    |
| Average forward rectified current |  | I <sub>o</sub>       |     |     | 70   | mA   |
| Forward current,surge peak        | 8.3 ms single half sine-wave superimposed on rate load(JEDEC method) | I <sub>FSM</sub>     |     |     | 0.1  | A    |
| Power dissipation                 |  | P <sub>D</sub>       |     |     | 150  | mW   |
| Storage temperature               |  | T <sub>STG</sub>     | -65 |     | +125 | °C   |
| Junction temperature              |  | T <sub>j</sub>       |     |     | +125 | °C   |

### Electrical Characteristics (at TA=25°C unless otherwise noted)

| Parameter                     | Conditions   | Symbol          | Min | Typ | Max       | Unit |
|-------------------------------|--|-----------------|-----|-----|-----------|------|
| Forward voltage               | I <sub>F</sub> = 1mA<br>I <sub>F</sub> = 15mA  | V <sub>F</sub>  |     |     | 0.41<br>1 | V    |
| Reverse current               | V <sub>R</sub> = 50V   | I <sub>R</sub>  |     |     | 0.1       | uA   |
| Capacitance between terminals | f = 1 MHz, and 0 VDC reverse voltage   | C <sub>T</sub>  |     |     | 2         | pF   |
| Reverse recovery time         | I <sub>F</sub> =I <sub>R</sub> =10mA,I <sub>rr</sub> =0.1xI <sub>R</sub> ,RL=100 Ohm | T <sub>rr</sub> |     |     | 5         | nS   |

## RATING AND CHARACTERISTIC CURVES (CDBU70-HF)

Fig. 1 - Forward characteristics

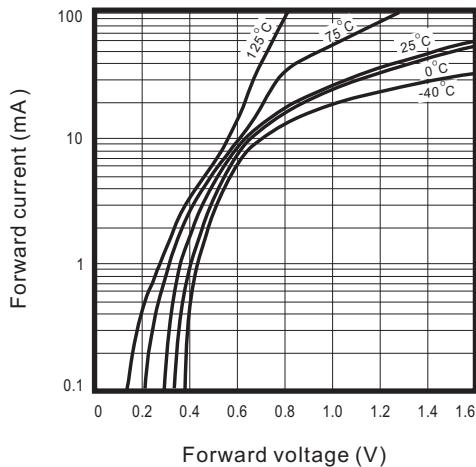


Fig. 2 - Reverse characteristics

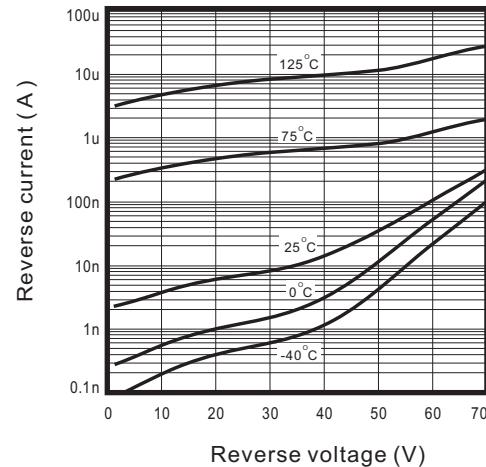


Fig.3 - Capacitance between terminals characteristics

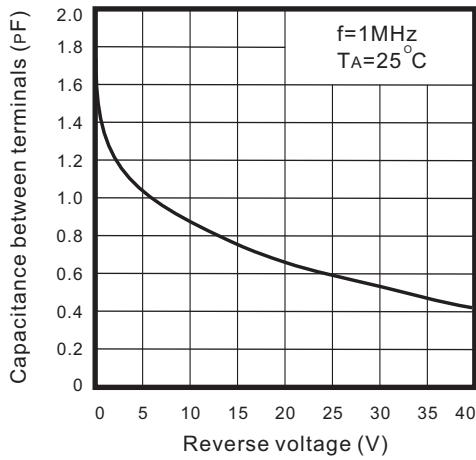
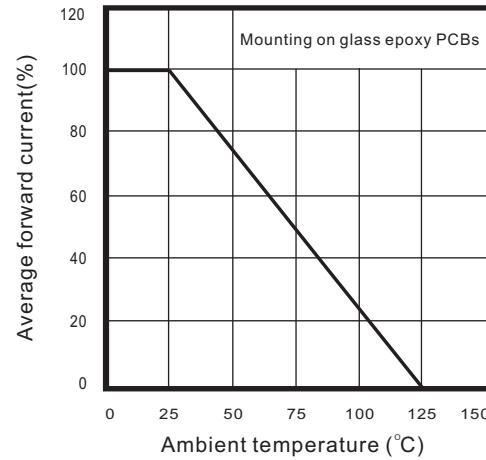
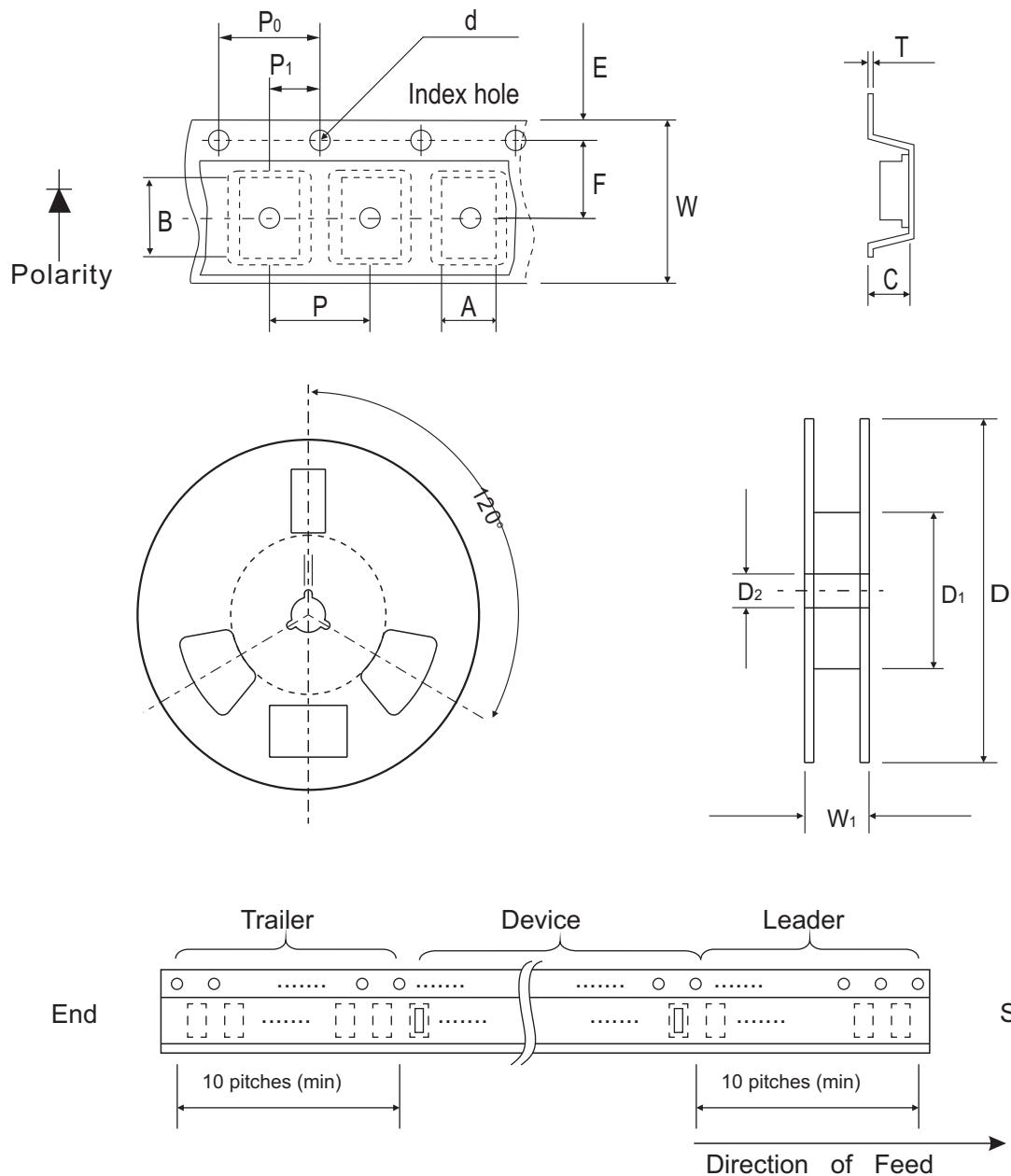


Fig.4 - Current derating curve



## Reel Taping Specification



| 0603<br>(SOD-523F) | SYMBOL | A             | B             | C             | d             | D            | D <sub>1</sub> | D <sub>2</sub> |
|--------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
|                    | (mm)   | 1.00 ± 0.10   | 1.85 ± 0.10   | 1.00 ± 0.10   | 1.55 ± 0.05   | 178 ± 1      | 60.0 MIN.      | 13.0 ± 0.20    |
|                    | (inch) | 0.039 ± 0.004 | 0.073 ± 0.004 | 0.039 ± 0.004 | 0.061 ± 0.002 | 7.008 ± 0.04 | 2.362 MIN.     | 0.512 ± 0.008  |

| 0603<br>(SOD-523F) | 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.     |

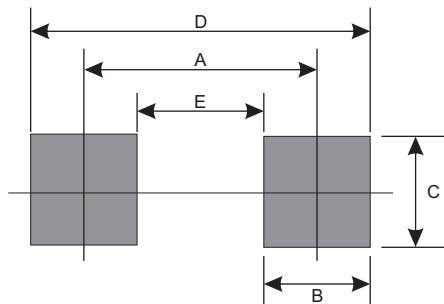
## Marking Code

| Park Number | Marking Code |
|-------------|--------------|
| CDBU70-HF   | BG           |



## Suggested PAD Layout

| SIZE | 0603/SOD-523F |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 1.70          | 0.067  |
| B    | 0.60          | 0.024  |
| C    | 0.80          | 0.031  |
| D    | 2.30          | 0.091  |
| E    | 1.10          | 0.043  |



## Standard Package

| Case Type     | Qty per Reel | Reel Size |
|---------------|--------------|-----------|
|               | (Pcs)        | (inch)    |
| 0603/SOD-523F | 4000         | 7         |

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