

## CDSU400B

### RoHS Device

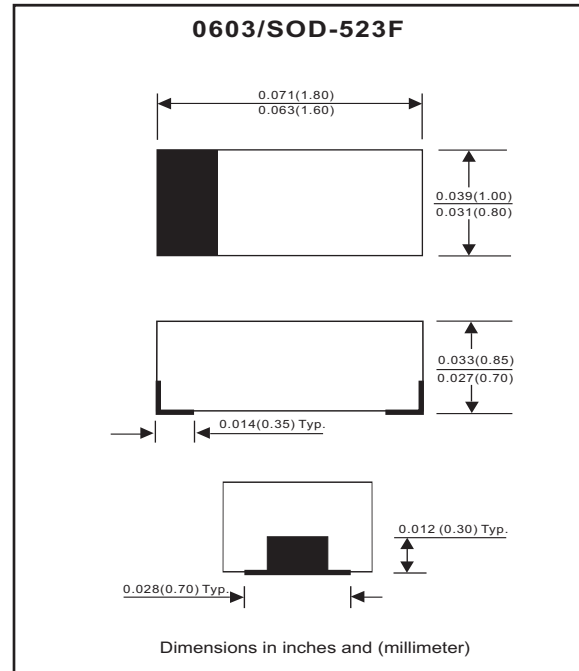


### Features

- High Speed
- Designed for mounting on small surface.
- Extremely thin/leadless package.
- Low leakage current.
- High mounting capability, strong surge withstand, high reliability.

### Mechanical data

- Case: 0603/SOD-523F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking Code: Cathode band & S4
- Mounting position: Any.
- Weight: 0.003 gram (approx.)



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

| Parameter                                  | Conditions  | Symbol           | Min | Typ  | Max  | Unit |
|--|---|------------------|-----|------|------|------|
| Repetitive peak reverse voltage            |   | V <sub>RRM</sub> |     |      | 90   | V    |
| Reverse voltage                            |   | V <sub>R</sub>   |     |      | 80   | V    |
| Average forward current                    |   | I <sub>o</sub>   |     |      | 100  | mA   |
| Forward current , surge peak               | 8.3 ms single half sine-wave superimposed on rate load ( JEDEC method ) | I <sub>FSM</sub> |     | 1000 |      | mA   |
| Repetitive peak forward current            |   | I <sub>FRM</sub> |     |      | 225  | mA   |
| Power dissipation                          |   | P <sub>D</sub>   |     |      | 150  | mW   |
| Thermal resistance junction to ambient air |   | R <sub>θJA</sub> |     |      | 667  | °C/W |
| Storage temperature                        |   | T <sub>STG</sub> | -55 |      | +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 |
|-------------------------------|--|-----------------|-----|-----|-----|------|
| Reverse breakdown voltage     | I <sub>R</sub> = 50 uA   | V <sub>BR</sub> | 80  |     |     | V    |
| Forward voltage               | I <sub>F</sub> = 100 mA  | V <sub>F</sub>  |     |     | 1.0 | V    |
| Reverse current               | V <sub>R</sub> = 80 V  | I <sub>R</sub>  |     |     | 0.1 | uA   |
| Capacitance between terminals | f = 1MHz, and 0.5VDC reverse voltage                                 | C <sub>T</sub>  |     |     | 3   | pF   |
| Reverse recovery time         | V <sub>R</sub> = 6V, I <sub>F</sub> = 10 mA, R <sub>L</sub> =50 ohms | T <sub>rr</sub> |     |     | 4   | nS   |

## RATING AND CHARACTERISTIC CURVES (CDSU400B )

Fig. 1 - Forward characteristics

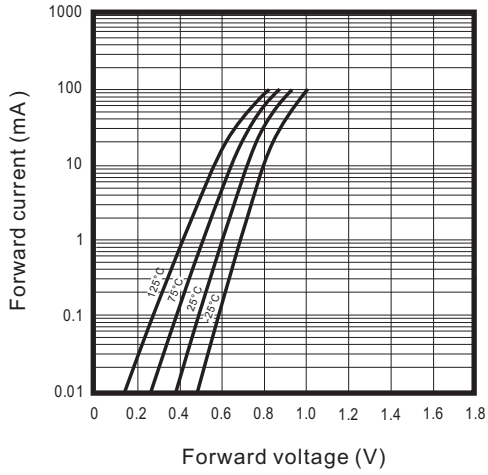


Fig. 2 - Reverse characteristics

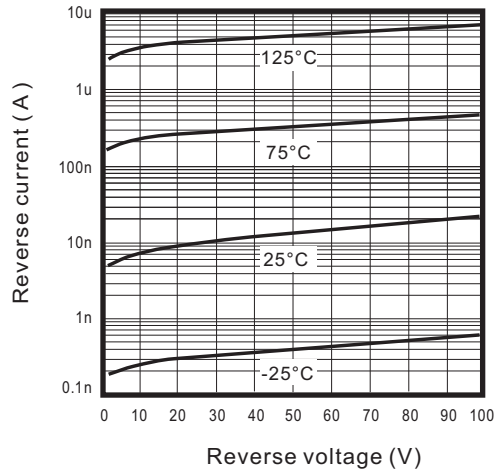


Fig. 3 - Capacitance between terminals characteristics

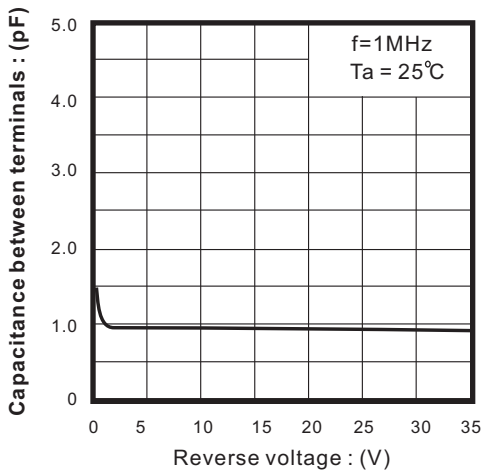
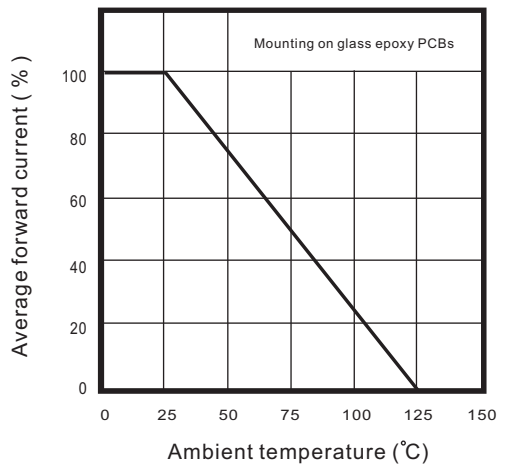
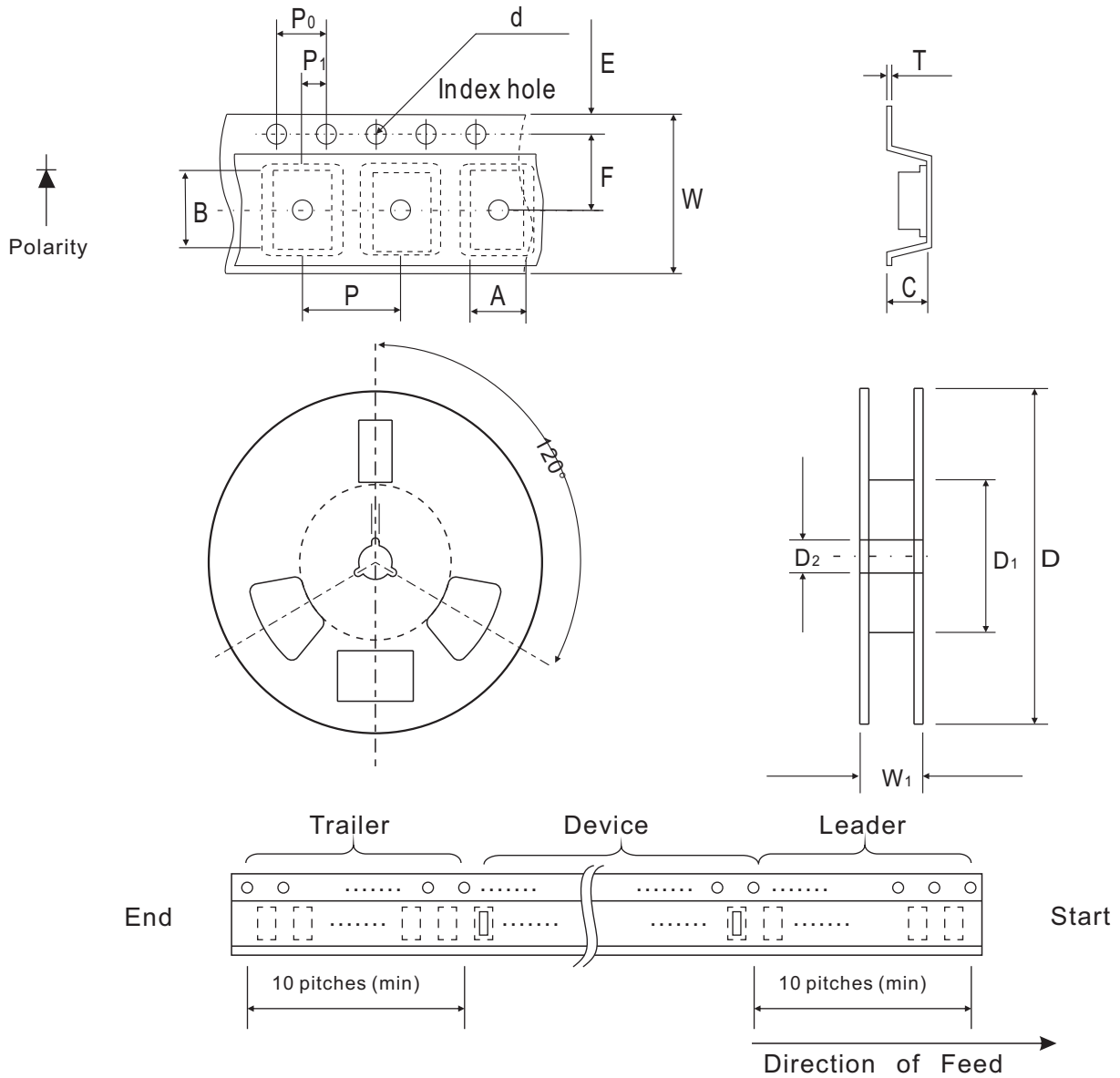


Fig. 4 - Current derating curve



## 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.     |

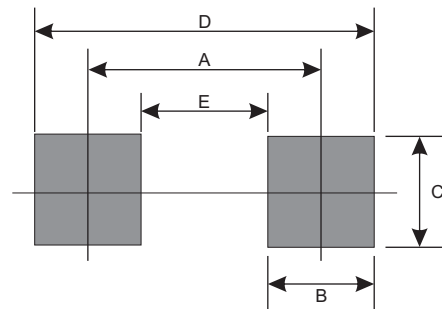
## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CDSU400B    | S4           |



## 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         |