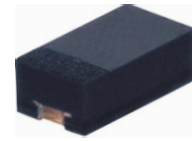


## CDSU4148-HF

### RoHS Device

### Halogen Free



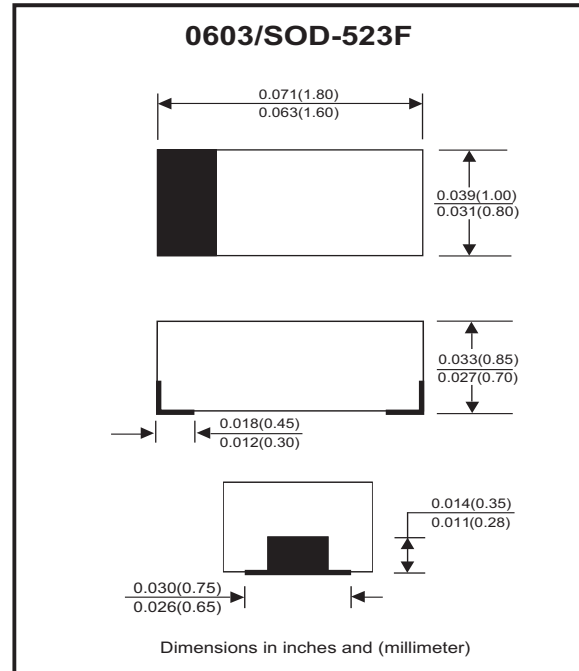
### Features

- High Speed.
- Designed for mounting on small surface.
- Extremely thin/leadless package.
- 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.
- Polarity: Indicated by cathode band.
- Mounting position: Any.
- Weight: 0.003 grams (approx.).

### Circuit diagram



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

| Parameter                       | Conditions                                 | Symbol           | Min | Typ    | Max  | Unit |
|---------------------------------|--|------------------|-----|--------|------|------|
| Repetitive peak reverse voltage |  | V <sub>RRM</sub> |     |        | 100  | V    |
| Reverse voltage                 |  | V <sub>R</sub>   |     |        | 75   | V    |
| Average forward current         |  | I <sub>O</sub>   |     |        | 150  | mA   |
| Forward current, surge peak     | T <sub>p</sub> =1μS<br>T <sub>p</sub> =1mS | I <sub>FSM</sub> |     | 4<br>1 |      | A    |
| Power dissipation               |  | P <sub>D</sub>   |     |        | 150  | mW   |
| Operating temperature range     |  | T <sub>j</sub>   | -40 |        | +125 | °C   |
| Storage temperature range       |  | T <sub>STG</sub> | -40 |        | +125 | °C   |

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

| Parameter                     | Conditions  | Symbol          | Min | Typ | Max       | Unit     |
|-------------------------------|---|-----------------|-----|-----|-----------|----------|
| Forward voltage               | I <sub>F</sub> = 50 mA DC   | V <sub>F</sub>  |     |     | 1.0       | V        |
| Reverse current               | V <sub>R</sub> = 20V<br>V <sub>R</sub> = 75V  | I <sub>R</sub>  |     |     | 25<br>2.5 | nA<br>μA |
| Capacitance between terminals | f = 1MHz, and 0 VDC reverse voltage   | C <sub>T</sub>  |     |     | 4         | pF       |
| Reverse recovery time         | I <sub>F</sub> = I <sub>R</sub> = 10 mA, R <sub>L</sub> = 100 ohms, I <sub>rr</sub> = 1mA | T <sub>rr</sub> |     |     | 4         | nS       |

## RATING AND CHARACTERISTIC CURVES (CDSU4148-HF)

Fig.1 - Forward Characteristics

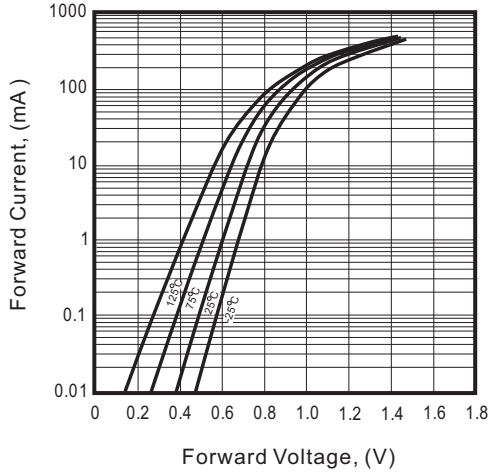


Fig.2 - Reverse Characteristics

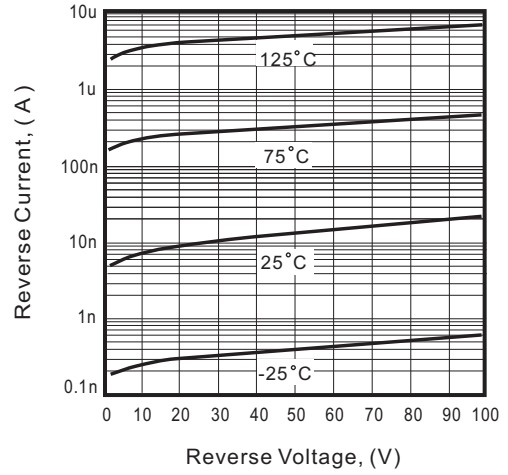


Fig.3 - Capacitance Between Terminals Characteristics

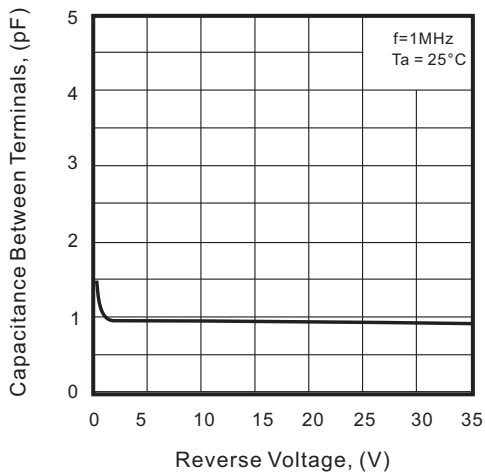
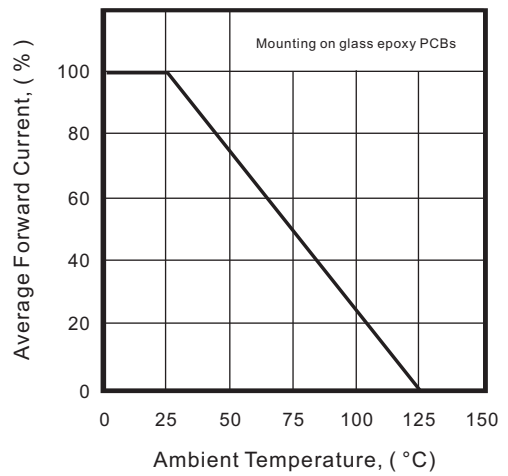
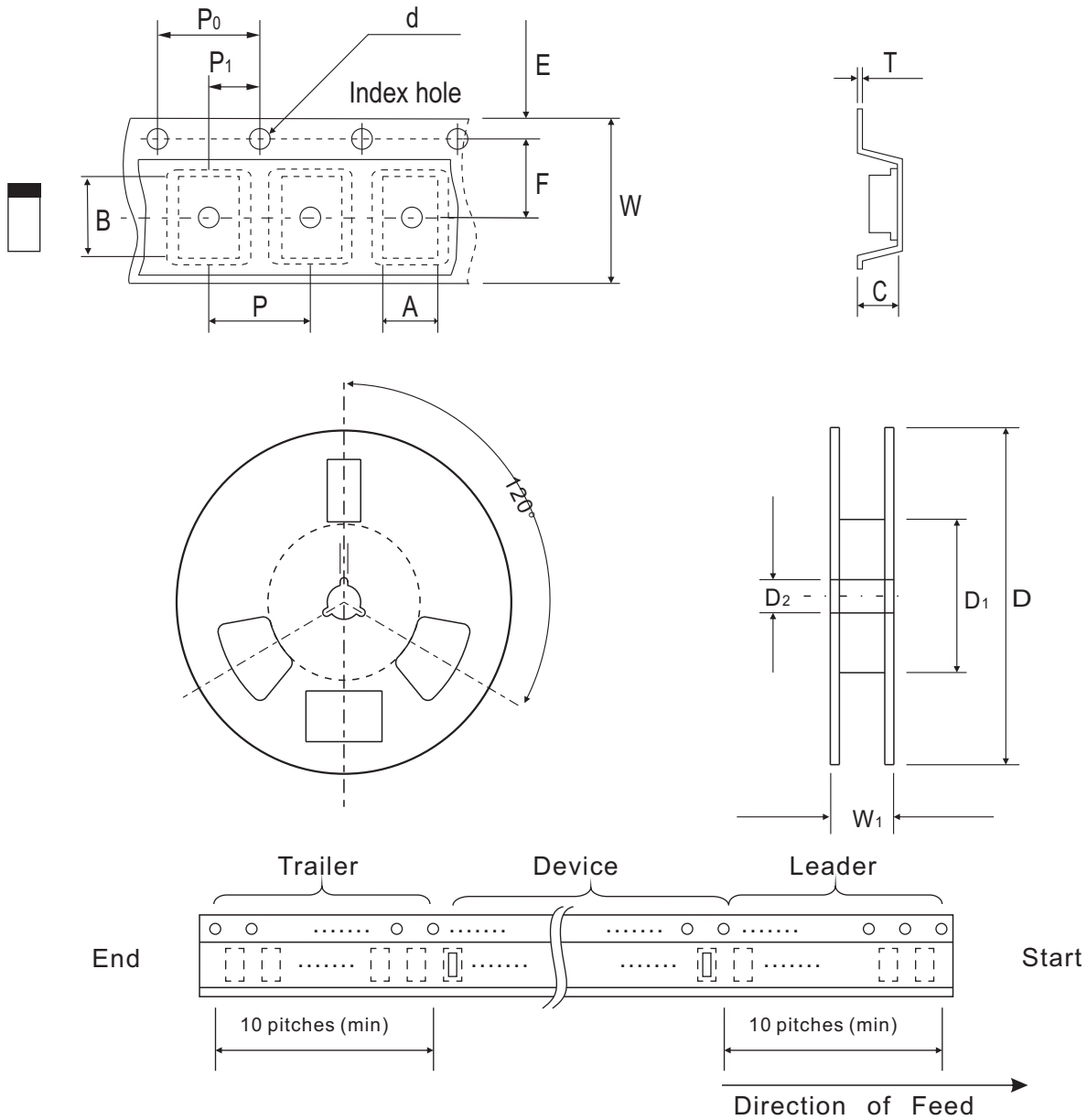


Fig.4 - Current Derating Curve



## 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 ± 0.10   | 178 ± 1.00   | 60.0 MIN.      | 13.0 ± 0.20    |
|                    | (inch) | 0.039 ± 0.004 | 0.073 ± 0.004 | 0.039 ± 0.004 | 0.061 ± 0.004 | 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          |
|                    | (mm)   | 1.75 ± 0.10   | 3.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.10    | 2.00 ± 0.10    | 0.23 ± 0.05   | 8.00 ± 0.20   | 13.50 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. |