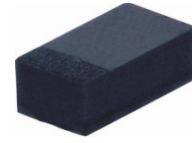


## CDSQR4448S-HF

RoHS Device  
Halogen Free

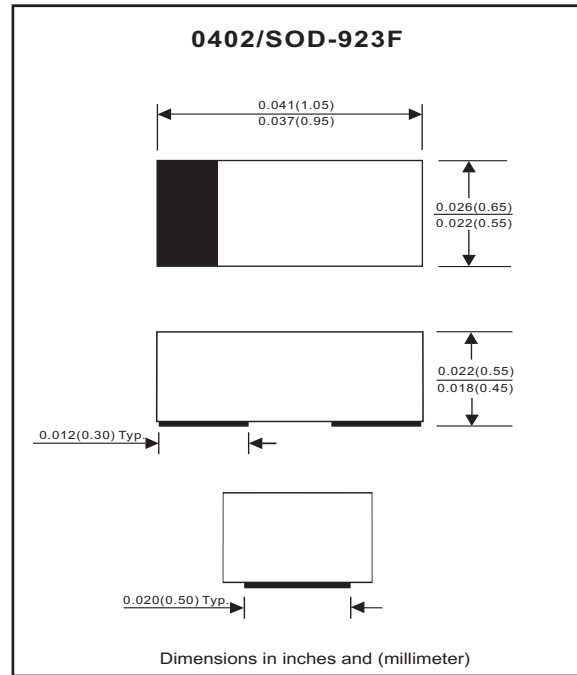


### Features

- High Speed.
- Fast Switching Speed.
- Designed for mounting on small surface.
- Extremely thin/leadless package.

### Mechanical data

- Case: 0402/SOD-923F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any.
- Weight: 0.001 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> |     |     | 100  | V    |
| Reverse voltage                 |                        | V <sub>R</sub>   |     |     | 100  | V    |
| Average forward current         |                        | I <sub>O</sub>   |     |     | 125  | mA   |
| Forward current, surge peak     | T <sub>P</sub> = 8.3mS | I <sub>FSM</sub> |     |     | 1.5  | A    |
| Power Dissipation               |                        | P <sub>D</sub>   |     |     | 125  | mW   |
| Storage temperature             |                        | T <sub>STG</sub> | -55 |     | +150 | °C   |
| Junction temperature            |                        | T <sub>j</sub>   |     |     | +150 | °C   |

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

| Parameter                     | Conditions   | Symbol          | Min | Typ | Max       | Unit |
|-------------------------------|--|-----------------|-----|-----|-----------|------|
| Forward voltage               | I <sub>F</sub> = 100 mA  | V <sub>F</sub>  |     |     | 1.0       | V    |
| Reverse current               | V <sub>R</sub> = 30 V<br>V <sub>R</sub> = 100 V  | I <sub>R</sub>  |     |     | 25<br>100 | nA   |
| Capacitance between terminals | f = 1 MHz, and 0~40 VDC reverse voltage  | C <sub>T</sub>  |     |     | 3         | pF   |
| Reverse recovery time         | I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>rr</sub> = 1mA, R <sub>L</sub> = 100ohm | T <sub>rr</sub> |     |     | 4         | nS   |

## RATING AND CHARACTERISTIC CURVES (CDSQR4448S-HF)

Fig. 1 - Forward characteristics

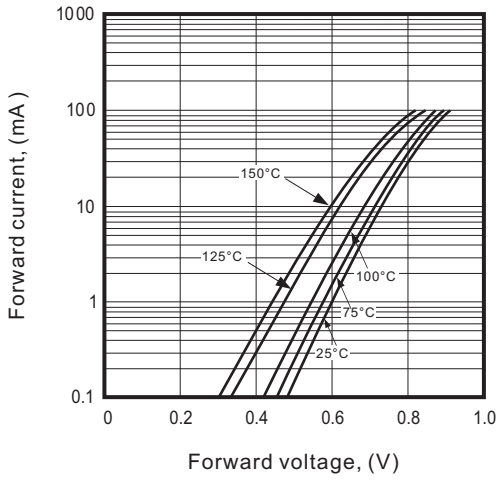


Fig. 2 - Reverse characteristics

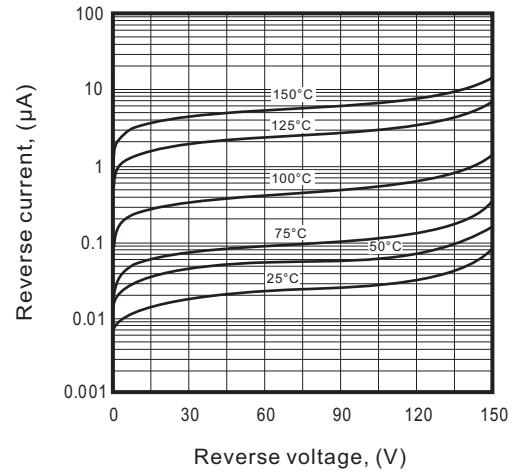


Fig. 3 - Capacitance between terminals characteristics

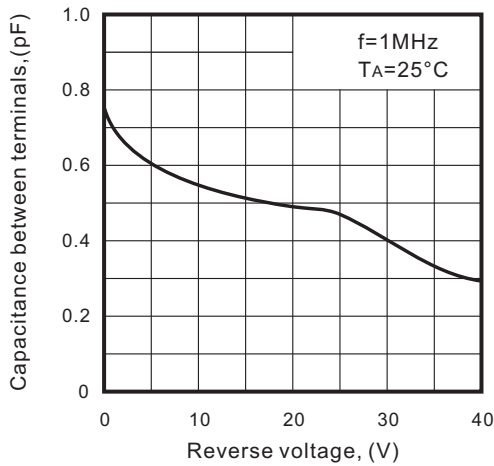
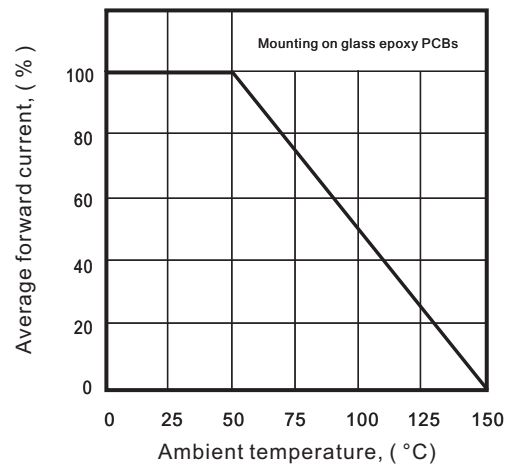
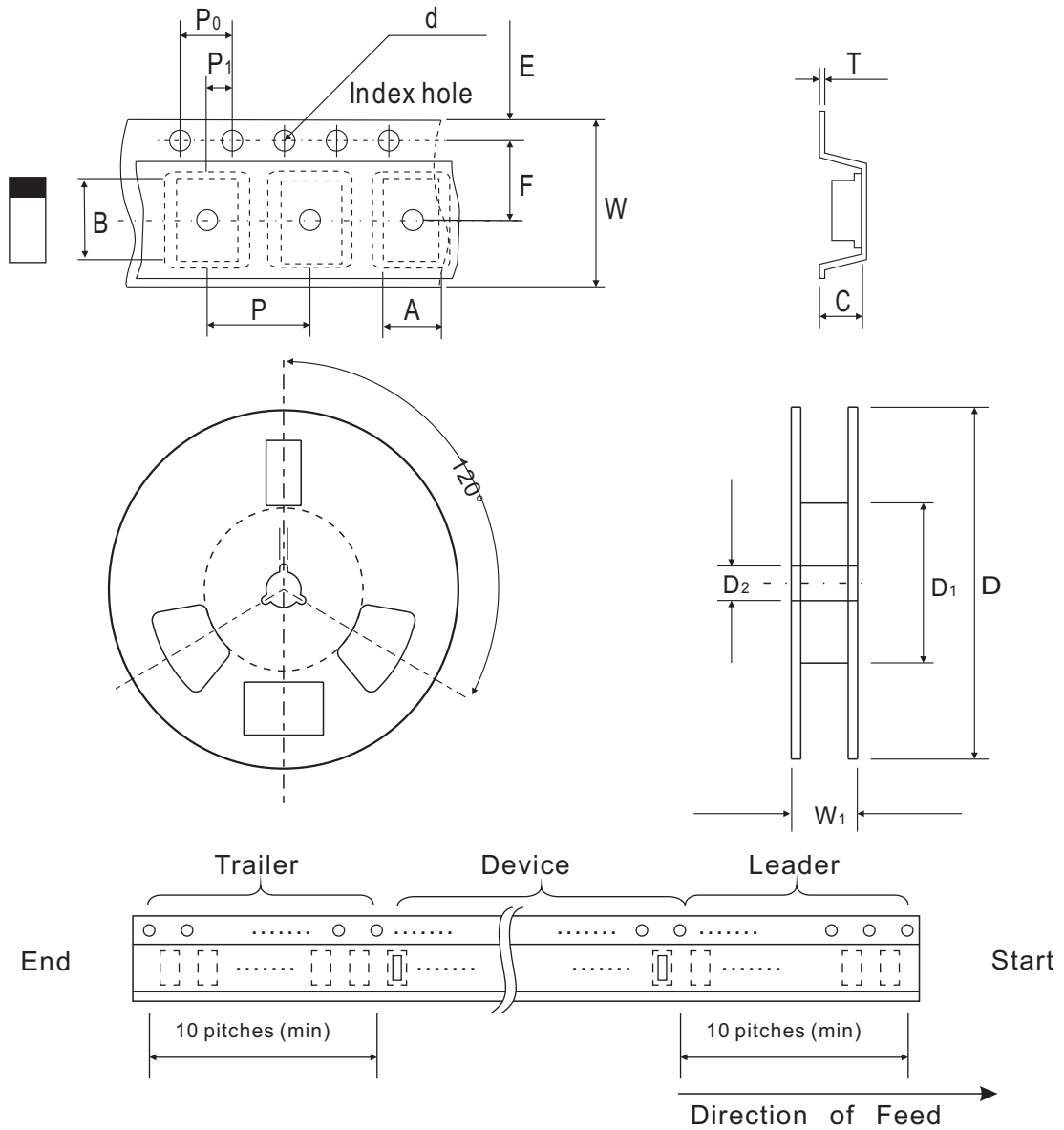


Fig. 4 - Current derating curve



## Reel Taping Specification



| 0402<br>(SOD-923F) | SYMBOL | A             | B             | C             | d             | D            | D <sub>1</sub> | D <sub>2</sub> |
|--------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
|                    | (mm)   | 0.75 ± 0.10   | 1.15 ± 0.10   | 0.60 ± 0.10   | 1.55 ± 0.10   | 178 ± 1      | 60.0 MIN.      | 13.0 ± 0.20    |
|                    | (inch) | 0.026 ± 0.004 | 0.045 ± 0.004 | 0.024 ± 0.004 | 0.061 ± 0.004 | 7.008 ± 0.04 | 2.362 MIN.     | 0.512 ± 0.008  |

| 0402<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 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.10    | 2.00 ± 0.10    | 0.22 ± 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.     |

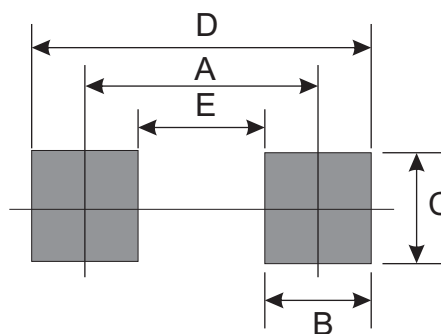
## Marking Code

| Part Number   | Marking Code |
|---------------|--------------|
| CDSQR4448S-HF | .S5          |



## Suggested PAD Layout

| SIZE | 0402/SOD-923F |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 0.750         | 0.030  |
| B    | 0.500         | 0.020  |
| C    | 0.700         | 0.028  |
| D    | 1.250         | 0.049  |
| E    | 0.250         | 0.010  |



## Standard Packaging

| Case Type     | Qty per Reel | Reel Size |
|---------------|--------------|-----------|
|               | (Pcs)        | (inch)    |
| 0402/SOD-923F | 5,000        | 7         |