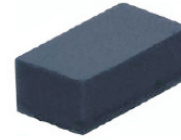


## CPDUR5V0R-HF

RoHS Device  
Halogen Free



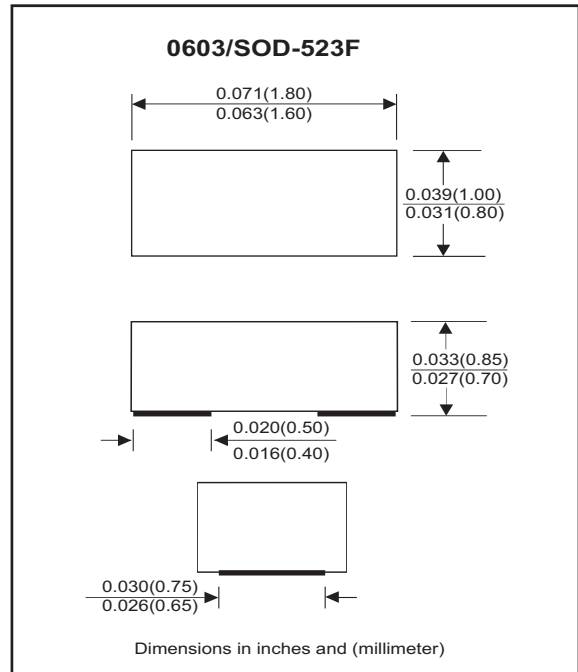
### Features

- Bi-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- Operating voltage: 5V

### Mechanical data

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

### Circuit Diagram



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

| Parameter                 | Conditions                                     | Symbol           | Min | Typ | Max  | Unit |
|---------------------------|--|------------------|-----|-----|------|------|
| Reverse stand-Off voltage |  | V <sub>RWM</sub> | -   | -   | 5    | V    |
| Diode breakdown voltage   | I <sub>R</sub> = 1mA                           | V <sub>BD</sub>  | 5.6 | -   | 9.4  | V    |
| Reverse leakage current   | V <sub>R</sub> = 5V                            | I <sub>L</sub>   | -   | 5   | 90   | nA   |
| Junction capacitance      | V <sub>R</sub> = 0V, f = 1MHz                  | C <sub>T</sub>   | -   | 20  | 30   | pF   |
| ESD capability            | IEC 61000-4-2(Air)                             | ESD              | -   | -   | ±30  | kV   |
|                           | IEC 61000-4-2(Contact)                         | ESD              | -   | -   | ±30  | kV   |
| Clamping Voltage          | I <sub>PP</sub> = 1 A, t <sub>p</sub> =8/20us  | V <sub>c</sub>   | -   | -   | 8    | V    |
|                           | I <sub>PP</sub> = 11 A, t <sub>p</sub> =8/20us | V <sub>c</sub>   | -   | -   | 12   | V    |
| Operation temperature     |  | T <sub>j</sub>   | -40 | -   | +150 | °C   |
| Storage temperature       |  | T <sub>STG</sub> | -40 | -   | +150 | °C   |

## RATING AND CHARACTERISTIC CURVES (CPDUR5V0R-HF)

Fig. 1 - Reverse Characteristics

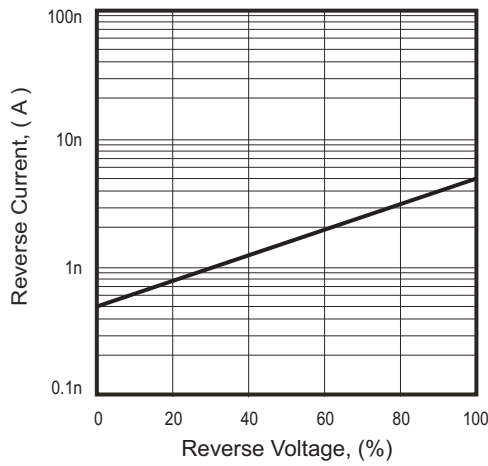


Fig. 2 - Capacitance Between Terminals Characteristics

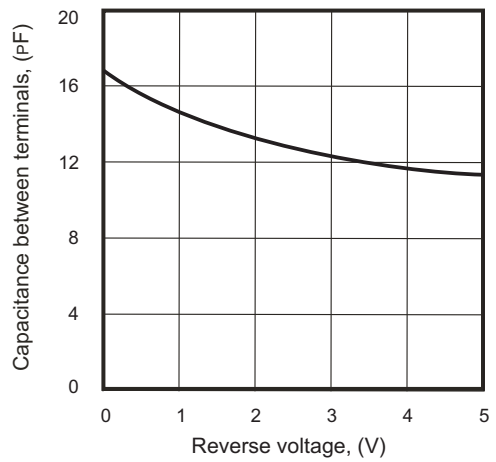


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

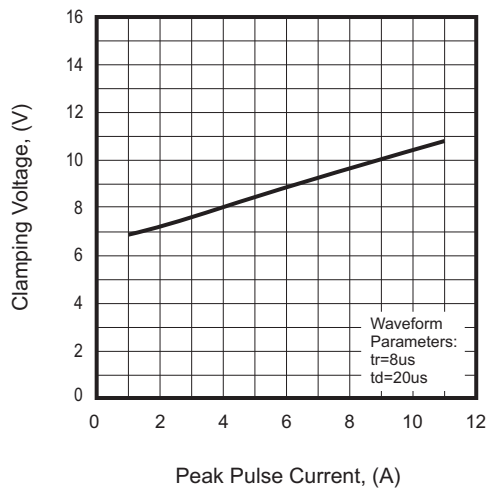
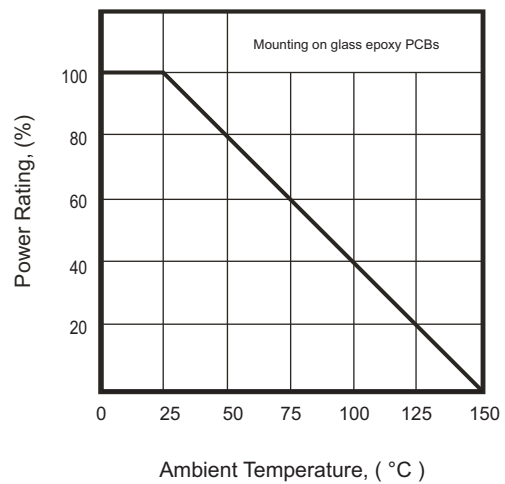
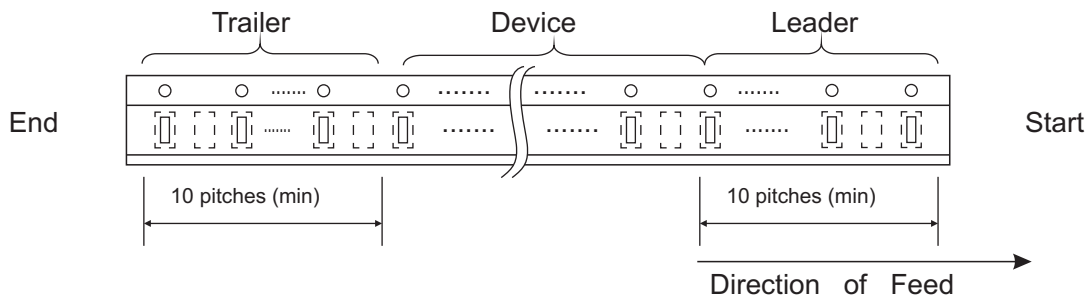
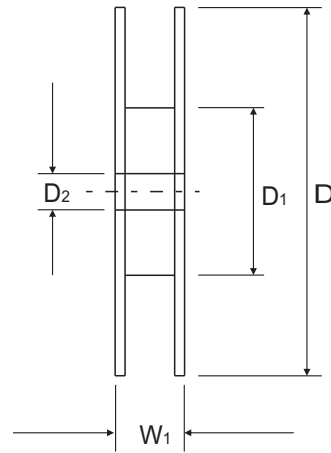
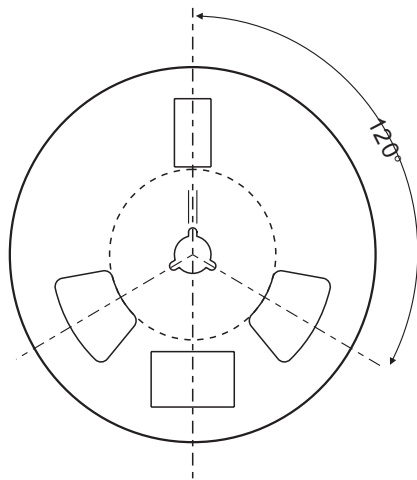
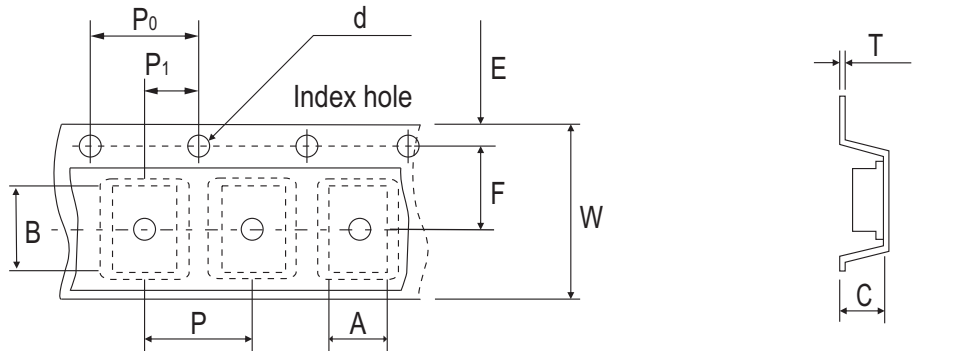


Fig. 4 - Power Rating Derating Curve



## Reel Taping Specification



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

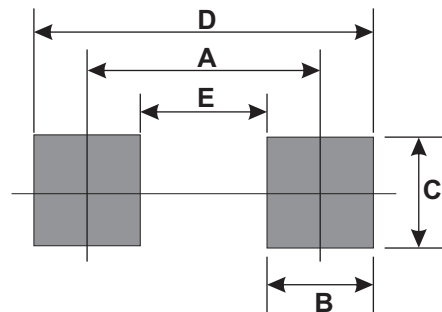
## Marking Code

| Part Number  | Marking Code |
|--------------|--------------|
| CPDUR5V0R-HF | E5R          |



## Suggested PAD Layout

| SIZE | 0603/SOD-523F |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 1.25          | 0.049  |
| B    | 0.60          | 0.024  |
| C    | 1.00          | 0.039  |
| D    | 1.85          | 0.073  |
| E    | 0.65          | 0.026  |



## Standard Packaging

| Case Type     | REEL PACK    |                  |
|---------------|--------------|------------------|
|               | REEL ( pcs ) | Reel Size (inch) |
| 0603/SOD-523F | 4,000        | 7                |

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