

## CPDQC5V0CSP-IPHF

**RoHS Device**  
**Halogen Free**



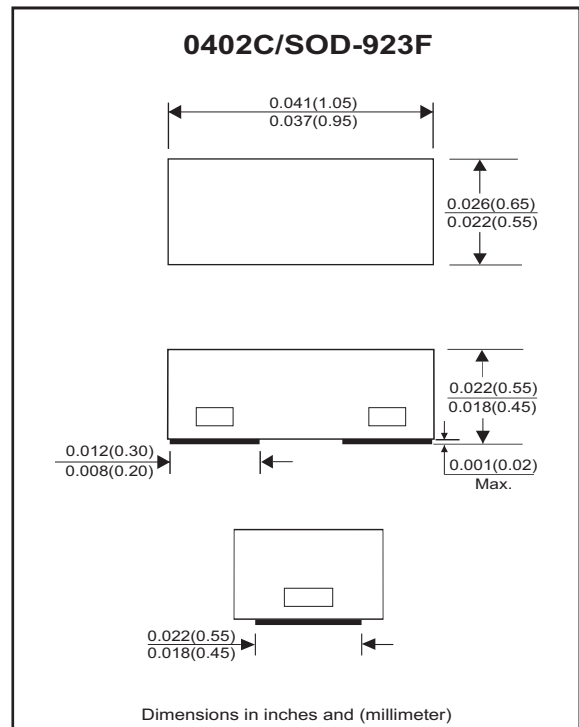
### Features

- IEC61000-4-2 (ESD)  $\pm 10\text{kV}$
- Working Voltage: 5V
- Typical capacitance: 0.15pF

### Mechanical data

- Case: 0402C/SOD-923F small outline plastic package. molded plastic.
- Terminals: Matte tin plated, solderable per MIL-STD-202, method 208.
- Mounting position: Any.
- High temperature soldering guaranteed:  
260°C/10 second.
- Weight: 0.001 grams(approx.).

### Circuit diagram



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

| Parameter                                                    | Symbol | Value       | Unit |
|--------------------------------------------------------------|--------|-------------|------|
| Peak pulse current ( $t_p = 8/20\mu\text{s}$ waveform)       | PPP    | 35          | W    |
| ESD per IEC 61000-4-2(Air)<br>ESD per IEC 61000-4-2(Contact) | VESD   | $\pm 10$    | kV   |
| Operating temperature rang                                   | TJ     | -55 to +150 | °C   |
| Storage temperature rang                                     | TSTG   | -55 to +150 | °C   |

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

| Parameter                 | Conditions       | Symbol | Min | Typ  | Max  | Unit |
|---------------------------|------------------|--------|-----|------|------|------|
| Reverse stand-Off voltage |                  | VRWM   | -   | -    | 5    | V    |
| Reverse leakage current   | VR = 5 V         | IR     | -   | -    | 100  | nA   |
| Reverse breakdown voltage | IR = 1 mA        | V(BR)  | 7   | -    | 10   | V    |
| Clamping voltage          | IPP = 1 A        | VC     | -   | -    | 15   | V    |
|                           | IPP = 2 A        | VC     | -   | -    | 18   | V    |
| Junction capacitance      | VR = 0V , F=1MHz | CJ     | -   | 0.15 | 0.25 | pF   |

## RATING AND CHARACTERISTIC CURVES (CPDQC5V0CSP-IPHF)

Fig.1 - 8/20us Peak Pulse Current Wave  
Form Acc. IEC 61000-4-5

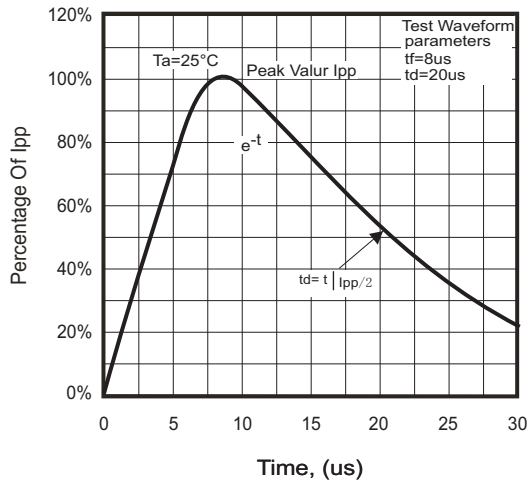


Fig.2 - Power Rating Derating Curve

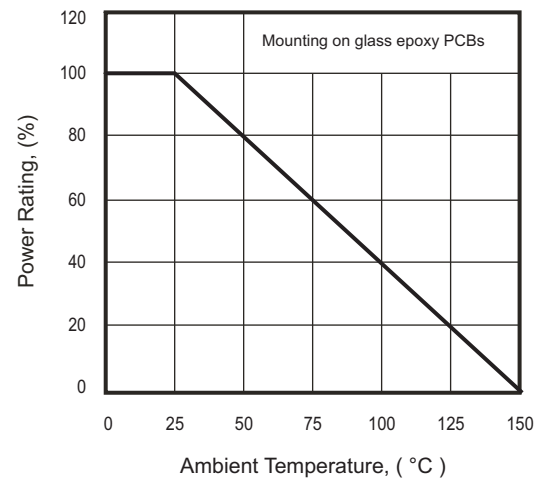


Fig.3 - Clamping Voltage Vs.  
Peak Pulse Current

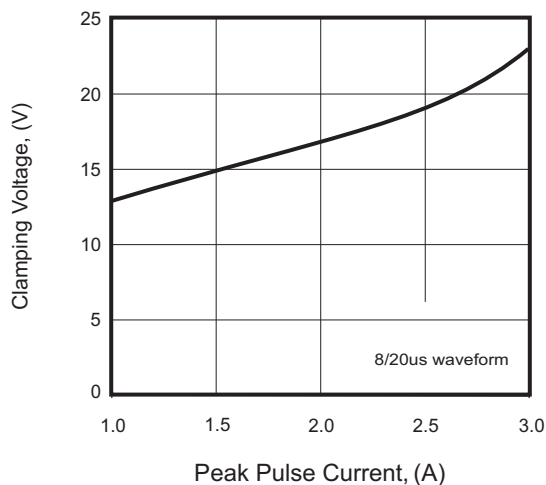
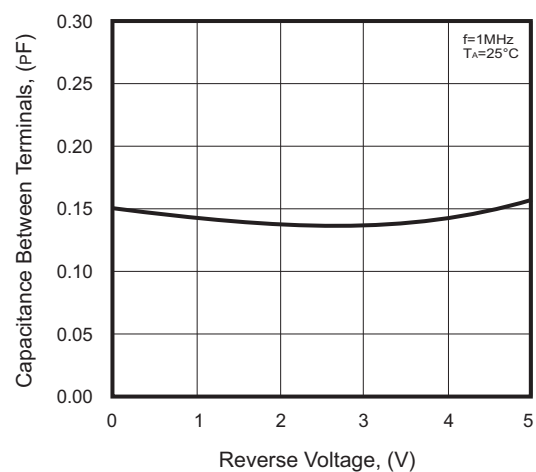
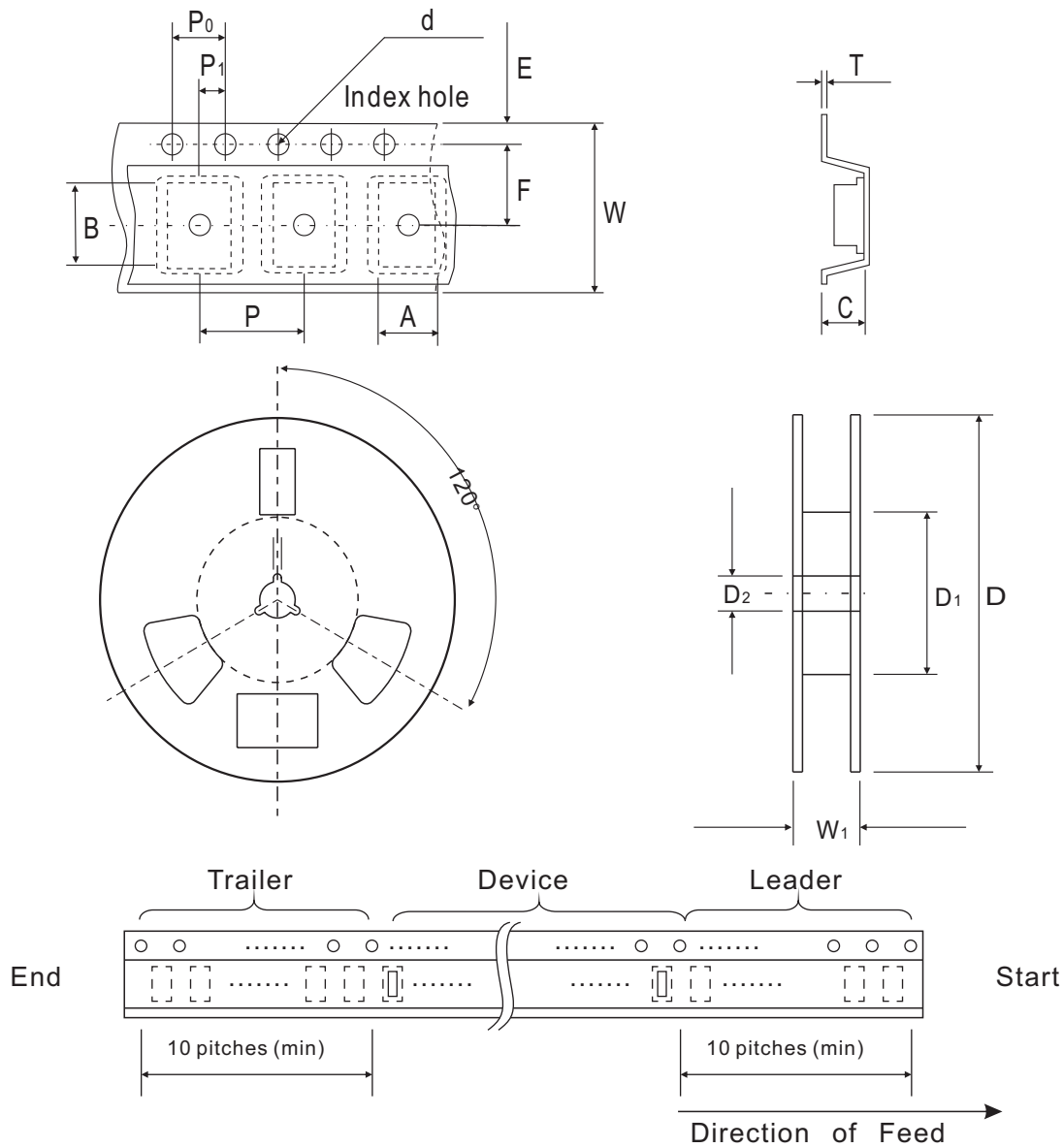


Fig.4 - Capacitance Between  
Terminals Characteristics



Reel Taping Specification



|                    |        |               |               |               |               |              |                |                |
|--------------------|--------|---------------|---------------|---------------|---------------|--------------|----------------|----------------|
| 0402C/<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 ± 1.00   | 60.0 MIN.      | 13.0 ± 0.20    |
|                    | (inch) | 0.030 ± 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  |

|                    |        |               |               |               |                |                |               |               |                |
|--------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| 0402C/<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   | 13.50 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.     |

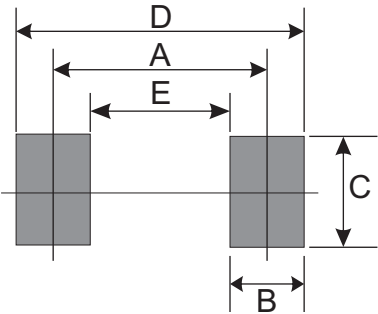
Marking Code

| Part Number      | Marking Code |
|------------------|--------------|
| CPDQC5V0CSP-IPHF | 5S           |

5S

Suggested PAD Layout

| SIZE | 0402C/SOD-923F |        |
|------|----------------|--------|
|      | (mm)           | (inch) |
| A    | 0.70           | 0.028  |
| B    | 0.40           | 0.016  |
| C    | 0.70           | 0.028  |
| D    | 1.10           | 0.043  |
| E    | 0.30           | 0.012  |



Standard Packaging

| Case Type      | REEL PACK       |                     |
|----------------|-----------------|---------------------|
|                | REEL<br>( pcs ) | Reel Size<br>(inch) |
| 0402C/SOD-923F | 5,000           | 7                   |