

## CPDQC5V0SC-HF

### RoHS Device

### Halogen Free



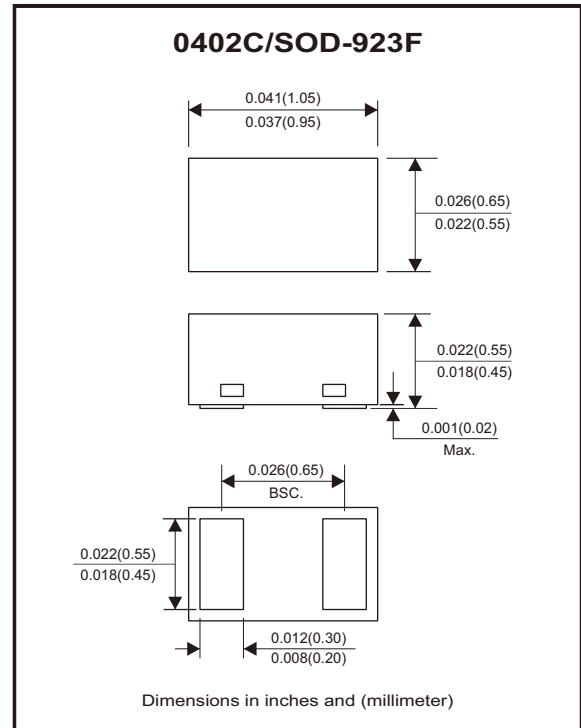
### Features

- Bi-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Working Voltage: 5V
- Typical capacitance: 0.2pF

### Mechanical data

- Case: 0402C/SOD-923F small outline plastic package. molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- 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 power ( tp = 8/20μs waveform)	PPP	36	W
ESD per IEC 61000-4-2(Air)	VESD	±15	kV
ESD per IEC 61000-4-2(Contact)		±8	
Operating temperature range	TJ	-55 to +150	°C
Storage temperature range	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)	6			V
Clamping voltage	I <sub>PP</sub> = 1 A	Vc		13	15	V
	I <sub>PP</sub> = 2A	Vc			18	V
Junction capacitance	VR = 0V , f=1MHz	CJ		0.2	0.4	pF

## Rating and Characteristic Curves (CPDQC5V0SC-HF)

Fig.1 - 8/20 $\mu$ s Peak Pulse Current Wave  
Form Acc. IEC 61000-4-5

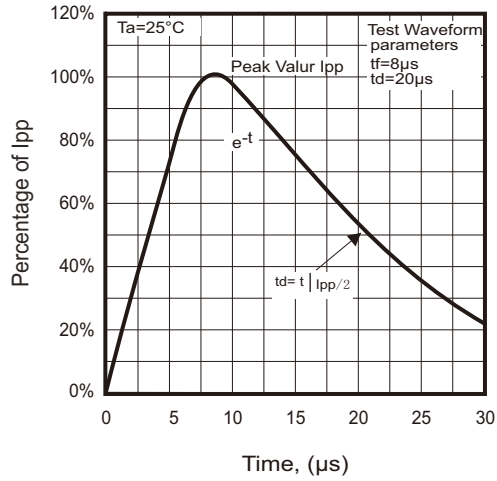


Fig.2 - Typical Capacitance Between  
Terminals Characteristics

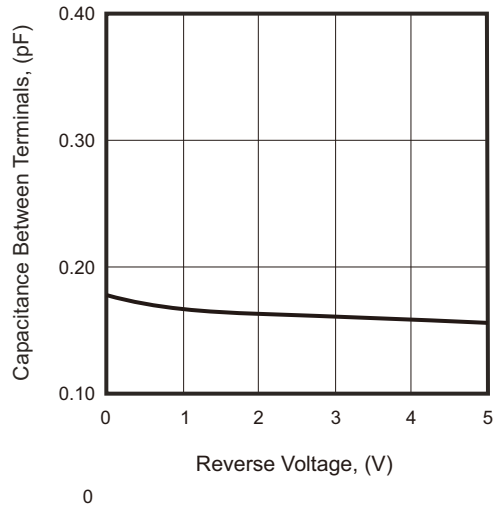


Fig.3 - Clamping Voltage Vs.  
Peak Pulse Current

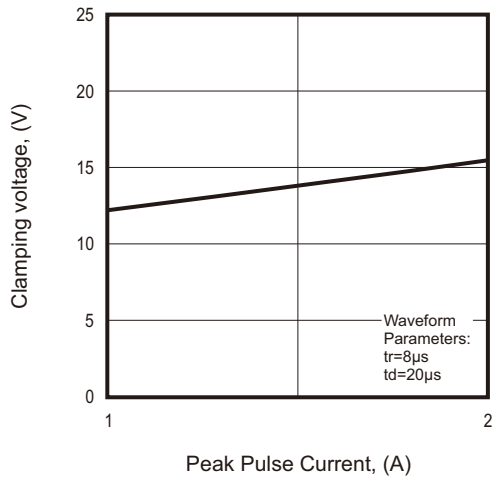
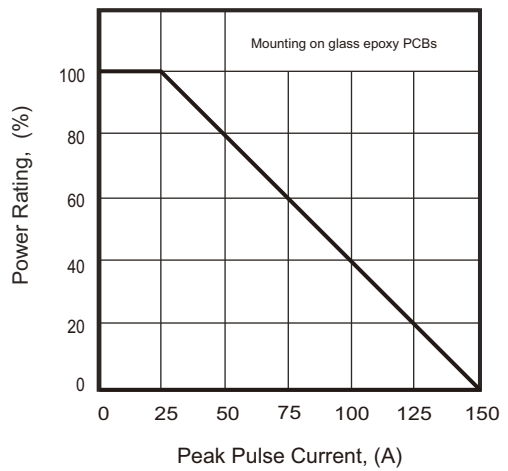
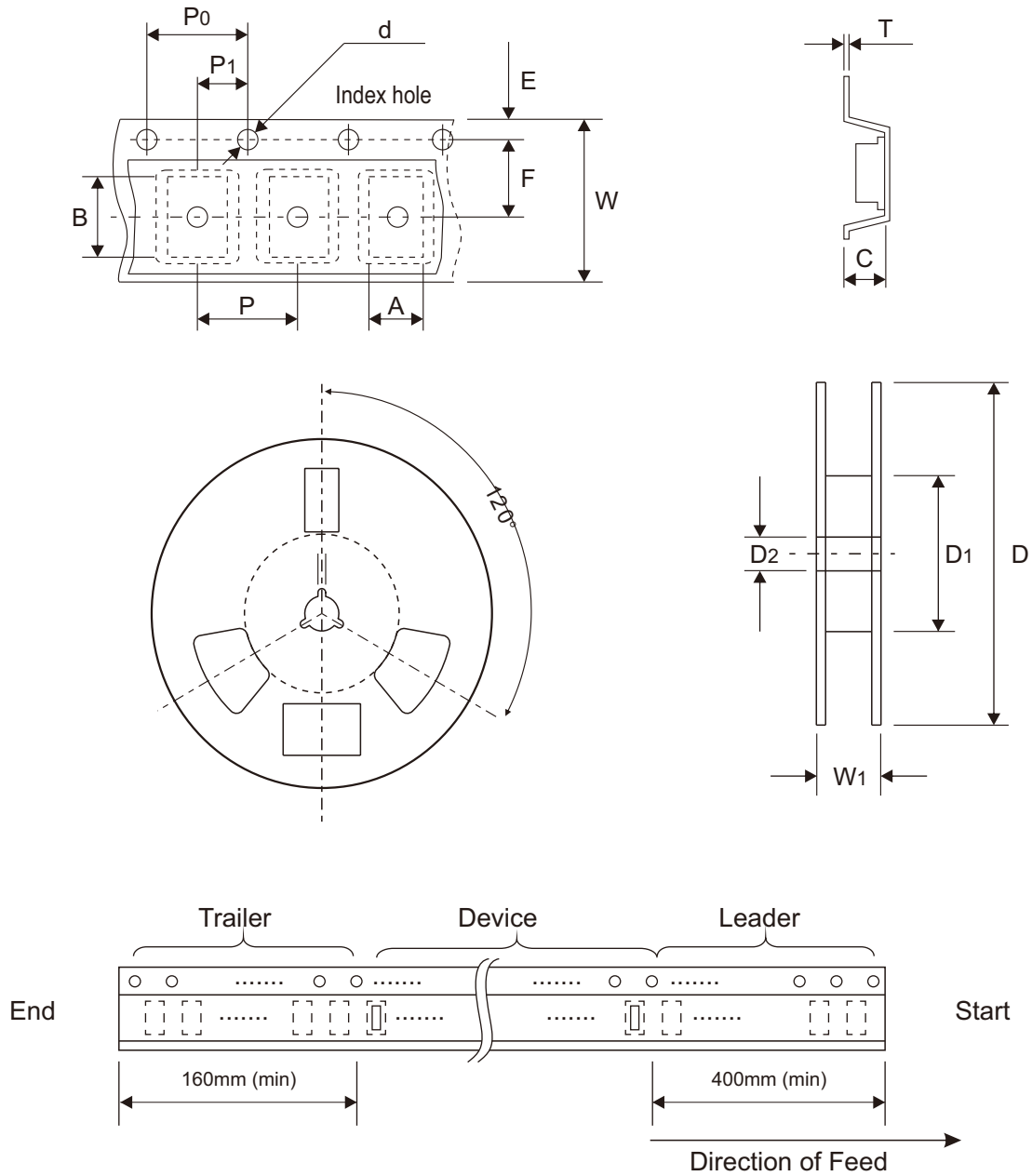


Fig.4 - Power Rating Derating Curve



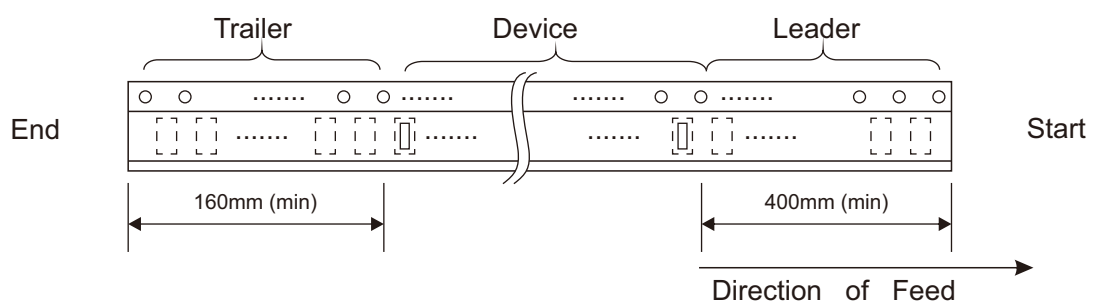
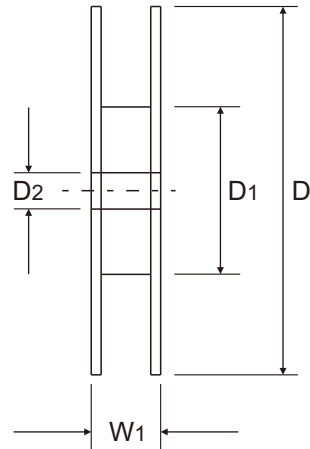
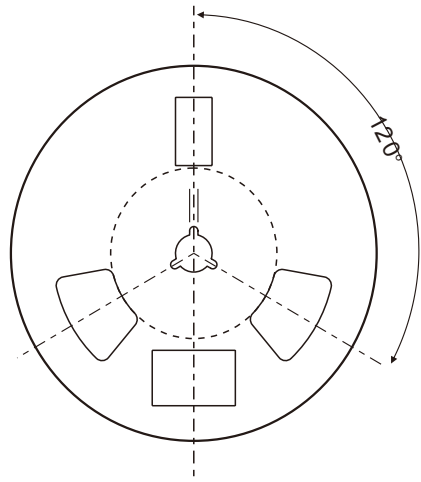
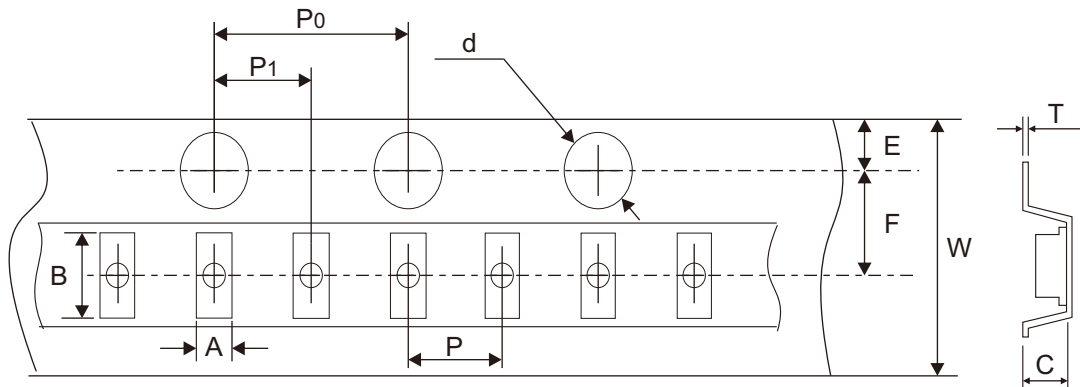
## Reel Taping Specification (For CPDQC5V0SC-HF)



0402C (SOD-923F)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.75 ± 0.05	1.17 ± 0.05	0.65 ± 0.05	1.50 + 0.10 - 0.00	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.030 ± 0.002	0.046 ± 0.002	0.026 ± 0.002	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0402C (SOD-923F)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	0.20 + 0.02 - 0.05	8.00 ± 0.20	12.00 + 0.50 - 0.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.008 + 0.001 - 0.002	0.315 ± 0.008	0.472 + 0.020 - 0.000

## Reel Taping Specification (For CPDQC5V0SC-HFT)



0402C (SOD-923F)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	$0.70 \pm 0.05$	$1.17 \pm 0.05$	$0.60 \pm 0.05$	$1.50 + 0.10 - 0.00$	$178.00 \pm 1.00$	$60.00 \pm 0.50$	$13.50 \pm 0.20$
	(inch)	$0.028 \pm 0.002$	$0.046 \pm 0.002$	$0.024 \pm 0.002$	$0.059 + 0.004 - 0.000$	$7.008 \pm 0.039$	$2.362 \pm 0.020$	$0.531 \pm 0.008$

0402C (SOD-923F)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	$1.75 \pm 0.10$	$3.50 \pm 0.05$	$2.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.05$	$0.20 \pm 0.05$	$8.00 \pm 0.20$	$12.00 + 0.50 - 0.00$
	(inch)	$0.069 \pm 0.004$	$0.138 \pm 0.002$	$0.079 \pm 0.004$	$0.157 \pm 0.004$	$0.079 \pm 0.002$	$0.008 \pm 0.002$	$0.315 \pm 0.008$	$0.472 + 0.020 - 0.000$

## Marking Code

Part Number	Marking Code
CPDQC5V0SC-HF(T)	5SP

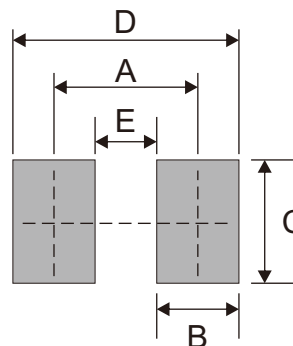
5SP

Note: Suffix code after part number to specify packaging item.

REEL (pcs)	Code
5 k	NA
10 k	T

## Suggested PAD Layout

SIZE	0402C/SOD-923F	
	(mm)	(inch)
A	0.70	0.028
B	0.40	0.016
C	0.60	0.024
D	1.10	0.043
E	0.30	0.012



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
0402C/SOD-923F	5,000	7
	10,000	

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