

## CPDQC3V3T-HF

RoHS Device  
Halogen Free

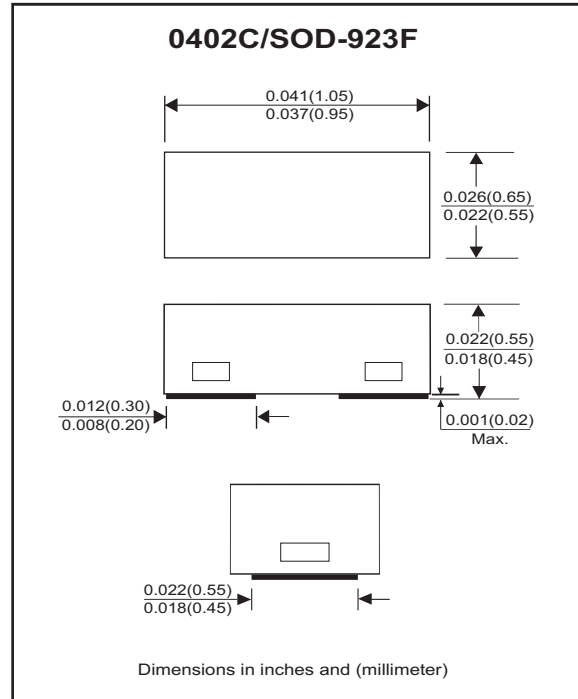


### Features

- Bi-directional ESD protection.
- IEC 61000-4-2 ±30kV(Contact).
- ESD Rating of Class 3 per Human Body Model.
- ESD Rating of Class 4 per Machine Model.
- Surface mount package.
- Ultra small SMD package:0402
- High component density.

### Mechanical data

- Case: 0402C/SOD-923 Standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750,method 2026.
- Mounting position: Any.
- Weight: 0.001 grams(approx.).



### Circuit diagram



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		$V_{RWM}$			3.3	V
Reverse breakdown voltage	$I_R = 1mA$	$V_{BR}$	3.6	4.2	4.6	V
Leakage current	$V_{RWM} = 3.3V$	$I_R$		<0.02	0.5	$\mu A$
Clamping voltage	$I_{PP}=1A, t_p=8/20\mu s$ $I_{PP}=16A, t_p=8/20\mu s$	$V_C$		4.65 9.8		V
Clamping voltage	$I_{PP}=5A, t_p=100ns$ $I_{PP}=18A, t_p=100ns$	$V_{CL}$		6 8.75		V
Dynamic resistance		$R_{DYN}$		0.18		$\Omega$
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			30 30	kV
Junction capacitance	$V_R=0V, f=1MHz$	$C_T$		20	25	pF
Junction temperature		$T_J$			125	$^{\circ}C$
Storage temperature		$T_{STG}$	-55		150	$^{\circ}C$

## RATING AND CHARACTERISTIC CURVES (CPDQC3V3T-HF)

Fig.1 - 8/20us Peak Pulse Current Waveform ACC. IEC 61000-4-5

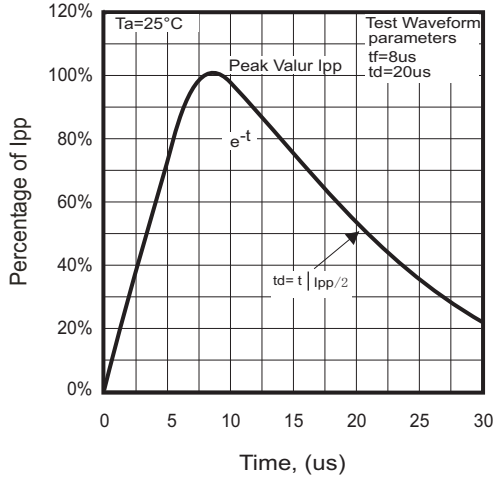


Fig.2 - Typical Capacitance Between Terminals Characteristics

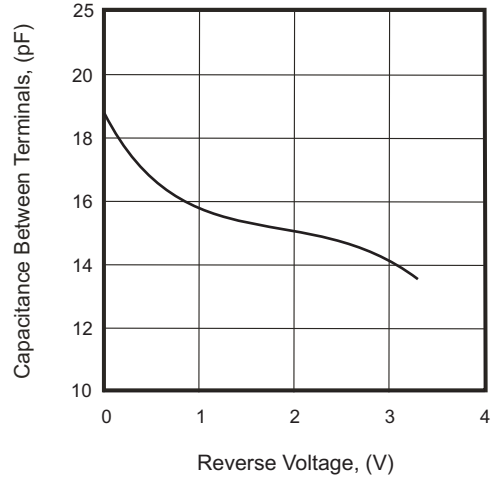


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

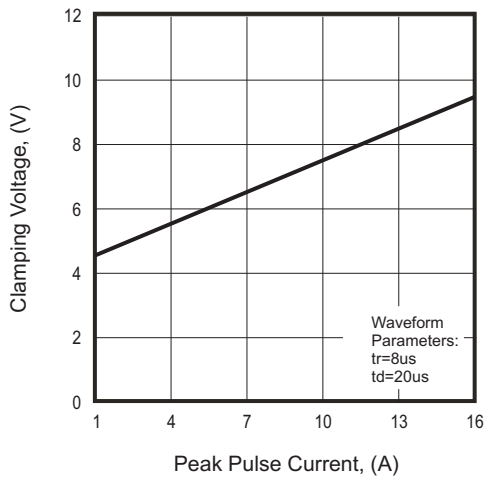


Fig.4 - Power Rating Derating Curve

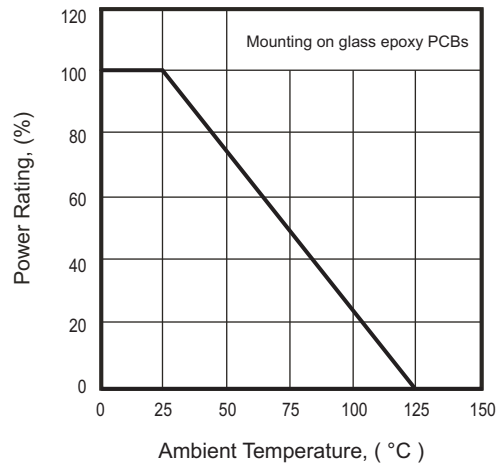


Fig. 5 - Pin1 To Pin2

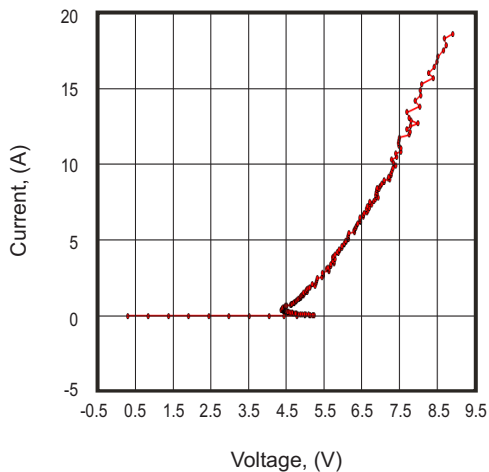
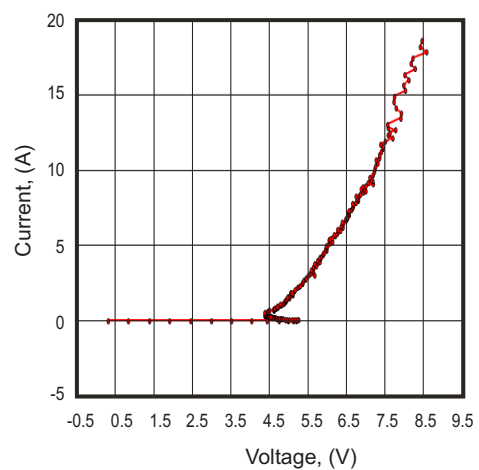
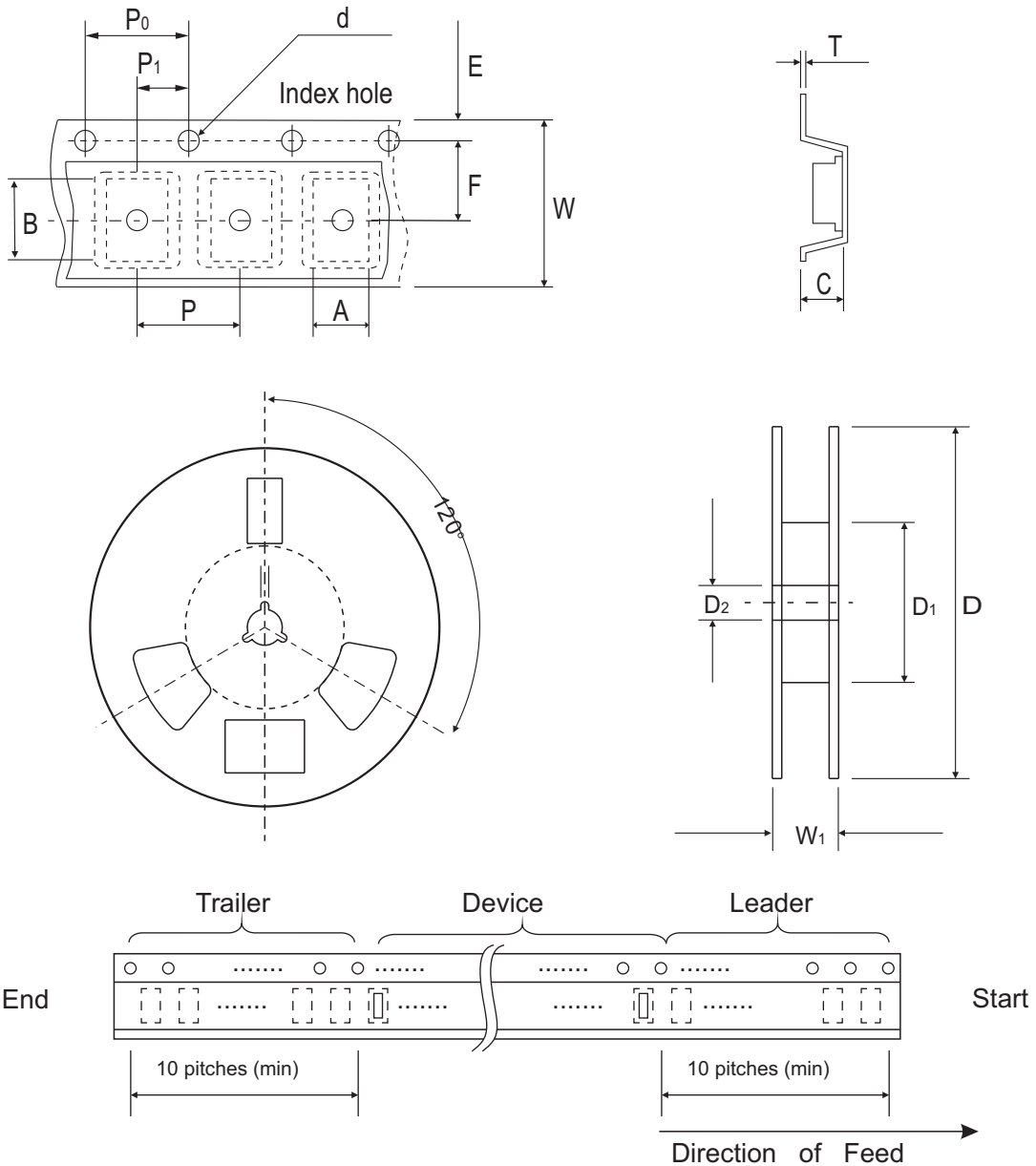


Fig.6 - Pin2 To Pin1



## Reel Taping Specification



0402C/ 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/ SOD-923F	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	0.22 ± 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

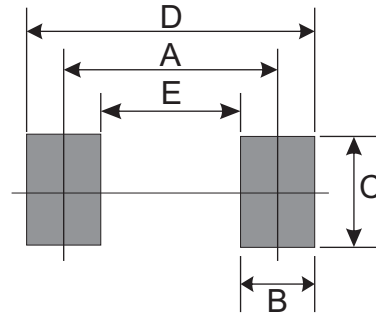
Part Number	Marking Code
CPDQC3V3T-HF	E3



xx = Product type marking code

## 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 ( pcs )	Reel Size (inch)
0402C/SOD-923F	5,000	7