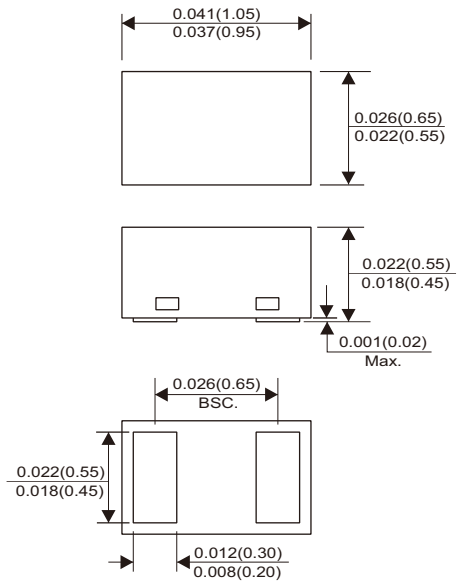
CPDQC24VE-HF

High-Reliability and High-Performance
RoHS Device
Halogen Free

Features

- Bi-directional ESD protection.
- IEC 61000-4-2 (ESD) ; ±30KV(contact)
- Surface mount package.
- Ultra small SMD package: 0402C
- High component density.

0402C/SOD-923F



Dimensions in inches and (millimeter)

Mechanical data

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

Circuit Diagram

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

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	T_P = 8/20μs	P_{PP}	138	W
Peak pulse current	T_P = 8/20μs	I_{PP}	3	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	±30	kV
Operating temperature range		T_j	-55~+125	°C
Storage temperature range		T_{STG}	-55~+150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V_{RWM}			24	V
Breakdown voltage	I_T = 1mA	V_{BR}	26.5	29	32	V
Reverse leakage current	V_{RWM} = 24V	I_R			100	nA
Clamping voltage	I_{PP} = 1A, T_P = 8/20μs I_{PP} = 3A, T_P = 8/20μs	V_C		32 38	36 46	V
Junction capacitance	V_R = 0V, f = 1MHz	C_J		13	20	pF

Rating and Characteristic Curves (CPDQC24VE-HF)

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

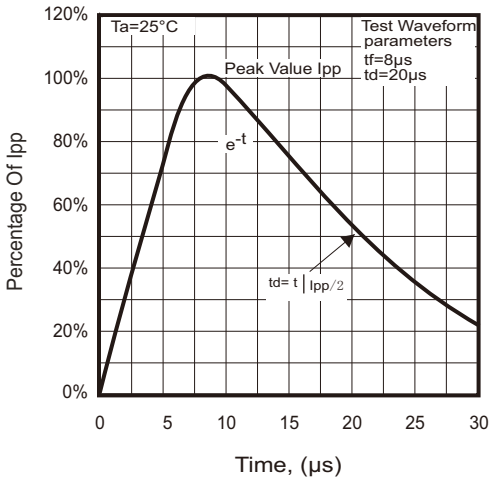


Fig.2 - Power rating derating curve

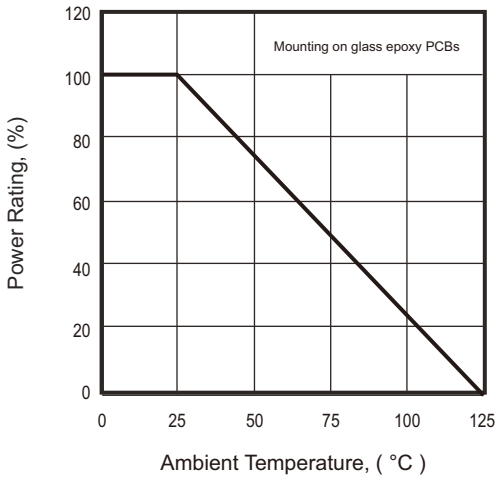


Fig. 3 - Clamping Voltage Vs.
Peak Pulse Current

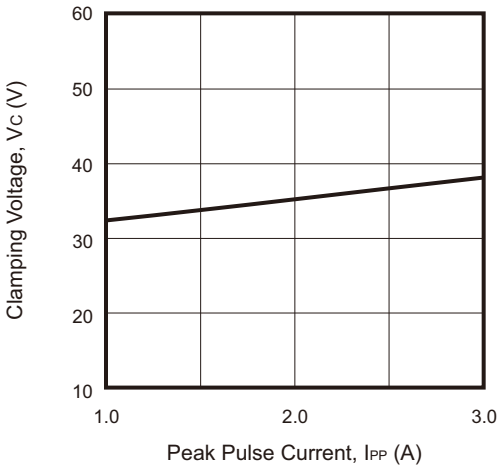
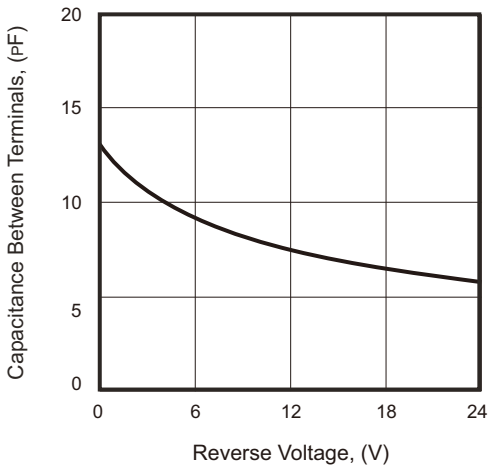
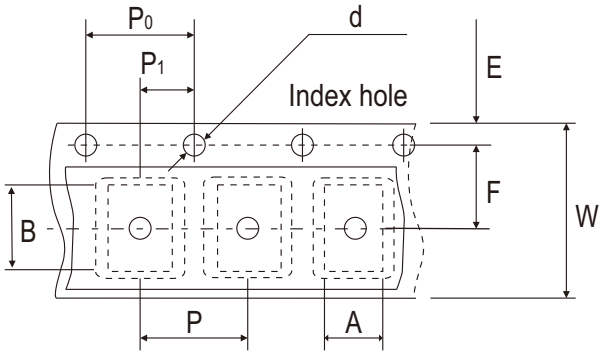
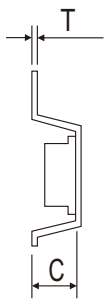


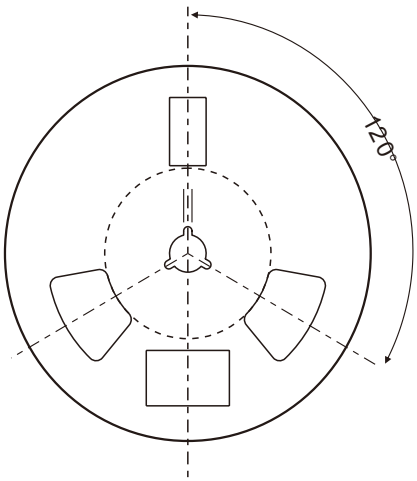
Fig.4 - Capacitance Between
Terminals Characteristics

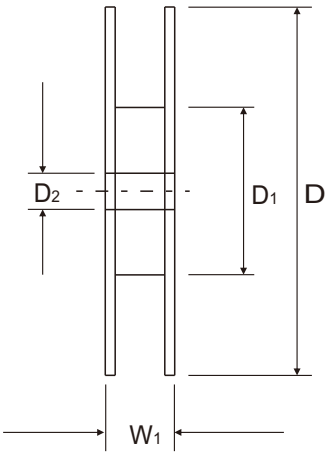


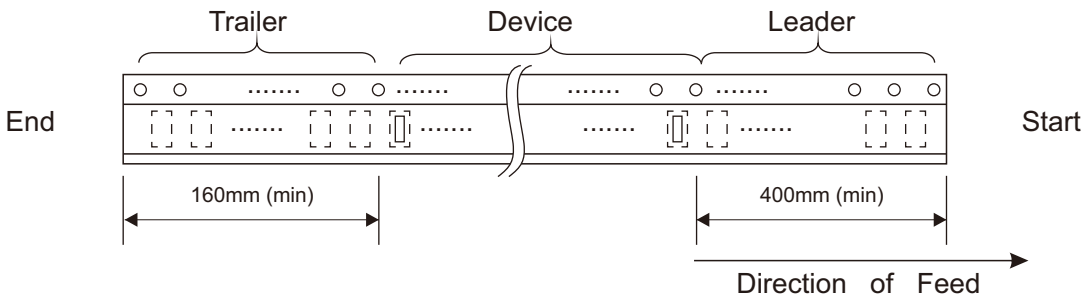
Reel Taping Specification











	SYMBOL	A	B	C	d	D	D_1	D_2
0402C (SOD-923F)	(mm)	0.75 ± 0.05	1.17 ± 0.05	0.65 ± 0.05	1.50 + 0.10 - 0	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	7.008 ± 0.039	2.362 ± 0.002	0.531 ± 0.008

	SYMBOL	E	F	P	P_0	P_1	T	W	W_1
0402C (SOD-923F)	(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
	(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

Company reserves the right to improve product design , functions and reliability without notice.

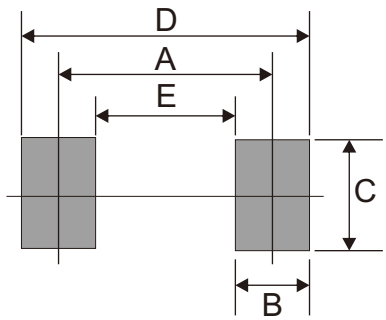
Marking Code

Part Number	Marking Code
CPDQC24VE-HF	E4

E4

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