

CPDQC3V3A-HF High-Reliability and High-Performance RoHS Device Halogen Free



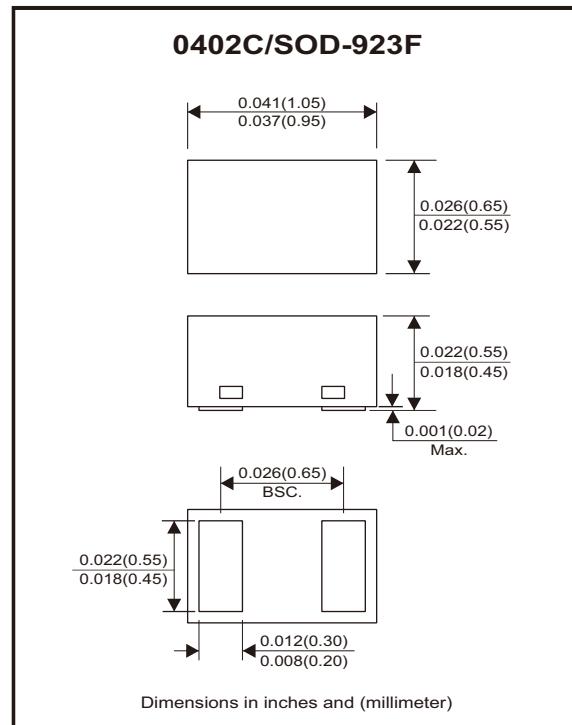
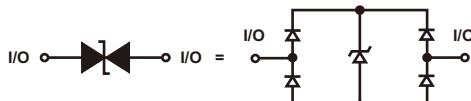
Features

- Bi-directional ESD protection.
- IEC 61000-4-5 (surge) ; IPP=4A
- IEC 61000-4-2 (ESD) ; ±20KV(contact)
- Low clamping voltage.
- Low leakage current.

Mechanical data

- Case: 0402C/SOD-923F standard 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 TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	TP = 8/20μs	P _{PP}	100	W
Peak pulse current	TP = 8/20μs	I _{PP}	4	A
ESD capability	IEC 61000-4-2(air)	ESD	±20	kV
	IEC 61000-4-2(contact)	ESD	±20	
Operating temperature range		T _j	-55 ~ +125	°C
Storage temperature range		T _{STG}	-55 ~ +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V _{RWM}			3.3	V
Diode breakdown voltage	I _r = 1mA	V _{BR}	4.5			V
Reverse current	V _{RWM} = 3.3V	I _r			0.1	μA
Clamping voltage	I _{PP} = 1A, TP = 8/20μs	V _c		11	14	V
	I _{PP} = 4A, TP = 8/20μs	V _c			25	V
Junction capacitance	V _R = 0V, f = 1MHz	C _J		0.2	0.3	pF

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

REV:B

Rating and Characteristic Curves (CPDQC3V3A-HF)

Fig.1 - 8/20 μ s Peak Pulse Current Wave Form Acc. IEC61000-4-5

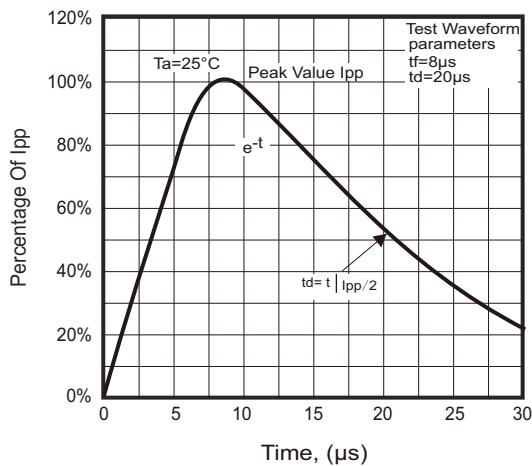


Fig.2 - Typical Capacitance Between Terminals Characteristics

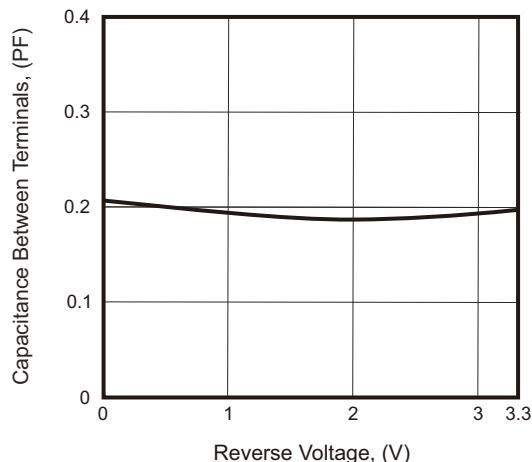


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

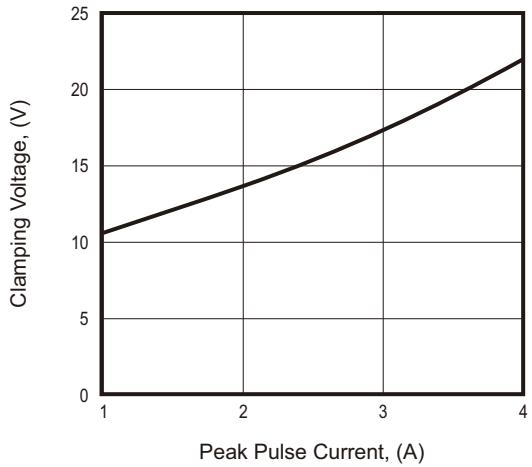
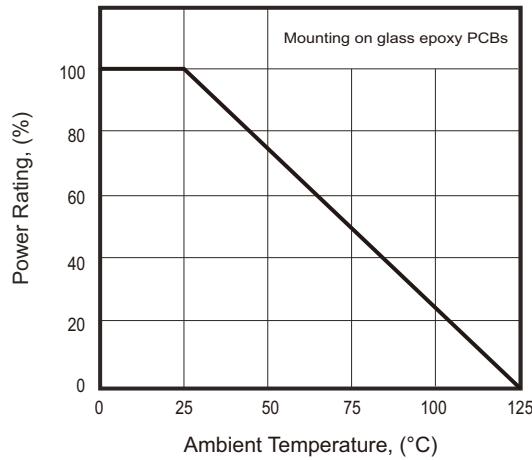
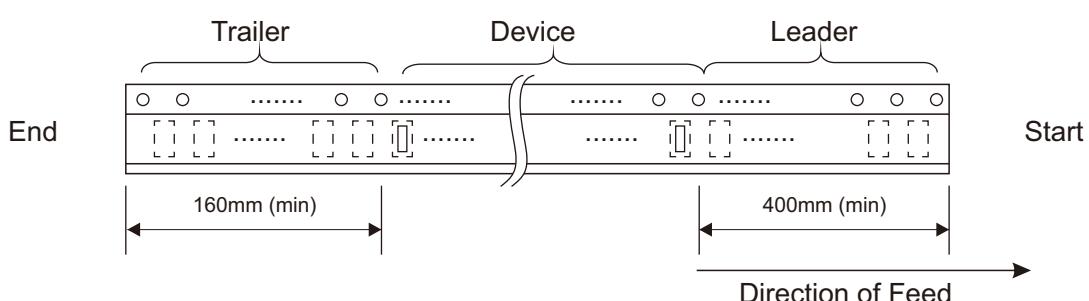
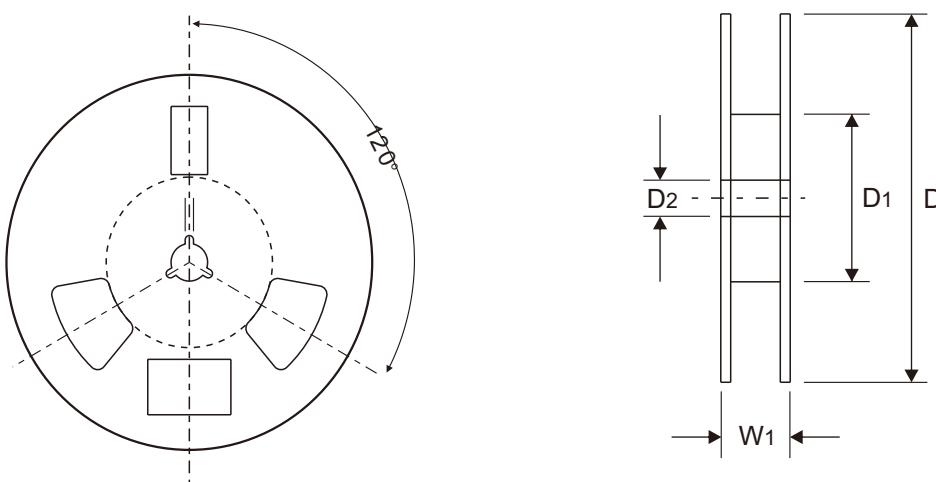
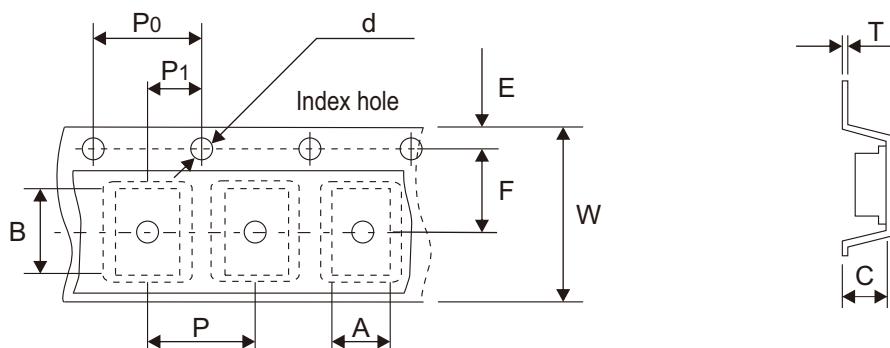


Fig. 4 - Power Rating Derating Curve



Reel Taping Specification



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	$0.472 + 0.020$ $- 0.000$

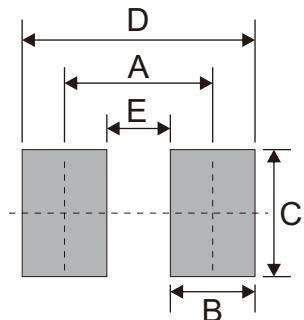
Marking Code

Part Number	Marking Code
CPDQC3V3A-HF	E3A

E3A

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