

## CPDUC24VE-HF

RoHS Device  
Halogen Free



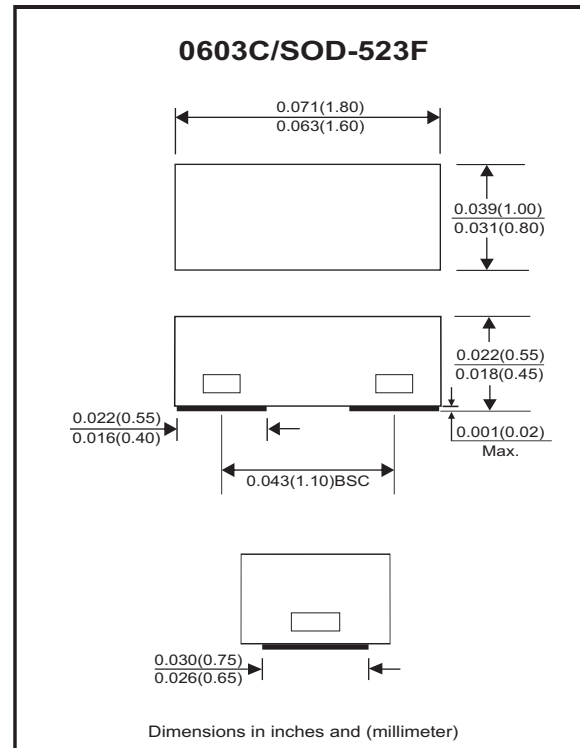
### Features

- Bi-directional ESD protection.
- IEC 61000-4-2 (ESD) ; ±30KV(contact)
- Surface mount package.
- Ultra small SMD package: 0603C
- High component density.

### Mechanical data

- Case: 0603C/SOD-523F standard package, molded plastic.
- Terminals: Matte tin plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- Weight: 0.003 grams(approx.).

### Circuit Diagram



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

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	T <sub>P</sub> = 8/20us	P <sub>PP</sub>	138	W
Peak pulse current	T <sub>P</sub> = 8/20us	I <sub>PP</sub>	3	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	±30	kV
Operation temperature range		T <sub>J</sub>	-55~+125	°C
Storage temperature range		T <sub>STG</sub>	-55~+150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		V <sub>RWM</sub>			24	V
Breakdown voltage	I <sub>T</sub> = 1mA	V <sub>BR</sub>	26.5	28	32	V
Reverse leakage current	V <sub>RWM</sub> = 24V	I <sub>R</sub>			100	nA
Clamping voltage	I <sub>PP</sub> = 1A, T <sub>P</sub> = 8/20us I <sub>PP</sub> = 3A, T <sub>P</sub> = 8/20us	V <sub>C</sub>		32 44	36 46	V
Junction capacitance	V <sub>R</sub> = 0V, f = 1MHz	C <sub>J</sub>		13	20	pF

## RATING AND CHARACTERISTIC CURVES (CPDUC24VE-HF)

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

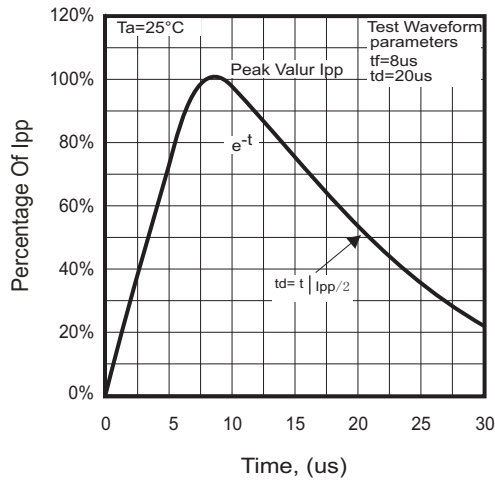


Fig.2 - Power rating derating curve

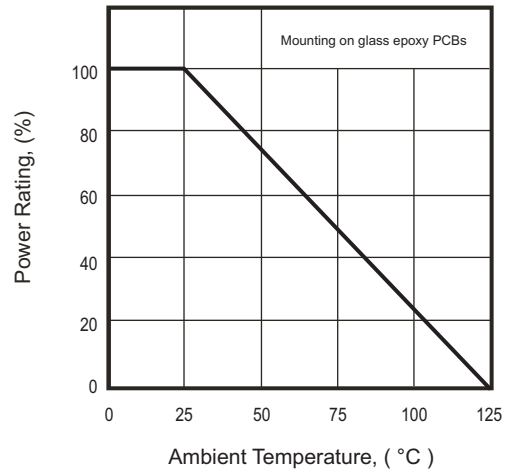


Fig. 3 - Clamping Voltage Vs. Peak Pulse Current

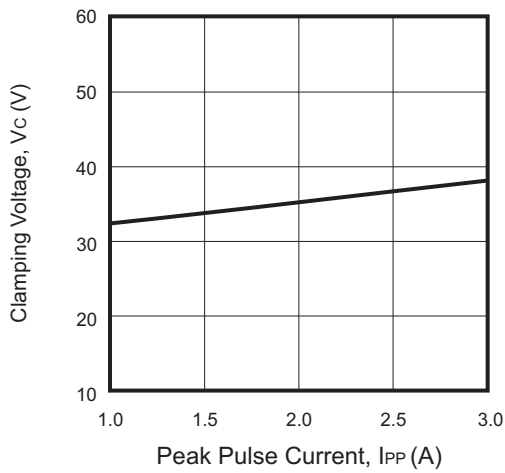
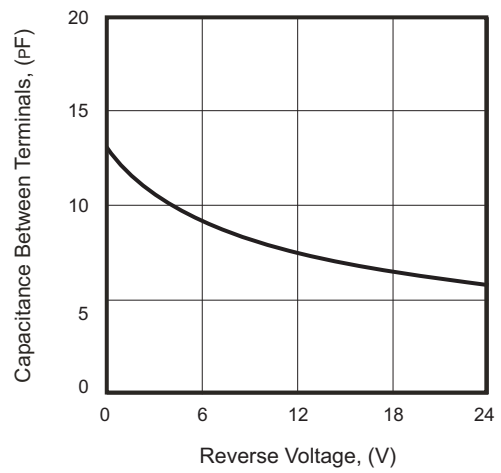
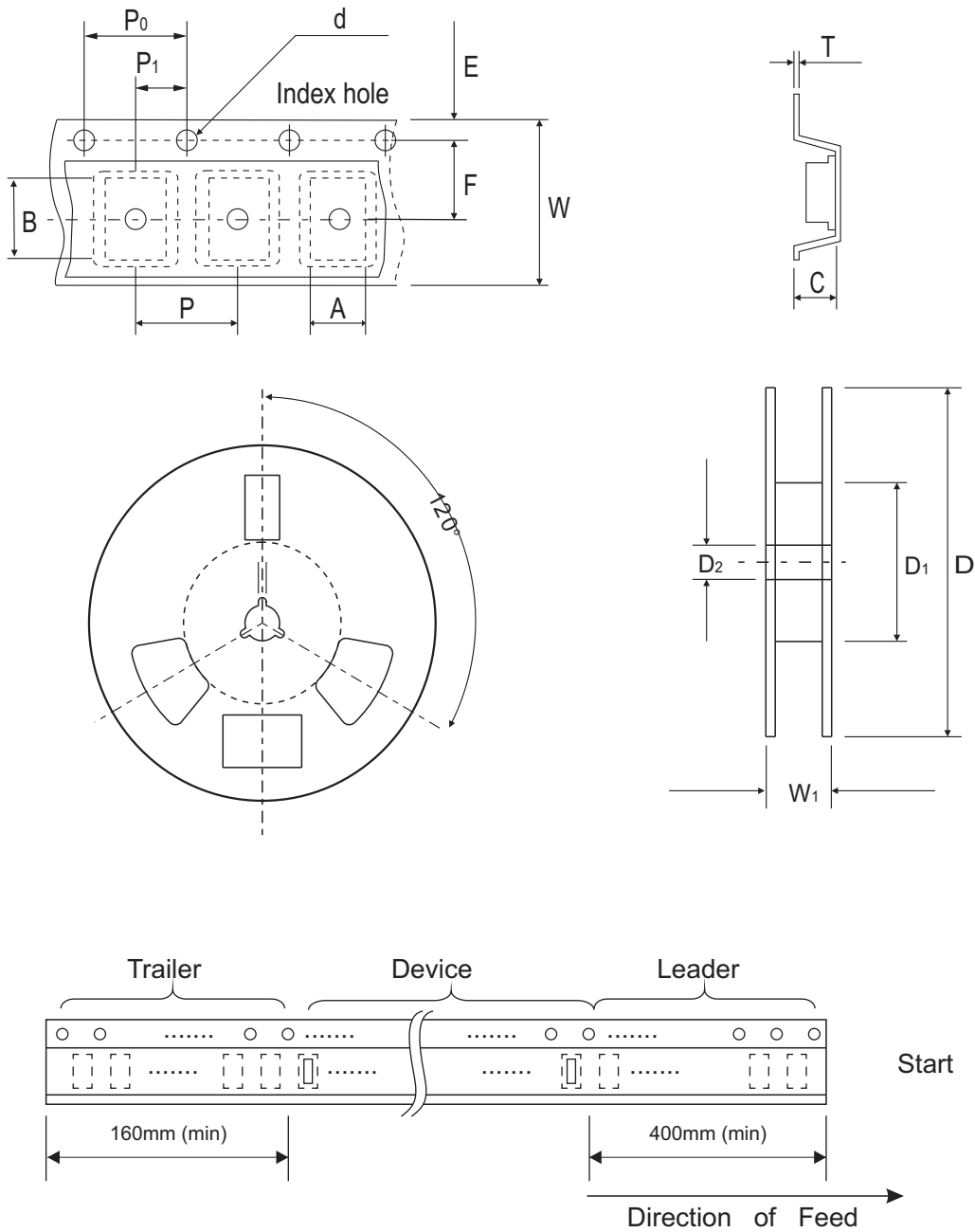


Fig.4 - Capacitance Between Terminals Characteristics



## Reel Taping Specification



0603C/ SOD-523F	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.05 ± 0.05	1.96 ± 0.05	0.57 ± 0.05	1.50 + 0.10 - 0	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.041 ± 0.002	0.077 ± 0.002	0.022 ± 0.002	0.059 + 0.004 - 0	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0603C/ SOD-523F	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 ± 0.05	2.00 ± 0.05	0.20 ± 0.03	8.00 ± 0.20	12.00 + 0.50 - 0
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.002	0.079 ± 0.002	0.008 ± 0.001	0.315 ± 0.008	0.472 + 0.020 - 0

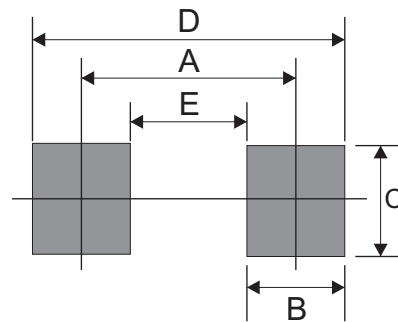
## Marking Code

Part Number	Marking Code
CPDUC24VE-HF	E24



## Suggested PAD Layout

SIZE	0603C/SOD-523F	
	(mm)	(inch)
A	1.10	0.043
B	0.70	0.028
C	1.00	0.039
D	1.80	0.071
E	0.40	0.016



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
0603C/SOD-523F	4,000	7