

## CPDUC5V0-HF

### High-Reliability and High-Performance

### RoHS Device

### Halogen Free

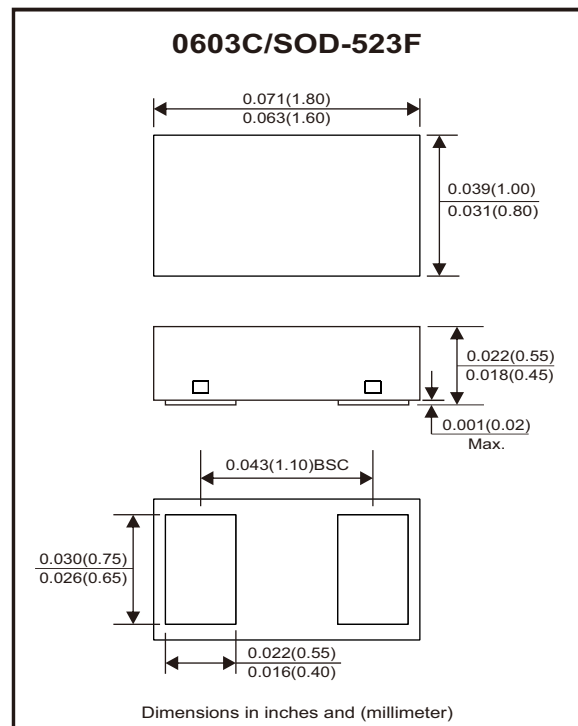


#### Features

- Bi-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Ultra small SMD package.
- Surface mount package.
- 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	TP = 8/20μs	PPP	75	W
Peak pulse current	TP = 8/20μs	IPP	5	A
ESD capability	IEC 61000-4-2(Air) IEC 61000-4-2(Contact)	ESD	±16 ±8	kV
Operating temperature range		Tj	-40 ~ +125	°C
Storage temperature range		TSTG	-55 ~ +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	IR = 1mA	VBD	5.1	7.0		V
Leakage current	VR = 5V	IL		0.1	2.0	μA
Clamping voltage	IPP = 5A, TP = 8/20μs	VC			15	V
Junction capacitance	VR = 0V, f = 1MHz	CT		15	20	pF

## Rating and Characteristic Curves (CPDUC5V0-HF)

Fig.1 - 8/20 $\mu$ s Peak Pulse Current Waveform acc. IEC 61000-4-5

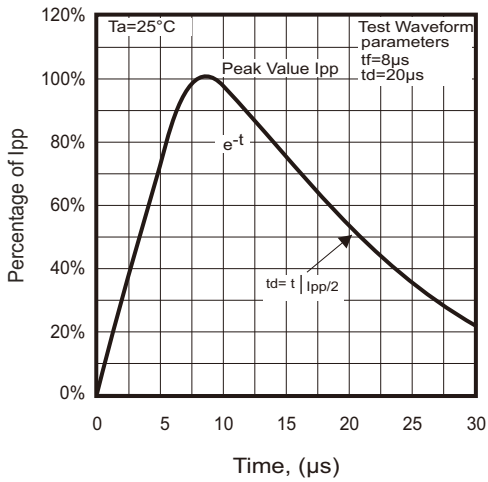


Fig.2 - Reverse Characteristics

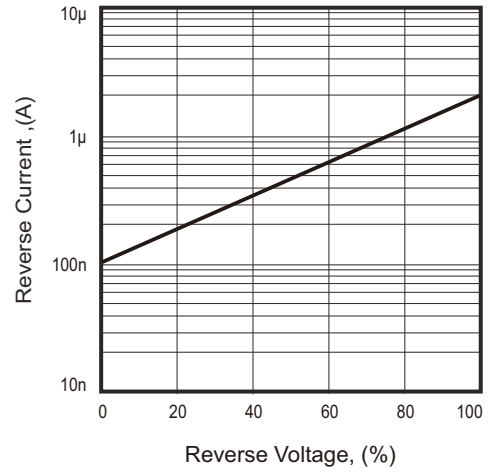


Fig.3 - Capacitance Between Terminals Characteristics

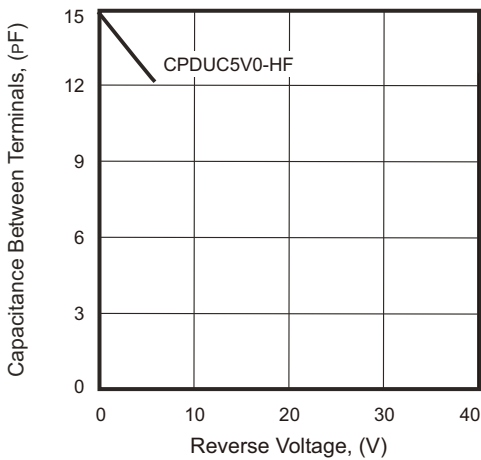
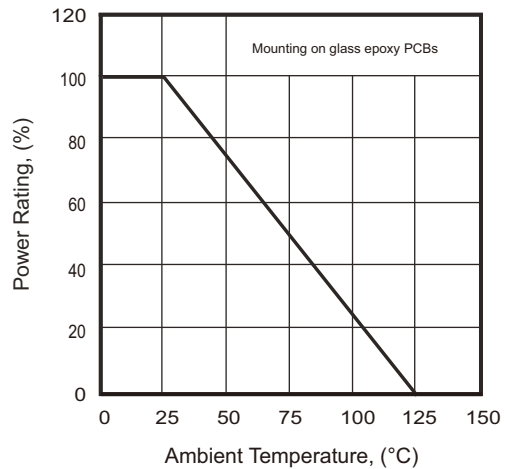
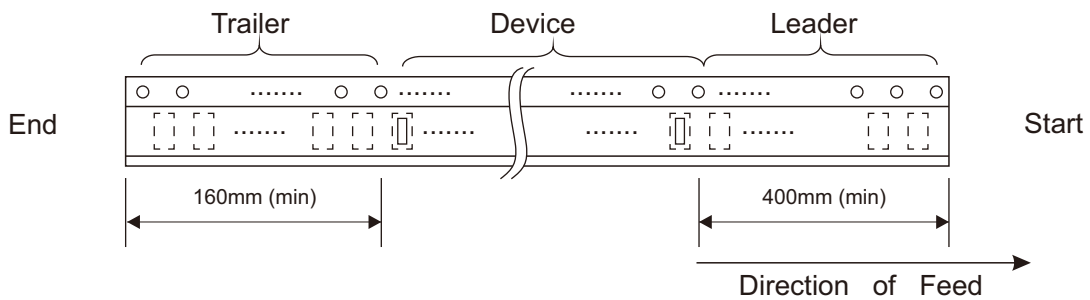
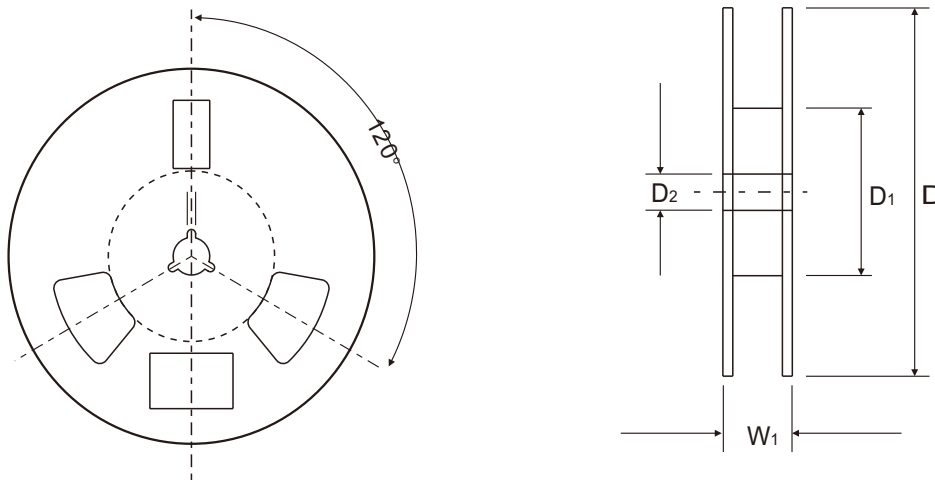
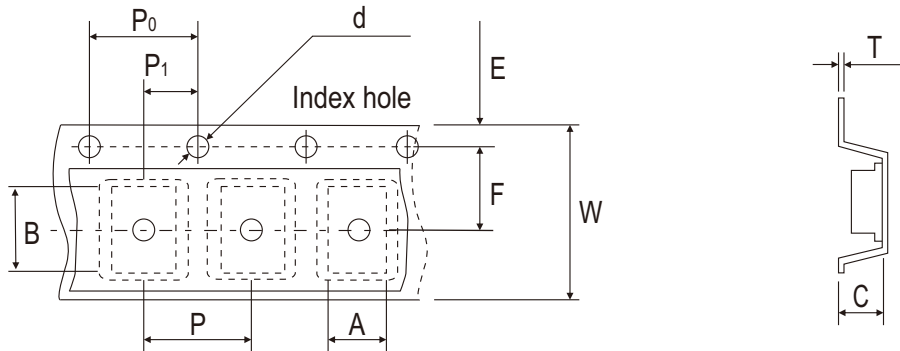


Fig.4 - Power Rating Derating Curve



## 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

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

REV:B

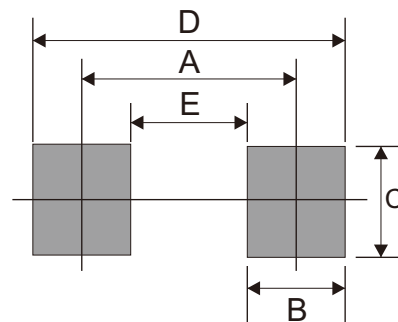
## Marking Code

Part Number	Marking Code
CPDUC5V0-HF	E05



## 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