

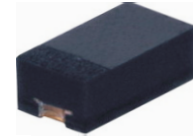


# THE DATASHEET OF CPDF5V0U



## CPDF5V0U-HF

RoHS Device  
Halogen Free



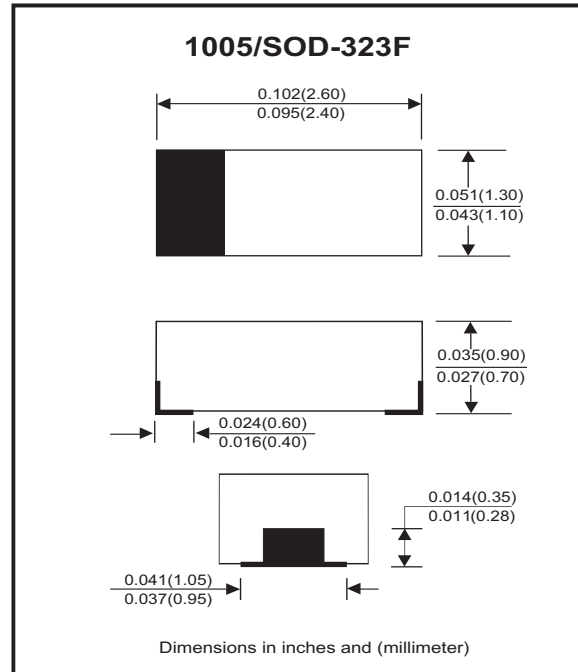
### Features

- Uni-directional ESD protection.
- IEC 61000-4-2 (ESD) ; ±30KV(contact)
- Working voltage: 5V
- Surface mount package.
- High component density.

### Mechanical data

- Case: 1005/SOD-323F standard package , molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- Weight: 0.006 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>	180	W
Peak pulse current	T <sub>P</sub> = 8/20us	I <sub>PP</sub>	15	A
ESD capability	IEC 61000-4-2(air)	ESD	±30	kV
	IEC 61000-4-2(contact)	ESD	±30	
Operation temperature range		T <sub>J</sub>	-40~+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>			5.0	V
Forward voltage	I <sub>F</sub> = 10mA	V <sub>F</sub>		0.8	1.2	V
Breakdown voltage	I <sub>T</sub> = 1mA	V <sub>BR</sub>	6			V
Reverse leakage current	V <sub>RWM</sub> = 5V	I <sub>R</sub>		0.2	2.0	µA
Clamping voltage	I <sub>PP</sub> = 1A, T <sub>P</sub> = 8/20us	V <sub>C</sub>		8	7.6	V
	I <sub>PP</sub> = 5A, T <sub>P</sub> = 8/20us			10	9.4	
	I <sub>PP</sub> = 15A, T <sub>P</sub> = 8/20us				12	
Junction capacitance	V <sub>R</sub> = 0V, f = 1MHz	C <sub>J</sub>		130		pF

## RATING AND CHARACTERISTIC CURVES (CPDF5V0U-HF)

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

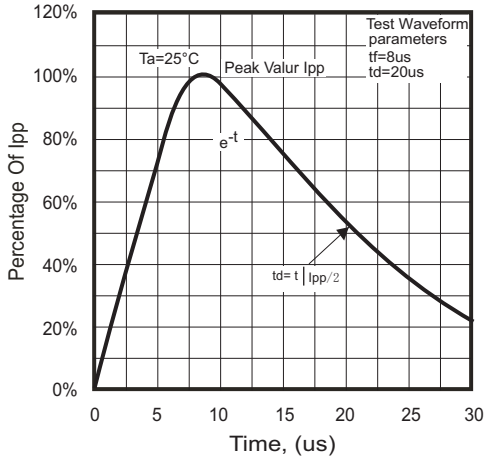


Fig.2 - Power Rating Derating Curve

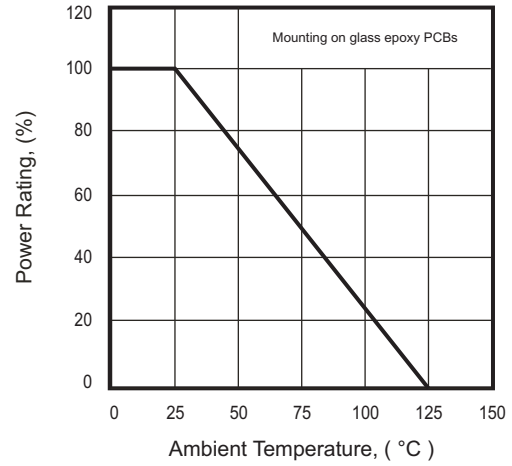


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

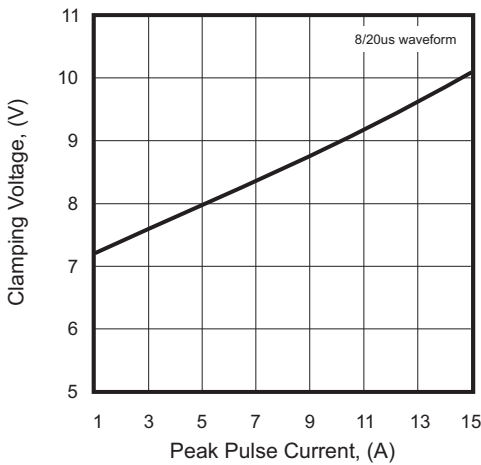


Fig.4 - Forward Characteristic

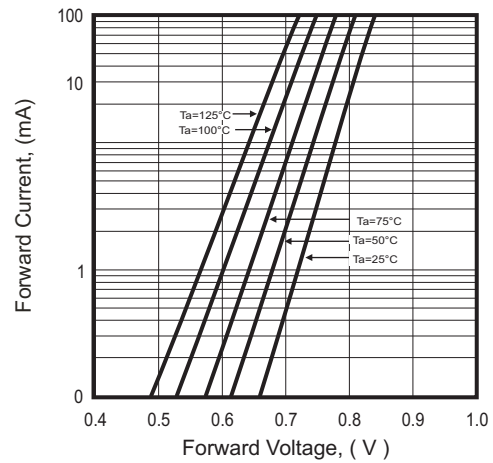
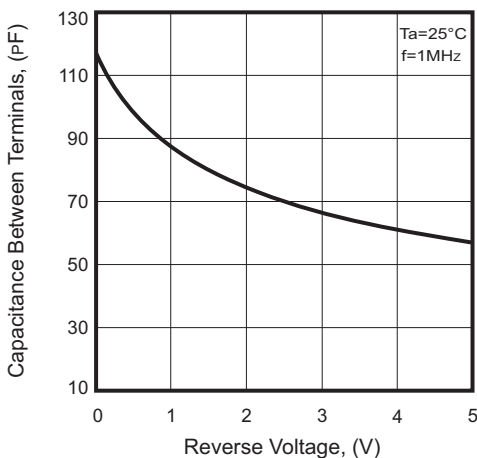
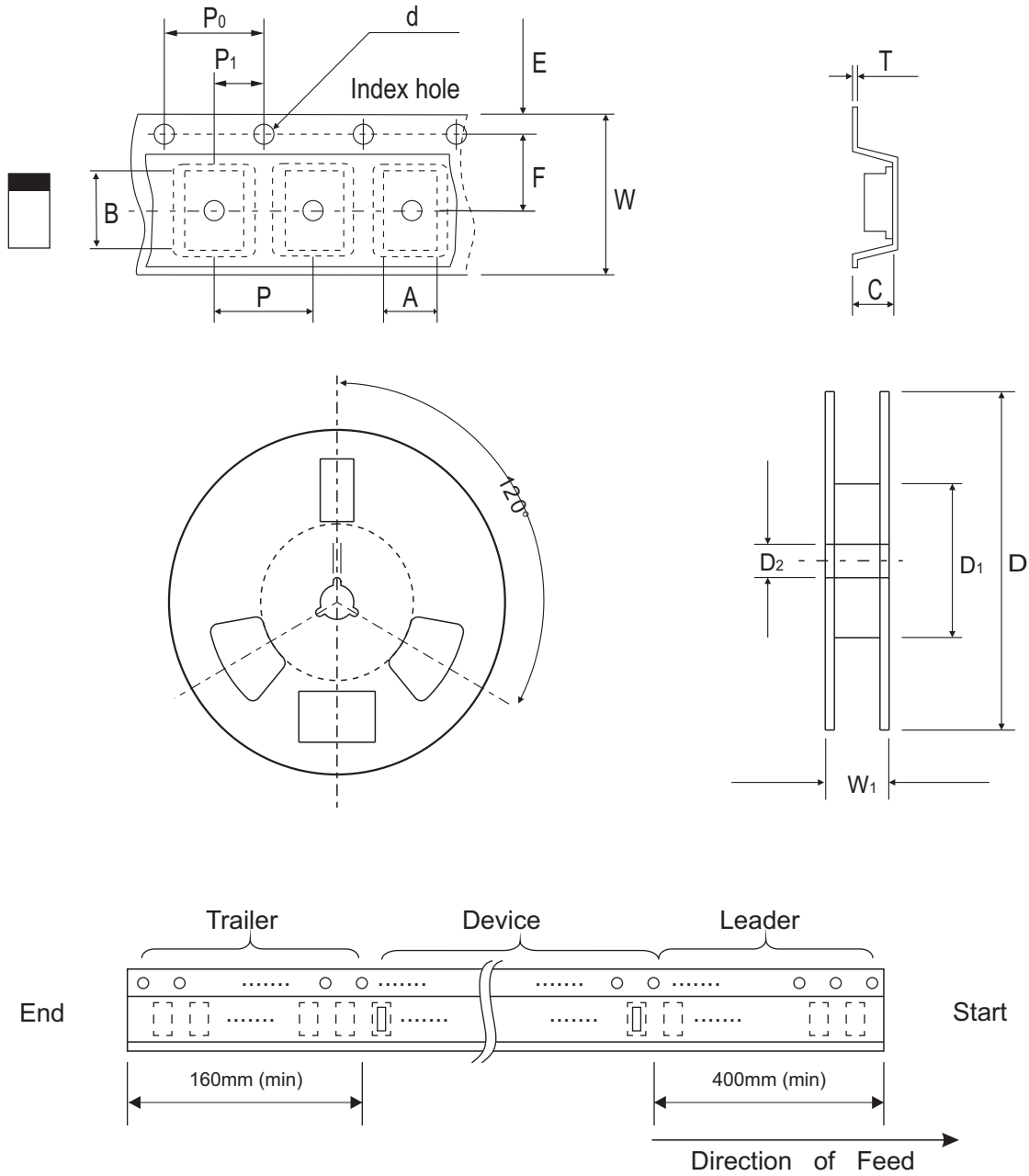


Fig.5 - Capacitance Between Terminals Characteristics



## Reel Taping Specification



1005 (SOD-323F)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.45 ± 0.05	2.80 ± 0.05	1.00 ± 0.05	1.50 + 0.10 - 0	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.057 ± 0.002	0.110 ± 0.002	0.039 ± 0.002	0.059 + 0.004 - 0	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

1005 (SOD-323F)	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 ± 0.10	2.00 ± 0.05	0.23 ± 0.05	8.00 ± 0.10	12.00 + 0.50 - 0
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.002	0.315 ± 0.004	0.472 + 0.020 - 0

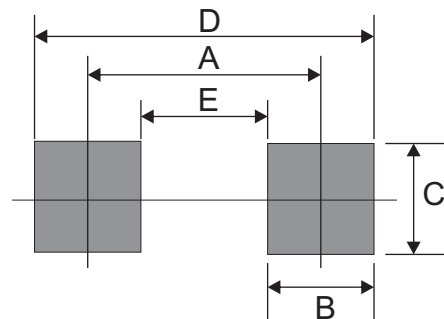
## Marking Code

Part Number	Marking Code
CPDF5V0U-HF	E05



## Suggested PAD Layout

SIZE	1005/SOD-323F	
	(mm)	(inch)
A	2.10	0.083
B	1.20	0.047
C	1.20	0.047
D	3.30	0.130
E	0.90	0.035



## Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
1005/SOD-323F	4,000	7

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