



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

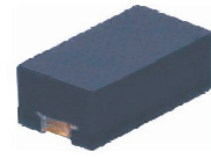
Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## CPDF Series-HF

RoHS Device  
Halogen Free

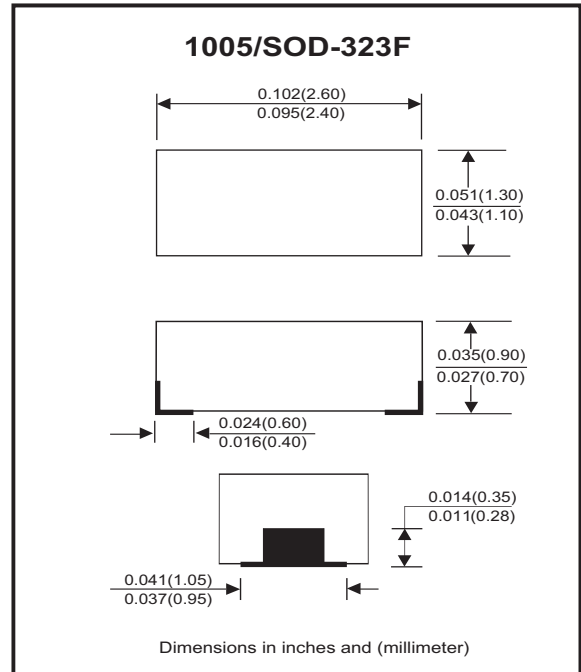


### Features

- Bi-directional ESD protection.
- 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.
- Marking Code:
  - CPDF5V0-HF: E05
  - CPDF12V-HF: E12
  - CPDF24V-HF: E24
- Mounting position: Any.
- Weight: 0.006 grams(approx.).



### Circuit diagram



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	CPDF5V0-HF CPDF12V-HF CPDF24V-HF IR = 1mA	V <sub>BD</sub>	5.1 13 25	7.0 17 28		V
Leakage current	CPDF5V0-HF CPDF12V-HF CPDF24V-HF VR = 5V VR = 12V VR = 24V	I <sub>L</sub>		0.1	2.0	uA
Junction capacitance	CPDF5V0-HF CPDF12V-HF CPDF24V-HF VR = 0V, f = 1MHz	C <sub>T</sub>		15 12 10	20 -	pF
ESD capability	CPDF Series-HF IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			16 8	kV
Clamping voltage	CPDF5V0-HF CPDF12V-HF CPDF24V-HF IPP = 1A, TP=8/20us IPP = 5A, TP=8/20us IPP = 1A, TP=8/20us IPP = 1A, TP=8/20us	V <sub>C</sub>			10 15 25 47	V
Peak pulse power	CPDF5V0-HF CPDF12V-HF CPDF24V-HF TP=8/20us	PPP			75 25 47	W
Operation temperature range	CPDF Series-HF	T <sub>j</sub>	-40		125	°C
Storage temperature range	CPDF Series-HF	T <sub>STG</sub>	-55		150	°C

## RATING AND CHARACTERISTIC CURVES (CPDF Series-HF)

Fig.1 - Peak Pulse Current Wave  
Form Acc. IEC 61000-4-5

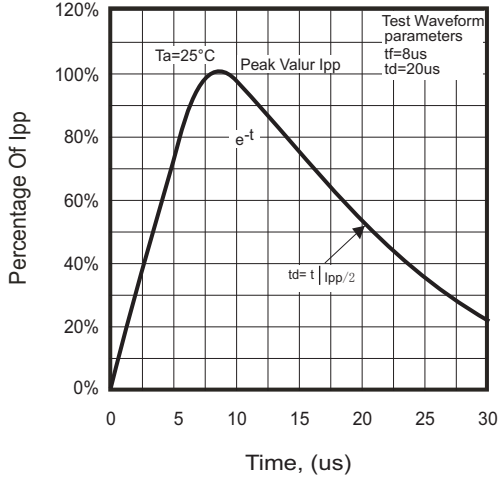


Fig.2-1 - Reverse Characteristics

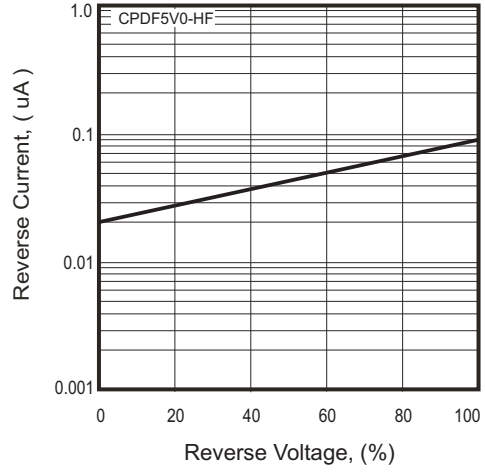


Fig.2-2 - Reverse Characteristics

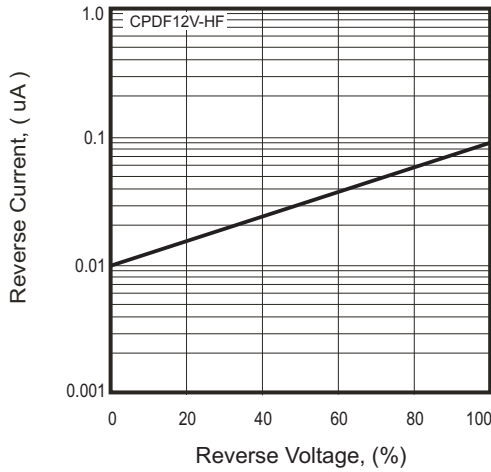


Fig.2-3 - Reverse Characteristics

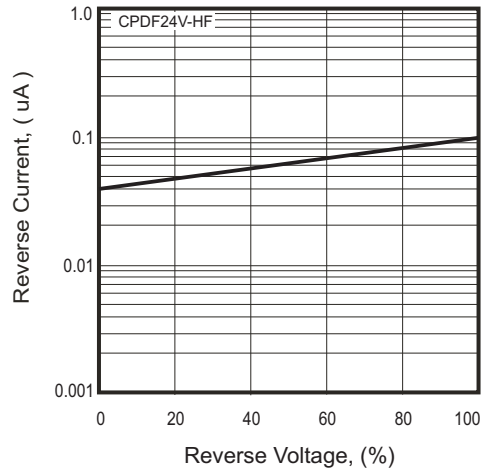


Fig.3 - Capacitance Between  
Terminals Characteristics

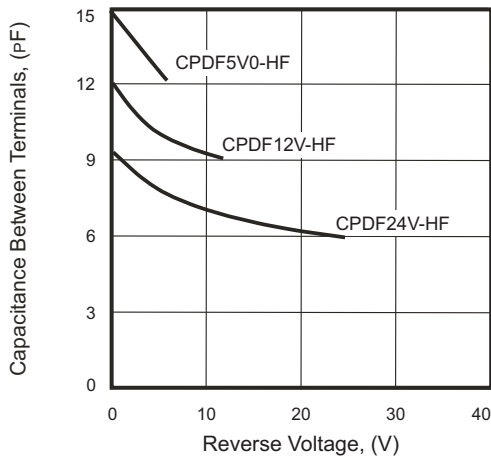
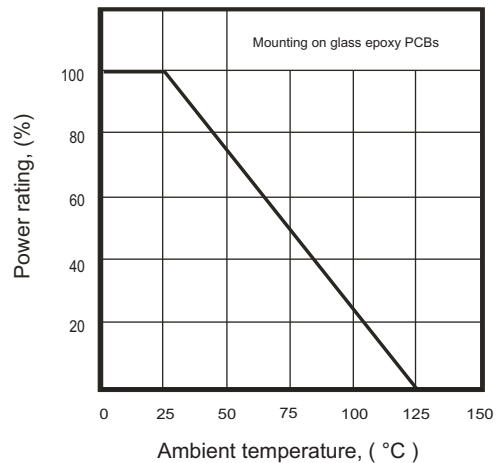
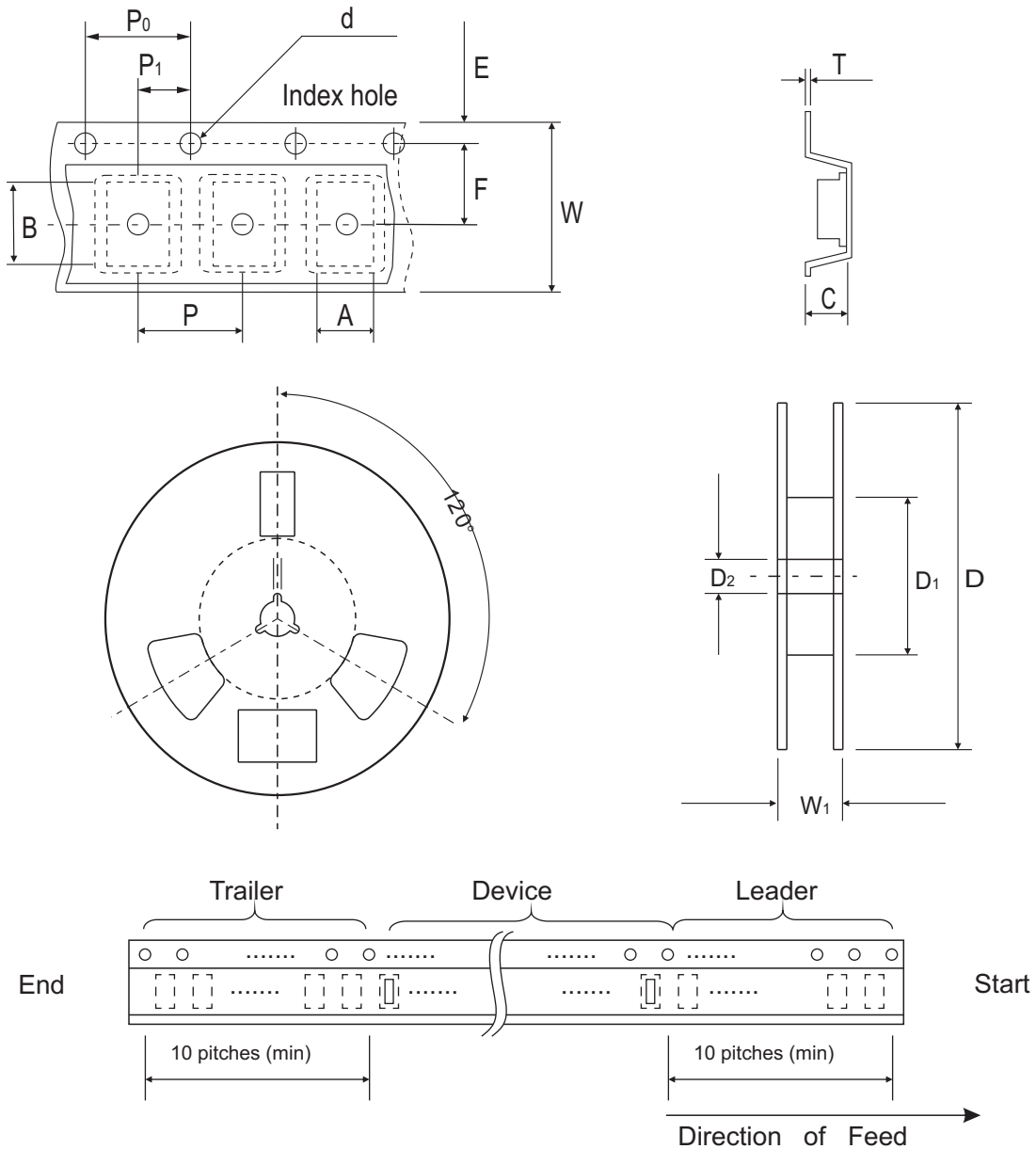


Fig. 4 - Power rating derating curve



## Reel Taping Specification



1005 (SOD-323F)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.55 ± 0.10	2.65 ± 0.10	1.05 ± 0.10	1.55 ± 0.05	178 ± 1.0	60.0 MIN.	13.00 ± 0.20
	(inch)	0.061 ± 0.004	0.104 ± 0.004	0.041 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 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 ± 0.20	13.5 MAX.
	(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 ± 0.008	0.531 MAX.

## Marking Code

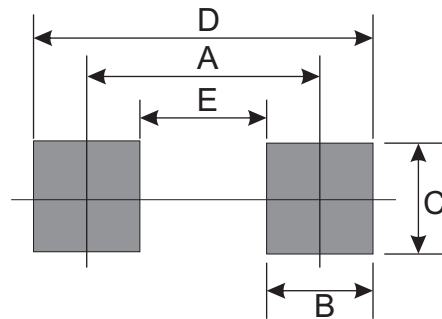
Part Number	Marking Code
CPDF5V0-HF	E05
CPDF12V-HF	E12
CPDF24V-HF	E24



xxx = Product type marking code

## 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