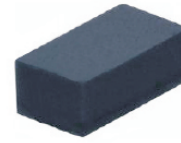


## CPDFR5V0R-HF

RoHS Device  
Halogen Free

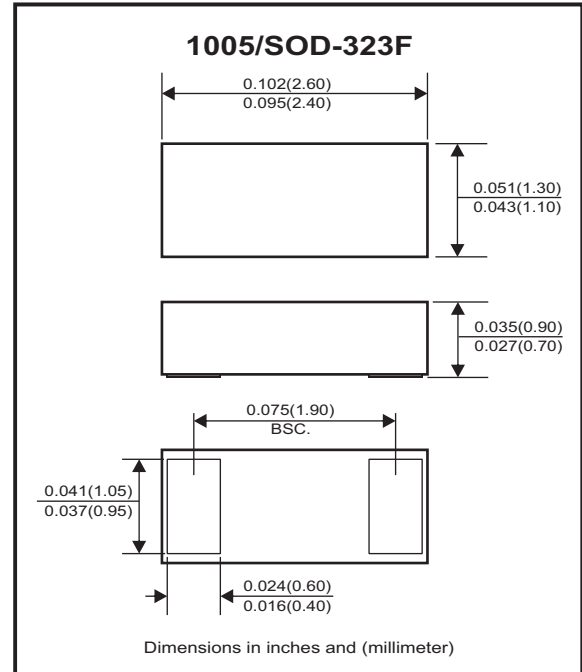


### Features

- Bi-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- Operating voltage: 5V

### 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>	154	W
Peak pulse current	T <sub>P</sub> = 8/20us	I <sub>PP</sub>	11	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~+150	°C
Storage temperature range		T <sub>STG</sub>	-40~+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	V
Diode breakdown voltage	I <sub>T</sub> = 1mA	V <sub>BR</sub>	5.6		9.4	V
Reverse leakage current	V <sub>RWM</sub> = 5V	I <sub>R</sub>		5	90	nA
Clamping Voltage	I <sub>PP</sub> = 1 A, t <sub>p</sub> =8/20us	V <sub>c</sub>		7.5	10	V
	I <sub>PP</sub> = 11 A, t <sub>p</sub> =8/20us	V <sub>c</sub>		12	14	V
Junction capacitance	V <sub>R</sub> = 0V, f = 1MHz	C <sub>J</sub>		20	30	pF

## RATING AND CHARACTERISTIC CURVES (CPDFR5V0R-HF)

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

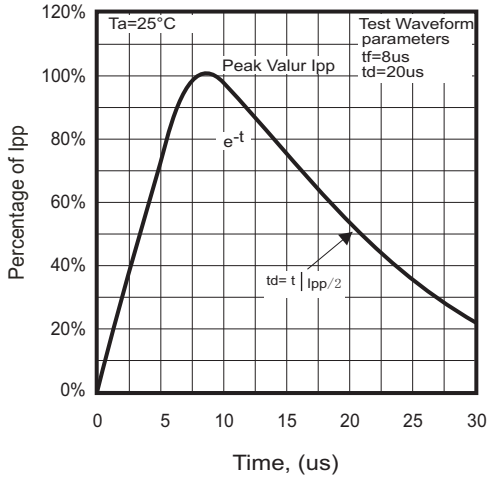


Fig. 2 - Capacitance Between Terminals Characteristics

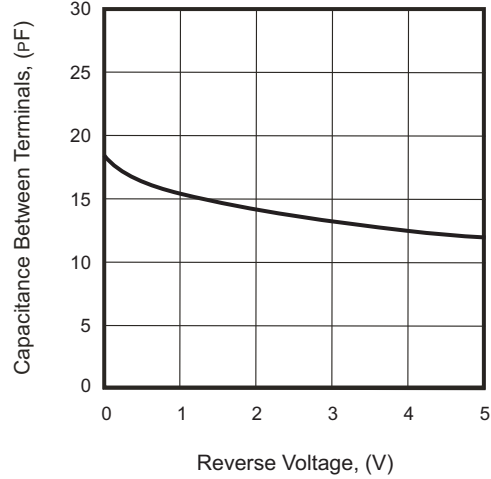


Fig. 3 - Clamping Voltage Vs. Peak Pulse Current

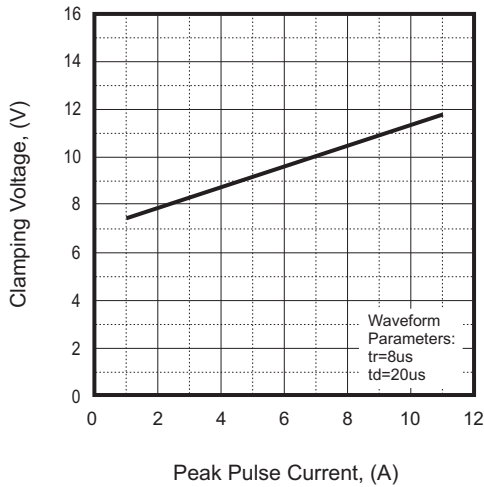
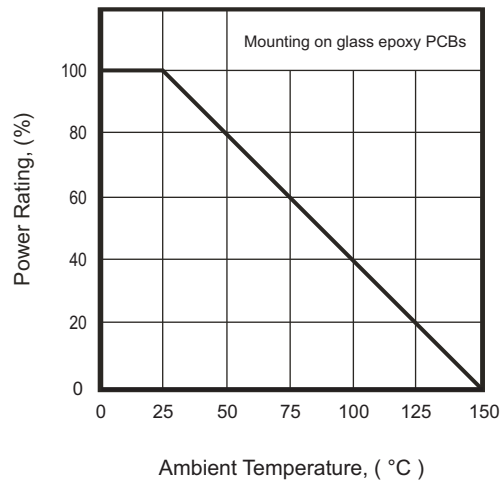
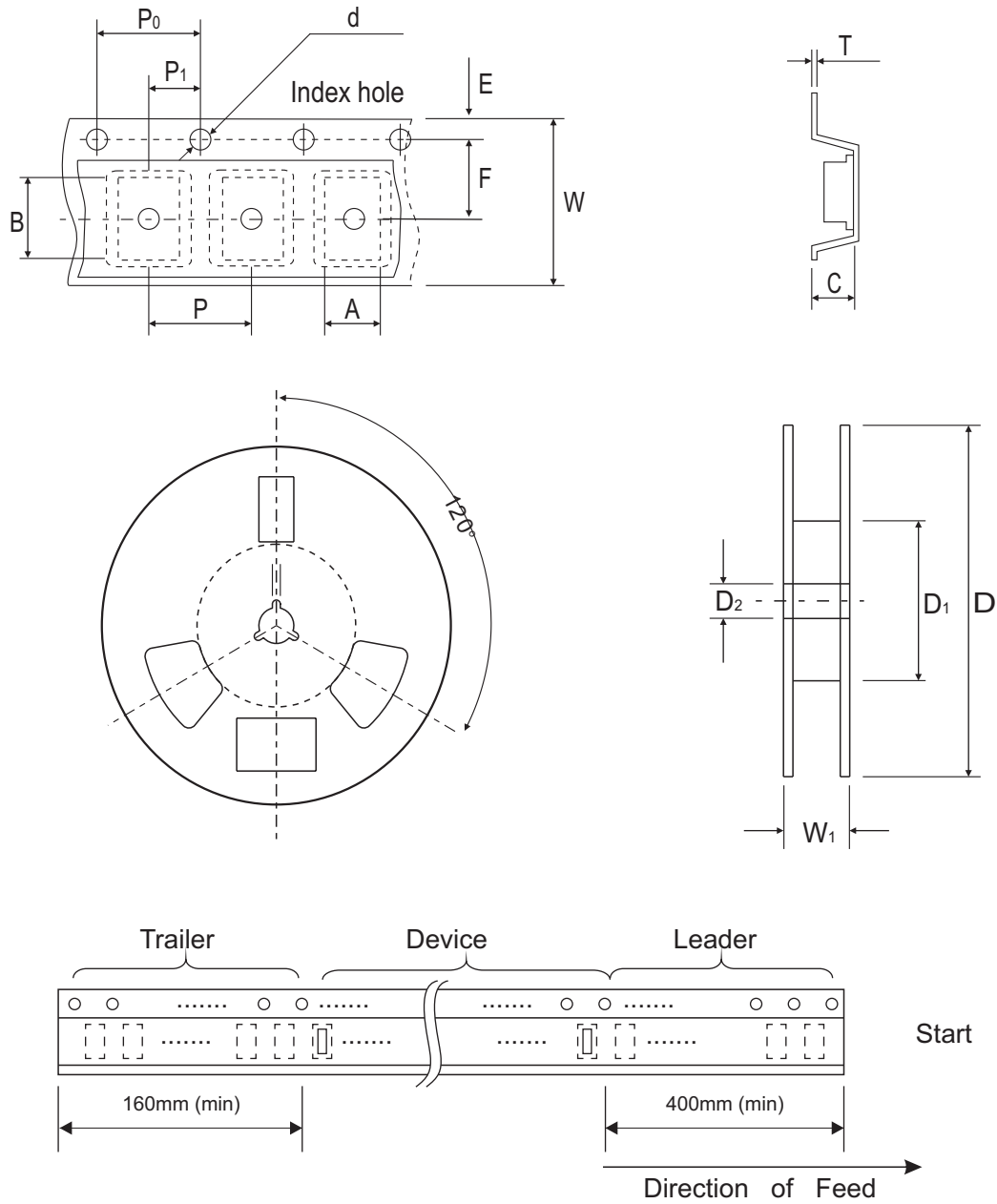


Fig. 4 - Power Rating Derating Curve



## Reel Taping Specification



1005 (SOD-323F)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.45 ± 0.05	2.80 ± 0.05	1.00 ± 0.05	1.50 + 0.10 - 0	178.00 ± 1.00	60.0 ± 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

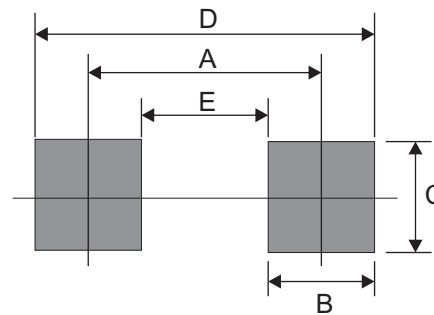
## Marking Code

Part Number	Marking Code
CPDFR5V0R-HF	E5R



## Suggested PAD Layout

SIZE	1005/SOD-323F	
	(mm)	(inch)
A	2.00	0.079
B	0.70	0.028
C	1.30	0.051
D	2.70	0.106
E	1.30	0.051



## Standard Packaging

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