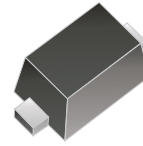


## CPDH5V0-HF

### RoHS Device

### Halogen Free

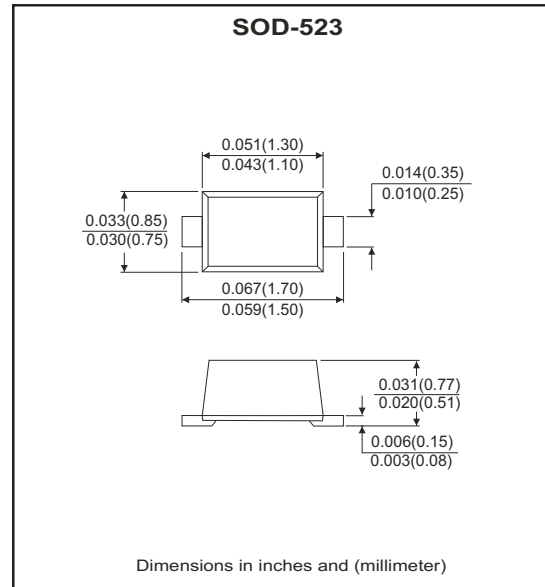


### Features

- Bi-directional ESD protection of one line.
- IEC61000-4-2 Level 4 ESD protection.
- JESD22-A114-B ESD Rating of class 3B per human body model.
- Low capacitance: 12pF(Typ.)
- Low reverse stand-off voltage: 5.0V
- Low reverse clamping voltage.
- Low leakage current.
- Fast response time

### Mechanical data

- Case: SOD-523 standard package , molded plastic.
- Terminals: Tin plated, solderable per MIL-STD-750,method 2026.
- Marking code: BH
- Mounting position: Any



### Circuit Diagram



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

Parameter	Conditions	Symbol	Value	Unit
ESD capability	IEC 61000-4-2(air)	V <sub>ESD</sub> <sup>(1)</sup>	±20	kV
	IEC 61000-4-2(contact)		±20	
JESD22-A114-B ESD voltage	per human body model		±16	
ESD voltage	Machine model		±0.4	
Peak pulse power	T <sub>P</sub> = 8/20us	P <sub>PP</sub> <sup>(2)</sup>	50	W
Peak pulse current	T <sub>P</sub> = 8/20us	I <sub>PP</sub> <sup>(2)</sup>	5	A
Lead solder temperature Maximum(10second duration)		T <sub>L</sub>	260	°C
Junction temperature range		T <sub>J</sub>	-40~+150	°C
Storage temperature range		T <sub>STG</sub>	-55~+150	°C

#### Notes:

- (1). Device stressed with ten non-repetitive ESD pulses.
- (2). Non-repetitive current pulse 8/20µs exponential decay waveform according to IEC61000-4-5

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand off voltage		$V_{RWM}^{(1)}$			5	V
Reverse leakage current	$V_{RWM} = 5V$	$I_R$			0.1	uA
Breakdown voltage	$I_T = 1mA$	$V_{(BR)}$	5.8		7.8	V
Clamping voltage	$I_{PP} = 5A$	$V_C^{(2)}$			10	V
Junction capacitance	$V_R = 0V, f = 1MHz$	$C_J$		12	15	pF

### Notes:

- (1). Other voltages available upon request
- (2). Non-repetitive current pulse 8/20µs exponential decay waveform according to IEC61000-4-5

## RATING AND CHARACTERISTIC CURVES (CPDH5V0-HF)

Fig.1 - Reverse Characteristics

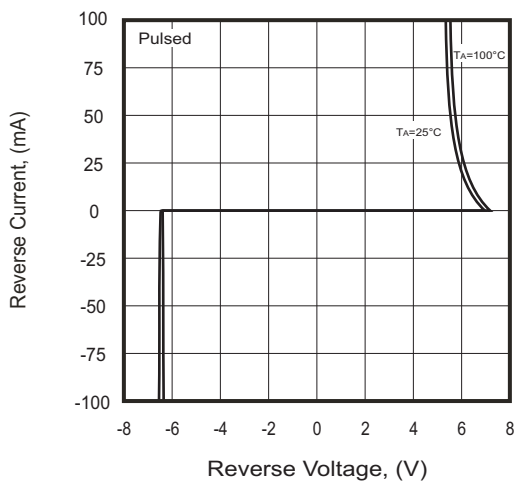


Fig.2 - Capacitance Characteristics

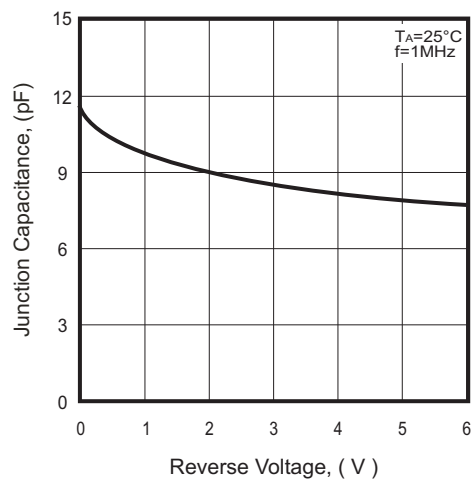
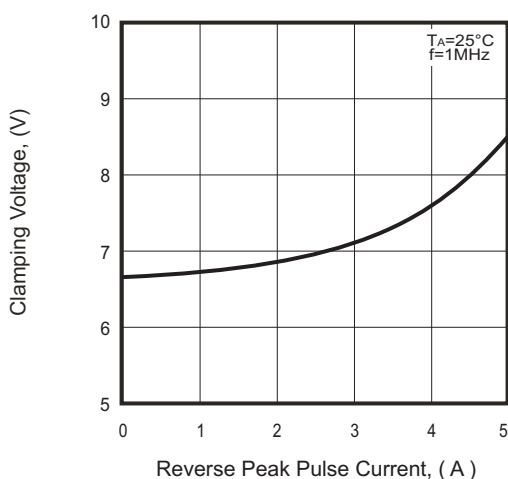
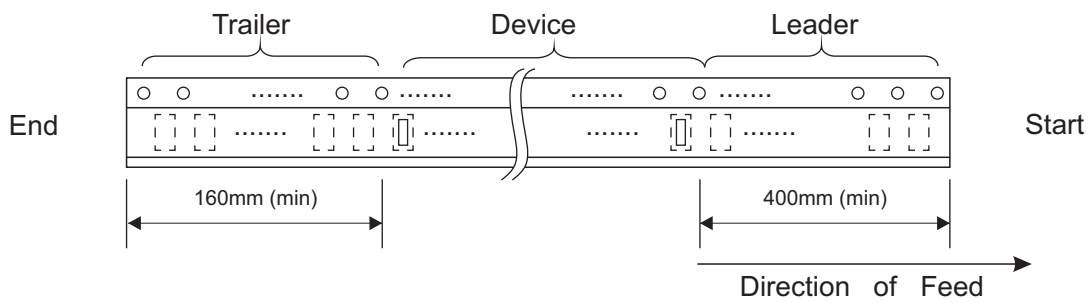
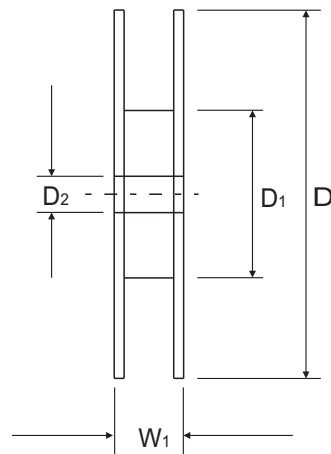
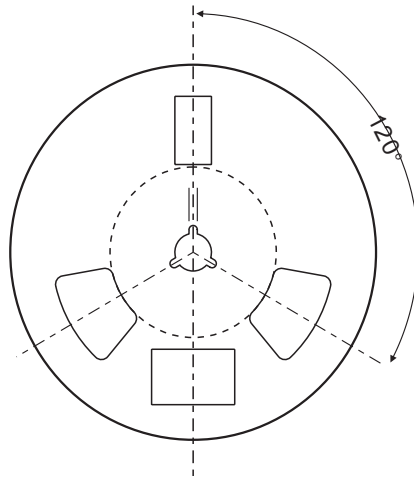
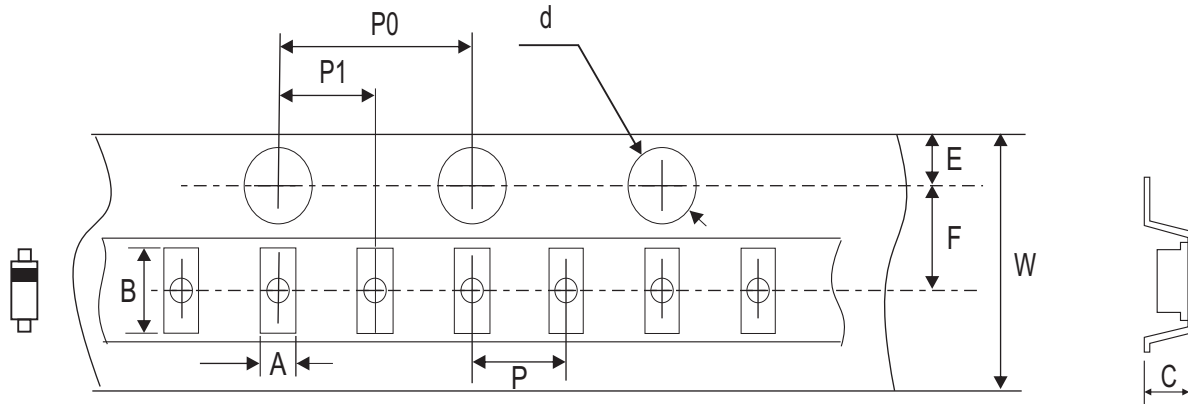


Fig.3 -  $V_C$  —  $I_{PP}$



## Reel Taping Specification



SOD-523	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	0.90 ± 0.05	1.94 ± 0.05	0.73 ± 0.05	1.50 ± 0.10	178 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.035 ± 0.002	0.076 ± 0.002	0.029 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.511 ± 0.039

SOD-523	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	3.50 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 / - 0.10	12.30 ± 1.0
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 + 0.012 / - 0.004	0.484 ± 0.039

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

## Marking Code

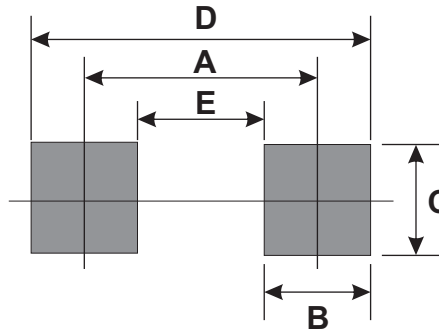
Part Number	Marking Code
CPDH5V0-HF	BH



BH = Product type marking code  
 Solid dot = Halogen free parts

## Suggested PAD Layout

SIZE	SOD-523	
	(mm)	(inch)
A	1.42	0.055
B	0.60	0.024
C	0.70	0.028
D	2.02	0.079
E	0.82	0.031



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
SOD-523	8,000	7