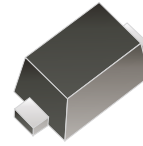


CPDH5V0-HF

RoHS Device
Halogen Free

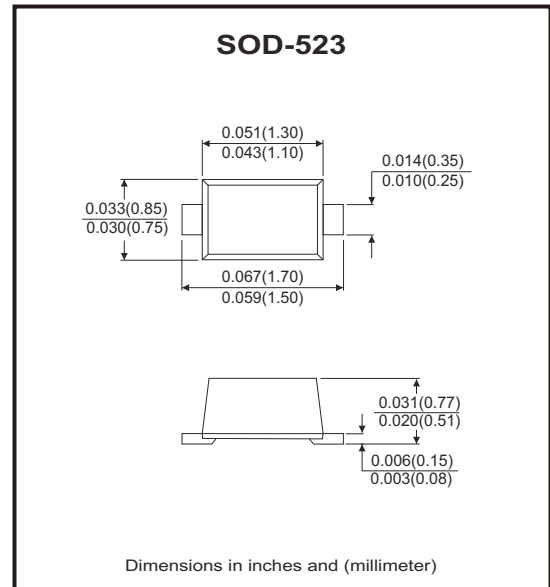


Features

- 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)	$V_{ESD}^{(1)}$	±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	$T_P = 8/20\mu s$	$P_{PP}^{(2)}$	50	W
Peak pulse current	$T_P = 8/20\mu s$	$I_{PP}^{(2)}$	5	A
Lead solder temperature Maximum(10second duration)		T_L	260	°C
Junction temperature range		T_J	-40~+150	°C
Storage temperature range		T_{STG}	-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 IEC 61000-4-5.

Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

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

Notes: 1. Other voltages available upon request.

2. Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC 61000-4-5.

Rating and Characteristic Curves (CPDH5V0-HF)

Fig.1 - Reverse Characteristics

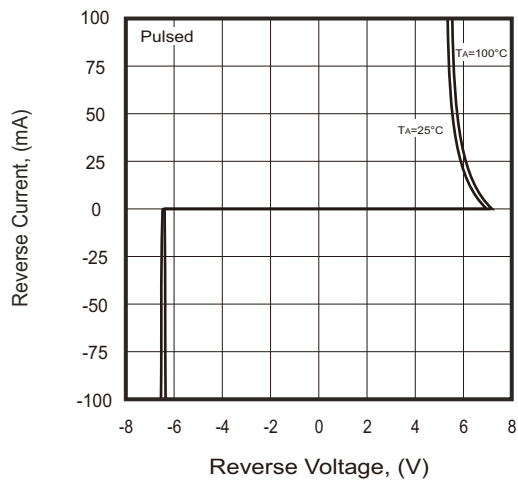


Fig.2 - Capacitance Characteristics

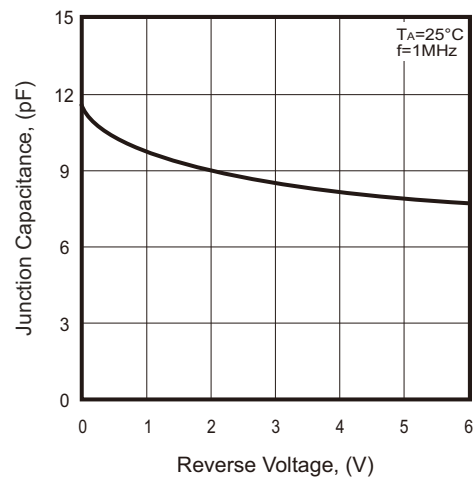
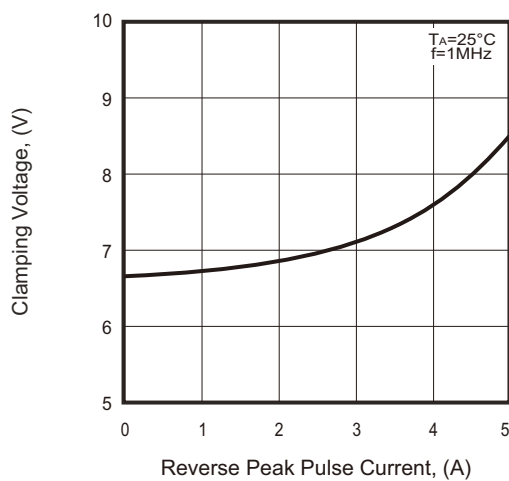
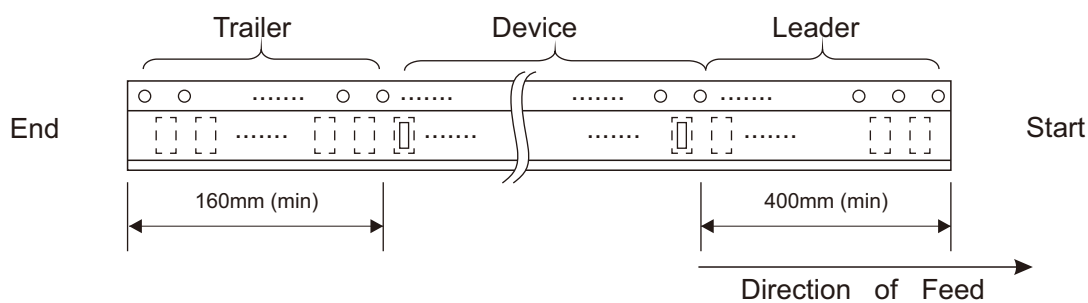
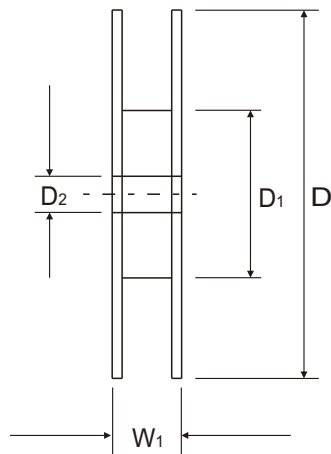
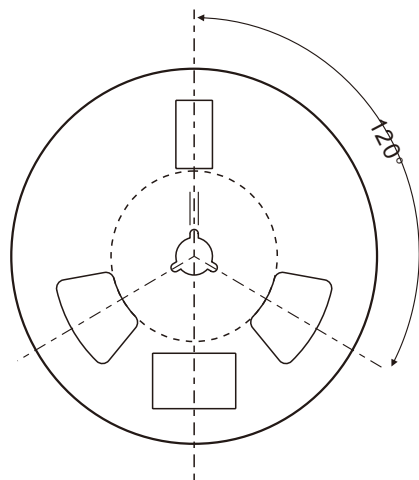
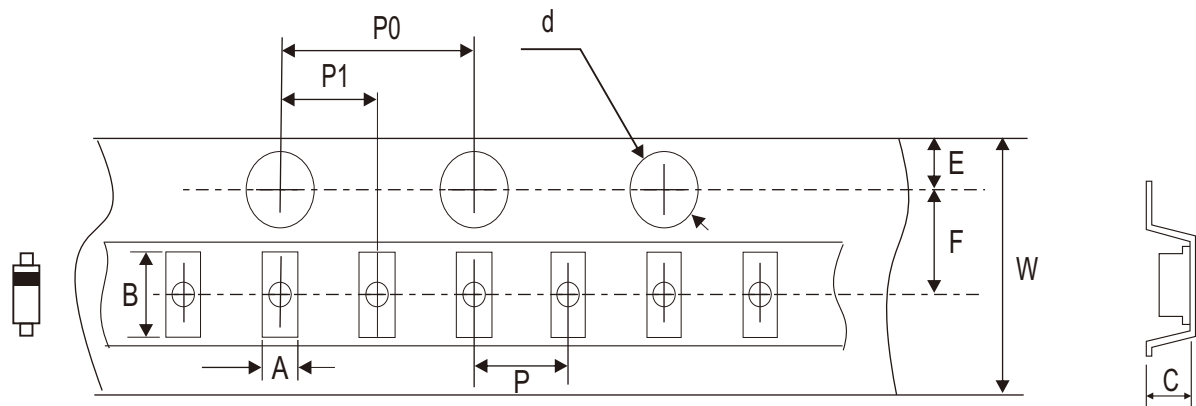


Fig.3 - V_C — I_{PP}



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

Reel Taping Specification

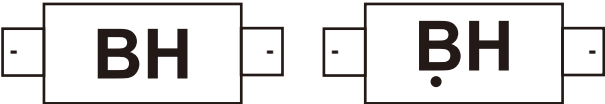


SOD-523	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.90 ± 0.05	1.94 ± 0.05	0.73 ± 0.05	1.50 ± 0.10	178 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.035 ± 0.002	0.076 ± 0.002	0.029 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.511 ± 0.039

SOD-523	SYMBOL	E	F	P	P ₀	P ₁	W	W ₁
	(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

Marking Code

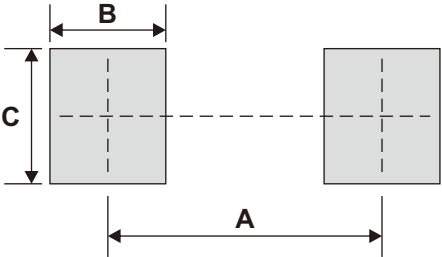
Part Number	Marking Code
CPDH5V0-HF	BH



Solid dot = Control code

Suggested P.C.B. PAD Layout

SIZE	SOD-523	
	(mm)	(inch)
A	1.42	0.056
B	0.60	0.024
C	0.70	0.028



Note: 1. The pad layout is for reference purposes only.

Standard Packaging

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