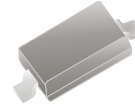


CPDV4V5-HF

RoHS Device

Halogen Free

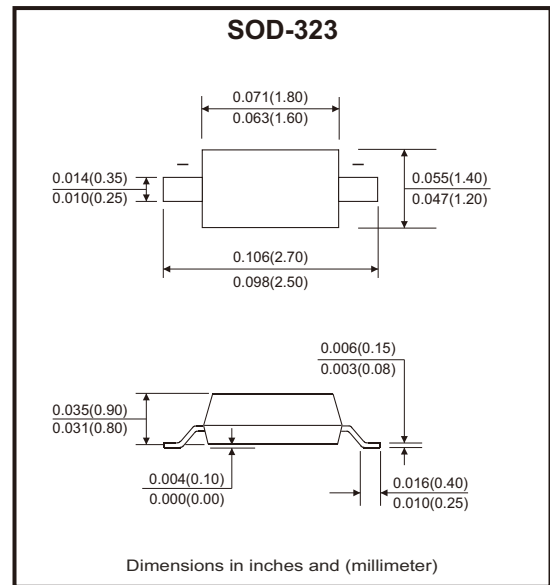


Features

- Bi-directional ESD protection of one line.
- Reverse stand-off voltage: 4.5V.
- Low reverse clamping voltage.
- Low leakage current.
- Excellent package: 1.70mm x 1.30mm x 1.00mm.
- Peak pulse power: 3300W (IEC 61000-4-5 8/20μs).
- Fast response time.
- JESD22-A114-B ESD rating of class 3B per human body model.
- IEC 61000-4-2 Level 4 ESD protection.
- Surge protection according to IEC 61000-4-5 8/20μs waveform: IPPM 140A.

Mechanical data

- Case: SOD-323 package, molded plastic.



Circuit Diagram



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

Parameter	Symbol	Value	Unit
IEC 61000-4-2 ESD voltage air model	V _{ESD} (Note 1)	±30	kV
IEC 61000-4-2 ESD voltage contact model		±20	
JESD22-A114-B ESD voltage per human body model		±0.4	
ESD voltage machine model			
Peak pulse power (Note 2)	P _{PP}	3300	W
Peak pulse current (Note 2)	I _{PP}	140	A
Lead solder temperature - maximum (10 second duration)	T _L	260	°C
Operation junction and storage temperature range	T _J , 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 (Note 1)		V_{RWM}			4.5	V
Reverse leakage current	$V_{RWM} = 4.5\text{V}$	I_R			1	μA
Reverse trigger voltage	$I_T = 1\text{mA}$	V_{TRIG}	5.0			V
Reverse holding voltage	$I_T = 100\text{mA}$	V_{HOLD}	4.6			V
Clamping voltage (Note 2)	$I_{PP} = 100\text{A}$	V_C			27.5	V
Junction capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J			150	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 (CPDV4V5-HF)

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

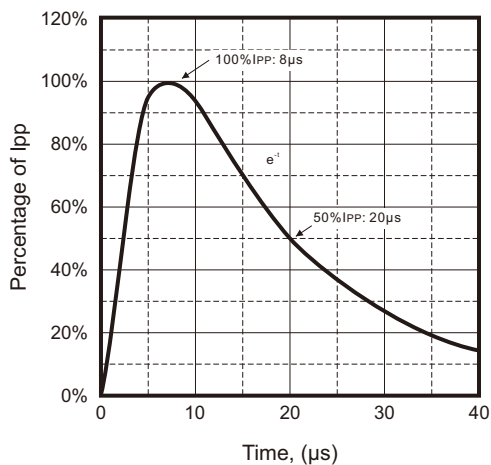


Fig.2 - Reverse Characteristics

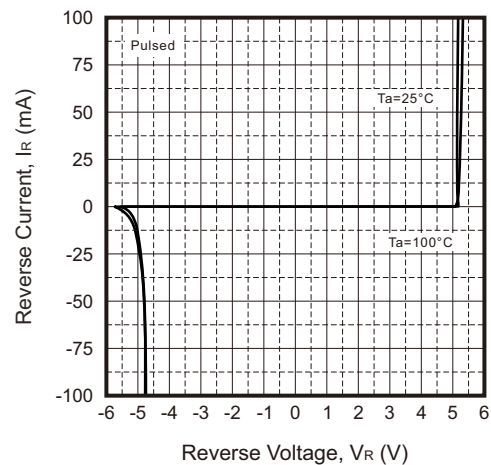


Fig.3 - Capacitance Characteristics

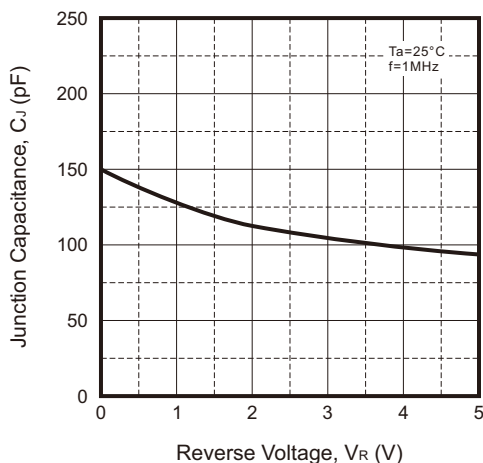
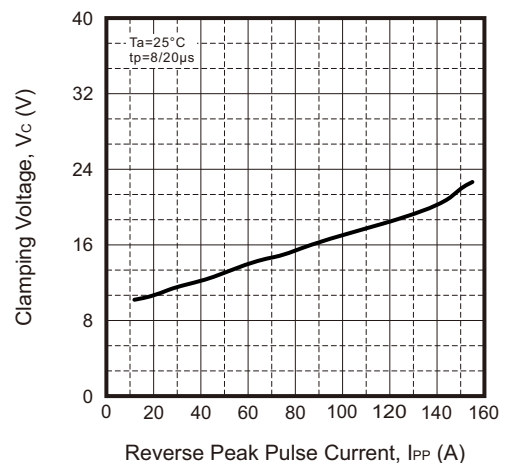
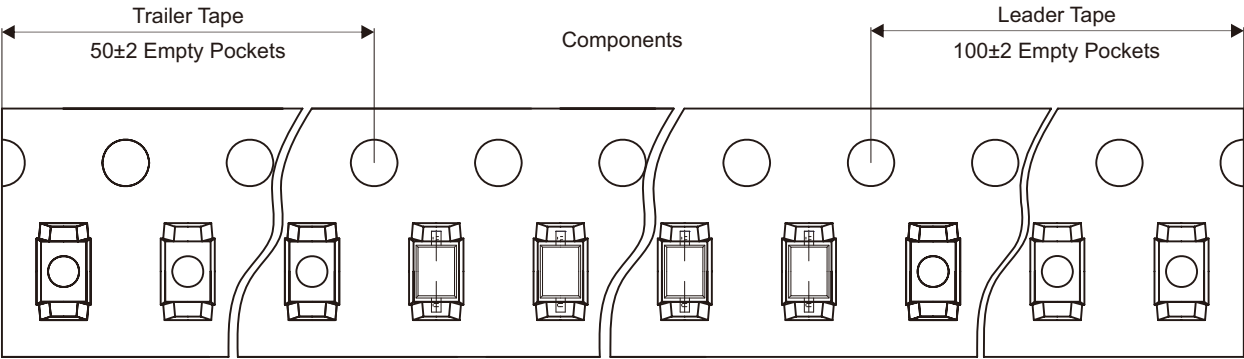
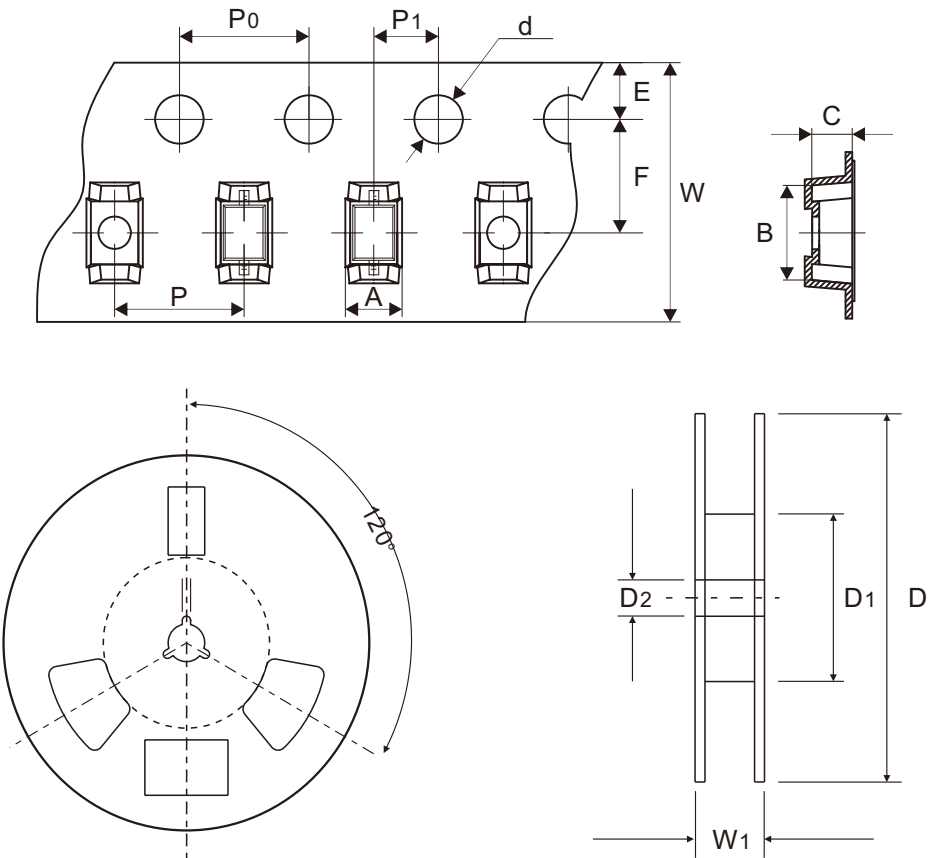


Fig.4 - V_C — I_{PP}



Reel Taping Specification



SOD-323	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.46 ± 0.05	2.90 ± 0.05	1.25 ± 0.05	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.057 ± 0.002	0.114 ± 0.002	0.049 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOD-323	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 - 0.10	12.30 ± 1.00
	(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

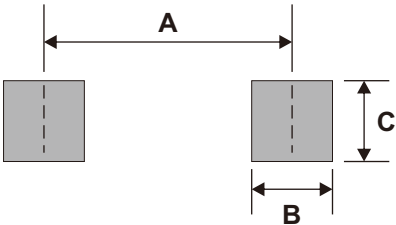
Marking Code

Part Number	Marking Code
CPDV4V5-HF	D4



Suggested P.C.B. PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
A	2.33	0.092
B	0.70	0.028
C	0.70	0.028



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

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-323	3,000	7