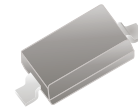


CPDV3V3A-HF

RoHS Device
Halogen Free

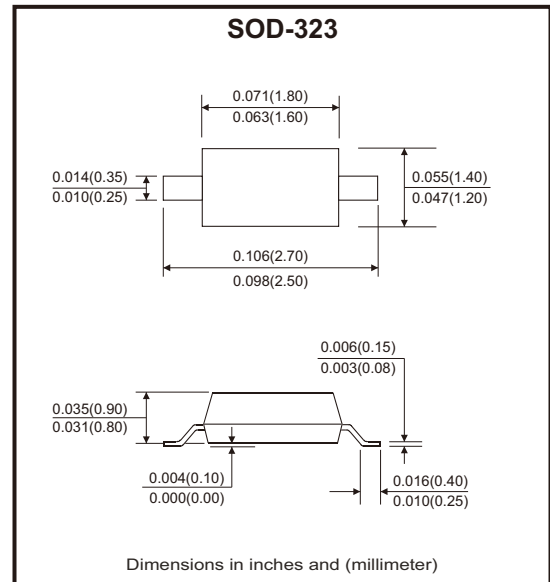


Features

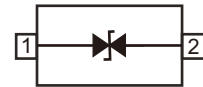
- Transient protection for high-speed data lines
IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
IEC61000-4-4 (EFT) 40A (5/50ns)
IEC61000-4-5 (Lightning) 4A (8/20 μs)
Cable discharge event (CDE)
- Ultra-small package.
- Protects one data, control line.
- Low capacitance: 0.25pF (typical).
- Low leakage current.
- Low clamping voltage.

Mechanical data

- Case: SOD-323 package.
- Flammability rating: UL 94V-0.
- High temperature soldering guaranteed:
260°C/10s



Circuit diagram



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

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (air)	V_{ESD}	± 20	kV
ESD per IEC 61000-4-2 (contact)		± 20	
Peak pulse power (8/20 μs)	P_{PP}	100	W
Operating temperature range	T_{OPT}	-55 to +125	°C
Storage temperature range	T_{STG}	-55 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse working voltage		V_{RWM}			3.3	V
Reverse breakdown voltage	$I_{\text{T}} = 1\text{mA}$	V_{BR}	4.2			V
Reverse leakage current	$V_{\text{RWM}} = 3.3\text{V}$	I_{R}			100	nA
Clamping voltage	$I_{\text{PP}} = 1\text{A}$, $T_{\text{P}} = 8/20\mu\text{s}$	V_{C}			12	V
	$I_{\text{PP}} = 4\text{A}$, $T_{\text{P}} = 8/20\mu\text{s}$				25	
Junction capacitance	$V_{\text{R}} = 0\text{V}$, $f = 1\text{MHz}$	C_{J}		0.25	0.4	pF

Rating and Characteristic Curves (CPDV3V3A-HF)

Fig.1 - Power Derating Curve

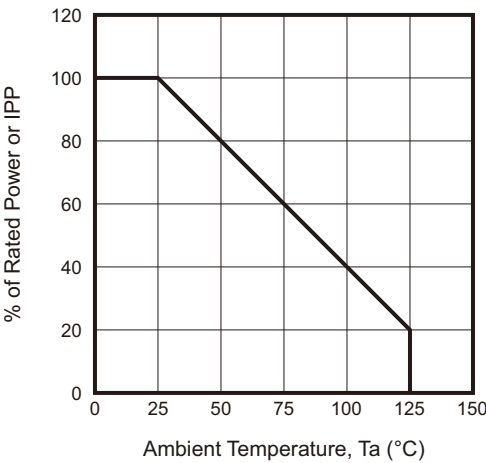


Fig.2 - Clamping Voltage vs Peak Pulse Current

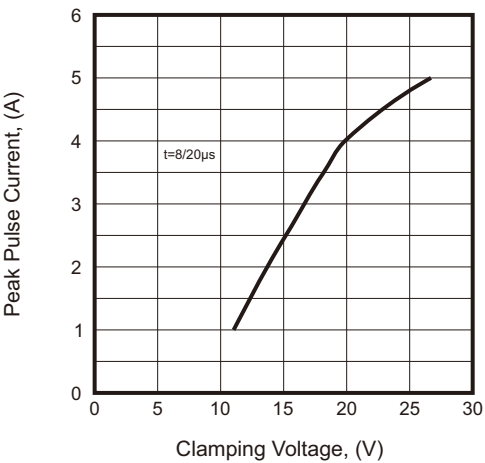


Fig.3 - Voltage Sweeping

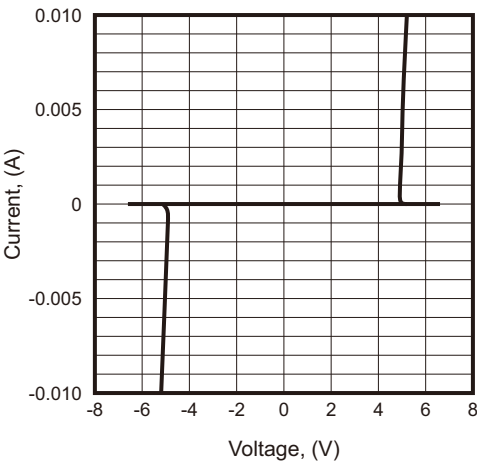


Fig.4 - Voltage vs Capacitance

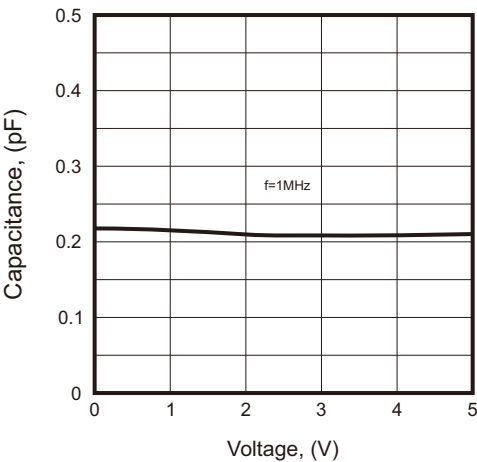


Fig.5 - ESD Clamping
(+8kV Contact per IEC 61000-4-2)

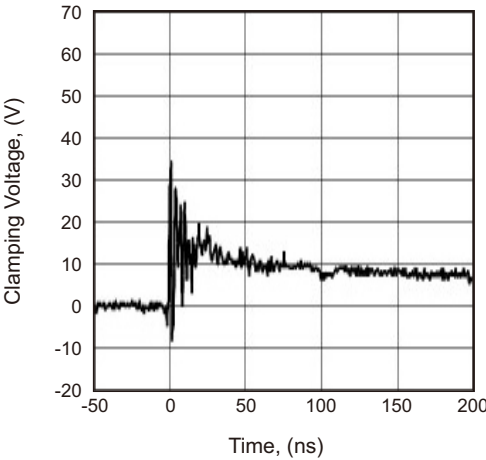
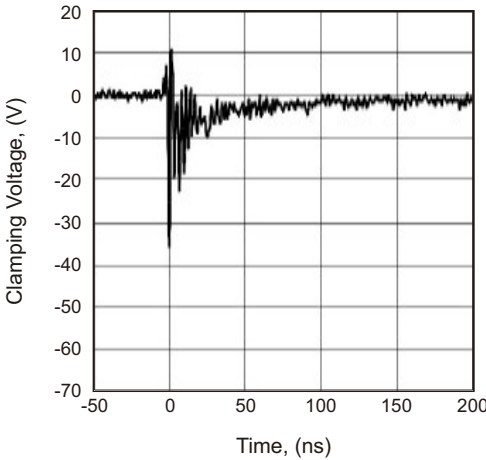
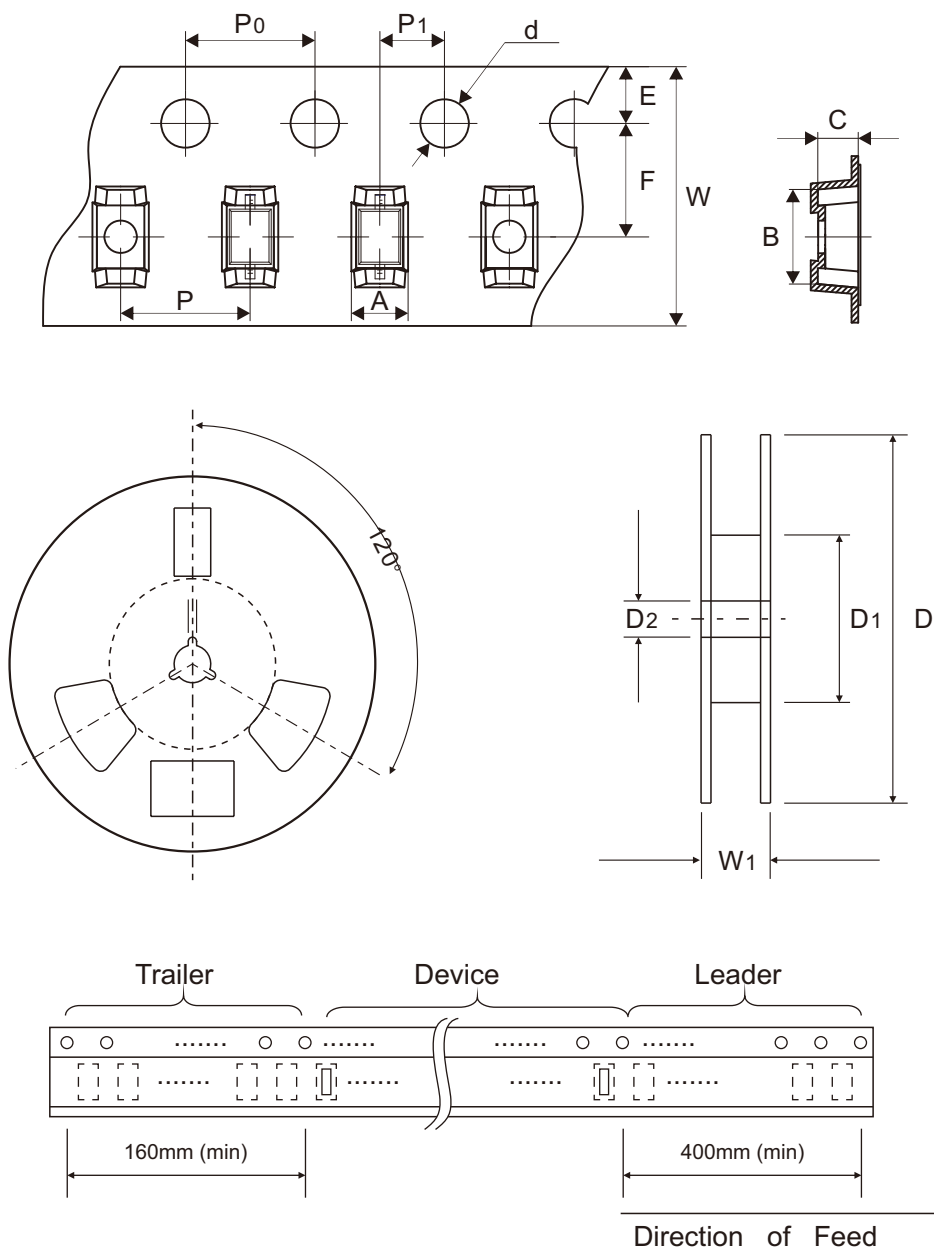


Fig.6 - ESD Clamping
(-8kV Contact per IEC 61000-4-2)



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

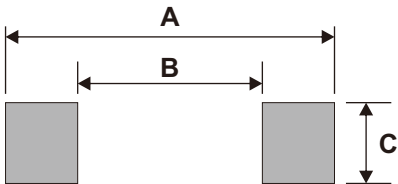
Part Number	Marking Code
CPDV3V3A-HF	3BU



xxx = Product type marking code

Suggested PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
A	2.85	0.112
B	1.60	0.063
C	0.85	0.033



Note: 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