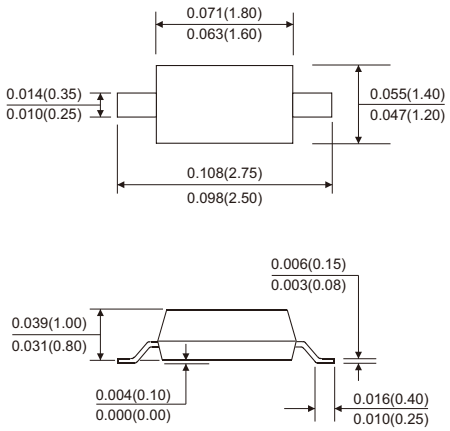
ACPDV1524V-HF

RoHS Device
Halogen Free

Features

- Bi-directional ESD protection of one line.
- Reverse stand-off voltage: +24V/-15V
- Low reverse clamping voltage.
- Low leakage current.
- Fast response time.
- AEC-Q101 Qualified.

SOD-323

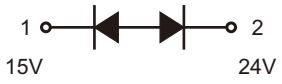


Dimensions in inches and (millimeter)

Mechanical data

- Case: SOD-323, molded plastic.
- Terminals: Tin plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Conditions	Symbol	Value	Unit
ESD capability (Note 1)	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	±25	kV
JESD22-A 114-B ESD voltage per human body model (Note 1)		ESD	±16	
ESD voltage per machine mode (Note 1)		ESD	±0.4	
Peak pulse power (Note 2)	T_P = 8/20μs, Pin 2 to Pin 1 (24V)	P_{PP}	268	W
Peak pulse current (Note 2)		I_{PP}	5	A
Maximum lead solder temperature (10 second duration)		T_L	260	°C
Operation junction and storage temperature range		T_{STG}	-55 to +150	°C

Notes: 1. Device stressed with ten non-repetitive ESD pulse.

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

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

Parameter	Conditions		Symbol	Min	Typ	Max	Unit
Working peak reverse voltage (Note 1)	Pin 2 to Pin 1		V_{RWM}			24	V
Reverse leakage current		V_{RWM} = 24V	I_R			1	μA
Breakdown voltage		I_T = 1mA	V_{BR}	27.4		34	V
Clamping voltage (Note 2)		I_{PP} = 1A, T_P = 8/20μs	V_C			39	V
		I_{PP} = 3A, T_P = 8/20μs	V_C			46	
		I_{PP} = 5A, T_P = 8/20μs	V_C			53.5	
Working peak reverse voltage (Note 1)	Pin 1 to Pin 2		V_{RWM}			15	V
Reverse leakage current		V_{RWM} = 15V	I_R			1	μA
Breakdown voltage		I_T = 1mA	V_{BR}	17.4		21	V
Clamping voltage (Note 2)		I_{PP} = 1A, T_P = 8/20μs	V_C			24	V
		I_{PP} = 5A, T_P = 8/20μs	V_C			29.3	
		I_{PP} = 9.5A, T_P = 8/20μs	V_C		33.3		
Junction capacitance		V_R = 0V, f = 1MHz	C_J		21		pF

Notes: 1. Device stressed with ten non-repetitive ESD pulse.

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

Typical Rating and Characteristic Curves (ACPDV1524V-HF)

Fig.1 - Reverse Characteristics

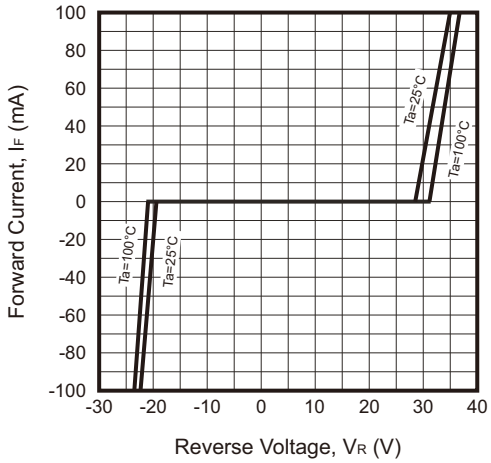


Fig.2 - VC — IPP (form Pin2 to Pin1)

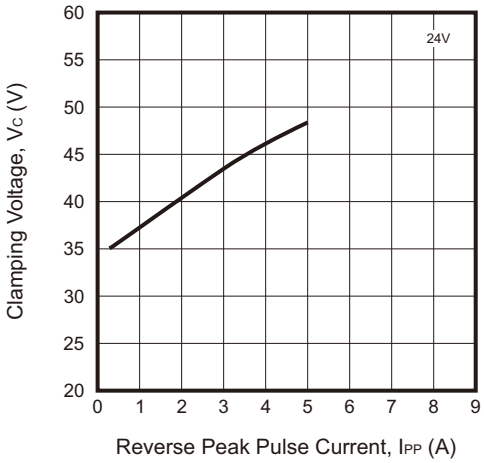


Fig.3 - VC — IPP (form Pin1 to Pin2)

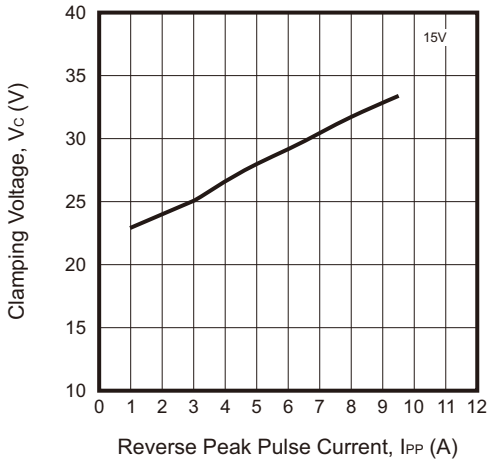


Fig.4 - Capacitance Characteristics

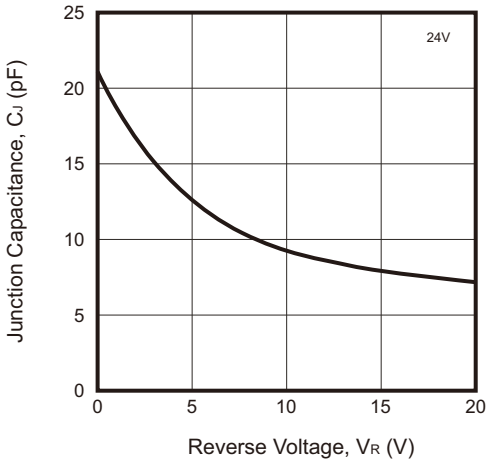
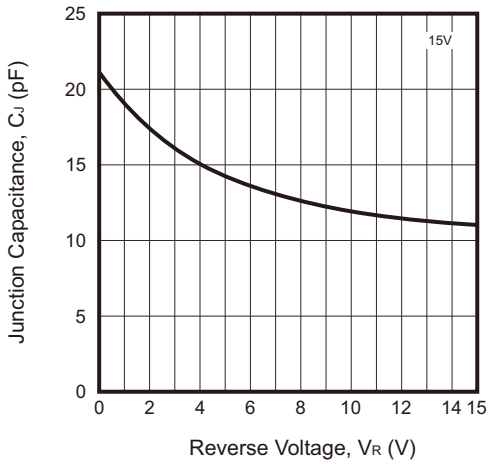
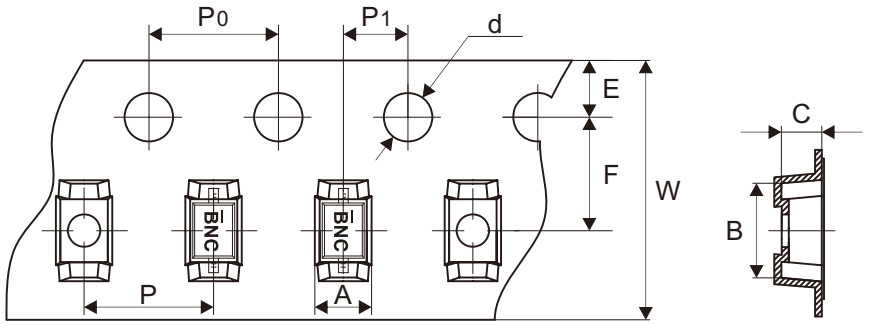
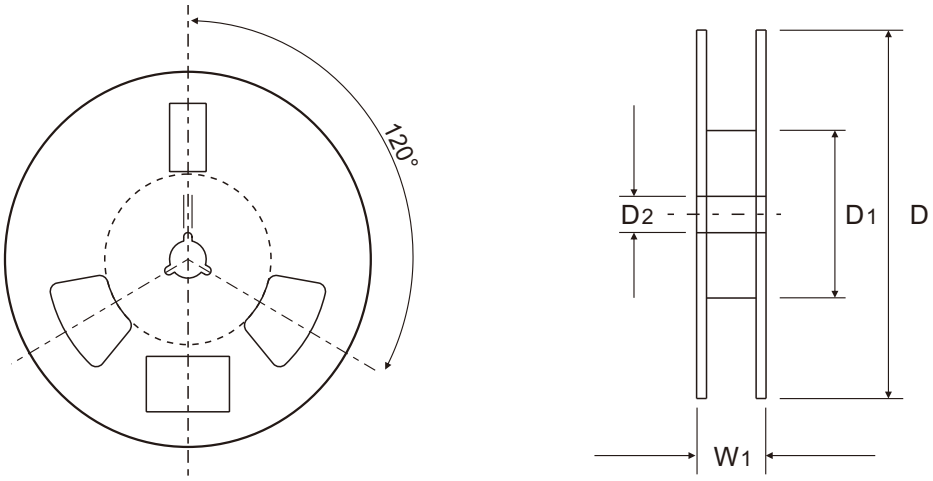


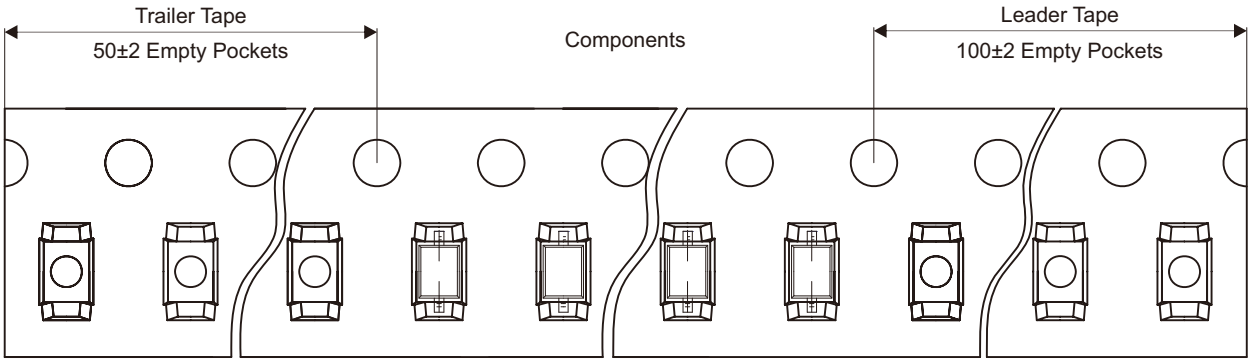
Fig.5 - Capacitance Characteristics



Reel Taping Specification







	SYMBOL	A	B	C	d	D	D1	D2
SOD-323	(mm)	1.48 + 0.03 − 0.07	3.30 + 0.00 − 0.20	1.25 ± 0.10	1.50 + 0.10 − 0.00	178.00 ± 0.10	54.40 ± 0.04	13.00 ± 0.20
	(inch)	0.058 + 0.001 − 0.003	0.130 + 0.000 − 0.008	0.049 ± 0.004	0.059 + 0.004 − 0.000	7.008 ± 0.004	2.142 ± 0.002	0.512 ± 0.008

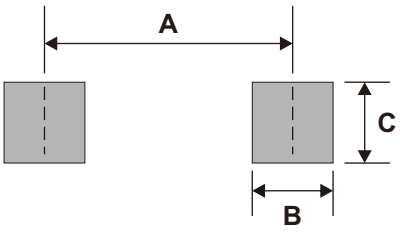
	SYMBOL	E	F	P	P0	P1	W	W1
SOD-323	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 − 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.315 + 0.012 − 0.004	0.484 ± 0.039

Marking Code

Part Number	Marking Code
ACPDV1524V-HF	$\overline{B}$NC

Suggested P.C.B. PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
A	2.15	0.085
B	0.70	0.028
C	0.70	0.028



Standard Packaging

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