

## ACDBN120-HF Thru. ACDBN1100-HF

Forward current: 1.0A  
Reverse voltage: 20 to 100V

RoHS Device  
Halogen Free

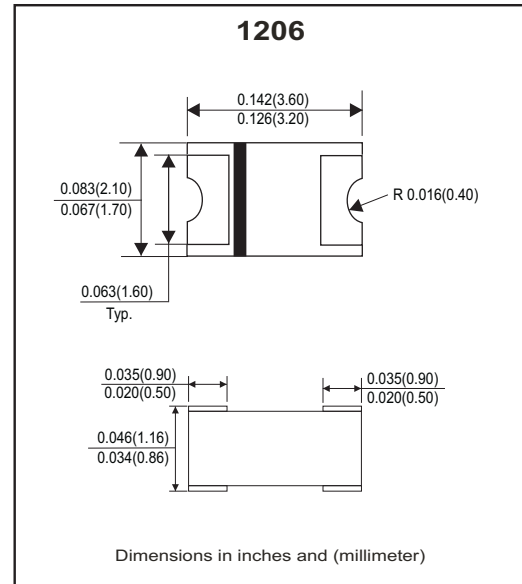


### Features

- Lead less chip form, no lead damage.
- Low power loss, High efficiency.
- High current capability, low VF.
- Plastic package has UL 94V-0.
- Comply with AEC-Q101

### Mechanical Data

- Case: Packed with FRP substrate and epoxy underfilled.
- Terminals: Pure Tin plated (Lead-Free), solderable per MIL-STD-750, method 2026.
- Polarity: Laser cathode band marking.
- Weight: 0.012 grams (approx).



### Circuit diagram



### Maximum Ratings (At Ta=25°C, unless otherwise noted)

Parameter	Symbol	ACDBN120-HF	ACDBN140-HF	ACDBN160-HF	ACDBN1100-HF	Unit
Repetitive peak reverse voltage	V <sub>RRM</sub>	20	40	60	100	V
Average forward current	I <sub>F(AV)</sub>	1.0				A
Peak forward surge current @8.3ms single half sine-wave	I <sub>FSM</sub>	20				A
Operating junction temperature range	T <sub>J</sub>	-55 to +125		-55 to +150		°C
Storage temperature range	T <sub>STG</sub>	-55 ~ +150				°C

### Electrical Characteristics (At Ta=25°C, unless otherwise noted)

Parameter	Conditions	Type	Symbol	Min.	Typ.	Max.	Unit
Forward voltage (Note1)	I <sub>F</sub> =0.1A I <sub>F</sub> =0.5A I <sub>F</sub> =1.0A	ACDBN120-HF / ACDBN140-HF	V <sub>F</sub>	-	0.32	-	V
				-	0.40	-	
				-	0.46	0.50	
	I <sub>F</sub> =0.1A I <sub>F</sub> =0.5A I <sub>F</sub> =1.0A	ACDBN160-HF		-	0.35	-	
				-	0.48	-	
				-	0.62	0.70	
	I <sub>F</sub> =0.1A I <sub>F</sub> =0.5A I <sub>F</sub> =1.0A	ACDBN1100-HF		-	0.45	-	
				-	0.66	-	
				-	0.76	0.85	
Reverse peak reverse current (Note1)	V <sub>R</sub> =Max.V <sub>RRM</sub> , Ta=25°C		I <sub>RRM</sub>	-	0.015	0.2	mA
Junction capacitance	V <sub>R</sub> =4V, f=1.0MHz		C <sub>j</sub>	-	110	-	pF
Thermal resistance	Junction to ambient (Note 2)		R <sub>θJA</sub>	-	88	-	°C/W
	Junction to lead (Note 2)		R <sub>θJL</sub>	-	28	-	°C/W

Notes: (1) Pulse test width pw=300usec, 1% duty cycle.  
(2) Mounted on P.C. board with 0.2\*0.2"(5.0\*5.0mm) copper pad areas.

## RATING AND CHARACTERISTIC CURVES (ACDBN120-HF Thru. ACDBN1100-HF)

Fig.1 - Forward Current Derating Curve

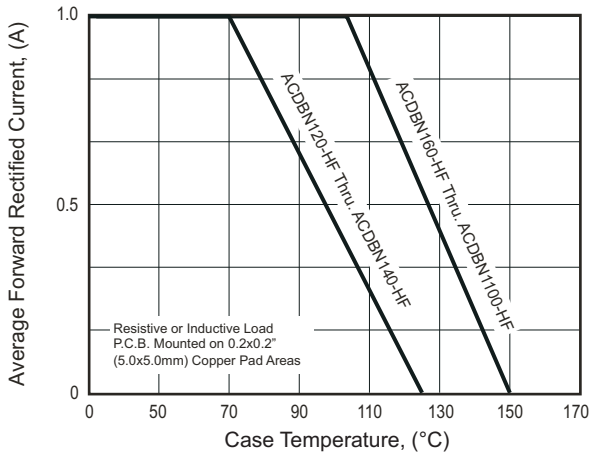


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

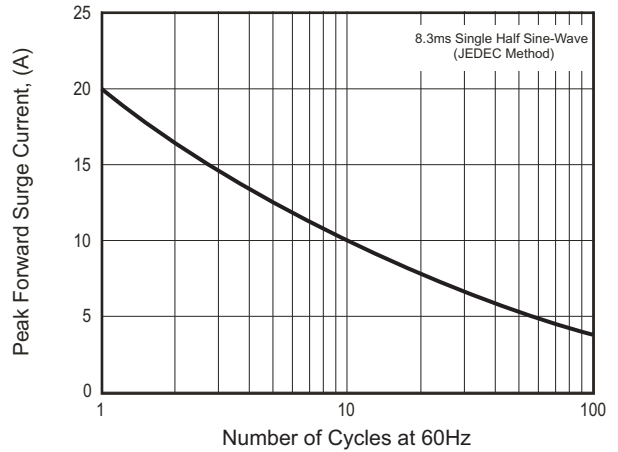


Fig.3 - Typical Instantaneous Forward Characteristics

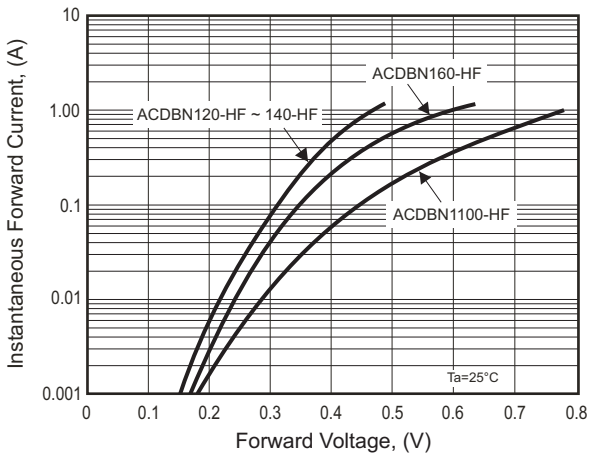


Fig.4- Typical Reverse Characteristics

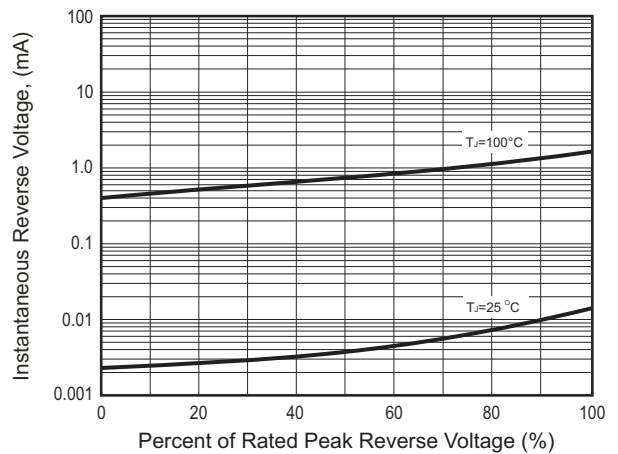
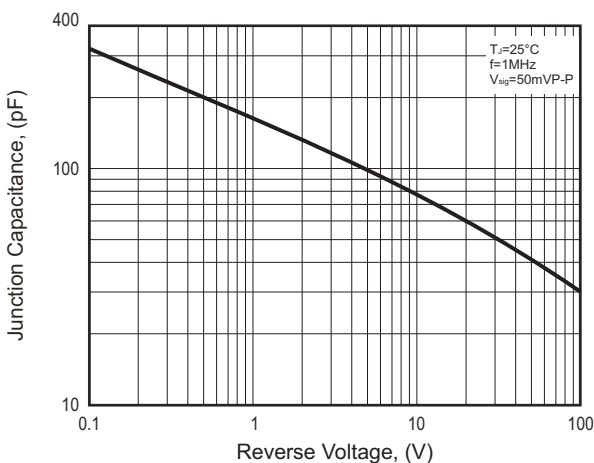
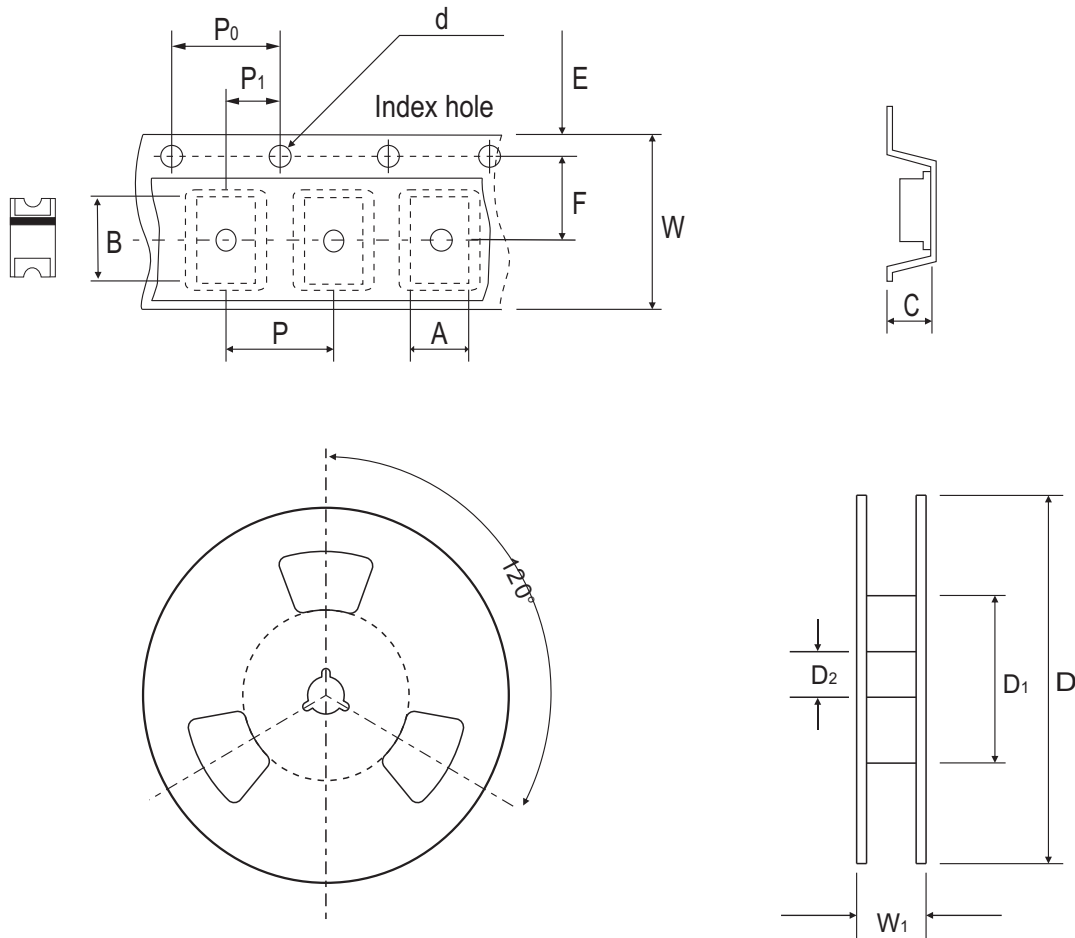


Fig.5 - Typical Junction Capacitance



## Reel Taping Specification



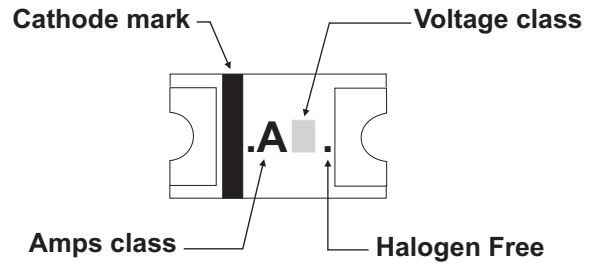
1206	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	2.20 ± 0.10	3.65 ± 0.10	1.28 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	50.00 MIN.	13.00 ± 0.50
	(inch)	0.087 ± 0.004	0.144 ± 0.004	0.050 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	1.969 MIN.	0.512 ± 0.020

1206	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	5.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	12.00 ± 0.30	18.70 MAX.
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.472 ± 0.012	0.736 MAX.

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

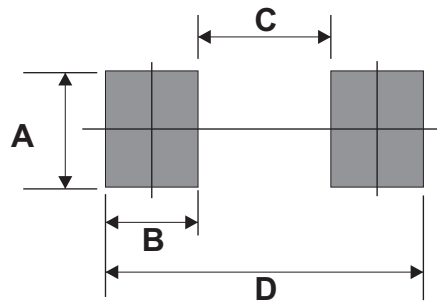
## Marking Code

Part Number	Marking Code
ACDBN120-HF	.A2.
ACDBN140-HF	.A4.
ACDBN160-HF	.A6.
ACDBN1100-HF	.A10.



## Suggested PAD Layout

SIZE	1206	
	(mm)	(inch)
A	1.50 MIN.	0.059MIN.
B	1.00	0.039
C	2.00MAX.	0.078MAX.
D	4.00REF.	0.157 REF.



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
1206	3,000	7

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