

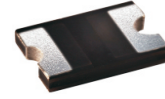
## ACDBCT320-HF Thru. ACDBCT3100-HF

Forward current: 3.0A

Reverse voltage: 20 to 100V

RoHS Device

Halogen Free

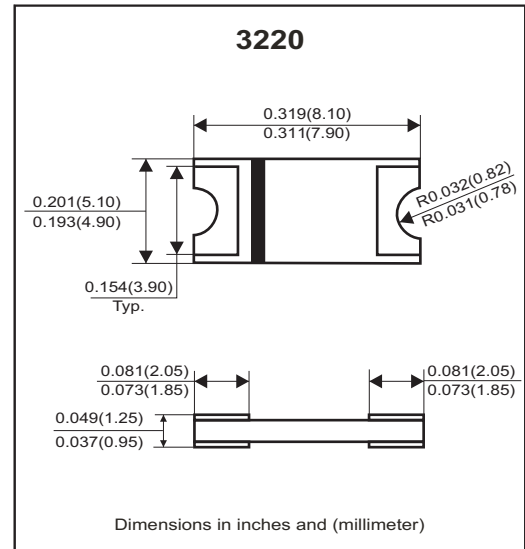


### Features

- Lead less chip form, no lead damage.
- Low power loss, High efficiency.
- High current capability, low  $V_F$
- 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: 0.093 grams (approx).



### Circuit diagram



### Maximum Ratings (At $T_a=25^\circ\text{C}$ , unless otherwise noted)

Parameter	Symbol	ACDBCT320-HF	ACDBCT340-HF	ACDBCT360-HF	ACDBCT3100-HF	Unit
Non-repetitive peak reverse voltage	$V_{RM}$	20	40	60	100	V
Average forward current	$I_{F(AV)}$	3				A
Peak forward surge current @8.3ms single half sine-wave	$I_{FSM}$	100				A
Operating junction temperature range	$T_J$	-55 to +125		-55 to +150		$^\circ\text{C}$
Storage temperature	$T_{STG}$	-55 ~ +150				$^\circ\text{C}$

### Electrical Characteristics (At $T_a=25^\circ\text{C}$ , unless otherwise noted)

Parameter	Conditions	Type	Symbol	Min.	Typ.	Max.	Unit
Forward voltage (Note1)	$I_F=0.5\text{A}$ $I_F=1.0\text{A}$ $I_F=3.0\text{A}$	ACDBCT320-HF ACDBCT340-HF	$V_F$	-	0.33	-	V
				-	0.38	-	
				-	0.47	0.50	
	$I_F=0.5\text{A}$ $I_F=1.0\text{A}$ $I_F=3.0\text{A}$	ACDBCT360-HF		-	0.38	-	
				-	0.48	-	
				-	0.65	0.70	
	$I_F=0.5\text{A}$ $I_F=1.0\text{A}$ $I_F=3.0\text{A}$	ACDBCT3100-HF		-	0.48	-	
				-	0.58	-	
				-	0.78	0.85	
Reverse peak reverse current	$V_R=\text{Max. } V_{RRM}, T_a=25^\circ\text{C}$		$I_{RRM}$	-	0.025	0.5	mA
Junction capacitance	$V_R=4\text{V}, f=1.0\text{MHz}$		$C_j$	-	180	-	pF
Thermal resistance	Junction to ambient (Note 2)		$R_{\theta JA}$	-	55	-	$^\circ\text{C/W}$
	Junction to lead (Note 2)		$R_{\theta JL}$	-	17	-	$^\circ\text{C/W}$

Notes: (1) Pulse test width  $p_w=300\mu\text{sec}$ , 1% duty cycle.

(2) Mounted on P.C. board with  $0.2 \times 0.2 \text{ (} 5.0 \times 5.0 \text{ mm)}$  copper pad areas.

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

REV:C

## RATING AND CHARACTERISTIC CURVES (ACDBCT320-HF Thru. ACDBCT3100-HF)

Fig.1 - Typical Forward Current Derating Curve

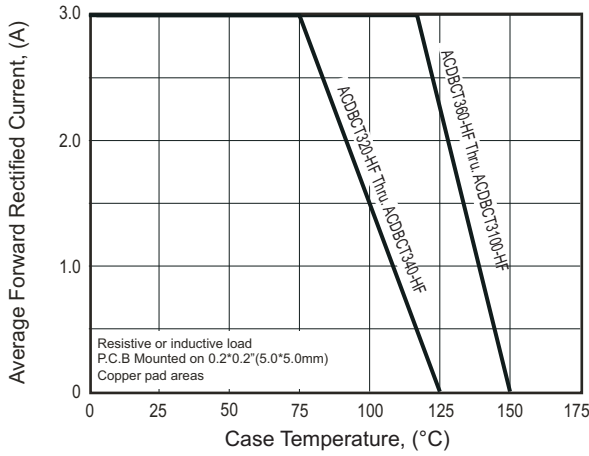


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

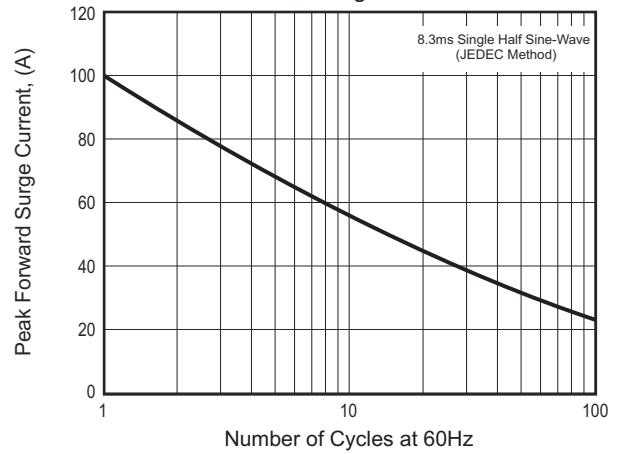


Fig.3 - Typical Instantaneous Forward Characteristics

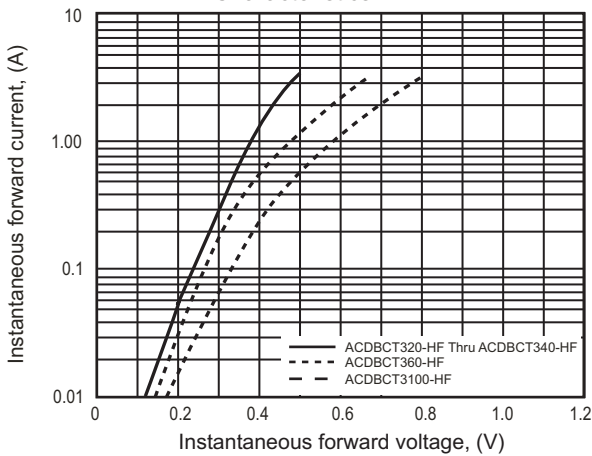


Fig.4 - Typical Reverse Characteristics

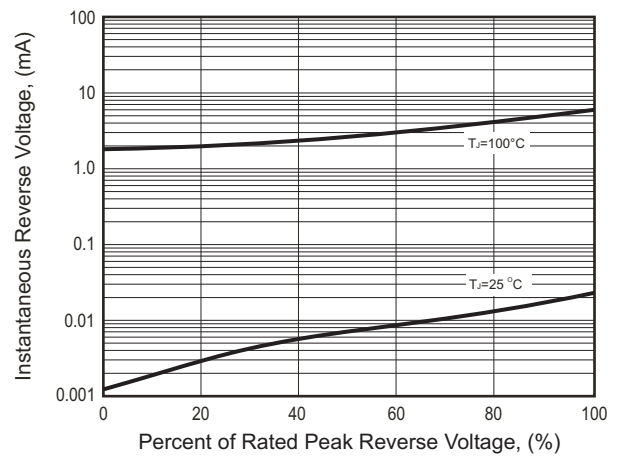
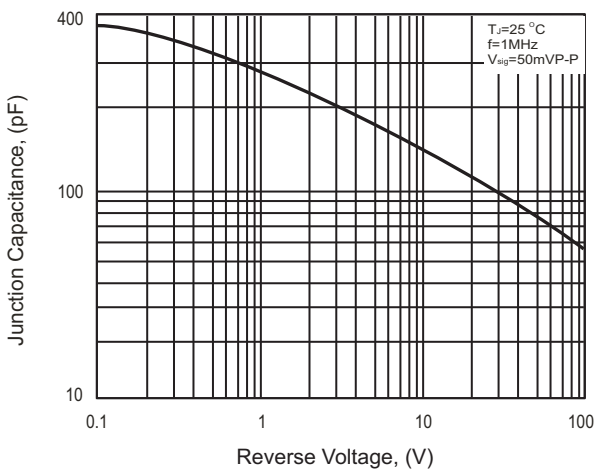
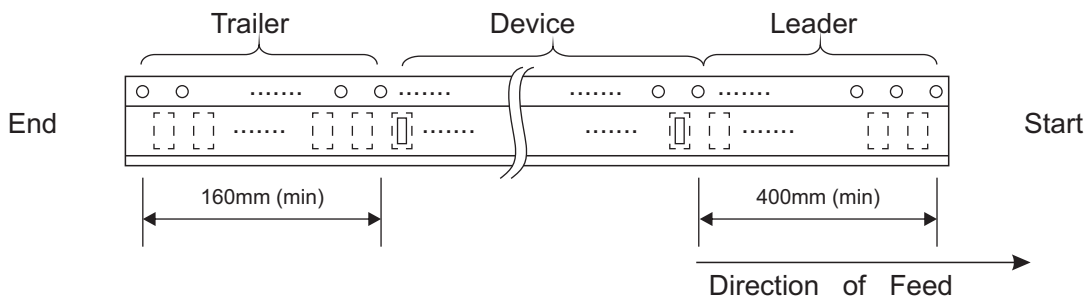
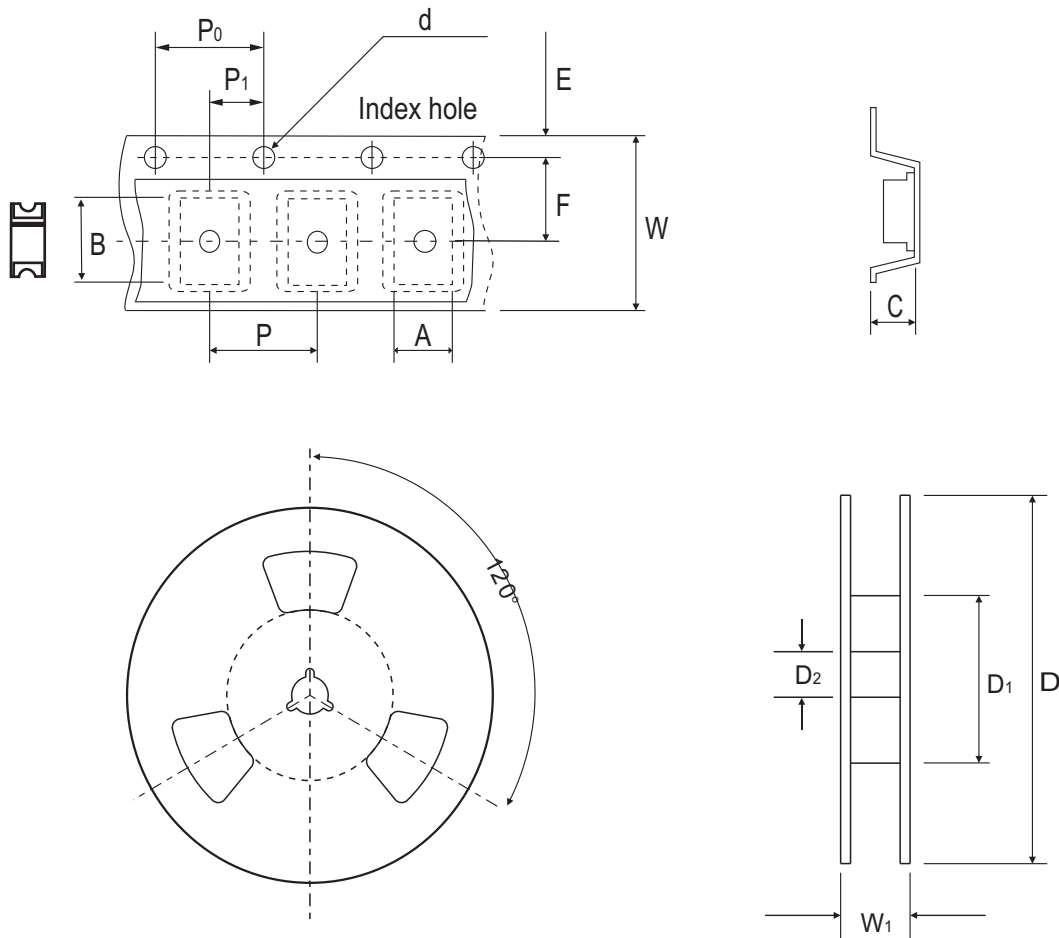


Fig.5 - Typical Junction Capacitance



## Reel Taping Specification

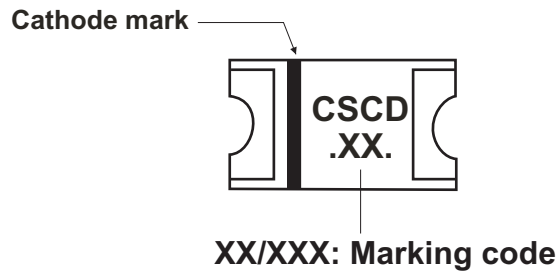


3220	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	5.56 ± 0.10	8.18 ± 0.10	2.16 ± 0.10	1.55 ± 0.05	330 ± 2.00	50.0 MIN.	13.0 ± 0.50
	(inch)	0.219 ± 0.004	0.322 ± 0.004	0.085 ± 0.004	0.061 ± 0.002	12.992 ± 0.079	1.969 MIN.	0.512 ± 0.020

3220	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	7.50 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	16.00 ± 0.30	22.70 MAX.
	(inch)	0.069 ± 0.004	0.295 ± 0.004	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.630 ± 0.012	0.893 MAX.

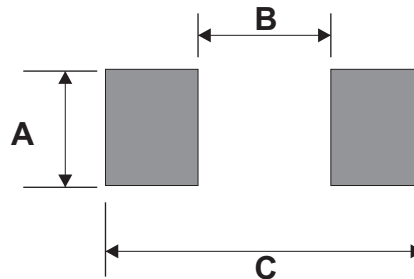
## Marking Code

Part Number	Marking Code
ACDBCT320-HF	32
ACDBCT340-HF	34
ACDBCT360-HF	36
ACDBCT3100-HF	310



## Suggested PAD Layout

SIZE	3220	
	(mm)	(inch)
A	3.90MIN.	0.154MIN.
B	4.10MAX.	0.161MAX.
C	11.90REF.	0.469 REF.



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
3220	3,000	13