

## CDBCT320-HF Thru. CDBCT3100-HF

Forward current: 3.0A

Reverse voltage: 20 to 100V

RoHS Device  
Halogen Free

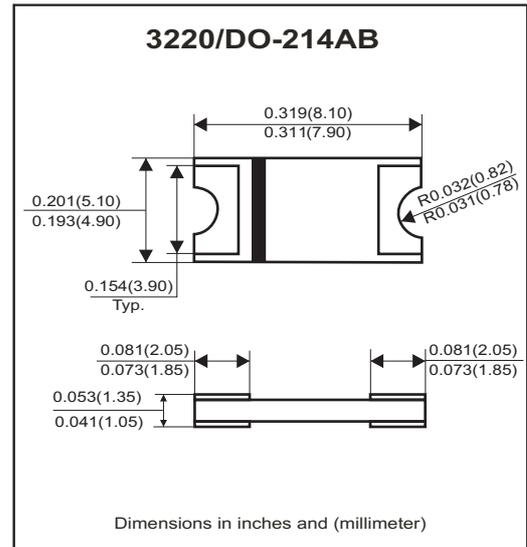


### Features

- Lead less chip form, no lead damage.
- Low power loss, High efficiency.
- High current capability, low VF
- Plastic package has underwriters laboratory flammability classification 94V-0.

### 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 Ta=25°C, unless otherwise noted)

Parameter	Symbol	CDBCT320-HF	CDBCT340-HF	CDBCT360-HF	CDBCT3100-HF	Unit
Non-repetitive peak reverse voltage	V <sub>RM</sub>	20	40	60	100	V
Average forward current	I <sub>F(AV)</sub>	3				A
Peak forward surge current @8.3ms single half sine-wave	I <sub>FSM</sub>	100				A
Operating junction temperature range	T <sub>J</sub>	-55 to +125		-55 to +150		°C
Storage temperature	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> =0.5A I <sub>F</sub> =1.0A I <sub>F</sub> =3.0A	CDBCT320-HF CDBCT340-HF	V <sub>F</sub>	-	0.33	-	V
				-	0.38	-	
				-	0.47	0.50	
	I <sub>F</sub> =0.5A I <sub>F</sub> =1.0A I <sub>F</sub> =3.0A	CDBCT360-HF		-	0.38	-	
				-	0.48	-	
				-	0.65	0.70	
	I <sub>F</sub> =0.5A I <sub>F</sub> =1.0A I <sub>F</sub> =3.0A	CDBCT3100-HF		-	0.48	-	
				-	0.58	-	
				-	0.78	0.85	
Reverse peak reverse current	V <sub>R</sub> =Max.V <sub>RRM</sub> , Ta=25°C		I <sub>RRM</sub>	-	0.025	0.5	mA
Junction capacitance	V <sub>R</sub> =4V, f=1.0MHz		C <sub>j</sub>	-	180	-	pF
Thermal resistance	Junction to ambient (Note 2)		R <sub>θJA</sub>	-	55	-	°C/W
	Junction to lead (Note 2)		R <sub>θJL</sub>	-	17	-	°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.

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

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## RATING AND CHARACTERISTIC CURVES (CDBCT320-HF Thru. CDBCT3100-HF)

Fig.1- Typical Forward Current Derating Curve

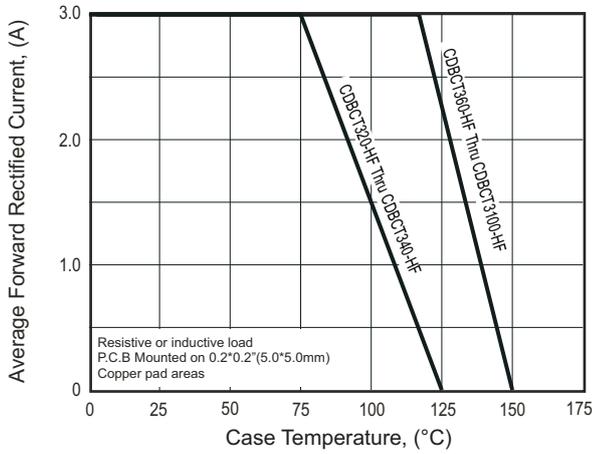


Fig.2- Maximum Non-Repetitive Peak Forward Surge Current

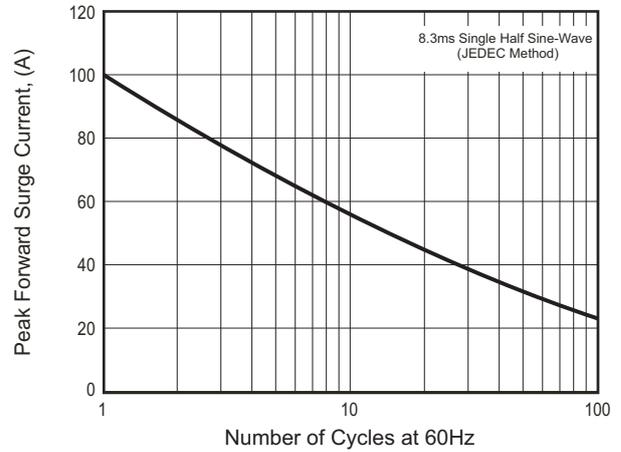


Fig.3- Typical Instantaneous Forward Characteristics

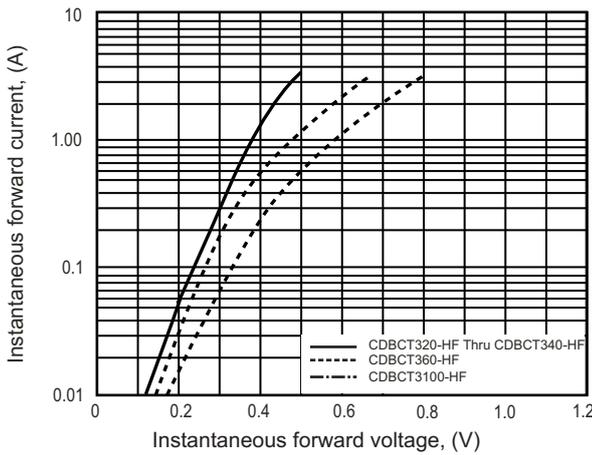


Fig.4- Typical Reverse Characteristics

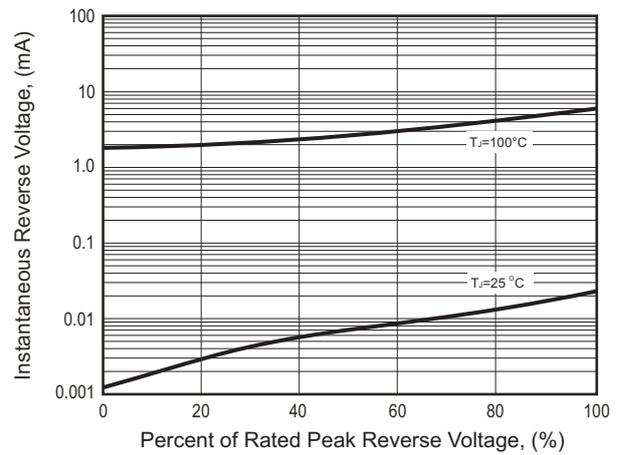
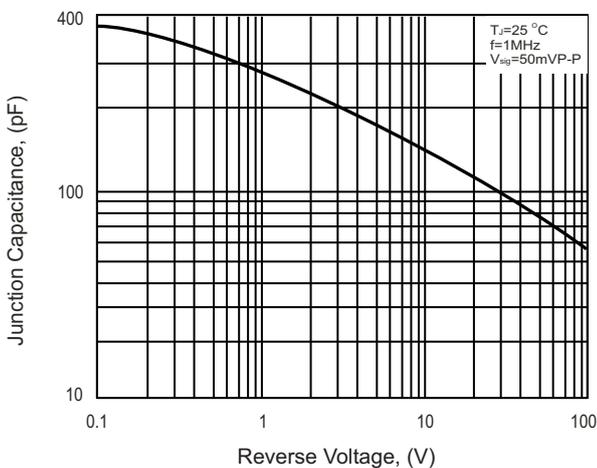
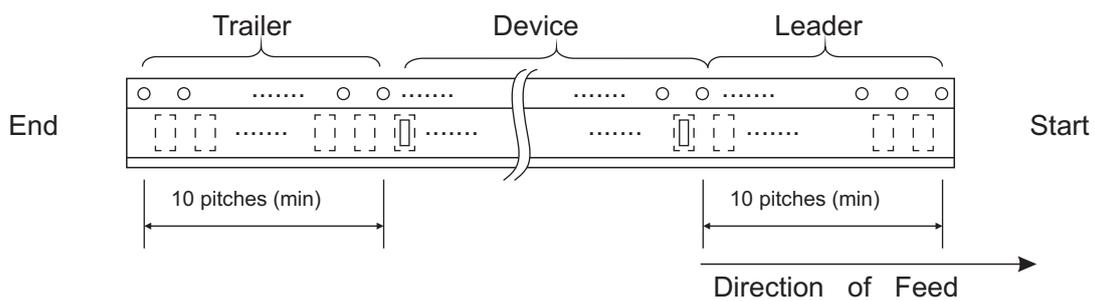
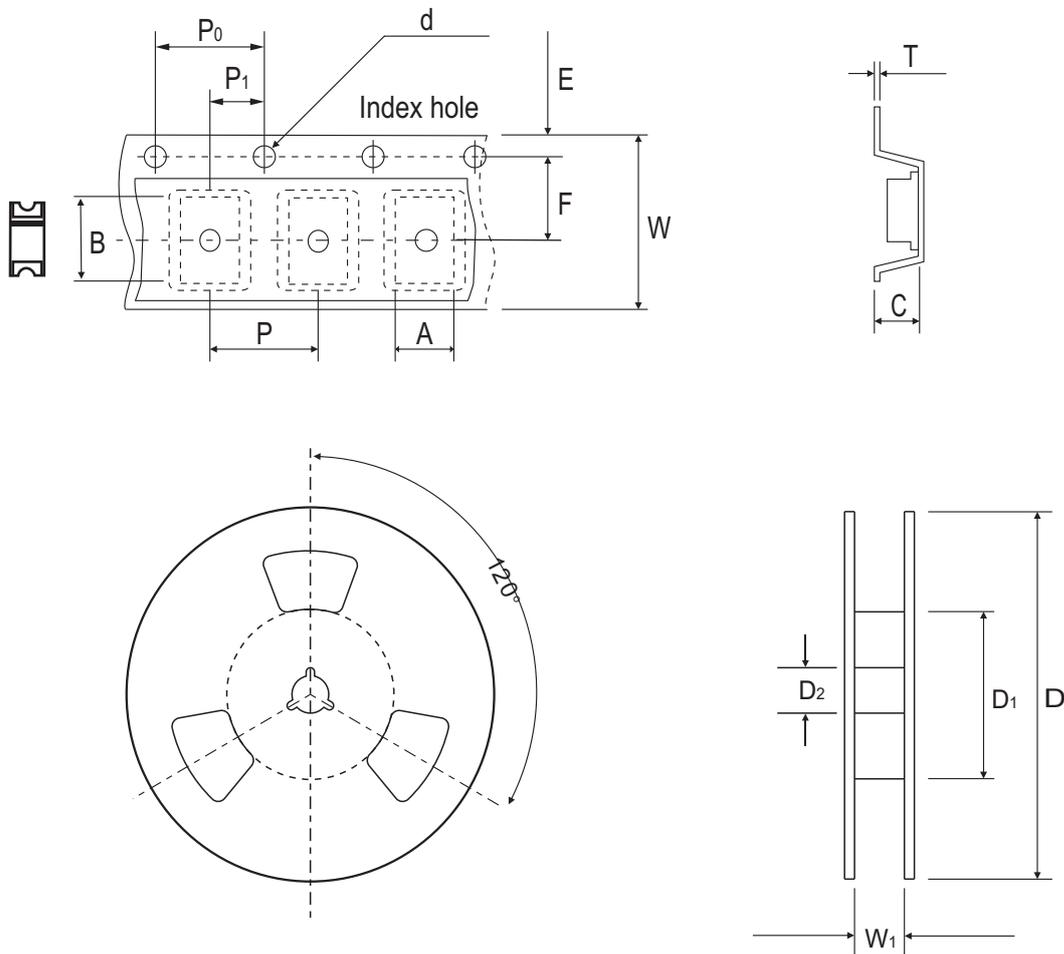


Fig.5- Typical Junction Capacitance



## Reel Taping Specification



3220 (DO-214AB)	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

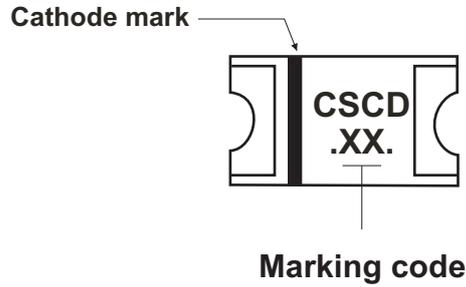
3220 (DO-214AB)	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	7.50 ± 0.10	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	16.00 ± 0.30	18.40 MAX.
	(inch)	0.069 ± 0.004	0.295 ± 0.004	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.630 ± 0.012	0.724 MAX.

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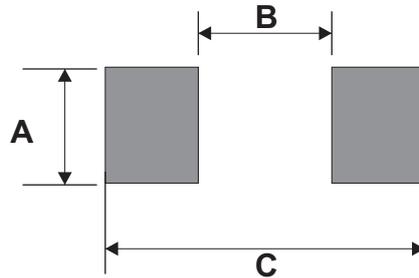
## Marking Code

Part Number	Marking Code
CDBCT320-HF	2
CDBCT340-HF	4
CDBCT360-HF	6
CDBCT3100-HF	10



## Suggested PAD Layout

SIZE	3220/DO-214AB	
	(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/DO-214AB	3,000	13