

## CDBAT120-HF Thru. CDBAT1100-HF

Forward current: 1.0A

Reverse voltage: 20 to 100V

RoHS Device  
Halogen Free

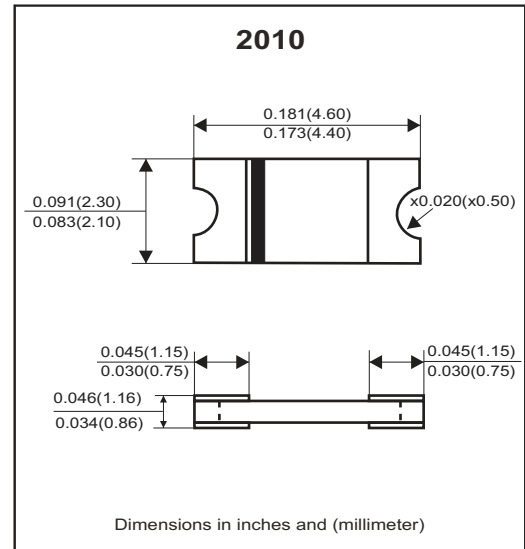


### Features

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

### 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: 0.02 grams (approx).



### Circuit diagram



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

Parameter	Symbol	CDBAT120-HF	CDBAT140-HF	CDBAT160-HF	CDBAT1100-HF	Unit
Non-repetitive peak reverse voltage	V <sub>RM</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>	30				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> =0.1A I <sub>F</sub> =0.5A I <sub>F</sub> =1.0A	CDBAT120-HF / CDBAT140-HF	V <sub>F</sub>	-	0.34	-	V
				-	0.41	-	
				-	0.47	0.50	
	I <sub>F</sub> =0.1A I <sub>F</sub> =0.5A I <sub>F</sub> =1.0A	CDBAT160-HF		-	0.38	-	
				-	0.48	-	
				-	0.60	0.70	
	I <sub>F</sub> =0.1A I <sub>F</sub> =0.5A I <sub>F</sub> =1.0A	CDBAT1100-HF		-	0.45	-	
				-	0.63	-	
				-	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>	-	0.02	0.20	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.

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

REV:B

## RATING AND CHARACTERISTIC CURVES (CDBAT120-HF Thru. CDBAT1100-HF)

Fig.1- Forward current derating curve

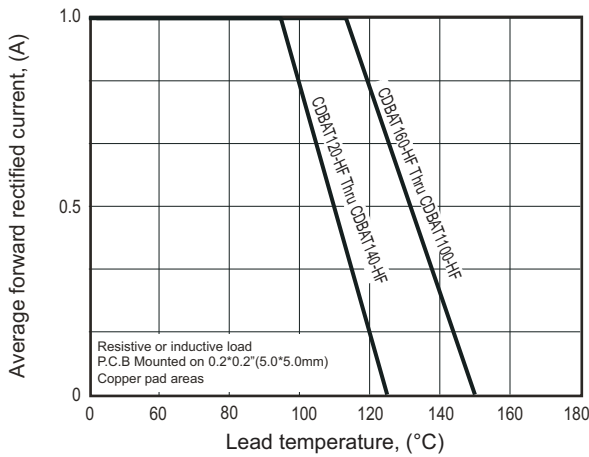


Fig.2- Maximum Non-repetitive peak forward surge current

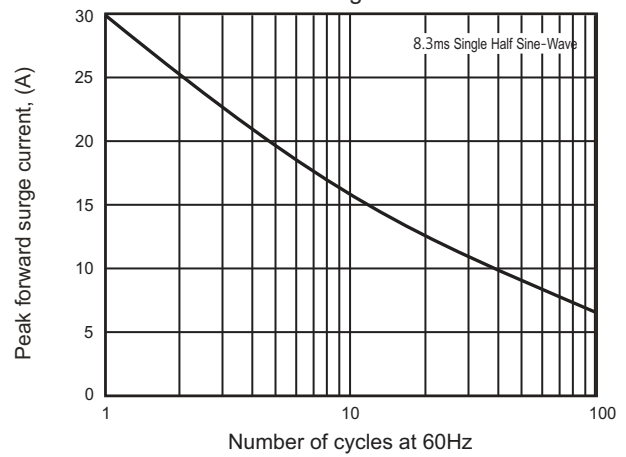


Fig.3- Typical Instantaneous Forward Characteristics

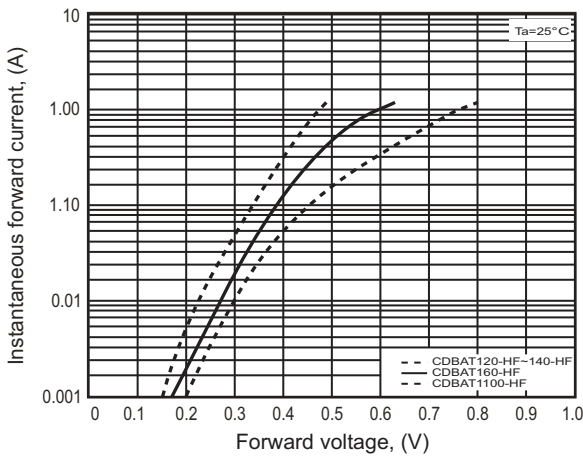


Fig.4- Typical reverse characteristics

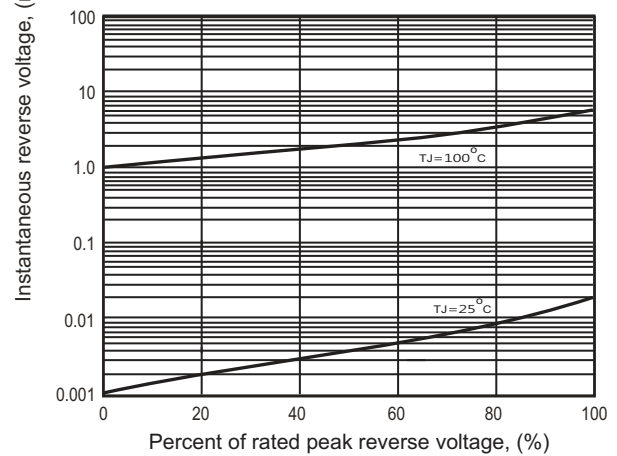
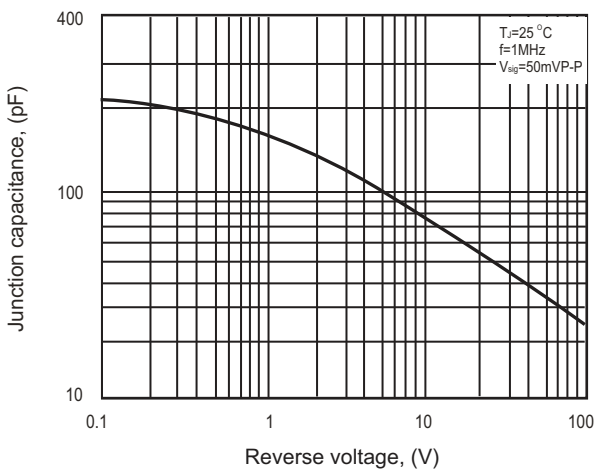
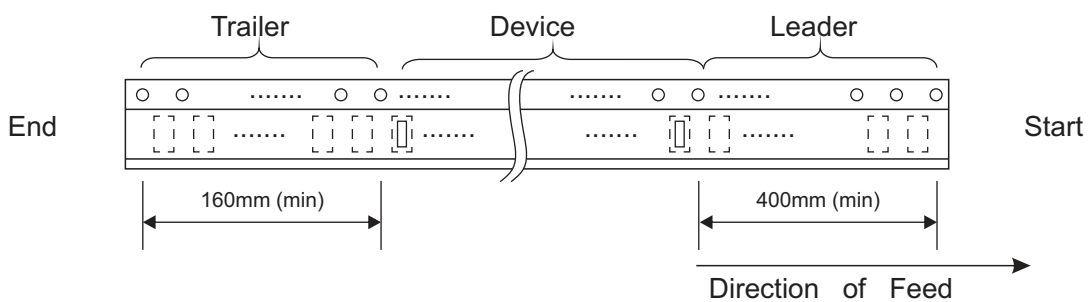
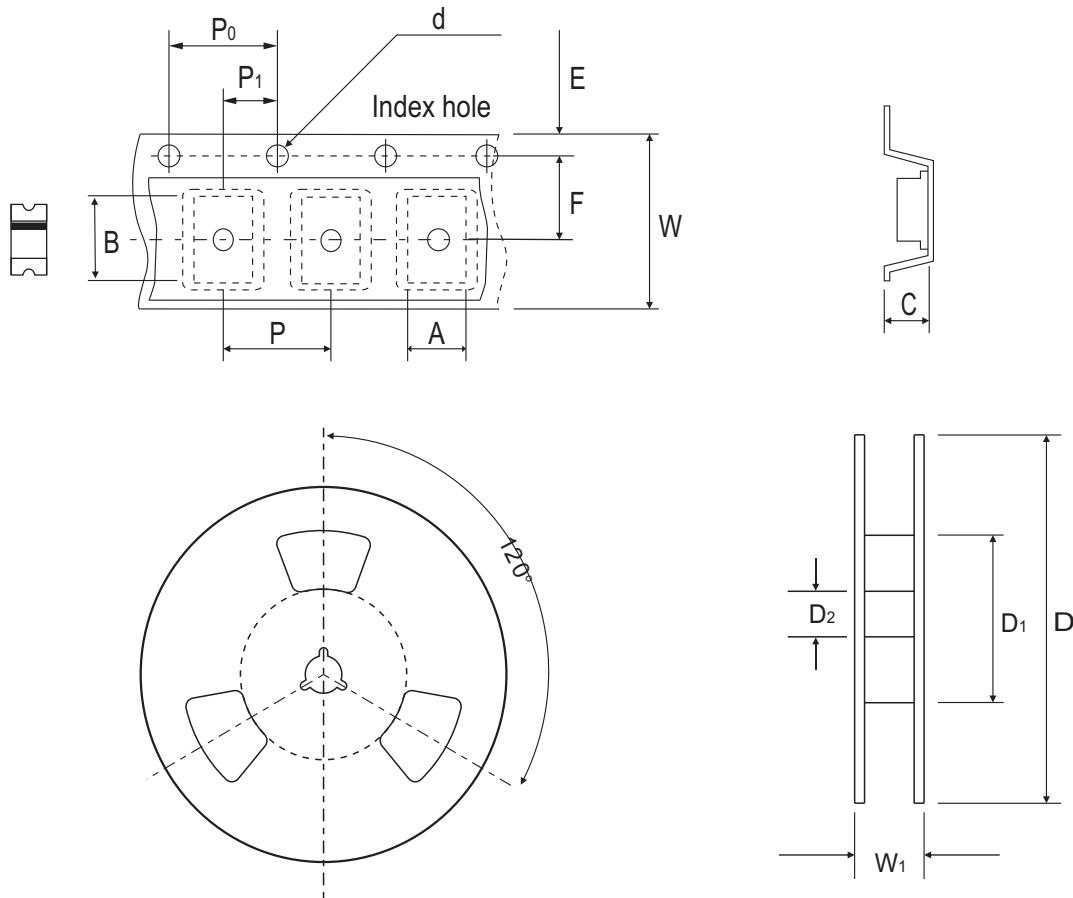


Fig.5- Typical junction capacitance



## Reel Taping Specification

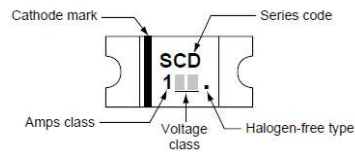


2010	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	4.75 ± 0.10	2.45 ± 0.10	1.30 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	50.00 MIN.	13.00 ± 0.50
	(inch)	0.187 ± 0.004	0.096 ± 0.004	0.051 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	1.969 MIN.	0.512 ± 0.020

2010	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.

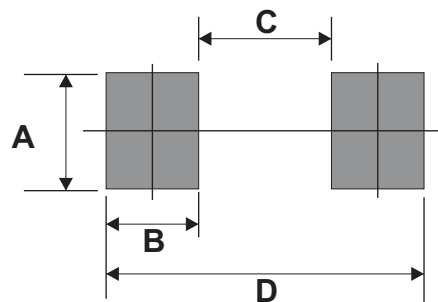
## Marking Code

Part Number	Marking Code
CDBAT120-HF	2
CDBAT140-HF	4
CDBAT160-HF	6
CDBAT1100-HF	10



## Suggested PAD Layout

SIZE	2010	
	(mm)	(inch)
A	1.47MIN.	0.058MIN.
B	1.27MIN.	0.050MIN.
C	2.60MAX.	0.102MAX.
D	5.14REF.	0.202 REF.



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
2010	3,000	7