

CDBAT120-HF Thru. CDBAT1100-HF

Forward current: 1.0A

Reverse voltage: 20 to 100V

RoHS Device

Halogen Free

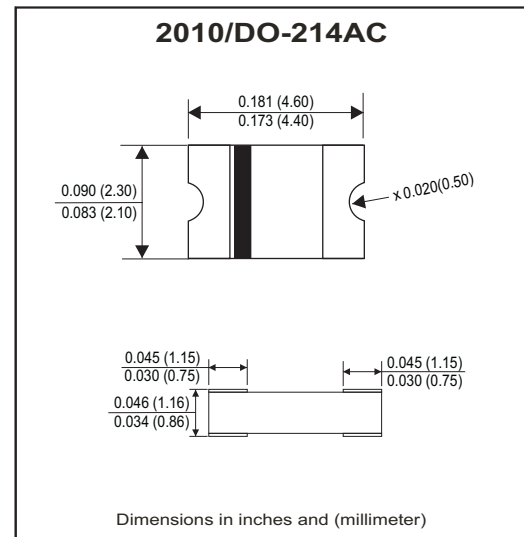


Features

- Lead less chip form, no lead damage.
- Low power loss, High efficiency.
- High current capability, low VF
- Plastic package has 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: 0.02 gram (approx).
- Packing: 3,000 pieces per 7" reel.



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 _{RM}	20	40	60	100	V
Average forward current	I _{F(AV)}	1.0				A
Peak forward surge current @8.3ms single half sine-wave	I _{FSM}	30				A
Operating junction temperature range	T _J	-55 to +125		-55 to +150		°C
Storage temperature	T _{STG}	-55 ~ +150				°C

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

Parameter	Conditions	Type	Symbol	Min.	Typ.	Max.	Unit
Forward voltage (Note1)	If=0.1A	CDBAT120-HF / CDBAT140-HF	VF	-	0.34	-	V
	If=0.5A			-	0.41	-	
	If=1.0A			-	0.47	0.50	
	If=0.1A	CDBAT160-HF		-	0.38	-	
	If=0.5A			-	0.48	-	
	If=1.0A			-	0.60	0.70	
	If=0.1A	CDBAT1100-HF		-	0.45	-	
	If=0.5A			-	0.63	-	
	If=1.0A			-	0.76	0.85	
Reverse peak reverse current (Note1)	VR=Max.VRRM, Ta=25°C		IRRM	-	0.02	0.20	mA
Junction capacitance	VR=4V, f=1.0MHz		Cj	-	110	-	pF
Thermal resistance	Junction to ambient (Note 2)		RθJA	-	88	-	°C/W
	Junction to lead (Note 2)		RθJL	-	28	-	°C/W

Notes: (1) Pulse test width $p_w=300\mu sec$, 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:A

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

Fig.1- Forward current derating curve

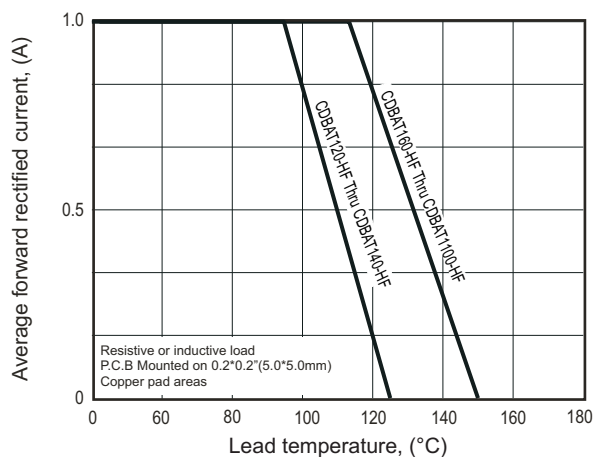


Fig.2- Maximum Non-repetitive peak forward surge current

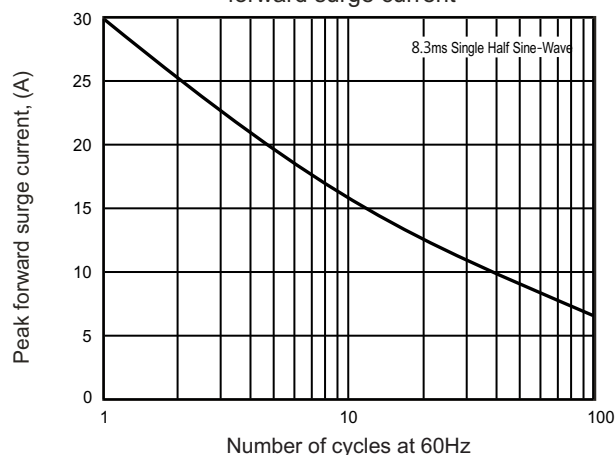


Fig.3- Typical Instantaneous Forward Characteristics

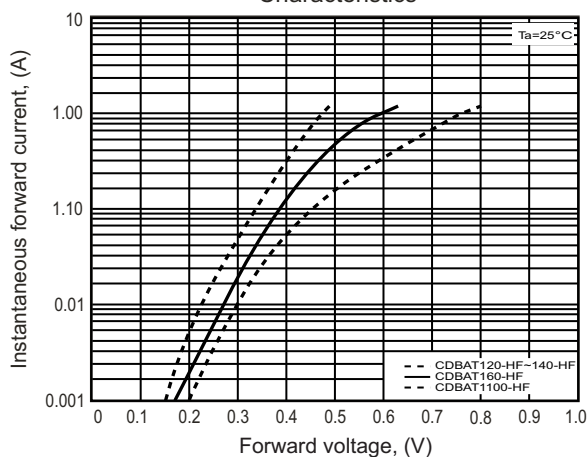


Fig.4- Typical reverse characteristics

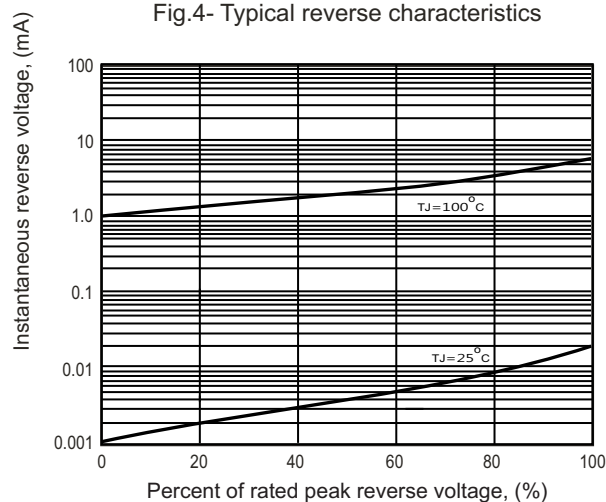
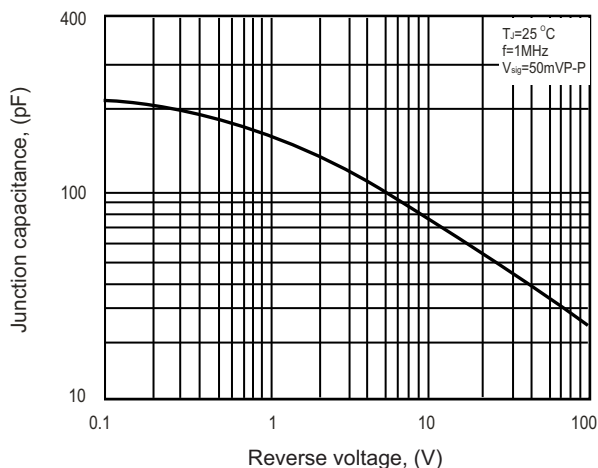
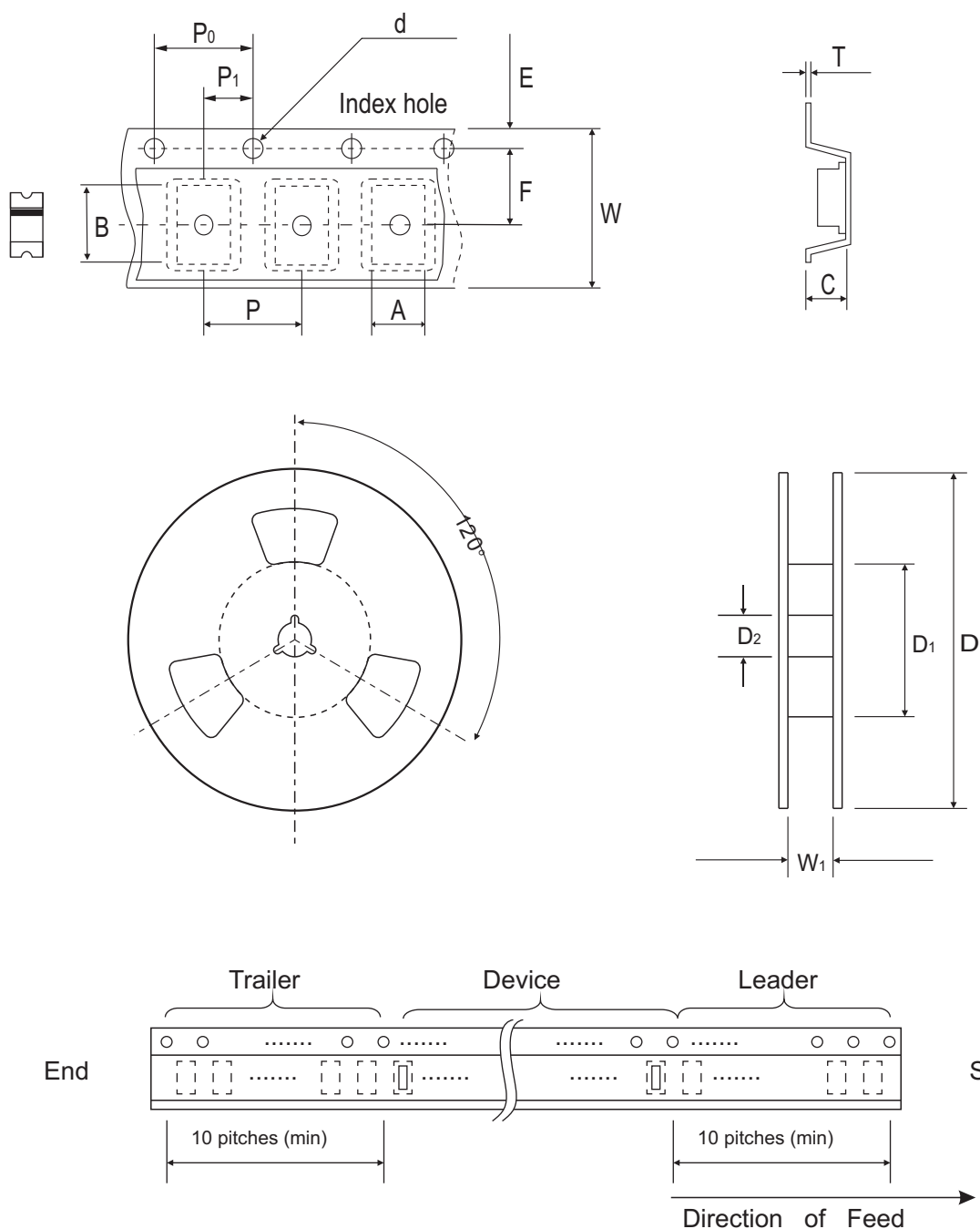


Fig.5- Typical junction capacitance



Reel Taping Specification

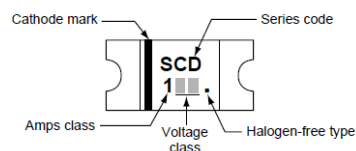


2010 (DO-214AC)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	4.70 ± 0.10	2.40 ± 0.10	1.26 ± 0.10	1.50 ± 0.10	330 ± 2.00	50.0 MIN.	13.0 ± 0.50
	(inch)	0.185 ± 0.004	0.094 ± 0.004	0.050 ± 0.004	0.059 ± 0.004	12.992 ± 0.079	1.969 MIN.	0.512 ± 0.020

2010 (DO-214AC)	SYMBOL	E	F	P	P ₀	P ₁	W	W ₁
	(mm)	1.75 ± 0.10	5.50 ± 0.05	8.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	12.00 ± 0.30	14.4 MAX.
	(inch)	0.069 ± 0.004	0.217 ± 0.002	0.315 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.472 ± 0.012	0.567 MAX.

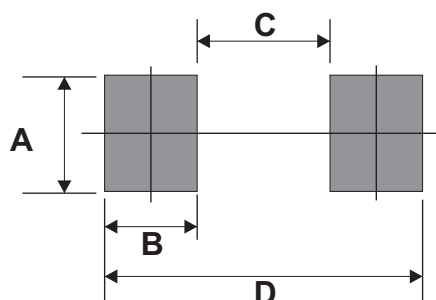
Marking Code

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



Suggested PAD Layout

SIZE	2010/DO-214AC	
	(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/DO-214AC	3,000	7