



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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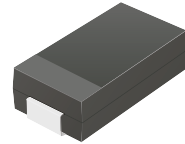
## CDBC320-HF Thru. CDBC3100-HF

Reverse Voltage: 20 to 100 Volts

Forward Current: 3.0 Amp

RoHS Device

Halogen Free

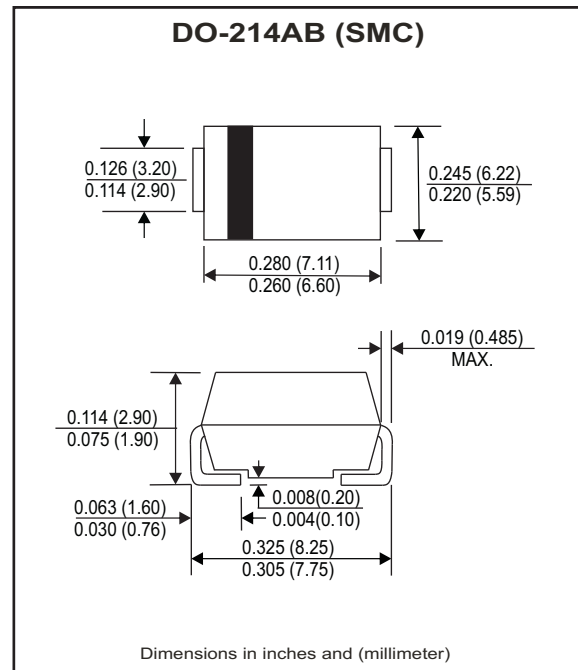


### Features

- Low Profile surface mount applications in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guard ring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.

### Mechanical data

- Epoxy: UL94-V0 rate flame retardant.
- Case: Molded plastic, DO-214AB / SMC
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.226 grams(Approx.)



### Circuit Diagram



### Maximum Ratings and Electrical Characteristics

Ratings at  $T_a=25^{\circ}\text{C}$  unless otherwise noted.  
Single phase, half wave, 60Hz, resistive or inductive loaded.  
For capacitive load, derate current by 20% .

Parameter	Symbol	CDBC 320-HF	CDBC 340-HF	CDBC 360-HF	CDBC 3100-HF	Unit
Max. repetitive peak reverse voltage	$V_{RRM}$	20	40	60	100	V
Max. DC blocking voltage	$V_{DC}$	20	40	60	100	V
Max. RMS voltage	$V_{RMS}$	14	28	42	70	V
Max. instantaneous forward voltage @ 3.0A, $T_a=25^{\circ}\text{C}$	$V_F$	0.45	0.50	0.70	0.81	V
Operating Temperature	$T_J$	-50 to +150				$^{\circ}\text{C}$

Parameter	Conditions	Symbol	MIN.	TYP.	MAX.	Units
Forward rectified current	see Fig.1	$I_O$			3.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$			70	A
Reverse Current	$V_R = V_{RRM}$ $T_a=25^{\circ}\text{C}$	$I_R$			0.5	mA
	$V_R = V_{RRM}$ $T_a=100^{\circ}\text{C}$	$I_R$			20	mA
Thermal Resistance	Junction to ambient	$R_{\theta JA}$		55		$^{\circ}\text{C/W}$
Diode Junction capacitance	f=1MHz and applied 4V DC reverse Voltage	$C_J$		250		pF
Storage temperature		$T_{STG}$	-50		+175	$^{\circ}\text{C}$

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

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## RATING AND CHARACTERISTIC CURVES (CDBC320-HF thru. CDBC3100-HF)

Fig.1 - Typical Forward Current Derating Curve

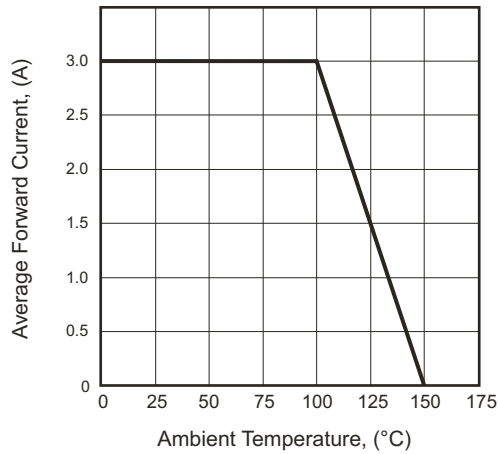


Fig.2 - Typical Forward Characteristics

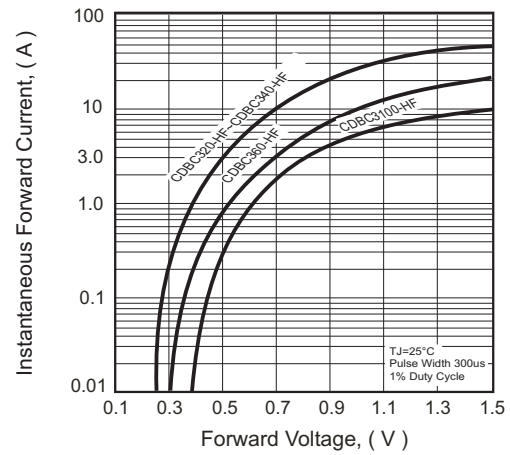


Fig.3 - Maximum Non-repetitive Forward Surge Current

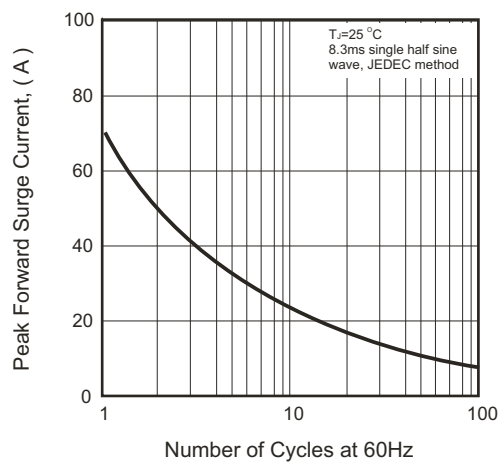


Fig.4 - Typical Junction Capacitance

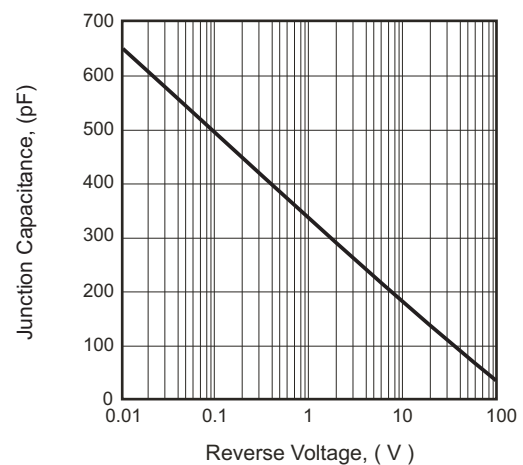
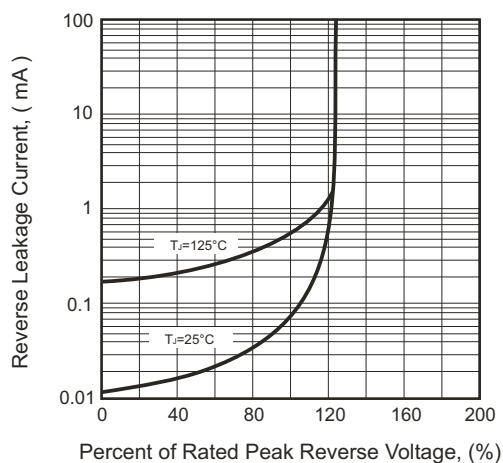


Fig.5 - Typical Reverse Characteristics



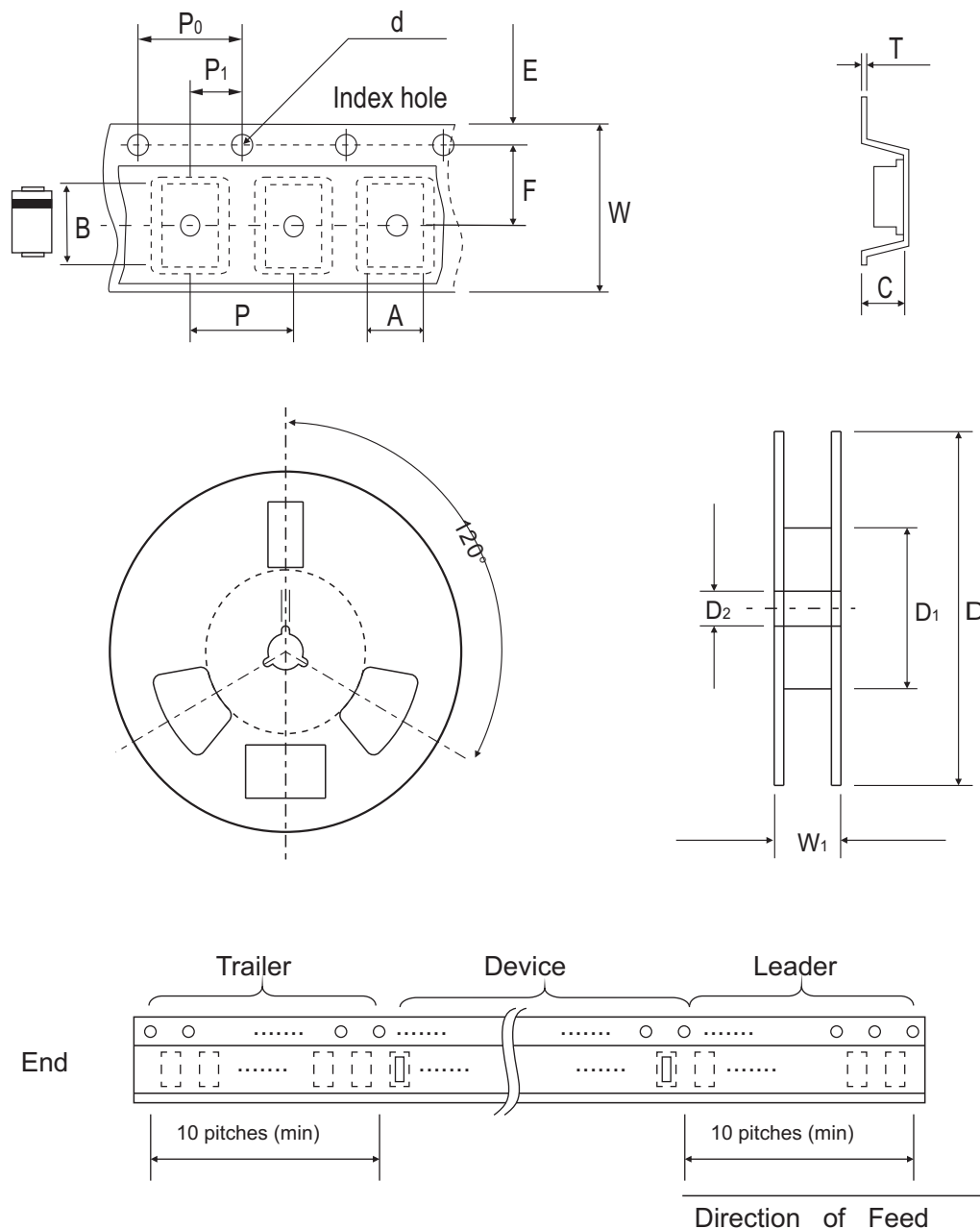
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## Reel Taping Specification



DO-214AB (SMC)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	$6.30 \pm 0.10$	$8.60 \pm 0.10$	$2.90 \pm 0.10$	$1.50 \pm 0.10$	$330 \pm 2.00$	50.0 MIN.	$13.50 \pm 0.50$
	(inch)	$0.248 \pm 0.004$	$0.339 \pm 0.004$	$0.114 \pm 0.004$	$0.059 \pm 0.004$	$12.99 \pm 0.079$	1.969 MIN.	$0.531 \pm 0.020$

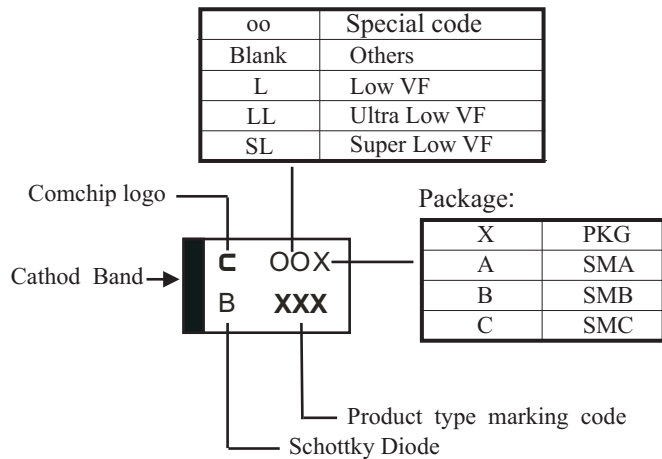
DO-214AB (SMC)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	$1.75 \pm 0.10$	$7.50 \pm 0.10$	$8.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.10$	$0.60 \pm 0.10$	$16.00 \pm 0.30$	$22.40 \pm 1.00$
	(inch)	$0.069 \pm 0.004$	$0.295 \pm 0.004$	$0.315 \pm 0.004$	$0.157 \pm 0.004$	$0.079 \pm 0.004$	$0.236 \pm 0.004$	$0.630 \pm 0.012$	$0.882 \pm 0.039$

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## Marking Code

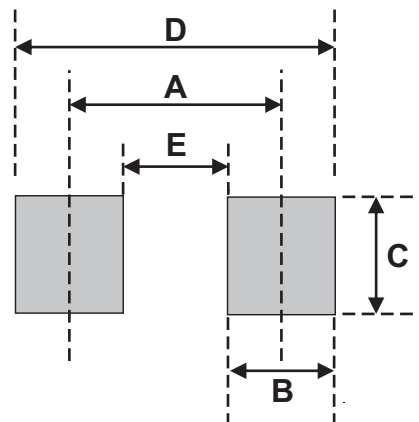
Part Number	Marking Code
CDBC320-HF	320
CDBC340-HF	340
CDBC360-HF	360
CDBC3100-HF	3100



**xxx/xxxx = Product type marking code**

## Suggested PAD Layout

SIZE	DO-214AB (SMC)	
	(mm)	(inch)
A	6.90	0.272
B	2.50	0.098
C	3.30	0.130
D	9.40	0.370
E	4.40	0.173



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
DO-214AB (SMC)	3,000	13