

## Features

- RoHS compliant\*
- Low profile
- Low power loss, high efficiency
- UL 94V-0 classification

## Applications

- Switch Mode Power Supplies
- Portable equipment batteries
- High frequency rectification
- DC/DC Converters
- Telecommunications

# CD214B-B3xR Series Schottky Barrier Rectifier Chip Diode

### General Information

Portable communications, computing and video equipment manufacturers are challenging the semiconductor industry to develop increasingly smaller electronic components.



Bourns offers Schottky Rectifier Diodes for rectification applications, in a compact chip package compatible with DO-214AA (SMB) size format. The Schottky Rectifier Diodes offer a forward current of 3 A with a choice of repetitive voltage of 20 V up to 100 V.

### Additional Information

Click these links for more information:



### Absolute Maximum Ratings (@ T<sub>A</sub> = 25 °C Unless Otherwise Noted)

Parameter	Symbol	CD214B-				Unit
		B320R	B340R	B360R	B3100R	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	40	60	100	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	3				A
Maximum Peak Forward Surge Current (8.3 ms Single Half Sine-Wave)	I <sub>FSM</sub>	80				A
Operating Junction Temperature Range	T <sub>OPR</sub>	-55 to +125		-55 to +150		°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150				°C

### Electrical Characteristics (@ T<sub>A</sub> = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Condition or Model	Min.	Typ.	Max.	Unit	
Maximum Instantaneous Forward Voltage (NOTE 1)	V <sub>F</sub>	I <sub>F</sub> = 1 A	CD214B-B320R		0.40		V
			CD214B-B340R				
			CD214B-B360R		0.48		
		I <sub>F</sub> = 3 A	CD214B-B3100R		0.58		
			CD214B-B320R		0.48	0.50	
			CD214B-B340R		0.65	0.70	
DC Reverse Current	I <sub>R</sub>	V <sub>R</sub> = V <sub>RRM</sub>		0.04	0.50	mA	
Typical Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 4 V, f = 1.0 MHz		180		pF	
Typical Thermal Resistance (NOTE 2)	Junction to Ambient	R <sub>θJA</sub>		55		°C/W	
	Junction to Lead	R <sub>θJL</sub>		17			

#### NOTES:

- (1) Pulse width 300 microsecond, 1 % duty cycle.
- (2) Mounted on PCB with 5.0 x 5.0 mm (0.2 x 0.2 inch) copper pad areas.



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

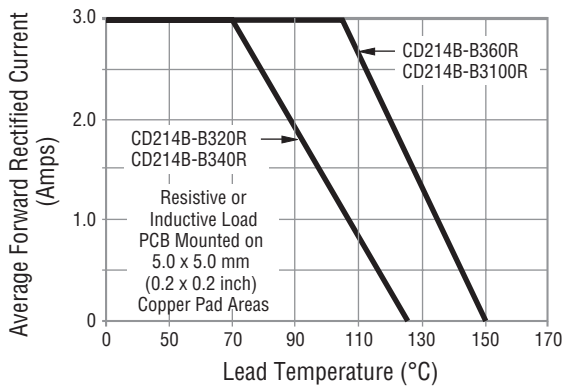
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
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# CD214B-B3xR Series Schottky Barrier Rectifier Chip Diode

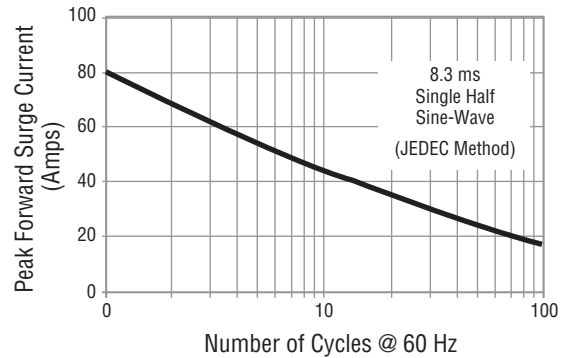


## Performance Graphs

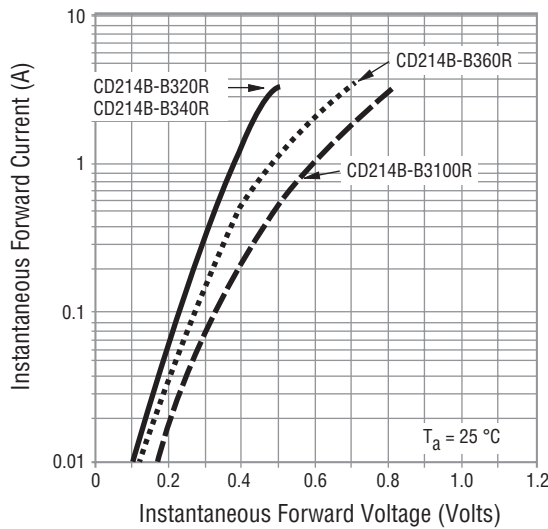
### Forward Current Derating Curve



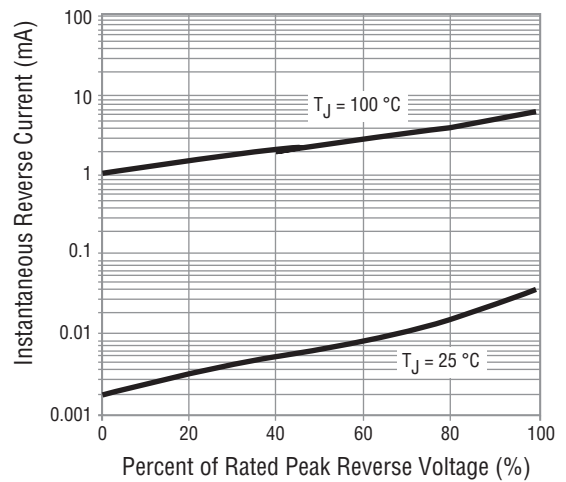
### Max. Peak Forward Surge Current



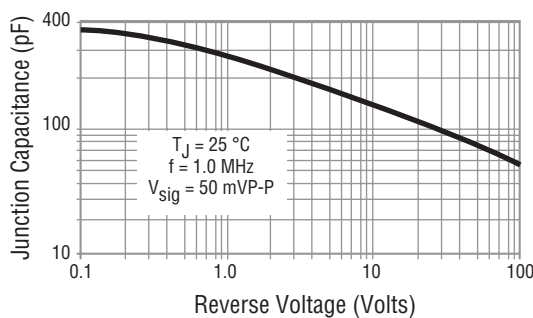
### Typical Instantaneous Forward Characteristics



### Typical Reverse Characteristics



### Typical Junction Capacitance

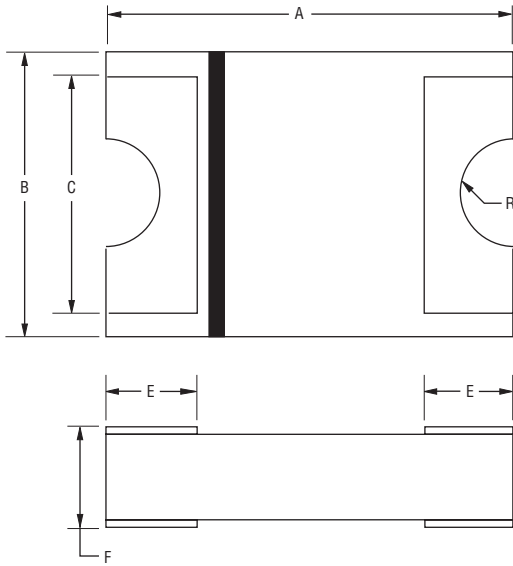


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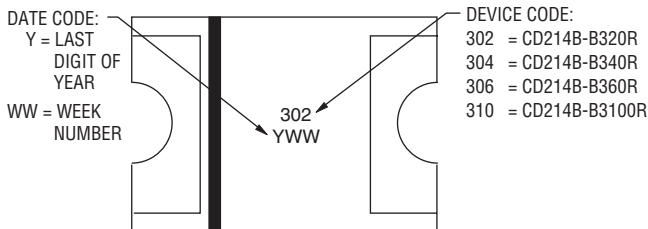
## Product Dimensions



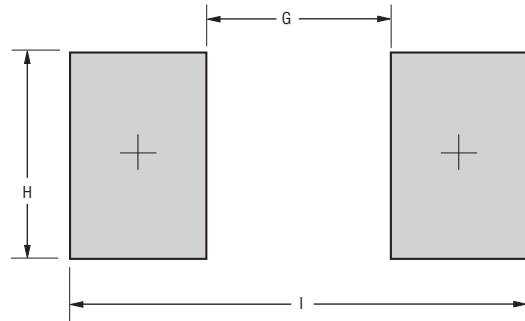
Dimension	CD214B-B3 Series
A	$5.20 \pm 0.10$ ( $0.205 \pm 0.004$ )
B	$3.60 \pm 0.10$ ( $0.142 \pm 0.004$ )
C	$3.01$ TYP. ( $0.119$ )
R (Radius)	$0.695$ TYP. ( $0.027$ )
E	$1.15 \pm 0.1$ ( $0.045 \pm 0.004$ )
F	$1.10 \pm 0.15$ ( $0.043 \pm 0.006$ )

DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## Typical Part Marking



## Recommended Pad Layout



Dimension	CD214B-B3 Series
G	$2.65$ MAX. ( $0.104$ )
H	$3.00$ MIN. ( $0.118$ )
I	$6.65$ REF. ( $0.262$ )

DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$

## Environmental Specifications

Moisture Sensitivity Level..... 1  
ESD Classification (HBM).....3B

## How to Order

CD 214B - B 3 20 R

Common Code \_\_\_\_\_  
CD = Chip Diode

Package \_\_\_\_\_  
214B = SMB/DO-214AA Compatible

Model \_\_\_\_\_  
B = Schottky Barrier Series

Maximum Average Forward Rectified Current \_\_\_\_\_  
3 = 3 A

Maximum Repetitive Peak Reverse Voltage \_\_\_\_\_  
20 = 20 V  
40 = 40 V  
60 = 60 V  
100 = 100 V

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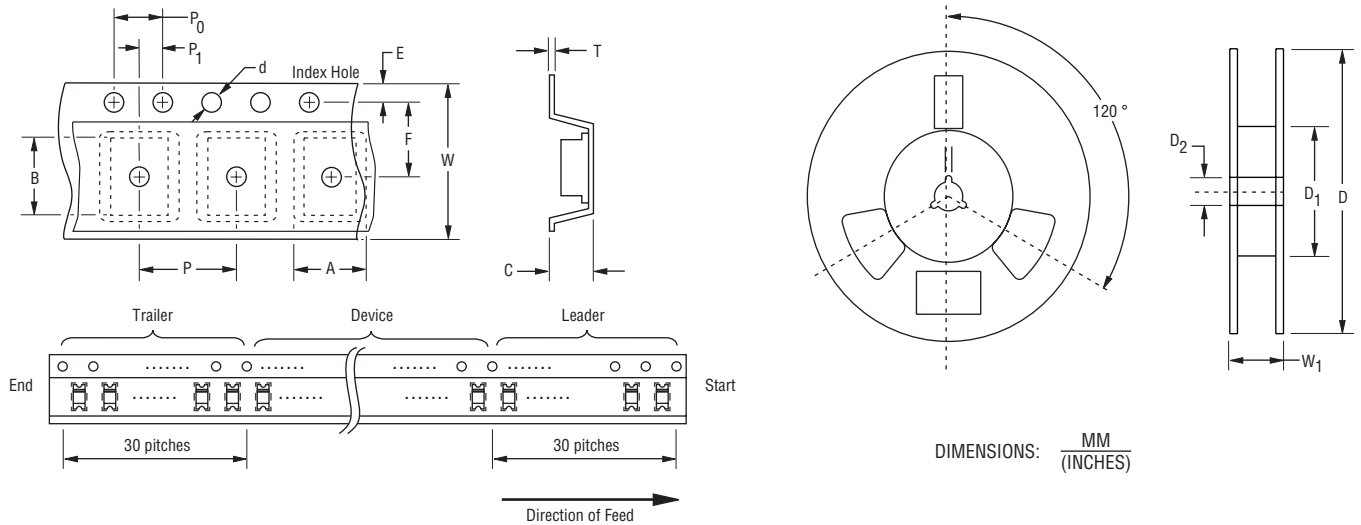
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# CD214B-B3xR Series Schottky Barrier Rectifier Chip Diode

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## Packaging Information

The product is dispensed in tape and reel format (see diagram below).



Item	Symbol	CD214B-B3 Series
Carrier Width	A	$\frac{3.70 \pm 0.10}{(0.146 \pm 0.004)}$
Carrier Length	B	$\frac{5.40 \pm 0.10}{(0.213 \pm 0.004)}$
Carrier Depth	C	$\frac{1.65 \pm 0.10}{(0.065 \pm 0.004)}$
Sprocket Hole	d	$\frac{1.50 \pm 0.10}{(0.059 \pm 0.004)}$
Reel Outside Diameter	D	$\frac{330 \pm 2.0}{(12.992 \pm 0.079)}$
Reel Inner Diameter	D <sub>1</sub>	$\frac{50.0}{(1.969)}$ MIN.
Feed Hole Diameter	D <sub>2</sub>	$\frac{13.0 \pm 0.50}{(0.512 \pm 0.020)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$
Punch Hole Position	F	$\frac{5.50 \pm 0.05}{(0.217 \pm 0.002)}$
Punch Hole Pitch	P	$\frac{8.00 \pm 0.10}{(0.157 \pm 0.004)}$
Sprocket Hole Pitch	P <sub>0</sub>	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Embossment Center	P <sub>1</sub>	$\frac{2.00 \pm 0.10}{(0.079 \pm 0.004)}$
Overall Tape Thickness	T	$\frac{0.40}{(0.016)}$ MAX.
Tape Width	W	$\frac{12.00 \pm 0.30}{(0.472 \pm 0.012)}$
Reel Width	W <sub>1</sub>	$\frac{18.7}{(0.736)}$ MAX.
Quantity per Reel	--	5,000

**BOURNS®**

**Asia-Pacific:** Tel: +886-2 2562-4117

Email: asiacus@bourns.com

**EMEA:** Tel: +36 88 885 877

Email: eurocus@bourns.com

**The Americas:** Tel: +1-951 781-5500

Email: americus@bourns.com

**www.bourns.com**

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