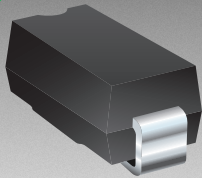


\*RoHS COMPLIANT



**BOURNS®**

## Features

- RoHS compliant\*
- SMB package
- Surface mount
- High current capability



The Model CD214B-B3xR Series is the recommended replacement.

## CD214B-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

### General Information

The markets of portable communications, computing and video equipment are challenging the semiconductor industry to develop increasingly smaller electronic components.

Bourns offers Schottky Rectifier Diodes for rectification applications, in compact chip package DO-214AA (SMB) size format, which offer PCB real estate savings and are considerably smaller than competitive parts. The Schottky Rectifier Diodes offer a forward current of 3 A with a choice of repetitive peak reverse voltage of 20 V up to 60 V.

Bourns® Chip Diodes conform to JEDEC standards, are easy to handle with standard pick and place equipment and their flat configuration minimizes roll away.

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

Parameter	Symbol	CD214B-					Unit
		B320	B330	B340	B350	B360	
Forward Voltage (Max.) (I <sub>F</sub> = 3 A)	V <sub>F</sub>	0.5	0.5	0.5	0.7	0.7	V
Typical Junction Capacitance*	C <sub>T</sub>	250					pF
Reverse Current (Max.) at Rated V <sub>R</sub> )	I <sub>R</sub>	0.5					mA

\* Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.

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

Parameter	Symbol	CD214B-					Unit
		B320	B330	B340	B350	B360	
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	V
Reverse Voltage	V <sub>R</sub>	20	30	40	50	60	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	V
Avg. Forward Current	I <sub>O</sub>	3					A
Forward Current, Surge Peak (60 Hz, 1 cycle)	I <sub>surge</sub>	100					A
Typical Thermal Resistance**	R <sub>θJL</sub>	10					°C/W
Storage Temperature	T <sub>STG</sub>	-55 to +150					°C
Junction Temperature	T <sub>J</sub>	-55 to +125					°C

\*\* Thermal resistance junction to lead.

### How To Order

Common Code	CD 214B - B 3 30 LF
Chip Diode	
Package	
• 214B = SMB/DO-214AA	
Model	
B = Schottky Barrier Series	
Average Forward Current (I <sub>O</sub> ) Code	
3 = 3 A (Code x 1000 mA = Average Forward Current)	
Reverse Voltage (V <sub>R</sub> ) Code	
30 = 30 V	
40 = 40 V	
60 = 60 V	
Terminations	
LF = 100 % Sn (RoHS Compliant)	

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

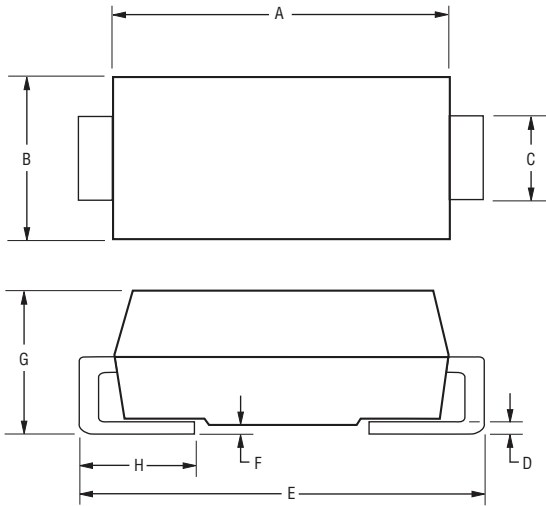
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.

# CD214B-B320 ~ B360 Schottky Barrier Rectifier Chip Diode



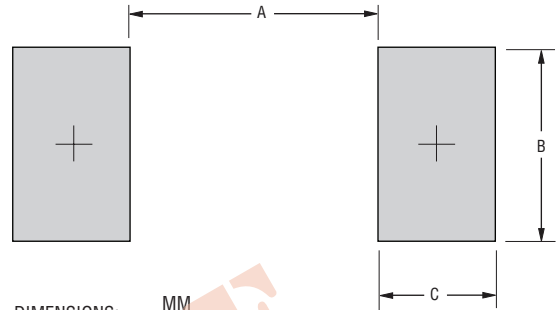
## Product Dimensions



Dimension	SMB (DO-214AA)
A	4.06 - 4.57 (0.160 - 0.180)
B	3.30 - 3.94 (0.130 - 0.155)
C	1.96 - 2.21 (0.078 - 0.087)
D	0.15 - 0.31 (0.006 - 0.112)
E	5.21 - 5.59 (0.205 - 0.220)
F	0.05 - 0.20 (0.002 - 0.008)
G	2.01 - 2.62 (0.080 - 0.103)
H	0.76 - 1.52 (0.030 - 0.060)

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

## Recommended Pad Layout



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

Dimension	SMA (DO-214AC)
A	2.90 (0.114)
B	3.00 (0.118)
C	2.30 (0.091)

## Physical Specifications

Case ..... Molded plastic  
 Polarity ..... Indicated by cathode band  
 Weight ..... 0.003 ounces / 0.093 grams

## Typical Part Marking

CD214B-B320 ..... **B** 320B  
 CD214B-B330 ..... **B** 330B  
 CD214B-B340 ..... **B** 340B  
 CD214B-B350 ..... **B** 350B  
 CD214B-B360 ..... **B** 360B

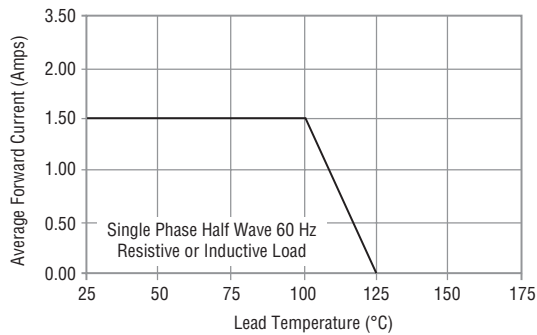
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# CD214B-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

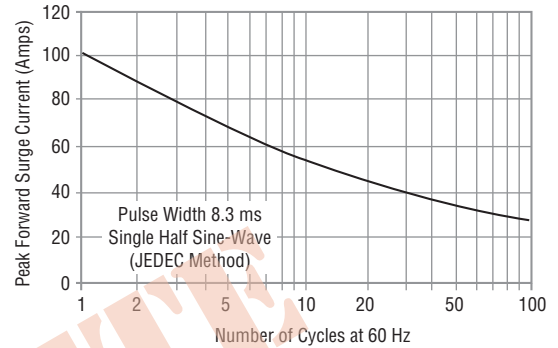


## Rating and Characteristic Curves

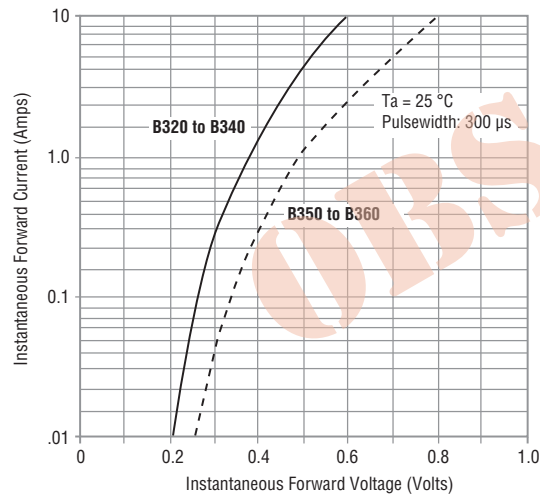
### Forward Current Derating Curve



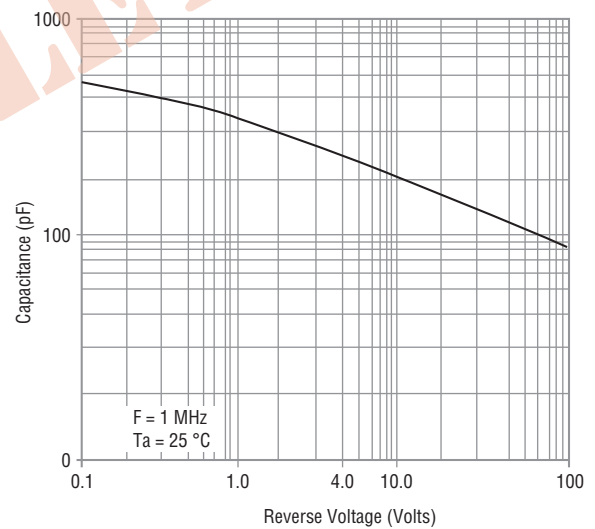
### Maximum Non-Repetitive Surge Current



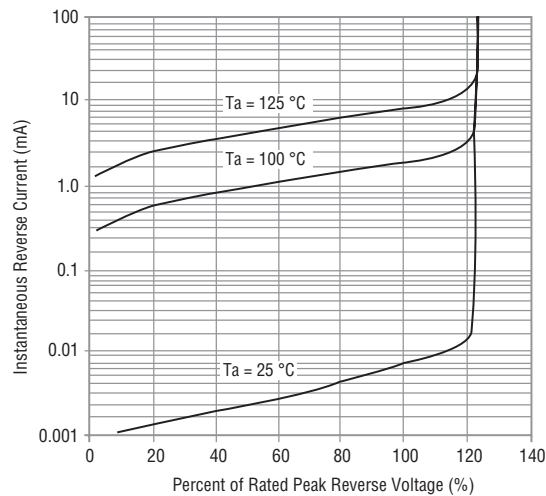
### Typical Forward Characteristics



### Typical Junction Capacitance



### Typical Reverse Characteristics



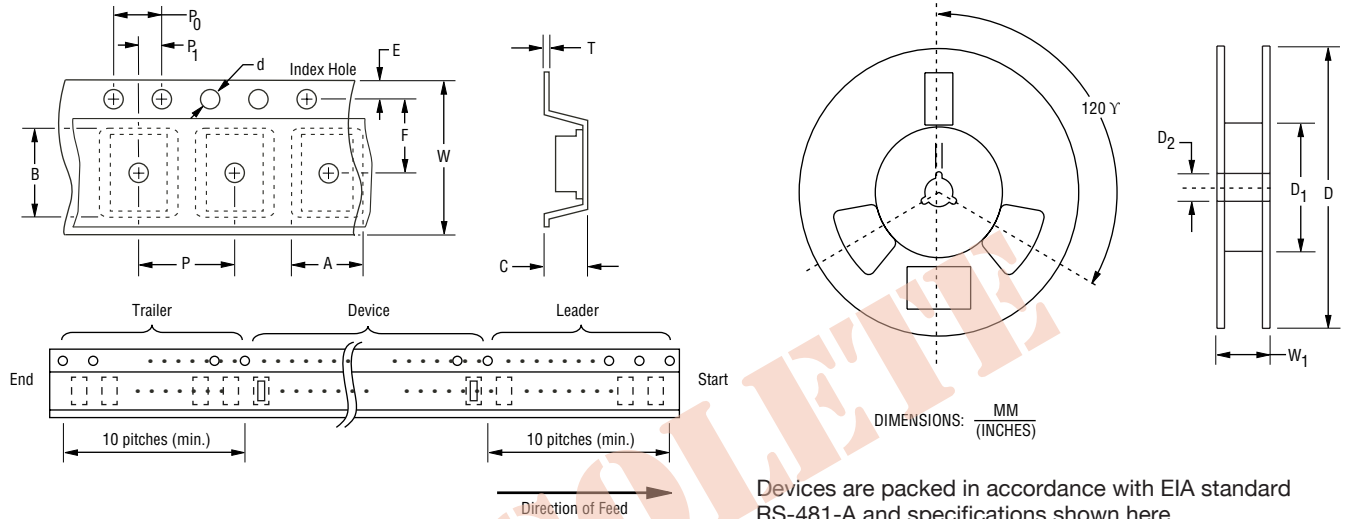
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# CD214B-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

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## Packaging Information

The product will be dispensed in Tape and Reel format (see diagram below).



Item	Symbol	SMB (DO-214AA)
Carrier Width	A	$\frac{4.94 \pm 0.10}{(0.194 \pm 0.004)}$
Carrier Length	B	$\frac{5.57 \pm 0.10}{(0.219 \pm 0.004)}$
Carrier Depth	C	$\frac{2.36 \pm 0.10}{(0.093 \pm 0.004)}$
Sprocket Hole	d	$\frac{1.55 \pm 0.05}{(0.061 \pm 0.002)}$
Reel Outside Diameter	D	$\frac{330}{(12.992)}$
Reel Inner Diameter	D <sub>1</sub>	$\frac{50.0}{(1.969)}$ MIN.
Feed Hole Diameter	D <sub>2</sub>	$\frac{13.0 \pm 0.20}{(0.512 \pm 0.008)}$
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	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Sprocket Hole Pitch	P <sub>0</sub>	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Embossment Center	P <sub>1</sub>	$\frac{2.00 \pm 0.05}{(0.079 \pm 0.002)}$
Overall Tape Thickness	T	$\frac{0.30 \pm 0.10}{(0.012 \pm 0.004)}$
Tape Width	W	$\frac{12.00 \pm 0.20}{(0.472 \pm 0.008)}$
Reel Width	W <sub>1</sub>	$\frac{18.4}{(0.724)}$ MAX.
Quantity per Reel	--	3,000

REV. 01/18

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