



## Features

- Lead free versions available
- RoHS compliant (lead free version)\*
- SMA package
- Surface mount
- High current capability

## CD214A-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-214AC (SMA) 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, easy to handle on standard pick and place equipment and their flat configuration makes roll away much more difficult.

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

Parameter	Symbol	CD214A-						Unit
		B320	B330	B340	B340L	B350	B360	
Forward Voltage (Max.) (I <sub>f</sub> = 3 A)	V <sub>F</sub>	0.5	0.5	0.5	0.45	0.7	0.7	V
Typical Junction Capacitance*	C <sub>T</sub>	250	250	250	300	250	250	pF
Reverse Current (Max.) at Rated V <sub>R</sub> )	I <sub>R</sub>	0.5	0.5	0.5	1.0	0.5	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	CD214A-						Unit
		B320	B330	B340	B340L	B350	B360	
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	40	50	60	V
Reverse Voltage	V <sub>R</sub>	20	30	40	40	50	60	V
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	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	100	100	70	100	100	A
Typical Thermal Resistance**	R <sub>θJL</sub>	10	10	10	20	10	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.



Reliable Electronic Solutions

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[www.bourns.com](http://www.bourns.com)

\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex

Specifications are subject to change without notice.

Customers should verify actual device performance in their specific applications.

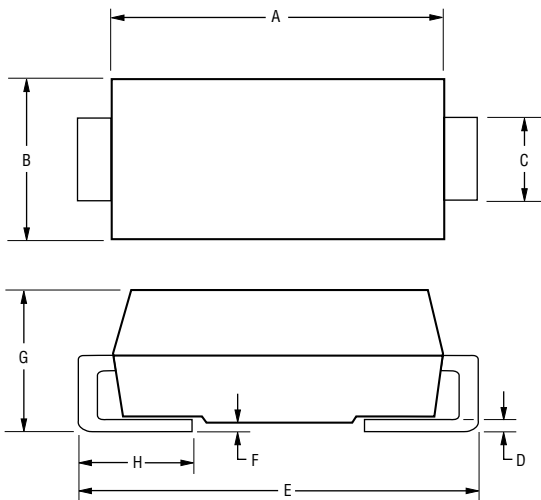
### How To Order

Common Code	CD 214A - B 3 30 L
Chip Diode	
Package	
• 214A = SMA/DO-214AC	
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	
Forward Voltage Suffix	
L = Low Forward Voltage V <sub>f</sub> (CD214-B330L)	
Terminations	
LF = 100 % Sn (lead free)	
Blank = Sn/Pb	

# CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode



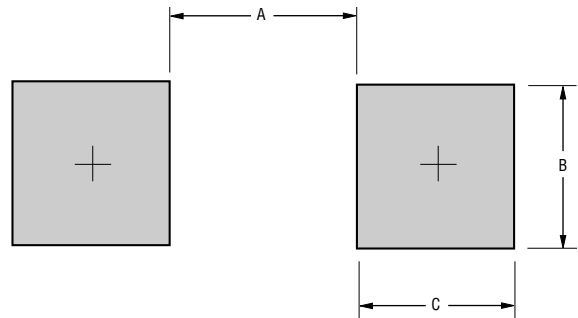
## Product Dimensions



Dimension	SMA (DO-214AC)
A	$\frac{4.06 - 4.57}{(0.160 - 0.180)}$
B	$\frac{2.29 - 2.92}{(0.090 - 0.115)}$
C	$\frac{1.27 - 1.63}{(0.050 - 0.064)}$
D	$\frac{0.15 - 0.31}{(0.006 - 0.110)}$
E	$\frac{4.83 - 5.59}{(0.190 - 0.220)}$
F	$\frac{0.05 - 0.20}{(0.002 - 0.008)}$
G	$\frac{2.01 - 2.62}{(0.080 - 0.103)}$
H	$\frac{0.76 - 1.52}{(0.030 - 0.060)}$

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

## Recommended Pad Layout



Dimension	SMA (DO-214AC)
A (Max.)	$\frac{2.69}{(0.106)}$
B (Min.)	$\frac{2.10}{(0.083)}$
C (Min.)	$\frac{1.27}{(0.050)}$

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

## Physical Specifications

Case .....Molded plastic  
 Polarity .....Indicated by cathode band  
 Weight .....0.002 ounces / 0.064 grams

## Typical Part Marking

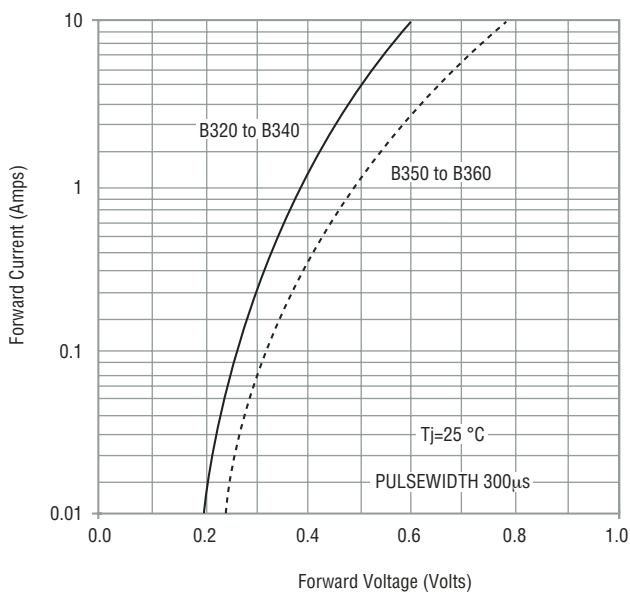
CD214A-B320 ..... **B** 320  
 CD214A-B330 ..... **B** 330  
 CD214A-B340 ..... **B** 340  
 CD214A-B340L ..... **B** 340L  
 CD214A-B350 ..... **B** 350  
 CD214A-B360 ..... **B** 360

# CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

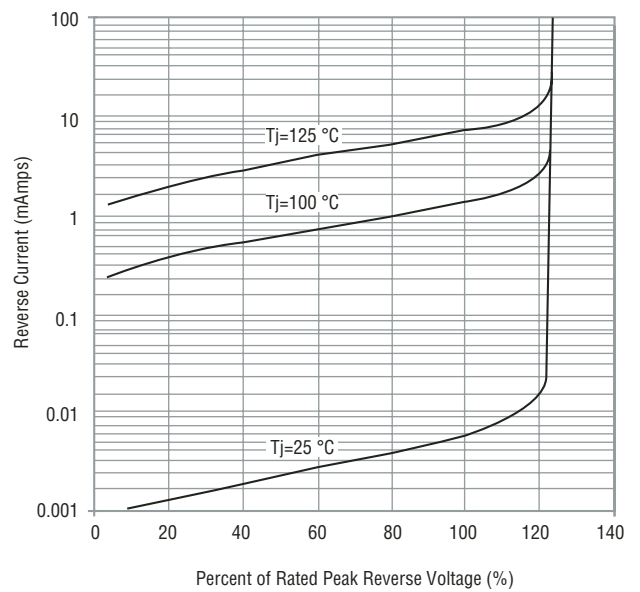


Rating and Characteristic Curves: CD214A-B320, CD214A-B330, CD214A-B340, CD214A-B350 & CD214A-B360

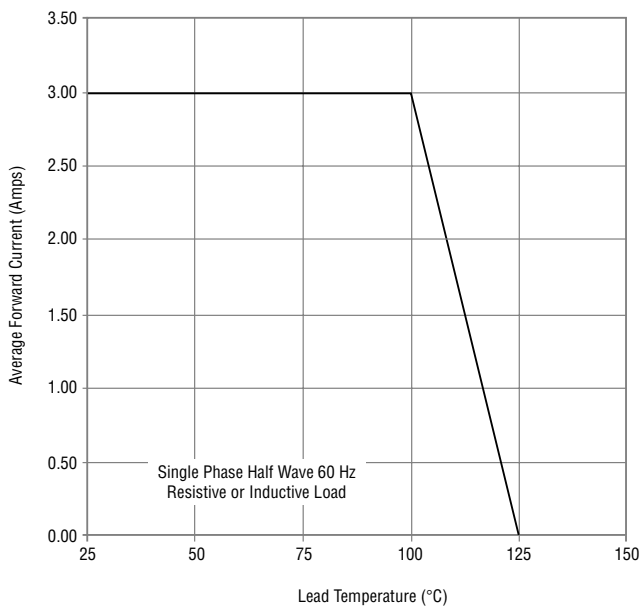
## Forward Characteristics



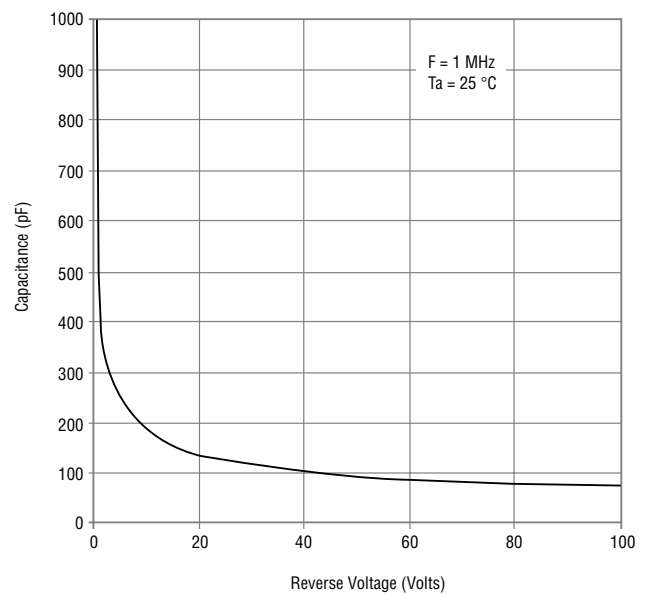
## Reverse Characteristics



## Derating Curve



## Capacitance Between Terminals



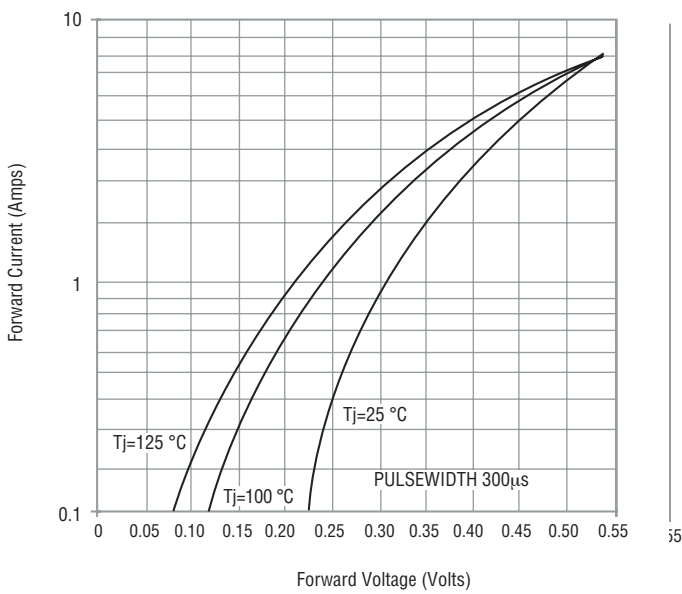
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# CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

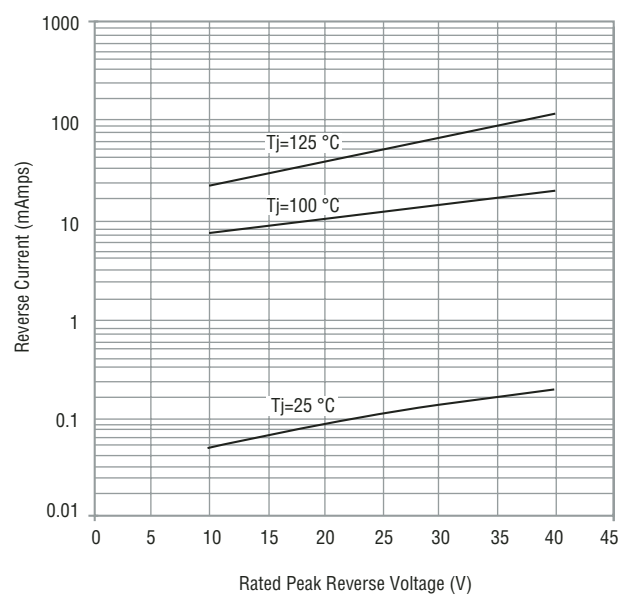


## Rating and Characteristic Curves: CD214A-B340L

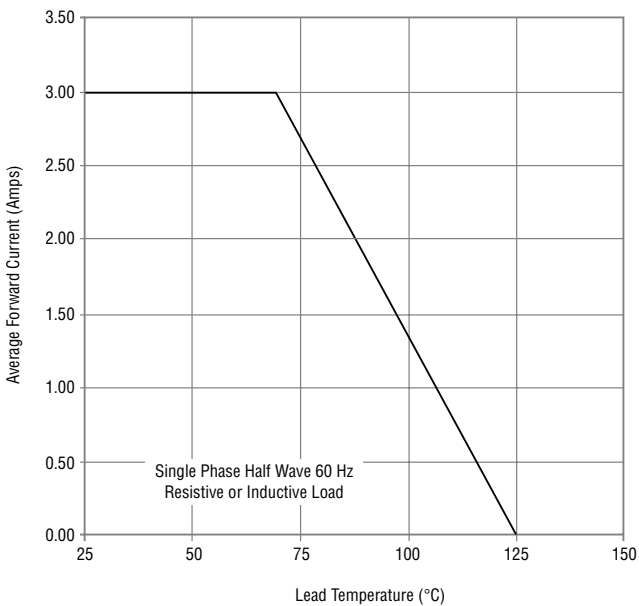
### Forward Characteristics



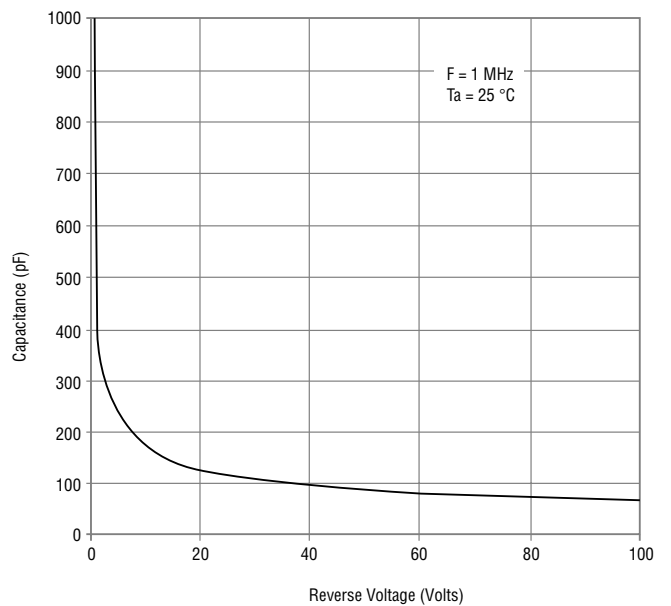
### Reverse Characteristics



### Derating Curve



### Capacitance Between Terminals

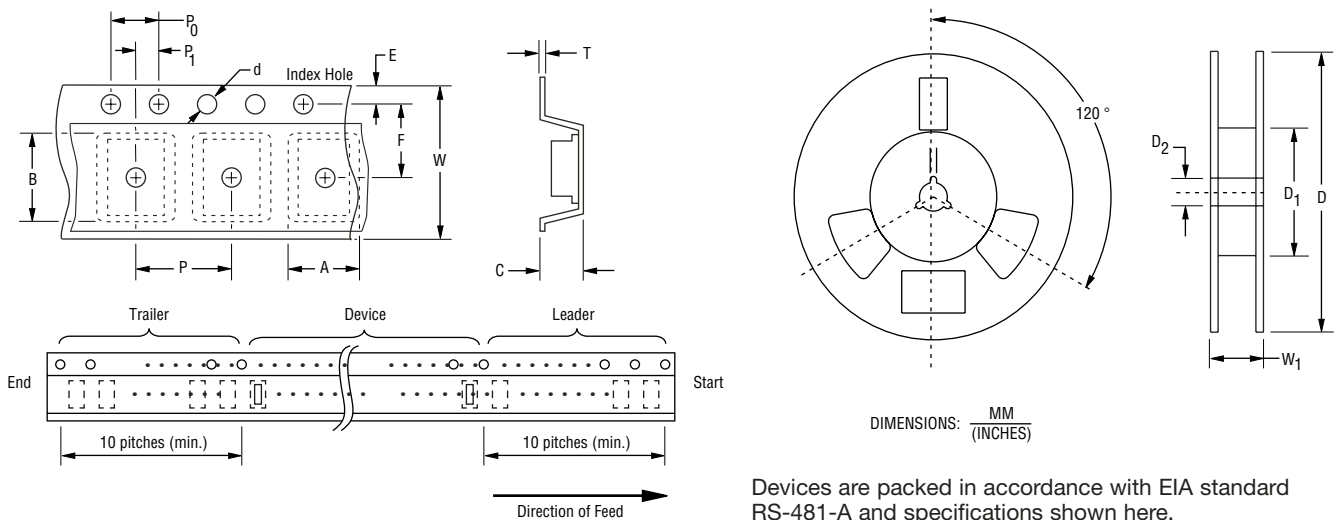


# CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode



## Packaging Information

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



Item	Symbol	SMA (DO-214AC)
Carrier Width	A	$\frac{2.90 \pm 0.10}{(0.114 - 0.004)}$
Carrier Length	B	$\frac{5.59 \pm 0.10}{(0.220 - 0.004)}$
Carrier Depth	C	$\frac{2.36 \pm 0.10}{(0.093 - 0.004)}$
Sprocket Hole	d	$\frac{1.55 \pm 0.05}{(0.061 - 0.002)}$
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>	$\frac{13.0 \pm 0.20}{(0.512 - 0.008)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 - 0.004)}$
Punch Hole Position	F	$\frac{5.50 \pm 0.05}{(0.217 - 0.002)}$
Punch Hole Pitch	P	$\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$
Sprocket Hole Pitch	P <sub>0</sub>	$\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$
Embossment Center	P <sub>1</sub>	$\frac{2.00 \pm 0.05}{(0.079 - 0.002)}$
Overall Tape Thickness	T	$\frac{0.30 \pm 0.10}{(0.012 - 0.004)}$
Tape Width	W	$\frac{12.00 \pm 0.20}{(0.472 - 0.008)}$
Reel Width	W <sub>1</sub>	$\frac{18.4}{(0.724)}$ MAX.
Quantity per Reel	--	5,000

REV. 02/05

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