



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 (@ $T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	CD214A-						Unit
		B320	B330	B340	B340L	B350	B360	
Forward Voltage (Max.) ($I_f = 3\text{ A}$)	V_F	0.5	0.5	0.5	0.45	0.7	0.7	V
Typical Junction Capacitance*	C_T	250	250	250	300	250	250	pF
Reverse Current (Max.) at Rated V_R	I_R	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 (@ $T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	CD214A-						Unit
		B320	B330	B340	B340L	B350	B360	
Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	40	50	60	V
Reverse Voltage	V_R	20	30	40	40	50	60	V
Maximum RMS Voltage	V_{RMS}	14	21	28	28	35	42	V
Avg. Forward Current	I_O	3						A
Forward Current, Surge Peak (60 Hz, 1 cycle)	I_{surge}	100	100	100	70	100	100	A
Typical Thermal Resistance**	$R_{\theta JL}$	10	10	10	20	10	10	$^\circ\text{C}/\text{W}$
Storage Temperature	T_{STG}	-55 to +150						$^\circ\text{C}$
Junction Temperature	T_J	-55 to +125						$^\circ\text{C}$

** Thermal resistance junction to lead.



Reliable Electronic Solutions

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*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

CD 214A - B 3 30 L

Common Code _____
Chip Diode

Package _____
• 214A = SMA/DO-214AC

Model _____
B = Schottky Barrier Series

Average Forward Current (I_O) Code _____
3 = 3 A (Code x 1000 mA = Average Forward Current)

Reverse Voltage (V_R) Code _____
30 = 30 V
40 = 40 V
60 = 60 V

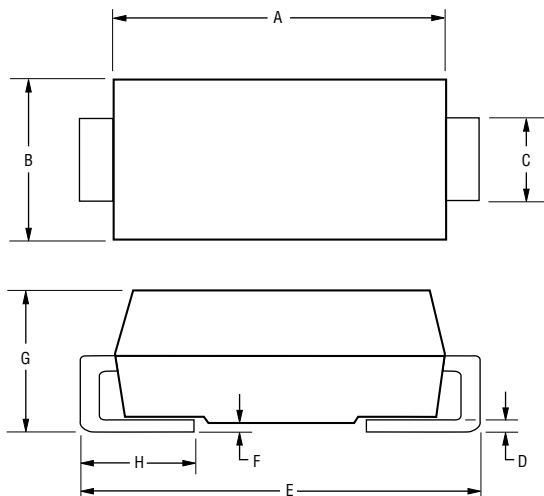
Forward Voltage Suffix _____
L = Low Forward Voltage V_f (CD214-B330L)

Terminations _____
LF = 100 % Sn (lead free)
Blank = Sn/Pb

CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

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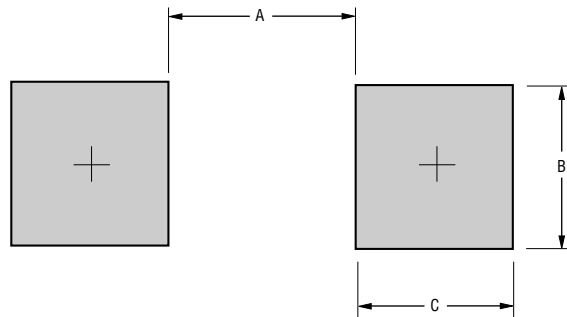
Product Dimensions



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

CaseMolded plastic
PolarityIndicated by cathode band
Weight0.002 ounces / 0.064 grams

Typical Part Marking

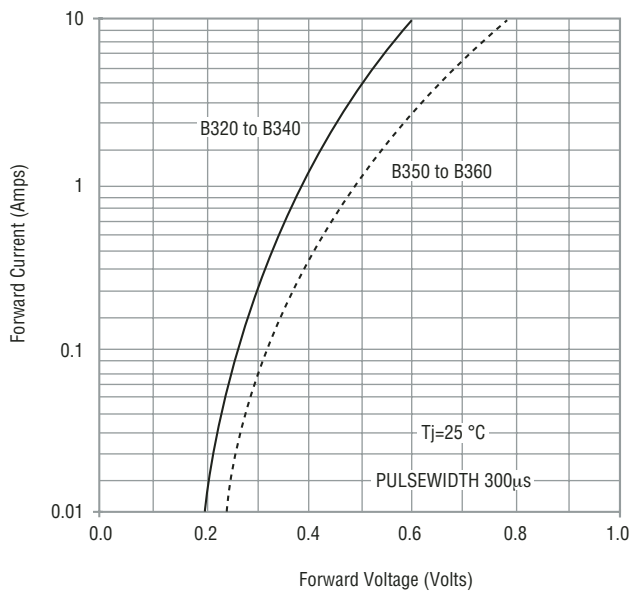
CD214A-B320 **B** 320
CD214A-B330 **B** 330
CD214A-B340 **B** 340
CD214A-B340L **B** 340L
CD214A-B350 **B** 350
CD214A-B360 **B** 360

CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

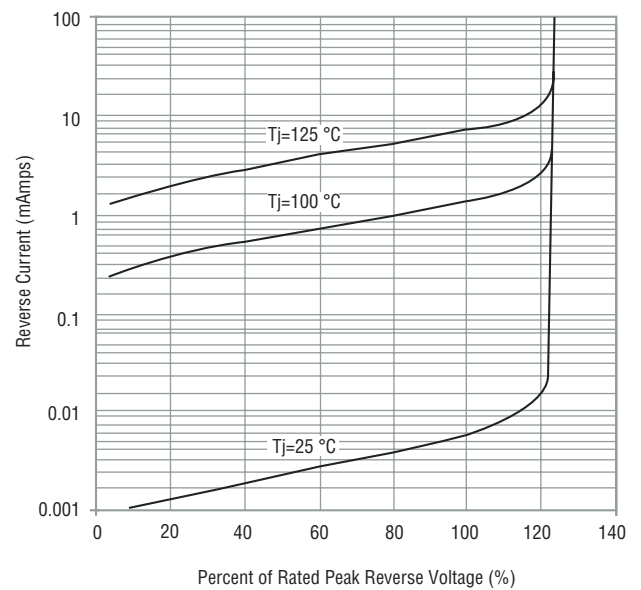
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Rating and Characteristic Curves: CD214A-B320, CD214A-B330, CD214A-B340, CD214A-B350 & CD214A-B360

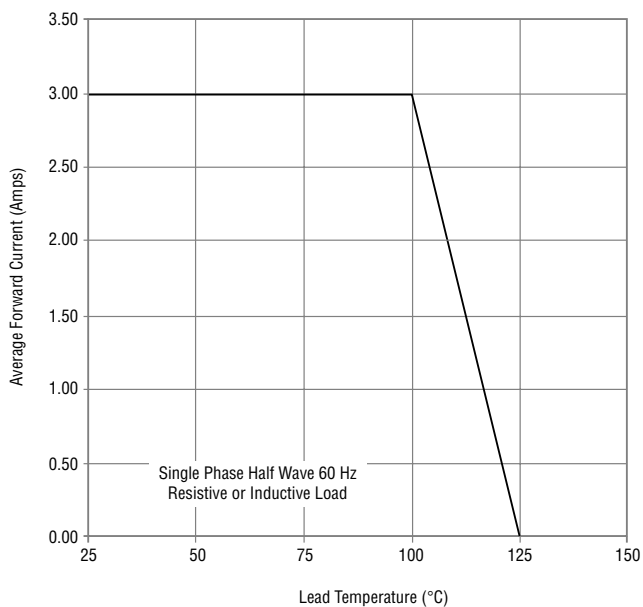
Forward Characteristics



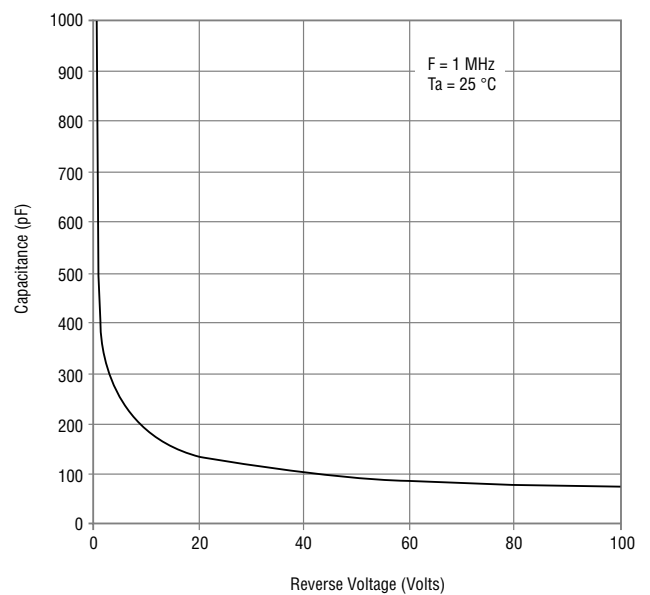
Reverse Characteristics



Derating Curve



Capacitance Between Terminals



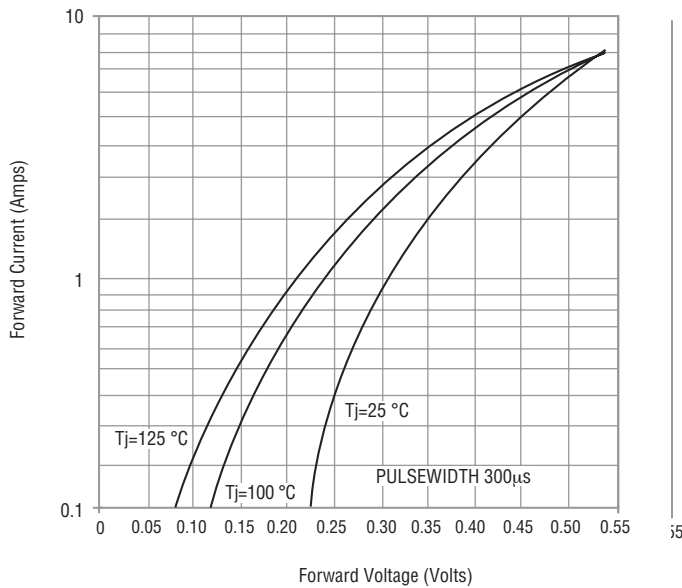
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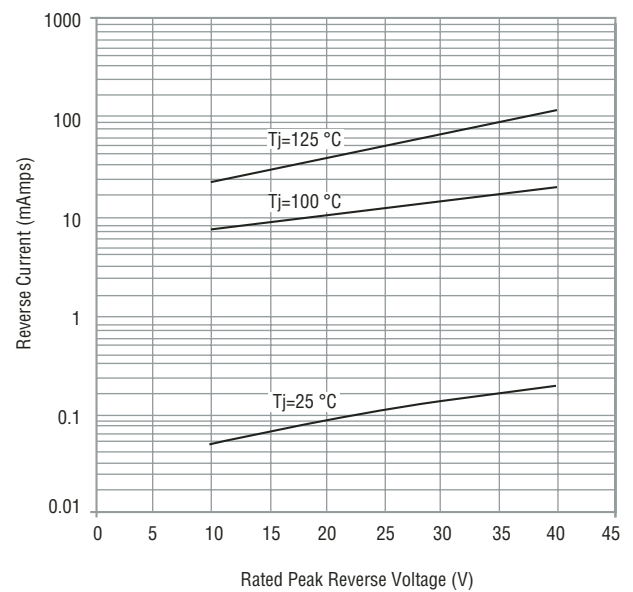
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Rating and Characteristic Curves: CD214A-B340L

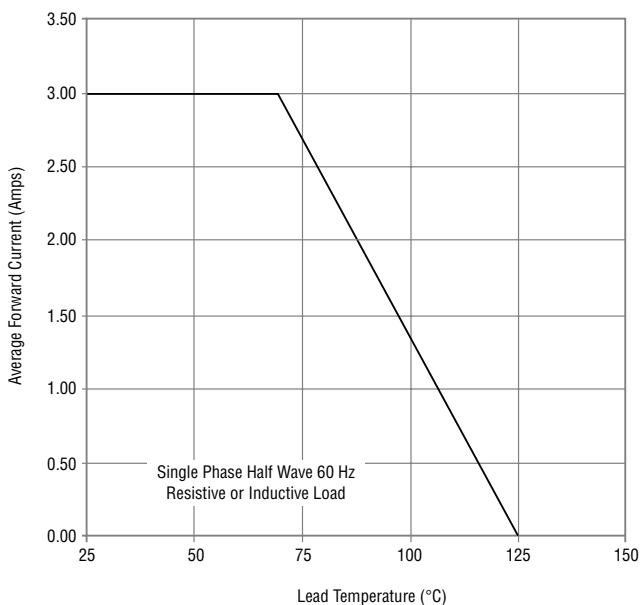
Forward Characteristics



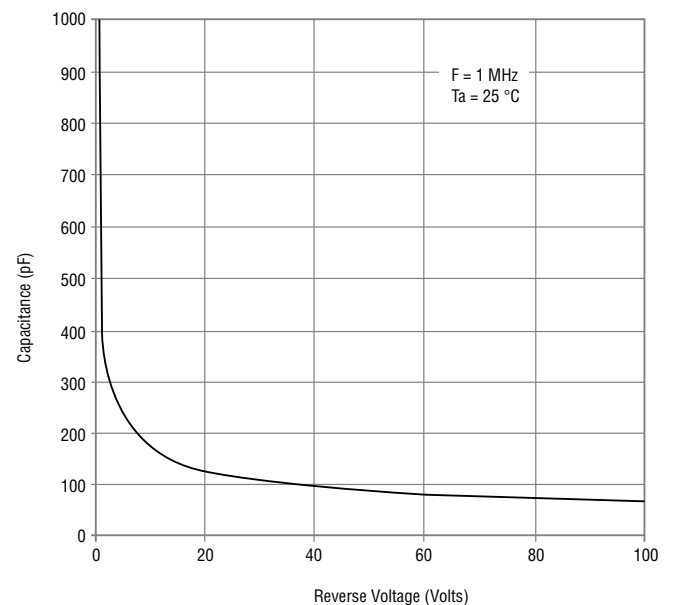
Reverse Characteristics



Derating Curve



Capacitance Between Terminals

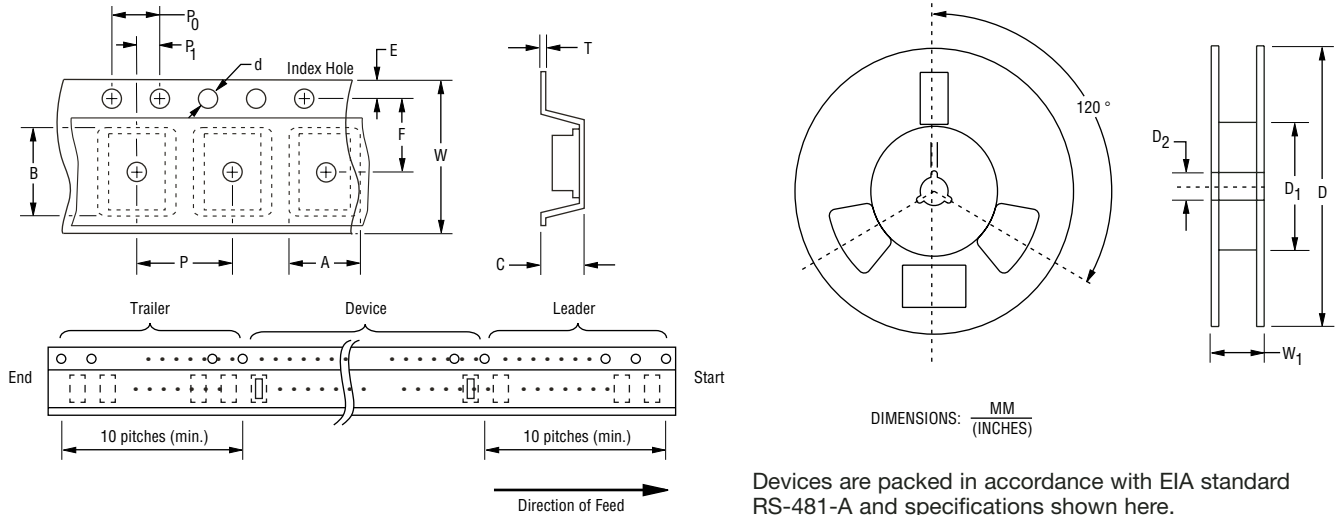


CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

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Packaging Information

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



Item	Symbol	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 ₁	$\frac{50.0}{(1.969)} \text{ MIN.}$
Feed Hole Diameter	D ₂	$\frac{13.0 \pm 0.20}{(0.512 - 0.008)}$
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 ₀	$\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$
Embossment Center	P ₁	$\frac{2.00 \pm 0.05}{(0.079 - 0.002)}$
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 ₁	$\frac{18.4}{(0.724)} \text{ MAX.}$
Quantity per Reel	--	5,000

REV. 02/05

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