

## 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-B2xR 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, which offer PCB real estate savings and are considerably smaller than competitive parts. The Schottky Rectifier Diodes offer a forward current of 2 A with a choice of repetitive peak reverse 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
		B220R	B240R	B260R	B2100R	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	40	60	100	V
Maximum Average Forward Current	I <sub>F(AV)</sub>	2				A
Maximum Peak Forward Surge Current (8.3 ms Single Half Sine-Wave)	I <sub>FSM</sub>	50				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-B220R		0.41		V
			CD214B-B240R				
		CD214B-B260R		0.5			
		CD214B-B2100R		0.62			
	I <sub>F</sub> = 2 A	CD214B-B220R		0.49	0.5		
		CD214B-B240R					
CD214B-B260R			0.6	0.7			
		CD214B-B2100R		0.75	0.85		
DC Reverse Current	I <sub>R</sub>	V <sub>R</sub> = V <sub>RRM</sub>		0.025	0.2	mA	
Typical Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> = 4 V, f = 1.0 MHz		115		pF	
Typical Thermal Resistance (NOTE 2)	Junction to Ambient	R <sub>θJA</sub>		65		°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)

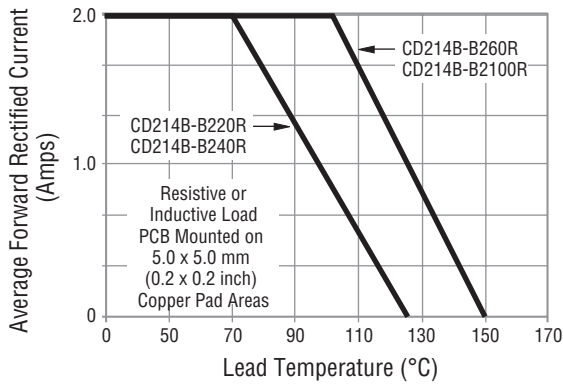
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
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# CD214B-B2xR Series Schottky Barrier Rectifier Chip Diode

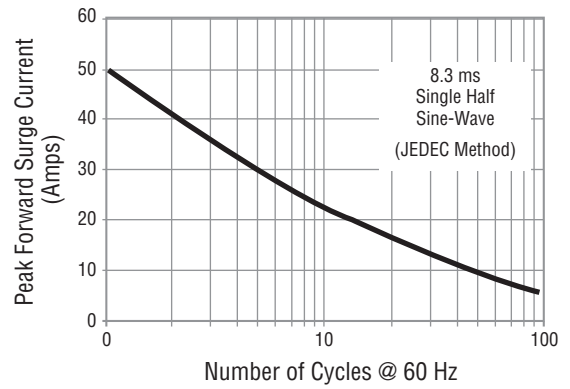


## Performance Graphs

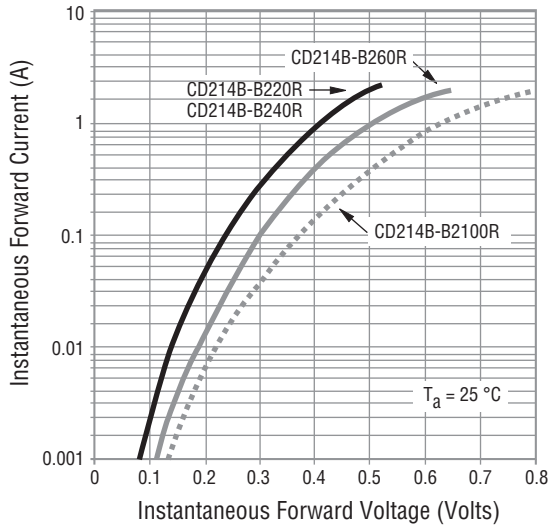
### Forward Current Derating Curve



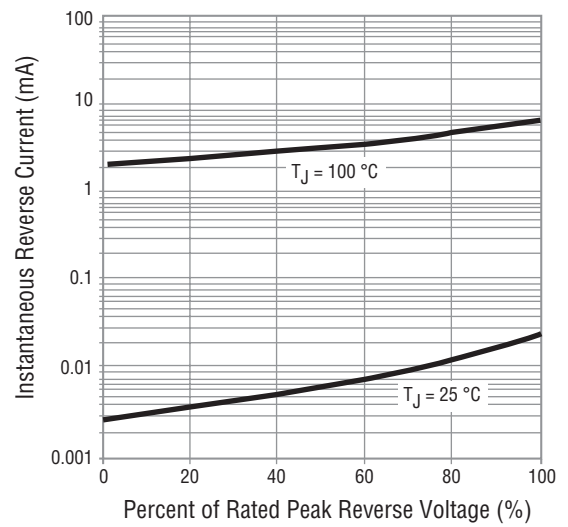
### Max. Peak Forward Surge Current



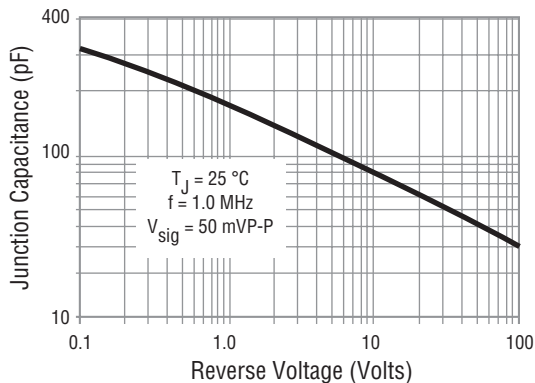
### Typical Instantaneous Forward Characteristics



### Typical Reverse Characteristics



### Typical Junction Capacitance

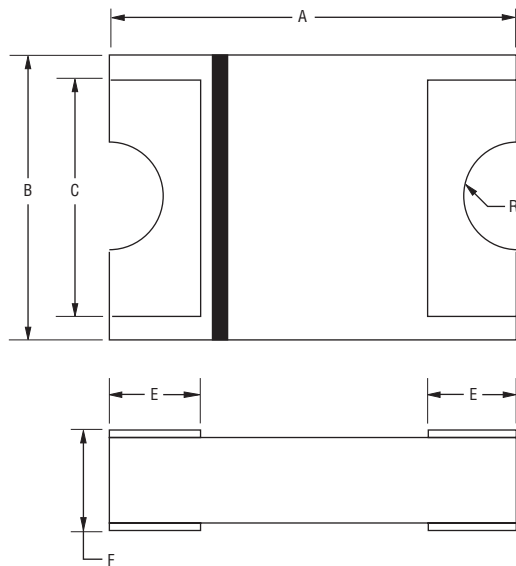


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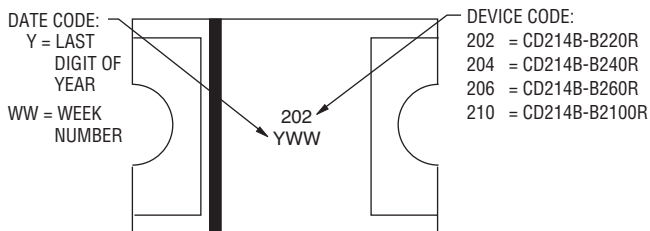
## Product Dimensions



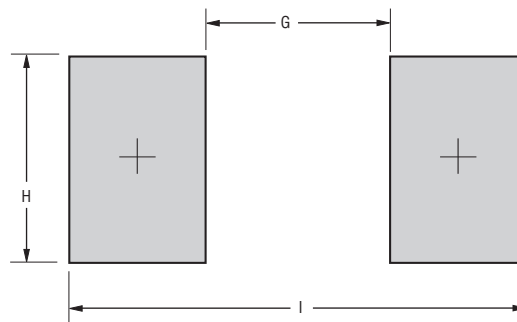
Dimension	CD214B-B2 Series
A	5.20 ± 0.10 (0.205 ± 0.004)
B	3.60 ± 0.10 (0.142 ± 0.004)
C	3.01 TYP. (0.119)
R (Radius)	0.695 TYP. (0.027)
E	1.15 ± 0.1 (0.045 ± 0.004)
F	1.10 ± 0.15 (0.043 ± 0.006)

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

## Typical Part Marking



## Recommended Pad Layout



Dimension	CD214B-B2 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 2 20 R**

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

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

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

Maximum Average Forward Rectified Current \_\_\_\_\_  
2 = 2 A

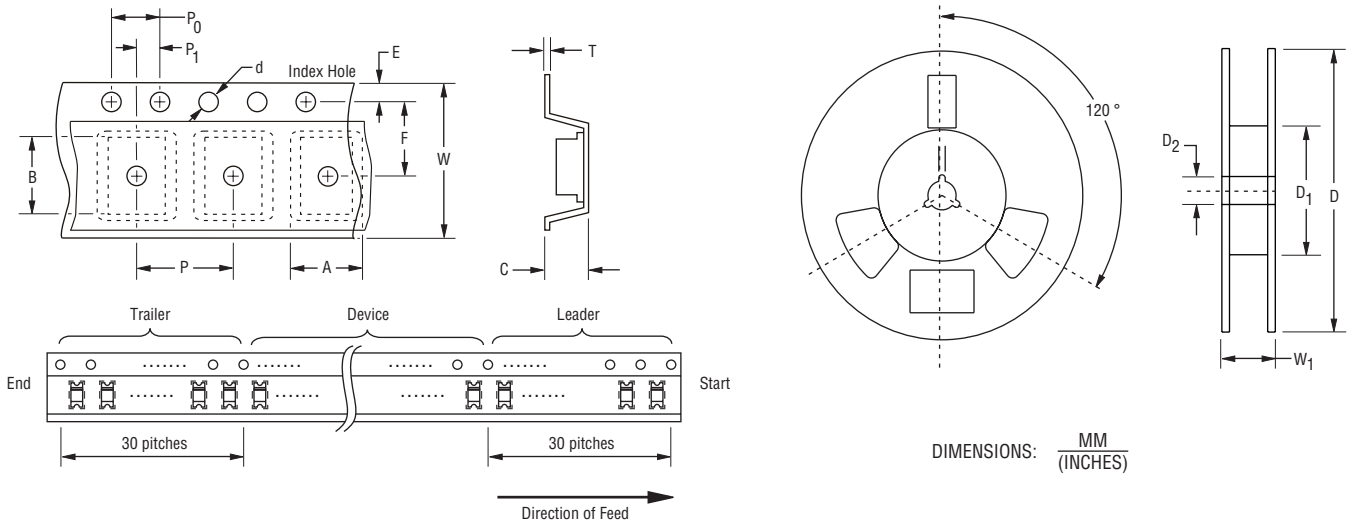
Maximum Repetitive Peak Reverse Voltage \_\_\_\_\_  
20 = 20 V  
40 = 40 V  
60 = 60 V  
100 = 100 V

# CD214B-B2xR Series Schottky Barrier Rectifier Chip Diode

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## Packaging Information

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



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

Item	Symbol	CD214B-B2 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

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