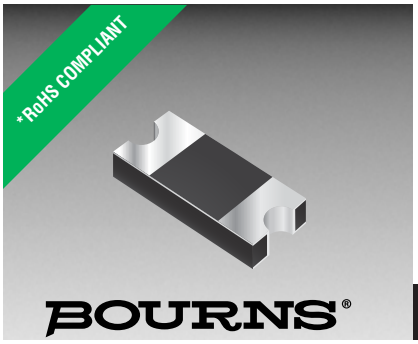


Features

- 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

CD214A-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-214AC (SMA) size format. 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.



Absolute Maximum Ratings (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	CD214A-					Unit
		B320R	B320LR	B340R	B340LR	B360R	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	20	40	40	60	V
Maximum Average Forward Current	$I_{F(AV)}$	3					A
Maximum Peak Forward Surge Current (8.3 ms Single Half Sine-Wave)	I_{FSM}	80					A
Operating Junction Temperature Range	T_{OPR}	-55 to +125					°C
Storage Temperature Range	T_{STG}	-55 to +150					°C

Electrical Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Condition or Model		Min.	Typ.	Max.	Unit
Maximum Instantaneous Forward Voltage (NOTE 1)	V_F	I_F = 1 A	CD214A-B320R CD214A-B340R		0.37		V
			CD214A-B360R		0.42		
			CD214A-B320LR CD214A-B340LR		0.3		
		I_F = 3 A	CD214A-B320R CD214A-B340R		0.46	0.5	
			CD214A-B360R		0.58	0.7	
			CD214A-B320LR CD214A-B340LR		0.39	0.42	
DC Reverse Current	I_R	V_R = V_{RRM}	CD214A-B320R CD214A-B340R CD214A-B360R		0.02	0.2	mA
			CD214A-B320LR CD214A-B340LR		0.55	1	
Typical Junction Capacitance	C_J	V_R = 4 V, f = 1.0 MHz	CD214A-B320R CD214A-B340R		160		pF
			CD214A-B360R		135		
			CD214A-B320LR CD214A-B340LR		120		

NOTE: (1) Pulse width 300 microsecond, 1 % duty cycle.

Continued on next page.

WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
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Users should verify actual device performance in their specific applications.
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Electrical Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter		Symbol	Condition or Model	Min.	Typ.	Max.	Unit
Typical Thermal Resistance (NOTE 2)	Junction to Ambient	$R_{\theta JA}$	CD214A-B320R CD214A-B340R CD214A-B360R		86		°C/W
			CD214A-B320LR CD214A-B340LR		55		
	Junction to Lead	$R_{\theta JL}$	CD214A-B320R CD214A-B340R CD214A-B360R		24		
			CD214A-B320LR CD214A-B340LR		17		

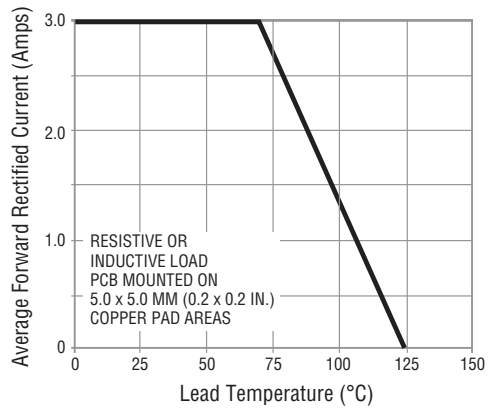
NOTE: (2) Mounted on PCB with 5.0 x 5.0 mm (0.2 x 0.2 inch) copper pad areas.

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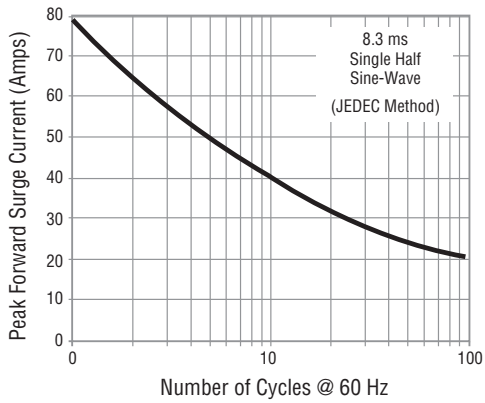
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Performance Graphs

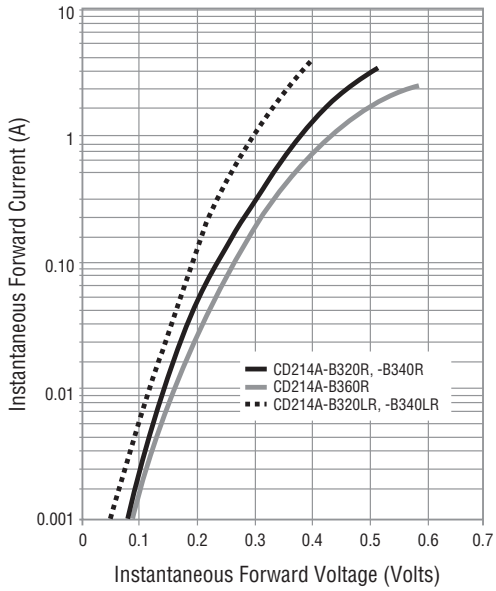
Forward Current Derating Curve



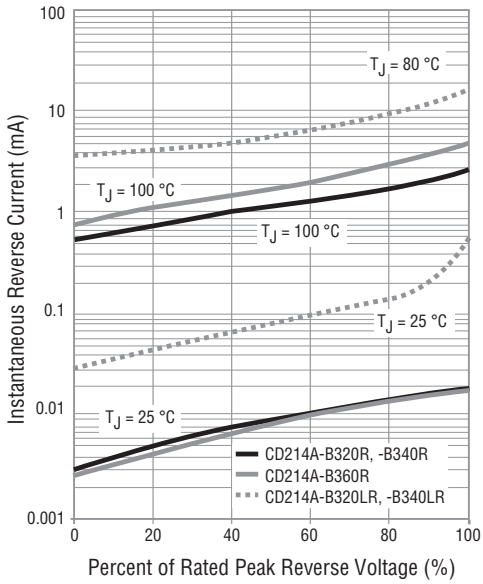
Maximum Peak Forward Surge Current



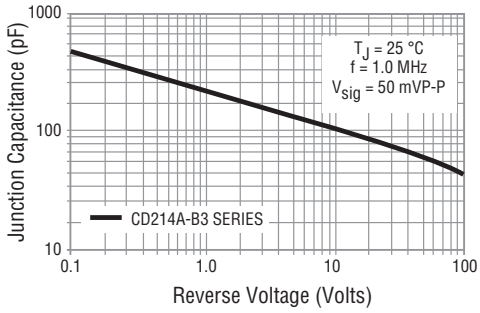
Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance



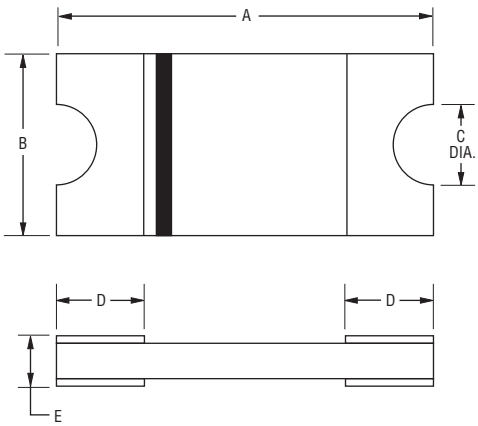
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CD214A-B3xR Series Schottky Barrier Rectifier Chip Diode

BOURNS®

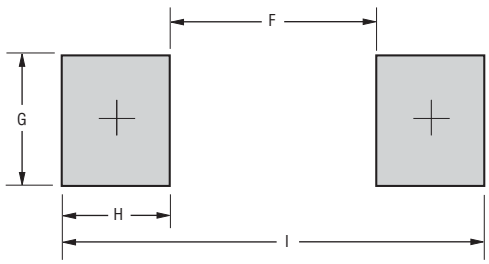
Product Dimensions



Dimension	CD214A-B3 Series
A	4.5 ± 0.10 (0.177 ± 0.004)
B	2.20 ± 0.10 (0.087 ± 0.004)
C (Dia.)	0.50 (0.020)
D	0.95 ± 0.20 (0.037 ± 0.008)
E	0.96 +0.20/-0.10 (0.038 +0.008/-0.004)

DIMENSIONS: MM (INCHES)

Recommended Pad Layout



Dimension	CD214A-B3 Series
F	2.60 (0.102) MAX.
G	1.47 (0.058) MIN.
H	1.27 (0.050) MIN.
I	5.14 (0.202) REF.

DIMENSIONS: MM (INCHES)

Environmental Specifications

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

How to Order

CD 214A - B 3 20 L R

Common Code
CD = Chip Diode

Package
214A = SMA/DO-214AC Compatible

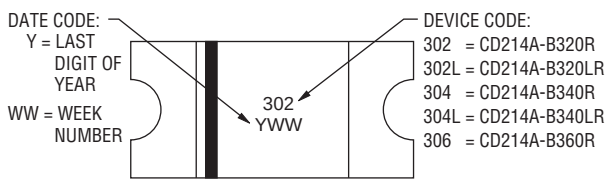
Model
B = Schottky Barrier Series

Maximum Average Forward Rectified Current
3 = 3 A

Maximum Repetitive Peak Reverse Voltage
20 = 20 V
40 = 40 V
60 = 60 V

Forward Voltage Suffix
L = Low Forward Voltage

Typical Part Marking

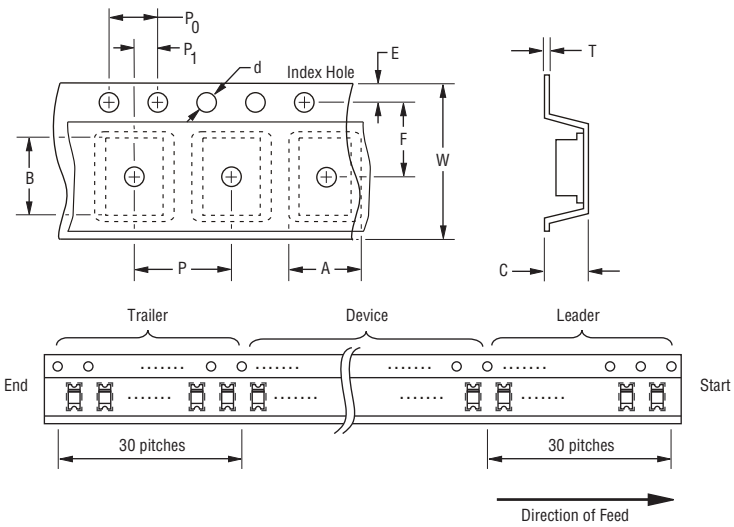


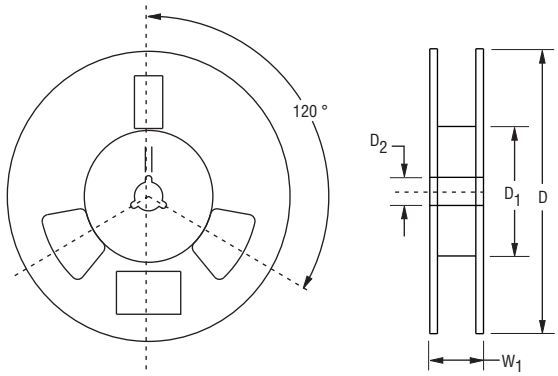
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Packaging Information

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





DIMENSIONS: MM / (INCHES)

Item	Symbol	CD214A-B3 Series
Carrier Width	A	2.45 ± 0.10 (0.096 ± 0.004)
Carrier Length	B	4.75 ± 0.10 (0.187 ± 0.004)
Carrier Depth	C	1.51 ± 0.10 (0.059 ± 0.004)
Sprocket Hole	d	1.50 ± 0.10 (0.059 ± 0.004)
Reel Outside Diameter	D	178 ± 2.0 (7.008 ± 0.079)
Reel Inner Diameter	D_1	50.0 (1.969) MIN.
Feed Hole Diameter	D_2	13.0 ± 0.50 (0.512 ± 0.020)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 ± 0.004)
Punch Hole Position	F	5.50 ± 0.05 (0.217 ± 0.002)
Punch Hole Pitch	P	4.00 ± 0.10 (0.157 ± 0.004)
Sprocket Hole Pitch	P_0	4.00 ± 0.10 (0.157 ± 0.004)
Embossment Center	P_1	2.00 ± 0.10 (0.079 ± 0.004)
Overall Tape Thickness	T	0.40 (0.016) MAX.
Tape Width	W	12.00 ± 0.30 (0.472 ± 0.012)
Reel Width	W_1	18.7 (0.736) MAX.
Quantity per Reel	--	3,000

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