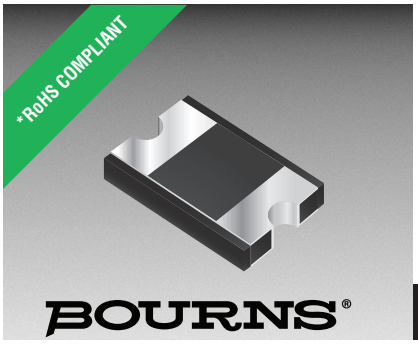


Features

- RoHS compliant*
- Low profile
- Low power loss, high efficiency
- UL 94V-0 classification

Applications

- Switching Mode Power Supplies
- Portable equipment batteries
- High frequency rectification
- DC/DC Converters
- Telecommunications

CD214C-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-214AB (SMC) 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 100 V.

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

Parameter	Symbol	CD214C-				Unit
		B320R	B340R	B360R	B3100R	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	100	V
Maximum Average Forward Current	$I_{F(AV)}$	3				A
Maximum Peak Forward Surge Current (8.3 ms Single Half Sine-Wave)	I_{FSM}	100				A
Operating Junction Temperature Range	T_{OPR}	-55 to +125		-55 to +150		°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	CD214C-B320R		0.38		V
				CD214C-B340R				
				CD214C-B360R		0.48		
				CD214C-B3100R		0.58		
			I_F = 3 A	CD214C-B320R		0.47	0.5	
				CD214C-B340R				
				CD214C-B360R		0.65	0.7	
				CD214C-B3100R		0.78	0.85	
DC Reverse Current		I_R	V_R = V_{RRM}			0.025	0.5	mA
Typical Junction Capacitance		C_J	V_R = 4 V, f = 1.0 MHz			180		pF
Typical Thermal Resistance (NOTE 2)	Junction to Ambient	$R_{\theta JA}$				55		°C/W
	Junction to Lead	$R_{\theta JL}$				17		

NOTES:

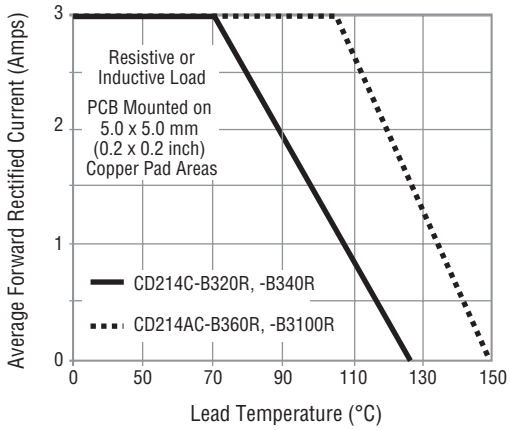
(1) Pulse width 300 microsecond, 1 % duty cycle.

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

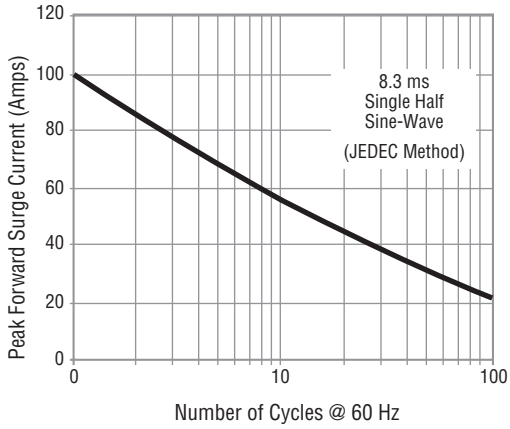
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Performance Graphs

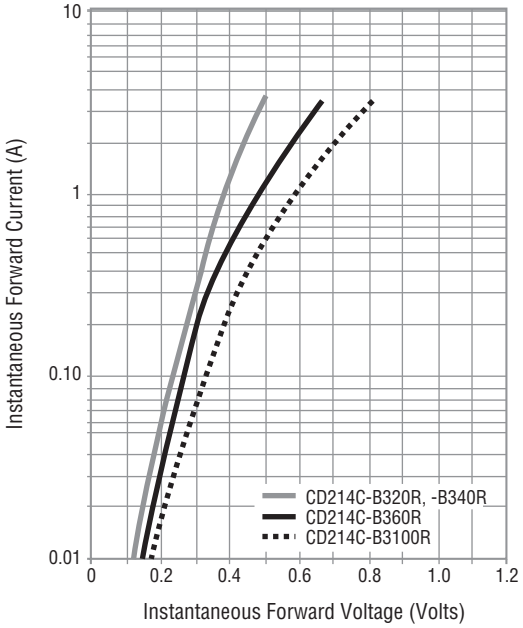
Forward Current Derating Curve



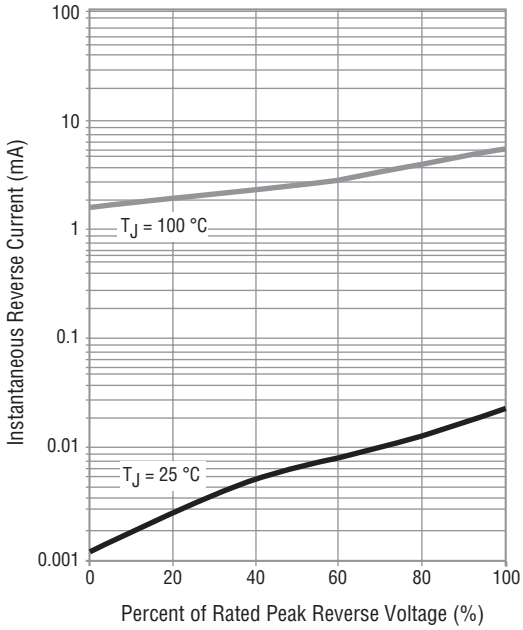
Maximum Peak Forward Surge Current



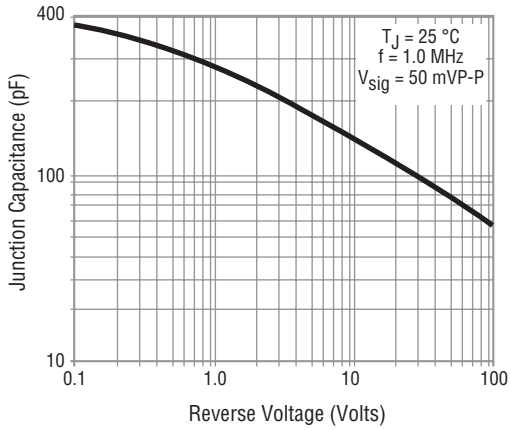
Typical Instantaneous Forward Characteristics



Typical Reverse Characteristics



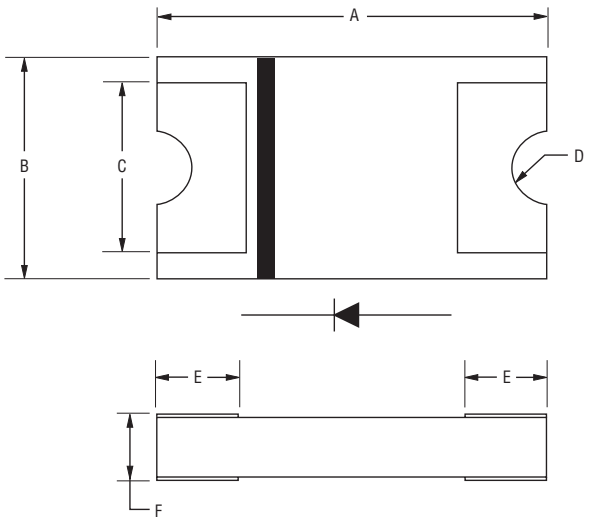
Typical Junction Capacitance



CD214C-B3xR Series Schottky Barrier Rectifier Chip Diode

BOURNS®

Product Dimensions



Dimension	CD214C-B3 Series
A	8.0 ± 0.10 (0.315 ± 0.004)
B	5.0 ± 0.10 (0.197 ± 0.004)
C	3.90 (0.154) TYP.
D	0.80 ± 0.02 (0.031 ± 0.001)
E	1.95 ± 0.10 (0.077 ± 0.004)
F	1.10 ± 0.15 (0.043 ± 0.006)

DIMENSIONS: MM (INCHES)

How to Order

CD 214C - B 3 20 R

Common Code
CD = Chip Diode

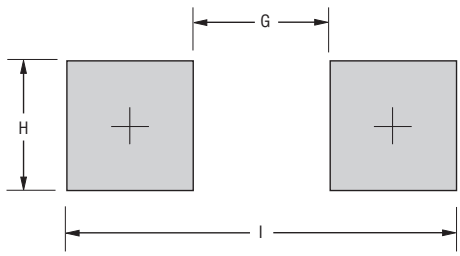
Package
214C = SMC/DO-214AB Compatible

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
100 = 100 V

Recommended Pad Layout



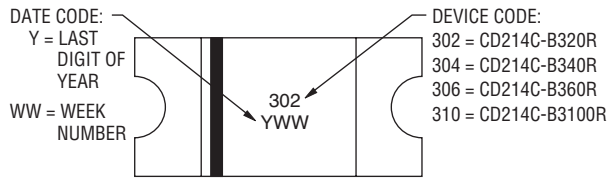
Dimension	CD214C-B3 Series
G	4.10 (0.161) MAX.
H	3.90 (0154) MIN.
I	11.90 (0.469) REF.

DIMENSIONS: MM (INCHES)

Environmental Specifications

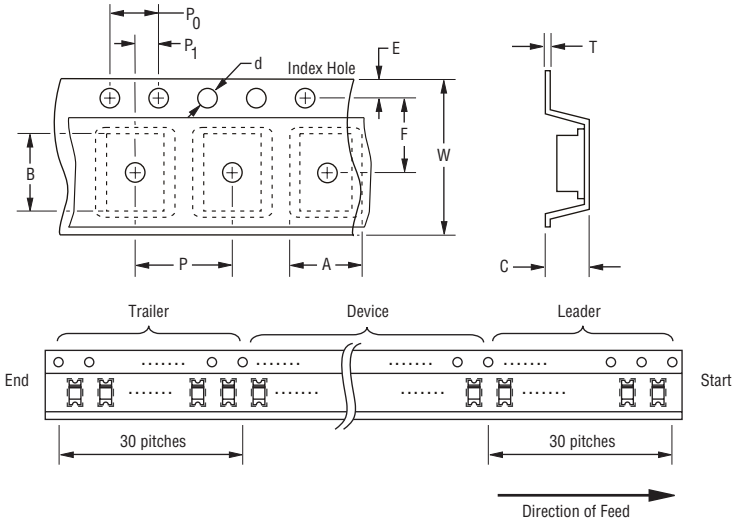
Moisture Sensitivity Level 1
ESD Classification (HBM) 3B

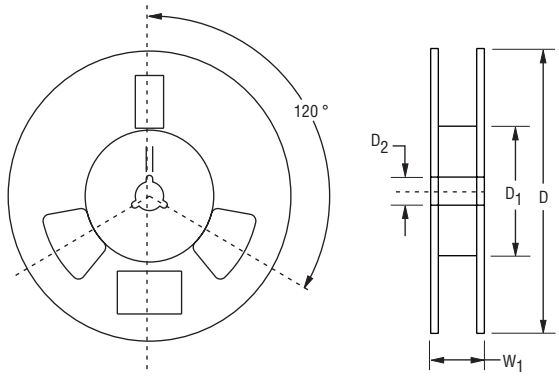
Typical Part Marking



Packaging Information

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





DIMENSIONS: MM / (INCHES)

Item	Symbol	CD214C-B3 Series
Carrier Width	A	5.56 ± 0.10 (0.219 ± 0.004)
Carrier Length	B	8.18 ± 0.10 (0.322 ± 0.004)
Carrier Depth	C	2.50 (0.098) MAX.
Sprocket Hole	d	1.55 ± 0.05 (0.061 ± 0.002)
Reel Outside Diameter	D	330 ± 2.0 (12.992 ± 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	7.50 ± 0.10 (0.295 ± 0.004)
Punch Hole Pitch	P	8.00 ± 0.10 (0.315 ± 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	16.00 ± 0.30 (0.630 ± 0.012)
Reel Width	W_1	22.7 (0.893) MAX.
Quantity per Reel	--	3,000

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