

Features

- RoHS compliant*
- Glass passivated chip
- Low reverse leakage current
- Low forward voltage drop
- High current capability

CD214C-R350~R31000 Glass Passivated Rectifiers

General Information

The markets of portable communications, computing and video equipment are challenging the semiconductor industry to develop increasingly smaller electronic components. Bourns offers Glass Passivated Rectifiers for rectification applications, in compact chip DO-214AB (SMC) size format, which offer PCB real estate savings and are considerably smaller than most competitive parts. The Glass Passivated Rectifier Diodes offer a forward current of 3.0 A with a choice of repetitive peak reverse voltage of 50 V up to 1000 V.

Bourns® Chip Diodes conform to JEDEC standards, are easy to handle on standard pick and place equipment and their flat configuration minimizes roll away.

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

Parameter	Symbol	CD214C-							Unit
		R350	R3100	R3200	R3400	R3600	R3800	R31000	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Max. Average Forward Rectified Current ¹	$I_{(AV)}$	3.0							A
DC Reverse Current @ Rated DC Blocking Voltage (@ $T_J = 25^\circ\text{C}$)	I_R	10.0							μA
DC Reverse Current @ Rated DC Blocking Voltage (@ $T_J = 125^\circ\text{C}$)	I_R	250.0							μA
Typical Junction Capacitance ²	C_J	40							pF
Maximum Instantaneous Forward Voltage @ 3 A	V_F	1.15							V
Typical Thermal Resistance ³	$R_{\theta JL}$	10							$^\circ\text{C/W}$
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	100							A

Notes:

1 See Forward Derating Curve.

2 Measured @ 1 MHz and applied reverse voltage of 4.0 V.

3 Thermal resistance from junction to lead.

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

Parameter	Symbol	CD214C-R350~R31000	Unit
Operating Temperature Range	T_J	-65 to +175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +175	$^\circ\text{C}$

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

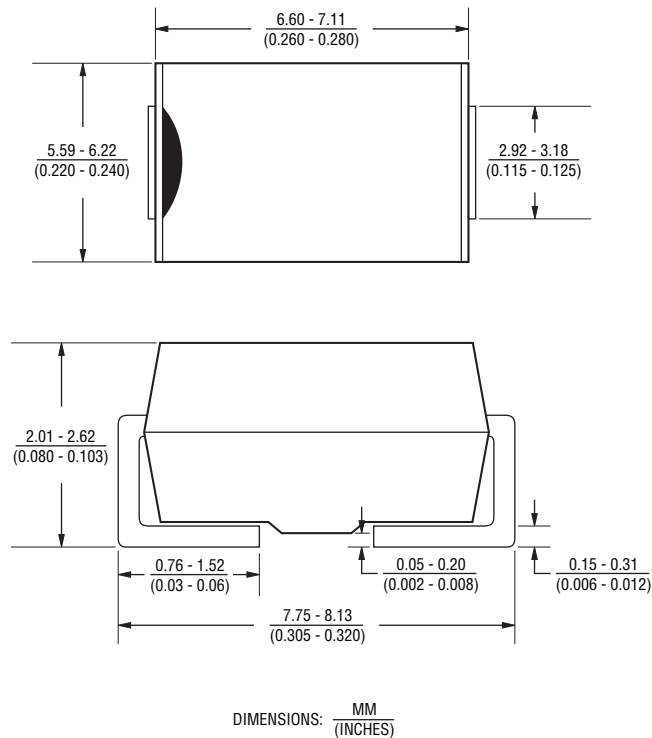
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

CD214C-R350~R31000 Glass Passivated Rectifiers

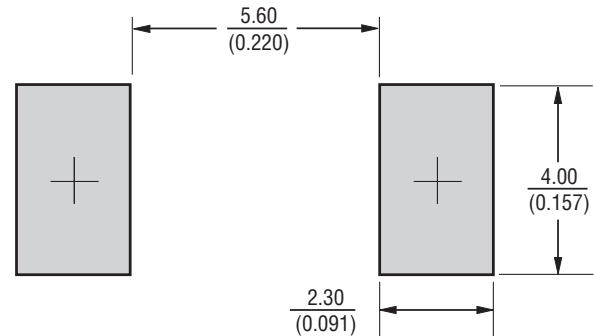
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Product Dimensions

This is an RoHS compliant product using 100 % Sn termination. It is a molded plastic package. A cathode band indicates the polarity. The package weighs approximately 0.21 g. The package and dimensions are shown below.



Recommended Pad Layout



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

How To Order

CD 214C - R 3 50

Common Code _____

Chip Diode _____

Package _____

• 214C = SMC/DO-214AB

Model _____

R = Glass Passivated Rectifiers

Forward Current I_{AV} _____

3 = 3 A

Reverse Voltage _____

50 = 50 V

100 = 100 V

200 = 200 V

400 = 400 V

600 = 600 V

800 = 800 V

1000 = 1000 V

Typical Part Marking

CD214C-R350	R3A
CD214C-R3100	R3B
CD214C-R3200	R3D
CD214C-R3400	R3G
CD214C-R3600	R3J
CD214C-R3800	3R3K
CD214C-R31000	R3M

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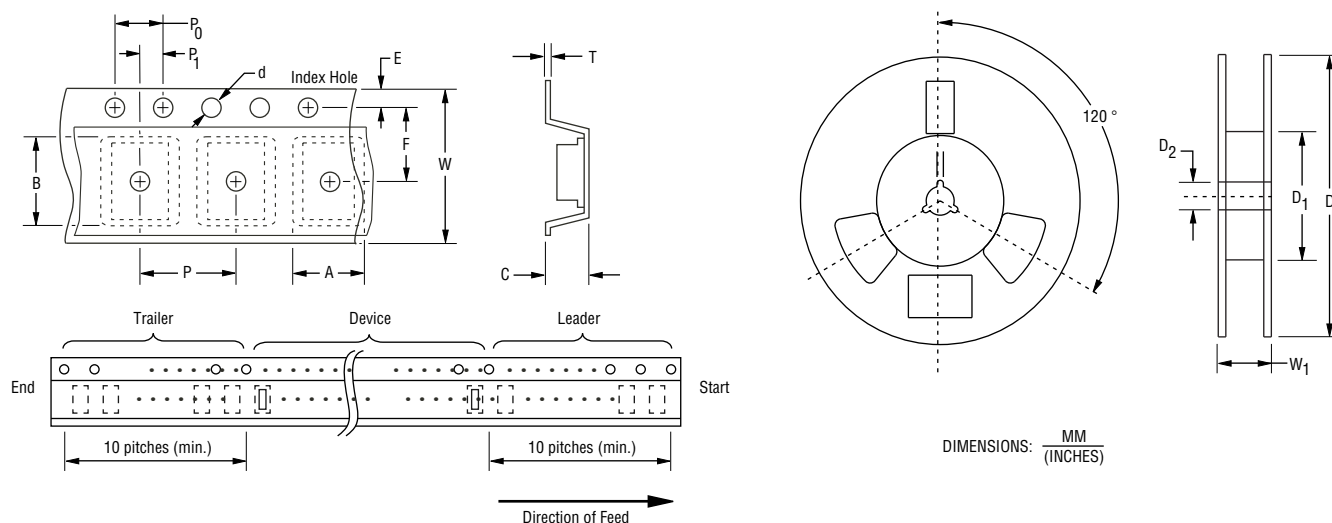
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CD214B-R350~R31000 Glass Passivated Rectifiers

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Packaging Information

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



Devices are packed in accordance with EIA standard RS-481-A and specifications shown here.

Item	Symbol	(SMC) DO-214AB
Carrier Width	A	$\frac{7.22 \pm 0.10}{(0.284 - 0.004)}$
Carrier Length	B	$\frac{8.11 \pm 0.10}{(0.319 - 0.004)}$
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	$\frac{7.50 \pm 0.05}{(0.295 - 0.002)}$
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	$\frac{16.00 \pm 0.20}{(0.630 - 0.008)}$
Reel Width	W ₁	$\frac{22.4}{(0.882)} \text{ Max.}$
Quantity per Reel	—	3,000

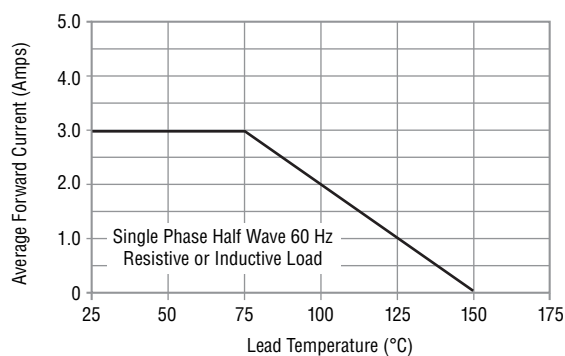
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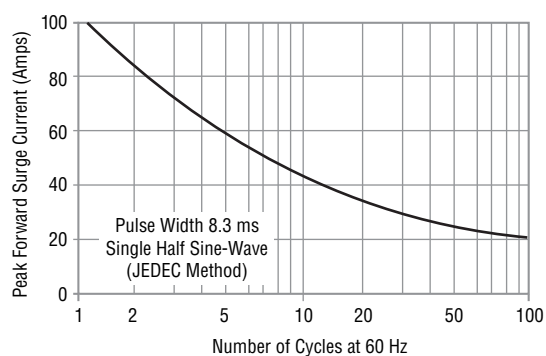
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Rating and Characteristic Curves

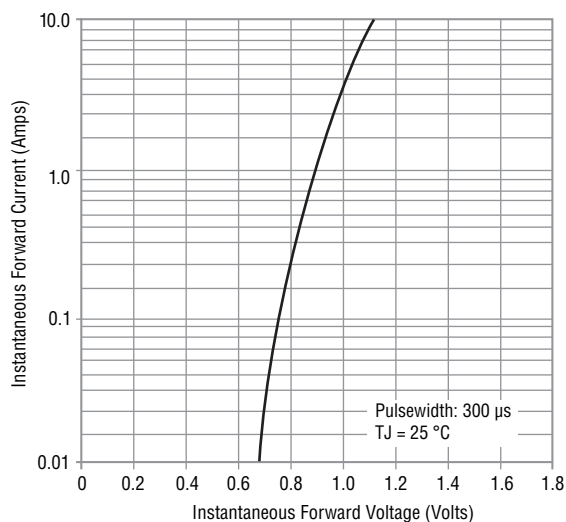
Forward Current Derating Curve



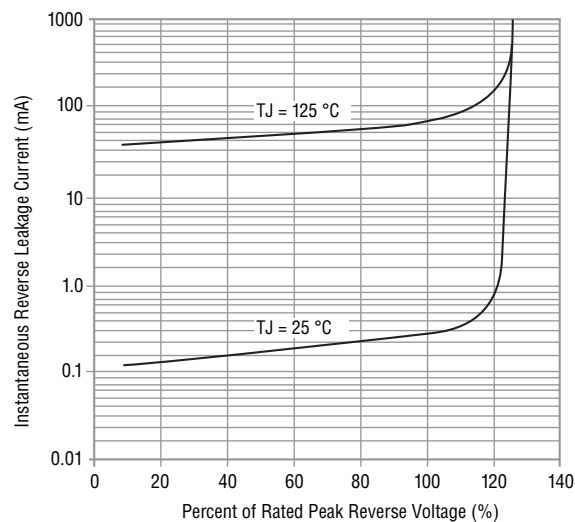
Maximum Non-Repetitive Surge Current



Typical Forward Characteristics



Typical Reverse Characteristics



REV. 09/15

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