



Features

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

CD214B-R250~R21000 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-214AA (SMB) 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 2.0 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 °C Unless Otherwise Noted)

| Parameter | Symbol | CD214B- | | | | | | | Unit |
|---|-------------------|---------|-------|-------|-------|-------|-------|--------|------|
| | | R250 | R2100 | R2200 | R2400 | R2600 | R2800 | R21000 | |
| 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) | 2.0 | | | | | | | A |
| DC Reverse Current @ Rated DC Blocking Voltage (@T _J = 25 °C) | I _R | 5.0 | | | | | | | μA |
| DC Reverse Current @ Rated DC Blocking Voltage (@T _J = 125 °C) | I _R | 30 | | | | | | | μA |
| Typical Junction Capacitance ² | C _J | 25 | | | | | | | pF |
| Maximum Instantaneous Forward Voltage @ 1 A | V _F | 1.0 | | | | | | | V |
| Typical Thermal Resistance ³ | R _{θJL} | 16 | | | | | | | °C/W |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 65 | | | | | | | A |

Notes:

1 See Forward Derating Curve.

2 Measured @ 1.0 MHz and applied reverse voltage of 4.0 VDC.

3 Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas.

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

| Parameter | Symbol | CD214B-R250~R21000 | Unit |
|-----------------------------|------------------|--------------------|------|
| Operating Temperature Range | T _J | -65 to +175 | °C |
| Storage Temperature Range | T _{STG} | -65 to +170 | °C |

*RoHS Directive 2002/95/EC Jan 27, 2003 including Annex.

Specifications are subject to change without notice.

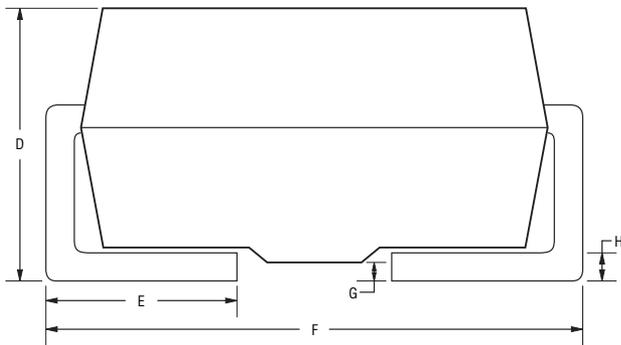
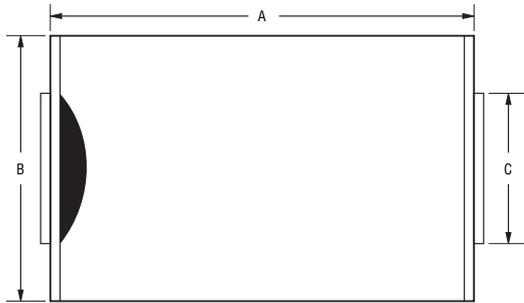
Customers should verify actual device performance in their specific applications.

CD214B-R250~R21000 Glass Passivated Rectifiers

BOURNS®

Product Dimensions

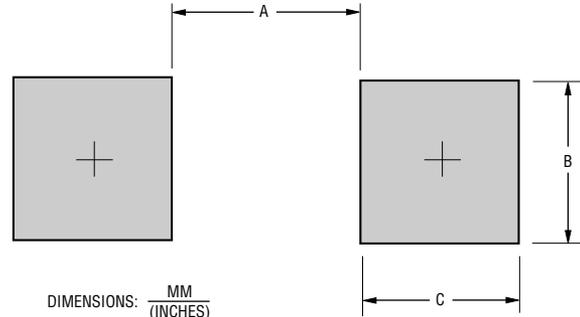
This is an RoHS compliant product. It is a molded plastic package. A cathode band indicates the polarity. The package weighs approximately 0.064 g. The package and dimensions are shown below.



| Dimensions | |
|------------|---|
| A | $\frac{4.06 - 4.57}{(0.167 - 0.187)}$ |
| B | $\frac{3.30 - 3.94}{(0.130 - 0.150)}$ |
| C | $\frac{1.96 - 2.21}{(0.075 - 0.087)}$ |
| D | $\frac{2.01 - 2.62}{(0.079 - 0.096)}$ |
| E | $\frac{0.76 - 1.52}{(0.039 - 0.055)}$ |
| F | $\frac{5.21 - 5.59}{(0.197 - 0.236)}$ |
| G | $\frac{0.05 - 0.20}{(0.00196 - 0.00787)}$ |
| H | $\frac{0.15 - 0.31}{(0.006 - 0.016)}$ |

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

Recommended Pad Layout



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

| Dimension | SMB (DO-214AA) |
|-----------|------------------------|
| A (Max.) | $\frac{2.69}{(0.106)}$ |
| B (Min.) | $\frac{2.10}{(0.083)}$ |
| C (Min.) | $\frac{1.27}{(0.050)}$ |

How To Order

CD 214B - R 2 50

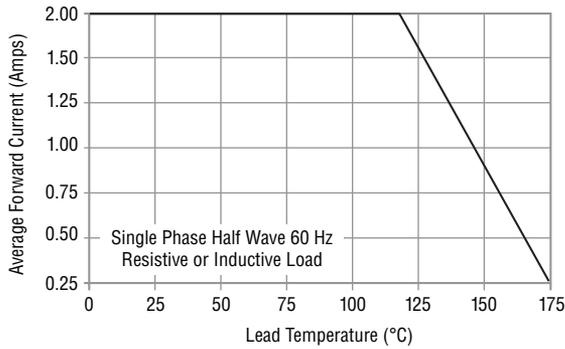
Common Code _____
 Chip Diode _____
 Package _____
 • 214B = SMB/DO-214AA
 Model _____
 R = Glass Pasivated Rectifiers
 Forward Current I_{AV} _____
 2 = 2 A
 Reverse Voltage _____
 50 = 50 V
 100 = 100 V
 200 = 200 V
 400 = 400 V
 600 = 600 V
 800 = 800 V
 1000 = 1000 V

CD214B-R250~R21000 Glass Passivated Rectifiers

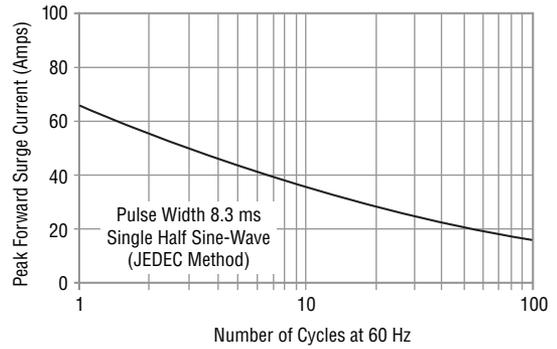


Rating and Characteristic Curves

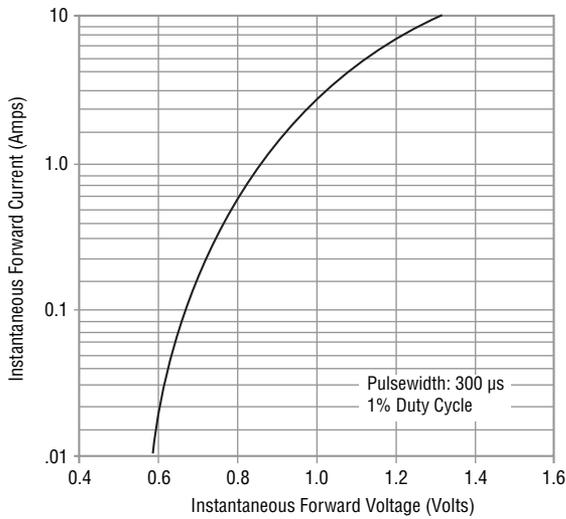
Forward Current Derating Curve



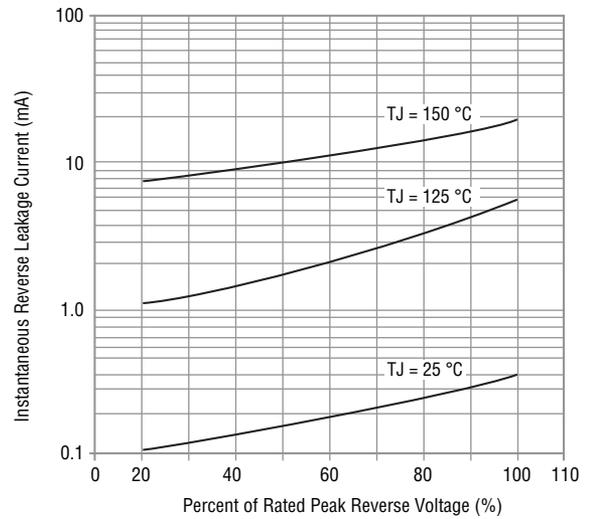
Non-Repetitive Surge Current



Forward Characteristics



Reverse Characteristics



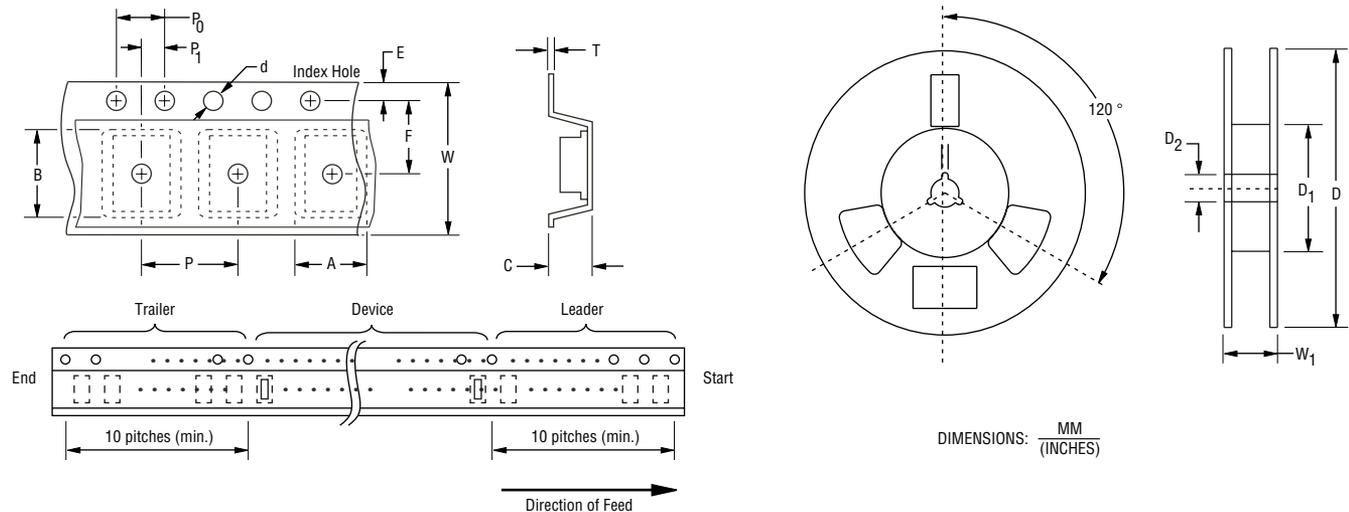
Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

CD214B-R250~R21000 Glass Passivated Rectifiers

BOURNS®

Packaging Information

The surface mount product is packaged in an 8 mm x 4 mm tape and reel format per EIA-481 standard.



| Item | Symbol | DO-214AA (SMB) |
|------------------------|----------------|---|
| Carrier Width | A | $\frac{1.90 \pm 0.10}{(0.075 - 0.004)}$ |
| Carrier Length | B | $\frac{4.30 \pm 0.10}{(0.169 - 0.004)}$ |
| Carrier Depth | C | $\frac{1.80 \pm 0.10}{(0.071 - 0.004)}$ |
| Sprocket Hole | d | $\frac{1.55 \pm 0.05}{(0.061 - 0.002)}$ |
| Reel Outside Diameter | D | $\frac{178}{(7.008)}$ |
| Reel Inner Diameter | D ₁ | $\frac{80.0}{(3.150)}$ 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 | $\frac{3.50 \pm 0.05}{(0.138 - 0.002)}$ |
| 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 | $\frac{0.20 \pm 0.10}{(0.008 - 0.004)}$ |
| Tape Width | W | $\frac{8.00 \pm 0.20}{(0.315 - 0.008)}$ |
| Reel Width | W ₁ | $\frac{13.5}{(0.531)}$ Max. |
| Quantity per Reel | — | 2,500 |

BOURNS®

Asia-Pacific:
Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116

Europe:
Tel: +41-41 768 5555 • Fax: +41-41 768 5510

The Americas:
Tel: +1-951 781-5500 • Fax: +1-951 781-5700

www.bourns.com

REV. 06/11

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкуренспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru