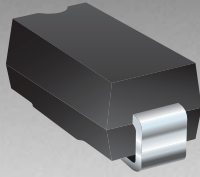


*RoHS COMPLIANT



BOURNS®

Features

- RoHS compliant*
- SMA package
- Surface mount
- High current capability

CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

General Information

The markets of portable communications, computing and video equipment are challenging the semiconductor industry to develop increasingly smaller electronic components.

Bourns offers Schottky Rectifier Diodes for rectification applications, in compact chip package DO-214AC (SMA) size format, which offer PCB real estate savings and are considerably smaller than competitive parts. 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.

Bourns® Chip Diodes conform to JEDEC standards, 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 | CD214A- | | | | | | Unit |
|---|----------------|---------|------|------|-------|------|------|------|
| | | B320 | B330 | B340 | B340L | B350 | B360 | |
| Forward Voltage (Max.) (I _f = 3 A) | V _F | 0.5 | 0.5 | 0.5 | 0.45 | 0.7 | 0.7 | V |
| Typical Junction Capacitance* | C _T | 250 | 250 | 250 | 300 | 250 | 250 | pF |
| Reverse Current (Max.) at Rated V _R) | I _R | 0.5 | 0.5 | 0.5 | 1.0 | 0.5 | 0.5 | mA |

* Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.

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

| Parameter | Symbol | CD214A- | | | | | | Unit |
|---|--------------------|-------------|------|------|-------|------|------|------|
| | | B320 | B330 | B340 | B340L | B350 | B360 | |
| Repetitive Peak Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 40 | 50 | 60 | V |
| Reverse Voltage | V _R | 20 | 30 | 40 | 40 | 50 | 60 | V |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | 28 | 35 | 42 | V |
| Avg. Forward Current | I _O | 3 | | | | | | A |
| Forward Current, Surge Peak (60 Hz, 1 cycle) | I _{surge} | 100 | 100 | 100 | 70 | 100 | 100 | A |
| Typical Thermal Resistance** | R _{θJL} | 10 | 10 | 10 | 20 | 10 | 10 | °C/W |
| Storage Temperature | T _{STG} | -55 to +150 | | | | | | °C |
| Junction Temperature | T _J | -55 to +125 | | | | | | °C |

** Thermal resistance junction to lead.

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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

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*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.

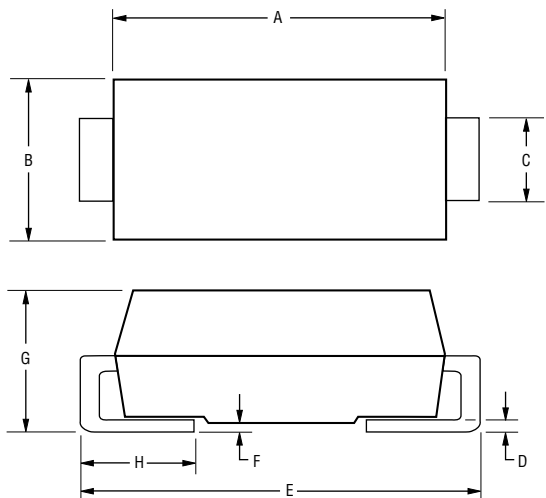
How To Order

| | | | | | | | |
|--|----|------|----|---|----|---|----|
| Common Code | CD | 214A | -B | 3 | 30 | L | LF |
| Chip Diode | | | | | | | |
| Package | | | | | | | |
| • 214A = SMA/DO-214AC | | | | | | | |
| Model | | | | | | | |
| B = Schottky Barrier Series | | | | | | | |
| Average Forward Current (I _O) Code | | | | | | | |
| 3 = 3 A (Code x 1000 mA = Average Forward Current) | | | | | | | |
| Reverse Voltage (V _R) Code | | | | | | | |
| 30 = 30 V | | | | | | | |
| 40 = 40 V | | | | | | | |
| 60 = 60 V | | | | | | | |
| Forward Voltage Suffix (Applies to B340L only) | | | | | | | |
| L = Low Forward Voltage (B340L only) | | | | | | | |
| No Space in P/N = Not Low Forward Voltage | | | | | | | |
| Terminations | | | | | | | |
| LF = 100 % Sn (RoHS Compliant) | | | | | | | |

CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode



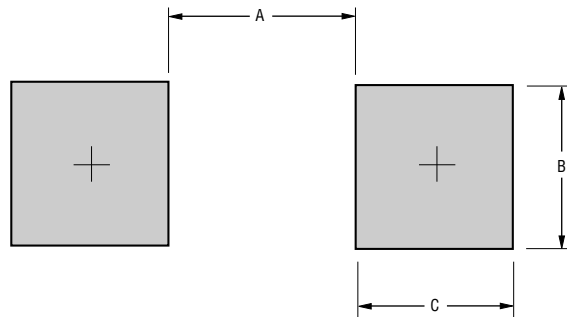
Product Dimensions



| Dimension | SMA (DO-214AC) |
|-----------|---------------------------------------|
| A | $\frac{4.06 - 4.57}{(0.160 - 0.180)}$ |
| B | $\frac{2.29 - 2.92}{(0.090 - 0.115)}$ |
| C | $\frac{1.27 - 1.63}{(0.050 - 0.064)}$ |
| D | $\frac{0.15 - 0.31}{(0.006 - 0.110)}$ |
| E | $\frac{4.83 - 5.59}{(0.190 - 0.220)}$ |
| F | $\frac{0.05 - 0.20}{(0.002 - 0.008)}$ |
| G | $\frac{2.01 - 2.62}{(0.080 - 0.103)}$ |
| H | $\frac{0.76 - 1.52}{(0.030 - 0.060)}$ |

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

Recommended Pad Layout



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

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

Physical Specifications

CaseMolded plastic
 PolarityIndicated by cathode band
 Weight0.002 ounces / 0.064 grams

Typical Part Marking

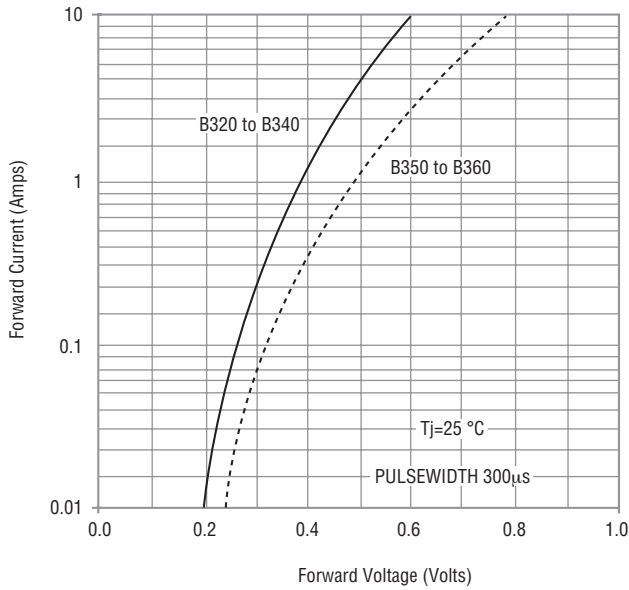
CD214A-B320 **B** 320A
 CD214A-B330 **B** 330A
 CD214A-B340 **B** 340A
 CD214A-B340L **B** 340L
 CD214A-B350 **B** 350A
 CD214A-B360 **B** 360A

CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

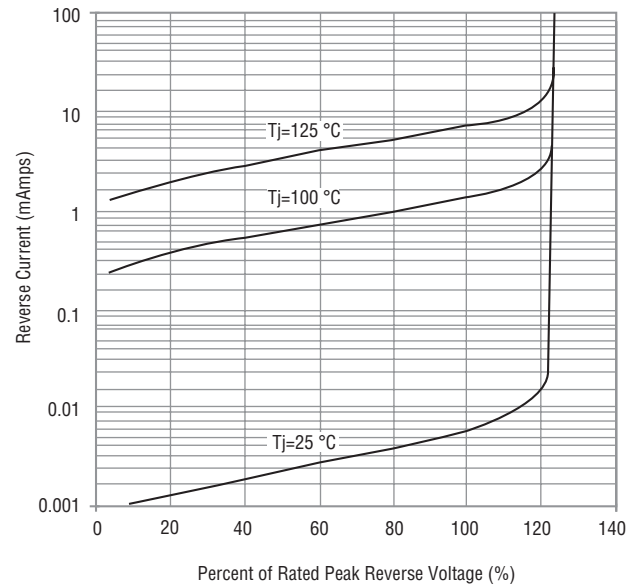


Rating and Characteristic Curves: CD214A-B320, CD214A-B330, CD214A-B340, CD214A-B350 & CD214A-B360

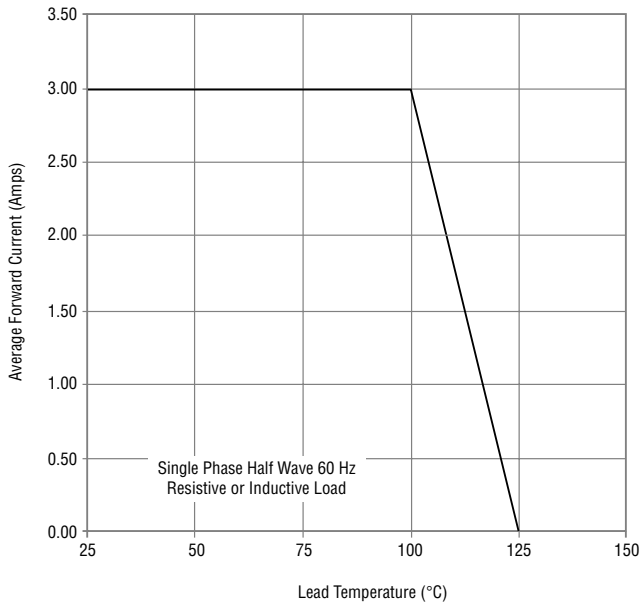
Forward Characteristics



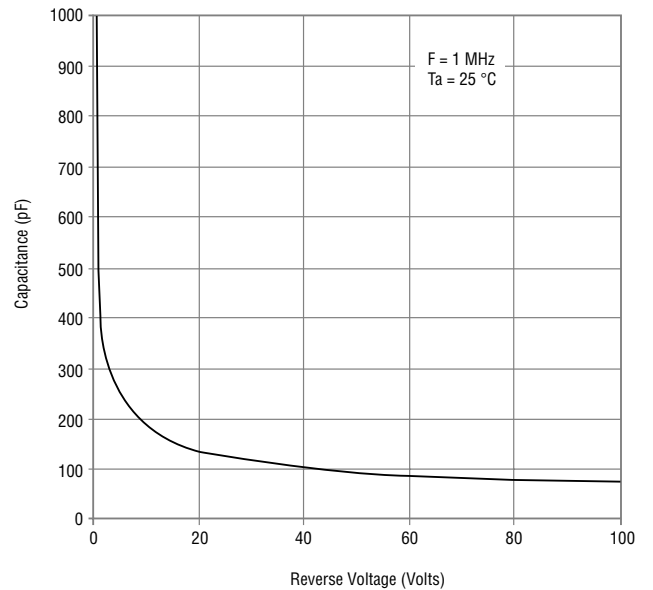
Reverse Characteristics



Derating Curve



Capacitance Between Terminals

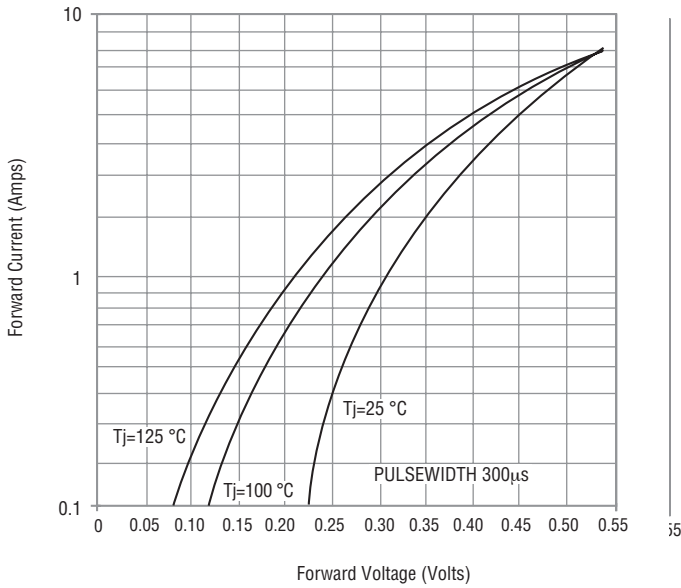


CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

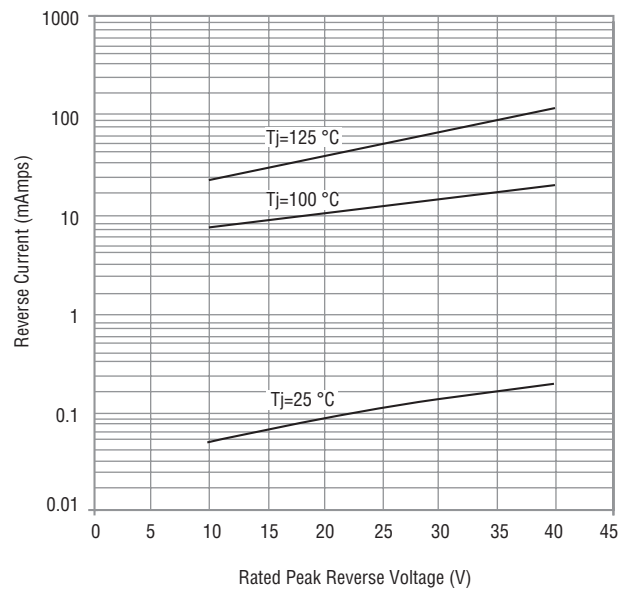


Rating and Characteristic Curves: CD214A-B340L

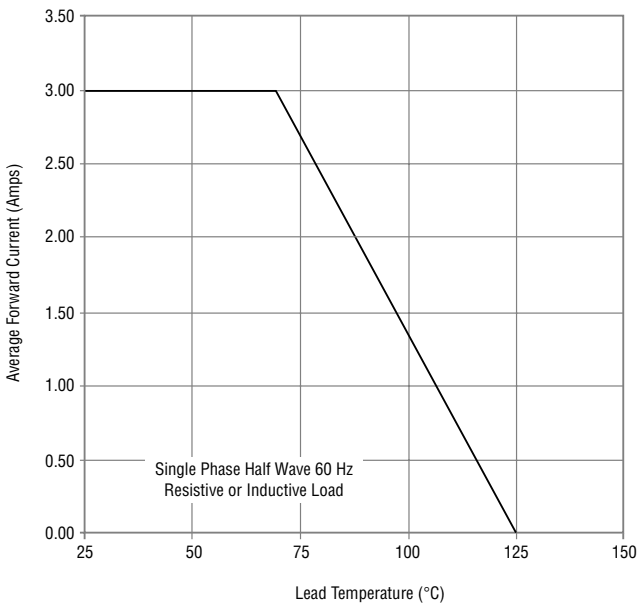
Forward Characteristics



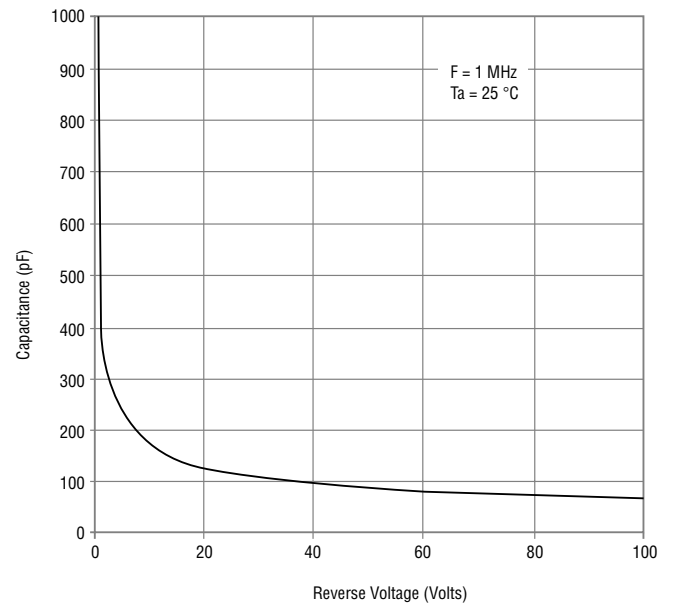
Reverse Characteristics



Derating Curve



Capacitance Between Terminals

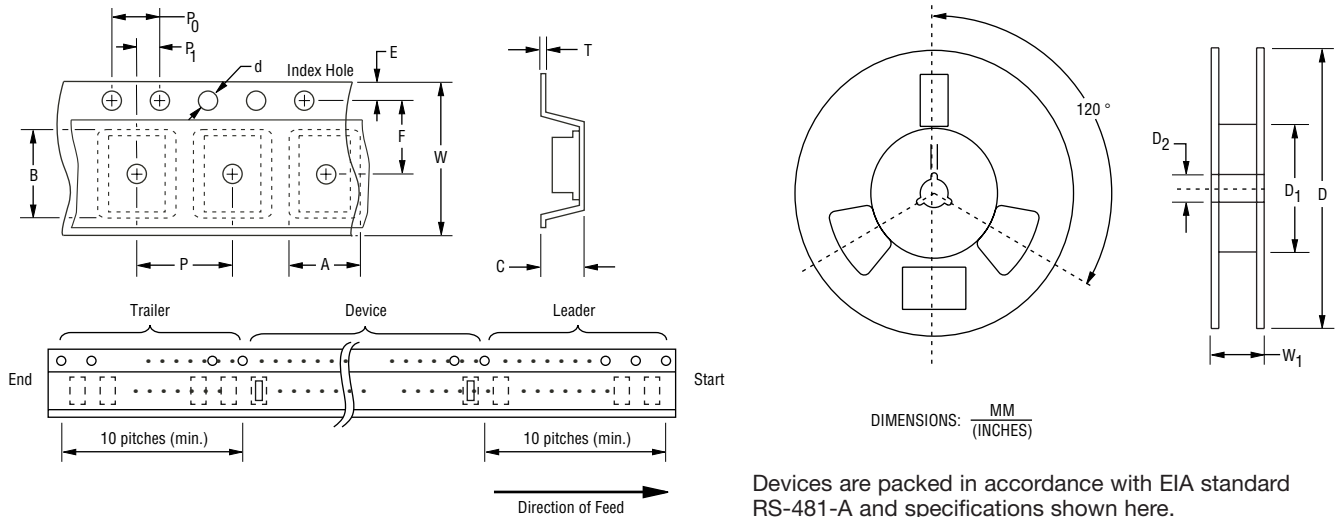


CD214A-B320 ~ B360 Schottky Barrier Rectifier Chip Diode

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Packaging Information

The 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 | SMA (DO-214AC) |
|------------------------|----------------|--|
| Carrier Width | A | $\frac{2.90 \pm 0.10}{(0.114 - 0.004)}$ |
| Carrier Length | B | $\frac{5.59 \pm 0.10}{(0.220 - 0.004)}$ |
| 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 | $\frac{50.0}{(1.969)}$ 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 | $\frac{5.50 \pm 0.05}{(0.217 - 0.002)}$ |
| 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 | $\frac{12.00 \pm 0.20}{(0.472 - 0.008)}$ |
| Reel Width | W ₁ | $\frac{18.4}{(0.724)}$ MAX. |
| Quantity per Reel | -- | 5,000 |

REV. 06/11

Specifications are subject to change without notice.

Customers should verify actual device performance in their specific applications.