Features
- RoHS compliant*
- SMA package
- Surface mount
- Very low forward voltage drop

The Model CD214A-B1xR Series is the recommended replacement.

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 1 A with a choice of repetitive peak reverse voltage of 20 V up to 100 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 (@ TA = 25 °C Unless Otherwise Noted)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>CD214A-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Voltage (Max.) (I = 1 A)</td>
<td>V_F</td>
<td>B120</td>
</tr>
<tr>
<td>Typical Junction Capacitance**</td>
<td>C_T</td>
<td>B120</td>
</tr>
<tr>
<td>Reverse Current (Max.) at Rated V_f</td>
<td>I_R</td>
<td>B120</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>CD214A-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repetitive Peak Reverse Voltage</td>
<td>V_RRM</td>
<td>B120</td>
</tr>
<tr>
<td>Reverse Voltage</td>
<td>V_R</td>
<td>B120</td>
</tr>
<tr>
<td>Maximum RMS Voltage</td>
<td>V_RMS</td>
<td>B120</td>
</tr>
<tr>
<td>Avg. Forward Current</td>
<td>I_Q</td>
<td>B120</td>
</tr>
<tr>
<td>Forward Current, Surge Peak (60 Hz, 1 cycle)</td>
<td>I_{surge}</td>
<td>B120</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>T_STG</td>
<td>-55 to +150</td>
</tr>
<tr>
<td>Junction Temperature</td>
<td>T_J</td>
<td>-55 to +125</td>
</tr>
</tbody>
</table>

*** Thermal resistance junction to lead.

How to Order

Common Code | Chip Diode | CD 214A - B 1 30 L LF
Package | 214A = SMA/DO-214AC
Model | B = Schottky Barrier Series
Average Forward Current (I_Q) Code | 1 = 1 A (Code x 1000 mA = Average Forward Current)
Reverse Voltage (V_R) Code | 30 = 30 V
40 = 40 V
100 = 100 V
Forward Voltage Suffix (Applies to -B120L & -B130L only) | L = Low Forward Voltage V_f (-B120L & -B130L only)
No Space in P/N = Not Low Forward Voltage
Terminations | LF = 100 % Sn (RoHS Compliant*)

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.
**Specifications**

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.

**Physical Specifications**

Case ........................................................... Molded plastic
Polarity .................................................. Indicated by cathode band
Weight ................................................ 0.002 ounces / 0.064 grams

**Typical Part Marking**

CD214A-B120 .............................................. B120
CD214A-B120L ............................................ B120L
CD214A-B130 .............................................. B130
CD214A-B130L ............................................ B130L
CD214A-B140 .............................................. B140
CD214A-B150 .............................................. B150
CD214A-B160 .............................................. B160
CD214A-B170 .............................................. B170
CD214A-B180 .............................................. B180
CD214A-B190 .............................................. B190
CD214A-B1100 ............................................. B1100

**Forward Characteristics**

**Reverse Characteristics**

**Derating Curve**

**Capacitance Between Terminals**

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Users should verify actual device performance in their specific applications.
Rating and Characteristic Curves: CD214A-B120L, CD214A-B130L

### Forward Characteristics

![Forward Characteristics Graph](image)

- **Forward Current (Amps)** vs **Forward Voltage (Volts)**
- **Tj = 25 °C**
- **Pulsewidth 300 μs**

### Reverse Characteristics

![Reverse Characteristics Graph](image)

- **Reverse Current (mAmps)** vs **Percent of Rated Peak Reverse Voltage (%)**
- **Tj = 25 °C**
- **Tj = 100 °C**
- **Tj = 125 °C**

### Derating Curve

![Derating Curve Graph](image)

- **Average Forward Current (Amps)** vs **Lead Temperature (°C)**
- **Single Phase Half Wave 60 Hz Resistive or Inductive Load**

### Capacitance Between Terminals

![Capacitance Graph](image)

- **Capacitance (pF)** vs **Reverse Voltage (Volts)**
- **Tj = 25 °C**
- **F = 1 MHz**

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Forward Characteristics

Reverse Characteristics

Derating Curve

Capacitance Between Terminals

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

### Packaging Information

- **Products**: CD214A-B120 ~ B1100 Schottky Barrier Rectifier Chip Diodes

#### Item | Symbol | SMA (DO-214AC) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrier Width</td>
<td>A</td>
<td>2.90 ± 0.10 (0.114 ± 0.004)</td>
</tr>
<tr>
<td>Carrier Length</td>
<td>B</td>
<td>5.59 ± 0.10 (0.220 ± 0.004)</td>
</tr>
<tr>
<td>Carrier Depth</td>
<td>C</td>
<td>2.36 ± 0.10 (0.093 ± 0.004)</td>
</tr>
<tr>
<td>Sprocket Hole</td>
<td>d</td>
<td>1.55 ± 0.05 (0.061 ± 0.002)</td>
</tr>
<tr>
<td>Reel Outside Diameter</td>
<td>D</td>
<td>3.30 (12.992)</td>
</tr>
<tr>
<td>Reel Inner Diameter</td>
<td>D1</td>
<td>50.0 MIN. (1.969)</td>
</tr>
<tr>
<td>Feed Hole Diameter</td>
<td>D2</td>
<td>13.0 ± 0.20 (0.512 ± 0.008)</td>
</tr>
<tr>
<td>Sprocket Hole Position</td>
<td>E</td>
<td>1.75 ± 0.10 (0.069 ± 0.004)</td>
</tr>
<tr>
<td>Punch Hole Position</td>
<td>F</td>
<td>5.50 ± 0.05 (0.217 ± 0.002)</td>
</tr>
<tr>
<td>Punch Hole Pitch</td>
<td>P</td>
<td>4.00 ± 0.10 (0.157 ± 0.004)</td>
</tr>
<tr>
<td>Sprocket Hole Pitch</td>
<td>P0</td>
<td>4.00 ± 0.10 (0.157 ± 0.004)</td>
</tr>
<tr>
<td>Embossment Center</td>
<td>P1</td>
<td>2.00 ± 0.05 (0.079 ± 0.002)</td>
</tr>
<tr>
<td>Overall Tape Thickness</td>
<td>T</td>
<td>0.30 ± 0.10 (0.012 ± 0.004)</td>
</tr>
<tr>
<td>Tape Width</td>
<td>W</td>
<td>12.00 ± 0.20 (0.472 ± 0.008)</td>
</tr>
<tr>
<td>Reel Width</td>
<td>W1</td>
<td>18.4 MAX. (0.724)</td>
</tr>
<tr>
<td>Quantity per Reel</td>
<td>--</td>
<td>5,000</td>
</tr>
</tbody>
</table>

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