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## Design Kits - Chip Diodes

The markets of portable communications, computing and video equipment are challenging the semiconductor industry to develop increasingly smaller electronic components. Today, designers of compact electronic systems are faced with board space constraints, thus driving the requirement for alternative packaging technologies. Functional integration and miniaturization is the key to success!

To aid this miniaturization campaign, a new generation of Chip Diodes from Bourns has emerged that offers the capability to provide a silicon diode with minimal packaging overhead. The small signal diodes are lead-free with Cu/Ni/Au plated terminations and are compatible with lead-free manufacturing processes, conforming many industry and government regulations on lead-free components.

Bourns offers MTE Schottky Barrier Diodes for rectification applications in compact chip package DO-216AA size format. The Model CD216A-B1 Schottky Rectifier Diode Series offer a forward current of 1 A with a choice of repetitive peak reverse voltage of 20 V up to 40 V.

Bourns® Chip Diodes conform to JEDEC standards, easy to handle on standard pick and place equipment and their flat configuration makes roll away much more difficult.

### Advantages

The Chip Diode product range provides distinct advantages over some of our competitors, such as:

- **Package Size:** The Chip Diodes are *leadless*, allowing designers to make real estate savings on PCB layouts. Chip Diodes offer a lower profile and provide height savings over competing SOD80 (MiniMELF) product.
- **Environmental:** All small signal diode terminations are *lead-free* with termination Cu/Ni/Au plating. Units meet many worldwide industry and government regulations on lead-free components.
- **Manufacturing Friendly:** Chip Diodes allow the use of industry standard pick & place equipment. The Chip Diode package makes it easy to handle and the flat configuration makes rollaway difficult in production operations.

In order to obtain a Bourns® Design Kit please contact your local [Bourns sales office](#) or [authorized Bourns distributor](#).



Kit Number	<a href="#">CD-LAB1</a>	<a href="#">CD-LAB2</a>	<a href="#">CD-LAB3</a>	<a href="#">CD-LAB4</a>
Kit Photo				
Description	Small Signal Switching & Schottky Barrier Diodes	Schottky Rectifier Diodes	Discrete TVS Diodes SMA Package	Discrete TVS Diodes SMB Package
Part Numbers	<a href="#">CD0603-B00340</a> <a href="#">CD0603-B0130L</a> <a href="#">CD0603-B0140L</a> <a href="#">CD0603-B0140R</a> <a href="#">CD0603-B0230</a> <a href="#">CD0603-B0240</a> <a href="#">CD0603-S01575</a> <a href="#">CD0603-S0180</a> <a href="#">CD0603-S0180R</a> <a href="#">CD1005-B00340</a> <a href="#">CD1005-B0130L</a> <a href="#">CD1005-B0140L</a> <a href="#">CD1005-B0140R</a> <a href="#">CD1005-B0230</a> <a href="#">CD1005-B0240</a> <a href="#">CD1005-B0520</a> <a href="#">CD1005-S01575</a> <a href="#">CD1005-S0180</a> <a href="#">CD1005-S0180R</a> <a href="#">CD1206-S01575</a>	<a href="#">CD214A-B120LF</a> <a href="#">CD214A-B130LF</a> <a href="#">CD214A-B140LF</a> <a href="#">CD214A-B150LF</a> <a href="#">CD214A-B160LF</a> <a href="#">CD214A-B170LF</a> <a href="#">CD214A-B180LF</a> <a href="#">CD214A-B1100LF</a> <a href="#">CD214A-B220LF</a> <a href="#">CD214A-B230LF</a> <a href="#">CD214A-B240LF</a> <a href="#">CD214A-B250LF</a> <a href="#">CD214A-B260LF</a> <a href="#">CD214A-B320LF</a> <a href="#">CD214A-B330LF</a> <a href="#">CD214A-B340LF</a> <a href="#">CD214A-B350LF</a> <a href="#">CD214A-B360LF</a> <a href="#">CD1206-B220LF</a> <a href="#">CD1206-B240LF</a> <a href="#">CD1206-B260LF</a> <a href="#">CD1206-B2100LF</a> <a href="#">CD1607-B120LF</a> <a href="#">CD1607-B120LLF</a> <a href="#">CD1607-B140LF</a> <a href="#">CD1607-B140LLF</a> <a href="#">CD2010-B140LF</a> <a href="#">CD2010-B160LF</a> <a href="#">CD216A-B120RLF</a> <a href="#">CD216A-B120LLF</a> <a href="#">CD216A-B130LLF</a> <a href="#">CD216A-B140LF</a>	<a href="#">SMAJ10A</a> <a href="#">SMAJ10A</a> <a href="#">SMAJ10CA</a> <a href="#">SMAJ110A</a> <a href="#">SMAJ12CA</a> <a href="#">SMAJ130A</a> <a href="#">SMAJ13A</a> <a href="#">SMAJ14CA</a> <a href="#">SMAJ15CA</a> <a href="#">SMAJ170A</a> <a href="#">SMAJ17CA</a> <a href="#">SMAJ18CA</a> <a href="#">SMAJ20CA</a> <a href="#">SMAJ24A</a> <a href="#">SMAJ24CA</a> <a href="#">SMAJ26CA</a> <a href="#">SMAJ30A</a> <a href="#">SMAJ33CA</a> <a href="#">SMAJ36A</a> <a href="#">SMAJ36CA</a> <a href="#">SMAJ43A</a> <a href="#">SMAJ5.0A</a> <a href="#">SMAJ5.0CA</a> <a href="#">SMAJ51CA</a> <a href="#">SMAJ58CA</a> <a href="#">SMAJ6.0A</a> <a href="#">SMAJ6.5A</a> <a href="#">SMAJ60CA</a> <a href="#">SMAJ7.5CA</a> <a href="#">SMAJ85CA</a> <a href="#">SMAJ9.0A</a> <a href="#">SMAJ90CA</a>	<a href="#">SMBJ10A</a> <a href="#">SMBJ10CA</a> <a href="#">SMBJ110CA</a> <a href="#">SMBJ12CA</a> <a href="#">SMBJ130A</a> <a href="#">SMBJ13A</a> <a href="#">SMBJ14CA</a> <a href="#">SMBJ15CA</a> <a href="#">SMBJ170A</a> <a href="#">SMBJ17CA</a> <a href="#">SMBJ18CA</a> <a href="#">SMBJ20CA</a> <a href="#">SMBJ24A</a> <a href="#">SMBJ24CA</a> <a href="#">SMBJ26CA</a> <a href="#">SMBJ30A</a> <a href="#">SMBJ33CA</a> <a href="#">SMBJ36A</a> <a href="#">SMBJ36CA</a> <a href="#">SMBJ43A</a> <a href="#">SMBJ5.0A</a> <a href="#">SMBJ5.0CA</a> <a href="#">SMBJ51CA</a> <a href="#">SMBJ58CA</a> <a href="#">SMBJ6.0A</a> <a href="#">SMBJ6.5A</a> <a href="#">SMBJ6.5CA</a> <a href="#">SMBJ60A</a> <a href="#">SMBJ7.5CA</a> <a href="#">SMBJ85CA</a> <a href="#">SMBJ9.0A</a> <a href="#">SMBJ90CA</a>
Kit Number	<a href="#">CD-LAB5</a>	<a href="#">CD-LAB6</a>	<a href="#">CD-LAB7</a>	<a href="#">CD-LAB8</a>
Kit Photo				
Description	Discrete TVS Diodes SMC Package	ESD Protection	Zener Diodes 0603 Package	Zener Diodes 1005 Package
Part Numbers	<a href="#">SMCJ10A</a> <a href="#">SMCJ10CA</a> <a href="#">SMCJ12CA</a> <a href="#">SMCJ13A</a> <a href="#">SMCJ14CA</a> <a href="#">SMCJ15CA</a> <a href="#">SMCJ170A</a> <a href="#">SMCJ17CA</a> <a href="#">SMCJ18CA</a> <a href="#">SMCJ20CA</a> <a href="#">SMCJ24A</a> <a href="#">SMCJ24CA</a> <a href="#">SMCJ30A</a> <a href="#">SMCJ33CA</a> <a href="#">SMCJ36A</a> <a href="#">SMCJ43A</a> <a href="#">SMCJ5.0A</a> <a href="#">SMCJ5.0CA</a> <a href="#">SMCJ51CA</a> <a href="#">SMCJ58CA</a> <a href="#">SMCJ6.0A</a> <a href="#">SMCJ6.5A</a> <a href="#">SMCJ6.5CA</a> <a href="#">SMCJ60A</a> <a href="#">SMLJ16A</a> <a href="#">SMLJ20A</a> <a href="#">SMLJ20CA</a> <a href="#">SMLJ64CA</a> <a href="#">SMCJ85CA</a> <a href="#">SMCJ9.0A</a> <a href="#">SMCJ90CA</a> <a href="#">SMCJ170CA</a>	<a href="#">CG0402MLU-3.3G</a> <a href="#">CG0402MLC-3.3LG</a> <a href="#">CG0603MLU-3.3E</a> <a href="#">CG0603MLC-3.3LE</a> <a href="#">CDSOT563-T05C</a> <a href="#">CDSOD323-T03C</a> <a href="#">CDSOT23-SRV05-4</a> <a href="#">CDSOT23-T03C</a> <a href="#">CDSOT23-T05C</a> <a href="#">CDSOT23-SR208</a> <a href="#">CDSOD323-T05C</a> <a href="#">CDSOT23-T03C</a> <a href="#">CDSOT23-T05C</a> <a href="#">CG1206MLC-05E</a> <a href="#">CG0603MLU-12E</a> <a href="#">CG0603MLC-12LE</a> <a href="#">CG0603MLU-24E</a> <a href="#">CD143A-SR70</a> <a href="#">CDSOD323-T12C</a> <a href="#">CDSOT236-T05C</a> <a href="#">CDDFN4-T4.7C</a> <a href="#">CDDFN4-T05</a> <a href="#">CDDFN8-T05</a> <a href="#">CDDFN10-3304N</a> <a href="#">CD143A-SR2.8</a> <a href="#">CD143A-SR3.3</a> <a href="#">CD143A-SR05</a> <a href="#">CD143A-SR12</a>	<a href="#">CD0603-Z2</a> <a href="#">CD0603-Z2V2</a> <a href="#">CD0603-Z2V4</a> <a href="#">CD0603-Z2V7</a> <a href="#">CD0603-Z3</a> <a href="#">CD0603-Z3V3</a> <a href="#">CD0603-Z3V6</a> <a href="#">CD0603-Z3V9</a> <a href="#">CD0603-Z4V3</a> <a href="#">CD0603-Z4V7</a> <a href="#">CD0603-Z5V1</a> <a href="#">CD0603-Z5V6</a> <a href="#">CD0603-Z6V2</a> <a href="#">CD0603-Z6V8</a> <a href="#">CD0603-Z7V5</a> <a href="#">CD0603-Z8V2</a> <a href="#">CD0603-Z9V1</a> <a href="#">CD0603-Z10</a> <a href="#">CD0603-Z11</a> <a href="#">CD0603-Z12</a> <a href="#">CD0603-Z13</a> <a href="#">CD0603-Z15</a> <a href="#">CD0603-Z16</a> <a href="#">CD0603-Z18</a> <a href="#">CD0603-Z20</a> <a href="#">CD0603-Z22</a> <a href="#">CD0603-Z24</a> <a href="#">CD0603-Z27</a> <a href="#">CD0603-Z30</a> <a href="#">CD0603-Z33</a> <a href="#">CD0603-Z36</a> <a href="#">CD0603-Z39</a>	<a href="#">CD1005-Z2</a> <a href="#">CD1005-Z2V2</a> <a href="#">CD1005-Z2V4</a> <a href="#">CD1005-Z2V7</a> <a href="#">CD1005-Z3</a> <a href="#">CD1005-Z3V3</a> <a href="#">CD1005-Z3V6</a> <a href="#">CD1005-Z3V9</a> <a href="#">CD1005-Z4V3</a> <a href="#">CD1005-Z4V7</a> <a href="#">CD1005-Z5V1</a> <a href="#">CD1005-Z5V6</a> <a href="#">CD1005-Z6V2</a> <a href="#">CD1005-Z6V8</a> <a href="#">CD1005-Z7V5</a> <a href="#">CD1005-Z8V2</a> <a href="#">CD1005-Z9V1</a> <a href="#">CD1005-Z10</a> <a href="#">CD1005-Z11</a> <a href="#">CD1005-Z12</a> <a href="#">CD1005-Z13</a> <a href="#">CD1005-Z15</a> <a href="#">CD1005-Z16</a> <a href="#">CD1005-Z18</a> <a href="#">CD1005-Z20</a> <a href="#">CD1005-Z22</a> <a href="#">CD1005-Z24</a> <a href="#">CD1005-Z27</a> <a href="#">CD1005-Z30</a> <a href="#">CD1005-Z33</a> <a href="#">CD1005-Z36</a> <a href="#">CD1005-Z39</a>