

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 MITE Schottky Barrier Diodes for rectification applications in compact chip package DO-216AA size format. The 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	CD-LAB1	CD-LAB2	CD-LAB3	CD-LAB4
Kit Photo				
Description	Small Signal Switching & Schottky Barrier Diodes	Schottky Rectifier Diodes	Discrete TVS Diodes SMA Package	Discrete TVS Diodes SMB Package
Part Numbers	CD0603-B00340 CD0603-B0130L CD0603-B0140L CD0603-B0140R CD0603-B0230 CD0603-B0240 CD0603-S01575 CD0603-S0180R CD0603-S0180R CD1005-B00340 CD1005-B0130L CD1005-B0140L CD1005-B0140R CD1005-B0230 CD1005-B0240 CD1005-B0520 CD1005-S01575 CD1005-S0180R CD1005-S0180R CD1206-S01575	CD214A-B120LF CD214A-B130LF CD214A-B140LF CD214A-B150LF CD214A-B160LF CD214A-B170LF CD214A-B180LF CD214A-B1100LF CD214A-B220LF CD214A-B230LF CD214A-B240LF CD214A-B250LF CD214A-B260LF CD214A-B320LF CD214A-B330LF CD214A-B340LF CD214A-B350LF CD214A-B360LF CD1206-B220LF CD1206-B240LF CD1206-B260LF CD1206-B2100LF CD1607-B120LF CD1607-B120LF CD1607-B140LF CD1607-B140LLF CD2010-B140LF CD2010-B160LF CD216A-B120RLF CD216A-B120LLF CD216A-B130LLF CD216A-B140LF	CD214A-T10ALF CD214A-T10CALF CD214A-T110CALF CD214A-T12CALF CD214A-T130ALF CD214A-T13ALF CD214A-T14CALF CD214A-T15CALF CD214A-T170ALF CD214A-T17CALF CD214A-T18CALF CD214A-T20CALF CD214A-T24ALF CD214A-T24CALF CD214A-T26CALF CD214A-T30ALF CD214A-T33CALF CD214A-T36ALF CD214A-T36CALF CD214A-T43ALF CD214A-T5.0ALF CD214A-T5.0CALF CD214A-T51CALF CD214A-T58CALF CD214A-T6.0ALF CD214A-T6.5ALF CD214A-T6.5CALF CD214A-T60ALF CD214A-T7.5CALF CD214A-T85CALF CD214A-T9.0ALF CD214A-T90CALF	CD214B-T10ALF CD214B-T10CALF CD214B-T110CALF CD214B-T12CALF CD214B-T130ALF CD214B-T13ALF CD214B-T14CALF CD214B-T15CALF CD214B-T170ALF CD214B-T17CALF CD214B-T18CALF CD214B-T20CALF CD214B-T24ALF CD214B-T24CALF CD214B-T26CALF CD214B-T30ALF CD214B-T33CALF CD214B-T36ALF CD214B-T36CALF CD214B-T43ALF CD214B-T5.0ALF CD214B-T5.0CALF CD214B-T51CALF CD214B-T58CALF CD214B-T6.0ALF CD214B-T6.5ALF CD214B-T6.5CALF CD214B-T60ALF CD214B-T7.5CALF CD214B-T85CALF CD214B-T9.0ALF CD214B-T90CALF
Kit Number	CD-LAB5	CD-LAB6	CD-LAB7	CD-LAB8
Kit Photo				
Description	Discrete TVS Diodes SMC Package	ESD Protection	Zener Diodes 0603 Package	Zener Diodes 1005 Package
Part Numbers	CD214C-T10ALF CD214C-T10CALF CD214C-T12CALF	CG0402MLU-3.3G CG0402MLC-3.3LG CG0603MLU-3.3E	CD0603-Z2 CD0603-Z2V2 CD0603-Z2V4	CD1005-Z2 CD1005-Z2V2 CD1005-Z2V4

Part Numbers	CD214C-T13ALF	CG0603MLC-3.3LE	CD0603-Z2V7	CD1005-Z2V7
	CD214C-T14CALF	CDSOT563-T05C	CD0603-Z3	CD1005-Z3
	CD214C-T15CALF	CDSOD323-T03C	CD0603-Z3V3	CD1005-Z3V3
	CD214C-T170ALF	CDSOT23-SRV05-4	CD0603-Z3V6	CD1005-Z3V6
	CD214C-T17CALF	CDSC706-0504F	CD0603-Z3V9	CD1005-Z3V9
	CD214C-T18CALF	CG0402MLU-05G	CD0603-Z4V3	CD1005-Z4V3
	CD214C-T20CALF	CG0402MLC-05LG	CD0603-Z4V7	CD1005-Z4V7
	CD214C-T24ALF	CG0603MLU-05E	CD0603-Z5V1	CD1005-Z5V1
	CD214C-T24CALF	CG0603MLC-05LE	CD0603-Z5V6	CD1005-Z5V6
	CD214C-T30ALF	CDSOT23-SR208	CD0603-Z6V2	CD1005-Z6V2
	CD214C-T33CALF	CDSOD323-T05C	CD0603-Z6V8	CD1005-Z6V8
	CD214C-T36ALF	CDSOT23-T03C	CD0603-Z7V5	CD1005-Z7V5
	CD214C-T43ALF	CDSOT23-T05C	CD0603-Z8V2	CD1005-Z8V2
	CD214C-T5.0ALF	CG1206MLC-05E	CD0603-Z9V1	CD1005-Z9V1
	CD214C-T5.0CALF	CG0603MLU-12E	CD0603-Z10	CD1005-Z10
	CD214C-T51CALF	CG0603MLC-12LE	CD0603-Z11	CD1005-Z11
	CD214C-T58CALF	CG0603MLU-24E	CD0603-Z12	CD1005-Z12
	CD214C-T6.0ALF	CD143A-SR70	CD0603-Z13	CD1005-Z13
	CD214C-T6.5ALF	CDSOD323-T12C	CD0603-Z15	CD1005-Z15
	CD214C-T6.5CALF	CDSOT236-T05C	CD0603-Z16	CD1005-Z16
	CD214C-T60ALF	CDSC706-T05C	CD0603-Z18	CD1005-Z18
	CD214L-T16ALF	CDDFN2-T4.7C	CD0603-Z20	CD1005-Z20
	CD214L-T20ALF	CDDFN4-T05	CD0603-Z22	CD1005-Z22
	CD214L-T20CALF	CDDFN8-T05	CD0603-Z24	CD1005-Z24
	CD214L-T64ALF	CDDFN10-3304N	CD0603-Z27	CD1005-Z27
	CD214C-T85CALF	CD143A-SR2.8	CD0603-Z30	CD1005-Z30
	CD214C-T9.0ALF	CD143A-SR3.3	CD0603-Z33	CD1005-Z33
	CD214C-T90CALF	CD143A-SR05	CD0603-Z36	CD1005-Z36
	CD214C-T170ALF	CD143A-SR12	CD0603-Z39	CD1005-Z39