

## Features

- Lead free device (RoHS compliant\*)
- Low profile
- High current capability
- UL 94V-0 classification

## Applications

- High frequency switching power supplies
- Inverters
- Free wheeling
- Polarity protection

# CD1206-B220~B2100 – Surface Mount Schottky Rectifier 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 1206 size format, which offer PCB real estate savings and are considerably smaller than most competitive parts. The Schottky Rectifier Diodes offer a forward current of 2 A with a 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 (@ $T_A = 25\text{ }^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	CD1206-				Unit
		B220	B240	B260	B2100	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	60	100	V
Maximum RMS Voltage	$V_{RMS}$	14	28	42	70	V
Maximum DC Blocking Voltage	$V_{DC}$	20	40	60	100	V
Maximum Average Forward Rectified Current <sup>1</sup>	$I_{(AV)}$	2				A
DC Reverse Current @ Rated DC Blocking Voltage (@ $T_J = 25\text{ }^\circ\text{C}$ )	$I_R$	0.5				mA
DC Reverse Current @ Rated DC Blocking Voltage (@ $T_J = 100\text{ }^\circ\text{C}$ )	$I_R$	20		10		mA
Maximum Instantaneous Forward Voltage @ 2 A <sup>2</sup>	$V_F$	0.5		0.7	0.85	V
Typical Thermal Resistance <sup>3</sup>	$R_{\theta JA}$	75				$^\circ\text{C/W}$
	$R_{\theta JL}$	17				
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	40				A

Notes:

1 See Forward Derating Curve.

2 Pulse test width PW = 300  $\mu\text{s}$ , 1 % duty cycle.

3 Mounted on P.C. board with 0.2 x 0.2" (5.0 x 5.0 mm) copper pad areas.

## Thermal Characteristics (@ $T_A = 25\text{ }^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	CD1206-B220~B2100	Unit
Operating Temperature Range	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	$^\circ\text{C}$

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

Specifications are subject to change without notice.

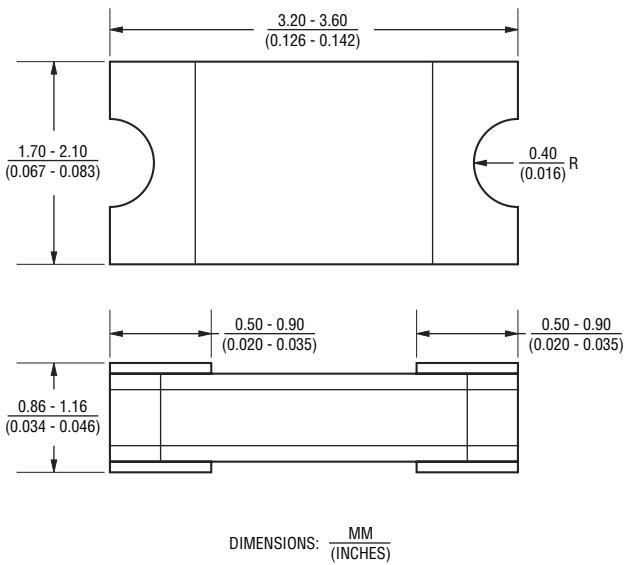
Customers should verify actual device performance in their specific applications.

# CD1206-B220~B2100 – Surface Mount Schottky Rectifier Diode

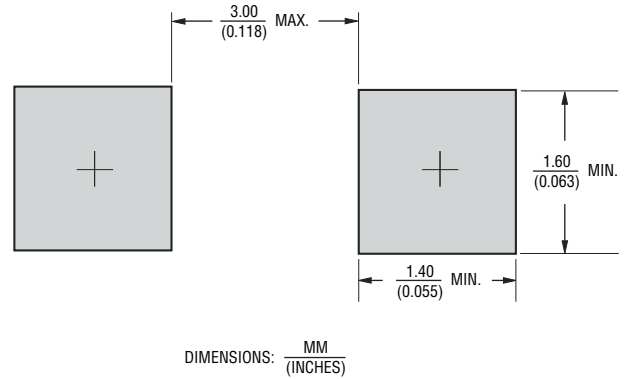


## Product Dimensions

This is a lead free product, packaged with FRP substrate and is epoxy underfilled. The terminals are pure tin plated and are solderable per MIL-STD-750, Method 2026. The package weighs approximately 0.02 g. The package and dimensions are shown below.



## Recommended Pad Layout



## How To Order

	<b>CD 1206 - B 2 20</b>
Common Code	CD = Chip Diode
Package	1206
Model Series	B = Schottky Barrier Diode
Forward Current $I_{(AV)}$	2 = 2 A
Reverse Voltage	20 = 20 V 40 = 40 V 60 = 60 V 100 = 100 V

## Physical Specifications

Case .....1206 (3216) Molded plastic  
 Terminals .....Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity .....Indicated by cathode band  
 Mounting Position .....Any

## Typical Part Marking

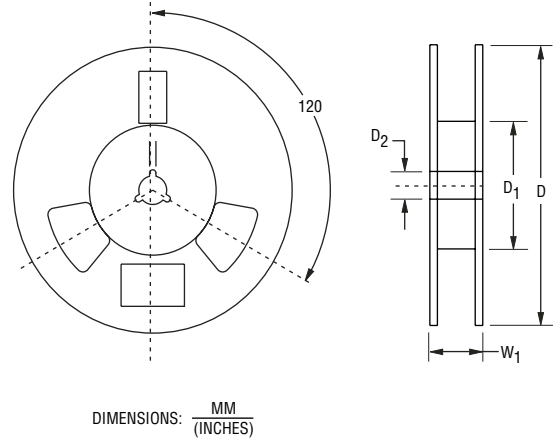
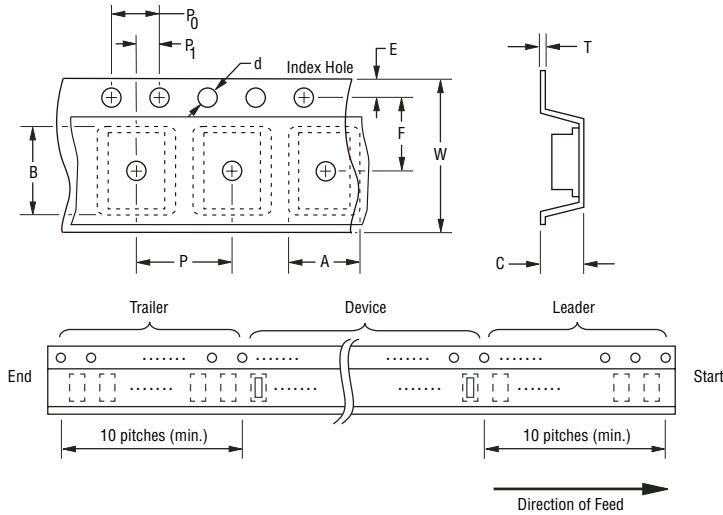
CD1206-B220	.....	<b>B</b>	<b>220</b>
CD1206-B240	.....	<b>B</b>	<b>240</b>
CD1206-B260	.....	<b>B</b>	<b>260</b>
CD1206-B2100	.....	<b>B</b>	<b>2100</b>

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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	1206
Carrier Width	A	$\frac{1.70 \pm 0.10}{(0.067 \pm 0.004)}$
Carrier Length	B	$\frac{3.40 \pm 0.10}{(0.134 \pm 0.004)}$
Carrier Depth	C	$\frac{1.25 \pm 0.10}{(0.049 \pm 0.004)}$
Sprocket Hole	d	$\frac{1.55 \pm 0.05}{(0.061 \pm 0.002)}$
Reel Outside Diameter	D	$\frac{178}{(7.008)}$
Reel Inner Diameter	D <sub>1</sub>	$\frac{60.0}{(2.362)}$ Min.
Feed Hole Diameter	D <sub>2</sub>	$\frac{13.0 \pm 0.20}{(0.512 \pm 0.008)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$
Punch Hole Position	F	$\frac{3.50 \pm 0.05}{(0.138 \pm 0.002)}$
Punch Hole Pitch	P	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Sprocket Hole Pitch	P <sub>0</sub>	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
Embossment Center	P <sub>1</sub>	$\frac{2.00 \pm 0.05}{(0.079 \pm 0.002)}$
Overall Tape Thickness	T	$\frac{0.20 \pm 0.05}{(0.008 \pm 0.002)}$
Tape Width	W	$\frac{8.00 \pm 0.20}{(0.315 \pm 0.008)}$
Reel Width	W <sub>1</sub>	$\frac{13.5}{(0.531)}$ Max.
Quantity per Reel	—	3,000

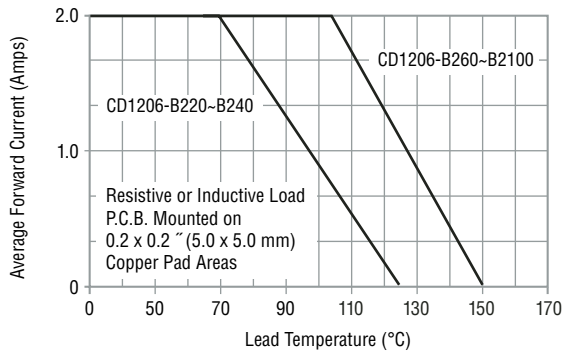
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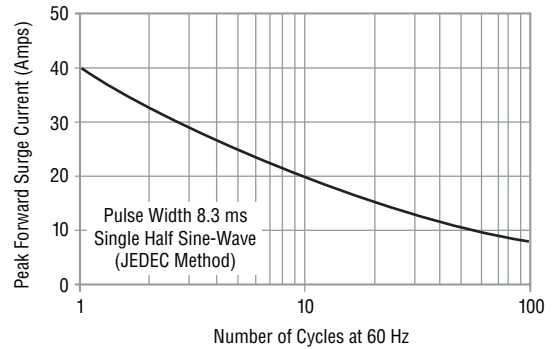


## Performance Graphs

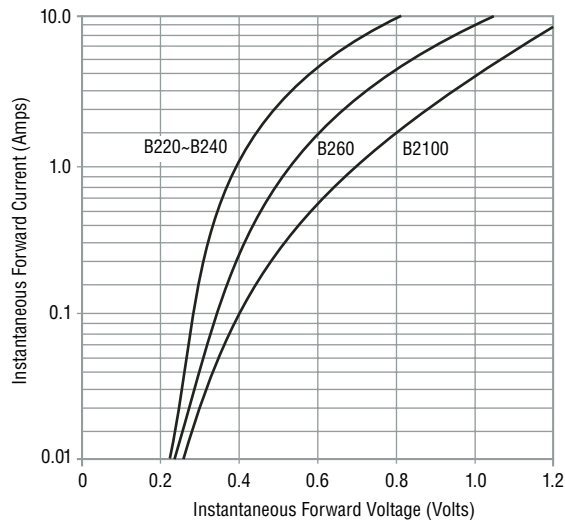
### Forward Current Derating Curve



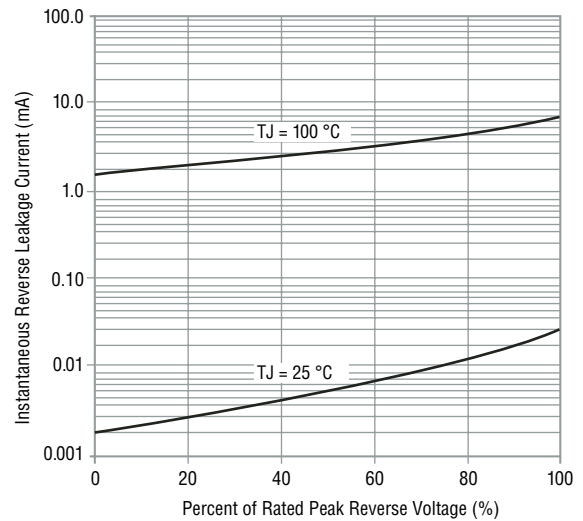
### Maximum Non-Repetitive Surge Current



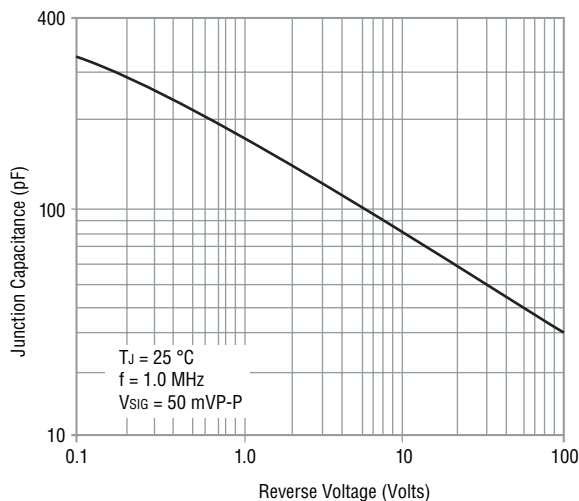
### Typical Forward Characteristics



### Typical Reverse Characteristics



### Typical Junction Capacitance



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